

STATE BOARD OF EDUCATION MEETING
February 17-18, 2016
Boise State University
Simplot Ballroom
Student Union Building
Boise, Idaho



Wednesday February 17, 2016, 1:00 p.m., Boise State University, Student Union Building, Boise, Idaho

BOARDWORK

1. Agenda Review / Approval
2. Minutes Review / Approval
3. Rolling Calendar

WORKSESSION

PLANNING, POLICY & GOVERNMENTAL AFFAIRS

- A. Board Member Professional Development

EXECUTIVE SESSION (time certain – 4:30 p.m.) – Closed to the public

Office of the State Board of Education

1. To go into executive session pursuant to section 74-206(1)(e), Idaho Code, “To consider preliminary negotiations involving matters of trade or commerce in which the governing body is in competition with governing bodies in other states or nations.”

Lewis-Clark State College

2. To go into executive session pursuant to Section 74-206(1)(b), Idaho Code, “To consider the evaluation, dismissal or disciplining of...a public officer, employee, staff member or individual agent, or public school student.”

Thursday February 18, 2016, 8:00 a.m., Boise State University, Simplot Ballroom, Student Union Building, Boise, Idaho

OPEN FORUM

CONSENT AGENDA

BAHR

1. Boise State University – Multi-Year Service Agreement - Aramark

PPGA

2. Boise State University – Facility Naming
3. Boise State University – School Naming
4. Alcohol Permits – President Approved – Report

PLANNING, POLICY & GOVERNMENTAL AFFAIRS

1. Boise State University - Annual Report
2. Presidents' Council Report
3. Idaho Public Charter School Commission – Annual Report
4. Idaho Digital Learning Academy - Annual Report
5. Idaho Educational Services for the Deaf and the Blind - Annual Report
6. Idaho State Historical Society – Museum Update
7. Every Student Succeeds Act (ESSA) Overview
8. Accountability Oversight Committee - Statewide Accountability System Framework Timeline
9. 2016 Legislative Update
10. Idaho State University Mission and Core Themes
11. Board Policy I.E. Executive Officers – Second Reading
12. Board Policy I.Q. Accountability Oversight Committee – Second Reading
13. Temporary Rule – IDAPA 08.02.01 – Pay For Success Contracting

INSTRUCTION, RESEARCH & STUDENT AFFAIRS

1. Higher Education Research Council Annual Report
2. Amendment to Board Policy – Section III.P. – Students – First Reading
3. Boise State University – Ph.D in Ecology, Evolution and Behavior
4. University of Idaho – Master of Public Administration – Online Program Fee Request
5. University of Idaho – Master of Laws
6. University of Idaho – Bachelor of Science, Sociology, Criminology Emphasis – Online

BUSINESS AFFAIRS & HUMAN RESOURCES

Section I – Human Resources

1. Retirement Plan Committee Appointments
2. Chief Executive Officer Compensation
3. Boise State University – Multi-Year Employment Agreement - Women's Head Volleyball Coach
4. University of Idaho - Multi-Year Employment Agreement – Athletic Director

Section II – Finance

1. Intercollegiate Athletics – Financial Reports
2. Intercollegiate Athletics – Employee Compensation Reports
3. Outcomes-Based Funding
4. Board Policy – Section V.R. – Establishment of Fees – First Reading
5. Boise State University – Facility Lease and Purchase Agreement – Gardner Company
6. Boise State University – Release of Reservation in Grant Deed on Real Property – College of Western Idaho

7. Idaho State University – Capital Project – Remodel of the Turner Dining Hall, Design-Build Phase
8. Idaho State University – Issuance of General Revenue Bonds
9. Lewis-Clark State College – Proposed Summer Session Fee Discount

DEPARTMENT OF EDUCATION

1. Superintendent of Public Instruction Update
2. Temporary Rule – IDAPA 08.02.02.111 – Bullying, Harassment, and Intimidation
3. Professional Standards Commission Annual Report
4. Idaho Standards Achievement Test – Parent Reports

If auxiliary aids or services are needed for individuals with disabilities, or if you wish to speak during the Open Forum, please contact the Board office at 334-2270 no later than two days before the meeting. While the Board attempts to address items in the listed order, some items may be addressed by the Board prior to, or after the order listed.

BOARDWORK
FEBRUARY 17, 2016

1. Agenda Approval

Changes or additions to the agenda

2. Minutes Approval

BOARD ACTION

I move to approve the minutes from the November 30, 2015 special Board meeting, the December 9-10, 2015 regular Board Meeting, the January 11, 2016 special Board meeting, and the January 21, 2016 special Board meeting as submitted.

3. Rolling Calendar

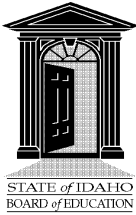
BOARD ACTION

I move to set February 15-16, 2017 as the date and Boise State University as the location for the February 2017 regularly scheduled Board meeting.

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STATE BOARD OF EDUCATION
TRUSTEES OF BOISE STATE UNIVERSITY
TRUSTEES OF IDAHO STATE UNIVERSITY
TRUSTEES OF LEWIS-CLARK STATE COLLEGE
BOARD OF REGENTS OF THE UNIVERSITY OF IDAHO
STATE BOARD FOR PROFESSIONAL-TECHNICAL EDUCATION

APPROVED MINUTES STATE BOARD OF EDUCATION November 30, 2015 Office of the State Board of Education Len B. Jordan Building, 3rd Floor Boise, Idaho

A special meeting of the State Board of Education was held November 30, 2015 in the large conference room of the Office of the State Board of Education, Len B. Jordan Building, in Boise, Idaho. Board President Don Soltman presided and called the meeting to order at 10:30 am Mountain Time. A roll call of members was taken.

Present:

Don Soltman, President
Emma Atchley, Vice President
Bill Goesling, Secretary
Sherri Ybarra, State Superintendent

Richard Westerberg
Debbie Critchfield
Linda Clark

Absent:

Dave Hill

Ms. Bent gave a brief overview of the rulemaking process which begins in April. June through August the Board sees proposed rules which then go out for public comment if approved by the Board. Following public comment, they come back to the Board as pending rules. Generally pending rules go before the Board in November. Pending rules have already been seen and approved by the Board as proposed rules. Changes to the pending rules, if any, are those precipitated by comments received. Once approved by the Board, the rules go before the legislature who can accept or reject them in whole or in part. Those accepted by the legislature take effect at the end of the legislative session.

PLANNING, POLICY AND GOVERNMENTAL AFFAIRS

1. Pending Rule – Docket No. 08-0109-1501 – GearUP Idaho Scholarship

BOARD ACTION

M/S (Critchfield/Clark): To approve Pending Rule, Docket No. 08-0109-1501, as submitted in Attachment 1. The motion carried unanimously 7-0.

Ms. Bent indicated small, technical edits were made to this rule to allow for more flexibility in distributing funds for this scholarship. There were no changes made between the proposed and pending rule.

2. Pending Rule – Docket No. 08-0113-1501 – Opportunity Scholarship

BOARD ACTION

M/S (Critchfield/Goesling): To approve Pending Rule – Docket No. 08-0113-1501, as submitted in

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Attachment 1. The motion carried unanimously 7-0.

Ms. Bent indicated there were some technical changes made to this rule and no changes were made between the proposed and pending rule.

3. Pending Rule – Docket No. 08-0201-1501 – Rules Governing Administration - GED Assessment

BOARD ACTION

M/S (Critchfield/Atchley): To approve Pending Rule – Docket No. 08-0201-1501, as submitted in Attachment 1. The motion carried unanimously 7-0.

Ms. Bent pointed out this rule is specific to the GED testing process and changes are to remove cut scores that were for students to be eligible for the high school equivalency and GED tests. There were no changes between the proposed and pending rule.

4. Pending Rule – Docket No. 08-0201-1502 – Rules Governing Administration - Continuous Improvement Plans

BOARD ACTION

M/S (Critchfield/Westerberg): To approve Pending Rule – Docket No. 08-0201-1502, as submitted in Attachment 1. The motion carried unanimously 7-0.

Ms. Bent indicated this rule is specific to the strategic planning and continuous improvement plan requirements to the school district. The changes align the terms to be consistent with Section 33-5201, Idaho Code, changing the term to “strategic plan” to “continuous improvement plan”. There were no changes between the proposed and pending rule.

5. Pending Rule – Docket No. 08-0202-1501 – Rules Governing Uniformity - Teacher Certification

BOARD ACTION

M/S (Critchfield/Atchley): To approve pending rule, docket number 08-0202-1501 as submitted in Attachment 1. The motion carried unanimously 7-0.

Ms. Bent indicated this rule pertains to teacher certification requirements. The changes made were to reorganize the section and make technical corrections. Definitions were added that brought the section in alignment with the Career Ladder adopted by the legislature last year. Endorsements for computer science and engineering have been added as previously approved by the Board. Ms. Bent pointed out a report would be provided at the Board’s December meeting on the teacher pipeline and the teacher certification process. Ms. Atchley questioned whether the colleges or universities had programs related to certification or endorsements in their educational colleges. Mr. Westerberg suggested relaying the question to the Institutional Research and Student Affairs Committee (IRSA) to query the institutions and provide a report to IRSA.

6. Pending Rule – Docket No. 08-0203-1505 – Rules Governing Thoroughness - Advanced Opportunities

BOARD ACTION

M/S (Critchfield/Goesling): To approve Pending Rule – Docket No. 08-0203-1505, Advanced Opportunities, as submitted in Attachment 1. The motion carried unanimously 7-0.

Ms. Bent indicated the language was updated from “tech prep” to “technical competency” to bring the rule and language in alignment with Board Policy III.Y. There were no changes between the proposed and

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pending rule.

7. Pending Rule – Docket No. 08-0203-1507 – Rules Governing Thoroughness - Graduation Requirements

BOARD ACTION

M/S (Critchfield/Atchley): To approve Pending Rule – Docket No. 08-0203-1507, as submitted in Attachment 1. The motion carried unanimously 7-0.

Ms. Bent indicated this rule pertains to graduation requirements; there were no changes between proposed and pending rule. One comment received recommends adding the definition of certification into the rule. Ms. Bent pointed out that any definition to certification should be in rule 08-0202 and will be something that is considered next spring when requirements as a whole are reviewed. Consequently, the change was not included in this rule. There were no changes between the proposed and pending rule.

8. Pending Rule – Docket No. 08-0501-1501 – Seed Certification, Incorporated by Reference – Standards

BOARD ACTION

M/S (Critchfield/Goesling): To approve Pending Rule – Docket No. 08-0501-1501, as presented in Attachment 1. The motion carried unanimously 6-0. Ms. Atchley abstained from voting.

Ms. Bent indicated this rule updates and reincorporates the standards developed by the Idaho Crop Improvement Association (ICIA). There were no changes to the standards or to the rule itself between proposed and pending rule.

9. Pending Rule – Docket No. 47-0101-1501 – Vocational Rehabilitation, Incorporated by Reference – Field Service Manual

BOARD ACTION

M/S (Critchfield/Atchley): To approve Pending Rule Docket No. 47-0101-1501, as submitted in Attachment 1. The motion carried unanimously 7-0.

Ms. Bent indicated this rule incorporates by reference the Division of Vocational Rehabilitation's Field Service Manual. Because they are amending their Field Service Manual and because it is incorporated by reference to a rule, it must go through the rulemaking process. No comments or changes were received or made between proposed and pending rule; no comments were received during the comment period.

STATE DEPARTMENT OF EDUCATION (Department)

1. Pending Rule – Docket No. 08-0202-1504 – Rules Governing Uniformity, Incorporated by Reference – Standards – Certification of Professional School Personnel

BOARD ACTION

M/S (Ybarra/Critchfield): To approve Pending Rule – Docket No. 08-0202-1504, Rules Governing Uniformity, Incorporated by Reference, incorporating the Idaho Standards for Initial Certification of Professional School Personnel as submitted. The motion carried unanimously 7-0.

Ms. Ybarra indicated this was related to the Professional Standards Commission's review of 20% of the Idaho Standards for Initial Certification of Professional School Personnel. The Professional Standards Commission has reviewed and recommends approval of all of the proposed revisions. There were no

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changes between the proposed and pending rule.

2. Pending Rule – Docket No. 08-0203-1503 – Rules Governing Thoroughness – Data Collection for Advanced Opportunities

BOARD ACTION

M/S (Ybarra/Goesling): To approve Pending Rule – Docket No. 08-0203-1503, Rules Governing Thoroughness, adding Data Collection Elements for Advanced Opportunities, as submitted. The motion carried unanimously 7-0.

Ms. Ybarra indicated the Dual Credit for Early Completers and Fast Forward programs provide financial support for students in Idaho public schools to earn dual credit and take college credit-bearing and professional/technical examinations. There were no changes between the proposed and pending rule.

3. Pending Rule – Docket No. 08-0203-1506 – Rules Governing Thoroughness – End of Course Achievement Standards, Incorporated by Reference – Special Education Manual

BOARD ACTION

M/S (Ybarra/Atchley): To approve Pending Rule – Docket No. 08-0203-1506, as submitted. The motion carried unanimously 7-0.

Ms. Ybarra indicated that comments were received but were not pertinent to the rule; no changes were made between the proposed and pending rule. Additionally, several hearings were held to answer questions.

4. Pending Rule – Docket No. 08-0203-1508 – Rules Governing Thoroughness – Compliance with IDEA/IEP Timelines

BOARD ACTION

M/S (Ybarra/Atchley): To approve the Pending Rule – Docket No. 08-0203-1508, Compliance with IDEA/IEP timelines, as submitted. The motion carried unanimously 7-0.

Ms. Ybarra indicated this rule is related to compliance with the Individuals with Disabilities Education Act (IDEA) and Individualized Education Program (IEP) timelines and the proposed amendments bring the rule into compliance with IDEA requirements. There were no changes between the proposed and pending rule.

5. Pending Rule – Docket No. 08-0203-1509 – Rules Governing Thoroughness, Incorporated by Reference/Amended Content Standards – Humanities and Science

BOARD ACTION

M/S (Ybarra/Clark): To approve Pending Rule – Docket No. 08-0203-1509, Rules Governing Thoroughness – Incorporation by Reference/Amended Content Standards – Humanities and Science, as submitted. The motion carried unanimously 7-0.

Ms. Ybarra indicated that per stakeholder input and public comments, minor changes were made to language in the pending rule to align with language in the standards. Most of the comments received were not pertinent to the rule or the standards bring incorporated into the rule. Questions during the public comment period were answered and those answers are also posted on the Department's website. There were no changes made between the proposed and pending rule.

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6. Pending Rule – Docket No. 08-0203-1510 – Rules Governing Thoroughness – Physical Education Curricular Materials

BOARD ACTION

M/S (Ybarra/Atchley): To approve Pending Rule – Docket No. 08-0203-1510, Rules Governing Thoroughness – inclusion of Physical Education to the list of subject areas for curricular materials adoption, as submitted. The motion carried unanimously 7-0.

Ms. Ybarra noted that this adds physical education to the list of subjects reviewed by the curriculum materials committee. There have been no changes between proposed and pending rule.

7. Pending Rule – Docket No. 08-0203-1511 – Rules Governing Thoroughness – Idaho English Language Assessment

BOARD ACTION

M/S (Ybarra/Atchley): To approve Pending Rule – Docket No. 08-0203-1511, Rules Governing Thoroughness, as submitted. The motion carried unanimously 7-0.

Ms. Ybarra indicated this rule removes redundant standards causing districts confusion and updates proficiency levels for the Idaho English Language Assessment, along with a few technical corrections. There were no comments received during the public comment period, and no changes were made between the proposed and pending rule.

8. Idaho State Teacher Equity Plan

BOARD ACTION

Ms. Ybarra pointed out this item an information item. It is the Idaho State Teacher Equity Plan and is something new that the U.S. Department of Education is requiring to address equity to ensure all students regardless of race or family income have access to effective educators. She pointed out there will be a webinar on December 15th that will provide a 30 minute overview of the plan. Details for the webinar will be posted on the Department's website. Ms. Marcia Beckman, Deputy Superintendent, outlined the federal requirements for the plan. She reported that they received notification on November 23rd that Idaho's Plan to Ensure Equitable Access to Excellent Educators had been approved. The plan details elements of Idaho's approach to improving access to excellent educators for minority and students from low-income families. She indicated this plan represents the first step in a comprehensive approach to strengthening and maintaining educator preparation and effectiveness across the state, with an emphasis on districts and schools demonstrating the greatest need.

Ms. Atchley complemented the Department on the metrics that were included in the plan and consistency with the Board's vision.

OTHER BUSINESS

There being no further business, a motion to adjourn was entertained.

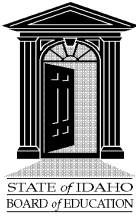
M/S (Clark/Atchley): To adjourn the meeting at 11:27 a.m. The motion carried unanimously.

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STATE BOARD OF EDUCATION
TRUSTEES OF BOISE STATE UNIVERSITY
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BOARD OF REGENTS OF THE UNIVERSITY OF IDAHO
STATE BOARD FOR PROFESSIONAL-TECHNICAL EDUCATION

DRAFT MINUTES STATE BOARD OF EDUCATION December 9-10, 2015 College of Southern Idaho Herrett Center for Arts & Sciences Rick Allen Room Twin Falls, Idaho

A regularly scheduled meeting of the State Board of Education was held December 9-10, 2015 at the College of Southern Idaho in Twin Falls.

Present:

Don Soltman, President
Emma Atchley, Vice President
Bill Goesling, Secretary
Sherri Ybarra, State Superintendent

Richard Westerberg
Debbie Critchfield
Dave Hill
Linda Clark

Wednesday, December 9, 2015

The Board met in the Rick Allen Room of the Herrett Center for Arts and Sciences at the College of Southern Idaho (CSI) in Twin Falls, Idaho. Board President Don Soltman welcomed everyone and called the meeting to order at 1:00 pm Mountain time. Mr. Soltman took a moment to welcome guests and extend appreciation to CSI for its hospitality. He announced the agenda would be modified slightly on Thursday to move the Department's portion of the agenda and presentations forward to accommodate a call from the Council of Chief State School Officers.

BOARDWORK

1. Agenda Review / Approval

BOARD ACTION

M/S (Atchley/Clark): To approve the agenda as presented. The motion carried unanimously.

2. Minutes Review / Approval

BOARD ACTION

M/S (Atchley/Goesling): To approve the minutes from the September 14, 2015 Special Board meeting, and the October 21-22, 2015 Regular Board meeting as submitted. The motion carried unanimously.

3. Rolling Calendar

BOARD ACTION

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M/S (Atchley/Goesling): To set December 14-15, 2016 as the date and the College of Western Idaho as the location for the December 2016 regularly scheduled Board meeting. The motion carried unanimously.

There was discussion about changing the December 2016 meeting to a different date; it will be determined at a later time on whether to make any changes.

WORKSESSION – Planning, Policy & Governmental Affairs (PPGA)

A. Board of Education Strategic Plan

BOARD ACTION

M/S (Critchfield/Atchley): To approve the 2016-2020 (FY17-FY21) Idaho State Board of Education Strategic Plan as submitted in Attachment 1 as amended. The motion carried unanimously.

Ms. Bent, Chief Planning and Policy Officer from the Board office, provided historical information on the development and background of the strategic plan and its changes. The amendments proposed during this review cycle focus on updates to the performance measures and benchmarks that were reached during the previous year. Mr. Carson Howell, Director of Research from the Board office, led the discussion regarding performance measures.

Ms. Bent discussed the performance measures under Goal 1, Objective A, reporting that they revised one of the measures regarding the portion of graduates with debt because the data being used was in alignment with that measure. It was decided to clarify the benchmark to 85% of student debt of *institution* peers to make the benchmark clearer. There was further discussion about reporting on what our student debt is and how it compares to peer institutions to provide a more complete picture on what the trends are showing. Board member Hill remarked on some of the benchmarks under Objective A and recommended considering other benchmarks to measure the Objective of Access more clearly and accurately. Student debt was a concern for this section and it was questioned whether to move it to under Goal 3, Effective and Efficient Educational System, or leave it under Goal 1: Access – because it could fall under either. It was decided to leave it under Goal 1, and to look at the measures again in October. Ms. Critchfield asked the Board members for questions about substantial changes to the plan, and because the institutions need to align their plan with the Board's plan, the substantial changes would be discussed today and smaller edifications would be handled by the Board office for efficiency's sake.

There was continued discussion about student debt and a great deal of concern expressed about the Board trying to effect student debt because it is a very individual situation, and goes far beyond what the job of the Board is.

The group discussed dual credit students and Mr. Howell indicated as students move through the pipeline staff would be looking at a graduation measure for dual credit students specifically.

Regarding Objective B, Adult learner re-integration, Dr. Goesling recommended adding access and support for veterans returning to school. Ms. Bent pointed out two options; one to identify veterans as their own group, or to put something specific in the plan. By putting some specific in the plan, it would highlight that group more, in addition to helping the agencies and institutions see what to focus on for veterans. Ms. Atchley asked if "veterans" could be added directly to the definition in objective B. Mr. Howell responded veterans could be included which would start a baseline for them; right now they fall under the number of non-traditional graduates.

Regarding Objective C, Higher Level of Educational Attainment, Ms. Bent pointed out they are working to correct an issue on the percentage of graduates at each level relative to Board target numbers. Mr. Howell indicated they were working to tie this measure back to the 60% goal. He said they recommended changing the targets for associates and bachelor's degrees, and also the advanced degrees, and

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explained the logic behind it which is to increase the amount of awards.

Regarding Objective D, Quality Education, Mr. Howell pointed out SAT benchmarks would be amended when the new numbers are available, likely in October. Mr. Freeman recommended clarifying that it is the statewide average college composite placement score.

Regarding Objective E, Education to Workforce Alignment, Dr. Goesling questioned whether to have benchmarks for other health education programs such as Idaho State University's (ISU) Physician's Assistant Program, and Pharmacy program. Ms. Bent clarified there are specific goals in the plan related to the University of Utah School of Medicine (UUSOM) program and WWAMI which are due to requirements by the Governor's office and the Division of Financial Management (DFM). For the ISU programs, they have their own strategic plan where those measurements would fall under. Mr. Freeman clarified that by specifically identifying those programs such as UUSOM and WWAMI in our strategic plan, it allows those programs to not have to submit their own strategic plans by law. Mr. Westerberg cautioned on making the strategic plan it too detailed.

Goal 2 had no changes other than small technical edits to better define what is being measured. Moving on to Goal 3, Objective C, Alignment and Coordination, a new benchmark was proposed which is percent of postsecondary students participating in a remedial program who completed the program or course. This looks at what the completion rate is for those programs once a student is enrolled in a remediation program. Under Objective D, Productivity and Efficiency, the benchmarks were adjusted under the four-year institutions, and the two-year institutions' benchmark is to be determined.

Ms. Bent thanked the Board for taking the time to review the strategic plan. The group discussed alternate routes to education for adult learners such as returning military or other professionals. Dr. Clark commented it would be beneficial to identify what barriers are to recruiting professionals into education, which also includes where the shortages are.

Mr. Howell proceeded to discuss two additional points on Objective D with additional detail on benchmarks. He recommended changing the number of degrees produced benchmark to 15,000 under Objective D, and proposed adding one additional measure which is a completion rate measure looking at first time full time freshman graduating 50% of students within 50% of time. The Board was supportive of the recommendation to add the measure. It will be a placeholder until October when it can be revisited after receiving additional feedback from the institutions.

B. 60% College Completion Goal

Ms. Critchfield introduced Ms. Cathleen McHugh, Chief Research Analyst from the Board office, for a report on the 2015 educational attainment model which was updated this year. She reported in 2014 that 40% of Idahoans had some sort of postsecondary credential. That statistic was lower than both prior years, but the difference is not considered statistically significant. The trend is also not presently considered statistically significant, but it is getting close to showing significance. She pointed out the data is from the American Community Survey which does not include certificates in its count. She clarified on the assumptions used to estimate the one year certificates.

Ms. McHugh reported on assumptions of the model pointing out she explicitly modeled factors that are within the Board's purview. She also included implicit models outside of the Board's purview, and clarified that these patterns today should hold for the foreseeable future and how the model could be understated or overstated based on the migration trends.

Ms. McHugh reported on the data sources used for this presentation included OSBE High School Feedback reports, Complete College America reports, and the American Community Survey. Ms. McHugh provided a slide as a visual aid which showed the magnitude of the effect of policy. She reported that the current educational attainment level is at 39% and will remain constant until policy changes are made. The policy that has the most effect over the shortest period of time is to increase go-on rates and completion rates for all students. Ms. McHugh also pointed out they examined the three-

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year go-on rate by gender and region in Idaho, and provided an explanation on the differences such as with students going on a mission. She indicated there are large gaps between males and females and the gaps do not necessarily diminish over time and are present in every region. There was further discussion on military data and Dr. Goesling pointed out that National Guard data can be tracked. Ms. McHugh confirmed they are working on gathering that type of data which will also help inform policy.

C. Statewide Assessment Discussion

Board member Critchfield indicated in October a work group was convened to discuss complaints regarding the availability of ISAT data available to the districts and the amount of time the test took. The work group consisted of Idaho educators as well as legislators and education stakeholders. This group will have a follow-up meeting on December 8th and Board member Critchfield will provide the Board with a full initial report on any outcomes.

Ms. Critchfield pointed out the item today is for discussion and not for decision making. She said the goal is to have decision making in April. Ms. Critchfield identified three areas for discussion: 1) which tests should we use – do we assess proficiency or college and career readiness; 2) what it is we want to accomplish and what way is best to move forward on that; and 3) the high stakes nature of the test.

Ms. Ybarra announced that today the Senate signed the Every Student Succeeds Act (ESSA), and it is anticipated the President will sign it tomorrow. The signing of ESSA does drive a lot of the conversation related to the flexibility waiver piece. She remarked on the vision of the Department and their support of accountability, and expressed they are still determining what is the expectation of the Smarter Balanced Assessment Consortium (SBAC) and are exploring what they want the test to do. The Department is using the SBAC this year and until they get the data from the testing, will not make any other decisions. Ms. Ybarra indicated she was at a Council of Chief State School Officers (CCSSO) consortium last week where the majority agreed the test is too long; the consortium voted to reduce the length by 30 minutes. The Department continues to work with the American Institute for Research (AIR) and SBAC on the issues and delivery for the testing. SBAC is willing to work with the Department on the data, but AIR delivers it and charges for changes. Ms. Ybarra indicated they are still working on some technical issues; the goal is to have adjustments made by the Spring.

Dr. Clark asked where we are at in terms of the growth measure related to the intent of testing. More specifically, what ties the student to the learning continuum. She asked how far away we are from that kind of data and when it would be available to teachers, the state, and the system. Ms. Ybarra responded they do not have answers to those questions yet and a lot will be answered during tomorrow's call with the U.S. Department of Education (DOE) and learned moving forward with the ESSA.

Ms. Critchfield remarked positively on Idaho being 100% in charge of how the data is packaged. She suggested not getting ahead of the federal mandates, and yet still looking toward a statewide assessment and a system of accountability. She introduced Dr. Chris Mathias, Chief Academic Affairs Officer from the Board of Education office, and Dr. Roger Stewart, College of Education Dean at Boise State University, to the discussion on this item.

Dr. Stewart, provided a report on a seamless K-16 system: Utilizing the Idaho Core Standards, the New ISAT, and other State Board initiatives to build a bridge between K-12 and higher education and the good of an open communications system between the two. He outlined the vision of a seamless K-16 education system and provided some background on involvement with the Smarter Balanced Assessment Consortium (SBAC). He pointed out the consortium states realized the importance of building a strong higher education presence in the development of the assessments and a need to recognize the 11th grade SBAC assessment as a valid and reliable measure which could be used for initial course placement decisions during the freshman year of college. Dr. Stewart reviewed what is needed to realize a seamless system which included content standards that bridge the K-12 and postsecondary education divide; the need for an assessment system that shows progress being made towards successful exit of the K-12 system; and state-level policies that clearly articulate the standards and assessments to be used, performance expectations, and accountability mechanisms. Dr. Stewart

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pointed out that the Chief Academic Officer of the State Board of Education is the higher education lead in this state as designated by the SBAC.

Dr. Stewart identified two higher education initiatives unique to Idaho's efforts to create a seamless K-16 system which include the Idaho General Education Reform Initiative and the Transforming College Remediation Initiative. He reviewed some of the work that has been done toward a seamless system including 11-12th grade transition framework being drafted. Dr. Stewart highlighted some of the details of that framework and the expectations for students. The Common Core and SBAC assessments are part of the K-12 side; and the Complete College Idaho Plan, the General Education Reform Plan, the Remediation Plan are part of the higher education side of the bridge.

Ms. Ybarra remarked she will continue to work with higher education, but indicated there are a lot of issues to correct and work on before implementing this piece. She also expressed concern about direct admissions. She stressed not having one test for one grade level (grade 11) as the end-all-be-all, and over testing in general.

Dr. Stewart reminded the Board to not lose the vision of a seamless system as things are debated and discussed. He felt there is an opportunity in Idaho to develop a seamless K-16 system with everything that is going on in K-12 and higher education. Dr. Clark praised the framework development which clearly lays out what the expectations are and ties back to the strategic planning. She affirmed the Assessment Committee was very supportive of the work being done and pointed out the needed bridge is an expansion bridge which is two-part – one related to grade 11, and one is the measurement of grade 3-8 (i.e., a growth measure over time). Mr. Westerberg strongly recommended a timeline for answering many of the questions around this subject including what decisions are necessary and who is responsible. Ms. Critchfield suggested April which lines up with the rule making process and would allow for any necessary changes requiring legislative action. Mr. Westerberg asked how far away we are from having an implementation plan. Ms. Ybarra responded that she is looking forward to tomorrow's discussion and working together on an implementation plan.

Dr. Clark remarked a simple litmus test would ask whether there is congruence between the written, taught, testing, and reporting. She felt a yes or no answer to those questions would be a good indicator. Ms. Atchley encouraged changing the tone we use about testing toward more of a positive one.

Dr. Goesling asked for everyone to be kept informed of the process. Ms. Critchfield asked the Board what they feel they need in order to make a decision. Consensus was to move forward through the PPGA committee for the April meeting. Board President Soltman requested something for the Board to react to at the February meeting. Dr. Goesling requested regular updates on where things are as they progress, perhaps a bi-weekly update. Mr. Westerberg reiterated his suggestion of an implementation plan with a timeline and framework by February. Ms. Ybarra indicated she would have a weekly update from the Department sent from her K-12 Communications Director provided to the Board.

Board President Soltman recessed the meeting at 4:15 p.m. Mountain.

Thursday December 10, 2015, 8:00 a.m., College of Southern Idaho, Herrett Center for Arts and Science, Rick Allen Room, Twin Falls, Idaho

The Board reconvened at the College of Southern Idaho, Herrett Center for Arts and Science, in the Rick Allen Room for regular business. Board President Soltman called the meeting to order at 8:00 a.m. and thanked CSI for their hospitality. Mr. Soltman announced that for those that knew him, Keith Ickes was previously diagnosed with esophageal cancer and passed away on Tuesday. He had been with the University of Idaho.

OPEN FORUM

Two people who had requested to speak during open forum, Andrea Witier and Diane Smith, did not show.

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Dr. Cathleen Barren, Assistant Professor of ISUs Doctor of Nursing Program, and Jonathan Barren, addressed the Board as principal investigators of a study they have designed called "Student perceptions of health insurance changes at ISU". The intent of the study was to explore the effect of the removal of the student health insurance plan shift and to give those with the power to make decisions about student health insurance access to data about the effects of the removal. They are interested in how health insurance changes affect student population.

Mr. Barren indicated the three primary questions they asked of students were related to concern, access to health care, and income. Their findings indicated the vast majority of students are very concerned about the student health insurance issue. Additionally, about 80% of students reported that health insurance is worse with the SHIP. The study also looked at income, and findings indicate that 50% of students are making less than the federal poverty level. Additionally, many issue students don't qualify for federal assistance due to certain requirements. Dr. Barren and Mr. Barren, as principal investigators in the study, offered to make the data they have collected available to Bboard members and staff.

CONSENT AGENDA

M/S (Atchley/Hill): To approve the consent agenda as presented. The motion carried unanimously.

Instruction Research and Student Affairs

1. Programs and Changes Approved by the Executive Director – Quarterly Report

A list of programs and changes approved by the Executive Director was provided for informational purposes in the agenda materials to the Board.

Planning, Policy & Governmental Affairs

2. Alcohol Permits Approved by the University Presidents

A list of alcohol permits approved by the university presidents was provided for informational purposes in the agenda materials to the Board.

PLANNING, POLICY & GOVERNMENTAL AFFAIRS (PPGA)

1. College of Southern Idaho Progress Report

At this time, Board President Soltman invited Dr. Fox, president of CSI, to the front of the room to acknowledge the 50th anniversary of the College of Southern Idaho. Mr. Soltman provided some historical background of CSI for the audience. Mr. Soltman presented Dr. Fox with a proclamation from Governor Butch Otter recognizing CSI and commemorating the college for its contribution to the state and community. Governor Otter proclaimed December 10th as CSI day.

Dr. Jeff Fox, CSI President, introduced Kate Collins, Research Analyst, who assisted in preparing the report for the Board. Dr. Fox welcomed the Board to CSI and provided a report on the college's recent activity in pursuit of the Board's 60% goal. Dr. Fox also took a moment to recognize some of the members of their Board of Trustees who were present in the audience.

Dr. Fox provided an update on CSI's strategic plan implementation, reporting that they updated their existing strategic plan last summer. They successfully completed an abbreviated seven year accreditation cycle in April 2015; accreditation was reaffirmed in June 2015. They are working on a new strategic plan as they move into a new accreditation cycle. He reported they intend to have a draft of the new plan available by February 2016 which will include an update to the college's goals and objectives.

Dr. Fox reported on employee FTE by classification which includes 44% faculty, 28% managerial and professional staff, and 28% classified staff. He reviewed their primary sources of revenue which include

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state funds (both academic and professional-technical), tuition and fees, and property taxes. Reporting on student cost of attendance at CSI, it is running at roughly \$120.00 cost per credit. Annual enrollment is about 10,686 which is down. Dr. Fox reported that dual credit enrollment is up for Fall 2015 at 2,473 students, which is an increase of more than 500 students from Fall 2014. Reporting on degrees and certificates, they are delivering nearly the same amount of professional-technical and academic degrees and certificates.

Dr. Fox reported that workforce development is going strong and that they have served 4,319 students in FY 15 which is an increase of 38% over the prior year. Programs include electrical, plumbing and maintenance apprenticeship, industrial maintenance, and health workforce training. Dr. Fox provided an update on STEM programs and that they are engaging students and faculty in many opportunities. Additionally with regard to collaboration efforts, they are promoting opportunities for students and reaching out into the community. They have collaborations with BSU, ISU, UI and reach out into county service regions and businesses within the Magic Valley, and have a number of outreach opportunities for students. Dr. Fox provided an illustration of their campus plan, reporting that they are excited about expanding and updating portions of the campus. Dr. Fox reported on their four new transition coordinators, two of whom are bi-lingual/bi-cultural and serve the Magic Valley area. They use space in the area high schools and have a case load of 400 students each.

Dr. Fox shared some NWCCU commendations received during the accreditation process which were all very positive. They had a few recommendations which included to continue to fully develop student learning outcomes at the program and degree level, and to continue to address internal control processes. Dr. Fox shared some positive news from their athletics department, commenting their women's volleyball team took first place in the division one NJCAA tournament, their eleventh national championship. Additionally, their women's softball team ranks second in the nation with a team average of 3.62 gpa.

Dr. Fox remarked on collaborations with higher education, K-12 and health care, and how their partnerships bring together various stakeholders in the region. Reporting on CSI foundation scholarships, they reported \$1,779,071 in 2014-15. The foundation will allow the college to award \$1.9 million in scholarships next year. He reported on how CSI is helping students make better financial decisions. He also reported on off-campus centers in Jerome, Gooding, Hailey, Burley and Idaho Falls, and how they serve their community in offering over 60 courses for community education. He pointed out that CSI offers free courses to citizens over 60 years of age, and this fall there are over 1,000 students enrolled in those courses.

Mr. Freeman asked if they track their dual enrollment students. Dr. Fox responded that they do track those students and could provide detail to the Board. Mr. Freeman also publically recognized Mike Mason's contribution to CSI.

At this time, they moved to item 3 on the agenda.

3. Exploring Options for Expanding Higher Education in Eastern Idaho

Ms. Critchfield introduced Idaho Falls Mayor, Rebecca Casper, and Representative Wendy Horman to provide a report to the Board on community efforts to establish a community college in Idaho Falls. Mayor Casper provided some background on the idea and much enthusiasm about establishing a community college in Idaho Falls.

For the past several months, Idaho Falls Mayor Rebecca Casper has been spearheading a conversation among community leaders about the possibility of running a campaign to create a community college district. While this community group enthusiastically supports the concept, the creation of a taxing district in Idaho must be approved by two-thirds of the voters voting on the question. Mayor Casper envisions turning to a citizen based process in the coming months to study core concerns in establishing a community college.

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The Mayor identified the following three questions they feel are important before moving forward: Is this a good idea for eastern Idaho? If it's a good idea how do we do it? How much will it cost? They intend to pose those questions to a citizen panel for feedback. If the responses are supportive, Mayor Casper reported the Board will see her again on this issue and she is hopeful about the future for this idea.

She invited Board members to contact her about any information they would like and also encouraged the Board to share the ideas and enthusiasm for a community college in Idaho Falls. She also asked if the Board members would be willing to share and promote the community college vision within their areas of influence.

Representative Horman remarked that she and Senator Mortimer are very supportive of this conversation and idea. She remarked on the powerful sense of internal community at the College of Southern Idaho and how much a community college really contributes to a region's community and support of economic development. She remarked on how a community college in the area may create an entry point in eastern Idaho, offering a number of possibilities for how it might look.

Ms. Critchfield asked about a timeline. Representative Horman indicated they do not have a concrete timeline established yet, and their committee is working to fully develop ideas. Mr. Freeman asked if they have secured financial resources. Mayor Casper reported they have been able to pay for initial expenses from members on the committee, and have recently received two additional significant commitments going forward.

At the conclusion of this item, they returned to item number two on the agenda, followed by number four and so on.

2. President's Council Report

Dr. Tony Fernandez, current chair of the President's Council, provided a report to the Board on its recent meetings.

The December 1, 2015 meeting included a briefing by Janie Revier and Marilyn Whitney on upcoming legislative session and budgetary items. There was discussion about next spring and the formation of a Higher Education Task Force. Related to delegated authority, several items were discussed and most of the discussion centered around contracts and salaries. They discussed student health insurance and President Fernandez reported that all institutions are reporting problems with student health insurance requirements as they are currently formulated. Higher education week was discussed and the schedule was reviewed. Presidents will be speaking to the implementation and effectiveness for funding for CCI. Presidents recommended the Higher Education Impact Study be available for public consumption. They also discussed the CEC Committee and will work with the Executive Director on a coordinated approach. The presidents had brief discussion about reporting high visibility incidents at institutions to the Executive Director and Board. They discussed the Fair Labor Standards Act (FLSA) and the impact to institutions when those new rules come into effect. There was discussion about presidential compensation. The institutions were also asked to provide input to the Board regarding the direct admissions initiative initiated by the Board earlier this year; those comments were mostly very positive.

Mr. Freeman pointed out that the Board will need to be prepared to react to changes regarding the FLSA.

4. Delegation of Duties

Starting in August 2015, the Board discussed the potential of delegating some items that are currently reserved for Board approval. As part of the Presidents' Council Report during the October Board meeting, Presidents were asked to review and provide feedback on potential areas of delegation that were received from the Board committees.

Dr. Fernandez reported that the recommendation from the President's Council is to expand the ability for the President's to hire non-classified staff with multi-year contracts. Additionally, Presidents would like to

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have a threshold set for them to approve those types of contracts along with coach contracts. Coaching contracts were of particular interest. Mr. Satterlee offered some comments on how delicate but complicated high profile contracts can be. Additionally other high profile contracts would include purchasing; an example would be large food service contracts. The question posed back to the Board was what kinds of items would the Board want to see, and what kinds of items would they entrust the presidents to make decisions on.

Mr. Westerberg remarked there has been a fair amount of work done regarding athletic contracts. He felt the suggestions by presidents should be fully vetted in committee and still allow the Board to fully exercise its responsibility. Dr. Goesling described how the athletics committee approached the question and how they looked at the cap of the contract as a gauge, as well as the limitations on funding. He felt duplicative reports such as APR should also be looked at, and recommended each committee ask their stakeholders about the challenges, duplications, etc.

Ms. Bent requested feedback from the Board on general items of consensus identified in President's Council (such as coach contracts) which would require changes in order to have them ready to come before the Board in February. She reported how those items would move through various committees for additional discussion and work.

5. Teacher Pipeline Report

Ms. Tracie Bent provided an overview and historical background of the item, stating in August 2015, the Board approved a proposed rule reorganizing IDAPA 08.02.02 and discussed the miss-alignment of current certification practices with Idaho Administrative Code. Because of the complexity of the issue, staff wanted to give the Board many opportunities to think about and look at the data. The materials today contain the first look at the data available on Idaho's teacher pipeline and includes different pieces of the pipeline such as teacher prep and alternate routes to certification. The important piece for the Board's consideration is related to putting policies in place. Staff is working with stakeholder groups to bring forward information for the Board to consider at a future meeting that would allow the rulemaking process to advance forward under the timeline. She reiterated this item has such a broad scope and has such a huge impact on teachers and students, Board staff wanted to give the Board members ample time to digest the material.

Mr. Soltman pointed out one of the main issues is that certificates don't align with certain endorsements. Ms. Bent responded that based on how the law is currently written, the current practice is not in alignment. Mr. Soltman asked for a differentiation between housekeeping and policy change.

The group discussed some of the data and the variances in trends. Ms. Alison Henken from the Board office provided additional detail and explanation for the Board members. She reported they are seeing an increase in out of state credentials of teachers who are moving in from out of state. Dr. Hill asked if, related to the teacher shortage, we have an approximation of the right number of teachers to produce each year or a number near what would work for Idaho. Ms. Bent responded the State School Administrators Association has been working on that data. When asked for input, University of Idaho Dean of Education, Dr. Corrinne Mantle-Bromley added that there has been a significant increase in the number of principals and superintendents that are being hired without certification, then are coming to the university for certification. She added that critical shortages are in special education as well as professional-technical education, along with teacher shortages in rural areas. She commented that salary issues are also a big problem and certified teachers are going out of state for better salaries; teacher climate is also a consideration.

Dr. Clark suggested also reporting on minority and military teacher data, commenting it would be an important area to track. She would like to see the secondary and professional technical areas also broken out from the "all other" category.

6. State Comprehensive Literacy Plan

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M/S (Critchfield/Clark): To adopt the Idaho Comprehensive Literacy Plan as submitted in Attachment 1. The motion carried unanimously.

Ms. Alison Henken from the Board office, provided a report on the State Comprehensive Literacy Plan. She reported that due to the length of time since the initial plan was written and approved by the Board and the extent of revisions necessary to update it, the Literacy Implementation Committee is submitting a new Idaho Comprehensive Literacy Plan to replace, rather than revise, the 1998 plan.

One focus of the new plan is how to support literacy statewide, and that every stakeholder has a responsibility toward that initiative. Ms. Henken outlined the go-on purpose of the plan and assessment data. This plan is built around literacy growth for all Idaho students. She pointed out the *Developing Literacy* section intends to provide the reader with a strong overview of how a child develops literacy skills; the section is heavily based on science, and provides examples of how a child develops skills through various stages of literacy development.

The third section, *Essential Elements*, is the heart of the plan and discusses what we should be doing to support literacy development. Ms. Henken summarized each element of the *Essential Elements* section. Under the *Developing Professional Educators* element, she pointed out on tab 6 page 30 in the *Higher Education* section, it addresses the need for educator programs to ensure educators are prepared to provide instruction that addresses the Idaho Literacy Standards for Educator Preparation. A copy of the standards are provided in the Appendices. Ms. Henken pointed out the document appendix includes a substantial proposed change to the standards, specifically the addition of a new standard outlining the teaching of the writing process. This recommendation was provided by the Idaho Higher Education Literacy Partnership and supported by the Idaho Association of the Colleges of Teacher Education.

Mr. Soltman asked if by approving the plan the Board, by default, approves the new method of teaching. Ms. Bent responded that once the plan is approved the standards incorporated by reference in the rules will need to be reviewed and amended accordingly; it would then come forward as an administrative rule. Ms. Henken added that the Idaho Higher Education Literacy Partnership and the Idaho Association of the Colleges of Teacher Education are looking at all of the rules associated to literacy, teacher preparation, and requirements relative to literacy, and will be providing recommendations around those rule changes next Spring.

Dr. Goesling asked about remediation available for home schooled students. Ms. Henken responded that the Board of Education has no governance over home schooling. The committee discussed the issue, but decided not to include any recommendations in the report specific to home schooling because of the lack of governance. They did discuss effective interventions for students and a separate recommendation was made requesting substantial financial support for literacy interventions, along with strategies for identifying students who need remediation, and ensuring those students receive timely and effective interventions.

Ms. Ybarra asked about teachers being part of the Literacy Committee and commented that the Idaho Reading Indicator (IRI) needs to be used for student assessment rather than teacher evaluations. Ms. Henken responded, clarifying there was a superintendent and charter school teacher included on the Literacy Committee. She also addressed the IRI concerns and how recommendations are being developed to meet the state's needs. Ms. Ybarra requested that her staff be part of the process with this plan.

Dr. Clark complemented the Literacy Committee for its work on the Plan. She recommended strategies be developed to acquaint people (public) and educators with this plan. Ms. Henken commented that the Committee will be working on integrating it into professional development and the details clarifying the process of implementation. Dr. Clark also commented on non-certified, non-classified librarians, and felt they cannot understate the need for training of certified librarians.

Mr. Freeman reported meeting with the Idaho Business for Education (IBE) group on this Literacy Plan

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who pointed out it is very strong, but recommended the plan have measurable goals. Board staff has asked the IBE for assistance in crafting some measurable goals for this plan.

Ms. Critchfield directed the Literacy Committee to set benchmarks and develop a timeline, along with work on measureable goals. She also complemented Ms. Henken and the Literacy Committee for their work on this in plan.

7. Amendment to Board Policy I.E. Executive Officers – First Reading

BOARD ACTION

M/S (Critchfield/Goesling): To approve the first reading of proposed amendments to Board Policy section I.E. Executive Officers, incorporating the reporting requirement, as submitted in Attachment 1. The motion carried unanimously.

8. Amendment to Board Policy I.Q. Accountability Oversight Committee – First Reading

BOARD ACTION

M/S (Critchfield/Clark): To approve the first reading of amendments to Board Policy I.Q. Accountability Oversight Committee as submitted in Attachment 1. The motion carried unanimously.

At this time, the Board moved to the State Department of Education's portion of the agenda.

DEPARTMENT OF EDUCATION (SDE)

1. Superintendent's Update

Superintendent Ybarra introduced Mr. Peter Zamora, Director of Federal Relations at the Council of Chief State School Officers (CCSSO), who reported President Obama signed into law the Every Student Succeeds Act (ESSA) today. Mr. Zamora provided a high-level summary of the legislation pointing out it received broad support in the House and Senate. He indicated guidelines for states are available, and shared a legislative timeline on the item. He indicated this legislation is intended to restore authority to states and offers more stability and flexibility for states, while increasing access to federal funds. He reported the intent is to maintain current assessment requirements but allows for innovative assessment systems. It requires state systems to be designed for 95% test participation but allows states to determine how to integrate into state accountability systems. The hope is to develop a system that is more responsive to local needs.

Mr. Zamora did point out the importance of meeting the federal requirements, and that the transition period may be a complex one for states to meet those requirements. He discussed accountability whereby states set long-term goals and interim targets for all subgroups on six different elements. The six elements include academic proficiency on state assessments, graduation rates for high schools, English language proficiency, student growth, one state-set indicator of school quality or student success, and a 95% assessment participation. Mr. Zamora reported on the school improvement category and that there are no models or specified interventions. He reported they are seeking targeted school improvement for under performing schools and envision comprehensive support and improvement to help schools get better.

Mr. Zamora reported on teacher evaluation and support which permits but does not require funds be used to implement specific teacher evaluation measures. It reauthorizes the Teacher Incentive Fund which is a competitive grant for teacher evaluation systems.

Mr. Zamora outlined the transition timeline which requires testing and reporting in 2015-16, 2016-17; and holds interventions constant over this time period. The new state plans would go into effect in SY 2017-18. More specific details have been provided to the State Department of Education. He indicated that no

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state will meet the current accountability requirements under the new law. He pointed out the Elementary and Secondary Education Act (ESEA) flexibility waiver will expire next August. In the Spring of 2017, the US Department of Education will review accountability workbooks. Mr. Zamora recommended familiarizing ourselves with the contents of the new law, and understanding the accountability measures, and to start to engage people and develop coalitions to move forward. He closed by saying they are there to support us and help answer questions and provide information.

2. ESEA Flexibility Waiver - Draft of Mutually Responsible Accountability System

Ms. Marcia Beckman, Associate Deputy Superintendent for the Department, provided an overview of the new guiding principles for Idaho's Mutually Responsible Accountability Plan for Districts and Schools. She reported that the Every Student Succeeds Act (ESSA) replaces the Elementary and Secondary Education Act (ESEA) as reauthorized by No Child Left Behind Act. Idaho will no longer operate under the ESEA flexibility waiver. The current system is replaced by a state defined index system with certain federally required components. She reviewed what has changed. She reported the Secretary of Education's authority has been limited whereby the federal government can no longer prescribe the goals of progress and measurement, and cannot prescribe specific assessments. Additionally, they cannot require that teacher evaluations be tied to the state assessment, and they cannot prescribe the 95% participation be punitive, or designate schools be sanctioned in the state.

Ms. Beckman outlined what is new that includes Idaho setting ambitious and realistic long-term goals and measures on interim progress for students and subgroups in a number of areas including academic achievement and growth on state assessments, graduation rates, interim progress in achieving English language for proficiency, and measures of school quality and student success. She outlined what districts can do which includes setting measures on interim progress for their schools. She pointed out the district's overall measures will be set by the state. Ms. Beckman provided a visualization of the state index that included indicators and types of schools. She also reviewed issues with the five star system based on stakeholder feedback.

Dr. Clark asked if there are provisions in the new law for alternative schools. Ms. Beckman responded they have not heard of such provisions yet, but they hope to have flexibility at the state level for alternative schools.

Ms. Beckman summarized that the Idaho Department of Education really wants the districts, the Department, the Board, all to move together toward something that is mutual. She remarked that the new flexibility and requirements for the accountability system provides an opportunity moving forward.

For the assessment update, Superintendent Ybarra requested it be moved to the February meeting at which time a deeper look at the SBAC will be provided. Ms. Ybarra introduced the Department's new Assessment Director, Dr. Cheryl Findley, who gave a brief update on the SBAC testing. She pointed out that as predicted, some of the changes have been difficult for administrators and educators. She said the Spring testing should be much smoother as some of the issues have been worked through this first year. She pointed out some of the solutions to issues will be increasing the amount of time and type of training for administer the assessment, and working with schools and districts prior to the training; there will be five training sessions held throughout the state. They will also continue to provide helpdesk and customer service during the testing window. She reviewed feedback which ranged from not making any more changes to the test, to not having testing at all. One independent report by CCSSO polling the teachers of the year found that the assessment is challenging and is aligned with the standards, and it is a measure of student ability to synthesize and apply the information they have learned. The Department is also staying focused on professional development opportunities and to make sure those opportunities are broadcast. They are also looking at opportunities for teachers to earn higher wages. Dr. Findley reported they will have an Alternate Assessment Coordinator start this Fall, along with an English Language Learning Coordinator starting in February who also does college and career readiness. She reported this year they will be giving a new alternate assessment and a new English Language Learners (ELL) assessment.

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At 12:06 p.m. Mountain Time the meeting recessed for lunch. President Soltman requested the meeting reconvene at 1:00 Mountain Time.

AUDIT

1. FY 2015 Financial Statements

BOARD ACTION

M/S (Atchley/Goesling): To accept from the Audit Committee the Fiscal Year 2015 financial audit reports for Boise State University, Idaho State University, University of Idaho, Lewis-Clark State College, and Eastern Idaho Technical College, as submitted by Moss Adams LLP. The motion carried unanimously.

Mr. Herbst reported on November 10, 2015, Moss Adams reviewed their audit findings with members of the Audit Committee and Board staff. He reported that all five of the institutions were given a clean report card and are to be commended. He also indicated they received positive feedback from Moss Adams on the cooperation from the institutions on this process. Ms. Atchley also commended the institutions for their work. Mr. Soltman noted the clean report was partially due to the quarterly reporting process.

2. FY 2015 Net Position Balances

Mr. Herbst indicated the net position balances as of June 30, 2015 are shown in the attachments to the agenda materials; there is a break-out for each institution. Staff provided a brief analysis of the institutions respective unrestricted net position. Mr. Herbst pointed out that Board policy requires all institutions to aim for 5%, and presently they have all reached and sustained that level. Dr. Goesling asked what is included in the "other" category. Mr. Herbst responded it varies by institution and is at the discretion of the institutions. Dr. Goesling asked for a footnote to address a breakout of anything over 5% in the "other" category. Mr. Herbst responded he would provide that request to the FVPs and the BAHHR committee.

3. FY 2015 Financial Ratios

Mr. Herbst indicated the financial ratios for each institution are shown in the attachments to the agenda materials. He provided a recap pointing out that the ratios and analyses are provided to the Board as an indicator of the financial health and relative efficiency of each institution. Mr. Herbst provided a brief analysis of institution financial ratios starting with a definition of the four ratios comprising the Composite Financial Index. He pointed out that a score of three indicates a threshold of financial health.

Mr. Westerberg remarked on how helpful the ratios are for the Board. He asked BSU about their net operating revenue performance in 2014-15. Ms. Stacy Pearson from BSU responded it is an indication of how they built up their reserves. She added the investments were good investments, but it will take them a couple of years to get up to the benchmark.

4. Eastern Idaho Technical College Foundation Operating Agreement

BOARD ACTION

M/S (Atchley/Goesling): To approve the amended operating agreement between Eastern Idaho Technical College and the Eastern Idaho Technical College Foundation, as submitted in Attachment 1. The motion carried unanimously.

Mr. Herbst reported foundation agreements are to be approved by the Board and reviewed every three to five years.

5. Amendment to Board Policy V.H. Audits – First Reading

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BOARD ACTION

M/S (Atchley/Hill): To approve the first reading of the proposed amendment to Idaho State Board of Education Policy V.H., as presented in Attachment 1. The motion carried unanimously.

Mr. Herbst reported at its June 2015 meeting, the Audit Committee discussed how it handles Legislative Services Office (LSO) audits of agencies under the jurisdiction of the Board. The Committee recommended revising Board policy to delegate review of LSO audit reports to the Executive Director unless a material weakness or significant deficiency was included in the audit report.

BUSINESS AFFAIRS & HUMAN RESOURCES (BAHR)

Section I – Human Resources

1. Idaho State University – Establish Position – Vice President for Health Sciences

BOARD ACTION

M/S (Westerberg/Atchley): To authorize Idaho State University to establish a position of Vice President for Health Sciences. The motion carried unanimously.

Mr. Westerberg indicated ISU has brought forward a request to authorize establishment of the position of Vice President for Health Sciences. It would create a sixth vice president position at ISU (assuming that the subsequent reorganization will leave the current five vice president positions essentially intact).

Section II – Finance

1. Amendment to Board Policy – Section V.B. – Budget Policies – Second Reading

BOARD ACTION

M/S (Westerberg/Hill): To approve the second reading of proposed amendments to Board policy V.B., Budget Policies, as presented in Attachment 1. The motion carried unanimously.

Mr. Westerberg indicated approval of the proposed amendments would clarify occupancy costs procedures and formalize the ongoing program prioritization process.

2. Amendment to Board Policy – Section V.R. Establishment of Fees – Second Reading

BOARD ACTION

M/S (Westerberg/Hill): To approve the second reading of proposed amendments to Board policy V.R., Establishment of Fees, as presented in Attachment 1. The motion carried unanimously.

Mr. Westerberg indicated there were no changes between first and second reading.

3. University of Idaho – Capital Project – Renovation and Modernization of the Wallace Residence Center, Construction Phase

BOARD ACTION

M/S (Westerberg/Atchley): To approve the request by the University of Idaho to implement the construction phase for the renovation and modernization of the Wallace Residence Center at a cost not to exceed \$5.0M. Project approval includes the authority to execute all necessary and requisite consulting contracts to fully implement the construction phase of the project. The motion carried unanimously.

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Mr. Ewart from the University of Idaho (UI) indicated they are requesting authorization to proceed with the finance plan and construction phase of a Capital Project to implement the construction phase for renovation and modernization of twelve floors in various wings of the Wallace Residence Center. It is the intent of the university to pursue this project effort via the Design-Build delivery methodology. Mr. Ewart provided a brief overview of the project and reported on the urgency to move forward with it, stating the need for the beds at the residency center.

4. University of Idaho – Self-support Fee Request for Education Ph.D. Specialization of Higher Education Leadership

BOARD ACTION

M/S (Westerberg/Atchley): To approve the request by the University of Idaho to establish its Higher Education Leadership Ph.D. specialization as a self-support academic program with a self-support fee set at \$36,000 for the four-year program. The motion carried unanimously.

Mr. Westerberg indicated the University of Idaho is requesting approval of a self-support fee for the Education Ph.D. Specialization of Higher Education Leadership. Ms. Atchley asked for clarification on the fee and whether the university would have the opportunity to modify it over time. Mr. Herbst responded the fee will be set at \$36,000 per student and will remain until the Board approves a change; there is a three year rolling evaluation of the program and fees. Mr. Freeman pointed out that Board policy V.R. was amended several years ago to specifically address self-support fees, that they would require a three year rolling evaluation.

Dr. Goesling asked if there were enough students to support this program. Dr. Mantle-Bromley responded that there is a significant demand for the program.

5. Idaho State University Foundation – Expansion of Bengal Pharmacy Operations

BOARD ACTION

M/S (Westerberg/Hill): To approve the request by the Idaho State University Foundation to establish a Bengal Pharmacy telepharmacy site in Council, Idaho, as described in the materials submitted to the Board. The motion carried unanimously.

Mr. Westerberg indicated ISU is requesting approval of expansion of Bengal Pharmacy's Telepharmacy Services. Approval would allow for Bengal Pharmacy to expand its telepharmacy services to Council, Idaho. Rex Force and Doug Sayer from the ISU Foundation Board of Directors provided a report to the Board on the update and expansion request. Mr. Force remarked they have three goals which are to provide educational experience to students, provide an innovation and research lab for faculty, and to generate revenue for the Foundation and university for the benefit of students and academic programs. Mr. Force commented on the current status of the Bengal Pharmacy and on the importance of these pharmacies to the communities they serve, pointing out there is also an important relationship between the pharmacy and the residents of these rural communities. Mr. Force added they often receive requests for expanding their pharmacy services. The Council expansion is in partnership with the Adams County Health Center; Adams County lost their only pharmacy services two years ago.

Mr. Westerberg suggested BAHF formulate a policy whereby Bengal Pharmacy could expand in rural areas without seeking Board approval.

INSTRUCTION, RESEARCH & STUDENT AFFAIRS (IRSA)

1. Idaho State University – Memoranda of Understanding with South Dakota State University and Brigham Young University Idaho

Dr. Woodworth-Ney provided an overview of the item. She reported that Idaho State University (ISU) will

BOARDWORK FEBRUARY 17, 2016

be entering into agreements with South Dakota State University (SDSU) and Brigham Young University Idaho (BYUI). These agreements will promote greater educational and career opportunities for students and will develop further collaboration between ISU and the two universities. She pointed out that the agreement between ISU and BYUI would allow students to complete ISU Master's degree programs in an accelerated manner, resulting in the potential for students to earn both a Master's degree program from ISU and a Bachelor's degree from BYUI in five years. The agreement between ISU and SDSU will support dual academic programs in an effort to better serve students desiring fundamental knowledge in physics as well as pursuing careers in nuclear engineering. This agreement would allow students to earn a Bachelor of Science (BS) degree in Physics from SDSU and a Master of Science (MS) degree in Nuclear Science and Engineering from ISU in five years.

Dr. Woodworth-Ney pointed out the collaborative partnership with SDSU will enhance STEM training for students and the partnership with BYUI will promote accelerated educational opportunities for BYUI undergraduate students and give them access to ISU graduate programs. Additionally, these partnerships were shared with the IRSA committee who recommended they be shared with the entire Board.

Dr. Hill applauded ISU for moving in this direction to provide broader opportunities for students in Idaho.

2. University of Utah School of Medicine (UUSOM) – Annual Report

Dr. Mathias provided an overview of the UUSOM report and pointed out a few of the particularly noteworthy items of the report. He indicated this is the third straight year they have received at least 100 applicants to the program. Related to rural placement through the rural observational experience, UUSOM will continue to support students who wish to participate in this opportunity by educating them on this option, assisting them to find a rewarding rural placement in a specialty they are interested in and providing access to a stipend to offset costs. Dr. Mathias pointed out the pages containing the 2014-15 financial report, followed by the school of medicine graduate report sponsored and non-sponsored students on the following page. He also pointed out the pages containing the resident graduate report of those students who chose to practice medicine in Idaho and what specialty area they pursued.

Mr. Westerberg requested a comparison of the rate of return between UUSOM and WWAMI students to Idaho. Mr. Freeman pointed out that UUSOM doesn't track Idaho sponsored students which makes reporting challenging, adding they would like to get that information from the Idaho Board of Medicine but were having difficulty. Mr. Freeman indicated staff would try to get better information through the Board of Medicine. Dr. Goesling requested seeing more information on rural placements. Mr. Freeman said he did speak with Dr. Chan about increasing the number of rural clinical experiences and could include that request when we renew our contract. Mr. Freeman reported Dr. Chan informally agreed they can do more intervention earlier on with the students by encouraging them to participate in rural experiences.

3. Board Policy III.P.16 – Partial Waiver – Students, Student Health Insurance

BOARD ACTION

M/S (Hill/Atchley): To waive paragraph 16.b.i. and paragraph 16.b.iv. of Board policy Section III.P. Students, as presented, delegating to institution presidents the authority to deal with individual or group cases of non-compliance, until September 1, 2016 or approval of a revised Board policy on Student Health Insurance, whichever shall occur first. The motion carried unanimously.

Mr. Herbst reported this proposed waiver addresses two issues with the student health insurance policy. First, it corrects an inaccuracy whereby the current policy does not reflect the actual provisions of the Affordable Care Act (ACA). The second issue is that many students with limited financial means have fallen into the "coverage gap" where their income is too high to qualify for Medicaid, but too low to qualify for federal subsidies. The effect of the waiver is to provide students the flexibility to deal with situations related to health insurance. He commented on the urgency of this waiver to help hundreds of students at the four year institutions right away. It will also provide a window in which a revised policy can be drafted, coordinated, and approved.

BOARDWORK
FEBRUARY 17, 2016

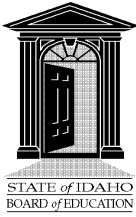
OTHER BUSINESS

There being no further business, a motion to adjourn was entertained.

M/S (Goesling/Hill): To adjourn the meeting at 2:20 p.m. Mountain time. The motion carried unanimously.

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BOARDWORK FEBRUARY 17, 2016



STATE BOARD OF EDUCATION
TRUSTEES OF BOISE STATE UNIVERSITY
TRUSTEES OF IDAHO STATE UNIVERSITY
TRUSTEES OF LEWIS-CLARK STATE COLLEGE
BOARD OF REGENTS OF THE UNIVERSITY OF IDAHO
STATE BOARD FOR PROFESSIONAL-TECHNICAL EDUCATION

DRAFT MINUTES IDAHO STATE BOARD OF EDUCATION January 11, 2016 Office of the State Board of Education Len B. Jordan Building, 3rd Floor Boise, Idaho

A special meeting of the Idaho State Board of Education was held January 11, 2016 at the Office of the State Board of Education in Boise, Idaho. Board President Don Soltman presided, called the meeting to order at 4:00 pm Mountain Time, and requested a roll call of members.

Present:

Don Soltman, President	Dave Hill
Emma Atchley, Vice President	Richard Westerberg
Bill Goesling, Secretary	Debbie Critchfield
Linda Clark	

Absent:

Sherri Ybarra, State Superintendent

PLANNING, POLICY & GOVERNMENTAL AFFAIRS

1. Governor's 2016 Education Budget Recommendations and Initiative

BOARD ACTION

M/S (Critchfield/Westerberg): To endorse Governor Otter's FY 2017 budget recommendations and FY 2016 legislative initiatives outlined in Attachments 1 through 8. A roll call vote was taken and the motion carried unanimously 7-0. Superintendent Ybarra was absent from voting.

Board member Critchfield introduced the item indicating the Board members received copies of the Governor's proposed FY 2017 budget and FY 2016 legislative initiatives as part of the agenda materials. The initiatives are intended to move Idaho forward toward realization of the Board's 60% goal as well as recognizing the need of educational programs that focus on workforce needs. The board members were enthusiastically supportive of the Governor's recommendations.

There was some discussion on the Governor's Tuition Lock proposal. Mr. Chet Herbst, Chief Fiscal Officer from the Board, provided what clarification he could, reminding Board members there are many details that still need to be worked out, along with what the legislature recommends.

OTHER BUSINESS

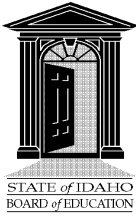
There being no further business, a motion to adjourn was entertained.

BOARDWORK
FEBRUARY 17, 2016

M/S (Westerberg/Atchley): To adjourn the meeting at 4:12 p.m. The motion carried unanimously.

BOARDWORK

FEBRUARY 17, 2016



STATE BOARD OF EDUCATION
TRUSTEES OF BOISE STATE UNIVERSITY
TRUSTEES OF IDAHO STATE UNIVERSITY
TRUSTEES OF LEWIS-CLARK STATE COLLEGE
BOARD OF REGENTS OF THE UNIVERSITY OF IDAHO
STATE BOARD FOR PROFESSIONAL-TECHNICAL EDUCATION

DRAFT MINUTES IDAHO STATE BOARD OF EDUCATION January 21, 2016 Office of the State Board of Education Len B. Jordan Building, 3rd Floor Boise, Idaho

A special meeting of the Idaho State Board of Education was held January 21, 2016 at the Office of the State Board of Education in Boise, Idaho. Board President Don Soltman presided, called the meeting to order at 1:30 pm Mountain Time, and requested a roll call of members.

Present:

Don Soltman, President	Dave Hill
Emma Atchley, Vice President	Richard Westerberg
Bill Goesling, Secretary	Debbie Critchfield
Linda Clark	

Absent:

Sherri Ybarra, State Superintendent

PLANNING, POLICY & GOVERNMENTAL AFFAIRS

1. Governor's 2016 Education Budget Recommendations and Initiative

BOARD ACTION

M/S (Critchfield/Clark): BOARD ACTION

I move to endorse the Senate concurrent resolution proposed by Lieutenant Governor Brad Little in support of the 60% goal as provided in Attachment 1. A roll call vote was taken and the motion carried unanimously 7-0. Superintendent Ybarra was absent from voting.

Board member Critchfield introduced the item indicating the Lieutenant Governor, Brad Little, has proposed a Senate Concurrent Resolution in support of the State Board of Education goal which was included in the agenda materials for review. This Resolution allows the legislature to take the formal position of supporting the goal. The purpose of presenting the resolution to the Board is to provide the Board to take a formal position regarding the specific resolution.

OTHER BUSINESS

There being no further business, a motion to adjourn was entertained.

M/S (Hill/Goesling): To adjourn the meeting at 1:33 p.m. The motion carried unanimously.

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**WORK SESSION
FEBRUARY 17, 2016**

TAB	DESCRIPTION	ACTION
A	BOARD MEMBER PROFESSIONAL DEVELOPMENT	Information Item

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WORKSESSION
FEBRUARY 17th, 2016

SUBJECT

Idaho State Board of Education – Board Member Professional Development

BACKGROUND/DISCUSSION

The February 17th Board Work Session will be dedicated to Board member professional development. Dr. Thomas C. Meredith, Senior Fellow, from the Association of Governing Boards (AGB) will facilitate the work session. Topics will include Board fiduciary duties, presidential evaluations, and compensation philosophy for presidents.

The work session will provide the Board with a unique opportunity to interact with an expert consultant. Dr. Meredith has served as a university president and as the head of three university systems. Most recently he served as Commissioner of Higher Education for Mississippi's university system of eight universities. In January 2002, he was appointed chancellor for the University System of Georgia, responsible for the state's 34 public colleges and universities. Prior to this appointment, he served as chancellor of the University of Alabama System, as well as president and professor of education at Western Kentucky University. He also was a vice chancellor at the University of Mississippi. He began his career as a high school teacher and later served as a high school principal. Dr. Meredith consults in the areas of presidential mentoring, development and performance appraisal (more than 70 presidents have reported to him); presidential compensation; leadership training; board development and self-evaluation; board relations; and multi-institutional system matters.

Dr. Meredith holds a BA from Kentucky Wesleyan College, an MA from Western Kentucky University, and an EdD from the University of Mississippi. He completed the Institute for Educational Management at Harvard University and the Higher Education Roundtable at Oxford University.

STAFF COMMENTS AND RECOMMENDATIONS

Based on comments and questions from Board members about roles and responsibilities, the Executive Director determined that a professional development session would be beneficial. Providing this opportunity at this time will also allow the Board to discuss added processes to the presidential evaluations scheduled in May.

BOARD ACTION

This item is for informational purposes only. Any action will be at the Board's discretion.

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**CONSENT AGENDA
FEBRUARY 18, 2016**

TAB	DESCRIPTION	ACTION
1	BAHR – FOOD SERVICE CONTRACT WITH ARAMARK EDUCATIONAL SERVICES	Motion to Approve
2	PPGA – BOISE STATE UNIVERSITY – MICRON FACILITY NAMING	Motion to Approve
3	PPGA – BOISE STATE UNIVERSITY – MICRON SCHOOL NAMING	Motion to Approve
4	PPGA – ALCOHOL PERMITS – PRESIDENT APPROVED REPORT	Information Item

BOARD ACTION

I move to approve the Consent Agenda as presented.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

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**CONSENT AGENDA
FEBRUARY 18, 2016**

BOISE STATE UNIVERSITY

SUBJECT

Food service contract with Aramark Educational Services

REFERENCE

April 2006	Idaho State Board of Education (Board) delegated approval authority to the Executive Director of the State Board of Education for the food service contract with Aramark Educational Services, LLC (Aramark)
July 2006	Executive Director for the Board approved food service contract with Aramark

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies and Procedures, Section V.I.6.b

BACKGROUND/DISCUSSION

On July 1, 2006, Boise State University (BSU) entered into a five year contract with five optional one year renewals with Aramark. The current food service contract with Aramark expires on June 30, 2016.

The food service contract is an exclusive contract to provide food service to BSU community. It encompasses dining services for residents, commuters and visitors, as well as catering, vending and concessions. The food service provider works as a partner with BSU to maximize quality while holding costs for students and customers to an acceptable level.

BSU issued a request for proposals (RFP) in January 2015. Proposals were received in March 2015 from Aramark and Compass, both major national college food service providers. The goals of the RFP were to increase financial return to BSU, increase student and client satisfaction, and ensure prudent management in regards to the environmental, economic and social sustainability of dining services. The bid process utilized a best value procurement strategy and Aramark was selected based on quality, expertise and price. BSU conducted the clarification phase with Aramark in May 2015. In January 2016, Boise State issued a Letter of Intent to Award to Aramark.

The contract is estimated to generate approximately \$14 million in annual sales, of which \$3 million is revenue to BSU. Projections may vary due to current and future construction projects that are directly linked to food service on campus. Revenues are a combination of commissions paid by the food service vendor for retail, catering, vending, concessions and net revenues generated from board dining. BSU and Aramark work collaboratively to make every effort to improve on

**CONSENT AGENDA
FEBRUARY 18, 2016**

projected sales, which in turn increases revenue to BSU. Revenues from the contract support operations and programs in Student Housing, Student Life, the Student Union Building, the Taco Bell Arena, Athletics and the College of Business and Economics.

Future projects may include a Residential Honors College facility through a public-private partnership with an anticipated completion date of August 2017. BSU will facilitate discussions between private management and contractor for potential agreements.

The procurement process conducted through Boise State's Department of Purchasing has been methodical and extensive. BSU is confident this process will result in a contractual relationship with the provider who best meets BSU's needs.

The terms agreed upon include:

1. Contract term is 5 years with optional 5 one-year renewals.
2. Aramark will operate Boise State University board dining, retail, catering, concessions, vending, and alcohol sales.
3. Aramark will pay Boise State a commission on all sales except for board dining, in which they are paid a per patron fee based on the specified dining plan.
4. Boise State provides an estimated \$470,000 in flexible spending for dining options to boarding dining students a year.
5. Aramark will be responsible for all costs of food service operations.
6. Total revenue in FY17 to the university is estimated to be \$3 million.
7. Aramark has committed an investment of \$8.3 million in capital and other investments and sponsorships over the life of the contract, 10 years.

Investments to Boise State University:

- Capital Investment Grants: \$2 million years 1-5
- Capital Investment Grants: \$2 million years 6-10
- Board Dining: \$450,000
- Albertson's Stadium and Taco Bell Arena Concessions: \$500,000
- Retail: \$2.4 million years 1-5
- Retail: \$1 million years 6-10

IMPACT

The quality, variety and perceived value of the food service on campus are all important components to the success of the associated programs and BSU as a whole. Continuing to improve each of these aspects of the contract will enhance revenue-generating capability and better serve the campus community by providing quality food service to students, faculty, staff and visitors.

**CONSENT AGENDA
FEBRUARY 18, 2016**

ATTACHMENTS

Attachment 1 – Proposed Contract

Page 5

STAFF COMMENTS AND RECOMMENDATIONS

Staff recommends approval.

BOARD ACTION

I move to authorize Boise State University to enter into a food service contract with Aramark in conformance with the contract in Attachment 1.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

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BOISE STATE UNIVERSITY

FOOD SERVICES CONTRACT BETWEEN ARAMARK EDUCATIONAL SERVICES, LLC AND BOISE STATE UNIVERSITY

RFP #TS15-058

Effective Date: July 1, 2016

DRAFT

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This Food Services Contract (the “Food Services Contract”) is entered into effective the 1st day of July, 2016, between Aramark Educational Services, LLC (“Aramark” or “Vendor” or “Contractor”) and Boise State University, a state of Idaho public institution of higher education.

Scope of Agreement

University issued its Request for Proposal in respect to University Dining Service (RFP #TS15-058) (the “RFP”) to establish a contract for exclusive management and operation of dining services on the Boise State University main campus. The RFP, Aramark’s Proposal in response to the RFP, including the Risk Assessment attached thereto and the Q&A submitted in connection therewith (the “RFP Response”), are incorporated herein. This Food Services Contract, together with the Modified State of Idaho Terms and Conditions, comprise the entire agreement between the Parties (the “Agreement”). Any inconsistency between or among any of the above incorporated documents will be decided in the following order of precedence:

1. The Food Services Contract;
2. Modified State of Idaho Terms and Conditions;
3. The RFP; and
4. The RFP Response.

1. PARTIES

1.1 ARAMARK EDUCATIONAL SERVICES, LLC (“Aramark”, “Vendor”, “Contractor”)

1.2 BOISE STATE UNIVERSITY (“Boise State”, “University”)

2. SCOPE OF WORK

University issued a Request for Proposal in respect to University Dining Services (RFP #TS15-058) (“RFP”) in respect of which Aramark was awarded the contract. This Food Service Contract Agreement comprises the agreement among the parties.

The initial term of the Agreement will be for a period of five (5) years, commencing July 1, 2016, through June 30, 2021. Subject to Section 4.1, the term of the Agreement may be automatically extended for five (5) one (1) year renewals. For financial reporting purposes, the financial reporting year is a period of twelve months commencing July 1 of one year and ending on June 30 in the immediately succeeding year. The maximum duration of this Agreement, including initial term and extensions, shall be ten years.

2.1 BACKGROUND/SCOPE OF SERVICES EXPECTATIONS AND REQUIREMENTS

The Boise State University (herein referred to as the University) is contracting for the exclusive management and operation of dining services on its main campus except as described within or exempted by the Vendor. The University is awarding this project to Aramark based on the requirements in the RFP solicitation.

The University’s goals of this contract are to:

1. Increase Financial Return to the University
2. Increase Satisfaction (University, Student, and University Clients)
3. Ensure prudent management in regards to sustainability of Dining Services

environmentally, economically, and socially

- 2.1.a. The Vendor shall require employees and volunteer organizations to comply with all instructions, regulations, and codes of conduct as specified by the University. All Vendor employed personnel and volunteer organizations shall be subject to University policies, rules and regulations in effect for all University employees while working on the Premises, including personal behavior and the use of University property.
- 2.1.b. The \$547,500 of unamortized investment from the previous contract (the "Prior Investment") will continue to be amortized per the provisions of the previous contract. The Prior Investment is amortized at \$7,500 per month ending July 2022. Upon expiration or termination of this Agreement by either party for any reason whatsoever prior to the complete amortization of the Prior Investment, University shall reimburse Aramark for the unamortized balance of the Prior Investment as of the date of expiration or termination. In the event such amounts owing to Aramark are not paid to Aramark within thirty (30) days of expiration or termination, University agrees to pay interest on such amounts at the Prime Rate plus two percentage points per annum, compounded monthly from the date of expiration or termination, until the date paid. The right of Aramark to charge interest for late payment shall not be construed as a waiver of Aramark's right to receive payment of invoices within thirty (30) days of the invoice date.
- 2.1.c. The University is currently considering potential public/private partnership agreements in future building projects. These buildings, while managed by a private company, are exempt from this contract. The University may facilitate discussion between private management and Vendor for potential agreements.
- 2.1.d. The University has a contract for exclusive beverage rights with The Coca-Cola Company and Swire Coca-Cola through June 30, 2018 with five (5) additional one (1) year renewal options. Vendor is required to adhere to all aspects of this established contract and any subsequent Beverage Rights contracts entered into during the Term of this Agreement, provided that any subsequent Beverage Rights contract does not materially alter Vendor's rights and obligations under this Agreement without vendor consent.

2.2 SCOPE OF SERVICES

The scope of the contract shall include management and operation of retail, board dining, catering, concessions, food vending, and alcohol sales as outlined below.

2.2.1 Retail

The scope of the contract shall include management and operation of the retail dining locations. The Vendor shall provide and maintain a mix of proprietary brands and national/regional/local brands designed to satisfy the wide range of food preferences in the campus community. The University reserves the right (up to 3 times per year) to bring external vendors to campus for events (e.g. a food truck rally) at the sole discretion of the University. Aramark will manage the retail venues as follows:

CONCEPT	1	2	3	4	5	6	7	8
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**CONSENT AGENDA
FEBRUARY 18, 2016**

ATTACHMENT 1

ANNUAL SALES PROJECTIONS:	447,000	323,000	426,000	327,000	402,000	377,000	408,000	79,000
MINIMUM ANNUAL GUARANTEE:	37,995	27,455	36,210	27,795	25,628	32,045	34,680	6,715
COMMISSION % ON SALES:	10.0%	10.0%	10.0%	10.0%	7.5%	10.0%	10.0%	10.0%
CONCEPT	9	10	11	12	13	14	15	16
ANNUAL SALES PROJECTIONS:	392,000	444,000	596,000	228,000	189,000	253,000	203,000	60,000
MINIMUM ANNUAL GUARANTEE:	33,320	28,305	50,660	19,380	24,098	16,129	12,941	7,650
COMMISSION % ON SALES:	10.0%	7.5%	7.5%	10.0%	15.0%	7.5%	7.5%	15.0%

NOTES/CLARIFICATIONS

1. Sales Projections and related minimum annual guarantee include additional Bronco Bucks on mandatory plans as noted in Amendment 1- Vendor Q&A (TS15-058), Question 8. Sales and guarantee do not include flex attached to the meal plan, which would be included in board plan return.
2. Any Subcontracted Concepts will have a 15.0% commission return to the University on actual net sales
3. Minimum Annual Guarantee is based on 85.0% of actual projected commissions, with preference to guarantee overall commission total as noted in Amendment 1-Vendor Q&A (TS15-058), Question 60. Guarantee expected to increase annually throughout term.
4. Cash Door Sales at the BRC are included in Board Revenue and are commissionable sales at 15.0% with a minimum guarantee of \$17,700.

Concepts 3, 4, 9 and 12 are pending approval based on market research data vendor is compiling. These final concept decisions will be mutually agreed upon based on market research outcomes. Menus and pricing are in Exhibit 1.

CONCEPT #1: Subway

CONCEPT DESCRIPTION (50 words or less):

National brand with a fast, fresh, and healthy menu focused on made to order hot or cold sub-style sandwiches, salads, wraps, soups and sides. Breakfast menu also available. #1 retail sandwich option for college students per student surveys at the University and other similar universities.

LOCATION PROPOSED: Student Union Building

MEAL EQUIVALENCY OPTION: 6" Meat or Veggie Sandwich, Potato Chips, 22 oz. Fountain Beverage

**CONSENT AGENDA
FEBRUARY 18, 2016**

ATTACHMENT 1

CONCEPT #2: Chick-Fil-A

CONCEPT DESCRIPTION (50 words or less):

National brand specializing in breaded and chargrilled chicken-breast sandwiches, wraps, strips, nuggets and salads. All cooking is done in 100% refined peanut oil with no trans-fat and is cholesterol free. #1 chicken brand preference based on various student surveys conducted at the University.

LOCATION PROPOSED: Student Union Building

MEAL EQUIVALENCY OPTION: Chick Fil-A Sandwich OR 12 Count Nuggets, 22 oz. Fountain Beverage

CONCEPT #3: Starbucks

CONCEPT DESCRIPTION (50 words or less):

National brand coffee retailer offering coffee and espresso beverages, including popular seasonal drinks. Variety of sandwiches, pastries and snacks made with high-quality ingredients. It is a top-rated preferred coffee brand with the University and college students nationally.

LOCATION PROPOSED: Student Union Building

MEAL EQUIVALENCY OPTION: Grande Single Shot Espresso, Drip Coffee or Frappuccino, and One Pastry

CONCEPT #4: Freshii

CONCEPT DESCRIPTION (50 words or less):

National brand that offers affordable made to order, nutritious and healthy meals and snacks. Menus include breakfast, lunch and dinner items such as wraps, salads, quinoa bowls, soups, and fresh juices. Biodegradable packaging. Fall 2014 surveys and focus groups conducted at the University indicated students wanted healthier concepts/ options.

LOCATION PROPOSED: Student Union Building

MEAL EQUIVALENCY OPTION: Any Chicken or Vegetarian Wrap or Bowl

CONCEPT #5: Fresh Express

CONCEPT DESCRIPTION (50 words or less):

Store offerings include a variety of freshly prepared food (sandwiches, salads, snacks, etc.) for all meal times, local produce, packaged snacks, beverages, grocery and frozen food products, gluten-free, healthy and vegetarian options. A wide variety of every day essentials that are of high quality, selection and value.

LOCATION PROPOSED: Student Union Building

MEAL EQUIVALENCY OPTION: (1) Pre-wrapped English muffin sandwich, Whole Fruit, 20 oz. Fountain Beverage; (2) Wedge Sandwich Whole Fruit OR Potato Chips, 20 oz. Fountain Beverage; (3) Choice of Chicken Caesar, Garden, or Chef Salad, 20 oz. Fountain Beverage

CONCEPT #6: Einstein Bros. Bagels

CONCEPT DESCRIPTION (50 words or less):

National brand that specializes in brewed and specialty coffee drinks, bagels, sandwiches, croissants and salads. Dessert choices include coffee cake, cookies and streusels. Menu includes vegetarian, vegan, low-fat and low-carb beverages and food. Proposing expansion of location to increase operational and customer efficiencies.

**CONSENT AGENDA
FEBRUARY 18, 2016**

ATTACHMENT 1

LOCATION PROPOSED: Interactive Learning Center

MEAL EQUIVALENCY OPTION: (1) 20 oz. Espresso (single shot) OR Drip coffee and any Bagel; or
(2) One Bagel Sandwich (any variety)

CONCEPT #7: Panda Express

CONCEPT DESCRIPTION (50 words or less):

National brand specializing in freshly prepared gourmet Asian-inspired entrees, sides and accompaniments and fresh new taste creations. #1 Asian option chosen by students in Fall 2014 survey conducted at Boise State University; also top preferred national Asian fast casual brand by consumers.

LOCATION PROPOSED: Interactive Learning Center

MEAL EQUIVALENCY OPTION: Any Panda Bowl (entrée and side) and 20 oz. Fountain Beverage

CONCEPT #8: Papa John's Pizza

CONCEPT DESCRIPTION (50 words or less):

National brand of pizza that is the third largest take-out and delivery brand in the nation. Offering a variety of hot made-to-order favorites and specialty pizzas with their famous dipping sauce.

LOCATION PROPOSED: Interactive Learning Center

MEAL EQUIVALENCY OPTION: Individual One Topping Pizza and 20 oz. Fountain Beverage

CONCEPT #9: Moe's Southwest Grille – Mexican

CONCEPT DESCRIPTION (50 words or less):

National brand specializing in made to order burritos, tacos, quesadillas, nachos and fajitas. Features gluten-free, vegetarian, low calorie items, organic tofu and hormone-free chicken and beef. Mexican is the #1 new food option Boise State students have requested in this area of campus per surveys conducted in Fall 2014.

LOCATION PROPOSED: Interactive Learning Center

MEAL EQUIVALENCY OPTION: Choice of Two meal options:
1. Two Regular Tacos, Chips & Salsa, 22 oz. Fountain Beverage
2. Small Burrito, Chips & Salsa, 22 oz. Fountain Beverage

CONCEPT #10: ILC-C-Store

CONCEPT DESCRIPTION (50 words or less):

Offerings include a variety of freshly prepared foods (sandwiches, salads, snacks, etc.) for all meal times, local produce, packaged snacks, beverages, grocery and frozen food products, gluten-free, healthy and vegetarian options.

LOCATION PROPOSED: Interactive Learning Center

MEAL EQUIVALENCY OPTION: (1) Pre-wrapped English muffin sandwich, Whole Fruit, 20 oz. Fountain Beverage; (2) Wedge Sandwich, Whole Fruit OR Potato Chips, 20 oz. Fountain Beverage; (3) Choice of Chicken Caesar, Garden, or Chef Salad, 20 oz. Fountain Beverage

CONCEPT #11: Starbucks

CONCEPT DESCRIPTION (50 words or less):

**CONSENT AGENDA
FEBRUARY 18, 2016**

ATTACHMENT 1

National brand coffee retailer offering coffee and espresso beverages, including popular seasonal drinks. Food items include sandwiches, pastries and snack; all high-quality ingredients. This existing location will be enhanced to include more space, seating, updated look, and will be more accommodating to customer traffic.

LOCATION PROPOSED: Albertson's Library

MEAL EQUIVALENCY OPTION: Choice of Grande (16 oz.) Single Shot Espresso, Drip Coffee or Frappuccino; includes Choice of One Pastry Item

CONCEPT #12: Subway

CONCEPT DESCRIPTION (50 words or less):

National brand with a fast, fresh, and healthy menu focused on made to order hot or cold sub-style sandwiches, salads, wraps, soups and sides. Breakfast menu also available. #1 retail sandwich option for college students per student surveys at Boise State University and other similar universities.

LOCATION PROPOSED: Education Building

MEAL EQUIVALENCY OPTION: 6" Meat or Veggie Sandwich, Chips, 22 oz. Fountain Beverage

CONCEPT #13: J.R. Simplot Café

CONCEPT DESCRIPTION (50 words or less):

Partnership with Boise State Living Learning Community to provide students with an opportunity to gain first-hand retail business experience utilizing this concept/location. Serving Starbucks brand coffee and espresso drinks, various breakfast items, sandwiches, soups, flatbread pizzas, and local fruits; includes vegetarian, vegan and gluten-free menu options.

LOCATION PROPOSED: Micron College of Business and Economics

MEAL EQUIVALENCY OPTION: (1) Muffin OR Bagel, Whole Fruit, Drip Coffee, Hot Tea, or 20 oz. Fountain Beverage
(2) Flatbread Pizza (Cheese or Pepperoni), Whole Fruit OR Potato Chips, 20 oz. Fountain Beverage

CONCEPT #14: C-Store & Grill

CONCEPT DESCRIPTION (50 words or less):

Store offerings include a variety of freshly prepared foods (sandwiches, salads, snacks, etc.) for all meal times, local produce, packaged snacks, beverages, shelf stable and frozen food products, gluten-free, healthy and vegetarian options. Also offer Starbucks brand coffee and espresso, and made to order grill menu.

LOCATION PROPOSED: Chaffee Residential

MEAL EQUIVALENCY OPTION: (1) Pre-wrapped English muffin sandwich, Whole Fruit, 20 oz. Fountain Drink; (2) Wedge Sandwich, Whole Fruit OR Potato Chips, 20 oz. Fountain Drink; (3) Chicken Caesar, Garden, or Chef Salad, 20 oz. Fountain Drink; (4) Fresh made-to-order Sandwich, Wrap, Panini or Flatbread, Potato Chips, 20 oz. Fountain Drink; (4) Daily Rotating Grill option served from 4-11pm, 20 oz. Fountain Drink

CONCEPT #15: C-Store & Sandwich Shop

CONCEPT DESCRIPTION (50 words or less):

Combined convenience store and sandwich concept catering to residential students. In addition to C-store essentials the sandwich concept will also serve fresh made-to-order wraps, Panini's and flatbread melts. Boise

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State students desire these offerings in this location per focus groups conducted Fall 2014.

LOCATION PROPOSED:	University Suites Apartments
MEAL EQUIVALENCY OPTION:	(1) Pre-wrapped English muffin sandwich, Whole Fruit; includes 20 oz. Fountain Beverage; (2) Wedge Sandwich, Whole Fruit OR Potato Chips, 20 oz. Fountain Beverage; (3) Choice of Chicken Caesar, Garden, or Chef Salad, 20 oz. Fountain Beverage; (4) Fresh made-to-order Sandwich, Wrap, Panini, or Flatbread, Potato Chips, 20 oz. Fountain Drink

CONCEPT #16: Moxie Java

CONCEPT DESCRIPTION (50 words or less):

National brand of coffee that serves specialty coffee and espresso drinks, smoothies, freezes, teas and private-label energy drink that customers can infuse with their favorite flavors. Preferred local coffee brand indicated by Fall 2014 surveys conducted at the University. Alternate local brands such as Dutch Bros. can be considered.

LOCATION PROPOSED:	Multipurpose Classroom Building
MEAL EQUIVALENCY OPTION:	16 oz. Drip Coffee or Smoothie and One Pastry

Additionally, two food trucks (location and vendor to be mutually agreed) to come to campus with retail offerings daily.

Hours of Operation (to be reviewed and mutually agreed annually:
 Fall/Spring:

CONCEPTS	SUB SUBWAY	Chickfila	Starbucks	Freshii	Fresh Express	Einsteins	Panda Express	Papa John's
SUNDAY	11A-6P	C	11A-4P	11A-6P	11A-9P	C	C	C
MONDAY	7:30A-7P	10:30A-7P	7A-7P	7:30A-7P	7A-8P	7A-7:00P	10A-7:30P	10:30A-7P
TUESDAY	7:30A-7P	10:30A-7P	7A-7P	7:30A-7P	7A-8P	7A-7:00P	10A-7:30P	10:30A-7P
WEDNESDAY	7:30A-7P	10:30A-7P	7A-7P	7:30A-7P	7A-8P	7A-7:00P	10A-7:30P	10:30A-7P
THURSDAY	7:30A-7P	10:30A-7P	7A-7P	7:30A-7P	7A-8P	7A-7:00P	10A-7:30P	10:30A-7P
FRIDAY	7:30A-6P	10:30A-5P	7A-6P	7:30A-6P	7A-6P	7A-3P	10AM-4P	10:30A-3P
SATURDAY	11A-6P	10:30A-5P	8A-1P	11A-6P	10A-5P	C	C	C
CONCEPTS	Moe's SW Grill	C-Store ILC	Starbucks	Subway	Simplot Café COBE	C-Store & Grill	C-Store & Sandwich Shop	Moxie Java
SUNDAY	C	C	10:30 A-9P	C	C	11A-12A	11A-12A	C
MONDAY	10:30A-6P	7:30A-8P	6:30 A-10P	8A-6:30P	7:30A-7:30P	10A-12A	7:30A-12A	7:30A-2P
TUESDAY	10:30A-6P	7:30A-8P	6:30 A-10P	8A-6:30P	7:30A-7:30P	10A-12A	7:30A-12A	7:30A-2P
WEDNESDAY	10:30A-6P	7:30A-8P	6:30 A-10P	8A-6:30P	7:30A-7:30P	10A-12A	7:30A-12A	7:30A-2P
THURSDAY	10:30A-6P	7:30A-8P	6:30 A-10P	8A-6:30P	7:30A-7:30P	10A-12A	7:30A-12A	7:30A-2P
FRIDAY	10:30A-2P	7:30A-4:30P	6:30A-5P	8A-4P	7:30A-1P	10A-12A	7:30A-12A	7:30A-2P
SATURDAY	C	C	10A-5P	C	C	11A-12A	11A-12A	C

Break Periods:

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	SUB SUBWAY	Chickfila	Starbucks	Freshii	Fresh Express	Einsteins	Panda Express	Papa John's
SUNDAY-11/20/16	C	C	C	C	C	C	C	C
MONDAY-11/21/16	10:30A-2P	C	7:30A-3P	C	10A-4P	7:30-1:30P	C	C
TUESDAY-11/22/16	10:30A-2P	C	7:30A-3P	C	10A-4P	7:30-1:30P	C	C
WEDNESDAY-11/23/16	10:30A-2P	C	7:30A-3P	C	10A-4P	7:30-1:30P	C	C
THURSDAY-11/24/16	C	C	C	C	C	C	C	C
FRIDAY-11/25/16	10:30A-2P	C	7:30A-3P	C	10A-4P	7:30-1:30P	C	C
SATURDAY-11/26/16	C	C	7:30A-3P	C	C	C	C	C
	Moe's SW Grill	C-Store ILC	Starbucks	Subway	Simplot Café COBE	C-Store & Grill	C-Store & Sandwich Shop	Moxie Java
SUNDAY-11/20/16	C	C	C	C	C	11-7PM	11-7PM	C
MONDAY-11/21/16	C	C	7:30 A-3P	C	C	11-7PM	11-7PM	C
TUESDAY-11/22/16	C	C	7:30 A-3P	C	C	11-7PM	11-7PM	C
WEDNESDAY-11/23/16	C	C	7:30 A-3P	C	C	11-7PM	11-7PM	C
THURSDAY-11/24/16	C	C	C	C	C	C	C	C
FRIDAY-11/25/16	C	C	7:30A-3P	C	C	11-7PM	11-7PM	C
SATURDAY-11/26/16	C	C	7:30A-3P	C	C	11-7PM	11-7PM	C
	SUB SUBWAY	Chickfila	Starbucks	Freshii	Fresh Express	Einsteins	Panda Express	Papa John's
SUNDAY-12/18/16	10:30A-2P	C	7:30A-3P	C	10A-4P	7:30-1:30P	C	C
MONDAY-12/19/16	10:30A-2P	C	7:30A-3P	C	10A-4P	7:30-1:30P	C	C
TUESDAY-12/20/16	10:30A-2P	C	7:30A-3P	C	10A-4P	7:30-1:30P	C	C
WEDNESDAY-12/21/16	10:30A-2P	C	7:30A-3P	C	10A-4P	7:30-1:30P	C	C
THURSDAY-12/22/16	10:30A-2P	C	7:30A-2P	C	10A-2P	7:30-1:30P	C	C
FRIDAY-12/23/16	C	C	C	C	C	C	C	C
SATURDAY-12/24/16	C	C	C	C	C	C	C	C
	Moe's SW Grille	C-Store ILC	Starbucks	Subway	Simplot Café COBE	C-Store & Grill	C-Store & Sandwich Shop	Moxie Java
SUNDAY-12/18/16	C	C	C	C	C	11-7PM	11-7PM	C
MONDAY-12/19/16	C	C	7:30 A-3P	C	C	11-7PM	11-7PM	C
TUESDAY-12/20/16	C	C	7:30 A-3P	C	C	11-7PM	11-7PM	C
WEDNESDAY-12/21/16	C	C	7:30 A-3P	C	C	11-7PM	11-7PM	C
THURSDAY-12/22/16	C	C	7:30 A-3P	C	C	11-7PM	11-7PM	C
FRIDAY-12/23/16	C	C	7:30A-2P	C	C	11-7PM	11-7PM	C
SATURDAY-12/24/16	C	C	C	C	C	11-4PM	11-4PM	C
	SUB SUBWAY	Chickfila	Starbucks	Freshii	Fresh Express	Einsteins	Panda Express	Papa John's
SUNDAY-3/26/17	C	C	C	C	C	C	C	C
MONDAY-3/27/17	C	C	7:30A-3P	10:30A-2P	10A-4P	7:30-1:30P	C	C
TUESDAY-3/28/17	C	C	7:30A-3P	10:30A-2P	10A-4P	7:30-1:30P	C	C
WEDNESDAY-3/29/17	C	C	7:30A-3P	10:30A-2P	10A-4P	7:30-1:30P	C	C
THURSDAY-3/30/17	C	C	7:30A-3P	10:30A-2P	10A-4P	7:30-1:30P	C	C
FRIDAY-3/31/17	C	C	7:30A-3P	10:30A-2P	10A-4P	7:30-1:30P	C	C
SATURDAY-4/1/17	C	C	C	C	C	C	C	C
	Moe's SW Grill	C-Store ILC	Starbucks	Subway	Simplot Café COBE	C-Store & Grill	C-Store & Sandwich Shop	Moxie Java
SUNDAY-3/26/17	C	C	C	C	C	11-7PM	11-7PM	C
MONDAY-3/27/17	C	C	7:30 A-3P	C	C	11-7PM	11-7PM	C
TUESDAY-3/28/17	C	C	7:30 A-3P	C	C	11-7PM	11-7PM	C
WEDNESDAY-3/29/17	C	C	7:30 A-3P	C	C	11-7PM	11-7PM	C
THURSDAY-3/30/17	C	C	7:30 A-3P	C	C	11-7PM	11-7PM	C
FRIDAY-3/31/17	C	C	7:30A-3P	C	C	11-7PM	11-7PM	C
SATURDAY-4/1/17	C	C	C	C	C	11-7PM	11-7PM	C

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	SUB SUBWAY	Chickfila	Starbucks	Freshii	Fresh Express	Einsteins	Panda Express	Papa John's
SUNDAY	C	C	C	C	C	C	C	C
MONDAY	11A-3PM	11A-2PM	7:30 A-3:30P	9A-1PM	10A-4P	7:30-1:30P	C	C
TUESDAY	11A-3PM	11A-2PM	7:30 A-3:30P	9A-1PM	10A-4P	7:30-1:30P	C	C
WEDNESDAY	11A-3PM	11A-2PM	7:30 A-3:30P	9A-1PM	10A-4P	7:30-1:30P	C	C
THURSDAY	11A-3PM	11A-2PM	7:30 A-3:30P	9A-1PM	10A-4P	7:30-1:30P	C	C
FRIDAY	11A-3PM	11A-2PM	7:30 A-3:30P	9A-1PM	10A-4P	7:30-1:30P	C	C
SATURDAY	C	C	C	C	C	C	C	C
	Moe's SW Grille	C-Store ILC	Starbucks	Subway	Simplot Café COBE	C-Store & Grill	C-Store & Sandwich Shop	Moxie Java
SUNDAY	C	C	C	C	C	7PM-10P	7PM-10P	C
MONDAY	11A-1PM	10A-2PM	7:30 A-3:30P	C	C	7PM-10P	7PM-10P	C
TUESDAY	11A-1PM	10A-2PM	7:30 A-3:30P	C	C	7PM-10P	7PM-10P	C
WEDNESDAY	11A-1PM	10A-2PM	7:30 A-3:30P	C	C	7PM-10P	7PM-10P	C
THURSDAY	11A-1PM	10A-2PM	7:30 A-3:30P	C	C	7PM-10P	7PM-10P	C
FRIDAY	11A-1PM	10A-2PM	7:30 A-3:30P	C	C	7PM-10P	7PM-10P	C
SATURDAY	C	C	C	C	C	7PM-10P	7PM-10P	C

2.2.1.a. There must be a minimum of one venue open until midnight. There must be at least one meal equivalency option at each retail location.

2.2.1.b. Vendor will be responsible for any capital improvement costs associated with a new concept, mandatory remodels due to any franchise requirements, and replacement of equipment as needed as mutually agreed. The Vendor will give ownership of all equipment to the University.

2.2.1.c. Point of Sale Equipment

The Vendor shall use the University's Point of Sale Devices and pay the annual maintenance fees associated with the devices in the Vendor's operations (current fees are at \$18,000). In addition, the Vendor must maintain a 5-year replacement cycle on registers and scanners by replacing 1/5 annually.

POS current detail:

- 18 POS registers on the 9700
- Three POS registers on the 3700
- One Micros workstation⁴
- 20 Micros workstation⁵
- Current cost break out is:
- POS register \$2,095
- Stand \$95
- Pole Display \$250
- Cash Drawer \$250
- Receipt Printer \$625
- Scanner \$365
- Total \$3,680 plus shipping per quote on 2/17/2015.

2.2.2 Board Dining

Current meal plan policy requires all first year students living on campus, as well as any other students living in Chaffee Hall, Driscoll Hall, Morrison Hall, Keiser Hall, Taylor Hall and Towers Hall to purchase residential meal plans. Existing meal plan details:

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There have been 112 days in the Fall, 111 days in the Spring (this is reviewed each year based on the academic calendar). Additionally, there are 7 days at Spring Break and 6 days during Thanksgiving Break that have currently been negotiated at \$18.02 per day for a minimum of 200 students.

While the plans are marketed to students as having meals and flex, there is actually a portion of the “flex” that is purchased from the University as Bronco Bucks to add additional money beyond what the vendor plans included. For those dollars, the vendor bills the University as the dollars are used and pays commissions to the University based on the commissionable rates of the retail venue. The first dollars used from the student plans are considered to be the Bronco Bucks.

The current breakdown is as follows:

- All Access 7 \$0 flex/\$50 Bronco Bucks
- All Access 5 \$125 flex/\$50 Bronco Bucks
- 19-meal \$0 flex/\$50 Bronco Bucks
- 14-meal \$100 flex/\$75 Bronco Bucks
- 12-meal \$125 flex/\$100 Bronco Bucks
- 10-meal \$175 flex/\$200 Bronco Bucks

Flex dollars are collected by Boise State as part of the meal plan price. The portion of “flex” that is currently Bronco Bucks (see Question 8 answer) is billed monthly as used. That portion also includes commission payments based on location of use to the University. The Bronco Bucks portion is considered the first flex utilized. The flex that is not Bronco Bucks is part of the daily rate payment.

The vendor retains unused flex dollar revenue, the University retains unused Bronco Buck portion of the revenue. Since Bronco Bucks is considered the first utilized, there has not be any of that portion remaining.

The University pays the daily rate to the vendor on a weekly basis based on the number of students on plans. Menus will be in line with those proposed in the vendor RFP response and are to be submitted and mutually agreed upon each semester.

Meal Plan Rate Schedule (2016-2017)

	All access 7 days \$50 Flex	All access 5 days \$175 Flex	19 Meal Plan \$50 Flex	14 Meal Plan \$175 Flex	12 Meal Plan \$225 Flex	10 Meal Plan \$375 Flex
Number of Students	159	26	59	332	201	743
1700+	10.25	9.57	8.56	8.18	7.88	7.20
1650-1699	10.53	9.85	8.84	8.46	8.16	7.48
1600-1649	10.82	10.14	9.13	8.75	8.45	7.77
1550-1599	11.13	10.45	9.44	9.06	8.76	8.08
1500-1549	11.46	10.78	9.77	9.39	9.09	8.41
1450-1499	11.82	11.14	10.13	9.75	9.45	8.77
1400-1449	12.20	11.52	10.51	10.13	9.83	9.15

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1350-1399	12.62	11.94	10.93	10.55	10.25	9.57
1300-1349	13.06	12.38	11.37	10.99	10.69	10.01
1250-1299	13.54	12.86	11.85	11.47	11.17	10.49
1200-1249	14.06	13.38	12.37	11.99	11.69	11.01
0-1199	TBN	TBN	TBN	TBN	TBN	TBN

TBN - To Be Negotiated

Rates assume Add-on DB handled consistent with current process.

Vendor's Proposed pricing per semester of existing meal plans

Residential (also available for non-residential students to purchase):

Meals per Week	Flex Dollars	Pricing FY17	Pricing FY18	Pricing FY19	Pricing FY20	Pricing FY21
7 day all access	50	\$1,912	\$1,969	\$2,028	\$2,089	\$2,152
5 day all access	175	\$1,802	\$1,856	\$1,912	\$1,969	\$2,028
19	50	\$1,802	\$1,856	\$1,912	\$1,969	\$2,028
14	175	\$1,691	\$1,742	\$1,794	\$1,848	\$1,903
12	225	\$1,691	\$1,742	\$1,794	\$1,848	\$1,903
10	375	\$1,691	\$1,742	\$1,794	\$1,848	\$1,903
Add 16 guest		\$120	\$123	\$126	\$129	\$132

	Boise River Café
SUNDAY	Brunch: 10:30am – 2pm Dinner: 4pm – 9pm
MONDAY	Breakfast: 7am – 10:15am Lunch: 11am – 3pm Dinner: 4pm – 9pm
TUESDAY	Breakfast: 7am – 10:15am Lunch: 11am – 3pm Dinner: 4pm – 9pm
WEDNESDAY	Breakfast: 7am – 10:15am Lunch: 11am – 3pm Dinner: 4pm – 9pm
THURSDAY	Breakfast: 7am – 10:15am Lunch: 11am – 3pm Dinner: 4pm – 9pm

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FRIDAY	Breakfast: 7am – 10:15am Lunch: 11am – 3pm Dinner: 4pm – 9pm
SATURDAY	Brunch: 10:30am – 2pm Dinner: 4pm – 9pm

Residential and Mega Meal Plan Rules:

One meal can be used per meal period (except on all access plans which are unlimited).

Meal Periods:

	Monday-Friday		Saturday-Sunday	
	Start	End	Start	End
Breakfast	6:55	11:00	6:55	10:30
Brunch			10:31	2:00
Lunch	11:01	3:00		
Mid-day	3:01	4:00	2:01	4:00
Dinner	4:01	9:00	4:01	9:00
Late Night	9:01	11:59	9:01	11:59

- Each plan purchased includes 16 guest meals that can be used anytime during the semester (unlimited use per transaction).
- All meals (including guest meals) can be used at BRC or for a meal equivalency at other dining venues on campus.
- All access plans can use one grab and go meal equivalency per meal period.
- Unused meals expire weekly and new week begins each Monday.
- Flex dollars can be used at any retail location or for pizza delivery from Papa Johns or Piehole.
- Unused flex dollars for Fall expire at after the first 3 weeks of Spring. Unused flex dollars for Spring expire at the end of the term.

Voluntary Meal Plans

Voluntary Meal Plans

ANNUAL SALES PROJECTIONS:	220,000
MINIMUM ANNUAL GUARANTEE:	28,050
COMMISSION % ON SALES:	15.0%

Voluntary Meal Plans, excluding the all flex plan. Flex dollar commission based on concept where flex is redeemed.

Meals per Year	Flex Dollars	Pricing FY17	Pricing FY18	Pricing FY19	Pricing FY20	Pricing FY21
45	75	\$410.00	\$418.20	\$426.56	\$435.10	\$443.80

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45	0	\$350.00	\$357.00	\$364.14	\$371.42	\$378.85
22	0	\$175.00	\$178.50	\$182.07	\$185.71	\$189.43
10	0	\$80.00	\$81.60	\$83.23	\$84.90	\$86.59
5	0	\$42.50	\$43.35	\$44.22	\$45.10	\$46.00
0	100	\$90.00	\$90.00	\$90.00	\$90.00	\$90.00

Voluntary Meal Plan Rules:

- Unlimited meals can be used per meal period.
- Meals can be used at BRC or for a meal equivalency at other dining venues on campus.
- Meals and flex dollars expire one year from date of purchase or upon termination of relationship with Boise State.
- Flex dollars can be used at any retail location or for pizza delivery from Papa Johns or Piehole.

2.2.2.a. Menu cycles must be a minimum of 3 week cycles and must change each semester. The University collects board dining retail rate from students. The Vendor will be paid based on the daily rate proposed on a weekly basis based on the number of students on the plan. The University maintains authority to determine retail rates to students.

2.2.2.b. The University will provide Vendor all kitchen smallwares, china, silver and glassware for board dining operations. Vendor will be required to take an annual inventory in conjunction with the University and replace any losses.

2.2.2.c. Vendor must allow residential students to adjust their meal plan any time within the first 2 weeks of each semester.

2.2.2.d. Unless changes to the meal plans are approved, annual increases shall be limited to the increases in the U.S.D.A. Regional (for the region in which Boise is located) Wholesale Food Price Index for the preceding 12-month period.

2.2.2.e. Each meal at the all-you-can-eat dining facility will include a sufficient number and variety of vegetarian, vegan, lactose free and gluten free options.

2.2.3. Catering

The scope of the contract shall include management and operation of all catering on the Boise State University main campus unless exempted by mutual agreement of the Vendor and University on a case by case basis. It will include catering off of the main campus in a non-exclusive capacity. The main campus for purposes of this contract is defined as University owned buildings contained within the area south of the Boise River, west of Broadway Avenue, north of Beacon Street and Boise Avenue, and east of Capital Boulevard.

Commission Structure:

External/Non-Profit	Internal
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MINIMUM ANNUAL GUARANTEE:	\$74,000	\$302,500
COMMISSION % ON SALES:	20.0%	15.0%

On campus/non-profit groups receive an 18% discount from catering menu prices.

Service Standards:

Service Style	# Servers	# Customers
Buffet Meal- Paper	1	50
Buffet Meal- China	1	40
Reception -Paper	1	50
Reception -China	1	40
Reception- Butler Passed	1	30
Served Plated	1	32
VIP Plated Served	1	24
Bar Wine-Beer	1	100
Bar Full Bar	1	75

2.2.3.a. Menus and pricing can be found in Exhibit 1.

2.2.3.b. The University will provide Vendor all kitchen smallwares, china, silver and glassware for catering operations. Vendor will be required to take an annual inventory in conjunction with the University and replace any losses.

2.2.3.c. The Vendor must utilize the University's Event Management System (EMS Enterprise Version 6.0) for estimating and planning catered events. The Vendor must fund two full-time event coordinator positions (estimated salary \$36,000 plus benefits \$18,000 for each position) that will be responsible for managing catering orders working with Vendor and the University's Conference Services department. Billing to clients will be combined and the University will pay Vendor weekly based upon collections received.

2.2.3.d. Exemptions from exclusive rights.

- For events or meetings that are not at the Student Union or Stueckle Sky Center and require less than \$200 in food and beverage service, the University constituents are not required to use the Vendor's catering services. This dollar amount may be adjusted upon mutual agreement between the Vendor and the University.
- For fundraising events held outside of the Student Union Building by the President or University Advancement Office regardless of dollar amount, the President or University Advancement Office is not required to use Vendor's catering services.
- Food/snacks/beverages for regular meetings of recognized student organizations where the public is not invited are exempted. Please note that an approval process is in place

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for this exception and the Vendor must still offer a low-cost service that meets this need and keeps this business (and good will) on campus.

- Birthday cakes/goodies/snacks provided by University faculty or staff members for other faculty or staff members in their office area, including pot lucks that are in a designated office area.
- Wedding cakes for receptions where the Vendor is providing other services (punch, etc.). (If the Vendor is proposing a significant baking option, this exception may be waived upon proven ability to produce a quality product.)
- Brown bag lunches brought into meetings by individuals, not the sponsoring group.

2.2.3.e. Additionally, the Vendor must work with the University to produce a number of events in a nontraditional manner. These events support the mission of the University, and are sponsored by student organizations. These events shall include (but are not limited to):

- Five events per year are prepared on-site in the central production kitchen with supervision and assistance of the Vendor's staff. Food is supplied at cost and labor is provided at no cost to the student organization responsible for this event.

2.2.3.f. Vendor must work with the University to allow donated food and beverage (subject to food safety delivery standards) to reduce catering costs when available. Vendor may still charge for labor and profit, but reduce the pricing based on the reduced food costs.

2.2.3.g. Vendor must work with the University to review additional exemptions as requested on a case by case basis.

2.2.3.h. The University is currently considering potential public/private partnership agreements in future building projects. The catering at these events, while managed by a private company, are exempt from this contract. The University may facilitate discussion between private management and Vendor for potential agreements.

2.2.3.i. Vendor must work with clients on menu review and tastings as requested.

2.2.4 Concessions

The Vendor shall provide concessions services at all athletic and entertainment events (includes but not limited to Taco Bell Arena, Albertson's Stadium, Dona Larsen Park, Appleton Tennis Center, Boas Tennis/Soccer Complex, Bronco Gym, Caven-Williams Sports Complex) and excluding the Morrison Center unless otherwise requested. In addition, the Vendor shall provide concession services to all other events and activities that supplement the normal athletic and entertainment events schedule.

Commission structure:

Minimum	Commission
Annual Guarantee	% on sales

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Athletic	223,000	33.5%
Taco Bell Arena	157,000	34.5%
Student Stand	1,000	10.0%
Value add/loaded tickets	0	0.0%

Concession commission based on the following
breakout - an overall average can be used if the
University prefers

Food	30.5%
Beverage	35.5%
Confection	10.0%
Coffee	15.0%
Third Party	45.0%

2.2.4.a. Menus and pricing can be found in Exhibit 1. Vendor is required to provide a special student only concession stand menu and pricing that operates without profit.

2.2.4.b. Point of Sale Equipment

The Vendor shall use the University's Point of Sale Devices and pay the annual maintenance fees associated with the devices in the Vendor's operations (current fees are at \$12,589). In addition, the Vendor must maintain a 5-year replacement cycle on registers and scanners by replacing 1/5 annually.

Current POS details:

- Quest Venue Manager 1.5.157 (build 5)
- Estimated replacement cost per machine \$1,107.

Stadium:

- 55 POS machines (VersaTerm VSR Dual Line Portable POS Terminal for QCM, with Integrated Mag STRipe Reader, Customer Display, Battery)
- 15 Premium POS machines (V-Touch Touch Screen POS Terminal for QVM, with integrated Mag Stripe Reader, Customer Display, and Battery)

Taco Bell Arena:

- 34 POS machines (same as 55 above)

2.2.4.c. Equipment

The University shall provide all equipment and accessories, including but not limited to, roller grills, popcorn popping machines, and coffee machines, necessary to adequately perform/conform to acceptable concession services standards throughout the term of the contract. The Vendor shall maintain any and all equipment used to supplement concession services. Vendor shall establish from Gross Revenues and maintain for the term of this Agreement a Reserve Account, equal to 2% of gross receipts, to be utilized for ongoing equipment maintenance, repair and replacement during the term of the agreement to be

utilized upon review and approval of the University. Any funds remaining at the end of the contract term will be paid to the University. Vendor will give ownership of all equipment to the University.

2.2.4.d. Vendor is required to sell Agri Beef products in Albertson's Stadium and Taco Bell Arena as the exclusive beef and pork products in all Vendor operated concession stands (excludes 3rd party vendors).

2.2.4.e. Future Partnerships

As the University expands and renovates its event facilities, it reserves the right to partner with manufacturers and other non-University related corporations. Such a partnership may include incorporating and prominently displaying a manufacturer's or company's name to describe a room or a facility in return for a donation to Boise State University. In addition to the monetary donation, if a manufacturer or company produces and sells products related to the food service industry, the Vendor may be asked to purchase certain product items and use them for select or specific functions or events. The University will assist in ensuring that the Vendor will be able to purchase such items at a comparable or lesser rate than could be purchased elsewhere.

2.2.4.f. Taco Bell Arena and Morrison Center Specifications

The rights hereunder shall not be construed so as to prevent or prohibit the following:

- Taco Bell Arena and Morrison Center (each a facility), and any other on-campus facilities hosting events managed through Taco Bell Arena or Morrison Center administration, from permitting other caterers, local or touring, to furnish backstage food and non-alcoholic beverage catering for the purpose of feeding performers, stage crew and/or other backstage personnel at any performance event (musical, ice, sporting, spectacle, etc.) held at Taco Bell Arena, Morrison Center, or other campus facility) when requested by the event licensee whether it be inside the Facility or in an outside area adjacent to the Facility ("Backstage Catering"). Backstage Catering shall also include catering for meet & greet and other VIP hosting activity. Backstage Catering shall not include food or beverage sold in Front of House locations (areas open to all ticket holders).
- Taco Bell Arena administration from permitting Feld Entertainment from receiving certain exclusive novelties and concessions rights associated with Feld Entertainment events to be sold both inside and outside a Facility and sold through Feld's own vendors or concessionaires as they designate, as required in the Feld engagement agreement, negotiated from year to year, without a buyout fee being due to Food Service Vendor. Current Feld novelties and concessions rights include: 100% exclusive rights to sell program books, novelties and souvenirs, cotton candy, sno-cones, popcorn, freshly-squeezed lemonade, s'mores and lollipops.
- An exhibitor, or sponsor associated with an event, from donating and/or distributing, without charge, a type of food or beverage or good or merchandise which is manufactured and distributed in the normal course of the exhibitor's or sponsor's business, or from providing small "tasters" of food or non-alcoholic items for consumption on premise for the purpose of providing samples to event patrons.
- Food Service Vendor shall treat Backstage Catering sales as 'at cost sales' whenever such services are performed following a written authorization of the Facility Director and/or the

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Executive Director of Campus Services. At cost sales shall be discounted at Vendor's cost of product, cost of direct labor to produce and deliver the product, and a ten percent general and administrative labor charge. No commission will be payable by the Vendor of Gross Receipts from Backstage Catering authorized in writing by the Executive Director.

- In the event that the menu for the touring production/company includes pre-packaged food items, such as water, soda, alcohol or other items that do not require food handling and preparation, these items may be purchased and provided by the University or the client and will not be subject to any buy-out fee. The Vendor will handle the placement/incorporation of the packaged items, into the back of house catering service provided by Vendor.

Food Service Vendor shall not sell concessions in the seats during a non-Boise State Athletics event held in a Facility unless expressly agreed to in writing by the Facilities' Executive Director.

Food Service Vendor shall be responsible for maintaining proper ratios of Points of Sale to anticipated attendance BY SEATING LEVEL as per industry standards, currently agreed to be as follows:

- Concessions with Alcohol: 1 POS per 125 seats sold
- Concessions without Alcohol: 1 POS per 225 seats sold
- Club Seats: 1 server per 120 seats sold, and 2 runners per server

Facility Executive Director (or designee) approves the number of sales areas open per event and length of time open and minimum offerings.

Facility Executive Director (or designee) is invited to attend annual Concessions employee training.

Facility Executive Director (or designee) approves concessionaire investment and marketing programs.

All concessions locations and vendors will be operationally ready 15 minutes PRIOR to advertised doors opening. This means all concessions related personnel in place, in neat/crisp/clean uniforms, product ready, line queuing equipment placed and ready, condiments refreshed and placed, POS equipment in fully operational mode, etc.

All concessions locations will be responsible for placing product packaging and waste in concessions designated waste receptacles (not those for the public) and calling for trash removal at least 15 minutes prior to public doors opening at the facility. Back counters and condiment counters will be kept neat and clean throughout food service during the event.

Concessions stands (each location) will not be closed prior to communication and agreement by the Facility's Executive Director or designee.

Vendor is required and responsible for covering all tables used for Food & Beverage dispensing with appropriate fitted, linen tablecloths, properly cleaned and pressed. The costs associated with linens and proper staging of spaces shall be borne by the Vendor.

Concessions areas will be thoroughly cleaned following each event (within 24 hours of events end), with deep cleaning on a semi-annual basis, all concessions materials in temporary locations will be

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stored in designated areas within 24 hours of event end. Storage areas will be maintained in an appropriately neat and clean condition. Temporary paper signage is to be kept to a minimum and only utilized in temporary sales locations and removed promptly (without taking paint off walls). Cambros will be drained in specifically designated drains and not in general floor drains.

Vendor is encouraged to incorporate Food Truck service options for event catering and concessions related to outdoor components of events.

2.2.4.g. The Vendor is encouraged to use service organizations from the campus and surrounding area to supplement its permanent staffing for the concessions operations. Preference should be given to student groups over community groups. When the majority of the volunteer group consists of minors, adult supervision is required and must be present at the event.

- The Vendor shall continually initiate methods to promote public relations among service organizations by allowing student organizations or local groups to work concession areas.
- The Vendor shall provide adequate training and supervision for service organizations to assure that food is handled in a safe and sanitary manner, that all monies are accounted for and that customers receive fast and friendly service.
- The Vendor shall make every effort to support and participate with any cross training/customer service education program initiated by the University and/or the applicable public event facility.

2.2.5 Food Vending

The Vendor will be granted the exclusive right to license and provide food, beverage, and related services through vending machines located on campus. Beverage, for the purposes of vending under this contract, is defined as hot beverages and milk. Services to be provided include food, snacks, beverages (as defined above), and change machines in appropriate locations.

Commissions:

MINIMUM ANNUAL GUARANTEE:	\$25,000
COMMISSION % ON SALES:	15.0%

2.2.5.a. All vending machines are to be furnished and maintained by the Vendor or their licensee. If a vending area should include a microwave based on items offered, the Vendor will provide that as well.

2.2.5.b Menus and pricing can be found in Exhibit 1.

2.2.6 Alcohol

Alcohol sales must comply with the Idaho State Board of Education policies as identified in Section 1. Subsection J. and any subsequent rulings:

http://www.boardofed.idaho.gov/policies/i_policy.asp

Alcohol sales must also comply with the Boise State University policies:

<http://policy.boisestate.edu/governance-legal/alcohol-on-campus/>

Commission structure:

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	Commission				
Sliding Scale	Taco Bell Arena	Stueckle Sky Center game bars	Stueckle Sky Center suite service	Catering	Morrison Center
\$0-\$250	0.0%	0.0%	0.0%	0.0%	0.0%
\$251-\$2000	26.0%	26.0%	26.0%	26.0%	26.0%
\$2001-\$3500	31.0%	31.0%	31.0%	31.0%	31.0%
\$3501-\$5000	35.0%	35.0%	35.0%	35.0%	35.0%
\$5001-\$7500	39.0%	39.0%	39.0%	39.0%	39.0%
\$7501-\$10000	41.0%	41.0%	41.0%	41.0%	41.0%
>\$10000	43.0%	43.0%	43.0%	43.0%	43.0%
Internal Catering	15.0%	15.0%	15.0%	15.0%	15.0%
External Catering	20.0%	20.0%	20.0%	20.0%	20.0%

Clarifications:

If Alcohol is sold in bulk as part of a catered event at an applicable location vs. individual purchase, then the applicable commission percentage for Internal or External Catering applies. Individual servings or by the glass (open bar), commissions are based on the sliding scale.

Overall Alcohol commissions in year 1 estimated at \$236,000, with minimum guarantee of 85.0% or \$200,000

2.2.6.a. Vendor will ensure all service staff are TIPS trained at the sole expense of the Vendor.

2.2.6.b. Vendor is required to obtain and maintain prior to the contract start date an Idaho State Liquor License to sell beer, wine, and liquor as required to be able to sell throughout campus. All costs associated with obtaining and maintaining the required permit(s) and licenses are the sole responsibility of the Vendor.

2.2.6.c. Alcohol sales in Stueckle Sky Center do not allow glass bottles in any locations with the exception of suites. Alcohol sales are subject to the rules the University has contractually with event clients.

2.2.6.d. Menus and pricing can be found in Exhibit 1.

2.2.7 Child and Adult Care Food Program (CACFP) and Summer Food Service Program (SFSP)

The Vendor will be required annually to complete a food service agreement with the University to act as the Food Service Vendor for these programs. The Vendor will be required to provide meals and snacks that comply with all requirements as established by the United States Department of Agriculture (USDA) guidelines, which may be found at:

<http://www.fns.usda.gov/cacfp/child-and-adult-care-food-program> and

<http://www.fns.usda.gov/sfsp/managing-sfsp>.

Vendor must maintain CN Labeling and reporting as required.

Vendor will provide daily breakfast, lunch, and snack to the Children's Center at a break even rate, which rate shall include Vendor's general and administrative expense allowance. Vendor

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will also provide the daily meals for students participating in the summer TRIO programs (meal costs cannot exceed costs per meal offered in board dining plans).

CACFP Rates:

Customer Counts	Rates
100-109	\$4.35
110-119	\$4.18
120-129	\$4.05
130-139	\$3.94
140-149	\$3.84
150-159	\$3.75
160-169	\$3.68
170-179	\$3.62
180-189	\$3.56
190-199	\$3.50
200-209	\$3.45
210-219	\$3.41
220-229	\$3.38
230-239	\$3.34
240-249	\$3.30
250-259	\$3.27

2.2.8. Training Table

The scope of the contract shall include provision of training table meals for the football team, during the football season, unless otherwise provided by outside vendors/sponsors of the Athletics department. The scope will also include any additional sports that choose to add training table programs.

Current Structure:

4-5 weekly meals, served and priced as catering by Vendor in the SCC

1-2 weekly meals are provided by outside vendors/sponsors of the Athletic teams

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2.2.8.a. Vendor shall provide training table meals for the football team, up to six(6) times weekly during the football season. Vendor shall permit training table meals to be provided by outside vendors/sponsors of the Athletics department, so long as the meal is provided by the outside vendor/sponsor at no cost to the University. Any other time the football team has training table meals on campus, Vendor shall provide a catered meal.

2.2.8.b. The Vendor shall allow the University to partner with outside groups such as Albertsons, or provide on its own, unlimited snacks to the student-athletes as allowed by NCAA regulations.

2.2.9. Summer, Conference, Camp Pricing

Vendor shall propose rates at varying participation levels for summer conferences to the University a year and a half in advance of proposed conference season.

MINIMUM ANNUAL GUARANTEE:	\$74,250
COMMISSION % ON SALES:	15%

Rates:

Groups	Summer 2017 Price
Breakfast	
30 - 100	\$7.28
101 -200	\$7.18
201 - 300	\$6.72
301 - 400	\$6.49
500 +	\$6.27
Lunch	
30 - 100	\$9.92
101 -200	\$9.60
201 - 300	\$9.31
301 - 400	\$8.99
500 +	\$8.69
Dinner	
30 - 100	\$12.13
101 -200	\$11.75

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201 - 300	\$11.38
301 - 400	\$11.00
500 +	\$10.63
Total Daily Rate	
30 - 100	\$28.92
101 -200	\$28.03
201 - 300	\$27.13
301 - 400	\$26.25
500 +	\$25.35
Summer Casual Door Rates 2016	
* Breakfast	\$7.19
* Lunch	\$9.97
* Dinner	\$12.19

Boise State Students/Faculty/Staff receive 10% discount with Boise State ID during the summer

2.2.10 Capital Investment beyond the \$547,500 repayment requirement

Retail:

Concepts	Investment dollars	
1	\$0	
2	\$0	
3	\$300,000	
4	\$375,000	
5	\$0	
6	\$200,000	Includes additional seating/Lighting
7	\$0	
8	\$0	
9	\$400,000	
10	\$325,000	Reconfiguration/improvements
11	\$350,000	Required Refresh, Expansion/Additional Seating
12	\$100,000	FY 17/18 Required Refresh
13	\$0	
14	\$0	
15	\$300,000	
16	\$50,000	FY 17/18 Potential Brand replacement

Investment will occur between July 2016 - June 2017 unless otherwise specified.

Board Dining:

Description of investment:

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FY17 Summer \$150,000 to be invested in improvements to board dining to be mutually agreed.

FY18 - Summer - \$300,000 to implement a fresh market produce station with cook to order capabilities.

Open up dining room to allow more accessibility and customer flow in the serving area

Investment Dollars: \$450,000

Catering:

Description of investment:

None at this time, but available use of renovation/equipment fund noted under other.

Investment Dollars: \$0

Concession:

Athletics

Description of investment:

Investment to upgrade concession stands at Bronco Stadium. Upgrades to improve the "Fan Experience" with a refresh of point-of-sale stands to include paint, cabinetry as necessary for 6 stands on the East side. Same for 8 stands on the West side, 14 DB card readers with Data lines and electrical power to accept flex dollars, mobile ordering, VIP/luxury Suites with food order/delivery system from seat. Enhance University brand utilizing school colors/logos, souvenir cups and signature food concepts.

Investment Dollars: \$500,000

Taco Bell Arena

Description of investment:

Investment to upgrade concession stands at Taco Bell Arena. Upgrades to improve the "Fan Experience" with a refresh of point-of-sale stands to include paint, cabinetry as necessary for 8 stands. 8 DB card readers with data lines and electrical power to accept flex dollars. Additional Quest System Upgrade with 10 mobile handhelds and 2 kitchen pantries to support mobile ordering pilot. Directional signage in stairwells and mobile ordering. Upgrade our capabilities to provide beer on tap at all concession stands for nonathletic events. Enhance University brand utilizing school colors/logos, souvenir cups and signature food concepts.

Investment Dollars: \$ included in Concessions
Athletics Investment

Other:

Describe any other capital investment being offered by Vendor.

Description of investment:

\$2.4 million investment in Retail Concepts (see Concept by number in the earlier chart). The proposed plan for new brands and refreshed locations is the result of thoughtful, data-based planning applying comprehensive marketplace and Boise State insights. The results of the plan will increase student value and satisfaction while responsibly growing the program and University returns.

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\$2 million unrestricted grant upon finalization of contract to be amortized over 5 years.

\$2 million unrestricted grant upon finalization of extension of contract to 10 years which will be amortized over years 6-10.

\$1.0M retail expansion earmarked for year 6 of contract, which will be amortized over years 6-10.

Investment Dollars: \$5,000,000

Vendor's total investment of **\$8,350,000** including unrestricted grants over a 10 year period, not including POS replacement, renovation/equipment fund and concessions equipment fund, shall be governed by Section 2.2.11, below.

2.2.11 Terms and Conditions Governing Financial Commitments and Unrestricted Grants

1. 2016 Financial Commitment. In consideration of University's agreement to enter into this Agreement under the terms set forth herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Aramark shall make a financial commitment to University between July, 2016, and June, 2017, in an amount up to Two Million Nine Hundred Thousand Dollars (\$2,900,000) (the "2016 Retail Financial Commitment") for dining facility renovations and for the purchase and installation of dining services equipment, area treatment, signage and marketing materials and other costs associated with the retail dining services program on University's premises. Any equipment purchased by Aramark on University's behalf shall be purchased as a "sale-for resale" to University. University shall hold title to all such equipment (with the exception of those items which bear the name of Aramark, its logo, or any of its logo, service marks or trademarks or any logo, service marks or trademarks of a third party) upon such resale. University acknowledges that it is a tax-exempt entity and will provide Aramark with a copy of the appropriate tax-exempt certificate.

Aramark and University hereby agree that the 2016 Financial Commitment shall be made in various segments (each, a "2016 FC Segment") as set forth in the chart below. The parties may mutually agree upon different uses for each such segment and may reallocate funding between projects as they determine to be desirable.

<u>Amount of Segment</u>	<u>Proposed Use(s)</u>
\$300,000	Starbucks Installation
\$375,000	Freshii Installation in Student Union Building
\$200,000	Einstein Bagels Refresh
\$400,000	Moe's Southwest Grill Installation at I.L.C.
\$325,000	I.L.C. C-Store Refresh
\$350,000	Library Starbucks refresh/expansion
\$300,000	University Suites C-Store and Sandwich Shop Installation
\$500,000	Taco Bell Arena and Albertson's Stadium Upgrades and Enhancements

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<u>Amount of Segment</u>	<u>Proposed Use(s)</u>
\$150,000	Food service facility upgrades/renovations to be mutually agreed upon
Total = \$2,900,000	

Each 2016 FC Segment shall be amortized on a straight-line basis over a period of months equivalent to the number of full months remaining until June 2026, commencing upon the complete expenditure of the applicable 2016 FC Segment. Upon completion of such expenditures, Aramark shall provide University with prompt written notice setting forth, in reasonable detail together with supporting documentation, the usage and amounts of the applicable 2016 FC Segment.

Upon expiration or termination of this Agreement by either party for any reason whatsoever prior to the complete amortization of the 2016 Financial Commitment, University shall reimburse Aramark for the unamortized balance of the 2016 Financial Commitment as of the date of expiration or termination. In the event such amounts owing to Aramark are not paid to Aramark within thirty (30) days of expiration or termination, University agrees to pay interest on such amounts at the Prime Rate plus two percentage points per annum, compounded monthly from the date of expiration or termination, until the date paid. The right of Aramark to charge interest for late payment shall not be construed as a waiver of Aramark's right to receive payment of invoices within thirty (30) days of the invoice date."

2. 2017 Financial Commitment. In consideration of University's agreement to enter into this Agreement under the terms set forth herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Aramark shall make a financial commitment to University between July, 2017, and June, 2018, in an amount up to Four Hundred and Fifty Thousand Dollars (\$450,000) (the "2017 Retail Financial Commitment") for retail dining facility renovations and for the purchase and installation of dining services equipment, area treatment, signage and marketing materials and other costs associated with the dining services program on University's premises. Any equipment purchased by Aramark on University's behalf shall be purchased as a "sale-for resale" to University. University shall hold title to all such equipment (with the exception of those items which bear the name of Aramark, its logo, or any of its logo, service marks or trademarks or any logo, service marks or trademarks of a third party) upon such resale. University acknowledges that it is a tax-exempt entity and will provide Aramark with a copy of the appropriate tax-exempt certificate.

Aramark and University hereby agree that the 2017 Financial Commitment shall be made in various segments (each, a "2017 FC Segment") as set forth in the chart below. The parties may mutually agree upon different uses for each such segment and may reallocate funding between projects as they determine to be desirable.

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<u>Amount of Segment</u>	<u>Proposed Use(s)</u>
\$100,000	Education Building Subway Refresh
\$50,000	Potential Brand Replacement of Multi-Purpose Classroom Building Moxie Java
\$300,000	Implement Fresh Market Produce Action Station and open dining room for better accessibility and flow
Total = \$450,000	

Each 2017 FC Segment shall be amortized on a straight-line basis over a period of months equivalent to the number of full months remaining until June 2026, commencing upon the complete expenditure of the applicable 2017 FC Segment. Upon completion of such expenditures, Aramark shall provide University with prompt written notice setting forth, in reasonable detail together with supporting documentation, the usage and amounts of the applicable 2017 FC Segment.

Upon expiration or termination of this Agreement by either party for any reason whatsoever prior to the complete amortization of the 2017 Financial Commitment, University shall reimburse Aramark for the unamortized balance of the 2017 Financial Commitment as of the date of expiration or termination. In the event such amounts owing to Aramark are not paid to Aramark within thirty (30) days of expiration or termination, University agrees to pay interest on such amounts at the Prime Rate plus two percentage points per annum, compounded monthly from the date of expiration or termination, until the date paid. The right of Aramark to charge interest for late payment shall not be construed as a waiver of Aramark's right to receive payment of invoices within thirty (30) days of the invoice date."

3. 2021 Financial Commitment. In the event that the parties mutually agree to extend the term of the Contract, in consideration of University's agreement to extend the term of the Contract, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Aramark shall make a financial commitment to University in an amount up to One Million Dollars (\$1,000,000) (the "2021 Financial Commitment") for retail dining facility expansion/renovations and for the purchase and installation of dining services equipment, area treatment, signage and marketing materials and other costs associated with the dining services program on University's premises. Any equipment purchased by Aramark on University's behalf shall be purchased as a "sale-for resale" to University. University shall hold title to all such equipment (with the exception of those items which bear the name of Aramark, its logo, or any of its logo, service marks or trademarks or any logo, service marks or trademarks of a third party) upon such resale. University acknowledges that it is a tax-exempt entity and will provide Aramark with a copy of the appropriate tax-exempt certificate.

The 2021 Financial Commitment shall be amortized on a straight-line basis over a period of months equivalent to the number of full months remaining until June 2026, commencing upon the complete expenditure of the 2021 Financial Commitment. Upon expiration or termination of this Agreement by either party for any reason whatsoever prior to the complete amortization of the 2021 Financial Commitment, University shall reimburse Aramark for the unamortized balance of the 2021 Financial Commitment as of the date of expiration or termination. In the event such amounts owing to Aramark are not paid to Aramark within thirty (30) days of expiration or termination, University agrees to pay interest on such amounts at the Prime Rate plus two percentage points per annum, compounded monthly from the date of expiration or termination, until the date paid. The right of Aramark to charge interest for late payment shall not be construed as a waiver of Aramark's right to receive payment of invoices within thirty (30) days of the invoice date.

4. 2016 Unrestricted Grant. In consideration of University's agreement to enter into this Agreement with Aramark under the terms set forth herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Aramark shall make an unrestricted grant to University in the amount of Two Million Dollars (\$2,000,000) (the "2016 Unrestricted Grant"). Aramark shall pay the 2016 Unrestricted Grant to the University within thirty (30) days of complete execution of the Contract.

The 2016 Unrestricted Grant shall be amortized on a straight-line basis over a period of sixty (60) months, commencing upon payment of the 2016 Unrestricted Grant. Upon expiration or termination of this Agreement by either party for any reason whatsoever prior to the complete amortization of the 2016 Unrestricted Grant, University shall reimburse Aramark for the unamortized balance of the 2016 Unrestricted Grant as of the date of expiration or termination. In the event such amounts owing to Aramark are not paid to Aramark within thirty (30) days of expiration or termination, University agrees to pay interest on such amounts at the Prime Rate plus two percentage points per annum, compounded monthly from the date of expiration or termination, until the date paid. The right of Aramark to charge interest for late payment shall not be construed as a waiver of Aramark's right to receive payment of invoices within thirty (30) days of the invoice date.

5. 2021 Unrestricted Grant. In the event that the parties mutually agree to extend the term of the Contract, in consideration of University's agreement to extend the term of the Contract, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Aramark shall make an unrestricted grant to University in the amount of Two Million Dollars (\$2,000,000) (the "2021 Unrestricted Grant"). Aramark shall pay the 2021 Unrestricted Grant to the University within thirty (30) days of complete execution of the amendment extending the term of the Contract through June, 2026.

The 2021 Unrestricted Grant shall be amortized on a straight-line basis over a period of sixty (60) months, commencing upon payment of the 2021 Unrestricted Grant. Upon expiration or

termination of this Agreement by either party for any reason whatsoever prior to the complete amortization of the 2021 Unrestricted Grant, University shall reimburse Aramark for the unamortized balance of the 2021 Unrestricted Grant as of the date of expiration or termination. In the event such amounts owing to Aramark are not paid to Aramark within thirty (30) days of expiration or termination, University agrees to pay interest on such amounts at the Prime Rate plus two percentage points per annum, compounded monthly from the date of expiration or termination, until the date paid. The right of Aramark to charge interest for late payment shall not be construed as a waiver of Aramark's right to receive payment of invoices within thirty (30) days of the invoice date.

2.3 PROGRAM AND SERVICE EXPECTATIONS

Aramark is to comply with the following important program and service expectations for the contract.

2.3.1 Programmatic Expectations

2.3.1.1 Excellent quality food with ingredients, recipes and fresh preparation methods that support good nutrition and a healthy lifestyle.

2.3.1.2 An innovative portfolio of service concepts that:

- includes a mix of national, regional, and locally owned brands that are popular with the University community;
- provides a thoughtful mix of service formats designed to satisfy a variety of consumer needs, such as “all you care to eat”, fast casual, quick service (“fast food”) and food markets;
- offers ordering, payment, delivery and “to go” mechanisms that are responsive to consumer lifestyles;
- incorporates comprehensive nutritional and wellness education.

2.3.1.3 A diversity of menu choices within operations and across the system that:

- address the broad range of consumer preferences;
- include entrees and other offerings that address special diet needs such as vegetarian, vegan, low fat, high protein, gluten free, etc.;
- provide for religion-based dietary needs.

2.3.1.4 Hours of service that support student lifestyle needs across campus and in residential neighborhoods, including late night service venues that offer menu variety and that accept meal plans.

2.3.1.5 Pricing to the customer that is competitive with “the street”. Catering pricing that is competitive with off-campus caterers and that offers tiers of pricing and service for

different event types (high-end to budget), including a service/price tier that is designed to offer affordable options for student groups.

2.3.1.6 A commitment to offering regularly scheduled special event programming designed to encourage participation and build community.

2.3.1.7 A meal plan program and policies that:

- offer multiple, affordable plan configurations for resident students;
- offer plan configurations for non-residents that are flexible, affordable and aggressively marketed;
- minimize the penalty for missed meals;
- are usable in all or most dining locations across campus, regardless of the service provider.

2.3.1.8 Service and dining environments that:

- provide diversity across the system;
- offer restaurant quality environments with a variety of seating types and amenities;
- promote community;
- physically facilitate programming;
- offer comfortable opportunities to hang out.

2.3.1.9 An intentional and committed approach to staffing that results in:

- staffing levels that are matched to customer demand so that service is fast and efficient;
- friendly, courteous, knowledgeable and professional employees that receive regular and comprehensive training in both technical and customer service skills;
- staff that are proficient in the English language when in positions of regular interaction with customers.

2.3.2. Management Expectations

2.3.2.1 A professional food service management company that is a leader in the field, offers a best practice approach to campus dining, and that views the University as a flagship account and an incubator for new programs, services, technology and management strategies;

2.3.2.2 District and regional management support that is present, involved, responsive, and that enables on site management to be nimble decision makers;

2.3.2.3 An on-site management structure that provides dedicated managerial resources for each business channel in the program, as well as appropriate administrative and technology support;

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- 2.3.2.4 An on-site management team that is the best in the field, and one that is exceptionally knowledgeable, experienced, competent and professional in managing all aspects of a large and diverse university dining program. The management team should be collaborative and collegial with the University, its key stakeholders, student leaders and advocacy groups, with a communication strategy that is proactive and accessible.

CRITICAL TEAM MEMBERS:

Name of Regional Vice President: Barbara Flanagan
Site General Manager: Carol Scott
Name of On-Site Executive Chef: Philippe Didier
Name of On-Site Catering Director: Cindy Vatcher
Name of On-Site Retail Manager: Bart Zillner
Name of On-Site Concession Manager: Chris Williamson
Name of On-Site Board Dining Manager: Gary Logosz

Any changes to the proposed on-site team must be reviewed and approved by Boise State University.

- 2.3.2.5 On-site, district and regional management that is experienced and adept at partnering with a growing university in meeting evolving campus needs;
- 2.3.2.6 Production, service and management information systems technology that is industry leading in all aspects of the program, in keeping with the University's position as a national technology leader, with a commitment to a seamless interface with University systems where necessary;
- 2.3.2.7 An ongoing commitment to proactive marketing and business development in the areas of meal plan sales, retail sales and catering sales that is collaborative with the University in articulating a seamless message, and includes quantitative success measurement;
- 2.3.2.8 Programs and standards that enforce safe food handling, proper sanitation, HACCP standards and health department requirements;
- 2.3.2.9 Facility and equipment preventive and ongoing maintenance programs that result in good stewardship of University owned resources;
- 2.3.2.10 Development and adherence to a risk minimization program that requires strict performance measures, incorporates full disclosure financial reporting to the University (including monthly and annual profit/loss statements), and tracks key performance indicators. The established risk minimization and performance measurement system will be agreed to by both the University and the Food Services Vendor prior to the award of the contract. The minimum performance metrics proposed by the successful Vendor will serve as the lowest level of performance acceptable to the

University. The risk minimization program must efficiently capture performance and compare it to the established minimums.

2.3.3 Human Resources Expectations

2.3.3.1 Human resource practices that are industry leading, and that support workplace diversity, employee retention and generally reflect the human resource practices of the University;

- Professional appearance (with uniforms and nametags) and conduct by all food service staff.
- Volunteer background checks are only required per Boise State University Policy #7005 located at <http://policy.boisestate.edu/human-resources/background-investigations/>. The Contractor is responsible for paying for all required background checks. The University can provide those checks and bill the Contractor, or the University will allow the Contractor to conduct such checks pending approval of the check process and resulting actions.

2.3.3.2 A significant and ongoing focus on technical and service training for all employees designed to maintain high standards across the program;

Preferential hiring of qualified, existing dining staff;

A strong focus on the hiring, retention and advancement of student employees at wages that are competitive with other student employment options on campus;

The student employee compensation schedule can be found at:
<http://career.boisestate.edu/student-employment-classification-schedule/>

2.3.3.3 Sustainability Expectations

A commitment to recycling that, at a minimum, matches and evolves with the University's recycling program.

2.3.3.4 A sustainability program that reflects the University's position as a national academic leader in this area, with particular emphasis on four key areas:

- Purchase and transport of food – does the program seek out suppliers minimizing their environmental impact through the effective use of ecologically sustainable techniques? Are seasonally available local produce options integrated into menu options? Is transport from farm to campus energy-efficient?
- Preparation – are initiatives in place to ensure that management, kitchen, and serving operations use resources efficiently through the effective deployment of resource-saving practices and technology? Are staff situated to make a contribution to sustainability?
- Disposal – is as little waste as possible produced? Are there mechanisms in place for composting or otherwise reducing the impact of food waste? Is packaging and other waste minimized? Are more ecologically-sensitive disposable products preferred? Are recycling and other efficient waste disposal mechanisms in place?

- Innovation and education – are sustainability practices constantly evaluated and updated regularly? Is campus dining situated as an innovator in food service sustainability? Are programs in place to educate the customer/student body about innovations and reasons for operations decisions in food service?

2.3.4 Compensation

2.3.4.1 A fair and balanced compensation agreement that supports both the Vendor and the University in meeting their respective financial objectives;

2.3.4.2 Compensation to the University sufficient to cover the University's direct and indirect costs of the dining program;

2.3.4.3 Provision of a Vendor contributed capital investment plan designed to support the capital development needs of the dining program over the life of the contract.

2.3.4.4 Provision of Vendor contributed funding to support student organization events.

2.4 MARKETING SUPPORT

2.4.1 At minimum, the University requires this level of marketing support for annual campus events.

- Good Will Project – Up to \$3,000 of “in-kind” support of meals for eligible staff members as determined by Human Resources.
- Approximately 600 Meal Tickets to the Boise River Café for Admissions, discounted 20%
- Supervision of the preparation of food in the kitchen for no more than 5 student organized events, such as the International Food, Song, and Dance Festival, where menu items are prepared by students and members of their student organizations. The labor for these events is provided at no cost, while the food is provided at cost.
- Partnership with Student Affairs and Academic Affairs on Events and Activities – Partnership is for “in-kind” products with a minimum retail value of \$5,000 per year.
- Partnership with the President's office on Events and Activities- Partnership is for “in-kind” products with a minimum retail value of \$15,000 year.

2.4.2 To support the University's recycling efforts, the Vendor will contribute \$2500 annually.

2.4.3 Customer Satisfaction

The University is dedicated to providing a quality-dining program on the Boise State Main Campus. Consequently, customer service is paramount. Therefore, the Vendor will be required to conduct at least one customer satisfaction survey each year, with prior approval from the Contract Administrator or designated liaison. Programs proposed and approved include:

2.4.3.a. Twice annual student satisfaction survey (Dining Styles Survey).

2.4.3.b. Daily Voice of Consumer feedback and responses.

2.4.3.c. Annual client survey.

2.5 SANITATION

2.5.1 The Vendor shall be responsible for custodial and sanitation of all food service and dining areas. This includes occupational health and safety measures necessary to comply with Federal, State, and local laws, ordinances, and regulations pertaining thereto. The Vendor shall adhere

strictly to all pure food and drug regulations, health laws, ordinances, and regulations as promulgated by the State of Idaho and the City of Boise, and agencies having authority there under, and shall identify and hold the University, their employees, and agents harmless from all claims arising from Vendor's failure to adhere to such laws, rules and regulations.

Housekeeping and sanitation programs must meet the highest standards of cleanliness.

- 2.5.2 The Vendor shall be responsible for gathering and containerizing trash and garbage generated by the provision of the Dining Services Program, and for trash removal, including off-premise catering and on-campus outdoor events. The cleaning of sanitation areas around the trash containers is the responsibility of the Vendor. All events should include recycle receptacles that should also be maintained by Vendor.
- 2.5.3 The maintenance of proper sanitation levels is the full responsibility of the Vendor. The University expects that a collaborative relationship will be developed between the Vendor's management staff and University. All state, county and City of Boise regulations for food service establishments and alcohol service must be maintained. All food service facilities and equipment will be maintained to the levels necessary to successfully pass each health department evaluation with a minimum score of 90 out of 100. A copy of all inspection reports will be forwarded to the University's Contract Administrator immediately following the inspection. If there are noted deficiencies, the Vendor shall include a written report that explains the cause and stipulates how the issues will be corrected.
- 2.5.4 For each food service operation, the kitchen, food storage, dish room and food preparation and serving area equipment and facilities must be kept clean and in sanitary condition through the length of the work day. The following minimum standards must be enforced at all times and apply to all facilities on campus managed and/or used by the Vendor for the purpose of preparing and or serving food. Participation in facility "walk throughs" with venue managers to identify sanitation and maintenance issues will occur on a regular basis.
- 2.5.5 The Vendor will develop quality sanitation standards and all employees will be trained and instructed in sanitation standards, cleaning procedures, personal habits and hygiene. The Vendor shall train and insure that its staff shall comply with the following standards:
- 2.5.6 Maintenance of insect and pest control in all food service, production, and storage areas, cost of which is to be borne by the Vendor.
- 2.5.7 The Vendor is required to participate in the University's recycling program. University will be responsible for provision and removal of appropriate containers, and for provision of procedural instructions.
- 2.5.8 The Vendor shall schedule deep cleaning of all the Concession Stands when they are not in use, ensuring that all perishable foods and products are removed and stored properly.

2.6 NUTRITION AWARENESS PROGRAM:

The Vendor shall provide a Nutrition Awareness Program (NAP) for all residential and retail dining that encourages an understanding of nutritional needs, a commitment to the lifelong maintenance of good health, and an awareness of ecological, political, and special food issues. Food included

in NAP would be prepared with less sugar, salt, fat, chemical additives, would contain more roughage and would include vegetarian entrees. As part of NAP, the Vendor is required to provide a mix of the following:

- 2.6.1 Nutrition information that gives the nutritional breakdown of all entrees and other portion controlled food selections served during the year.
- 2.6.2 Nutritional information for standard menu items served daily, including the number of calories and amount and types of fat in each serving.
- 2.6.3 Nutrition information boards in each serving area.
- 2.6.4 Daily posting of ingredients for each entrée served.
- 2.6.5 Nutritional information through charts, posters, table tents and other visual aids to be rotated monthly throughout the academic year in each of the dining operations.

2.7 FOOD SERVICE ADVISORY BOARD

The Vendor shall participate in, lead discussions with, and be responsive to the Food Service Advisory Board comprised of resident students, commuter students, faculty, staff, and the University's contract administrator to advise the Vendor regarding service/menu needs and to participate in new product tastings.

2.8 WEB-SITE

The Vendor shall establish and maintain an informational web site for the Dining Services Program that is linked to the University's web site. The web site shall contain information on dining locations, days/hours of operation, menus, meal plans, and catering services. Information will be kept current at all times.

2.9 PROVISION OF OFFICE SPACE

The University agrees to provide the Vendor with reasonable and adequate office space, in the University's sole discretion, for its on-site management and administrative personnel.

3. QUALITY CONTROL PLAN

- 3.1. List of University action items and requirements. The list must include item/task/ expectation, date required, and the actual person in the University's organization that is responsible for fulfilling the need.

There were no University items and requirements requested.

- 3.2. A detailed list of performance metrics and benchmarks, that to the satisfaction of the University, must consider financial performance, quality and customer satisfaction performance, and other necessary benchmarks of the received level of service.

Performance Measures to Verify the Success of the Project

Financial Performance Metrics

Category
Retail Sales (\$K): Flex Dollars, M&G Voluntary, M&G Mandatory, and Cash and Credit Cards
Catering Sales (\$K)
Camp/Conference Sales (\$K)
All Other Sales (\$K)
TOTAL REVENUE
Total Board Revenue
Total Retail Revenue
Commissions on Total Revenue (\$K)
Commissions on Retail Revenue (\$K)
% Commission Paid to BSU

Retail Sales Metrics

Category
Flex Dollars
Retail Concepts
TOTAL RETAIL SALES

Subcontractor Sales Metrics

Category
Papa Johns Pizza Delivery
Pie Hole Pizza Delivery
3rd Party Sales
Other Sales (\$K)
Total Subcontractor Sales (\$K)

Concessions Sales Metrics

Pre/Cap

Annual student satisfaction survey (Dining Styles Survey).

Daily Voice of Consumer feedback and responses.

Annual client survey.

3.3. Milestone Schedule

Our organization uses proven approaches to manage transition and achieve milestones which include:

- 1) Role-based transition Team Model (roles, responsibilities and organizational interfaces)
- 2) Guidelines for communications, status, integration and meeting times
- 3) A framework for Continuous Quality Assurance and Process Improvement
- 4) Time-boxed approach to Transition Management Scheduling and budgeting (Time phased, role-oriented "punch-lists" drives toward measurable milestones and deliverables)
- 5) A Best Value Risk Management Plan to prevent issues and when they occur timely resolution of key issues

Our Engaged Management Team using this approach will ensure the following:

- 1) Client and Consumer satisfaction without service interruptions;
- 2) Quality and consistency of product & service delivery

Production Operations: Food Prep/Supply Chain/Vendors- MILESTONES	Date Accomplished
Determination of priority concept openings /fall opening plans reviewed	February 2016
New Brands –suppliers identified in place- Execute	March 2016
Develop all new menu platforms for the residential program with university acceptance.	April 2016
Develop all training table menus and Game day buffet and suite menus	May 2016
Construction/Design - MILESTONES	Date Accomplished

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Meet with all parties involved with construction and planning--Facility Requirements Assessed	February 2016
All plans finalized with university acceptance	February 2016
Weekly construction status meeting with client	February 2016
All required licenses and permits pulled	March 2016
Key contractors hired and in place	April 2016
Completion of construction and refresh work	August 2016
Human Resources - MILESTONES	Date Accomplished
Venue specific training needs identified (hourly and Management)	April 2016
Hire and Onboard a Registered Dietitian.	June 2016
Training /Orientation Completed	August 2016
Sustainability –MILESTONES	Date Accomplished
Somat Dehydrator Installed in BRC	May 2016
Install Video Media Screen highlighting Sustainable Initiatives in BRC	May 2016
Hire 2 Student Sustainability Interns	May-August 2016
Finance/Information Technology/Administration - MILESTONES	Date Accomplished
Identify equipment needed to stream line post athletic/special event close down.	March 2016
Install 2 data ports for food truck use while on campus	April 2016
Identify and review with client all new contract rate changes	May 2016
Marketing /Culinary - MILESTONE	Date Accomplished
Install new Video Media Screens-Menu and Nutritional Content	May 2016
Campus Dining services web-site updated	July 2016
Plan and Calendar a Catering Open House for campus and community customers	July-August 2016
Individual site openings planned	August 2016
Grand Opening plans complete	September 2016

- 3.4. Development of a Risk Minimization and Performance Measurement Program that will be used during the life of the contract to track and document risks and performance metrics. The weekly risk report format is below and the performance measurements as per 3.2.

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Weekly Risk Report Format (WRR)

No.	Date Entered	Risk Category	Risk Details	Planned Resolution Date	Actual Resolution Date	Impact to Commissions	Impact to Capital Investment	Client Satisfaction Rating
0	5/11/15	Please identify the party responsible for the risk from the drop- down menu						

3.5 RISK ASSESSMENT PLAN

Risk #1 Description: Mandatory Meal Plan Enrollment Falls Short of Expectations

Risk Impact / Why is this a risk: Program performance and associated revenues, commissions and capital investments require anticipated meal plan subscriptions

Solution: A team is assigned to 1. Identify creative ways to increase and generate new sources of revenue. 2. Provide alternate plans to the University in case enrollment declines. 3. Collaborate with University constituents including Student Affairs, Admissions and the University to grow enrollment and build campus community.

Documented Performance: Through the application of Meal Plan Analytics tool, we have collaborated with large public universities on meal plan policy, pricing and structure to achieve year over year meal plan growth.

Risk #1 Clarification:

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Aramark expects that the University will do the following each year to enable Aramark to act in the best interest of the University:

1. Provide enrollment numbers
2. Provide Aramark with feedback from the University's master planning meetings
3. Identify Boise State Stakeholders to work on the joint team.

The financial terms (e.g., commissions, capital investments, pricing) in the contract are based upon the assumptions included in Attachment C to Aramark's Proposal. Those assumptions include the following:

1. That the number of mandatory meal plan subscriptions per semester will not drop below 1200; and
2. That the proposed dining locations and concepts are open and operational in accordance with the schedule set forth in the Proposal or otherwise mutually agreed by the University and Aramark, and existing venues remain open and operational as explained in the Proposal, except to the extent that any delays in opening proposed dining locations and concepts are caused by Aramark.

If the assumptions set forth above and in the documents referenced above are not satisfied, the following will occur:

1. Within thirty (30) days of any of the above assumptions not being met, Aramark will provide the University with proposed modifications to the financial and/or operational terms of the contract to reflect the changed conditions. Such modifications might include the following: (i) restructuring the dining program to reduce the hours of operation, number of meal plans; labor/staffing; (ii) restructuring meal plans and the sliding scale; (iii) reducing or eliminating meal plan equivalency; (iv) reducing commissions and/or the commission guarantee; (v) increasing retail, catering & concessions prices; (vi) reducing the repair and maintenance/replacement fund for concessions equipment; (vii) eliminating annual in-kind donations; (viii) eliminating the proposed Honors College capital investment; and/or (ix) repayment of all or a portion of the financial commitments or unrestricted grants made by Aramark. Any changes to the board dining plans will not be implemented until the following academic year (July 1 through June 30) due to already existing contractual obligations of the University to its students.
2. During the following period, not to exceed thirty (30) days, the parties will discuss the changed circumstances and agree upon modifications to the contract to reflect the changed conditions. The parties may agree to retain a third-party Best Value contracting expert to moderate the discussion. In the event that the University or Aramark fails to negotiate in good faith a modification to the contract to reflect the changed conditions, any such failure shall be considered a material breach of the contract.

Exclusion from the University Master Planning Process

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Risk #2 Description:

Risk Impact / Why is this a risk:

The University unknowingly could change policies and procedures, which could impact dining service financial and service structure that could lead to lower dining satisfaction and decrease dining revenue.

Solution:

1. A strategic leadership team will provide the University with marketplace, industry and consumer insights. 2. The University will receive a monthly report that shows trends and relevant information. 3. A dedicated Design team will be available to support physical transformation plans. 4. A survey will be done on the campus every year to collect planning input from students. 5. A strategic meeting will be held each year identifying changes that have been done on other University campuses that have brought improvements. 6. Partnership with a high performing team that has managed a Best Value contract at another University.

Documented Performance:

The high performing team we are partnering with through this plan has helped the university make decisions that have increased dining revenue by 95% over 7 years.

Risk #3 Description:

Risk Impact / Why is this a risk:

Government enacted laws or mandates that impact the program (including healthcare, minimum wage, environmental and supply chain requirements)

Solution:

Cost of the dining program increases and associated returns impacted
We will present to the university innovative solutions to scale the dining program through prudent management to ensure the sustainability of the dining services program.

Documented Performance:

Through the application of an annual strategic business review process in more than 110 accounts of similar size and scope, we clarify client goals and provide recommended data-driven actions that yield customer and client-focused outcomes.

Risk #3 Clarification:

The financial terms (e.g., commissions, capital investments, pricing) in the contract are based upon the statutes, rules and regulations in effect as of the effective date of the contract. In the event of a change in government enacted laws or mandates that materially impacts the dining program (including laws affecting health and welfare benefits, the minimum wage, contributions to social security or payroll taxes (including retroactive changes to such contributions), changes in a collective bargaining agreement covering Aramark's or the University's employees, the environment, or supply chain requirements), the following will occur:

1. Within thirty (30) days of any of change or proposed change in the statutes, rules and regulations described above, Aramark will provide the University with proposed modifications to the financial and/or operational terms of the contract to reflect the changed conditions. Such modifications might include the following: (i) restructuring the dining program to reduce the hours of operation, number of meal plans; labor/staffing; (ii) restructuring meal plans and the sliding scale; (iii) reducing or eliminating meal plan

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equivalency; (iv) reducing commissions and/or the commission guarantee; (v) increasing retail, catering & concessions prices; (vi) reducing the repair and maintenance/replacement fund for concessions equipment; (vii) eliminating annual in-kind donations; (viii) eliminating the proposed Honors College capital investment; and/or (ix) repayment of all or a portion of the financial commitments or unrestricted grants made by Aramark. Any changes to the board dining plans will not be implemented until the following academic year (July 1 through June 30) due to already existing contractual obligations to our students.

2. During the following period, not to exceed thirty (30) days, the parties will discuss the changed circumstances and agree upon modifications to the contract to reflect the changed conditions. The parties may agree to retain a third-party Best Value contracting expert to moderate the discussion. In the event that the University or Aramark fails to negotiate in good faith a modification to the contract to reflect the changed conditions, any such failure shall be considered a material breach of the contract.

Risk #4 Description:

Risk Impact / Why is

this a risk:

Unanticipated Natural or Man-Made Events that materially disrupt services (i.e. extreme weather, loss of infrastructure utilities) ("Unforeseen Events")

Impede our ability to service customers

1. Work together to ensure both the University and Aramark have plans in place with required steps to minimize impact of Unforeseen Events. 2. Provide experts to review University's plan. 3. Have experts on hand to address issues that arise due to the occurrence of any Unforeseen Events. 4. Keep an updated list of emergency resources that can be mobilized in less than 24 hours of an Unforeseen Event occurrence 5. Maintain an active inventory of emergency food items 6. Commit Regional and corporate resources, including QA & IT to support local team and University.

Solution:

We have managed many events with this solution. One university had water contamination and another had a major fire in the main dining location on campus. Student service interruption was minimized and clients had high satisfaction in both cases.

**Documented
Performance:**

Risk #4 Clarification:

1. At the start of each school year the University provides Aramark with the University's Preparedness plan for review and Aramark provides Boise State their Emergency/Business Continuity Plan to review.
2. University and Aramark to develop a mutually acceptable plan to include alternate sources of power and temporary dining locations to be made available.
3. Onsite GM to engage corporate resources to deploy Aramark's Emergency/Business Continuity Plan.

Risk #5 Description: Venue Attendance Declines for stadium and/arena Events

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Risk Impact / Why is this a risk:	Concession and Catering Revenue make up 1/3 of all dining service revenue. This makes stadium attendance vital to the dining service financial plan.
Solution:	Create memorable fan and guest experiences to attract event attendance. With the direct engagement of our industry –leading sports division to plan and implement program and business practices.
Documented Performance:	Effectively serving more than a dozen major universities with distinction and recognized as the #1 provider of food and hospitality in the NFL, NHL & NBA. One of our University stadiums recently broke sales per cap records, led by a 30 percent increase in hot dog sales & 14 percent improvement in the beverage category. Introduction of our gourmet burger concept resulted in a 33% stadium revenue increase and 100% increase in an arena setting.

- Risk #5 Clarification:** This joint UNIVERSITY/ARMK team will
1. Identify creative ways to increase and generate new sources of revenue;
 2. Provide alternate plans to the University in case attendance declines;
 3. Scale Concession and Catering offerings appropriately to align with attendance.

Aramark expects that the University will do the following each year to enable Aramark to act in the best interest of the University:

1. Meet with Aramark to quarterly to review Projected and Actual Attendance Numbers
2. Provide Annual Schedule of Events for both Taco Bell and Albertson's with ongoing updates

The financial terms (e.g., commissions, capital investments, pricing) in the contract are based upon the assumptions included in Attachment C to Aramark's Proposal. Those assumptions are based upon attendance at concession events remaining the same or increasing. Aramark and the University will conduct a semi-annual review of attendance at concession events. If attendance at home football games (including one bowl game) declines by more than ten percent (10%) from the baseline period (July 1, 2014, through June 30, 2015) the following will occur:

1. Within thirty (30) days of completion of the semi-annual review, Aramark will provide the University with proposed modifications to the financial and/or operational terms of the contract to reflect the changed conditions. Such modifications might include the following: (i) reducing commissions and/or the commission guarantee; (ii) increasing concessions prices; (iii) eliminating annual in-kind donations; (iv) eliminating the proposed Honors College capital investment; and/or (v) repayment of all or a portion of the financial commitments or unrestricted grants made by Aramark.
2. During the following period, not to exceed thirty (30) days, the parties will discuss the changed circumstances and agree upon modifications to the contract to reflect the changed conditions. The parties may agree to retain a

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third-party Best Value contracting expert to moderate the discussion. In the event that the University or Aramark fails to negotiate in good faith a modification to the contract to reflect the changed conditions, any such failure shall be considered a material breach of the contract.

3.6 VALUE ADDED PLAN

Item #1 Claim: Invest in the development of a residential village incorporating an Honors College concept and residential dining; increasing the meal plan-subscribed, on-campus population will accelerate a residential community transformation and incrementally grow the dining program and increase return to the University.

How will this add value?
Documented Performance: We have collaborated with large public universities on conservative meal plan policy, pricing, and structure to achieve year-over-year meal plan growth rate improvements of 8-20%.

Cost Impact (%): 0% **Schedule Impact (%):** 0-50%

Item #2 Claim: Application of our propriety, trademarked campus dining master planning system and invest in new retail dining hubs; accommodating the underserved retail customers in the academic and evolving South East Campus neighborhoods will attract and keep the large non-resident population on campus with convenience and choices, increasing student satisfaction and returns to the University.

How will this add value?
Documented Performance: The execution of our campus dining master planning process has yielded program growth of 9-19%.

Cost Impact (%): 0% **Schedule Impact (%):** 0-50%

Item #3 Claim: Provide the direct engagement of our industry-leading sports division. Experts effect marketplace innovations like broadening cashless and mobile transactions and introducing new food concepts. Informed insights and analytics guide data-driven decisions resulting in an elevated fan experience, build Boise State brand loyalty, and increases return to the Athletics program and the University.

How will this add value?
Documented Performance: 1. Our transformation of one stadium program drove concessions revenue 15% over prior year; 2. In cases where a food concept was completely changed, single stand revenue increased 100%; 3. Expanded cashless transactions at one football stadium resulted in increased throughput and a 30% growth in revenue year over year.

Cost Impact (%): 0% **Schedule Impact (%):** 0%

Item #4 Claim: Provide bond financing model to fund capital
Allows for lower cost of capital and reduces financial burden on the dining program for maximum value to the University. Client savings could approach 25%.

How will this add value?

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Documented Performance: We have partnered with several large public universities in successful applications of this model.

Cost Impact (%): 0-25%

Schedule Impact (%): 0-50%

Item #5 Claim: Establishment of a comprehensive Athletics training table
Enhance student athlete performance and their campus experience
satisfaction through the application of NCAA Nutrition Guidelines
How will this add value? supported by a registered dietitian.

Documented Performance: We successfully provide high student athlete and client satisfaction with our training table programs at six universities.

Cost Impact (%): 0%

Schedule Impact (%): 0%

Item #6 Claim: Provide a facilities needs assessment for Dining and Athletics;
Identify major facilities deficiencies, costs of repairs, and produces a
five-year priority strategy. Provides a comprehensive financial strategy
that analyzes deferred maintenance needs against programmatic growth
How will this add value? to create a model for maximum efficiency and growth.

Documented Performance: We have provided facilities assessments on campuses as a prelude or part of a facilities capital master plan.

Cost Impact (%): 0%

Schedule Impact (%): 0%

Item #7 Claim: Immediate activation of our proposed program plan.
Accelerated timeline to campus transformation beginning immediately
How will this add value? upon contract award without the delay of six-month transition causes.

Documented Performance: We are currently activating transformation plans at a major East Coast university that has retained our services for a contract that takes effect in July 2016.

Cost Impact (%): 0%

Schedule Impact (%): 0%

Item #8 Claim: Training and consulting from an experienced best value team
Best value experts, including a third-party best value consultant, will be
brought to campus to educate and assist the campus team to implement
How will this add value? best value concepts and processes.

Documented Performance: Our best value client is experiencing as much as 15%-20% year-over-year growth in the boarding, dining, and retail concepts' revenues and commissions. Our client has indicated that as a best value partner, we rate 4.6 on a 5.0 scale in Making an Impact on Their Organization and rate a 4.7 on Delivers on Commitments.

Cost Impact (%): 0%

Schedule Impact (%): 0%

4. CONTRACT TERMS AND CONDITIONS

The STATE OF IDAHO STANDARD CONTRACT TERMS AND CONDITIONS attached as Exhibit 2 are fully incorporated herein.

4.1 CONTRACT EXTENSION

CONSENT - BAHR – SECTION II

The initial term of the contract shall be for five (5) years, commencing the effective date. The contract may be renewed for five successive one year periods at the option of the University. The University shall provide written notice to the vendor of its intent to extend this contract at least 120 days prior to the end of the initial term. If the vendor does not desire to extend the contract, the vendor shall so notify the University in writing no later than ten (10) days after the date of the University's notice of intent under this paragraph. Any extension shall be under the same terms and conditions as the final year of the initial term of the contract unless otherwise negotiated and agreed to by the parties.

4.2 CONFLICT OF INTEREST

No employee, officer or agent of University shall participate in the selection, the award, or administration of the contract if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when one of the following has a financial or other interest in any firm proposing on or selected for the award:

- The employee, or an officer or agent of the employee;
- Any member of the employee's immediate family;
- The employee's business partner; or
- An organization which employs, or is about to employ, any of the above.

The University's officers, employees, or agents shall neither solicit nor accept gratuities, favors, or anything of monetary value from Vendors, potential Vendors, subcontractors, or other parties to sub-agreements whereby the intent could reasonably be inferred as influencing the employee in the performance of his or her duties or was intended as a reward for any official act on his or her part.

4.3 INSURANCE REQUIREMENTS

- 4.3.1 Vendor and its sub-vendors of any tier are required to carry the types and limits of insurance required by law.
- 4.3.2 By requiring insurance herein, University does not represent that coverage and limits will necessarily be adequate to protect Vendor and its sub-vendor(s) of any tier, and such coverage and limits shall not be deemed as a limitation on the liability of the Vendor and its sub-vendor(s) of any tier under the indemnities granted to University in this Agreement.
- 4.3.3 The Vendor is required to provide University with a certificate of Insurance ("certificate") to extent indemnified. All certificates shall be coordinated by the Vendor and provided to the University within seven (7) days of the signing of the contract by the Vendor. Certificates shall be executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements set forth below. Notice of cancellation of any insurance policies required herein shall be subject to ACORD 25 Certificate of Liability standards, and will be delivered, as applicable, in accordance with policy provisions.
- 4.3.4 All insurance required hereunder shall be maintained in full force and effect with insurers with Best's rating of A- or better and be licensed and admitted in Idaho. All policies required shall be written as primary policies and not contributing to nor in excess of any coverage University may

choose to maintain. Failure to maintain the required insurance may result in termination of this Agreement at University's option.

- 4.3.5 All policies except Workers Compensation and Professional Liability shall name University as Additional Insured.

- 4.3.6 Certificate Holder shall read:
State of Idaho and Boise State University
Attn: Risk Management
1910 University Drive
Boise, Idaho 83725-1245

Certificates shall be mailed to:
Boise State University
Attn: Risk Management
1910 University Drive
Boise, ID 83725-1245

- 4.3.7 All policies (except Workers Compensation and Professional Liability) shall name the following as Additional Insured: State of Idaho and Boise State University.

- 4.3.8 Failure of Certificate Holder to demand a certificate or other evidence of full compliance with these insurance requirements or failure of Certificate Holder to identify a deficiency from evidence that is provided shall not be construed as a waiver of Vendor's obligation and its sub-vendor(s) to maintain such insurance.

- 4.3.9 Should any of the above described policies be cancelled before the expiration date thereof, the issuing insurer will endeavor to mail 30 days written notice to the certificate holder named to the left, but failure to do so shall impose no obligation or liability of any kind upon the insurer, its agents or representatives

- 4.3.10 Failure to maintain the required insurance may result in termination of this contract at the Certificate Holder's option.

- 4.3.11 Vendor is responsible for coordinating the reporting of claims and for the following:

- (a) notifying the Institution in writing as soon as practicable after notice of an injury or a claim is received;
- (b) cooperating completely with University in the defense of such injury or claim; and
- (c) taking no steps (such as admission of liability) which will prejudice the defense or otherwise prevent the University from protecting its interests.

- 4.3.12 Required Insurance Coverage
Vendor and its sub-vendor(s) of any tier shall at its own expense obtain and maintain throughout the term of this contract.

4.3.13 Commercial General and Umbrella / Excess Liability Insurance

Vendor and its sub-Vendor(s) of any tier shall maintain Commercial General Liability ("GL") written on an occurrence basis and with a limit of not less than \$1,000,000 each occurrence and in the aggregate. If such CGL insurance contains a general aggregate limit, it shall apply separately by location and shall not be less than \$2,000,000. CGL insurance shall be written on standard ISO occurrence form (or a substitute form providing equivalent coverage) and shall cover liability arising from premises, operations, independent Vendors, products-completed operations, personal injury and advertising injury, liquor legal liability, food borne illness and contamination, and liability assumed under a contract including the tort liability of another assumed in a business contract. If necessary to provide the required limits, the Commercial General Liability policy's limits may be layered with a Commercial Umbrella or Excess Liability policy.

4.3.14 Commercial Automobile Insurance

Vendor and its sub-Vendor(s) of any tier shall maintain a Commercial Auto policy with a Combined Single Limit of not less than \$1,000,000; Underinsured and Uninsured Motorists limit of not less than \$1,000,000; Comprehensive; Collision; and a Medical Payments limit of not less than \$10,000. Coverage shall include Non-Owned and Hired Car coverage.

4.3.15 Business Personal Property

Vendor and its sub-Vendor(s) of any tier shall purchase insurance to cover Business Personal Property of Vendor and its sub-Vendor(s) of any tier. In no event shall University be liable for any damage to or loss of personal property sustained by Vendor, even if such loss is caused by the negligence of Institution, its employees, officers or agents.

4.3.16 Workers' Compensation and Employers' Liability Insurance

Vendor and its sub-Vendor(s) of any tier shall maintain all coverage statutorily required of the Vendor and its sub-Vendor(s) of any tier, and coverage shall be in accordance with the laws of Idaho. Vendor and its sub-Vendor(s) of any tier shall maintain Employer's Liability with limits of not less than \$100,000 / \$500,000 / \$100,000.

4.3.17 Professional Liability

If professional services are supplied to Institution, Vendor and its sub-Vendor(s) of any tier, shall maintain Professional Liability (Errors & Omissions) insurance on claims made basis, covering claims made during the policy period and reported within three years of the date of occurrence. Limits of liability shall be not less than one million dollars (\$1,000,000)

4.4 UNIVERSITY MARKS / NEWS RELEASE / PROMOTIONS

University Marks-Boise State University's registered trademarks, as well as other names, seals, logos, college colors and other indicia ("University Marks") that are representative of the University may be used solely with permission of Boise State University. Notwithstanding the foregoing, the University logo may be used in the RFP response for illustrative purposes only. No use may be made of University Marks in any document which implies any association with or endorsement of the services of the bidding company or any other third party.

4.5 ADVERSE INTERESTS

During the term of this contract and any extensions, the vendor will not provide services nor enter into any agreement to provide services to a person or organization that has interests that are adverse to the University (as defined by the University). If the University believes that the vendor is violating this paragraph, the University will notify the vendor in writing by certified mail. The University and the vendor will meet and discuss the alleged violation within thirty (30) days of such notice.

4.6 IDAHO STATE BOARD OF EDUCATION APPROVAL

This Agreement is subject to approval by the Idaho State Board of Education and if such approval is not granted this Agreement shall be void and neither party shall have any further obligations or liabilities hereunder.

4.7 DEFINITIONS

- BV – Best Value
- COBE – College of Business and Economics
- ILC – Interactive Learning Center
- PIPS – Performance Information Procurement System
- POS – Point of Sale
- PPI – Past Performance Information
- RFP – Request for Proposal
- RMP – Risk Management Program
- SUB – Student Union Building
- TIPS Training – Training for Intervention Procedures
- University – Boise State University
- VA – Value Added
- Vendor – Company or organization that is submitting a proposal in response to this RFP
- WILK or WILK POD – Wilkerson POD at Chaffee Hall
- WRR – Weekly Risk Report

5. ANNUAL PRICING SUBMISSIONS

5.1 PRICING CHANGES

After the first year of the Agreement, requests for price adjustments for the ensuing year will be submitted to the University no later than November 15 for the contract board program, concessions, retail, vending, child care, alcohol, training table, catering, and summer conference and camp operations. Boise State University will not unreasonably withhold approval of annual price changes that are justified by presentation of the following supporting data:

- Increases in the U.S.D.A. Regional (for the region in which Boise is located) Wholesale Food Price Index for the preceding 12-month period.
- Mutually agreed upon market basket survey comparison.
- Changes in menu, points-of-service, additions or levels of service provided.

The Contractor will not alter prices once approved by the Contract Administrator without obtaining further approval, and must be able to justify that proposed price increases are based upon the supporting data listed above or the result of legitimately escalating costs of doing business.

5.2 PROVISIONS OF ANNUAL PLAN

On or before November 15, of each calendar year, the Contractor shall submit to the Contract Administrator an Annual Plan for the Dining Services Program for the University's following fiscal year, July 1 through June 30th, which addresses the following items:

- 5.2.1 Menus / Concepts for all Dining Operations;
- 5.2.2 Pricing Structures, which are based on a Market Basket Survey Comparison;
- 5.2.3 Proposed Changes to Meal Plans;
- 5.2.4 Proposed Hours of Operation;
- 5.2.5 Detailed Marketing Plan, with Specific Goals and Measurements;
- 5.2.6 Employee Training Program;
- 5.2.7 A financial overview of the Dining Operations, including projected annual revenues and costs (food, labor, and direct costs) to include prior year comparisons;
- 5.2.8 Proposed Capital Expenditures and Furnishings, Furniture & Equipment Budget;
- 5.2.9 Proposed Adjustments to Contractor Compensation;
- 5.2.10 Proposed Catering Standards;
- 5.2.11 Customer Satisfaction Survey; and
- 5.2.12 State of Boise State University's Food Service versus Best Practices in the Marketplace.

The Annual Plan shall be based on identified goals and objectives as mutually established and determined by the University and the Contractor.

Once the Annual Plan is approved by the University and the Contractor, the Contractor will be responsible to comply with the Annual Plan, and shall not substantially deviate from it without the express written consent of the Contract Administrator, except where such deviation is due to and is in direct proportion to an increase in business in excess of pro forma operating projections. At the close of each fiscal quarter, or more frequently if deemed necessary by the Contract Administrator, the Contractor and the Contract Administrator shall meet to review operating results for the fiscal year to date, as well as operating plans for the balance of the fiscal year.

If either party requests material changes or modifications to a previously approved Annual Plan, the parties agree to negotiate regarding such reasonable modifications in good faith.

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EXHIBIT 1

Retail

1. Subway

MENU ITEM	PRICE
6" Veggie	\$3.89
6" Cold Cut Trio	\$3.89
6" Seafood Sensation	\$3.89
6" Meatball	\$3.89
6" Tuna	\$4.59
6" Ham	\$3.89
6" BMT	\$4.59
6" Turkey and Ham	\$4.59
6" Turkey	\$4.59
6" Melt	\$5.19
6" Steak	\$5.19
6" BLT	\$3.89
6" Spicy Italian	\$3.89
6" Club	\$5.19
6" Roast Beef	\$5.19
6" Fajita Chicken	\$4.59
6" Chicken and Bacon Ranch	\$5.19
6" Oven Roasted Chicken	\$4.59
6" Buffalo	\$5.19
6" Big Philly	\$5.69
6" Sweet Onion Chicken Teriyaki	\$5.19
12" Veggie	\$5.69
12" Cold Cut Trio	\$5.69
12" Seafood Sensation	\$5.69
12" Meatball	\$5.69
12" Tuna	\$6.89

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12" Ham	\$5.69
12" BMT	\$6.89
12" Turkey and Ham	\$6.89
12" Turkey	\$6.89
12" Melt	\$7.99
12" Steak	\$7.99
12" BLT	\$5.69
12" Spicy Italian	\$5.69
12" Club	\$7.99
12" Roast Beef	\$7.99
12" Fajita Chicken	\$6.89
12" Chicken and Bacon Ranch	\$7.99
12" Oven Roasted Chicken	\$6.89
12" Buffalo	\$7.99
12" Big Philly	\$8.99
12" Sweet Onion Chicken Teriyaki	\$7.99
Double Chicken Salad	\$7.69
Turkey Breast Salad	\$6.19
Veggie Delite Salad	\$5.19
Veggie Flatizza	\$3.59
Cheese Flatizza	\$3.59
Spicy Italian Flatizza	\$3.59
Sausage Flatizza	\$3.59
Pepperoni Flatizza	\$3.59
Build your own Flatizza (\$0.50 per topping)	\$0.59
Kid's Meal	\$4.59
Make it a meal Combo	\$2.59
Cookie	\$0.69
Apple Bites	\$1.59
Chips	\$1.29
Soup 8oz	\$2.39

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Egg and Cheese (bread or flat bread)	\$4.09
Ham and Cheese (bread or flat bread)	\$4.09
Bacon Egg and Cheese	\$4.09
Breakfast B.M.T.	\$4.39
Sunrise Subway Melt	\$4.39
Steak, Egg and Cheese	\$4.39
Sausage, Egg and Cheese	\$4.39
16oz coffee	\$1.89
Juice	\$1.89
Fountain Beverage	
20oz	\$ 1.49
32oz	\$ 1.69
44oz	\$ 1.89

2. Chick-Fil-A

MENU ITEM	PRICE
CFA Sandwich	\$ 3.29
CFA Sandwich Deluxe	\$ 3.89
Spicy Sandwich	\$ 3.59
Spicy Sandwich Deluxe	\$ 4.29
Waffle Fry (medium)	\$ 1.79
Waffle Fry (large)	\$ 1.99
8 piece Nugget	\$ 3.29
12 piece Nugget	\$ 4.89
Cobb Salad	\$ 8.19
Side Salad	\$ 2.99
Cookie 1	\$ 1.29
Cookie 6	\$ 7.39
Cookie Sundae	\$ 1.99
Milkshake	\$ 3.29
Lemonade (medium)	\$ 1.79
Lemonade (large)	\$ 1.99
Iced Tea (medium)	\$ 1.79
Iced Tea (large)	\$ 1.99

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Gallon Lemonade	\$ 9.49
Gallon Iced Tea	\$ 4.39
Nugget Tray (small)	\$ 23.49
Nugget Tray (medium)	\$ 42.39
Baked Lays Potato Chips	\$ 1.09
Regular Lays Potato Chips	\$ 1.09
Cookie Tray 12ct.	\$ 17.59
Cookie Tray 24ct.	\$ 33.00
Fountain Beverage	
22oz	\$ 1.49
32oz	\$ 1.69

3. Starbucks

MENU ITEM	PRICE
Hot Chocolate16 oz	\$ 3.39
Hot Chocolate20 oz	\$ 3.59
Caramel Apple Spice12 oz	\$ 3.29
Caramel Apple Spice16 oz	\$ 3.79
Caramel Apple Spice20 oz	\$ 3.99
Pumpkin Spice Latte12 oz	\$ 4.09
Pumpkin Spice Latte16 oz	\$ 4.79
Pumpkin Spice Latte20 oz	\$ 5.09
Caramel Macchiato12 oz	\$ 3.79
Caramel Macchiato16 oz	\$ 4.39
Caramel Macchiato20 oz	\$ 4.79
White Chocolate Mocha12 oz	\$ 3.79
White Chocolate Mocha16 oz	\$ 4.39
White Chocolate Mocha20 oz	\$ 4.79
Caffe Latte12 oz	\$ 2.99
Caffe Latte16 oz	\$ 3.59
Caffe Latte20 oz	\$ 4.09
Caffe Mocha12 oz	\$ 3.49
Caffe Mocha16 oz	\$ 4.39
Caffe Mocha20 oz	\$ 4.59
Vanilla Latte12 oz	\$ 3.49
Vanilla Latte16 oz	\$ 4.09
Vanilla Latte20 oz	\$ 4.59
Caffe Americano12 oz	\$ 2.39

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Caffe Americano16 oz	\$ 2.79
Caffe Americano20 oz	\$ 3.09
Cappuccino12 oz	\$ 2.99
Cappuccino16 oz	\$ 3.59
Cappuccino20 oz	\$ 4.09
Espresso Solo	\$ 1.79
Espresso Doppio	\$ 1.99
Add Shot	\$ 0.79
Add Soy	\$ 0.69
Shaken Iced Tea12 oz	\$ 1.59
Shaken Iced Tea16 oz	\$ 1.99
Cinnamon Dolce Latte12 oz	\$ 3.29
Cinnamon Dolce Latte16 oz	\$ 3.59
Cinnamon Dolce Latte20 oz	\$ 4.39
Freshly Brewed Coffee12 oz	\$ 1.79
Freshly Brewed Coffee16 oz	\$ 2.19
Freshly Brewed Coffee20 oz	\$ 2.49
Salted Caramel Hot Chocolate12 oz	\$ 3.59
Salted Caramel Hot Chocolate16 oz	\$ 4.39
Salted Caramel Hot Chocolate20 oz	\$ 4.59
Caramel Brul�e Latte12 oz	\$ 4.09
Caramel Brul�e Latte16 oz	\$ 4.79
Caramel Brul�e Latte20 oz	\$ 5.09
Peppermint Mocha 12 oz	\$ 4.09
Peppermint Mocha 16 oz	\$ 4.79
Peppermint Mocha 20 oz	\$ 5.09
Gingerbread Latte12 oz	\$ 4.09
Gingerbread Latte16 oz	\$ 4.79
Gingerbread Latte20 oz	\$ 5.09
Eggnog Latte12 oz	\$ 4.09
Eggnog Latte16 oz	\$ 4.79
Eggnog Latte20 oz	\$ 5.09
Peppermint White Chocolate Mocha12 oz	\$ 4.09
Peppermint White Chocolate Mocha16 oz	\$ 4.79
Peppermint White Chocolate Mocha20 oz	\$ 5.09
Peppermint Hot Chocolate12 oz	\$ 3.59
Peppermint Hot Chocolate16 oz	\$ 4.39
Peppermint Hot Chocolate20 oz	\$ 4.59
Caramel Apple Spice12 oz	\$ 3.29
Caramel Apple Spice16 oz	\$ 3.79
Caramel Apple Spice20 oz	\$ 3.99

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Strawberry16 oz	\$ 4.39
Chocolate 16 oz	\$ 4.39
Orange Mango 16 oz	\$ 4.39
Full-Leaf Brewed Tea12 oz	\$ 1.99
Full-Leaf Brewed Tea16 oz	\$ 2.19
Full-Leaf Brewed Tea20 oz	\$ 2.59
Chai Tea Latte12 oz	\$ 3.39
Chai Tea Latte16 oz	\$ 4.09
Chai Tea Latte20 oz	\$ 4.39
Shaken Iced Tea12 oz	\$ 1.79
Shaken Iced Tea16 oz	\$ 2.39
Shaken Iced Tea24 oz	\$ 3.09

4. Freshii

MENU ITEM	PRICE
Signature Protein Burrito	\$ 6.79
Vegetable Burrito	\$ 6.59
Bangkok Burrito	\$ 6.49
Fiesta Burrito	\$ 6.89
Grilled Steak Burrito	\$ 6.99
Vegan Wrap	\$ 5.79
Buffalo Chicken Wrap	\$ 5.99
Cobb Wrap	\$ 6.99
Tuna Garden Wrap	\$ 5.99
Chicken Club Wrap	\$ 6.79
Spicy Noodle Bowl	\$ 6.79
Asian Noodle Bowl	\$ 6.59
Warrior Chicken Bowl	\$ 6.49
Chicken Teriyaki Bowl	\$ 6.29
Bliss Bowl	\$ 7.49
Southwestern Chicken Soup	\$ 6.79
Spicy Lemongrass Soup	\$ 7.59
7 Vegetable Soup	\$ 6.59
Small Soup	\$ 2.59
BBQ Chicken Salad	\$ 7.69
Wild Pacific Salad	\$ 9.79
Chicken Caesar Salad	\$ 7.99
Antioxidant Crunch Salad	\$ 7.79
Fiesta Salad	\$ 7.79
Freshii Cobb Salad	\$ 8.99

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Asian Chop Salad	\$ 7.29
Buffalo Chicken Salad	\$ 8.29
Grilled Steak Salad	\$ 8.99
Soho Salad	\$ 8.49
Coffee or Tea + Breakfast Wrap	\$ 4.29
Coffee or Tea + Organic Oatmeal	\$ 4.89
Organic Coffee	\$ 1.99
Organic Tea	\$ 1.79
Bacon, Egg & Cheese Wrap	\$ 2.99
Monterey Chicken Wrap	\$ 3.29
Spinach & Goat Cheese Wrap	\$ 3.29
Mandarin Apple Muesli	\$ 3.89
2 Hard Boiled Eggs	\$ 1.79
Organic Oatmeal	\$ 3.99
Yogurt Parfait	\$ 3.99
Extra Topping	\$ 0.50
Fat-Free, Probiotic Frozen Yogurt	\$ 4.99
Extra Topping	\$ 0.50

5. Fresh Express C-Store

MENU ITEM	PRICE
King Size Candy	\$1.89
Campbell's V-8 12 oz bottles	\$1.89
V-8 Fusion 12 oz bottles	\$1.89
20oz Soda Fountain	\$1.49
32oz Soda Fountain	\$1.69
44oz Soda Fountain	\$1.89
20 oz Carbonated	\$1.89
1 Liter Carbonated	\$2.39
20 oz Dasani Water	\$1.59
1 liter Dasani Water	\$2.29
20 oz Dasani Essence	\$1.69
16.9 oz Honest Tea/Ade	\$2.29
18.5 oz Fuze	\$2.19
20oz Powerade	\$1.99
32 oz Powerade	\$2.39
20 oz Glaceau Vitamin Water	\$2.19
32 oz Glaceau Vitamin Water	\$3.09
700ml Glaceau Smartwater	\$2.19
1 liter Glaceau Smartwater	\$2.49

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16 oz Full Throttle Energy	\$2.99
12oz Monster Nitrous	\$2.99
6.75 oz Monster Xpresso	\$2.99
16oz Monster Energy	\$2.99
18 oz Full throttle energy	\$3.89
16 oz Nos Energy	\$2.99
22 oz. Nos Energy	\$3.89
Workz Energy Shot	\$3.89
5-hour Energy Shot	\$3.99
Minute Maid Juice. .450 ml.	\$2.19
16.9 oz Gold Peak Tea	\$2.19
F'real Milkshakes	
-Smoothies	\$3.89
-Milkshakes	\$3.89
-Blended Coffee	\$3.89
Freestyle Coke Beverage	
-20oz	\$1.59
-32oz	\$1.79
-44oz	\$1.99
HOT MENU ITEM	
Jimmy Dean Breakfast Sandwich	\$ 3.09
Cinnamon Roll	\$ 1.89
French Toast	\$ 1.89
Hot Lunch/Dinner Entrée	\$ 4.09
Enchiladas	\$ 3.59
Corndog	\$ 1.09
Mac & Cheese	\$ 3.09
Philly Cheesesteak Sandwich	\$ 6.09
Chicken Wings	\$ 4.09
Jalapeno Poppers	\$ 3.09
Soup of the Day (8oz)	\$ 1.59

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MENU ITEM	PRICE
Bagel	\$1.19
Signature Bagel	\$1.29
Cream Cheese	\$2.79
Hummus	\$2.79
PB&J	\$1.89
Peanut Butter	\$0.69
Butter Spread``	\$0.69
Preserves	\$0.69
Santa Fe Wrap	\$4.99
Egg Sandwich	\$4.69
Hot Turkey Club	\$7.19
Bagel Dog	\$5.09
Deli Sandwich	\$6.59
Club Mex Wrap	\$7.19
Veggie Bagel Sandwich	\$6.59
Turkey and Cheese Bagel	\$7.19
Chicken Caesar Salad	\$7.19
Soup (bowl)	\$3.79
Powerbagel	\$1.59
Half Dozen	\$5.09
Baker's Dozen	\$10.59
Muffin	\$1.99
Coffee Cake	\$2.29
Fountain Beverage	
20oz	\$ 1.49
32oz	\$ 1.69
44oz	\$ 1.89

7. Panda Express

MENU ITEM	PRICE
Bowl	\$5.89
2 Entrée plate	\$6.89
3 Entrée plate	\$8.29
Single item	\$3.69
Large item	\$9.79
Single Side	\$2.59

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Large Side	\$3.59
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8. Papa John's Pizza

MENU ITEM	PRICE
Cheese	\$4.29
Pepperoni	\$4.39
Garden Fresh	\$4.39
Meat Works	\$4.99
The Works	\$5.09
Breadsticks	\$2.39

9. Moe's Southwest Grille

MENU ITEM	PRICE
Art Vandalay Burrito Jr	\$ 7.89
Art Vandalay Burrito Regular	\$ 7.99
Band Camp Burrito Bowl	\$ 8.99
Billy Barou Nachos	\$ 8.29
Chicken Club Quesadilla	\$ 8.99
Earmuffs Burrito Bowl	\$ 8.99
Homewrecker Burrito Jr	\$ 8.19
Homewrecker Burrito Regular	\$ 8.29
Joey Bag of Donuts Jr	\$ 7.89
Joey Bag of Donuts Regular	\$ 7.99
Joey Streaker	\$ 8.99
John Coctostan	\$ 8.29
Julia Gulia	\$ 7.39
Overachiever	\$ 3.99
Ruprict Nachos	\$ 7.99
Super Kingpin	\$ 7.99
The Funk Meister	\$ 3.99
Unanimous Decision	\$ 3.99
Wrong Doug	\$ 8.99
Close Talker	\$ 8.29
Personal Trainer	\$ 7.99
Cookies	\$ 0.99
Black Beans	\$ 0.99
Guacamole	\$ 3.99
Moe's Famous Queso	\$ 3.29
Pico De Gallo	\$ 3.29
Salsa	\$ 1.49
Sour cream	\$ 0.99

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Southwestern Rice	\$ 0.99
Bottled Water Medium	\$ 1.95
Bottled Water Large	\$ 2.59
Iced Tea Medium	\$ 1.69
Iced Tea Large	\$ 1.89
Soft Drink Regular	\$ 1.95
Soft Drink Large	\$ 2.59
Kids Drink	\$ 1.19
Mini Masterpiece	\$ 4.49
Moo Moo Mr. Cow	\$ 5.49
Power Wagon	\$ 4.49
Kids Livewell	\$ 5.49

10. ILC C-Store

MENU ITEM	PRICE
King Size Candy	\$1.89
Campbell's V-8 12 oz bottles	\$1.89
V-8 Fusion 12 oz bottles	\$1.89
20oz Soda Fountain	\$1.49
32oz Soda Fountain	\$1.69
44oz Soda Fountain	\$1.89
20 oz Carbonated	\$1.89
1 Liter Carbonated	\$2.39
20 oz Dasani Water	\$1.59
1 liter Dasani Water	\$2.29
20 oz Dasani Essence	\$1.69
16.9 oz Honest Tea/Ade	\$2.29
18.5 oz Fuze	\$2.19
20oz Powerade	\$1.99
32 oz Powerade	\$2.39
20 oz Glaceau Vitamin Water	\$2.19
32 oz Glaceau Vitamin Water	\$3.09
700ml Glaceau Smartwater	\$2.19
1 liter Glaceau Smartwater	\$2.49
16 oz Full Throttle Energy	\$2.99
12oz Monster Nitrous	\$2.99
6.75 Monster Xpresso	\$2.99
16oz Monster Energy	\$2.99
18 oz Full throttle energy	\$3.89
16 oz Nos Energy	\$2.99

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22 oz. Nos Energy	\$3.89
Workz Energy Shot	\$3.89
5-hour Energy Shot	\$3.99
Minute Maid Juice. .450 ml.	\$2.19
16.9 oz Gold Peak Tea	\$2.19
F'real Milkshakes	
-Smoothies	\$3.89
-Milkshakes	\$3.89
-Blended Coffee	\$3.89
Freestyle Coke Beverage	
20oz	\$1.59
32oz	\$1.79
44oz	\$1.99

11. Starbuck's – Albertson's Library

ITEM	PRICE
Hot Chocolate16 oz	\$ 3.39
Hot Chocolate20 oz	\$ 3.59
Caramel Apple Spice12 oz	\$ 3.29
Caramel Apple Spice16 oz	\$ 3.79
Caramel Apple Spice20 oz	\$ 3.99
Pumpkin Spice Latte12 oz	\$ 4.09
Pumpkin Spice Latte16 oz	\$ 4.79
Pumpkin Spice Latte20 oz	\$ 5.09
Caramel Macchiato12 oz	\$ 3.79
Caramel Macchiato16 oz	\$ 4.39
Caramel Macchiato20 oz	\$ 4.79
White Chocolate Mocha12 oz	\$ 3.79
White Chocolate Mocha16 oz	\$ 4.39
White Chocolate Mocha20 oz	\$ 4.79
Caffe Latte12 oz	\$ 2.99
Caffe Latte16 oz	\$ 3.59
Caffe Latte20 oz	\$ 4.09
Caffe Mocha12 oz	\$ 3.49
Caffe Mocha16 oz	\$ 4.39
Caffe Mocha20 oz	\$ 4.59
Vanilla Latte12 oz	\$ 3.49
Vanilla Latte16 oz	\$ 4.09
Vanilla Latte20 oz	\$ 4.59
Caffe Americano12 oz	\$ 2.39

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Caffe Americano16 oz	\$ 2.79
Caffe Americano20 oz	\$ 3.09
Cappuccino12 oz	\$ 2.99
Cappuccino16 oz	\$ 3.59
Cappuccino20 oz	\$ 4.09
Espresso Solo	\$ 1.79
Espresso Doppio	\$ 1.99
Add Shot	\$ 0.79
Add Soy	\$ 0.69
Shaken Iced Tea12 oz	\$ 1.59
Shaken Iced Tea16 oz	\$ 1.99
Cinnamon Dolce Latte12 oz	\$ 3.29
Cinnamon Dolce Latte16 oz	\$ 3.59
Cinnamon Dolce Latte20 oz	\$ 4.39
Freshly Brewed Coffee12 oz	\$ 1.79
Freshly Brewed Coffee16 oz	\$ 2.19
Freshly Brewed Coffee20 oz	\$ 2.49
Salted Caramel Hot Chocolate12 oz	\$ 3.59
Salted Caramel Hot Chocolate16 oz	\$ 4.39
Salted Caramel Hot Chocolate20 oz	\$ 4.59
Caramel Brul�e Latte12 oz	\$ 4.09
Caramel Brul�e Latte16 oz	\$ 4.79
Caramel Brul�e Latte20 oz	\$ 5.09
Peppermint Mocha 12 oz	\$ 4.09
Peppermint Mocha 16 oz	\$ 4.79
Peppermint Mocha 20 oz	\$ 5.09
Gingerbread Latte12 oz	\$ 4.09
Gingerbread Latte16 oz	\$ 4.79
Gingerbread Latte20 oz	\$ 5.09
Eggnog Latte12 oz	\$ 4.09
Eggnog Latte16 oz	\$ 4.79
Eggnog Latte20 oz	\$ 5.09
Peppermint White Chocolate Mocha12 oz	\$ 4.09
Peppermint White Chocolate Mocha16 oz	\$ 4.79
Peppermint White Chocolate Mocha20 oz	\$ 5.09
Peppermint Hot Chocolate12 oz	\$ 3.59
Peppermint Hot Chocolate16 oz	\$ 4.39
Peppermint Hot Chocolate20 oz	\$ 4.59
Caramel Apple Spice12 oz	\$ 3.29
Caramel Apple Spice16 oz	\$ 3.79
Caramel Apple Spice20 oz	\$ 3.99

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Strawberry16 oz	\$ 4.39
Chocolate 16 oz	\$ 4.39
Orange Mango 16 oz	\$ 4.39
Full-Leaf Brewed Tea12 oz	\$ 1.99
Full-Leaf Brewed Tea16 oz	\$ 2.19
Full-Leaf Brewed Tea20 oz	\$ 2.59
Chai Tea Latte12 oz	\$ 3.39
Chai Tea Latte16 oz	\$ 4.09
Chai Tea Latte20 oz	\$ 4.39
Shaken Iced Tea12 oz	\$ 1.79
Shaken Iced Tea16 oz	\$ 2.39
Shaken Iced Tea24 oz	\$ 3.09

12. Subway – Education Building

MENU ITEM	PRICE
6" Veggie	\$3.89
6" Cold Cut Trio	\$3.89
6" Seafood Sensation	\$3.89
6" Meatball	\$3.89
6" Tuna	\$4.59
6" Ham	\$3.89
6" BMT	\$4.59
6" Turkey and Ham	\$4.59
6" Turkey	\$4.59
6" Melt	\$5.19
6" Steak	\$5.19
6" BLT	\$3.89
6" Spicy Italian	\$3.89
6" Club	\$5.19
6" Roast Beef	\$5.19
6" Fajita Chicken	\$4.59
6" Chicken and Bacon Ranch	\$5.19
6" Oven Roasted Chicken	\$4.59
6" Buffalo	\$5.19
6" Big Philly	\$5.69

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6" Sweet Onion Chicken Teriyaki	\$5.19
12" Veggie	\$5.69
12" Cold Cut Trio	\$5.69
12" Seafood Sensation	\$5.69
12" Meatball	\$5.69
12" Tuna	\$6.89
12" Ham	\$5.69
12" BMT	\$6.89
12" Turkey and Ham	\$6.89
12" Turkey	\$6.89
12" Melt	\$7.99
12" Steak	\$7.99
12" BLT	\$5.69
12" Spicy Italian	\$5.69
12" Club	\$7.99
12" Roast Beef	\$7.99
12" Fajita Chicken	\$6.89
12" Chicken and Bacon Ranch	\$7.99
12" Oven Roasted Chicken	\$6.89
12" Buffalo	\$7.99
12" Big Philly	\$8.99
12" Sweet Onion Chicken Teriyaki	\$7.99
Double Chicken Salad	\$7.69
Turkey Breast Salad	\$6.19
Veggie Delite Salad	\$5.19
Veggie Flatizza	\$3.59
Cheese Flatizza	\$3.59
Spicy Italian Flatizza	\$3.59
Sausage Flatizza	\$3.59
Pepperoni Flatizza	\$3.59
Build your own Flatizza (\$0.50 per topping)	\$0.59

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Kid's Meal	\$4.59
Make it a meal Combo	\$2.59
Cookie	\$0.69
Apple Bites	\$1.59
Chips	\$1.29
Soup 8oz	\$2.39
Egg and Cheese (bread or flat bread)	\$4.09
Ham and Cheese (bread or flat bread)	\$4.09
Bacon Egg and Cheese	\$4.09
Breakfast B.M.T.	\$4.39
Sunrise Subway Melt	\$4.39
Steak, Egg and Cheese	\$4.39
Sausage, Egg and Cheese	\$4.39
16oz coffee	\$1.89
Juice	\$1.89
Fountain Beverage	
20oz	\$ 1.49
32oz	\$ 1.69
44oz	\$ 1.89

13. J.R. Simplot Café

MENU ITEM	PRICE
Croissant	\$ 1.49
Granola Bar	\$ 1.89
Bagel	\$ 1.99
Loaf Bread	\$ 2.09
Muffin	\$ 2.09
English Muffin	\$ 2.99
Scones	\$ 1.89
Sausage and Cheese Croissant	\$ 3.99
Ham and Cheese Croissant	\$ 3.99

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ATTACHMENT 1

Chips	\$ 1.69
Cookies	\$ 1.99
Whole Fruit	\$ 1.09
Fruit Cup	\$ 3.09
Yogurt Parfait	\$ 3.09
Grape Cup	\$ 1.19
Snack Cup	\$ 2.19
Turkey Sandwich	\$ 5.29
Ham Sandwich	\$ 6.19
Tuna Salad Sandwich	\$ 5.99
Chicken Salad Sandwich	\$ 5.99
Hummus Sandwich	\$ 5.29
Specialty Sandwich of the month	\$ 6.09
Extra Cheese	\$ 0.69
Extra Meat	\$ 1.19
Specialty Bread Upgrade	\$ 0.89
Garden Salad	\$ 3.69
Salad of the month	\$ 6.59
Chicken Caesar	\$ 4.79
Side Salad	\$ 2.49
Cup of Soup (16oz)	\$ 3.09
Flatbread (Roasted Tomato)	\$ 2.99
Flatbread (Pepperoni)	\$ 3.49
Flatbread (Specialty)	\$ 3.99
Odwalla Juice	\$ 2.99
Fountain Beverage	
20oz	\$ 1.49
32oz	\$ 1.69
44oz	\$ 1.89

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14. C-Store & Grill

MENU ITEM	PRICE
King Size Candy	\$1.89
Campbell's V-8 12 oz bottles	\$1.89
V-8 Fusion 12 oz bottles	\$1.89
20oz Soda Fountain	\$1.49
32oz Soda Fountain	\$1.69
44oz Soda Fountain	\$1.89
20 oz Carbonated	\$1.89
1 Liter Carbonated	\$2.39
20 oz Dasani Water	\$1.59
1 liter Dasani Water	\$2.29
20 oz Dasani Essence	\$1.69
16.9 oz Honest Tea/Ade	\$2.29
18.5 oz Fuze	\$2.19
20oz Powerade	\$1.99
32 oz Powerade	\$2.39
20 oz Glaceau Vitamin Water	\$2.19
32 oz Glaceau Vitamin Water	\$3.09
700ml Glaceau Smartwater	\$2.19
1 liter Glaceau Smartwater	\$2.49
16 oz Full Throttle Energy	\$2.99
12oz Monster Nitrous	\$2.99
6.75 Monster Xpresso	\$2.99
16oz Monster Energy	\$2.99
18 oz Full throttle energy	\$3.89
16 oz Nos Energy	\$2.99
22 oz. Nos Energy	\$3.89
Workz Energy Shot	\$3.89
5-hour Energy Shot	\$3.99
Minute Maid Juice. .450 ml.	\$2.19
16.9 oz Gold Peak Tea	\$2.19
F'real Milkshakes	
-Smoothies	\$3.89
-Milkshakes	\$3.89
-Blended Coffee	\$3.89
Freestyle Coke Beverage	
20oz	\$1.59
32oz	\$1.79

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44oz	\$1.99
Fountain Beverage	
20oz	\$ 1.49
32oz	\$ 1.69
44oz	\$ 1.89
GRILL MENU	Price
Cheeseburger	\$3.39
Double Cheeseburger	\$4.89
Veggie Burger	\$4.09
Grilled Cheese Sandwich	\$2.09
Tater Tots	\$1.09

15. C-Store & Sandwich

MENU ITEM	PRICE
King Size Candy	\$1.89
Campbell's V-8 12 oz bottles	\$1.89
V-8 Fusion 12 oz bottles	\$1.89
20oz Soda Fountain	\$1.49
32oz Soda Fountain	\$1.69
44oz Soda Fountain	\$1.89
20 oz Carbonated	\$1.89
1 Liter Carbonated	\$2.39
20 oz Dasani Water	\$1.59
1 liter Dasani Water	\$2.29
20 oz Dasani Essence	\$1.69
16.9 oz Honest Tea/Ade	\$2.29
18.5 oz Fuze	\$2.19
20oz Powerade	\$1.99
32 oz Powerade	\$2.39
20 oz Glaceau Vitamin Water	\$2.19
32 oz Glaceau Vitamin Water	\$3.09
700ml Glaceau Smartwater	\$2.19
1 liter Glaceau Smartwater	\$2.49
16 oz Full Throttle Energy	\$2.99

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12oz Monster Nitrous	\$2.99
6.75 Monster Xpresso	\$2.99
16oz Monster Energy	\$2.99
18 oz Full throttle energy	\$3.89
16 oz Nos Energy	\$2.99
22 oz. Nos Energy	\$3.89
Workz Energy Shot	\$3.89
5-hour Energy Shot	\$3.99
Minute Maid Juice. .450 ml.	\$2.19
16.9 oz Gold Peak Tea	\$2.19
F'real Milkshakes	
-Smoothies	\$3.89
-Milkshakes	\$3.89
-Blended Coffee	\$3.89
Freestyle Coke Beverage	
20oz	\$1.59
32oz	\$1.79
44oz	\$1.99
Fountain Beverage	
20oz	\$ 1.49
32oz	\$ 1.69
44oz	\$ 1.89
Tortilla Wrap	\$5.49
Ciabatta	
Baguette	
Wheatberry bread	
6" Sub Roll	
Add Bacon 2 slices	\$0.99
Extra Meat3oz	\$1.59
Extra Cheese	\$0.69
Extra Toppings	\$0.29
Choice of Meats: chicken-ham –humus	

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ATTACHMENT 1

tuna-turkey -roast beef Choice of Cheeses: cheddar-provolone swiss-pepper jack Choice of Condiments Choice of Toppings	
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16. Moxie Java – Multipurpose Classroom Building

MENU ITEM	PRICE
Milky Way 12oz	\$ 3.69
Milky Way 16oz	\$ 4.09
Milky Way 20oz	\$ 4.79
Espresso (single)	\$ 1.99
Sm Flv Latte	\$ 3.19
Med Flv Latte	\$ 3.89
Lg Flv Latte	\$ 4.49
Sm Mocha	\$ 3.19
Med Mocha	\$ 3.89
Lg Mocha	\$ 4.49
Sm White Choc	\$ 3.69
Med White Choc	\$ 4.19
Lg White Choc	\$ 4.89
Sm Borgia	\$ 3.69
Med Borgia	\$ 4.09
Lg Borgia	\$ 4.79
Sm Breve	\$ 3.99
Med Breve	\$ 4.49
Lg Breve	\$ 5.19
Sm Café Au Lait	\$ 3.29
Med Café Au Lait	\$ 3.89
Lg Café Au Lait	\$ 4.49
Sm Mocha Lait	\$ 2.69
Med Mocha Lait	\$ 3.19
Lg Mocha Lait	\$ 3.49
Sm Chai	\$ 3.19
Med Chai	\$ 3.69
Lg Chai	\$ 4.49
Sm Coffee	\$ 2.19
Med Coffee	\$ 2.29
Lg Coffee	\$ 2.39

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Cappuccino	\$ 2.79
Sm Tea	\$ 1.99
Add Breve	\$ 0.69
Add Whip	\$ 0.49
Add Soy	\$ 0.69
Add Syrup	\$ 0.59
Add Shot	\$ 0.59
Daily Scone	\$ 1.69
Jumbo Muffin	\$ 2.19
Breakfast Bread (slice)	\$ 2.09
Plain Croissant	\$ 2.79
Bagel	\$ 1.69
Cream Cheese	\$ 0.49
Cinnamon Roll	\$ 2.19
Jumbo Cookie	\$ 2.39
Brownie	\$ 2.39
Today's Parfait	\$ 3.09
Tasty Grain Bar	\$ 1.99

Catering

CATERING MENU

MAIN CAMPUS MENU ITEM	PRODUCT GRADE	WEIGHT	PRICE
Bakers Breakfast - Selection of fresh baked muffins, breakfast breads, and pastries. Served with coffee and tea service, assorted juices	A	2 pcs per/person assorted bakery selections-12oz juice -10oz of hot beverage	\$ 7.25
Quick Start - Assorted muffins, pastries and scones, with fresh seasonal sliced fruit, assorted juices, coffee and tea service	A	2 pcs per/person assorted bakery selections-3oz fresh fruit -10oz juice -12oz of hot beverage	\$ 9.10
Morning Glory - Assorted danish and muffins, individual cereal cups, milk, ripe bananas, granola, assorted individual yogurt cups with fresh seasonal fruit salad, assorted juices, coffee and tea service	A	A pastry from the assorted bakery selections-1 p/person cereal cup-1 yogurt cup-3ozfruit salad-2oz condiments-12oz juice -10oz of hot beverage	\$11.50
Choice of Muffins, Scones or Cinnamon rolls	A	12 pcs	\$28.50
Assorted Bagels with Butter,	A	12 pcs	\$29.75

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Cream Cheese and Preserves			
Yogurt Cups	A	each	\$ 1.75
Fresh Seasonal Sliced Fruit	A	3oz	\$ 3.75
Fresh Cut Fruit Salad Bowl (4oz)	A	4oz	\$ 2.25
Whole Fresh Seasonal Fruit	A	each	\$ 1.50
Breakfast Breads - per loaf	A	20 slices	\$26.00
Granola and NutriGrain Bars	A	each	\$ 1.25
American Breakfast - Assorted pastries, scrambled eggs, crisp bacon, sausage links or sausage patties, choice of breakfast potato, coffee and tea service	A	A pastry from the assorted bakery selections-3 eggs scrambled-3 pcs brkfst meat -4oz potatoes-condiments--10oz of hot beverage	\$10.50
The Freshman - Buttermilk pancakes or French toast with your choice of bacon, ham, sausage or chorizo. Served with warm maple syrup, fruit wedges, coffee and tea service	A	3 large pancakes or 2 Brioche French Toast -3 pcs brkfst meat-3oz maple syrup- 2 fruit wedge-10oz of hot beverage	\$9.10
Add scrambled eggs (to the Freshman)	A	3 eggs each	\$2.50
Breakfast Burrito Buffet- Tortilla filled with scrambled eggs, cheese and choice of bacon, sausage, ham, or chorizo. Served with Idaho potatoes, fresh sliced fruit wedges, salsa, coffee and tea service	A	8oz mixture of eggs/meat/ch- 4oz potatoes -2 fruit wedge -2oz salsa-10oz of hot beverage	\$9.00
Breakfast Sandwich Buffet: Egg and cheese sandwiches with choice of bacon, sausage or ham and choice of English muffin, biscuit or croissant. Served with breakfast potatoes, fresh seasonal fruit salad, coffee and tea service	A	1- brkfst sandwich w/egg and CH-3psc brkfst meat -4oz potatoes-4oz fruit salad-10oz of hot beverage	\$9.00
Oatmeal Bar - Hot oatmeal, cinnamon sugar and apple maple pecan compote served with raisins, cranberries, low-fat granola and butter	A	8oz cooked oatmeal-3oz condiments	\$ 4.25
Greek Yogurt Bar - Vanilla yogurt, raisins, walnuts, almonds, gourmet granola, seasonal fruit	A	8oz yogurt-2oz fruit -3oz condiments	\$4.25
Strata - Choose from: Eggbeater strata with feta, spinach and tomato; vegetable cheese strata; or bacon, onion and Swiss strata	A	1 each	\$4.25

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Deli Express:-sliced oven-roasted turkey, roast beef, black forest ham; Swiss, American and Muenster cheeses; leaf lettuce, sliced tomatoes and pickles; assorted baked breads and rolls - served with choice of two salads, cookies, ice water, choice of lemonade, iced tea, or coffee	A	1 sandwich per/person consisting of 4oz of protein-1oz cheese-condiment tray-choice of 2 salads 3oz each salad- 2 cookies -12oz of lemonade or iced tea	\$14.25
Sandwich Buffet 1: Includes Kettle chips, pickles, condiments and choice of one salad, cookies, ice water and choice of lemonade, iced tea, or coffee Please choose three (3) of the following: buffalo chicken wrap, California turkey with vegetables, deli sliced turkey with provolone, black forest ham with smoked gouda on marble rye bread, grilled chicken club with bacon, lettuce and tomato on toasted 12 grain bread, roast beef and cheddar, Greek salad wrap with crumbled feta, black olives, fresh cucumbers, plum tomatoes and red onions	A	1 pre-built sandwich -indiv. kettle chips-choice of 1 side salad 4oz p/person-condiments-2 cookies-12oz lemonade or iced tea	\$12.80
Sandwich Buffet 2: Includes Kettle chips, pickles, condiments and choice of one salad, cookies, ice water, choice of lemonade, iced tea, or coffee. Please choose three (3) of the following: blackened chicken with cucumber raita salad on ciabatta bread, roast beef with bacon, sharp cheddar and roasted garlic mayonnaise on sub roll, roast beef with chive cream cheese, chipotle mayo, sun-dried tomatoes and grilled Spanish onions on a baguette, turkey breast with mesclun greens and sage cream cheese on ciabatta, roasted vegetable on foccacia fresh mozzarella, classic Italian sub	A	1 pre-built sandwich -indiv. kettle chips-choice of 2 side salads 3oz each salad p/person-condiments-2 cookies-12oz lemonade or iced tea	\$13.75
Picnic Buffet: Includes Kettle chips, pickles, condiments, choice of one salad, cookies, ice water, choice of	A	2 pre-built mini sandwiches -choice of a side salads 4oz salad p/person-condiments-2 cookies-12oz	\$12.80

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lemonade, iced tea, or coffee 2 mini sandwiches per guest. turkey with provolone, ham with swiss, beef with cheddar, mozzarella, tomato and basil		lemonade or iced tea or coffee	
The Executive Luncheon: Includes Kettle chips, pickles, condiments and choice of two salads, cookies, ice water, choice of lemonade, iced tea, or coffee. Please choose three (3) of the following: roasted turkey breast with cranberry spread on a French baguette, sliced turkey breast and ham with Swiss cheese, red onions, romaine, tomato and green olive pesto spread on ciabatta, roasted onion and apricot pork with chive cream cheese spread and Mesclun greens on ciabatta, granny smith apple and brie with fresh baby spinach on a French baguette, ham and brie, with fresh pear, spinach and caramelized onions on wheatberry bread, sliced portobello mushrooms with arugula and sun-dried tomato olive pesto spread on a French baguette	A	1 gourmet sandwich per/p, kettle chips, condiments, choice of 2 salads 3oz each salad, 2 cookies, 12 oz. beverage	\$19.00
Classic Box Lunch - Your choice of any Sandwich from Sandwich Buffet 1 or 2; served with Whole Fresh Fruit, Potato or Pasta Salad, Tim's Chips, Each Lunch Includes Cookies, Ice Water and Choice of Iced Tea, Lemonade or Coffee	A	1 premade sandwich -whole fruit-4oz salad-kettle chips-2 cookies 12oz of beverage	\$12.80
Chilled Lunch Box 1- Grilled Chicken Gremolata, Cranberry Couscous Salad, Fresh Arugula, Cingolini Mozzarella Tossed in Pesto, Pitas, Each Lunch Includes Cookies, Ice Water and Choice of Iced Tea, Lemonade or Coffee	A	Each chilled deli plate consists of 5oz cold grilled chicken-2-4oz salads - toasted pita chips-2 cookies -12oz of beverage	\$14.75
Chilled Lunch Box 2- Grilled Rosemary Chicken , Spinach Orzo Salad, Fresh Arugula, Sliced Brie, Sliced Baguettes	A	Each chilled deli plate consists of 5oz cold grilled chicken-2-4oz salads - 2oz baguettes- 1oz brie-2 cookies -12oz of beverage	\$14.75

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Chilled Lunch Box 3Grilled Chicken with Huckleberry Apple Garnish, Sweet Potato Salad with Candied Pecans, Roasted Vegetables, Spring Greens. Mini Ciabattas, Each Lunch Includes Cookies, Ice Water and Choice of Iced Tea, Lemonade or Coffee	A	Each chilled deli plate consists of 5 oz cold grilled chicken-2-4oz salads - mini ciabattas-2 cookies -12oz of beverage	\$14.75
Lazy Summer BBQ - Grilled BBQ chicken, sliced brisket, baked Beans, coleslaw, macaroni and cheese, cornbread fiesta muffins, , assorted cookies and dessert bars	A	5oz chicken breast-5oz brisket-4oz coleslaw-4oz Baked Beans-4oz Mac/CH-a cornbread muffin-1 cookie -1 dessert bar-12oz of beverage	\$17.50
Wok This Way -Orange Chicken, Teriyaki Beef Stir Fry, Asian slaw, Szechuan green beans, vegetable egg rolls with assorted dipping sauces, jasmine rice, fortune cookies and almond cookies	A	4oz chicken breast-6oz beef stirfry-4oz rice-4oz green Beans-1 vegetable eggroll dipping sauce-fortune cookie-1 almond cookie 12oz of beverage	\$16.00
Tasty Tex Mex - beef or chicken fajitas, chips and fresh salsa, tortillas, pico de gallo, Mexican rice, refried beans, and dulce de leche bars	A	5oz grilled chicken or grilled beef-2 soft tortillas-4oz rice-4oz beans-condiment bar-1 dessert bar-12oz of beverage	\$15.00
Hawaiian Luau - Kahlua pork, teriyaki chicken, maui rice, glazed carrots, pineapple cole slaw, Hawaiian rolls and butter, plus macadamian nut cookies	A	4oz grilled chicken-4oz roasted pork-4oz rice-4oz slaw-4oz carrots-condiment bar-rolls-2 cookies-12oz of beverage	\$16.50
Simply Italian - Grilled chicken parmesan or Italian sausage and peppers, Caesar salad, penne pasta with marinara and alfredo sauces, seasonal vegetables, fresh garlic bread, choice rotini marinara and fresh baked cookies	A	5oz chicken-or Italian Sausage w/onions and peppers-2oz salad-5oz pasta -3oz sauce choice of 2-garlic bread-2 cookies-12oz of beverage	\$15.00
Homeystyle- Melt in your mouth pot roast, oven roasted rosemary chicken, spring mix salad, garlic mashed potatoes, confetti corn, rolls and butter, apple pie	A	5oz pot roast-4oz grilled chicken-6oz potatoes-2oz salad-4oz vegetable-rolls-a slice of pie-12oz of beverage	\$19.75
Southern BBQ - Choice of oven roasted chicken or Carolina bbq chicken, barbecued baked beans, cheddar bacon mashed potatoes, coleslaw, biscuits with honey butter, brownies	A	5oz grilled chicken-6oz potatoes-4oz slaw-4oz beans-biscuit- brownie-12oz of beverage	\$15.50

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Chilled Tuscan - panzanella, spinach with fennel orange salad, grilled flatbread, herb roasted beef tenderloin with mushrooms, grilled chicken with broccolini and gremolata, and fior di latte	A	3oz salad-grilled flat bread-4oz sliced tenderloin-3oz grilled chicken+ 3oz broccolini/gremolata-panna cotta-12oz beverage	\$23.00
A Taste of Italy - grilled rosemary chicken, pesto tortellini, panzanella salad, Caesar salad, seasonal vegetables, mini ciabattas with basil oil, and lemon bars	A	2oz caesar salad--5ozgrilled chicken+ 4oz tortellini salad-3oz veggies-mini ciabattas-lemon bar-12oz beverage	\$15.00
Fantastic Frio - corn and black bean salsa, spiced sweet potato salad, grilled chicken veracruz with chile lime cucumber dressing, Mexican chopped chicken salad, grilled marinated flatbread and flore de latte	A	4ozsweet potato salad--5ozgrilled chicken+ 3oz corn blk bean salsa salad-4oz chpd salad-grilled flatbread-panna cotta-12oz beverage	\$15.00
Sizzling Salad Bar & Soup Du Jour - seasonal salad bar with Teriyaki Salmon, freshly grilled flatbreads and assorted gourmet cookies	A	Build your own entrée salad from a salad bar with fresh greens-8 toppings-dressings -4oz grilled teriyaki salmon-grilled flatbread-2 cookies-12oz beverages	\$14.75
Chicken Crimini Mushroom Madeira	A	5oz protein -5oz starch-4oz veggie-rolls-2oz salad-12oz beverage	\$18.75
Chicken Piccata	A	5oz protein -5oz starch-4oz veggie-rolls-2oz salad-12oz beverage	\$19.75
Chicken with red chili cream sauce	A	5oz protein -5oz starch-4oz veggie-rolls-2oz salad-12oz beverage	\$19.75
Teriyaki Chicken w/ mango salsa	A	5oz protein -5oz starch-4oz veggie-rolls-2oz salad-12oz beverage	\$18.75
Grilled chicken with a light mustard and fresh thyme cream	A	5oz protein -5oz starch-4oz veggie-rolls-2oz salad-12oz beverage	\$18.75
Grilled wild-caught (seasonal) salmon with citrus beurre blanc	A	6oz protein -5oz starch-4oz veggie-rolls-2oz salad-12oz beverage	Market
Grilled Mahi Mahi with cilantro pineapple glaze fruit salsa	A	6oz protein -5oz starch-4oz veggie-rolls-2oz salad-12oz beverage	\$23.75
Apple brine pork loin with bacon apple chutney	A	6oz protein -5oz starch-4oz veggie-rolls-2oz salad-12oz beverage	\$20.25
Pork loin chop with red onion confit	A	6oz protein -5oz starch-4oz veggie-rolls-2oz salad-12oz beverage	\$19.75
Beef tenderloin filet, choice of sauces	A	6oz protein -5oz starch-4oz veggie-rolls-2oz salad-12oz beverage	\$31.25
Grilled teriyaki flank steak	A	6oz protein -5oz starch-4oz veggie-rolls-2oz salad-12oz beverage	\$21.25

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Gaucho steak with chimichurri	A	6oz protein -5oz starch-4oz veggie-rolls-2oz salad-12oz beverage	\$20.75
New York Manhattan cut steak	A	6oz protein -5oz starch-4oz veggie-rolls-2oz salad-12oz beverage	\$26.00
Petit filet mignon and petite grilled salmon	A	4oz filet- 4oz salmon -5oz starch-4oz veggie-rolls-2oz salad-12oz beverage	\$35.75
Gaucho steak and chicken	A	4oz steak- 4oz chicken -5oz starch-4oz veggie-rolls-2oz salad-12oz beverage	\$26.00
New York Manhattan cut steak and jumbo prawns	A	4oz steak- 3 prawns -5oz starch-4oz veggie-rolls-2oz salad-12oz beverage	\$36.25
Seasonal Garden Cakes w/ sauce	A	2 garden cakes -5oz starch-4oz veggie-rolls-2oz salad-12oz beverage	\$20.00
Roasted Vegetable Napoleon	A	Veggie Napoleon -5oz starch-4oz veggie-rolls-2oz salad-12oz beverage	\$20.00
Stuffed Portobello	A	Stuffed Portobello -5oz starch-4oz veggie-rolls-2oz salad-12oz beverage	\$20.00
Ratatouille	A	3oz protein, 5oz starch-7oz veggie-rolls-2oz salad-12oz beverage	\$20.00
3 Cheese Jumbo Ravioli with tomato cream sauce	A	4 Jumbo Ravioli -4oz veggie-rolls-2oz salad-12oz beverage	\$20.00
Mushroom Risotto Cake	A	Jumbo Risotto Cake 4oz veggie-rolls-2oz salad-12oz beverage	\$20.00
Southwestern Chicken in Phyllo Crisp	A	50 pcs per order1.5oz each	\$68.00
Wild Mushroom and Goat Cheese Crostini	A	50 pcs per order1.5oz each	\$57.00
Roasted Vegetables and Curried Hummus on Pita Crisp	A	50 pcs per order1.5oz each	\$55.00
Prosciutto melon skewers(summer)Prosciutto mozzarella skewers (winter)	A	50 pcs per order1oz each	\$62.25
Artichoke & Smoked Salmon Flatbreads	A	50 pcs per order 2oz each	\$79.00
Mini phyllo tarts filled with brie and topped with raspberry jam	A	50 pcs per order1.5oz each	\$62.00
Dill scone with smoked trout and horseradish cream	A	50 pcs per order1oz each	\$96.00
Curry Chicken Salad in Sesame Cone	A	50 pcs per order2oz each	\$95.00
Crostini Caprese Pomador w/ fresh basil, and reduced balsamic glaze	A	50 pcs per order1.5oz each	\$60.00
Phyllo tartlets with asian beef salad	A	50 pcs per order 2oz each	\$75.00
Ginger chicken bite with cilantro lime mayonnaise	A	50 pcs per order 1.5oz each	\$70.00

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Spanakopita	A	50 pcs per order 1oz each	\$72.00
Wild mushroom risotto cakes w/ tomato basil chutney	A	50 pcs per order 1.5oz each	\$70.00
Beef satay skewers w/ lemongrass	A	50 pcs per order 1.5oz each	\$96.50
Marinated chicken skewers w/ choice of sauce	A	50 pcs per order	\$93.50
Parmesan Artichoke Heart with Goat Cheese	A	50 pcs per order 1.5oz each	\$75.00
Roasted Meatballs w/ choice of sauce	A	50 pcs per order 1oz each	\$53.00
Smoked Chicken and Wild Mushroom Quesadillas	A	50 pcs per order 1.5oz each	\$69.00
Pork Potstickers w/ ponzu dipping sauce	A	50 pcs per order 1.25oz each	\$62.00
Vegetable Spring Rolls w/ ginger soy sauce	A	50 pcs per order 1oz each	\$62.00
Fresh Garden Crudités - served with ranch,	A	3oz Per Person	\$3.25
Fresh Seasonal Fruit Platter	A	4oz per person	\$3.75
Domestic Cheeses and Crackers	A	3.5oz per Person	\$3.50
Artisan Cheeses and Breads	A	3.5oz per Person	\$5.25
Warm Spinach & Artichoke Dip with Pitas & Baguettes	A	3oz per Person	\$3.00
Hummus & grilled pitas	A	2.5oz hummus 1 pita	\$2.50
Antipasto Platter - served with marinated vegetables, assorted Italian meats and gourmet cheeses	A	2oz veg, 2oz meat, 2oz cheese	\$4.25
Assorted Mini Sandwiches - including ham, roast beef, turkey and mozzarella served on artisanal breads and rolls	A	2oz meat, .75 cheese each	\$2.00
Roasted Vegetable Platter	A	4oz Per Person	\$3.35
Chips, Salsa Bar & Guacamole	A	2oz salsa, 2oz guac 2oz chips	\$5.50
Chocolate Dipped Strawberries	A	each	\$1.90
Mediterranean - Seasonal Roasted Vegetables, Tabbouleh Salad, Olive Tapenade, Spanikopita, and Hummus with Pita Chips	A	3oz veg, 2oz tabbouleh, 1.5oz olive tapenade, 2 spanikopita, 2oz hummus - 1 pita	\$8.00
Dim Sum - Egg Rolls, Potstickers and Sweet and Spicy Boneless Chicken Wings served with assorted dipping sauces, including sweet chile and cucumber vinaigrette, and gourmet dessert	A	2 egg roll, 2 potsticker, 4 wings (1oz each) 1 dessert bar Per Person	\$10.50

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bars			
Happy Hour - Have a "pub" break with your favorite happy hour finger foods, including: warm spinach dip with pita chips, mini cheesesteaks, buffalo chicken tenders served with celery and blue cheese dip, and cookies and dessert bars	A	3oz spinach dip, 1/2 pita, 2oz per sandwich1 sandwich per guest- 2 chicken strips 2oz each 1 cookie and 1 dessert bar	\$8.50
South of the Border -Beef Taquitos, Mini Chicken Tacos, Fresh Vegetables with chipotle ranch, Chips, Salsa Bar, Black Bean Dip, Mexican Cookies	A	3 tacos, 3 taquito, 3oz veg, 2oz chips, 2oz salsa, 2oz black bean 2 cookies	\$9.00
Chocaholic - Become addicted with an assortment of mini chocolate bars, chocolate chip cookies, chilled chocolate milk & regular milk, trail mix, chocolate dipped pretzels	A	4 min candy bars - 2 DCH chip cookies-indiv bottled 8oz choc milk - 1.5oz ch pretzels - 1 ch dipped strawberry	\$9.10
Coffee Break -Starbucks regular and decaffeinated coffee service with hot tea, coconut macaroons, lemon bars, brownie bars and raspberry bars	A	12oz hot beverage - 2 Cookies 2 dessert bars per person	\$5.45
The Healthy Alternative - get healthy with an assortment of whole seasonal fruits, served with yogurt cups, trail mix and granola bars	A	1 piece of whole fruit - indiv. Yogurt cup - 2.5oz trail mix- 1 granola bar per person	\$7.45
Snack Attack - enjoy assorted chips, honey peanuts, trail mix and specialty cookies and brownies	A	1 chip - 1 pack or trail mix or honey peanuts- 1 cookie & 1 brownie per person	\$6.45
Energy Booster - variety of energy and nutri grain bars, fresh whole fruit, Vitamin water, juices	A	1 energy and 1 Nutri Grain bar, 1 whole fruit, 1 vitamin water and 1 juice	\$7.45
Grab and Go.Fresh whole seasonal fruit, variety of gourmet snack packages, bottled waters and sodas.	A	1 whole fruit, 1.5 snack packages, 1 bottled water or soda per person	\$6.25
Coffee Service Regular and Decaf	A	gal	\$19.00
Hot Tea Service	A	gal	\$19.00
Fruit Juice: orange, apple, cranberry	A	gal	\$29.00
Lemonade	A	gal	\$19.00
Fresh Brewed Iced Tea	A	gal	\$17.00

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Hot Chocolate	A	gal	\$21.00
Cranberry Punch	A	gal	\$25.00
Fresh Squeezed Raspberry Lemonade	A	gal	\$31.00
Citrus Punch	A	gal	\$21.00
Canned Sodas	A	each	\$ 1.60
Bottled Juices	A	12oz	\$ 1.60
Vitamin Water	A	20oz	\$2.55
Powerade	A	each	\$2.55
Standard Water Service disposable cup	A	each	\$0.50
Executive Guest Table Water Service glass goblets, linens, mints	A	each	\$1.30
Fresh Baked Gourmet Cookies	A	1 doz	\$14.00
Gourmet Brownies	A	1 doz	\$25.00
Lemon, Date, or Raspberry Bar	A	1 doz	\$25.00
Assorted Tea Cookies	A	1 doz	\$13.00
Full Sheet Cake	A	2 layer cake	\$80.00
1/2 Sheet Cake	A	2 layer cake	\$41.50
Ice Cream Sundae Bar	A	Build your own ice cream sundae bar for 35 guests -includes 2 ice creams and 6 toppings	\$134.00
Cup Cakes	A	each	\$2.25
Basil or Vanilla Panna Cotta	A	each	\$4.25
Vanilla Bean Crème Brulee	A	each	\$5.45
Lemon Pudding Cake with Citrus Anglaise	A	each	\$4.40
Flourless Chocolate Torte with White Chocolate Hazelnut Mousse	A	each	\$4.40
Apple Crumb Tart	A	each	\$4.40
Fresh Berry Tart	A	each	\$4.40
Chocolate Decadence Cake	A	each	\$ 4.40
Chocolate Truffles	A	dozen	\$20.75
Baked Fruit Pie Apple or Cherry	A	each	\$3.00
Chocolate Pudding Cake with Maple Glazed Pecans	A	each	\$4.40
Key lime Tart	A	each	\$4.40
Bread Pudding with bourbon vanilla sauce	A	each	\$3.60
Layered Parfait - choice of Tiramisu, Lemon Curd, White Chocolate Mouse 4.5oz portion	A	each	\$3.50
Mousse: Dark Chocolate, White	A	each	\$2.25

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Chocolate or Strawberry 3oz portion			
Italian Dessert Tray mini cannoli, chocolate dipped biscottis, tiramisu parfait	A	3 pieces per guest	\$4.40
Individual Cheesecakes Lime Yuzu or Salted Caramel	A	each	\$5.50
Carrot Cake	A	each	\$4.40
Petite Desserts assorted cheesecakes and tarts,	A	4 pieces per guest	\$6.50

MAIN MENU PER DIEM MENU ITEM	PRODUCT GRADE	WEIGHT	PRICE
Mesquite Grilled Chicken	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Fried Chicken	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Asian Chicken Stir Fry	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Chicken Pot Pie	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
BBQ Pulled Chicken Sandwich	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Thai Curry Chicken	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80

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Chipotle Orange Chicken	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
BBQ Chicken	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Teriyaki Chicken	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Chinese Chicken Salad	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Sheppard's Pie	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Housemade Meatloaf	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Teriyaki Beef Stir Fry	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Beef Stroganoff	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Roasted Pork Loin with demi glaze	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a	\$12.80

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		brownie, 12oz beverage	
Pulled Pork Sandwich	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Italian Sausage and Pepper Sandwich	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
2 Beef or Cheese Enchilada's	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Chicken Verde	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Ground Beef or Ground Turkey Taco Bar	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Ground Turkey Taco Salad Bar	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Grande Nacho Bar	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Layered Black Bean and Chicken Casserole	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Red chili Pork	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad	\$12.80

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		w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	
Italian Sausage baked Penne Casserole with fresh marinara, and parmesan cheese	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Cheese Tortellini with creamy pesto	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Cheese Manicotti	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Pesto 3 Cheese Ravioli	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Penne & Roasted Vegetables with marinara	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Spaghetti and Meatballs	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Penne Pasta w/ lemon, garlic, tomatoes, olive oil & parmesan	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Bow Tie Pasta with chicken, peppers, onions, and olive oil	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 1oz beverage	\$12.80

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Grilled Asian Vegetable Stir Fry	A	3 oz. entrée, 2 -4oz sides, or 1- 4oz side and 1- 1.5oz green salad w/dressing , a roll, 2 cookies or a brownie, 12oz beverage	\$12.80
Baked Potato Bar w/ vegetarian chili	A	3 oz. entrée, 2 sides, 1 drink	\$12.80

STUDENT CATERING MENU

MENU ITEM	PRODUCT GRADE	WEIGHT	PRICE
Danish	A	1 doz	\$11.20
Muffins	A	1 doz	\$11.20
Donuts	A	1 doz	\$11.00
Breakfast Breads	A	1 doz	\$11.20
Bagels & Cream Cheese	A	1 doz	\$14.50
Fresh Brewed Coffee	A	1 gallon	\$8.50
Hot Tea Selection	A	1 gallon	\$8.50
Fruit Juice orange, apple, cranberry	A	1 gallon	\$9.50
Lemonade	A	1 gallon	\$7.50
Iced Tea	A	1 gallon	\$7.50
Hot Chocolate	A	1 gallon	\$8.60
Hot Apple Cider	A	1 gallon	\$8.60
Canned Sodas	A	1-12oz can	\$0.80
Bottled Waters	A	1-12oz bottle	\$0.80
The Deli Bag - ham & swiss, roast beef & cheddar, or turkey & jack	A	1bag and drink each	\$5.70

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on sourdough with chips, fruit and canned sodas or bottled water			
The Simple Sack - tuna or chicken salad served on sourdough with a bag of chips, fruit and a can of soda or bottled water	A	1bag and drink each	\$5.70
The Sub Club- ham, turkey, and bacon with American cheese on a hoagie roll with a bag of chips, fruit and a can of soda or bottled water	A	1bag and drink each	\$5.15
Rotisserie Chicken Dinner - rotisserie chicken with mashed potatoes, gravy, veggies. Served with rolls and butter, brownies or cookies and canned soda	A	serves 10	\$66.75
Classic Cook Out) - Juicy hamburgers, fresh buns, lettuce, tomato, onions, ketchup and mustard served with potato chips, cookies or brownies and canned soda	A	serves 10	\$61.50
Chili Dog Bar- Delicious Beef Hot Dogs served with our own Homemade Chili and Assorted Toppings	A	serves 10	\$47.50
Taquitos- Beef taquitos served with salsa and sour cream	A	24 pieces	\$21.50
The Great Pasta Feast - Pasta tossed with marinara, meat or Alfredo sauce. Served with salad and assorted dressings, garlic bread, cookies or brownies and soda	A	serves 10	\$47.50
Super Soup n' Salad Bar- Garden	A	serves 10	\$57.75

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fresh tossed salad with two dressings, six toppings, rolls and butter, soup du jour and canned soda			
Nacho Bar - Chips, Nacho Cheese, Salsa, Jalapeños and Refried Beans	A	serves 10	\$25.00
Go Grande! Nacho Bar- Add Guacamole, Sour Cream and Chicken or Beef to the Nacho Bar	A	serves 10	\$42.00
Chicken Fingers- Served with your choice of Honey Mustard or BBQ Dipping Sauces	A	24 pieces	\$24.00
Chicken Wings - Served with Asian BBQ or Buffalo-style Red-hot Glaze	A	30 pieces	\$24.50
Fresh Veggie Tray - Seasonal Vegetables served with Ranch Dressing for dipping	A	3.5 lbs.	\$15.00
Seasonal Fruit Tray - The season's best Fruit served with a Yogurt Dipping Sauce	A	3.5 lbs.	\$21.25
Cheese and Cracker Tray (Serves 10) - An assortment of Domestic Cheeses served with Crackers	A	3.5 lbs.	\$21.50
Large Hot Pretzels with Assorted Mustards	A	12pieces	\$21.50
Meatballs - Italian or BBQ	A	24 pieces	\$13.50
One Topping Homemade Pizza - Fresh, hot and delicious pizza made from scratch. Choose from the following toppings: sausage, pepperoni, Canadian Bacon, mushrooms, black olives, green peppers, onions, pineapple,	A	1 16 inch pizza	\$9.50

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tomatoes or jalapeños			
Each additional topping	A	8oz	\$1.00
Home-style Potato Chips - Our signature homemade kettle chips	A	1 pound	\$2.65
Tortilla Chips	A	1 pound	\$2.65
Mini Pretzels	A	1 pound	\$2.35
Savory Snack Mix	A	1 pound	\$3.70
Salsa	A	1 cup	\$1.40
Ranch Dip	A	1 cup	\$1.40
Onion Dip	A	1 cup	\$1.40
Gourmet Cookies	A	1 dozen	\$9.60
Brownies	A	1 dozen	\$9.60
Rice Krispy Treats	A	1 dozen	\$8.50
1/2 Sheet Cake	A	1/2 sheet	\$32.00
Full Sheet Cake	A	1 full sheet	\$59.00
Ice Cream Social - Vanilla Ice Cream served with five delicious toppings! Serves 30–40 people	A	1 3gal tub of icecream-5 toppings 1 qt toppings	\$49.00
Gummie Bears	A	1 pound	\$4.10
Gummie Worms	A	1 pound	\$4.10
M&M's plain or peanut	A	1 pound	\$5.00
Jolly Ranchers	A	1 pound	\$4.90
Swedish Fish	A	1 pound	\$4.90
Yogurt Covered Pretzels	A	1 pound	\$4.90

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MENU ITEM	PRODUCT GRADE	WEIGHT	PRICE
Wing Trio	A	3 p/p	\$16.75
Dueling Meatballs	A	4 p/p	Incl.
Jumbo Soft Pretzels	A	1 p/p	Incl.
Homemade Kettle Chips & Dip	A	2oz chip1oz dip	Incl.
Cheese and Vegetable Tray	A	3oz cheese 3oz veggie	Incl.
Chips and Salsa	A	2oz chip2oz salsa	Incl.
Brownies & Cookies	A	2 p/p	Incl.
Kobe Sliders	A	1 p/p	\$22.50
Grilled Chicken Sliders	A	1 p/p	Incl.
Potato Skins	A	2 p/p	Incl.
Shrimp Cocktail	A	3 p/p	Incl.
Tortilla Chips & Salsa	A	2oz chips & 2oz salsa	Incl.
International Cheese & Seasonal Fruits: Boursin, Sharp White Cheddar, Manchego, Muenster, and Artisan Breads	A	4oz cheese & 3oz fruit	Incl.
Petite Desserts	A	3 p/p	Incl.
Bronco Dogs, Kobe Sliders with Chilies & Onions, Beer Brats	A	2 p/p	\$13.50
Buns/Rolls	A		Incl.
Mac 'n Cheese	A	5oz	Incl.
Homemade Kettle Chips & Dip	A	2oz chips 1oz dip	Incl.
Lettuce, Tomato, Pickles, and Onion Tray	A		Incl.
Coleslaw	A	3oz	Incl.

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Jumbo Fresh Baked Cookies	A	1 each	Incl.
Carolina Style Braised Pork	A	6oz	\$20.00
Cajun Grilled Shrimp on a bed of Red Beans and Rice	A	3 each	Incl.
Mac 'n Cheese topped w/ Tabasco Leeks	A	5oz	Incl.
Creamy Coleslaw	A	3oz	Incl.
Seasonal Fruit Bowl	A	4oz	Incl.
Turtle Brownies	A	1 each	Incl.
Seasoned Beef Fajitas	A	3oz protein	\$18.50
Chicken Fajitas	A	3oz protein	Incl.
Soft Flour Tortillas	A		Incl.
Lettuce, Tomatoes, Onions, Salsa, Guacamole, Sour Cream, and Cheese	A		Incl.
Corn and Black Bean Salad	A	4oz	Incl.
Spanish Rice	A	4oz	Incl.
Tortilla Chips with Queso Dip and Salsa	A	2oz chips, 2oz dip, 2oz salsa	Incl.
Brownies	A	1 each	Incl.
Sliced Beef Brisket	A	6oz	\$18.00
Grilled Signature Rope Sausage	A	4oz	Incl.
Buttered Corn on the Cob	A	1 each	Incl.
Mini Buns	A	2 each	Incl.
Potato Salad	A	4oz	Incl.
Mac 'n Cheese	A	5oz	Incl.

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Lemon Bar	A	1 each	Incl.
Kahlua Pork	A	5oz	\$16.75
Teriyaki Chicken Breast	A	5oz	Incl.
Island Rice Pilaf	A	4oz	Incl.
Hawaiian Ambrosia Salad	A	4oz	Incl.
Maui Coleslaw	A	3oz	Incl.
Hawaiian Rolls	A	2 each	Incl.
Macadamia Cookies	A	2 each	Incl.
Sliced Tenderloin	A	4oz	\$26.00
Sliced Grilled Chicken Gremolata	A	5oz	Incl.
Caesar Salad	A	2oz	Incl.
Pesto Tortellini Salad	A	4oz	Incl.
Grilled Vegetables	A	4oz	Incl.
Mini Ciabattas	A	2 each	Incl.
Cannoli	A	1 each	Incl.
Bronco Dogs	A	Choice 1 Entrée, 2 Sides, 1 Dessert	\$12.25, Add Entrée \$4.25, Add Side \$2.25
Chorizo	A	1each	Incl.
Bratwurst	A	1each	Incl.
Chicken Strips with Dip	A	1each	Incl.
Mini Pulled Chicken Sliders	A	1each	Incl.
Grilled Chicken Sliders	A	1each	Incl.

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Kobe Beef Sliders	A		Incl.
Homemade Chips and Dip/Salsa	A	2oz chips/ 2oz dip	Incl.
Creamy Coleslaw	A	3oz	Incl.
Fresh Fruit Salad	A	4oz	Incl.
Mac n' Cheese	A	5oz	Incl.
Red Potato Salad	A	4oz	Incl.
Black Bean and Corn Salad	A	4oz	Incl.
Marinated Grilled Vegetable Platter	A	4oz	Incl.
Sweet Potato Waffle Chips and Dip	A	3oz	Incl.
Chips and Guacamole	A	2oz chips/ 2oz dip	Incl.
Pasta Salad (Pesto or Ranch)	A	4oz	Incl.
Ice Cream Novelties	A	1 each	Incl.
Brownies/Lemon Bars	A	1 each	Incl.
Fresh Baked Cookies (Sugar, Macadamia Nut, Chocolate Chip)	A	1 each	Incl.
50 Piece Sushi Platter, with Pickled Ginger, Soy Sauce, Wasabi	A		\$26.25
California Rolls	A		Incl.
Philadelphia Rolls	A		Incl.
Spicy Shrimp Rolls	A		Incl.
24 Beef Satay with Peanut Sauce	A	2oz each 2 per person	Incl.
Asian Noodle Salad	A	4oz	Incl.
24 Mini Vegetable Egg Rolls with Plum Sauce	A	1oz each 2 per person	Incl.
Fresh Fruit Bowl	A	4oz	Incl.

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Mini Lemon Bars	A	1 per person	Incl.
Mini Almond Cookies	A	1 per person	Incl.
Ground Beef Nachos	A	3oz	\$12.75
Pulled Chicken	A	3oz	Incl.
Black Beans	A	4oz	Incl.
White Cheese Sauce	A	4oz	Incl.
Tortillas Chips with Shredded Cheese, Jalapenos, Salsa, Guacamole, Sour Cream, Pico, Black Olives, Hot Sauce	A	4 oz chips & 8 oz condiments	Incl.
Dulche De Leche Bars	A	1 per person	Incl.
Pepper Crusted Petite Filet Medallions	A	5oz	\$36.00
Bourbon Chicken Breast	A	5oz	Incl.
Boursin Mashed Potatoes	A	6oz	Incl.
Southwest Creaser Salad	A	2oz	Incl.
Confetti Corn	A	4oz	Incl.
Ciabatta Rolls and Condiments	A	2 per person	Incl.
Breakfast Burritos with Salsa and Hot Sauce	A	8oz each	\$12.50
Fresh Fruit Salad	A	4oz	Incl.
Jumbo Muffins	A	1 each	Incl.
Cinnamon Rolls	A	1 each	Incl.

GAME DAY BUFFET MENU

MENU ITEM	PRODUCT GRADE	WEIGHT	PRICE
Cuban Pork Sandwich	A	4oz pork/ham	\$16.50

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Chicken Taco Bar with Condiments & Tortillas	A	3oz chicken & condiments	Incl.
Cilantro Lime Rice	A	4oz	Incl.
Black Beans	A	4oz	Incl.
Garden Salad	A	2oz	Incl.
Fresh Fruit Salad	A	3oz	Incl.
BBQ Chicken	A	4oz	\$16.50
Grilled Signature Rope Sausage	A	4oz	Incl.
House made Ranch Beans	A	4oz	Incl.
Fresh Seasoned Corn with Flavored Butters	A	1 ear	Incl.
Garden Salad	A	2oz	Incl.
Sweet Potato Salad with Candied Pecans	A	3oz	Incl.
Creamy Coleslaw	A	3oz	Incl.
Rolls and Butter	A	1.5 per	Incl.
Chicken and Andouille Sausage Jambalaya	A	4oz protein	\$16.50
Blackened Chicken with Creole Cream Sauce	A	5oz	Incl.
Black-eyed Peas	A	3oz	Incl.
Dirty Rice	A	4oz	Incl.
Southern Greens	A	4oz	Incl.
Tomato Cucumber Marinated Salad	A	4oz	Incl.
Southern Chopped Salas	A	2oz	Incl.
Cornbread Muffins	A	2 each	Incl.

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Beef Fajitas	A	4oz protein	\$16.50
Vegetable Fajitas	A	3oz	Incl.
Chicken Verde with Tortillas, Lettuce, Cheese, Sour Cream, Guacamole, Hot Sauce	A	4oz protein - 6oz condiments	Incl.
Chips and Salsa Bar	A	2oz chips, 2oz salsa	Incl.
Spanish Rice	A	4oz	Incl.
Chopped Mexican Caesar Salad	A	2oz chips, 2oz salsa	Incl.
BBQ Chicken	A	4oz	\$16.50
Pulled Pork Sandwiches with 2 Fresh Made House BBQ Sauces	A	4oz protein	Incl.
Potato Salad	A	4oz	Incl.
Mac 'n' Cheese	A	4oz	Incl.
Green Beans with Onions	A	4oz	Incl.
Garden Salad	A	2oz	Incl.
Cornbread and Butter	A	2 per person	Incl.
Meatloaf	A	5oz	\$16.50
Roasted Turkey	A	4oz	Incl.
Mashed Potatoes	A	6oz	Incl.
Gravy	A	3oz	Incl.
Roasted Squash Medley	A	4oz	Incl.
Caesar Salad	A	2oz	Incl.
Fresh Fruit Salad	A	3oz	Incl.
Rolls and Butter	A	1.5 per person	Incl.
Pot-Roast	A	6oz	\$16.50

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Chicken Pot Pie	A	3oz protein	Incl.
Roasted Red Potatoes	A	5oz	Incl.
Braised Cabbage with Bacon	A	2oz	Incl.
Green Salad	A	2oz	Incl.
Waldorf Salad	A	4oz	Incl.
Rolls and Butter	A	1.5 per person	Incl.
Kahlua Pork	A	4oz	\$16.50
Teriyaki Chicken	A	5oz	Incl.
Grilled Pineapple	A	2oz	Incl.
Island Rice	A	4oz	Incl.
Fresh Fruit Salad	A	3oz	Incl.
Macaroni Salad	A	3oz	Incl.
Hawaiian Rolls and Butter	A	2 per person	Incl.
Brioche French Toast with Fruit Compote	A	2 per person3oz compote	\$16.50
Fresh Fruit Salad	A	3oz	Incl.
Bacon and Sausage	A	5oz	Incl.
Hacienda Eggs	A	4oz	Incl.
Biscuits and Gravy	A	1 per person	Incl.
Muffins	A	.5 per person	Incl.
Cinnamon Rolls	A	.5 per person	Incl.
Brioche French Toast with Fruit Compote	A	2 per person3oz compote	\$16.50
Breakfast Burrito Bar	A	6oz protein	Incl.
Fresh Fruit Salad	A	4oz	Incl.

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Hash Browns	A	6oz	Incl.
Muffins	A	.5 per person	Incl.
Danish	A	.5 per person	Incl.
Breakfast Breads	A	.5 per person	Incl.
*Note: Pre Order and save \$2.00 per/person			

Concession:

ATHLETIC CONCESSIONS

MENU ITEM	SIZE	PRICE
Regular Soda 24 OZ	1 Each	\$ 3.50
Large Soda 32 OZ	1 Each	\$4.00
Hot Choc 16oz	1 Each	\$3.00
Coffee	1 Each	\$2.50
20 oz Water Bottle	1 Each	\$3.00
20 oz Powerade Btl	1 Each	\$3.50
20 oz Bottle Soda(coke)	1 Each	\$3.50
Candy	1 Each	\$3.50
Burger ,Fries & Lrg Soda	1 Each	\$10.50
Burger ,Fries & Reg Soda	1 Each	\$10.00
3/1 Burger or Cheese Burger	1 Each	\$6.50
Cheese Cup 3oz	1 Each	\$1.25
Finger Steak Boat w/fries	1 Each	\$7.00
French Fry boat	1 Each	\$3.50
Plain Hot Dog	1 Each	\$4.00
Hot Dog, Chips, Lrg Soda	1 Each	\$7.50
Hot Dog, Chips, Reg Soda	1 Each	\$7.25

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Nachos Large cheese/salsa	1 Each	\$4.50
Nachos Small w/ cheese	1 Each	\$3.50
Popcorn Large	1 Each	\$3.50
Popcorn Small	1 Each	\$2.50
Pretzel	1 Each	\$3.50
Kids Meal	1 Each	\$5.25
Potato Chips	1 Each	\$1.75

TACO BELL ARENA/EVENT CONCESSIONS

MENU ITEM	SIZE	PRICE
Regular Soda 24 OZ	1 Each	\$3.50
Large Soda 32 OZ	1 Each	\$4.00
Hot Choc 16oz	1 Each	\$3.00
Coffee	1 Each	\$2.50
20 oz Water Bottle	1 Each	\$3.00
20 oz Powerade Btl	1 Each	\$3.50
20 oz Bottle Soda(coke)	1 Each	\$3.50
Candy	1 Each	\$3.50
Burger ,Fries & Lrg Soda	1 Each	\$10.50
Burger ,Fries & Reg Soda	1 Each	\$10.00
3/1 Burger or Cheese Burger	1 Each	\$6.50
Cheese Cup 3oz	1 Each	\$1.25
Finger Steak Boat w/fries	1 Each	\$7.00
French Fry boat	1 Each	\$3.50
Plain Hot dog	1 Each	\$4.00

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Hot Dog, Chips, Lrg Soda	1 Each	\$7.50
Hot Dog, Chips, Reg Soda	1 Each	\$7.25
Nachos Deluxe	1 Each	\$8.00
Nachos Large cheese/salsa	1 Each	\$4.50
Nachos Small w/ cheese	1 Each	\$3.50
Popcorn Large	1 Each	\$3.50
Popcorn Small	1 Each	\$2.50
Pretzel	1 Each	\$3.50
Pretzel time	1 Each	\$3.50
Kids Meal	1 Each	\$5.25
Potato Chips	1 Each	\$1.75

STUDENT STAND CONCESSIONS

MENU ITEM	SIZE	PRICE
Hot Dog	1 each	\$2.00
Nachos	1 -4oz chip w/cheese sauce	\$2.00
Soda	1 -12oz	\$1.00
Candy Bar	1reg size	\$1.00
Popcorn	1-16oz	\$1.00
Water	1 -12oz bottle	\$2.00
Hot Cocoa	1 -12oz	\$2.00

VALUE ADDED/LOADED VALUE TICKETS

		COST TO ADD TO
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MENU ITEM	SIZE(S)	TICKETS
BroncoDog/Chips/Regular Fountain Drink	Regular Combo	\$6.50
3/1 Burger/Regular Fries/Regular Fountain Drink	Regular Combo	\$8.50
1 large cheese nacho/ choice of Candy and 2 regular fountain drinks	Spirit Pack Combo	\$12.00
Add to Ticket	\$10.00 event spend	\$9.00
Add to Ticket	\$20.00 event spend	\$17.00
Add to Ticket	\$30.00 event spend	\$24.00

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Vending:

ITEM	PRICE
Famous Amos Cookies	\$1.00
Doritos	\$1.00
Lays	\$1.00
Ruffles	\$1.00
Fritos	\$1.00
Cheetos	\$1.00
Doritos Munchies	\$1.00
Pretzels	\$1.00
Smart Foods Hummus Chips	\$1.00
Kettle Cooked Chips	\$1.00
Snickers	\$1.25
M&M's	\$1.25
Twix	\$1.25
Reese's	\$1.25
Butterfinger	\$1.25
Hersey's	\$1.25
3 Musketeers	\$1.25
Planter's Peanuts	\$1.25
Fiber One bars	\$1.25
Grandma's Cookies	\$1.25
Pop Tarts	\$1.25
Welch's Fruit Snacks	\$1.25

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Rice Krispies	\$1.25
Mike & Ike	\$1.75
Swedish Fish	\$1.75
Chips	\$1.10
Large Bag Candy	\$1.85
Candy	\$1.35
Small Pastry	\$1.35
Premium Pastry	\$1.60
Gum & Mints	\$0.85
The Frozen Machine Prices	\$1.75 - \$4.00
2 BU Machine Prices	\$1.25 - \$4.75
Coffee Machine Prices	\$1.25 - \$1.50

Alcohol:

PRODUCT	PRICING				
	TACO BELL ARENA	STUECKLE SKY CENTER GAME BAR	STUECKLE SKY CENTER SUITE SERVICE	CATERING	MORRISON CENTER
Bourbon Jim Beam		\$6.00	\$6.00	\$6.00	
Coffee Liqueur Kamora		\$6.00	\$6.00	\$6.00	
Seagrams Dry Gin		\$6.00	\$6.00	\$6.00	
Irish Cream Carolans		\$6.00	\$6.00	\$6.00	
Rum Bacardi Silver	\$7.00	\$7.00	\$7.00	\$7.00	\$7.00

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Rum Malibu		\$6.00	\$6.00	\$6.00	
Rum Captain Morgan		\$6.00	\$6.00	\$6.00	
Scotch Grants		\$6.00	\$6.00	\$6.00	
Pedro Morales		\$6.00	\$6.00	\$6.00	
Vodka Smirnoff		\$6.00	\$6.00	\$6.00	
Whiskey Seagrams 7		\$6.00	\$6.00	\$6.00	
Peach Schnapps		\$6.00	\$6.00	\$6.00	
Peppermint Schnapps		\$6.00	\$6.00	\$6.00	
Bourbon Makers Mark		\$7.00	\$7.00	\$7.00	
Gin Bombay Sapphire		\$7.00	\$7.00	\$7.00	
Gin Tanqueray	\$7.00	\$7.00	\$7.00	\$7.00	\$7.00
Scotch Chivas Regal Blend		\$7.00	\$7.00	\$7.00	
Tequila Sauza		\$7.00	\$7.00	\$7.00	
Vodka Absolute	\$7.00	\$7.00	\$7.00	\$7.00	\$7.00
Vodka Ketel one		\$7.00	\$7.00	\$7.00	
Whiskey Crown Royal		\$7.00	\$7.00	\$7.00	
Whiskey Irish Jamesons		\$7.00	\$7.00	\$7.00	
Whiskey Jack Daniels	\$7.00	\$7.00	\$7.00	\$7.00	\$7.00
Vodka 44 North		\$7.00	\$7.00	\$7.00	
Scotch - 12yr Glenlivet		\$9.00	\$9.00	\$9.00	
Vodka Grey Goose		\$9.00	\$9.00	\$9.00	
Gran Marnier		\$9.00	\$9.00	\$9.00	
Odouls 12oz		\$5.00	\$5.00	\$5.00	
Budweiser 12oz		\$5.00	\$5.00	\$5.00	\$5.00

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Bud Light 12oz		\$5.00	\$5.00	\$5.00	
Budweiser 16oz		\$6.50	\$6.50	\$6.50	
Bud Light 16oz		\$6.50	\$6.50	\$6.50	
Coors 12oz		\$5.00	\$5.00	\$5.00	\$5.00
Coors Light 12oz		\$5.00	\$5.00	\$5.00	\$5.00
Coors Light 16oz		\$6.50	\$6.50	\$6.50	
Fat Tire 12oz		\$6.00	\$6.00	\$6.00	\$6.00
Sierra Nevada 12oz		\$6.00	\$6.00	\$6.00	
Stella 12oz		\$6.00	\$6.00	\$6.00	\$6.00
Coppa prewrap-8oz	\$5.00	\$5.00	\$5.00		
Limearitas 8oz	\$5.50				\$5.50
Domestics 16oz	\$5.00	\$5.00	\$5.00	\$5.00	
Domestics 24oz	\$7.00				
Microbrews 16oz	\$6.00	\$6.00	\$6.00	\$6.00	
Microbrews 24oz	\$8.00				
Domestics keg				\$ 350.00	
Microbrews keg				\$ 425.00	
Mikes Hard Lemonade		\$5.00	\$5.00	\$5.00	
Fountain Sodas		\$1.75	\$1.75	\$1.75	
House glass		\$5.50	\$5.50	\$5.50	\$5.50
Mid Price glass		\$6.50	\$6.50	\$6.50	
Premium Wines glass		\$7.50	\$7.50	\$7.50	\$7.50
House bottle		\$ 24.00	\$ 24.00	\$ 24.00	
Mid Price bottle		\$ 30.00	\$ 30.00	\$ 30.00	

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Premium Wines bottle		\$ 36.00	\$ 36.00	\$ 36.00	
12oz Can Soda				\$1.60	
12oz Bottle Water				\$1.60	

DRAFT

University Expenditure Responsibility

Facility Rental
Utilities
Bronco Card Support
Utility Infrastructure Maintenance
Trash Collection from designated areas
Internet Access

Vendor Expenditure Responsibility

All other costs not listed above, for example:

Labor
Food Costs
Paper Supplies
Cleaning Supplies
Office Supplies
Telephone
Hiring Costs & Background Checks
Parking Permits
Vehicle Expense
Equipment Rental
Linens and Uniforms
Flowers/Decorations
Equipment Repairs and Maintenance
Training/Professional Development
Marketing and Advertising
Credit Card Fees
Banking and Professional Fees
Courier Expense
Payroll and Business Insurance and Expense
Brand Licensing/Franchise Fees
Taxes and Licenses
Smallwares Replacement
Small Equipment Replacement
Pest Control
Light Bulbs in the back of house areas
Painting in the back-of-house areas
Plumbing clogs
Tools
Signage

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ATTACHMENT 1

**Boise State University
Pro Forma Projections (7/1/16 – 6/30/21)**

REVENUE:	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21
Board Dining (1)	\$3,344	\$3,896	\$4,060	\$ 4,231	\$4,410
Retail (2)	\$5,321	\$5,530	\$5,929	\$ 6,355	\$6,813
Concessions	\$1,313	\$1,418	\$1,532	\$ 1,654	\$1,787
Alcohol	\$739	\$ 798	\$862	\$931	\$1,005
Catering	\$2,808	\$2,920	\$3,037	\$ 3,159	\$3,285
Summer Conference	\$374	\$ 389	\$405	\$421	\$438
Food Vending (3)	\$18	\$18	\$19	\$ 19	\$20
CACFP	\$139	\$ 143	\$148	\$152	\$157
Other (specify)					
Board Holiday Additional Billings	\$54	\$55	\$57	\$ 59	\$60
Subcontractor Income (4)	\$14	\$21	\$22	\$ 23	\$24
Total Revenue:	\$14,123	\$ 15,189	\$16,069	\$17,004	\$17,998
OPERATING EXPENSES:					
Wages/Benefits	\$4,607	\$4,882	\$5,123	\$ 5,376	\$5,644
Food/Beverage	\$4,820	\$5,176	\$5,475	\$ 5,792	\$6,128
Service and Supplies	\$480	\$ 516	\$546	\$578	\$612
Repair and Maintenance	\$71	\$76	\$80	\$ 85	\$90
Capital Contribution	\$800	\$ 850	\$850	\$850	\$850
Commission Expenses	\$1,765	\$1,863	\$1,986	\$ 2,118	\$2,259
Other Expenses (list):					
National Brand Royalties	\$362	\$ 401	\$428	\$456	\$486

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Insurance	\$169	\$ 182	\$193	\$204	\$216
Credit card Fees	\$226	\$ 243	\$257	\$272	\$288
Uniforms	\$127	\$ 137	\$145	\$153	\$162
IT/POS Charges	\$64	\$68	\$72	\$ 77	\$81
Marketing & Advertising	\$49	\$53	\$56	\$ 60	\$63
Renovation/Equipment Fund	\$75	\$85	\$95	\$105	\$115
Concessions Equipment Fund	\$35	\$37	\$40	\$ 44	\$47
Smallwares Replacements	\$35	\$38	\$40	\$ 43	\$45
Miscellaneous Direct Expenses (5)	\$265	\$ 279	\$292	\$306	\$322
Net Income	\$174	\$ 301	\$391	\$487	\$590

(1) Board Dining includes residential dining based on daily rate, excludes add-on Bronco bucks which is reflected in retail.

(2) Retail includes all cash, credit, add-on Bronco Bucks and unused flex.

(3) Vending revenue is reflected net of commissions paid to the University.

(4) Subcontractor revenue is reflected is based on Aramark's net revenue from Sub-contractor.

(5) Miscellaneous Direct expenses include training, travel, other small equipment, employee programs, postage, freight, sales tax on purchases, franchise fees, etc.

**EXHIBIT 2
MODIFIED STATE OF IDAHO TERMS AND CONDITIONS**

The following Modified State of Idaho Terms and Conditions (“Terms and Conditions” shall apply to the foodservice agreement (RFP TS15-058) between Aramark and Boise State University.

DEFINITIONS: Unless the context requires otherwise, all terms not defined below shall have the meanings defined in Idaho Code Section 67-5716 or IDAPA 38.05.01.011.

1. DEFINITIONS: Unless the context requires otherwise, all terms not defined below shall have the meanings defined in Idaho Code Section 67-5716 or IDAPA 38.05.01.011.

A. Agency. All offices, departments, divisions, bureaus, boards, commissions and institutions of the state, including the public utilities commission, but excluding other legislative and judicial branches of government, and excluding the governor, the lieutenant-governor, the secretary of state, the state controller, the state treasurer, the attorney general, and the superintendent of public instruction.

B. Bid – A written offer that is binding on the Bidder to perform a Contract to purchase or supply Property in response to an Invitation to Bid.

C. Contract - Any state written agreement, including a solicitation or specification documents and the accepted portions of the solicitation, for the acquisition of Property. Generally, the term is used to describe term contracts, definite or indefinite quantity or delivery contracts or other acquisition agreements whose subject matter involves multiple payments and deliveries.

D. Contractor – A Vendor who has been awarded a Contract.

E. Property – Goods, services, parts, supplies and equipment, both tangible and intangible, including, but nonexclusively, designs, plans, programs, systems, techniques and any rights and interest in such Property. Includes concession services and rights to access or use state property or facilities for business purposes.

F. Proposal – A written response, including pricing information, to a Request for Proposals that describes the solution or means of providing the Property requested and which Proposal is considered an offer to perform in full response to the Request for Proposals. Price may be an evaluation criterion for Proposals, but will not necessarily be the predominant basis for Contract award.

G. Quotation – An offer to supply Property in response to a Request for Quotation and generally used for small or emergency purchases.

H. Solicitation – An Invitation to Bid, a Request for Proposals, or a Request for Quotation issued by the purchasing activity for the purpose of soliciting Bids, Proposals, or Quotes to perform a Contract.

I. State – The state of Idaho including each Agency unless the context implies other state(s) of the United States.

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ATTACHMENT 1

J. Vendor – A person or entity capable of supplying Property to the State.

2. **TERMINATION:** Termination for Material Breach (including non-payment): In the event of a material breach by the either party of the terms set forth in this Contract, the non-breaching party shall give the breaching party written notice specifying such breach, and the breaching party shall have thirty (30) days within which to cure such breach. If the breach is not cured within that time, the non-breaching party shall have the right to then terminate this Agreement by giving the University sixty (60) days' written notice of its intention to terminate. If the Contract is terminated for default or non-compliance, the Contractor will be responsible for any costs resulting from the State's award of a new contract and any damages incurred by the State. The State, upon termination for default or non-compliance, reserves the right to take any legal action it may deem necessary including, without limitation, offset of damages against payment due.

3. **RENEWAL OPTIONS:** Notwithstanding any other provision in the Contract limiting or providing for renewal of the Contract, upon mutual, written agreement by the parties, the Contract may be extended under the same terms and conditions for the time interval equal to the original contract period, or for such shorter period of time as agreed to by the parties.

4. **PRICES:** Prices shall not fluctuate for the period of the Contract and any renewal or extension unless agreed to in writing by the State. Unless otherwise specified, prices include all costs associated with delivery to the FOB **Destination address identified in the Solicitation, as provided in Paragraph 17, Shipping and Delivery, below.**

5. **ADMINISTRATIVE FEE:** Administrative fee does not apply to this contract.

6. **CHANGES/MODIFICATIONS:** Changes of specifications or modification of the Contract in any particular can be affected only upon written consent of the State, and after any proposed change or modification has been submitted in writing, signed by the party proposing the change. Additionally, the State may issue unilateral amendments to the Contract to make administrative changes, when necessary. Any such administrative changes will not materially alter the financial terms of the Contract or have a material financial impact on the Contract, unless consented to in writing by Contractor.

7. **CONFORMING PROPERTY:** The Property shall conform in all respects with the requirements of the State's Solicitation. In the event of nonconformity, and without limitation upon any other remedy, the State shall have no financial obligation in regard to the non-conforming goods or services. Additionally, upon notification by the State, the Contractor shall pay all costs for the removal of nonconforming Property from State premises.

8. **OFFICIAL, AGENT AND EMPLOYEES OF THE STATE NOT PERSONALLY LIABLE:** In no event shall any official, officer, employee or agent of the State be in any way personally liable or responsible for any covenant or agreement herein contained whether expressed or implied, nor for any statement, representation or warranty made herein or in any connection with the Contract.

9. **CONTRACT RELATIONSHIP:** It is distinctly and particularly understood and agreed between the parties to the Contract that the State is in no way associated or otherwise connected with the performance of any service under the Contract on the part of the Contractor or with the employment of labor or the incurring of expenses by the Contractor. Said Contractor is an independent contractor in the performance of each and every part of the Contract, and solely and personally liable for all labor, taxes, insurance, required bonding and other expenses, except as specifically stated herein. The Contractor shall exonerate, defend, indemnify and hold the State harmless from and against and assume full responsibility for payment of all federal, state and local taxes or

contributions imposed or required under unemployment insurance, social security, worker's compensation and income tax laws with respect to the Contractor or Contractor's employees engaged in performance under the Contract. The Contractor will maintain any applicable worker's compensation insurance as required by law and will provide certificate of same if requested. There will be no exceptions made to this requirement and failure to provide a certificate of worker's compensation insurance may, at the State's option, result in cancellation of the Contract or in a contract price adjustment to cover the State's cost of providing any necessary worker's compensation insurance. The Contractor must provide either a certificate of worker's compensation insurance issued by a surety licensed to write worker's compensation insurance in the state of Idaho, as evidence that the Contractor has in effect a current Idaho worker's compensation insurance policy, or an extraterritorial certificate approved by the Idaho Industrial Commission from a state that has a current reciprocity agreement with the Idaho Industrial Commission. The State does not assume liability as an employer.

10. ANTI-DISCRIMINATION/EQUAL EMPLOYMENT OPPORTUNITY CLAUSE: The Contractor is bound to the terms and conditions of Section 601, Title VI, Civil Rights Act of 1964, in that "No person in the United States shall, on the grounds of race, color, national origin, or sex, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving Federal financial assistance." In addition, "No otherwise qualified handicapped individual in the United States shall, solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance" (Section 504 of the Rehabilitation Act of 1973). Furthermore, for Contracts involving federal funds, the applicable provisions and requirements of Executive Order 11246 as amended, Section 402 of the Vietnam Era Veterans Readjustment Assistance Act of 1974, Section 701 of Title VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act of 1967 (ADEA), 29 USC Sections 621, et seq., the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, U.S. Department of Interior regulations at 43 CFR Part 17, and the Americans with Disabilities Act of 1990, are also incorporated into the Contract. The Contractor shall comply with pertinent amendments to such laws made during the term of the Contract and with all federal and state rules and regulations implementing such laws. The Contractor must include this provision in every subcontract relating to the Contract.

11. TAXES: The State is generally exempt from payment of state sales and use taxes and from personal property tax for property purchased for its use. The State is generally exempt from payment of federal excise tax under a permanent authority from the District Director of the Internal Revenue Service (Chapter 32 Internal Revenue Code [No. 82-73-0019K]). Exemption certificates will be furnished as required upon written request by the Contractor. If the Contractor is required to pay any taxes incurred as a result of doing business with the State, it shall be solely responsible for the payment of those taxes. If, after the effective date of the Contract, an Idaho political subdivision assesses, or attempts to assess, personal property taxes not applicable or in existence at the time the Contract becomes effective, the State will be responsible for such personal property taxes, after reasonable time to appeal. In no event shall the State be responsible for personal property taxes affecting items subject to the Contract at the time it becomes effective.

12. INDEMNIFICATION: Contractor shall defend, indemnify and hold harmless the State from any and all liability, claims, damages, costs, expenses, and actions, including reasonable attorney fees, caused by or that arise from the negligent or wrongful acts or omissions of the Contractor, its employees, agents, or subcontractors under the Contract that cause death or injury or damage to property or arising out of a failure to comply with any state or federal statute, law, regulation or act. Contractor shall have no indemnification liability under this section for death, injury, or damage arising solely out of the negligence or misconduct of the State.

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ATTACHMENT 1

13. CONTRACT NUMBERS: The Contractor shall clearly show the State's Contract number or Purchase Order number on all acknowledgments, shipping labels, packing slips, invoices, and on all correspondence.

14. CONTRACTOR RESPONSIBILITY: The Contractor is responsible for furnishing and delivery of all Property included in the Contract, whether or not the Contractor is the manufacturer or producer of such Property. Further, the Contractor will be the sole point of contact on contractual matters, including all warranty issues and payment of charges resulting from the use or purchase of Property.

15. SUBCONTRACTING: Unless otherwise allowed by the State in the Contract, the Contractor shall not, without written approval from the State, enter into any subcontract relating to the performance of the Contract or any part thereof. Approval by the State of Contractor's request to subcontract or acceptance of or payment for subcontracted work by the State shall not in any way relieve the Contractor of any responsibility under the Contract. The Contractor shall be and remain liable for all damages to the State caused by negligent performance or non-performance of work under the Contract by Contractor's subcontractor. Subcontractor(s) must maintain the same types and levels of insurance as that required of the Contractor under the Contract; unless the Contractor provides proof to the State's satisfaction that the subcontractor(s) are fully covered under the Contractor's insurance, or, except as otherwise authorized by the State.

16. COMMODITY STATUS: It is understood and agreed that any item offered or shipped shall be new and in first class condition and that all containers shall be new and suitable for storage or shipment, unless otherwise indicated by the State in the Solicitation. Demonstrators, previously rented, refurbished, or reconditioned items are not considered "new" except as specifically provided in this section. "New" means items that have not been used previously and that are being actively marketed by the manufacturer or Contractor. The items may contain minimal amounts of recycled or recovered parts that have been reprocessed to meet the manufacturer's new product standards. The items must have the State as their first user and the items must not have been previously sold, installed, demonstrated, or used in any manner (such as rentals, demonstrators, trial units, etc.). The new items offered must be provided with a full, unadulterated, and undiminished new item warranty against defects in workmanship and materials. The warranty is to include replacement, repair, and any labor for the period of time required by other specifications or for the standard manufacturer or warranty provided by the Contractor, whichever is longer.

17. SHIPPING AND DELIVERY: Unless otherwise required in the Contract, all orders will be shipped directly to the Agency that placed the order at the location specified by the State, on an F.O.B. Destination freight prepaid and allowed basis with all transportation, unloading, uncrating, drayage, or other associated delivery and handling charges paid by the Contractor. Unless otherwise specified in the Contract, deliveries shall be made to the Agency's receiving dock or inside delivery point, such as the Agency's reception desk. The Contractor shall deliver all orders and complete installation, if required, within the time specified in the Contract. Time for delivery commences at the time the order is received by the Contractor.

18. ACCEPTANCE: Unless otherwise specified in the Contract:

A. When the Contract does not require installation, acceptance shall occur fourteen (14) calendar days after delivery, unless the State has notified the Contractor in writing that the product delivered does not meet the State's specification requirements or otherwise fails to pass the Contractor's established test procedures or programs or test procedures or programs identified in the Contract.

**CONSENT AGENDA
FEBRUARY 18, 2016**

ATTACHMENT 1

B. When the Contract requires installation, acceptance shall occur fourteen (14) calendar days after completion of installation, unless the State has notified the Contractor in writing that the products(s) delivered does not meet the State's specification requirements, that the product is not installed correctly or otherwise fails to pass the Contractor's established test procedures or programs or test procedures or programs identified in the Contract.

C. When the Contract requires the delivery of services, acceptance shall occur fourteen (14) calendar days after delivery of the services, unless the State has notified the Contractor in writing that the services do not meet the State's requirements or otherwise fail to pass the Contractor's established test procedures or programs or test procedures or programs identified in the Contract.

19. RISK OF LOSS: Risk of loss and responsibility and liability for loss or damage will remain with Contractor until acceptance, when responsibility will pass to the State with the exceptions of latent defects, fraud and Contractor's warranty obligations. Such loss, injury or destruction shall not release the Contractor from any obligation under the Contract.

20. INVOICING: ALL INVOICES are to be sent directly to the AGENCY TO WHICH THE PROPERTY IS PROVIDED, unless otherwise required by the Contract. The Contract number is to be shown on all invoices. Invoices must not be sent to the Division of Purchasing unless required by the Contract.

21. ASSIGNMENTS: Contractor shall not assign this contract, or its rights, obligations, or any other interest arising from the Contract, or delegate any of its performance obligations, without the express written consent of the University, which consent shall not unreasonably be withheld. Transfer without such approval shall cause the annulment of the Contract, at the option of the State. All rights of action, however, for any breach of the contract are reserved to the State. (Idaho Code Section 67-5726[1]).

Notwithstanding the foregoing, and to the extent required by applicable law (including Idaho Code Section 28-9-406), Contractor may assign its right to payment on an account provided that the State shall have no obligation to make payment to an assignee until thirty days after Contractor (not the assignee) has provided the responsible State procurement officer with (a) proof of the assignment, (b) the identity of the specific state contract to which the assignment applies, and (c) the name of the assignee and the exact address to which assigned payments should be made. The State may treat violation of this provision as an event of default.

22. PAYMENT PROCESSING: Idaho Code Section 67-5735 reads as follows: "Within ten (10) days after the property acquired is delivered as called for by the bid specifications, the acquiring agency shall complete all processing required of that agency to permit the contractor to be reimbursed according to the terms of the bid. Within ten (10) days of receipt of the document necessary to permit reimbursement of the contractor according to the terms of the contract, the State Controller shall cause a warrant to be issued in favor of the contractor and delivered." Payments shall be processed within the timeframes required by I.C. § 67-5735 unless otherwise specified in the Contract.

23. COMPLIANCE WITH LAW, LICENSING AND CERTIFICATIONS: Contractor shall comply with ALL requirements of federal, state and local laws and regulations applicable to Contractor or to the Property provided by Contractor pursuant to the Contract. For the duration of the Contract, the Contractor shall maintain in effect and have in its possession all licenses and certifications required by federal, state and local laws and rules.

24. PATENTS AND COPYRIGHT INDEMNITY:

A. Contractor shall indemnify and hold the State harmless and shall defend at its own expense any action brought against the State based upon a claim of infringement of a United States' patent, copyright, trade secret, or trademark for Property purchased under the Contract. Contractor will pay all damages and costs finally awarded and attributable to such claim, but such defense and payments are conditioned on the following: (i) that Contractor shall be notified promptly in writing by the State of any notice of such claim; (ii) that Contractor shall have the sole control of the defense of any action on such claim and all negotiations for its settlement or compromise and State may select at its own expense advisory counsel; and (iii) that the State shall cooperate with Contractor in a reasonable way to facilitate settlement or defense of any claim or suit.

B. Contractor shall have no liability to the State under any provision of this clause with respect to any claim of infringement that is based upon: (i) the combination or utilization of the Property with machines or devices not provided by the Contractor other than in accordance with Contractor's previously established specifications unless such combination or utilization was disclosed in the specifications; (ii) the modification of the Property unless such modification was disclosed in the specifications; or (iii) the use of the Property not in accordance with Contractor's previously established specifications unless such use was disclosed in the specifications.

C. Should the Property become, or in Contractor's opinion be likely to become, the subject of a claim of infringement of a United States' patent, the Contractor shall, at its option and expense, either procure for the State the right to continue using the Property, to replace or modify the Property so that it becomes non-infringing, or to grant the State a full refund for the purchase price of the Property and accept its return.

25. CONFIDENTIAL INFORMATION: Pursuant to the Contract, Contractor may collect, or the State may disclose to Contractor, financial, personnel or other information that the State regards as proprietary or confidential ("Confidential Information"). Such Confidential Information shall belong solely to the State. Contractor shall use such Confidential Information only in the performance of its services under the Contract and shall not disclose Confidential Information or any advice given by it to the State to any third party, except with the State's prior written consent or under a valid order of a court or governmental agency of competent jurisdiction and then only upon timely notice to the State. Confidential Information shall be returned to the State upon termination or expiration of the Contract.

Confidential Information shall not include data or information that:

A. Is or was in the possession of Contractor before being furnished by the State, provided that such information or other data is not known by Contractor to be subject to another confidentiality agreement with or other obligation of secrecy to the State;

B. Becomes generally available to the public other than as a result of disclosure by Contractor; or

C. Becomes available to Contractor on a non-confidential basis from a source other than the State, provided that such source is not known by Contractor to be subject to a confidentiality agreement with or other obligation of secrecy to the State.

26. USE OF THE STATE OF IDAHO NAME: Contractor shall not, prior to, in the course of, or after performance under the Contract, use the State's name in any advertising or promotional media, including press releases, as a customer or client of Contractor without the prior written consent of the State.

27. TERMINATION FOR FISCAL NECESSITY: The State is a government entity and it is understood and agreed that the State's payments under the Contract shall be paid from Idaho State Legislative appropriations, funds granted by the federal government, or both. The Legislature is under no legal obligation to make appropriations to fulfill the Contract. Additionally, the federal government is not legally obligated to provide funds to fulfill the Contract. The Contract shall in no way or manner be construed so as to bind or obligate the state of Idaho beyond the term of any particular appropriation of funds by the Idaho State Legislature, or beyond any federal funds granted to the State, as may exist from time to time. The State reserves the right to terminate the Contract in whole or in part (or any order placed under it) if, in its sole judgment, the Legislature of the state of Idaho fails, neglects, or refuses to appropriate sufficient funds as may be required for the State to continue such payments, or requires any return or "give-back" of funds required for the State to continue payments, or if the Executive Branch mandates any cuts or holdbacks in spending, or if funds are not budgeted or otherwise available (e.g. through repeal of enabling legislation), or if the State discontinues or makes a material alteration of the program under which funds were provided, or if federal grant funds are discontinued. The State shall not be required to transfer funds between accounts in the event that funds are reduced or unavailable. All affected future rights and liabilities of the parties shall thereupon cease within ten (10) calendar days after notice to the Contractor. Further, in the event that funds are no longer available to support the Contract, as described herein, the State shall not be liable for any penalty, expense, or liability, or for general, special, incidental, consequential or other damages resulting therefrom. In the event of early Contract termination under this section, the State will collect all Contractor-owned equipment and accessory items distributed under the Contract within thirty (30) calendar days of Contract termination. Items will be collected at a central (or regional) location(s) designated by the State. Contractor will be responsible for all costs associated with packaging and removing all Contractor-owned items from the State-designated location(s), which must be completed within thirty (30) calendar days of written notification from the State. If Contractor fails to remove its items within that time period, the State may charge Contractor for costs associated with storing the items; and may otherwise dispose of the items as allowed by applicable law. At Contractor's request, the State shall promptly provide supplemental documentation as to such Termination for Fiscal Necessity. Nothing in this section shall be construed as ability by the State to terminate for its convenience. In the event of a termination for fiscal necessity, the Contractor will be paid for all services provided prior to the effective date of the termination.

28. PUBLIC RECORDS:

A. Pursuant to Idaho Code Section 9-335, et seq., information or documents received by the State will be open to public inspection and copying unless the material is exempt from disclosure under applicable law. The person or entity submitting the material must clearly designate specific information within the document as "exempt," if claiming an exemption; and indicate the basis for such exemption (e.g. Trade Secret). The State will not accept the marking of an entire document as exempt; or a legend or statement on one page that all, or substantially all, of the document is exempt from disclosure.

B. Contractor shall indemnify and defend the State against all liability, claims, damages, losses, expenses, actions, attorney fees and suits whatsoever for honoring such a designation or for the Contractor's failure to designate specific information within the document as exempt. The Contractor's failure to designate as exempt any document or portion of a document that is released by the State shall constitute a complete waiver of any and all claims for damages caused by any such release. If the State receives a request for materials claimed exempt by the Contractor, the Contractor shall provide the legal defense for such claim.

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ATTACHMENT 1

29. NOTICES: Any notice which may be or is required to be given pursuant to the provisions of the Contract shall be in writing and shall be hand delivered, sent by facsimile, email, prepaid overnight courier or United States' mail as follows:

A. For notice to the State, the address, phone and facsimile number are: State of Idaho
Division of Purchasing
650 W State Street – Room B15
P.O. Box 83720 Boise, ID 83720-0075 208-327-7465 (phone) 208-327-7320 (fax)

Additionally, for notice to the State, the email address to use is the email address identified in the Contract, courtesy copied to purchasing@adm.idaho.gov.

B. For notice to the Contractor, the address, facsimile number or email address shall be that contained on the Contractor's Bid, Proposal or Quotation (including, for any Bid, Proposal or Quotation submitted electronically through IPRO, the address, facsimile number or email address in the profile under which the Contractor submitted its Bid, Proposal or Quotation). Notice shall be deemed delivered immediately upon personal service, facsimile transmission (with confirmation printout), email (with printout confirming sent) the day after deposit for overnight courier or forty-eight (48) hours after deposit in the United States' mail. Either party may change its address, facsimile number or email address by giving written notice of the change to the other party.

30. NON-WAIVER: The failure of any party, at any time, to enforce a provision of the Contract shall in no way constitute a waiver of that provision, nor in any way affect the validity of the Contract, any part hereof, or the right of such party thereafter to enforce each and every provision hereof.

31. ATTORNEY FEES: In the event suit is brought or an attorney is retained by any party to the Contract to enforce the terms of the Contract or to collect any moneys due hereunder, the prevailing party shall be entitled to recover reimbursement for reasonable attorney fees, court costs, costs of investigation and other related expenses incurred in connection therewith in addition to any other available remedies; however, the State's liability is limited to that which is identified in the Idaho Tort Claims Act, Idaho Code Section 6-9 et seq.

32. RESTRICTIONS ON AND WARRANTIES – ILLEGAL ALIENS: Contractor warrants that the Contract is subject to Executive Order 2009-10 http://gov.idaho.gov/mediacenter/execorders/eo09/eo_2009_10.html; it does not knowingly hire or engage any illegal aliens or persons not authorized to work in the United States; it takes steps to verify that it does not hire or engage any illegal aliens or persons not authorized to work in the United States; and that any knowing or negligent misrepresentation in this regard or any employment of persons not authorized to work in the United States constitutes a material breach and shall be cause for the imposition of monetary penalties up to five percent (5%) of the contract price, per violation, and/or termination of its contract.

33. FORCE MAJEURE: Neither party shall be liable or deemed to be in default for any Force Majeure delay in shipment or performance occasioned by unforeseeable causes beyond the control and without the fault or negligence of either party, including, but not restricted to, acts of God or the public enemy, fires, floods, epidemics, quarantine, restrictions, strikes, freight embargoes, or unusually severe weather, provided that in all cases the Contractor shall notify the State promptly in writing of any cause for delay and the State concurs that the delay was beyond the control and without the fault or negligence of the Contractor. The period for the performance shall be extended for a period equivalent to the period of the Force Majeure delay.

34. PRIORITY OF DOCUMENTS: The Contract consists of and precedence is established by the order of the following documents:

1. The State's Blanket Purchase Order, Statewide Blanket Purchase Order, Contract Purchase Order, Purchase Order, or Participating Addendum;
2. The Food Services Contract Agreement; and
3. The Solicitation; and
4. Contractor's Bid, Proposal or Quotation as accepted by the State.

The Solicitation and the Contractor's Bid, Proposal or Quotation accepted by the State are incorporated into the Contract by this reference. The parties intend to include all items necessary for the proper completion of the Contract's requirements.

The documents set forth above are complementary and what is required by one shall be binding as if required by all. However, in the case of any conflict or inconsistency arising under the documents, a lower numbered document shall supersede a higher numbered document to the extent necessary to resolve any such conflict or inconsistency. Provided, however, that in the event an issue is addressed in one of the above mentioned documents but is not addressed in another of such documents, no conflict or inconsistency shall be deemed to occur.

Where terms and conditions specified in the Contractor's Bid, Proposal or Quotation differ from the terms in the Solicitation, the terms and conditions in the Solicitation shall apply. Where terms and conditions specified in the Contractor's Bid, Proposal or Quotation supplement the terms and conditions in the Solicitation, the supplemental terms and conditions shall apply only if specifically accepted by the Division of Purchasing in writing.

35. ENTIRE AGREEMENT: The Contract is the entire agreement between the parties with respect to the subject matter hereof. Where terms and conditions specified in the Contractor's Bid, Proposal or Quotation differ from those specifically stated in the Contract, the terms and conditions of the Contract shall apply. In the event of any conflict between the State of Idaho Standard Contract Terms and Conditions and any Special Terms and Conditions in the Contract, the Special Terms and Conditions will govern. The Contract may not be released, discharged, changed or modified except by an instrument in writing signed by a duly authorized representative of each of the parties; however, Termination for Fiscal Necessity is excepted, and, the State may issue unilateral amendments to the Contract to make administrative changes when necessary.

36. GOVERNING LAW AND SEVERABILITY: The Contract shall be construed in accordance with and governed by the laws of the state of Idaho. Any action to enforce the provisions of the Contract shall be brought in State district court in Ada County, Boise, Idaho. In the event any term of the Contract is held to be invalid or unenforceable by a court of competent jurisdiction, the remaining terms of the Contract will remain in force.

EXHIBIT 3

Smallwares, china, silver, and glassware inventory

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CONSENT
FEBRUARY 18, 2016

BOISE STATE UNIVERSITY

SUBJECT

Facility Naming - Micron Center for Materials Research

REFERENCE

October 2015 Board approved planning and design phase of the center for materials research facility.

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies and Procedures, Section I.K

BACKGROUND/DISCUSSION

Since 2000, the Micron Technology Foundation and Micron Technology, Inc. have given more than \$68 million to Boise State University, primarily to support the establishment and growth of the College of Engineering programs. A breakdown of gifts follows:

2003	Micron gives \$2 million to start a Materials Science and Engineering bachelor's degree program
2006/2007	Micron Commitment of \$5 million to begin a PhD program in Electrical Engineering
2007/2011	Micron committed \$13 million to fund a new PhD program in Materials Science and Engineering

Additionally, the Micron Foundation and employee matching gifts have provided hundreds of thousands of dollars in scholarships to promote STEM education and science and engineering related programs.

In October 2015, the Micron Foundation made its largest gift ever committing \$25 million to support the construction of the Center for Materials Research. The project cost is approximately \$50 million and will be funded with the \$25 million gift from Micron, \$20 million in bonding authority by Boise State University, and an additional \$5 million in gifts.

Constructing the Center for Materials Research is another important step to elevating materials research at Boise State University to national prominence. The approximately 100,000 square-foot facility will provide four floors of research laboratories and associated support areas including offices, seminar rooms and common areas. The building will aid in recruitment and retention of top faculty members; enhance competition for federally-funded research center designation; enable an increase in the number of major awards won by materials science faculty and researchers; facilitate an increase in the number of joint appointments

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between materials science and other departments; and increase the number of graduating Ph.D. students each year.

Boise State University seeks Board approval to name the Center for Materials Research facility the Micron Center for Materials Research. The proposed name has been reviewed and approved by the University's Naming Committee.

IMPACT

Naming the Center for Materials Research facility the Micron Center for Materials Research will honor the Micron Foundation's vision and commitment to the sciences at Boise State University.

STAFF COMMENTS AND RECOMMENDATIONS

Board Policy I.K.1.b(ii) outlines the requirements by which a building, facility, or administrative unit may be named for other than a former employee of the system of higher education. These include consideration of the nature of the gift and its significance to the institution; the eminence of the individual whose name is proposed; and the individuals relationship to the institution.

Boise State University's request is in alignment with Board policy. Staff recommends approval.

BOARD ACTION

I move to approve Boise State University's request to name the new Center for Material Research Facility "Micron Center for Materials Research."

Moved by _____ Seconded by _____ Carried Yes _____ No _____

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BOISE STATE UNIVERSITY

SUBJECT

School Naming – Micron School of Materials Science and Engineering

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies and Procedures, Section I.K

BACKGROUND/DISCUSSION

Boise State University requests Board approval for the renaming of its new “School of Materials Science and Engineering” to be named the “Micron School of Materials Science and Engineering.”

This proposal to name the school “Micron School of Materials Science and Engineering” recognizes Micron’s long-term partnership with Boise State University, millions of dollars in gifts to the university programs, and their transformational role in the emergence and growth of Boise State University.

The Micron Technology Foundation and Micron Technology, Inc. have donated over \$68 million to Boise State University since 2000. These gifts were primarily to support the establishment and growth of College of Engineering programs. The College of Engineering is poised for national academic and research prominence due in large part to Micron’s investment in the Materials Science and Engineering bachelor’s and PhD programs, as well as the Electrical Engineering PhD.

A breakdown of gifts follows:

2003	Micron gives \$2 million to start a Materials Science and Engineering bachelor’s degree program
2006/2007	Micron committed \$5 million to begin a PhD program in Electrical Engineering
2007/2011	Micron committed \$13 million to fund a new PhD program in Materials Science and Engineering
2015	Micron Foundation commits \$25 million to support the construction of the Center for Materials Research

The Materials Science and Engineering program holds the highest enrollment in an engineering PhD program in the state. Many students that major in Chemistry, Physics, Biology, Computer Science, Mechanical Engineering, Civil Engineering, and Electrical and Computer Engineering are involved in materials research. Since Fall 2006, undergraduate enrollment has increased by 87% with graduate-level enrollment increasing by 221%.

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	<u>2006</u>	<u>2015</u>
BS in Materials Science and Engineering	60	112
MS and M.Engr. in Materials Science and Engineering	4	22
PhD in Materials Science and Engineering:	NA	34

IMPACT

The creation of the School of Materials Science and Engineering and the naming thereof as the "Micron School of Materials Science and Engineering" will honor the Micron Foundation's vision and commitment to the sciences at Boise State University. No new funding is required.

STAFF COMMENTS AND RECOMMENDATIONS

Board Policy I.K.1.b(ii) outlines the requirements by which a building, facility, or administrative unit may be named for other than a former employee of the system of higher education. These include consideration of the nature of the gift and its significance to the institution; the eminence of the individual whose name is proposed; and the individual's relationship to the institution.

Boise State University's request is in alignment with Board policy. Staff recommends approval.

BOARD ACTION

I move to approve Boise State University's request for the naming of the new School of Materials Science and Engineering to be named the "Micron School of Materials Science and Engineering."

Moved by _____ Seconded by _____ Carried Yes _____ No _____

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SUBJECT

President Approved Alcohol Permits Report

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies and Procedures, I.J.2.b.

BACKGROUND/DISCUSSION

The chief executive officer of each institution may waive the prohibition against possession or consumption of alcoholic beverages only as permitted by, and in compliance with, Board policy. Immediately upon issuance of an Alcohol Beverage Permit, a complete copy of the application and the permit shall be delivered to the Office of the State Board of Education, and Board staff shall disclose the issuance of the permit to the Board no later than the next Board meeting.

The last update presented to the Board was at the December 2015 Board meeting. Since that meeting, Board staff has received twenty-four (24) permits from Boise State University, six (6) permits from Idaho State University, and six (6) permits from the University of Idaho.

Board staff has prepared a brief listing of the permits issued for use. The list is attached for the Board's review.

ATTACHMENTS

Attachment 1 - List of Approved Permits by Institution

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BOARD ACTION

This item is for informational purposes only. Any action will be at the Board's discretion.

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**APPROVED ALCOHOL SERVICE AT
BOISE STATE UNIVERSITY
December 2015 – February 2016**

EVENT	LOCATION	Institution Sponsor	Outside Sponsor	DATE (S)
Boise Valley Economic Partnership Annual Member Reception	Stueckle Sky Center		X	12/07/15
Servepro Holiday Party	Stueckle Sky Center		X	12/11/15
Intermountain Albertsons Division Christmas Party	Stueckle Sky Center		X	12/17/15
Minert & Associates Holiday Party	Stueckle Sky Center		X	12/19/15
Cradlepoint Company Dinner	Stueckle Sky Center		X	01/06/16
Coaches Club Reception	Gene Bleymaier Football Complex		X	01/07/16
McAlvain Holiday Party	Cavin Williams Complex		X	01/09/16
Lewis Wedding	Stueckle Sky Center		X	01/16/16
Frank & Bethine Church Award for Public Service	Stueckle Sky Center		X	01/18/16
Shen Yun – Dance	Morrison Center		X	01/19/16 – 01/20/16
Western Power Sports Dinner	Stueckle Sky Center		X	01/22/16
Idaho Dance Theater Performance	Student Union Building		X	01/22/16 – 01/23/16
Philharmonic Concert	Morrison Center		X	01/23/16
Working with Alumni – President's Club	Visual Art Center – Hemingway Gallery		X	01/27/16
The Price is Right – Live Gameshow	Morrison Center		X	01/27/16
Executive MBA Open House	College of Business and Economics		X	01/28/16
Ferguson Wellman Investment Outlook	Stueckle Sky Center		X	01/28/16
Hal Holbrook as Mark Twain	Morrison Center		X	01/30/16
YMCA Annual Campaign Kickoff	Student Union Building		X	02/02/16
Washington Trust Bank Customer Appreciation	Stueckle Sky Center		X	02/04/16
Be Inspired Dinner for Breast Cancer	Stueckle Sky Center		X	02/18/16

**CONSENT
FEBRUARY 18, 2016**

EVENT	LOCATION	Institution Sponsor	Outside Sponsor	DATE (S)
Roeloffs Wedding	Stueckle Sky Center		X	02/20/16
Murphy Wedding	Stueckle Sky Center		X	02/21/16
Fidelity Investments Event	Stueckle Sky Center		X	02/25/16

**CONSENT
FEBRUARY 18, 2016**

**APPROVED ALCOHOL SERVICE AT
IDAHO STATE UNIVERSITY
December 2015 – February 2016**

EVENT	LOCATION	Institution Sponsor	Outside Sponsor	DATE (S)
ISUCU Holiday Party	Stephens Performing Arts Center	X		12/05/15
A Very Geeky Xmas	Idaho Museum of Natural History	X		12/11/15
New Year's Eve Gala	Stephens Performing Arts Center	X		12/31/15
Cards Against Humanity Game Night	Idaho Museum of Natural History	X		01/15/16
PMC Winterfest	Stephens Performing Arts Center	X		01/22/16
Kirkpatrick Award Reception	Holt Arena	X		02/11/16

**CONSENT
FEBRUARY 18, 2016**

**APPROVED ALCOHOL SERVICE AT
UNIVERSITY OF IDAHO
December 2015 – May 2016**

EVENT	LOCATION	Institution Sponsor	Outside Sponsor	DATE (S)
College of Education Holiday Party	Brink Hall Faculty Staff Lounge	X		12/08/15
Faculty Gathering/VIP Event	Bruce Pitman Center	X		12/14/15 – 02/12/16
Farewell Reception: Dr. John C. Foltz	Bruce Pitman Center	X		01/15/16
University Advancement Retreat	Kibbie Dome Litehouse Center	X		02/09/16
Kappa Kappa Gamma Centennial Celebration	Bruce Pitman Center	X		04/02/16
Geological Society of America Rocky Mtn. Section Meeting	Bruce Pitman Center	X		05/19/16

**PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
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TAB	DESCRIPTION	ACTION
1	BOISE STATE UNIVERSITY – ANNUAL REPORT	Information Item
2	PRESIDENTS’ COUNCIL REPORT	Information Item
3	IDAHO PUBLIC CHARTER SCHOOL COMMISSION – ANNUAL REPORT	Information Item
4	IDAHO DIGITAL LEARNING ACADEMY – ANNUAL REPORT	Information Item
5	IDAHO EDUCATIONAL SERVICES FOR THE DEAF AND THE BLIND – ANNUAL REPORT	Information Item
6	IDAHO STATE HISTORICAL SOCIETY - MUSEUM UPDATE	Information Item
7	EVERY STUDENT SUCCEEDS ACT (ESSA) OVERVIEW	Information Item
8	ACCOUNTABILITY OVERSIGHT COMMITTEE STATEWIDE ACCOUNTABILITY SYSTEM RECOMMENDATIONS	Information Item
9	2016 LEGISLATIVE UPDATE	Information Item
10	IDAHO STATE UNIVERSITY MISSION AND CORE THEMES	Motion to Approve
11	BOARD POLICY I.E. – SECOND READING	Motion to Approve

**PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
FEBRUARY 18, 2016**

12	BOARD POLICY I.Q. – SECOND READING	Motion to Approve
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13	TEMPORARY RULE – IDAPA 08.01.14 – PAY FOR SUCCESS CONTRACTING	Motion to Approve
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**PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
FEBRUARY 18, 2016**

BOISE STATE UNIVERSITY

SUBJECT

Boise State University Annual Report

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section I.M.3.

BACKGROUND/DISCUSSION

This agenda item fulfills the Board's requirement for Boise State University to provide a progress report on the institution's strategic plan, details of implementation, status of goals and objectives and information on other points of interest in accordance with a schedule and format established by the Board's Executive Director.

IMPACT

Boise State University's strategic plan drives the University's planning, programming, budgeting and assessment cycles and is the basis for the institution's annual budget requests and performance measure reports.

ATTACHMENTS

Attachment 1 – Summary Annual Statistics

Page 3

BOARD ACTION

This item is for informational purposes only. Any action will be at the Board's discretion.

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Boise State University Progress Report
February 2016

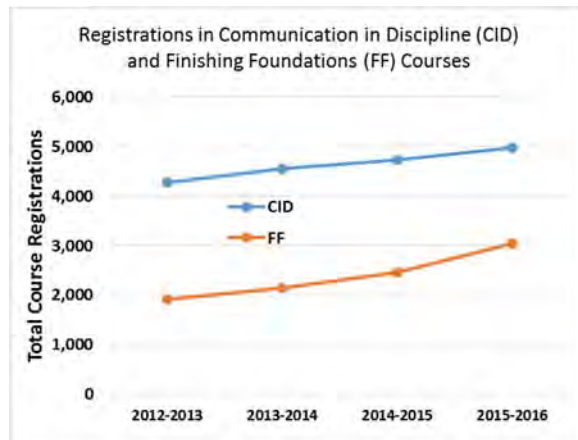
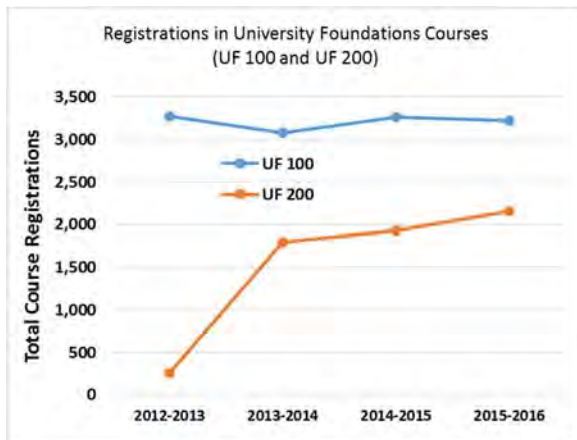
Strategic Plan Implementation

The goals and strategies of our strategic plan, *Focus on Effectiveness 2012-2017*, provide the blueprint by which we are deliberately and methodically attaining our vision to become a Metropolitan Research University of Distinction. We have made substantial progress in a number of areas.

Goal #1: “Create a signature, high-quality educational experience for all students.”

In Fall, 2012, Boise State began implementation of our Foundational Studies Program. The program is a complete restructuring of the way we deliver general education that provides a connected, multidisciplinary framework of learning from freshman to senior years. Courses incorporate teamwork and extend the educational experience beyond the classroom to include such areas as international studies, service-learning, internships, and participation in student government.

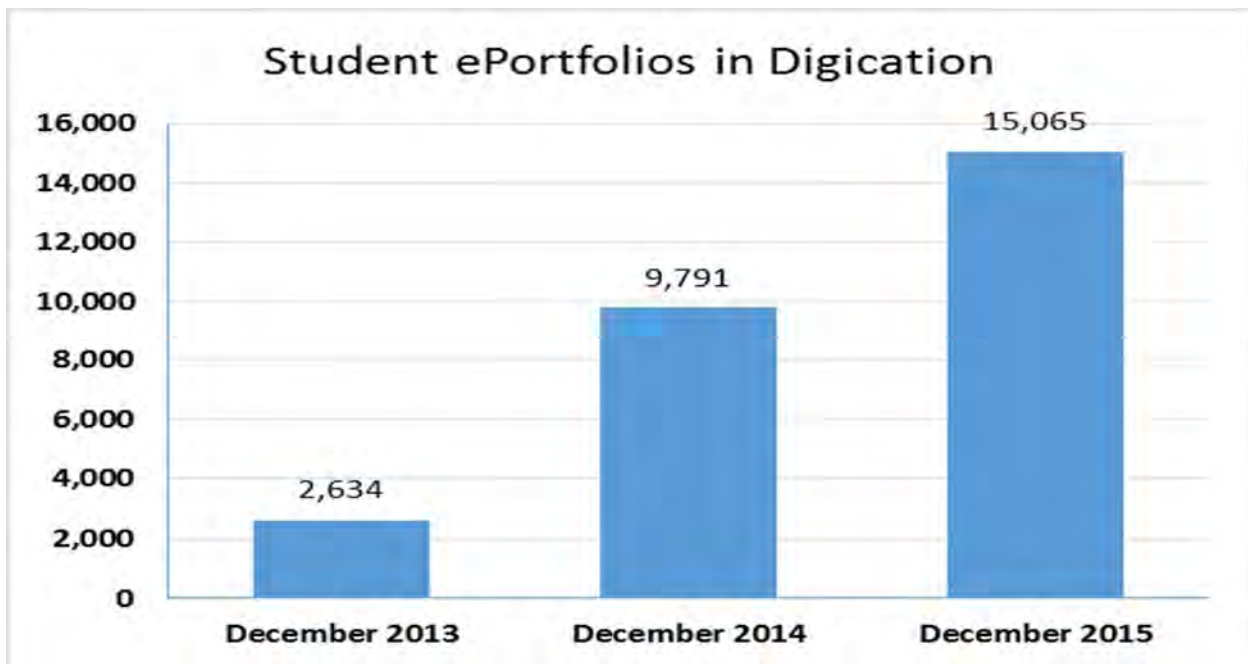
May, 2016 will mark four years since implementation began, and graduating this May will be the first cohort of students who entered as freshmen and will graduate after four years with our Foundational Studies Program. The following graphs give an idea of the magnitude of the number of students being educated under the new program. UF 100 and UF 200 courses are university-wide courses that are taken typically in the freshman and sophomore years, respectively. Communication in the Discipline and Finishing Foundations courses are embedded in the major curriculum and are designed to reinforce University Learning Outcomes later in a student’s career.



The Foundational Studies Program is organized around eleven University Learning Objectives (ULOs) that every Boise State graduate will be expected to have met, regardless of major. Importantly, the ULOs align well with the types of skills and knowledge sought by employers: written and oral communication, problem solving, critical thinking, teamwork, and ethics.

PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
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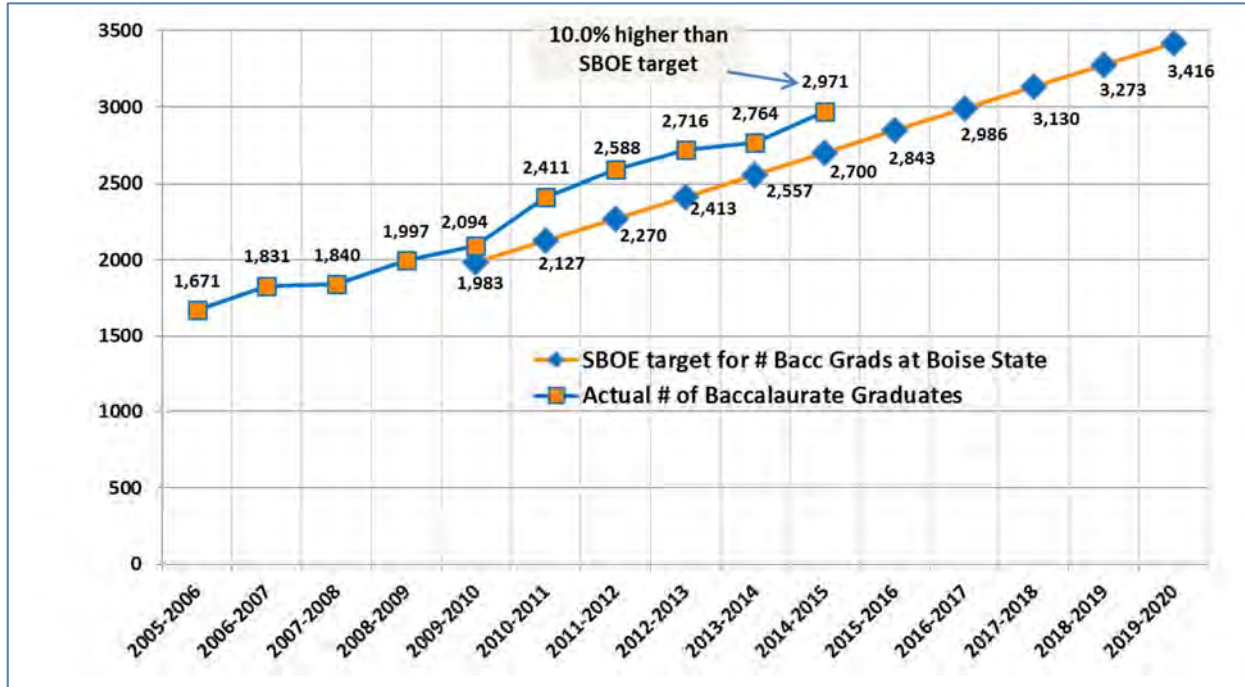
The ULOs also provide a framework of uniform assessment categories for departments and degree programs. Boise State has established “Digication” software as the ePortfolio platform that is being used to document and evaluate the achievement of the ULOs and to facilitate student learning via the reflection process inherent in ePortfolio development. Assessment of ULOs will include the collection of data, analysis of data, review of findings, and integration of faculty development to address those findings. Our assessment plan relies on regular, comprehensive collection (via Digication) of evidence of student learning for evaluation, reflection, and ultimately, improvement in student learning based on actions identified through the assessment process. By using ePortfolios to ensure effectiveness of the Foundational Studies Program, we are demonstrating accountability for the resources we invest in the program. As can be seen in the accompanying figure, use of ePortfolios by students has increased by nearly six-fold in just two years.



Goal #2: “Facilitate the timely attainment of educational goals of our diverse student population.”

Our work on this goal is directly aligned with the Complete College Idaho plan and with meeting the targets for numbers of graduates given each institution at the August, 2010, meeting of the SBOE. As can be seen by the following figure, the number of baccalaureate graduates produced by Boise State University in 2014-15 was 10% higher than the 2014-15 target given to Boise State by the SBOE.

PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
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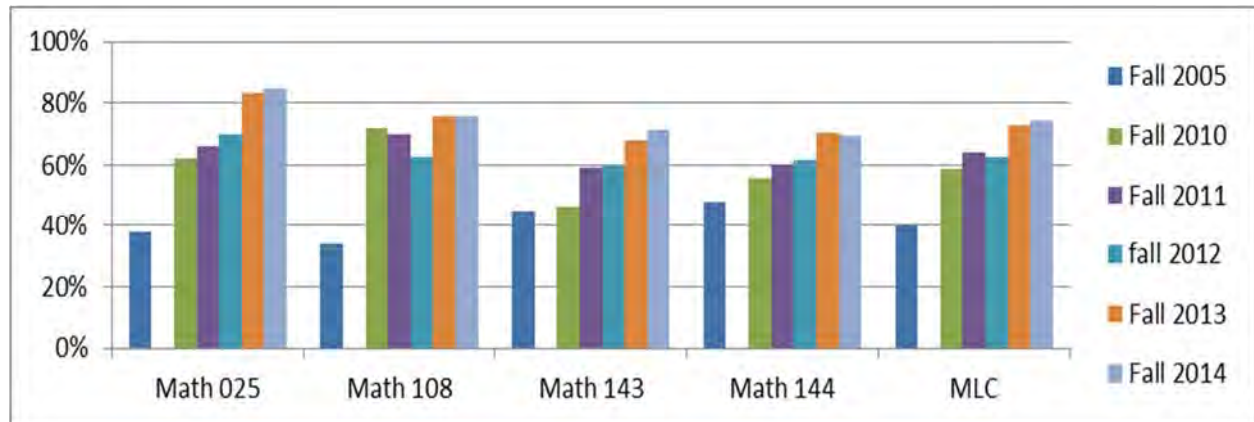


Boise State University produces more baccalaureate graduates than any other Idaho public institution: in 2014-15, more than 46% graduated from Boise State. We have been able to increase the number of baccalaureate graduates while maintaining a relatively steady enrollment by taking a number of actions that have increased the successful progression of our students. That success is reflected in (i) increased retention during the first year, which increased from 60% for the Fall 2004 cohort to 76% for the Fall 2014 cohort, and (ii) increased 6-year graduation rate, which increased from 24% for the Fall 2002 cohort to 38% for the Fall 2009 cohort.

PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
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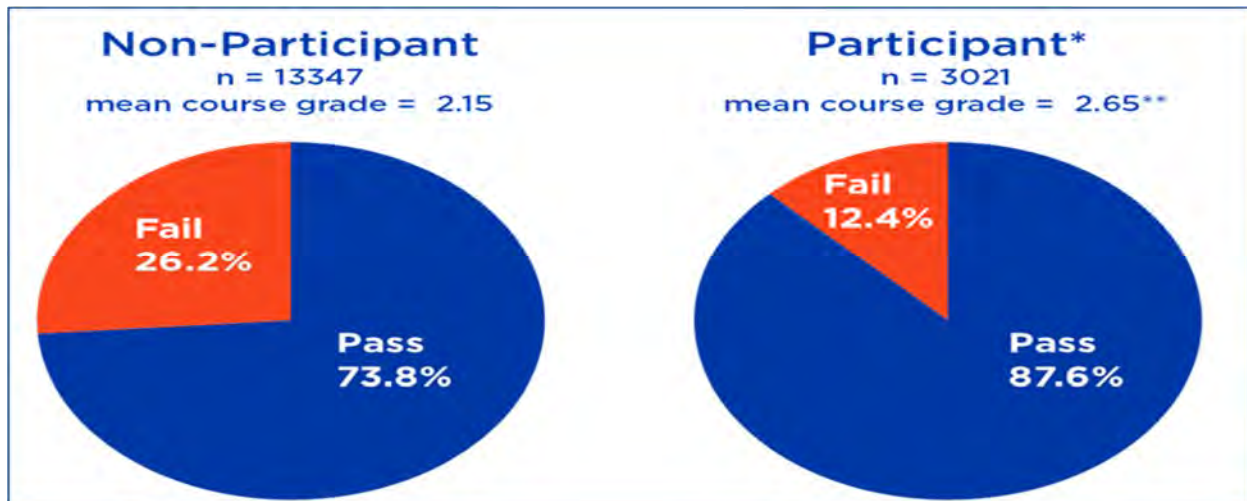
Much of our effort has been focused on increasing the success of Freshman and Sophomore students. The following are a selection of the initiatives we are pursuing:

- The Math Learning Center redesigned remedial math by blending online learning modules with face-to-face instructions, whereby students “learn math by doing math” within an encouraging environment. Pass rates, since implementation, have increased consistently in a range of math courses as can be seen in the following figure.

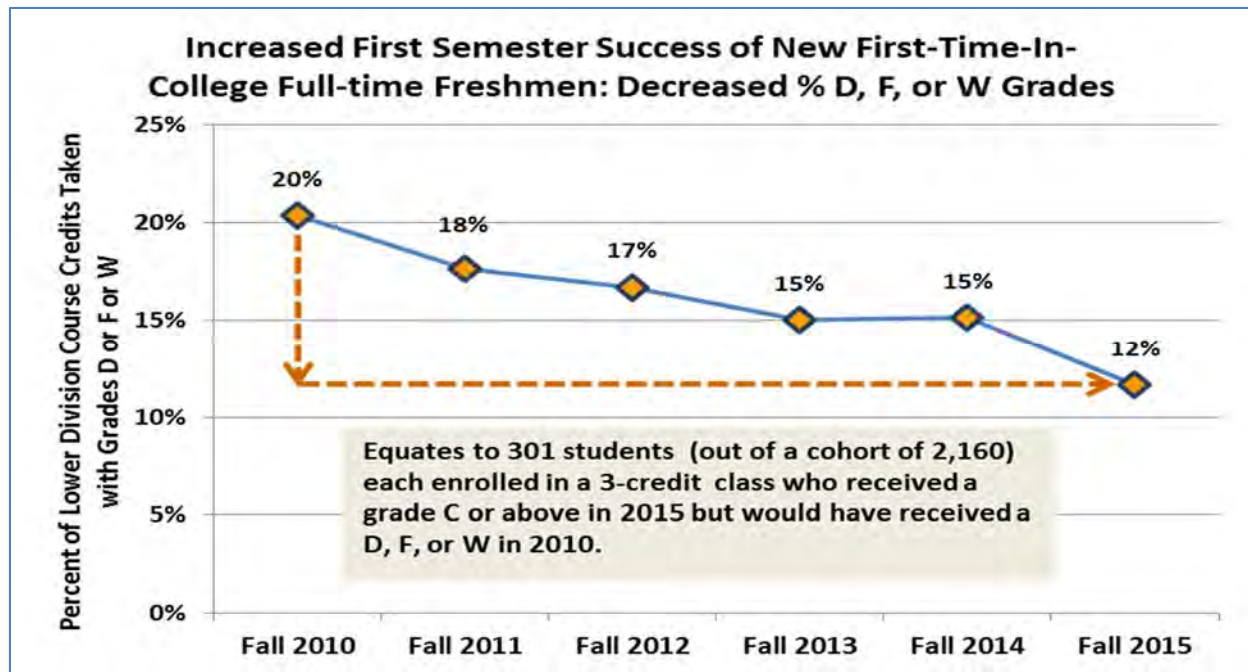


- We redesigned our English course placement and remediation. The new placement process is designed to ensure that students are in the course level in which they can be successful. Using the new placement process for the Fall 2013 student cohort, successful completion of first-year writing courses increased 5% compared to the Fall 2012 cohort. Students needing English remediation who completed a newly created co-requisite 4-credit version of English 101 (known as English 101+) were also retained at higher rate than students who did not require remediation and took the English 101 component alone.
- We expanded our use of Learning Assistants program, which provides peer leaders to support students and faculty inside and outside the classroom. Learning assistants support active learning during class and build mentoring relationships with students outside of class through four hours per week of facilitated study sessions. Peer support is coupled with a faculty coordinator working to align and improve curriculum across sections. The figure shows that participants had significantly higher pass rates in the classes in which they received assistance.

PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
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The overall impact of these and other initiatives can be seen in the following graph, which shows that we have been highly successful at increasing the success of our freshman students in their coursework. The graph shows an analysis of the success of incoming freshmen in their first semester at Boise State. This graph considers students who receive a grade of D or F or W (which constitutes a withdrawal from class) as being unsuccessful. As you can see, the percentage of credits for which a D/F/or W was received by those students has gone down substantially over the last five years: from 20% to 12%. If examined in terms of our Fall 2015 cohort of 2,160 freshmen, this increase in success equates to 301 of those students each in a three-credit class and each receiving a grade of C or better. Our research shows that one of the most important contributors to the retention of freshmen is their success in their first classes. Therefore, a big increase in success in courses will translate to a big increase in retention.



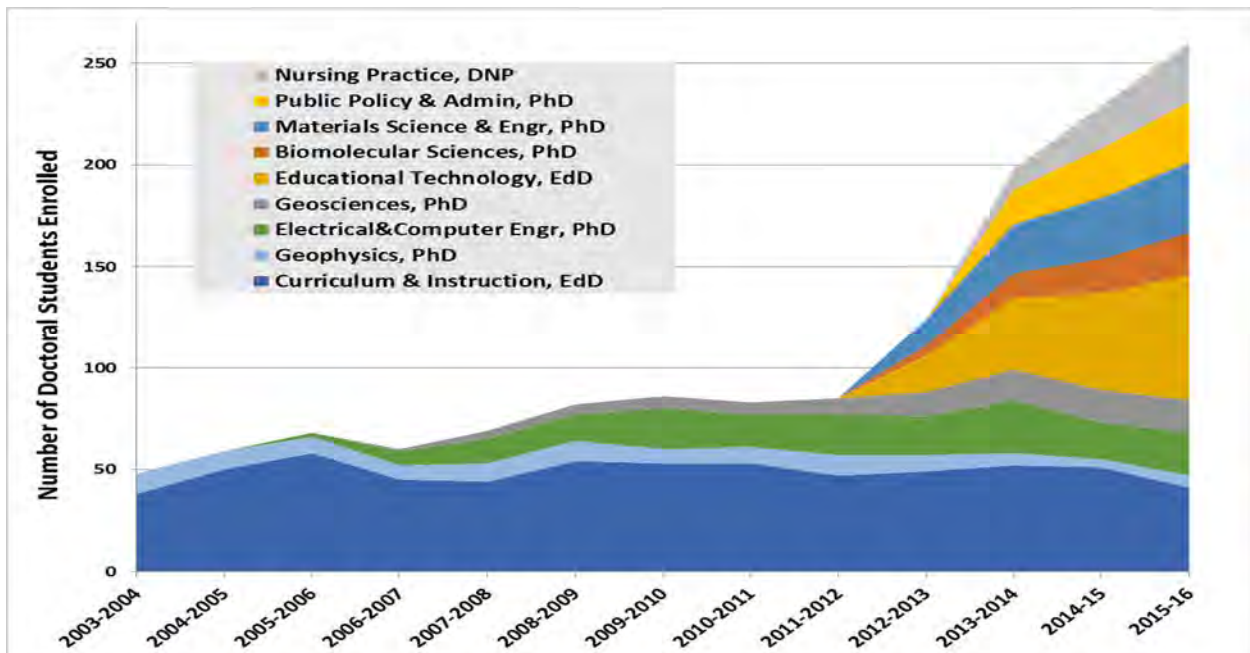
PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
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Goal #3 is “Gain distinction as a doctoral research university.”

The Carnegie Foundation recently announced the 2015 classifications of institutions of higher education, and Boise State now has a Basic Classification of “Doctoral University.” The new classification was a result of remarkable accomplishments depicted in the key parameters used in the classification process: number of doctoral graduates, amount of research expenditures, and number of research personnel. As is shown in the following table, all three of those parameters more than doubled between the 2008-09 academic year (on which the previous classification of “Master’s University” was based) and the 2013-14 academic year, on which the new classification is based.

	2008-09	2013-14	Percent change
Indicators Used In Assigning Basic Classification			
>Number of PhD and EdD graduates	9	34	278% increase
>Research and Development expenditures as reported to the National Science Foundation	\$12,305,000	\$26,567,923	116% increase
>Number of postdoctoral and non-faculty doctorate-holding research personnel	5	32	540% increase

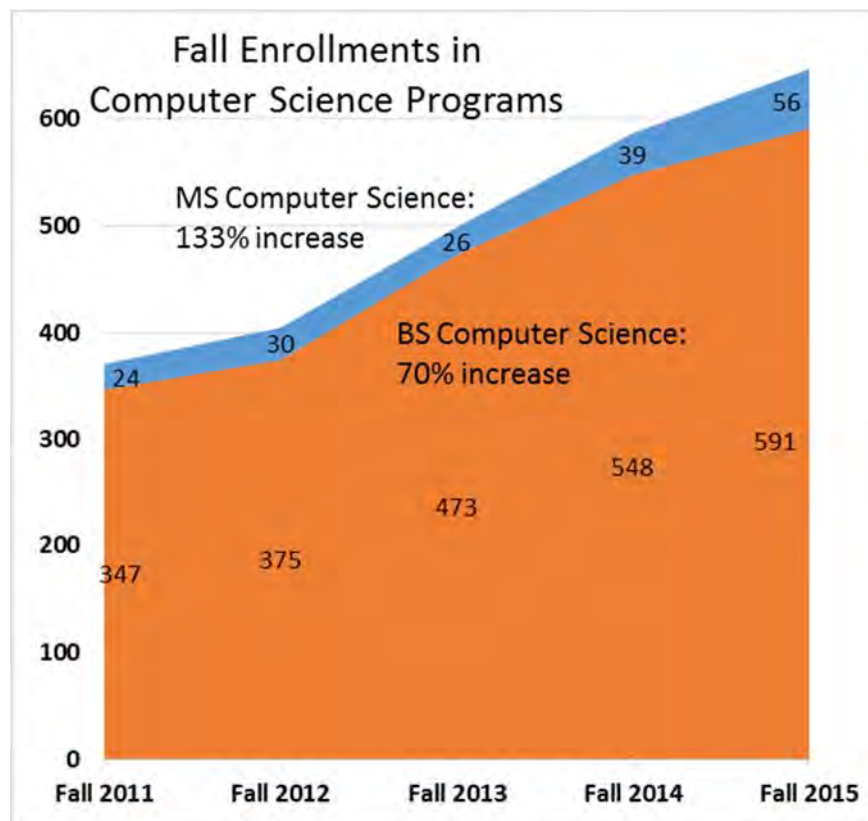
At the core of Boise State’s emergence as a doctoral research university is the creation of successful doctoral programs. Over the last decade, Boise State has initiated seven new doctoral programs: PhDs in Geosciences, Electrical and Computer Engineering, Materials Science and Engineering, Biomolecular Sciences, and Public Policy and Administration; an EdD in Educational Technology; and a Doctor of Nursing Practice. Now in development are a PhD in Ecology, Evolution, and Behavior and a PhD in Computing. The following figure shows the growth in the number of doctoral programs and in the number of students enrolled in those programs.



Goal #4 is “Align university programs and activities with community needs.”

Boise State is among 361 U.S. colleges and universities that have been recognized with The Carnegie Foundation 2015 Community Engagement Classification. Boise State was one of only 76 universities in the country to be classified as a Carnegie Foundation Community Engaged Institution when the designation was first established in 2006. A few examples of the types of partnerships in which faculty and staff are involved include the re-design of a camp for Idaho children diagnosed with cancer, programs that encourage the exploration of math and science, an office that supports the advancement of innovation and entrepreneurship throughout the campus and the community, and linguistics students and faculty working with members of the Boise refugee community to provide language documentation (thus far projects have produced documentation in the Chizigula, Maay and KiBembe languages).

Computer science has been the focus of considerable investment by the state, by the university, and by industry. Boise State’s Computer Science Department is moving to a downtown location to be close to industry partners. The department has partnered with the industry on Hackfort and in many other community efforts aimed at boosting the industry in Idaho. These efforts have paid off: the number of students enrolled in the department’s program has grown dramatically.



Boise State has undertaken several efforts to help ensure that our graduates are well-prepared for the workplace. Make College Count is a program developed by The Career Center so that students have every opportunity to understand why they are in college, what skills and experiences employers say are critical to employability, and how to gain these skills and experiences and make the most of their college experience. Bridge to Career is a multifaceted effort. The College of Business and Economics created a certificate and a minor that focus on providing key business skills to students who are not business majors. The College of Innovation and Design developed a variety of credit and non-credit courses that provide project-driven face-to-face learning coached by leading experts.

Goal #5 is “*Transform our operations to serve the contemporary mission of the university.*”

Boise State and Oracle have teamed up to implement Oracle Financials Cloud at Boise State, which will produce the following benefits:

- Automate and transform business processes (including financial management and billing, procurement, grant management, project management and reporting) to drive greater operational efficiency and organizational effectiveness
- Empower staff with information and critical insight when and where they need it
- Reduce IT complexity and boost IT agility to meet rapidly changing needs
- Improve total cost of IT ownership while ensuring scalability
- Eliminate the initial and ongoing costs of purchasing, building out and modernizing hardware infrastructure, which will reduce our data center footprint and IT burden while delivering a robust, flexible, and reliable financials system.

Boise State will work with Oracle Consulting on the implementation, which also will look to drive new levels of precision and transparency to grants management, a capability that is increasingly important as the university expands our research and graduate programs.

Boise State is in the early stages of developing and implementing an entirely new budget model: BroncoBudget 2.0. The model will be similar to models at other universities that go by the names of Responsibility-Centered Management, Incentive-Based Budgeting, and Activity-based Budgeting. Key to the new model is that the resources that are provided to academic units are tied to the productivity and outcomes of those units. The model will facilitate entrepreneurship in colleges, alignment with university mission and strategic goals, improvement of quality, increased relevance, and increased access to programs that are over capacity.

This fall, we restructured some reporting lines to increase efficiency and effectiveness in a number of areas. Specifically, we shifted oversight from Student Affairs for campus service operations (Student Union, Conference Services, Bookstore, Broncoshops, and Campus Dining) to the umbrella of Campus Operations. Having these business functions reside under the same reporting line as transportation & parking and facilities operations & maintenance will create opportunities for efficiency

PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
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and improved patron relations. This move aligns well with our program prioritization efforts, which are still playing out across our campus. And while partnerships with Student Affairs in these areas will continue, this move will free up our Student Affairs division to focus on the increasingly important areas of enrollment and student services.

The successful transition of University Health Services from a business unit to a hybrid business/academic unit under the College of Health Sciences provides us a model that we followed with the transition of the Children's Center to the College of Education. This new arrangement will allow for continued services to our faculty, staff and students with childcare and educational needs, but will now also provide an opportunity for our students in the College of Education to get hands-on experience and applied knowledge in a lab school environment.

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Budget

Revenue and Expenditures for FY 2015; From Audited Financial Statement	
Operating Revenue	FY 2015
Student tuition and fees (Gross)	142,445,827
Scholarship discounts and allowances	(24,597,200)
Federal grants and contracts	25,987,687
State and local grants and contracts	3,344,399
Private grants and contracts	4,071,040
Sales and services of educational activities	3,729,493
Sales and services of auxiliary enterprises	61,836,973
Other	2,374,609
Total operating revenues	219,192,828
Operating Expenses	
Instruction	109,933,975
Research	21,222,821
Public Service	15,361,949
Libraries	5,370,746
Student Services	17,242,116
Operation & Maintenance of plant	21,027,199
Institutional Support	25,906,877
Academic Support	21,514,093
Auxiliary Enterprises	64,985,479
Scholarships and Fellowships	12,798,914
Depreciation	25,658,622
Total operating expenses	341,022,792
Operating income/(loss)	(121,829,964)
Non-operating revenues/(expenses):	
State appropriation - general	84,740,497
State appropriation - maintenance	2,418,576
Pell grants	26,175,741
Gifts	21,435,600
Net investment income	396,947
Change in fair value of investments	(28,161)
Interest	(9,544,339)
Gain/loss on retirement of assets	(1,008,377)
Other non-operating revenue/(expense)	95,757
Net non-operating revenues/(expenses)	124,693,241
Other revenue and expenses:	
Capital appropriations	2,275,920
Capital gifts and grants	4,814,788
Total other revenues and expenses	7,090,708
Increase in net position	(5,548,042)
Net position - beginning of year	385,326,898
Net position - end of year	379,778,856

**PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
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Enrollment Fall 2015

Enrollment Fall 2015 (October 15 census)	Headcount
Undergraduate Degree-seeking	15,953
Graduate Degree-seeking	2,426
Early college	2,894
Other non-degree seeking (undergraduate and graduate combined)	813
TOTAL	22,086

2014-2015 Graduates

Degree and graduate certificate graduates	Distinct number of Graduates
Baccalaureate Degree (Academic)	2,971
Graduate Certificate	226
Master's Degree	703
Doctoral Degree	14

Employees

Employees (from 2015 IPEDS Human Resources Report [based on Nov 2014 snapshot])	Full-time	Part-time	FTE	%
Instructional Faculty	678	524	853	37.0%
Professional Staff (all)	917	53	935	40.5
Classified Staff	504	42	518	22.5
TOTAL				100%

PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
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Research and Economic Development

	FY2011	FY2012	FY2013	FY2014	FY2015
	<i>Office of Technology Transfer</i>				
Invention Disclosures	23	25	24	16	15
Patent Applications Filed	8	18	16	9	11
Patents Issued	7	2	7	6	3
Licenses/Options/Letters of Intent	12	15	22	27	38
License Revenue	\$500	\$34,471	\$37,582	\$5,600	\$21,475
Startups	0	0	1	0	0
FTEs	1	2	2	2	1
Number of protocols reviewed by:	<i>Office of Research Compliance</i>				
Institutional Biosafety Committee	16	29	45	36	42
Institutional Animal Care and Use Committee	42	52	50	72	95
Social and Behavioral Institutional Review Board	280	300	319	296	312
Medical Institutional Review Board	62	38	23	18	17
	<i>Office of Sponsored Programs</i>				
Total # of Proposals Submitted	368	340	361	435	561
Total # of Awards	257	299	233	290	304
Total Federal Appropriation (Earmark) Funding	\$732,088	0	0	discontinued	discontinued
Total Recovery/Stimulus Funding	\$4,480,370	\$907,438	0	discontinued	discontinued
Remainder of Sponsored Projects Funding	\$30,762,184	\$35,120,876	\$31,367,273	\$32,008,716	\$40,167,055
Total Sponsored Projects Funding	\$35,974,642	\$36,028,314	\$31,367,273	\$32,008,716	\$40,167,055
Total Research and Development Expenditures as reported to NSF	\$24.2M	\$27.9M	\$25.7M	\$26.6M	Not available at this time
Externally Funded Research Expenditures	\$20.3M	\$21.8M	\$17.8M	\$17.3M	\$20.6M

Other University Updates

Boise State student Kelly Schutt won one of the world's most competitive scholarships this year for his work researching solar energy in our department of materials science and engineering. He joins just 31 other students this year — hailing from schools such as Yale, Harvard, Princeton and Johns Hopkins. The Marshall scholarship, statistically speaking, is harder to get than a Rhodes scholarship, they say.

Idaho's Professor of the Year, as named by the Carnegie Foundation for Teaching, is Boise State's own chemistry professor, Susan Shadle. Susan doesn't just do eye-catching teaching in her own classroom. She is the campus leader in improving teaching methods and helping faculty at all levels use technology and the latest research in making sure our students succeed through the Center for Teaching and Learning. Even with this additional assignment, she doesn't shy away from what many view as the hardest job on campus — teaching introductory and often very large chemistry classes. Her methods create small groups to explore and understand the subjects that otherwise get lost in large classroom settings.

At a time many universities are re-entrenching and losing students and relevance, Boise State launched two future-driven efforts: The College of Innovation and Design and the School of Public Service. Along with Idaho-based research projects, our new Dean Corey Cook's goal is for the school to be a valuable resource and partner in shaping Idaho's future. Meanwhile, the Stanford-trained former head of the Harvard Innovation Lab, Gordon Jones, is leading groundbreaking efforts at the College of Innovation and Design to best prepare Boise State graduates for the modern workplace, to redefine our partnerships with business and innovation leaders, and to help shape what the university of the future should look like.

One of the new College's programs is already moving the needle on what new technologies can do. Students and faculty in our Gaming, Interactive Media and Mobile Technology program — which combines, art and computer science and psychology and other disparate fields — are working with our nursing school to use virtual reality to introduce and train students on new techniques that previously had to be practiced in expensive simulation labs. Before these students were out of their first year in the program, it had won a western award for innovation for finding affordable ways to produce more competent health care workers.

This new degree prepares students to produce and manage hardware and software across all of the platforms we use daily — tablets, smart phones, websites, etc. They are also prepared to build virtual learning environments and new machines to enhance the user experience. The degree was developed to serve the needs of local industry, and has grown to 63 students enrolled in only its second semester. When they graduate, these students will find jobs as mobile, game and web developers, and in the health care industry, which is increasingly relying on automated systems and virtual

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environments. Local companies that have endorsed this major as very relevant to their needs include Pulse Robotics, Unity Technology, and HDR to name just a few.

Collaborations

Boise State was pleased to announce a \$25 million gift from the Micron Foundation that will have a transformational impact on the field of engineering and materials research. The largest gift in the university's history will fund the establishment of a new Center for Materials Research, operated by the College of Engineering.

The Center for Materials Research will allow Boise State to better answer industry's call for a more broadly based, technically fluent workforce. Students earning a degree in materials science and engineering emerge as important contributors across many scientific disciplines, including manufacturing technology, new materials, cancer research, energy studies, space and aeronautics, and the development of new sensors. The program has quickly matured into an effective partner with Idaho companies, including:

- Idaho National Laboratory (hired one of our first graduates!)
- Micron
- HP
- DuPont
- Plexus
- American Semiconductor (Boise)
- Premier Technology (SE Idaho)
- Quality Thermistor (Boise)
- PKG (Meridian)
- NxEdge (Boise)
- Fiberguide (Caldwell)
- Western Electronics (Meridian)

We began another partnership that will pay longterm, dividends for the students at Boise State. And that is with eastern Idaho native philanthropist Greg Carr, and the Gorongosa National Park in Mozambique, Africa that he is helping to restore. This agreement provides our students and faculty from all areas — biology, ecology, political science and many more disciplines — access to this unique ecological "laboratory" for research, learning opportunities and more.

Capital Campaign

Boise State is not currently in a capital campaign, but is in the midst of a scholarship campaign. The campaign, "Extraordinary Times, Extraordinary Measures" began in January 2013 and continues until June 2017. Our initial goal was set at \$25 million. We have raised \$22,098,384 as of December 31, 2015.

New Buildings

A new building project on our campus reflects the commitment Boise State is making to the highest academic quality and will accommodate the fast-growing number of academically accomplished and talented students in the university's Honors College. Nearly 600 students are now enrolled in Honors, which provides challenging and engaging discussions and coursework on top of each student's individual majors — and they do come from all over. At Honors, it isn't unusual for students from computer science, creative writing, philosophy, engineering and health sciences to come together in their core classes, share perspectives, and challenge each other's thinking. This project is not only a first for Boise State, but a first for public higher education in Idaho, in that it is the result of a unique partnership with a private company that will front all of the costs of construction — a necessity in our changing landscape and one that will ensure that Boise State can continue to provide a cutting-edge higher education experience without breaking the bank of the state or our students.

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**PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
FEBRUARY 18, 2016**

PRESIDENTS' COUNCIL

SUBJECT

Presidents' Council Report for January 5, 2016 meetings.

BACKGROUND/DISCUSSION

President Tony Fernández, Lewis-Clark State College President and current chair of the Presidents' Council, will give a report on the Presidents' Council meetings held on January 5, 2016.

Governor Otter joined the group to discuss the education initiatives that will be recommended to the legislature during the 2016 legislative session.

BOARD ACTION

This item is for informational purposes only. Any action will be at the Board's discretion.

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PLANNING, POLICY & GOVERNMENTAL AFFAIRS
FEBRUARY 18, 2016

SUBJECT

Idaho Public Charter School Commission Update

APPLICABLE STATUTE, RULE, OR POLICY

Section 33-5213, Idaho Code

BACKGROUND/DISCUSSION

Section 33-5213, Idaho Code, creates the Public Charter School Commission (Commission), and locates it in the Office of the State Board of Education. The Board's Executive Director or designee is responsible with the enforcement of Chapter 52, Title 33 (Public Charter Schools) as well as serving as the Secretary to the Commission. The Director for the Commission, Tamara Baysinger, is the designee.

In addition to acting as an independent authorizer for public charter schools, the Commission also has the responsibility of making recommendations to the Board regarding the oversight of public charter schools in Idaho. Ms. Baysinger will provide the Commission's annual update to the Board on the status of the Commission's portfolio schools and the ongoing implementation of best authorizing practices.

IMPACT

This presentation will provide the Board with an update on the charter schools authorized by the Commission and provide the Board with the opportunity to ask questions

ATTACHMENTS

Attachment 1 – PCSC's Annual Report

Page 3

STAFF COMMENTS AND RECOMMENDATIONS

Staff has no comments or recommendations.

BOARD ACTION

This item is for informational purposes only. Any action will be at the Board's discretion.

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Idaho Public Charter School Commission 2015 Annual Report

A Year in Review

Thank you for your interest in Idaho's public charter schools. The Public Charter School Commission (PCSC) is Idaho's largest authorizer, with a portfolio comprising 72% of Idaho's 50 charters. Our mission is to protect student and public interests by balancing high standards of accountability with respect for the autonomy of public charter schools. We endeavor to implement best practices and enforce compliance with Idaho statute in order to ensure the excellence of public charter school options for Idaho families.

In the wake of Idaho's 2013 legislative session, the PCSC, its staff, and its stakeholders developed a performance certificate and performance framework. These documents were designed improve transparency of PCSC expectations, as well as highlight the challenges and successes of our portfolio schools.



Over the past two years, significant and ongoing changes to the state's school accountability system have impacted the ability of this framework to function as intended. Elimination of the Star Rating System, as well as implementation of the ISAT by SBAC, have limited the scope of valid academic data available for publication in this report.

As of early 2016, our portfolio has expanded to include one new school: Alturus International Academy. AIA is anticipated to open in fall 2016 in Idaho Falls, providing students with the option of an International Baccalaureate program.

During 2014, we had the privilege of being selected by the National Association of Charter School Authorizers for a formative evaluation of our work. Their recommendations both affirmed our direction and served as a guide for future improvement. Over the past year, we have continued to implement NACSA's recommendations, with positive results.

We invite you to join us in supporting a high-quality charter school sector in Idaho.

Sincerely,

Alan Reed, Chairman

Tamara L. Baysinger, Director

February 2016

Portfolio Overview

The PCSC's portfolio comprises 36 public charter schools. These schools are located all across the state, in both rural and urban communities. Their time in operation ranges from pre-opening to 16 years. They offer an array of educational choices: Core Knowledge, Expeditionary Learning, Harbor, Montessori, Classical, Waldorf, International Baccalaureate, and more. Several are alternative schools, and others focus on underserved or at-risk populations while welcoming all students who wish to attend. Seven are categorized as virtual schools.

PCSC PORTFOLIO SCHOOL	YEAR	LOCATION	GRADES	METHOD
Alturas International Academy	2016	Idaho Falls	K-8	International Baccalaureate
American Heritage Charter School	2013	Idaho Falls	K-8	Core Knowledge
Another Choice Virtual School	2010	Treasure Valley	K-12	Virtual, Special Needs
Bingham Academy	2014	Blackfoot	9-12	Postsecondary Preparation
Blackfoot Community Charter Learning Center	2000	Blackfoot	K-8	Brain-Based, Multi-Age
Chief Tahgee Elementary Academy	2013	Fort Hall	K-6	Language Immersion
Coeur d'Alene Charter Academy	1999	Coeur d'Alene	6-12	College Prep
Compass Public Charter School	2005	Meridian	K-12	Compass Method
Conner Academy (formerly The Academy)	2006	Pocatello	K-8	Harbor
Falcon Ridge Public Charter School	2005	Kuna	K-8	Harbor
Heritage Academy	2011	Jerome	K-8	Schoolwide Enrichment
Heritage Community Charter School	2011	Caldwell	K-8	Classical, Dual-Language
Idaho College and Career Readiness Academy	2014	Statewide	9-12	Career Technical
Idaho Connects Online	2009	Statewide	6-12	Virtual
Idaho Science and Technology Charter School	2009	Blackfoot	4-8	Science & Technology
Idaho Virtual Academy	2002	Statewide	K-12	Virtual
INSPIRE Connections Academy	2005	Statewide	K-12	Virtual
iSucceed Virtual High School	2008	Statewide	9-12	Virtual
Kootenai Bridge Academy	2009	Coeur d'Alene	11-12	Virtual, Credit Recovery
Legacy Charter School	2011	Nampa	K-8	Harbor
Liberty Charter School	1999	Nampa	K-12	Harbor
Monticello Montessori Charter School	2010	Ammon	K-6	Montessori
North Idaho STEM Charter Academy	2012	Rathdrum	K-12	STEM
North Star Charter School	2003	Eagle	K-12	International Baccalaureate
North Valley Academy	2008	Gooding	K-12	Core Knowledge
Palouse Prairie Charter School	2009	Moscow	K-8	Expeditionary Learning
Richard McKenna Charter School	2002	Mountain Home	K-12	Montessori K-8, Virtual Alt. HS
Rolling Hills Public Charter School	2005	Boise	K-8	Harbor
Sage International School of Boise	2010	Boise	K-12	International Baccalaureate
Syringa Mountain School	2014	Ketchum	K-6	Waldorf Inspired
Taylor's Crossing Public Charter School	2006	Idaho Falls	K-12	Harbor
The Village Charter School	2011	Boise	K-8	7 Habits & Leadership
Victory Charter School	2004	Nampa	K-12	Harbor
Vision Charter School	2007	Caldwell	K-12	Classical
White Pine Charter School	2003	Idaho Falls	K-8	Core Knowledge
Xavier Charter School	2007	Twin Falls	K-12	Classical

Approximately 16,060 students are served by the PCSC's portfolio schools. About 4,865 of these are enrolled in virtual charter schools. The PCSC's portfolio saw an increase of about 520 brick-and-mortar charter school students since 2014; virtual school enrollment dropped by about 60 students. Idaho also offers 14 district-authorized charter schools. The total number of public charter school students in Idaho is approximately 20,220.

PLANNING, POLICY AND GOVERNMENTAL AFFAIRS

FEBRUARY 18, 2016

In December 2014, the PCSC placed a temporary moratorium on the approval of additional transfer petitions until such time as the PCSC had the capacity to meet its statutory obligations and adequately service its existing portfolio, new charter petitioners, and transfer petitioners. We are pleased to report that, in August 2015, the PCSC was able to lift this moratorium. We thank the Idaho State Board of Education and Idaho's Legislature for approving the additional staff positions that allowed us to reopen our doors to transfer proposals, as well as provide additional services to both proposed and operating schools.

Who We Are

The PCSC's seven members hail from all around the state. Commissioners are appointed by the Governor (3 members), Senate Pro Tempore (2 members), or Speaker of the House (2 members). They serve 4 year terms; statute provides for a 2-term limit. Officers are elected every two years in the spring.

The PCSC office is staffed by the Office of the State Board of Education and includes 4 FTE, an increase of 1.5 FTE (60%) from FY15: Director Tamara Baysinger, Charter Schools Program Manager Kirsten Pochop, Accountability Program Manager Jennifer Barbeau, and an Administrative Assistant.

The PCSC's fiscal year 2016 budget is \$468,000, an increase of 41% from fiscal year 2015. The majority of this increase reflects additional personnel and facility costs. The PCSC's FY16 revenue represents a combination of authorizer fees and state funds appropriated as part of the State Board of Education's budget. No substantial increase in funding is anticipated for FY17.

In its October 2013 Authorizing Roadmap, the National Association of Charter School Authorizers provided a comparison of PCSC resources compared to those of similar authorizers. Below, that comparison has been updated to reflect FY15 data.

Authorizer	# of Schools	FTE	Budget
CO CSI	32	16	\$2,042,567
HI PCSC	34	18	\$1,400,000
Denver Public Schools	55	15	\$1,328,000
Idaho PCSC	36	4	\$468,000

Although our resources remain limited, we are pleased to report that the addition of 1.5 FTE has already enabled us to improve and broaden the services our staff is able to offer to petitioning groups, portfolio schools, and the Commission itself. We are now able to spend more time visiting with school leaders, developing resources, providing training opportunities, and considering both hard data and "soft" observations to better understand the impact of each school on its students and community. The additional personnel will prove especially critical as we seek a thorough understanding of all schools scheduled for renewal consideration in 2017.

OUR COMMISSIONERS

Chairman Alan Reed
Idaho Falls
Term: 2014 - 2018

Vice-Chair Gayle O'Donahue
Nampa
Term: 2012 - 2016

Commissioner Evan Frasure
Pocatello
Term: 2015 - 2019

Commissioner Kelly Murphey
Castleford
Term: 2014 - 2018

Commissioner Wanda Quinn
Coeur d'Alene
Term: 2012 - 2016

Commissioner Brian Scigliano
Boise
Term: 2012 - 2016

Commissioner Gayann DeMordaunt
Boise
Term: 2015 - 2019

We also thank former Commissioner
Esther Van Wart (term ended 5/15)

School Performance Evaluation

The PCSC bases its evaluation of school performance on the performance certificate and performance framework. These documents were developed in accordance with 2013 legislation, through a collaborative process that invited the input of stakeholders over a five-month period. Performance certificates set forth the rights and duties of each school and the PCSC as its authorizer. Performance frameworks establish the specific criteria schools are expected to meet in order to qualify for periodic charter renewal pursuant to Idaho statute.

The PCSC's performance framework is divided into four sets of measures: academic, mission-specific, operational, and financial. Renewal decisions should be based primarily on the academic and mission-specific results, but will also be informed by operational and financial outcomes.

The academic portion of the framework was designed to dovetail with Idaho's Star Rating System (SRS). At the time, it was believed that the SRS would remain in use, with some modifications to accommodate the ISAT by SBAC and better reflect the achievements of alternative schools. However, the State Department of Education has since discontinued use of the SRS. This, in addition to the absence of growth data due to the statewide assessment change, has severely curtailed the PCSC's ability to provide academic performance data within the framework.

For the 2014-2015 school year, only three to four of the original fifteen academic measures in the framework can be applied (3 for elementary schools, 4 for high schools). The scope of the remaining measures is considerably reduced from the categories of state and federal accountability, proficiency, growth, and college and career readiness that the framework was designed to address. Additionally, there is presently no clear state goal for student achievement such as §33-5209A(2), Idaho Code, requires our measurable performance targets to meet.

We look forward to working with other state education leaders to ensure that, over the long term, our portfolio schools can be evaluated in a thorough, fair, meaningful, and consistent manner.

Annual Performance Reports

Each PCSC portfolio school receives an annual performance report reflecting its outcomes on measures within the performance framework. Schools are encouraged to use this information for strategic planning and to ensure that any identified weaknesses are addressed in advance of renewal consideration, which takes place in Year 3 of operations, then every 5 years thereafter (or as otherwise stated in initial performance certificates).

Data contained in the reports was gathered primarily through Idaho System for Educational Excellence (ISEE) reports, independent fiscal audits, and State Department of Education records. In 2014-2015, most PCSC portfolio schools needed to submit only three, additional reports to the PCSC.

Schools were provided with draft reports in December 2015. Following a response period, final reports were published in January 2016. Individual schools' annual performance reports, including scoring details and explanatory notes as applicable, are available on the PCSC's website at chartercommission.idaho.gov.

Typically, annual reports include scores on multiple, individual measures, which are then tallied to establish an accountability designation in each of three categories: academic & mission specific (combined), operational, and financial. Due to the limited availability of academic data for 2014-2015, however, no academic & mission specific accountability designations are included in this report.

This report does offer comparisons of PCSC portfolio schools' academic proficiency rates with those of neighboring schools and the state as a whole. Demographic data is provided for additional context. However, it is important to bear in mind that proficiency rates, while important, cannot paint a complete picture of a school's academic quality.

Summary of 2015 Performance Outcomes

The following chart provides an “at a glance” summary of each PCSC portfolio school’s performance outcomes in the areas of academics, operations, and finance.

Each academic subject, Math and English Language Arts (ELA), is shaded according to whether the school’s proficiency rate exceeded or fell short of the state’s proficiency rate. Light gray shading indicates that the school’s results were higher than the statewide proficiency rate; dark gray indicates lower results.

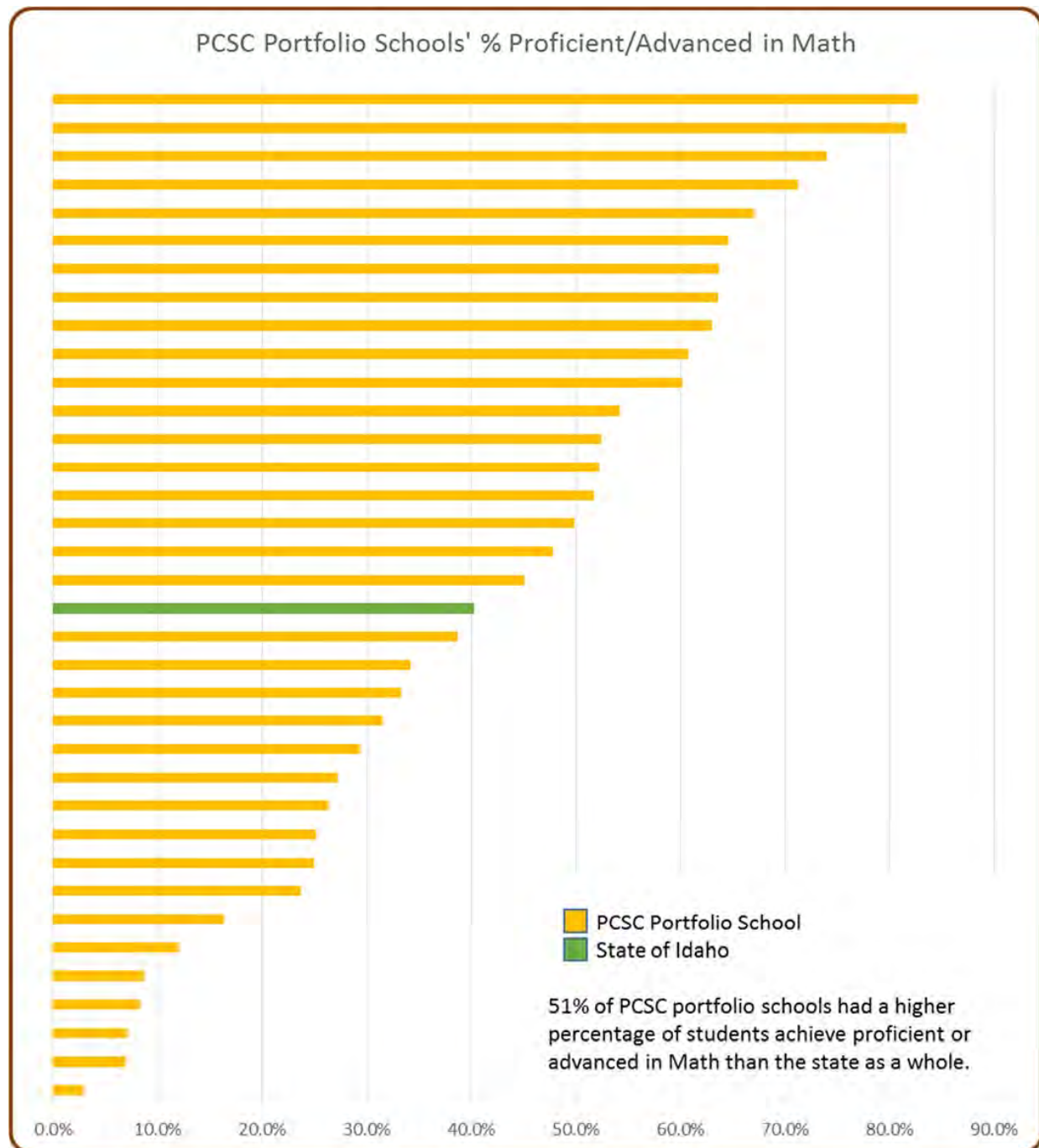
In the operational and financial categories, results are color-coded by schools’ accountability designations as detailed in their individual annual performance reports. The four accountability designations are honor (blue), good standing (green), remediation (yellow), and critical (red).

To ensure masking of individually identifiable student data, schools are alphabetically arranged within each of two groups: those that exceeded the state’s math proficiency rate, and those that fell below it. For schools that offer both general and alternative programs, only general population results are reflected in this chart. Virtual schools are highlighted in beige.

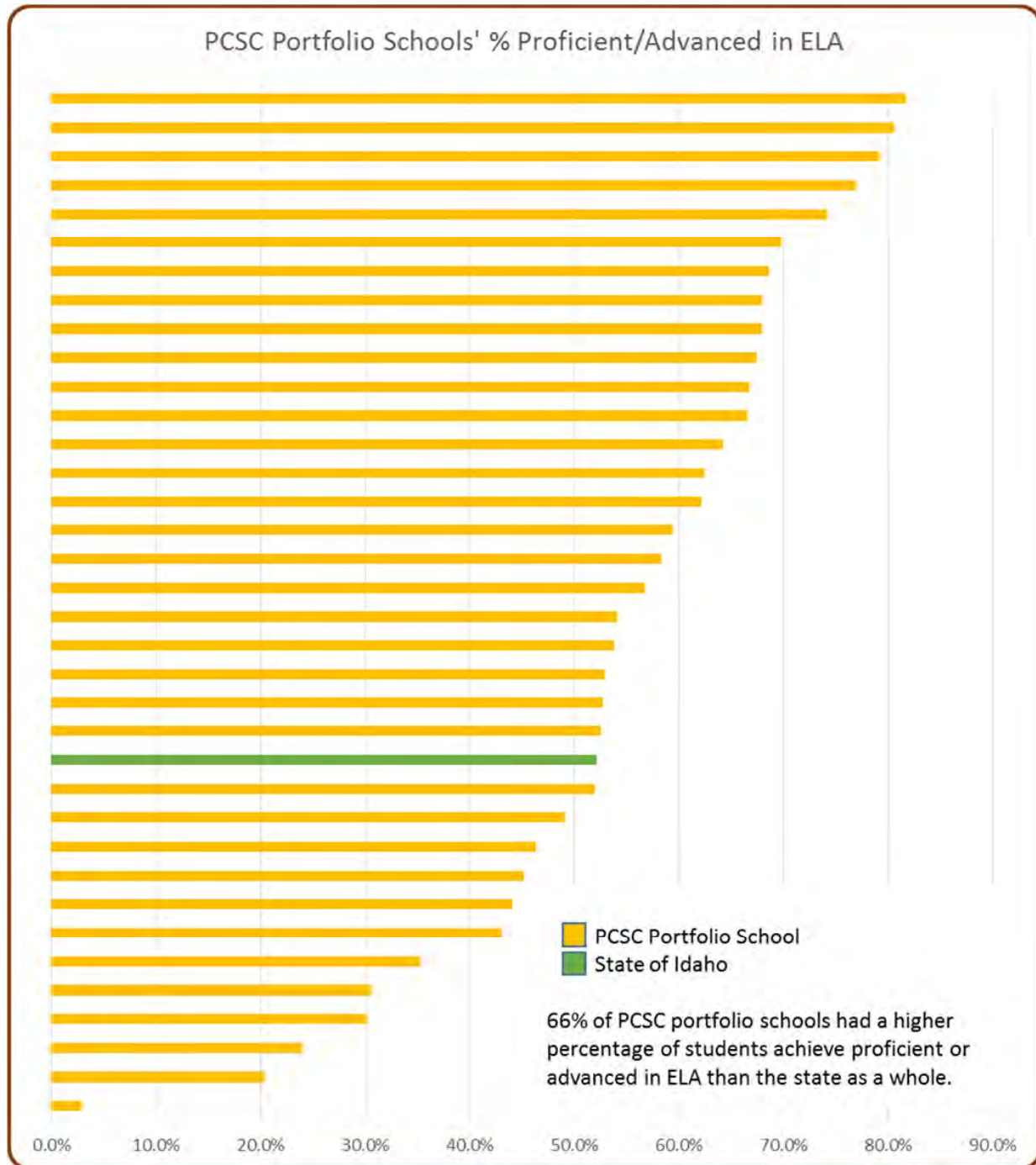
PCSC PORTFOLIO SCHOOL	MATH	ELA	OPERATIONAL	FINANCIAL
American Heritage Charter School				
Coeur d'Alene Charter Academy				
Compass Public Charter School				
Connor Academy				
Falcon Ridge Public Charter School				
Legacy Charter School				
Liberty Charter School				
Monticello Montessori Charter School				
North Idaho STEM Charter Academy				
North Star Charter School				
Palouse Prairie Charter School				
Rolling Hills Public Charter School				
Sage International School of Boise				
Taylor's Crossing Public Charter School				
Victory Charter School				
Vision Charter School				
White Pine Charter School				
Xavier Charter School				
Another Choice Virtual School				
Bingham Academy				
Blackfoot Charter Community Learning Center				
Chief Tahgee Elementary Academy				
Heritage Academy				
Heritage Community Charter School				
Idaho College and Career Readiness Academy				
Idaho Connects Online				
Idaho Science and Technology Charter School				
Idaho Virtual Academy				
INSPIRE Connections Academy				
iSucceed Virtual School				
Kootenai Bridge Academy (Alternative)				
North Valley Academy				
Richard McKenna Charter School				
Syringa Mountain School				
The Village Charter School				

Academic Outcomes

2015 standardized test results represent the first set of data that the state has published based on the ISAT by SBAC. For this reason, schools' results cannot be compared to outcomes from prior years. This report focuses instead on comparisons of PCSC portfolio schools' ISAT proficiency rates to those of their surrounding districts and the state as a whole. Data is available for two subject areas: Math and English Language Arts (ELA).

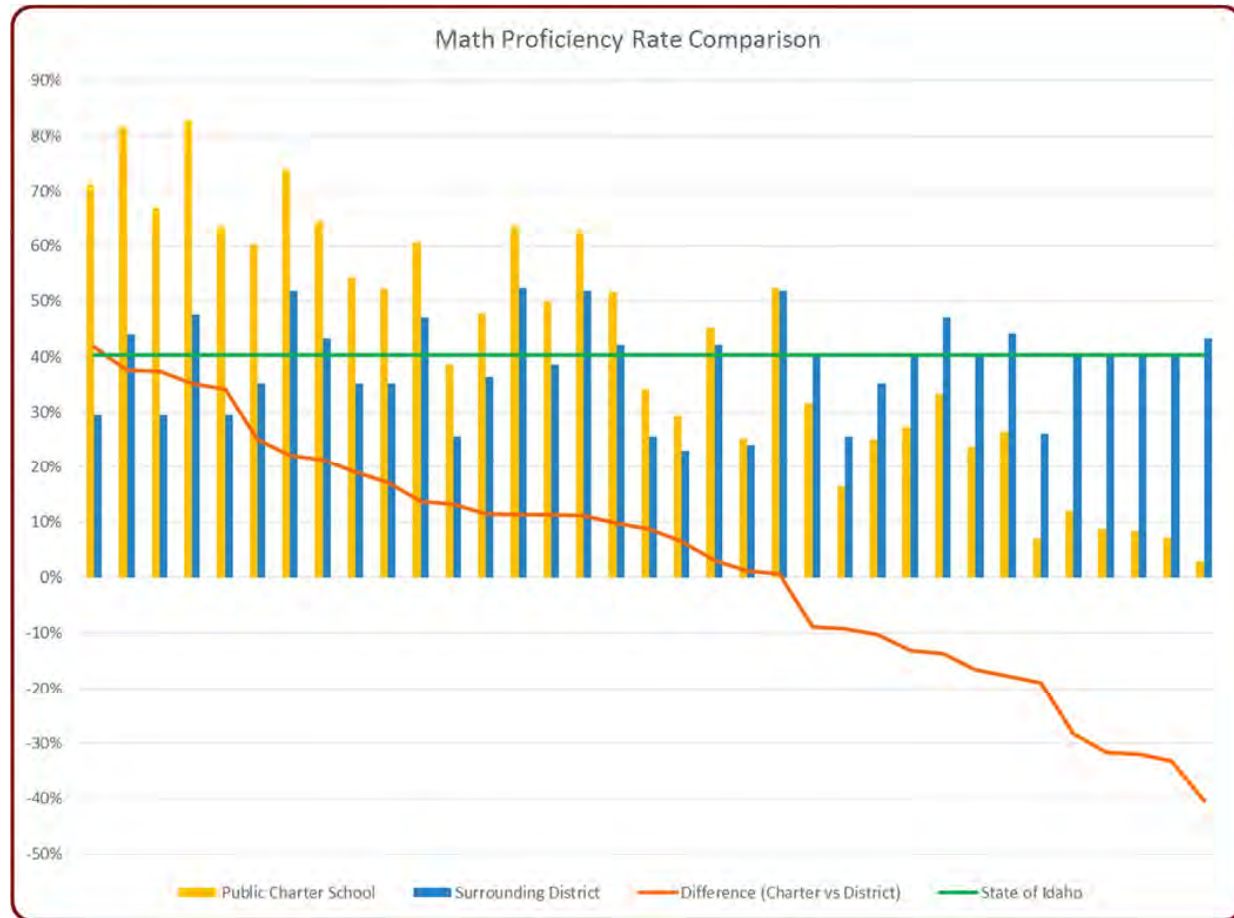


Although there are some exceptions, it can be generally observed that ELA proficiency rates tend to be higher than Math proficiency rates at both public charter and traditional public schools. Very low proficiency rates at a small number of schools indicate a need for further investigation into the reasons for such outcomes and what action school leaders are taking to address identified deficiencies.



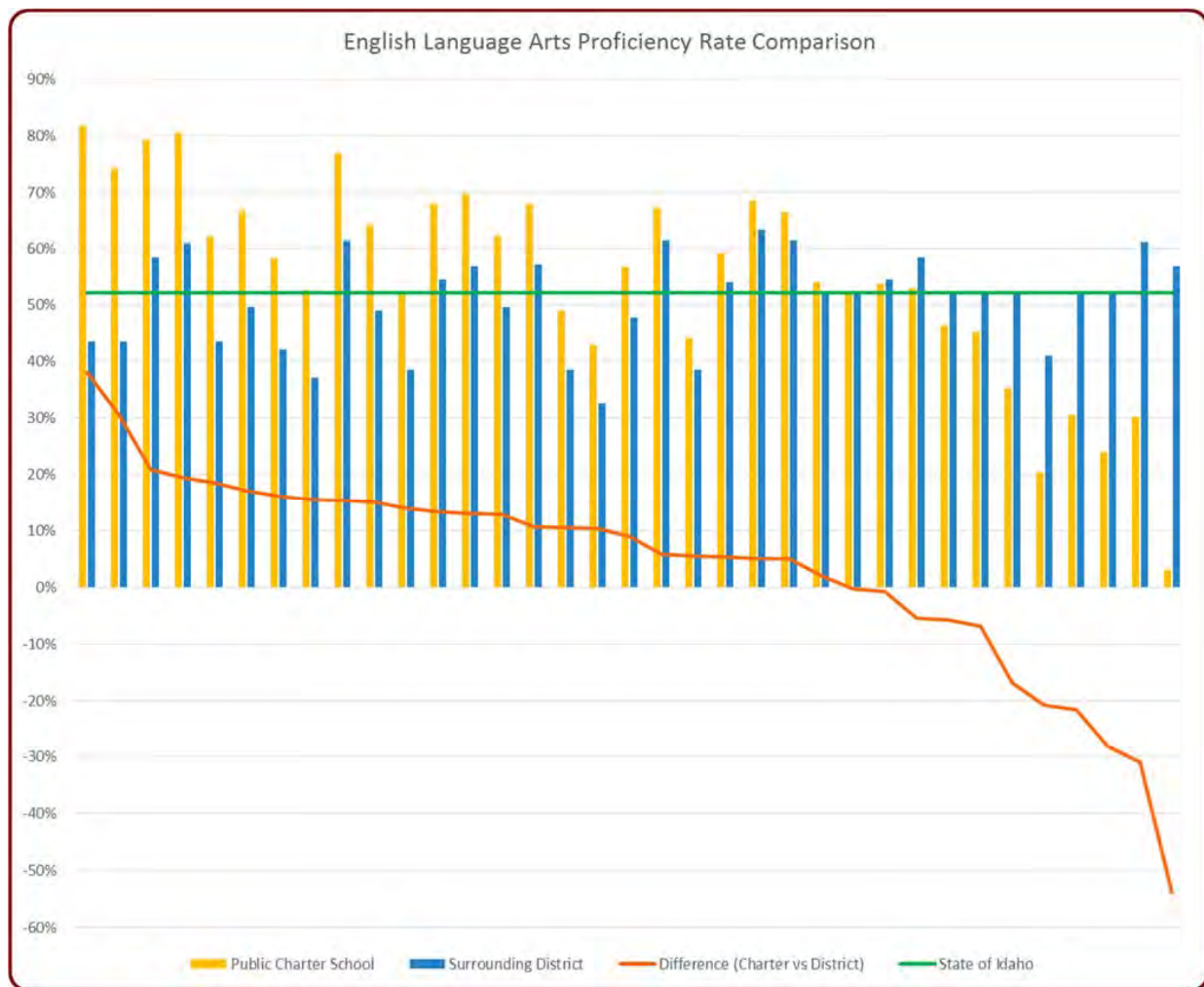
In the following charts, PCSC portfolio schools' proficiency rates are compared to those of neighboring or similar schools. The "surrounding district" data represented by the blue columns describes other public schools that are located in the same geographical area. In the case of virtual schools, which serve multiple districts or the entire state, the State of Idaho is used for comparison in place of the "surrounding district."

The columns are arranged by degree of difference between the public charter schools' proficiency rates and those of their surrounding districts. As indicated by the orange line, charter schools toward the left side of the chart have proficiency rates exceeding those of the district, while charter schools toward the right side have proficiency rates lower than those of the district.



63% of PCSC portfolio schools surpass their surrounding districts' proficiency rates in math, and 69% of PCSC portfolio schools surpass their surrounding districts' proficiency rates in ELA. However, 31% of PCSC portfolio schools have math proficiency rates that are 10 - 40 percentage points lower than their surrounding districts. Seventeen percent of PCSC portfolio schools have ELA proficiency rates that are 17 - 54 percentage points lower than their surrounding districts.

Additional detail, including contextual information such as demographic data and school type (virtual, alternative, etc.) is provided later in this report.



Comparison Data by Geographic Area

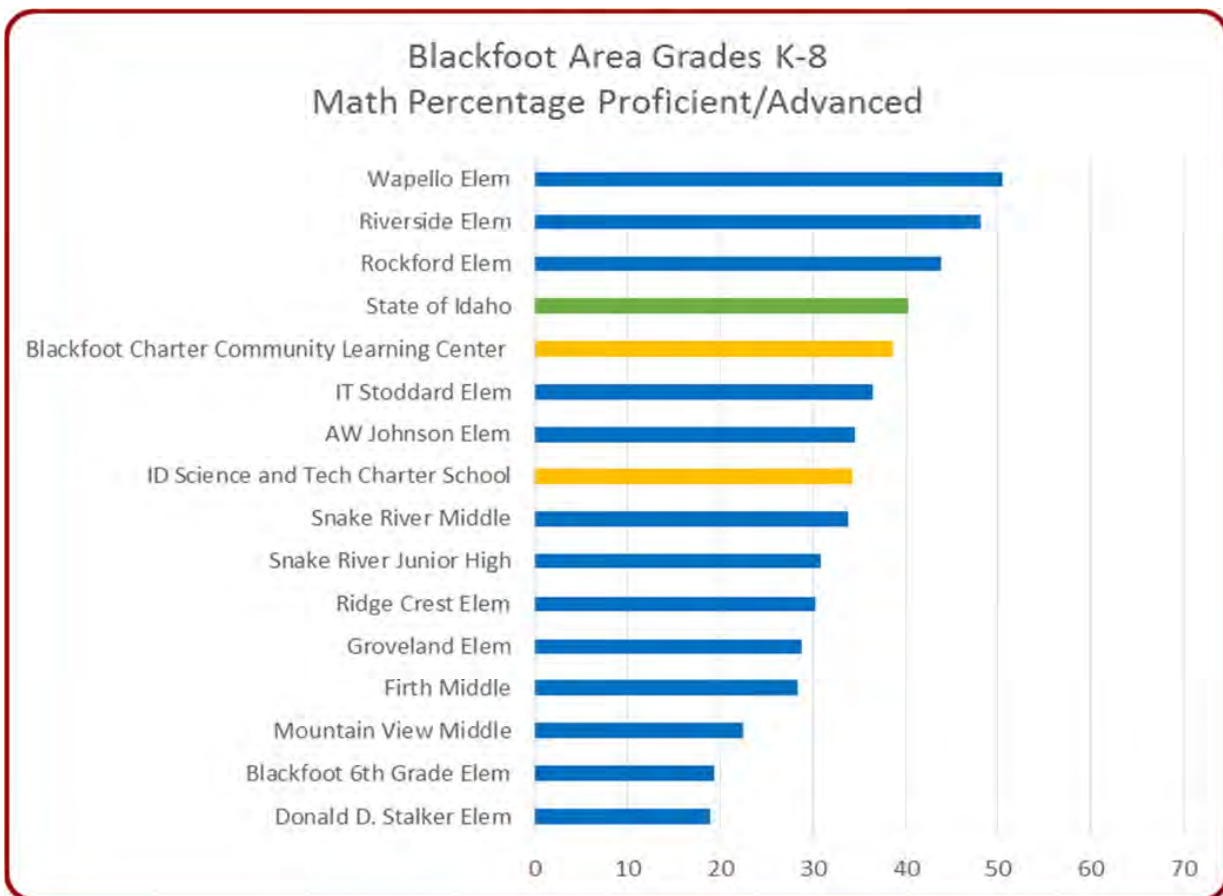
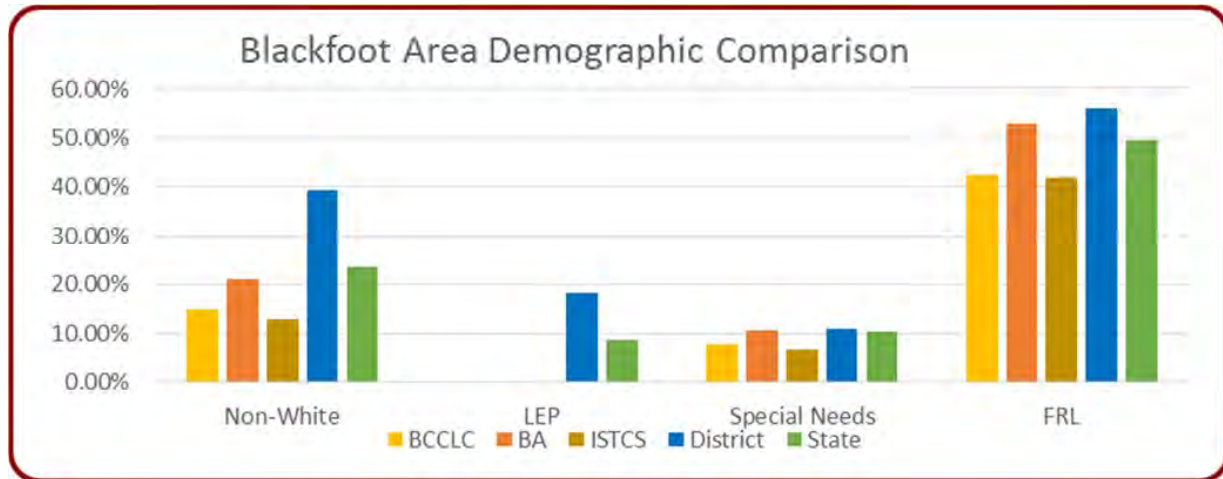
The following pages provide additional detail comparing individual PCSC portfolio schools' ISAT results and demographics to those of other schools located in geographical areas they serve.

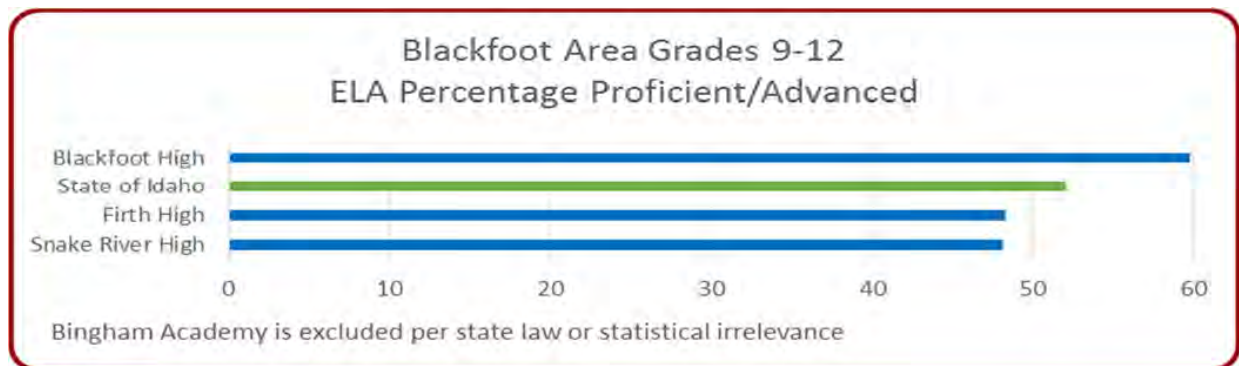
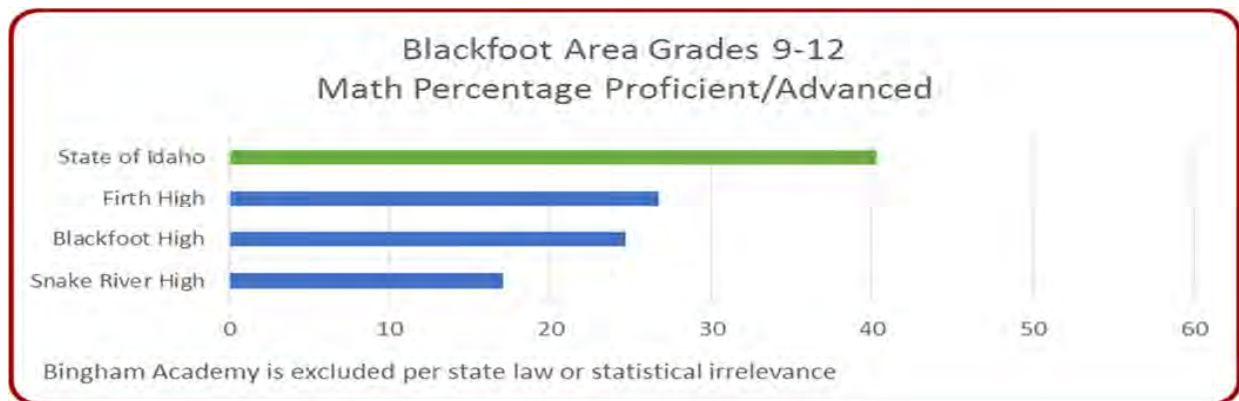
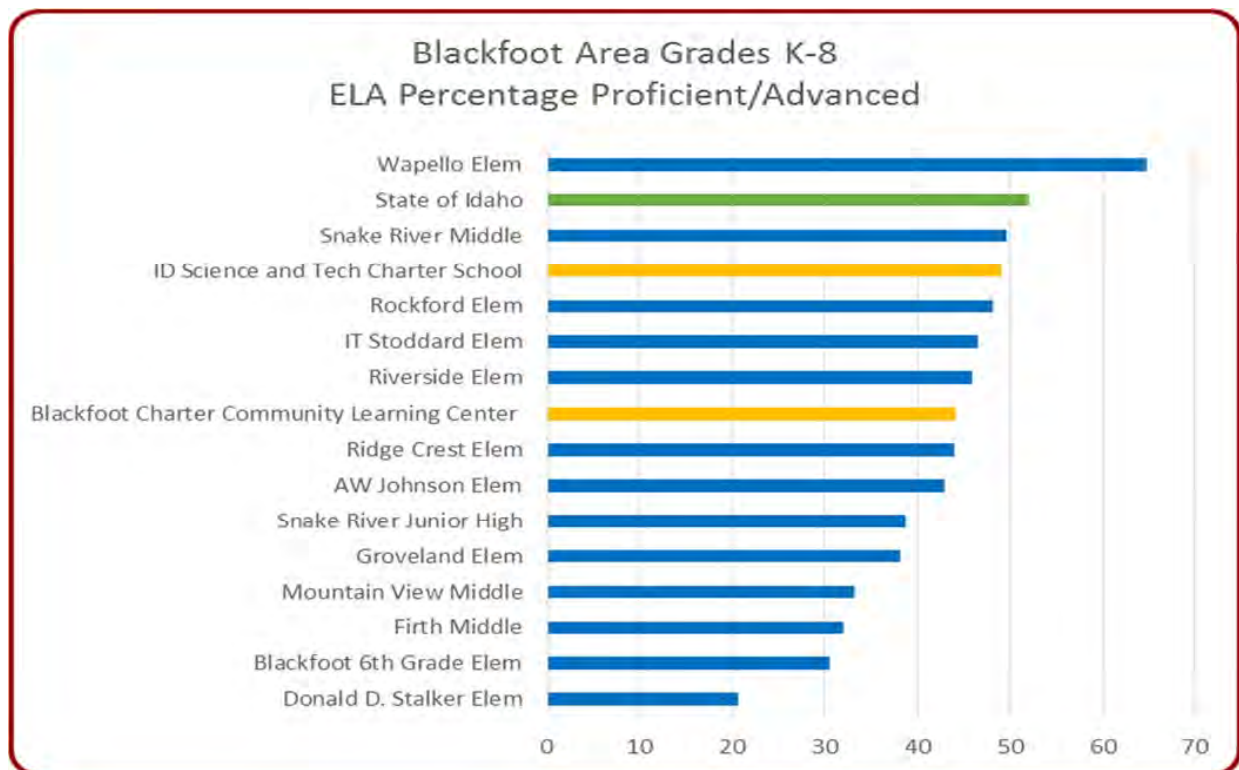
Each PCSC portfolio school is compared to other area schools serving similar grade levels. Virtual schools are compared with other virtual schools. For public charter schools that offer both general and alternative programs, only the general population results are shown. Alternative program results are addressed in individual schools' annual performance reports, which are available on the PCSC website.

In the demographic charts, each PCSC portfolio school is compared to the State of Idaho and the district in which it is physically located. It should be noted that some public charter schools have primary attendance areas that cross school district boundaries. Additional detail is available in these schools' individual reports.

Blackfoot Area Comparison Data

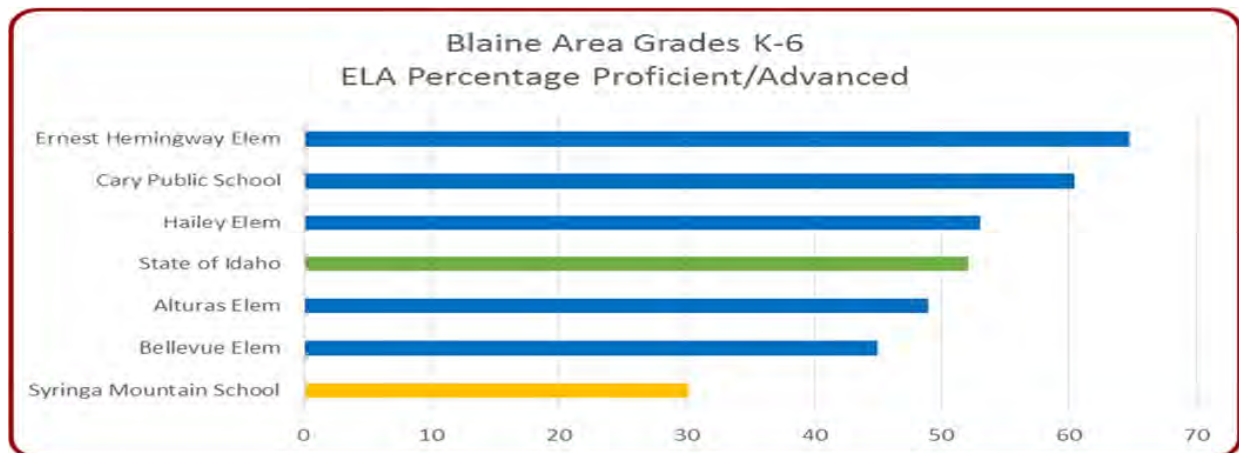
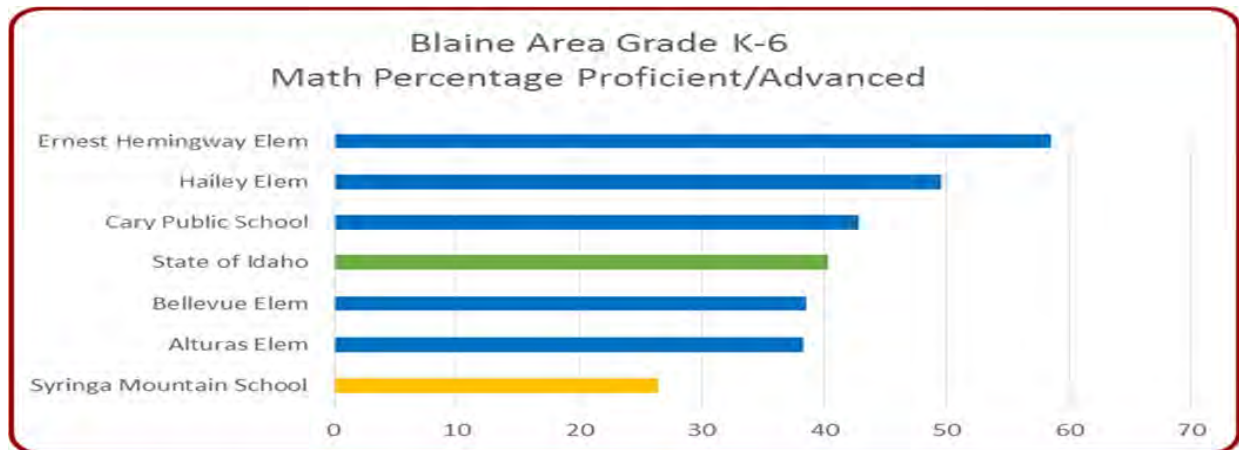
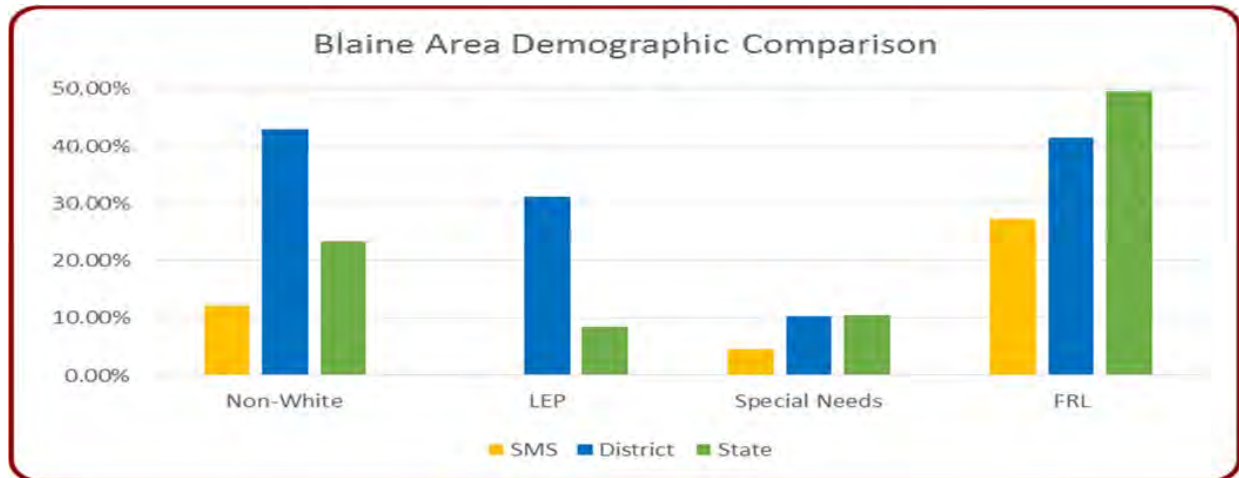
The PCSC authorizes three schools in the Blackfoot area: Blackfoot Charter Community Learning Center (K-8), Idaho Science and Technology Charter School (4-8), and Bingham Academy (9-12).





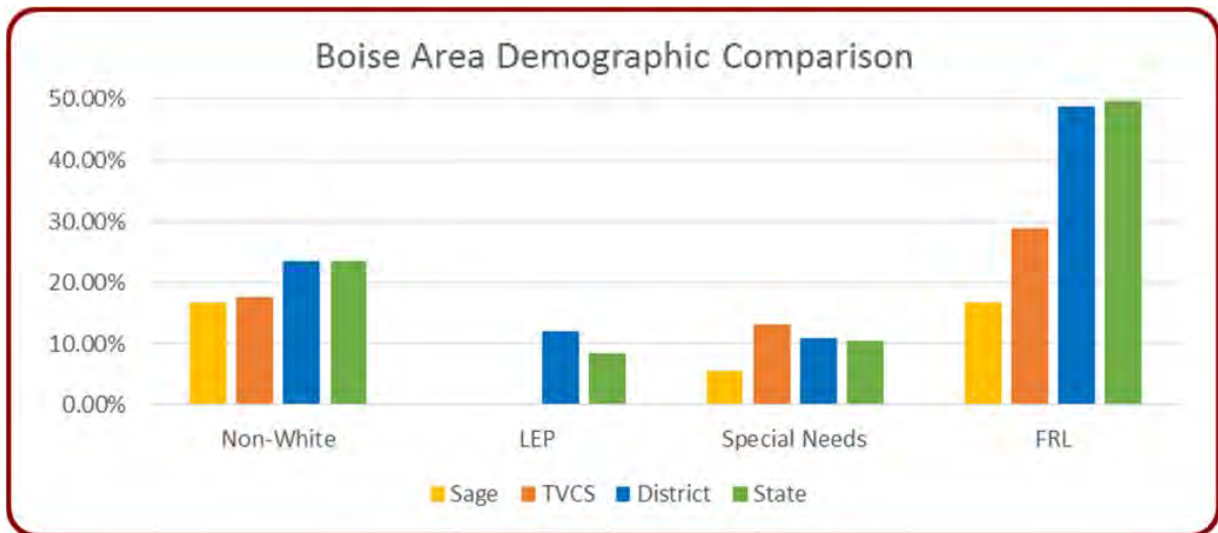
Blaine Area Comparison Data

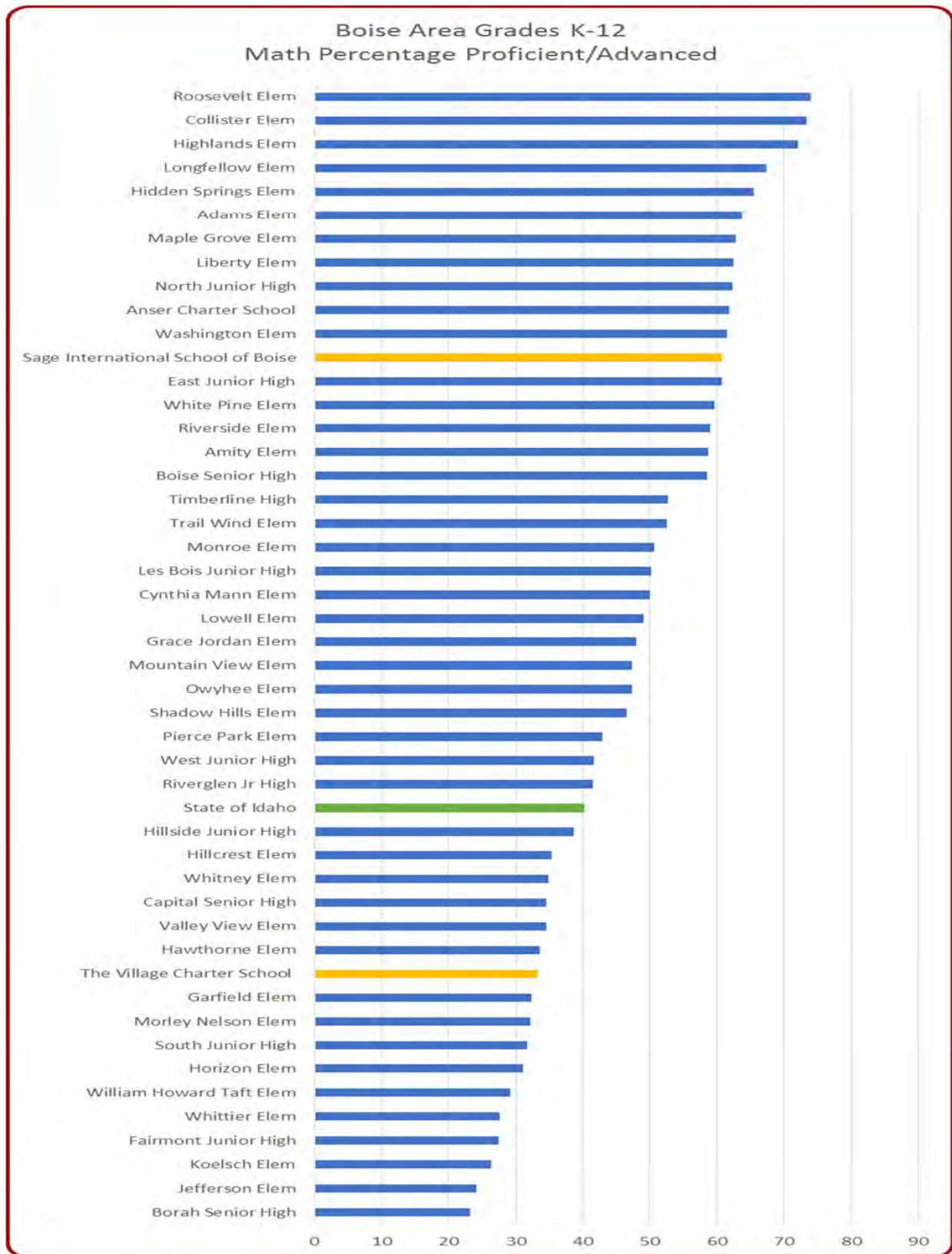
The PCSC authorizes one school in the Blaine area: Syringa Mountain School (K-6).

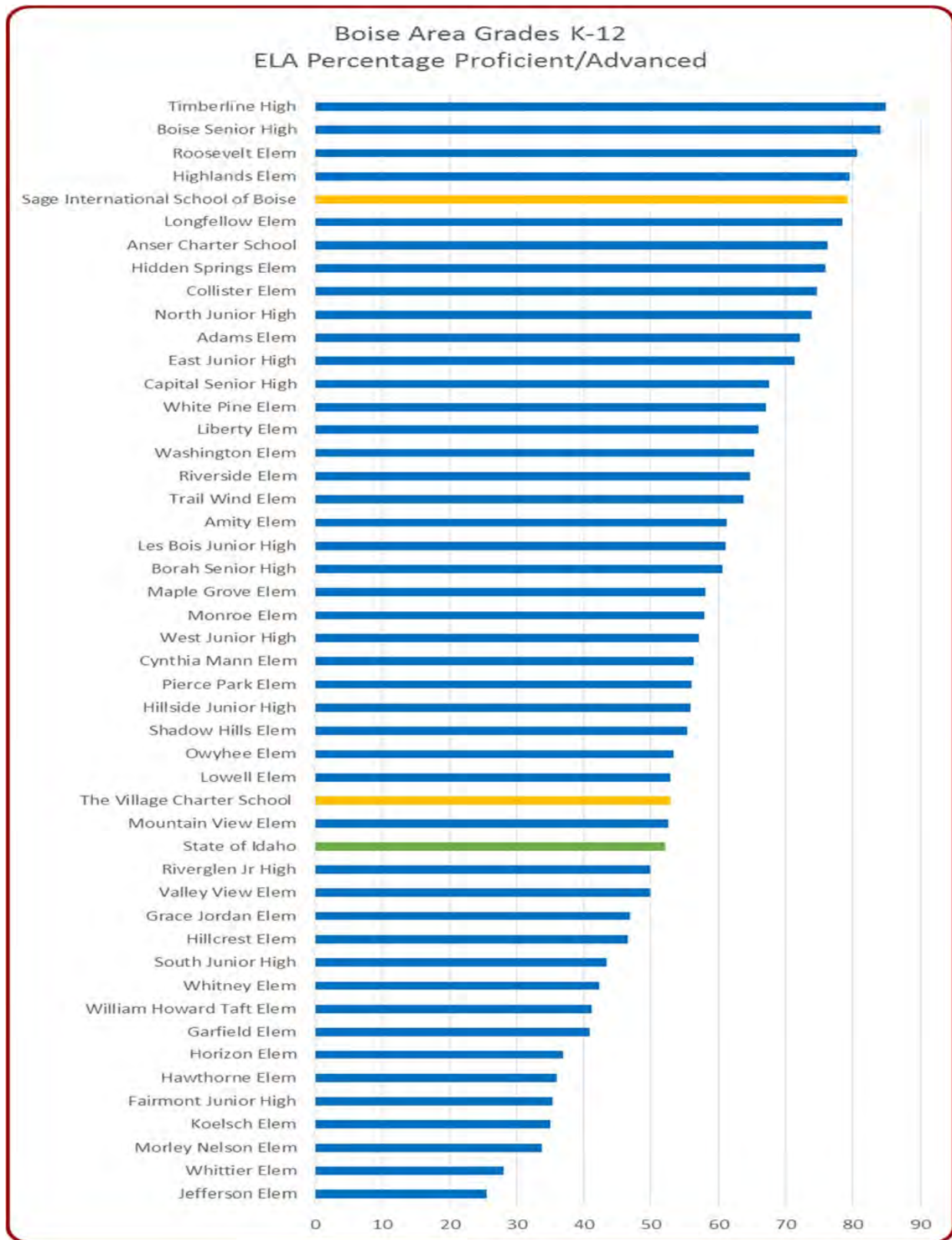


Boise Area Comparison Data

The PCSC authorizes two schools in the Boise area: Sage International School of Boise (K-12), and The Village Charter School (K-8).

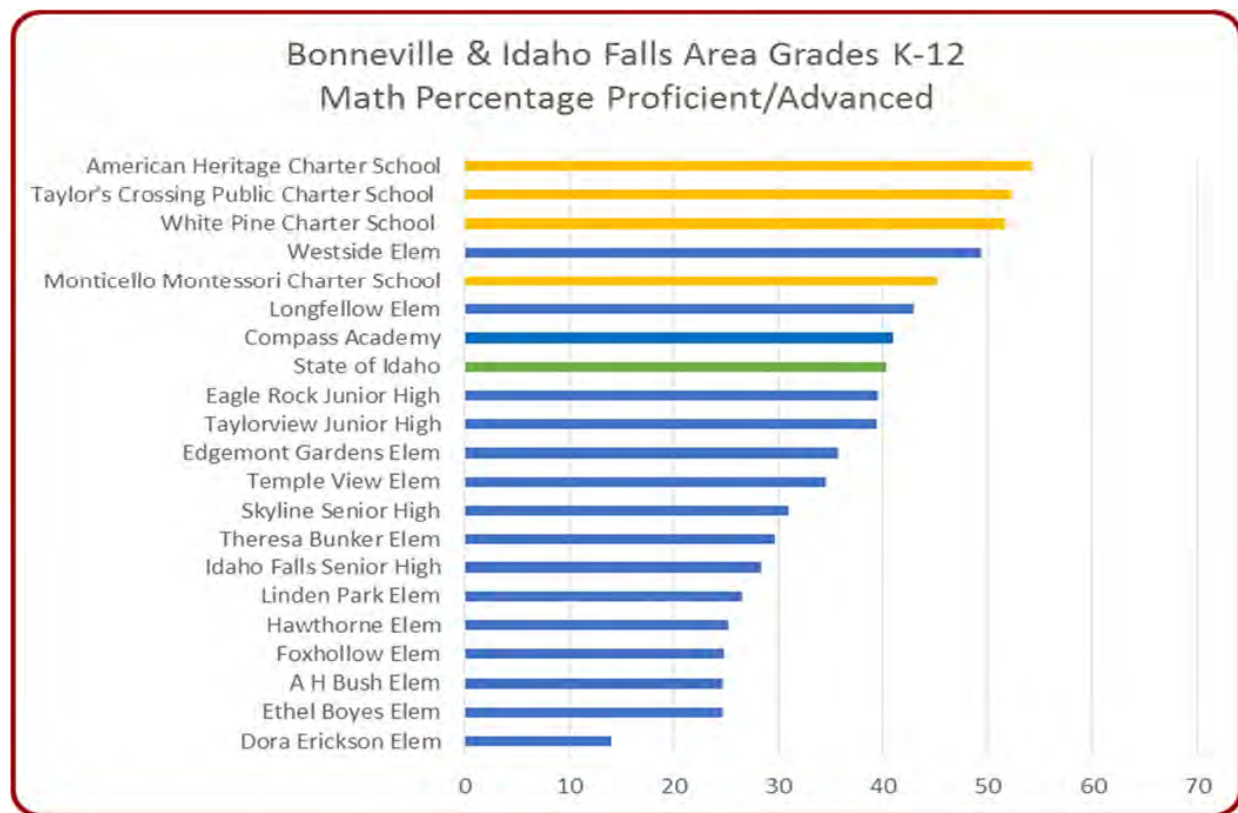
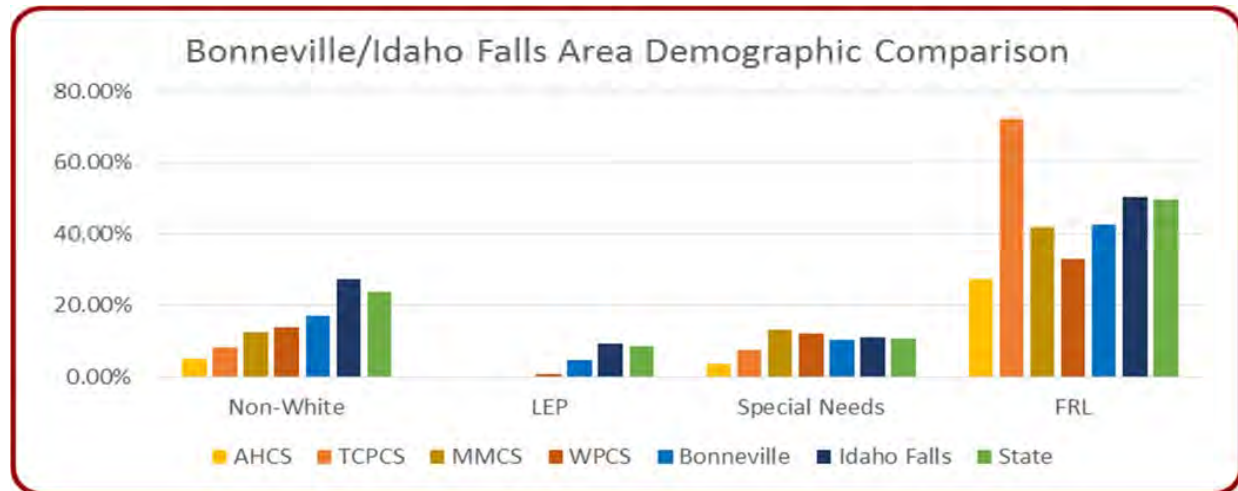


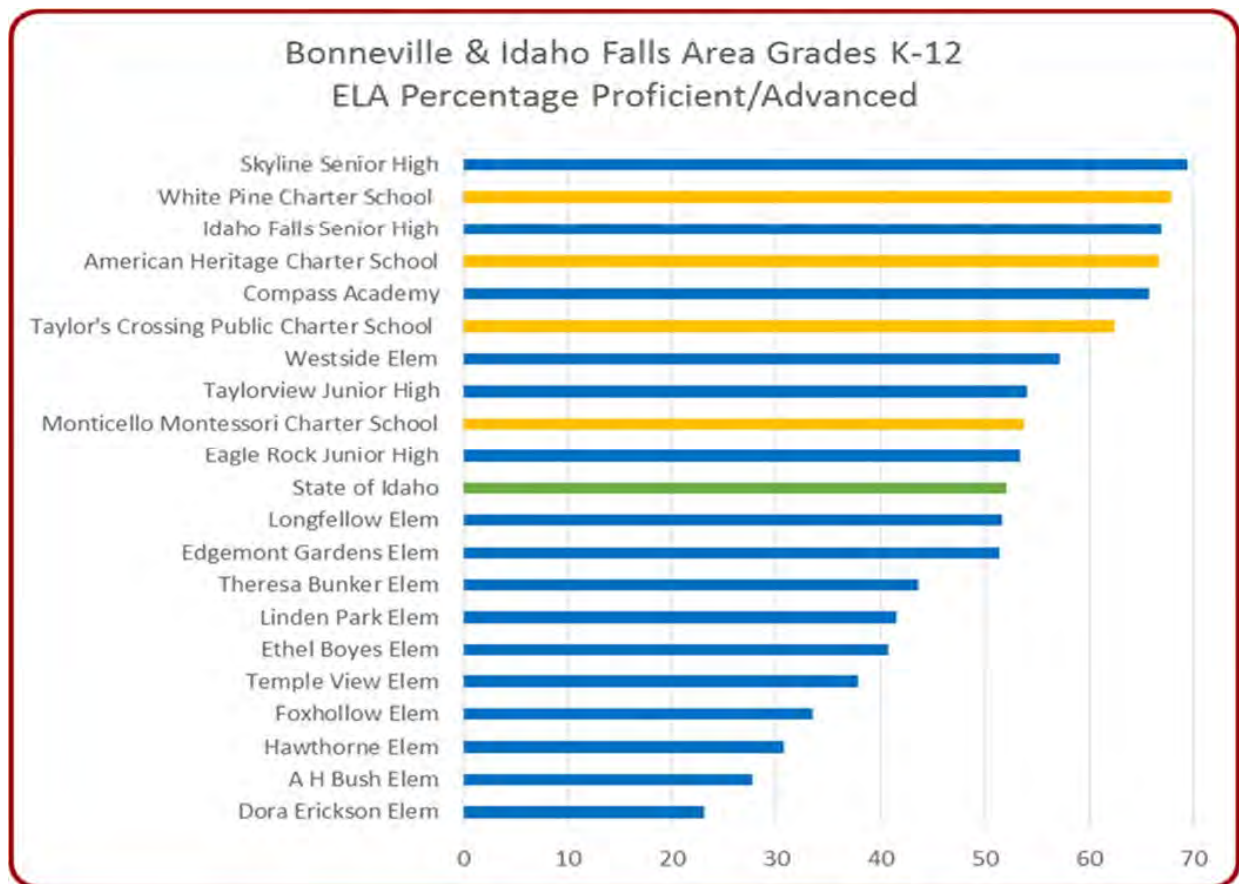




Bonneville/Idaho Falls Area Comparison Data

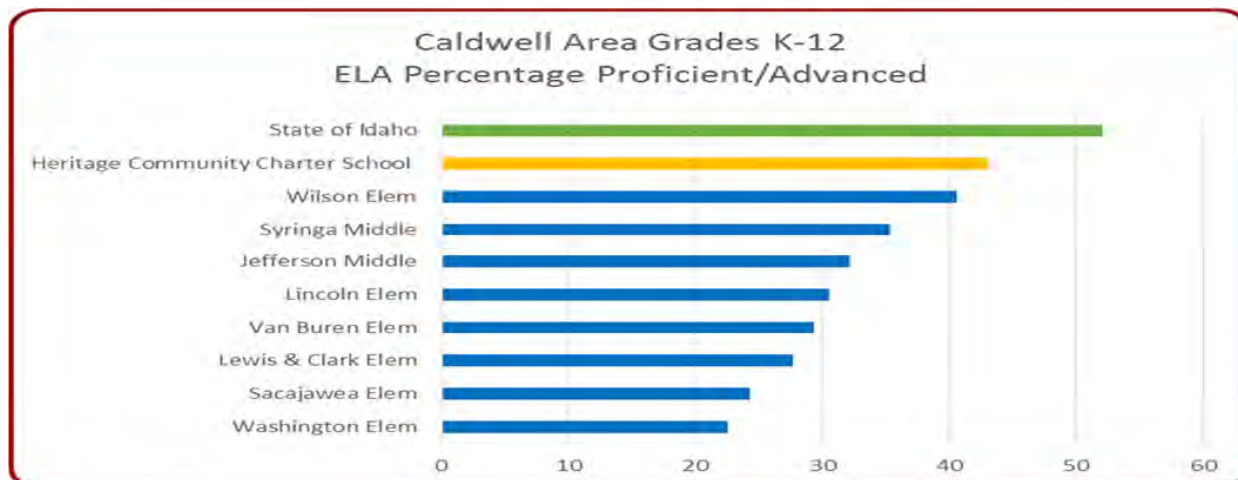
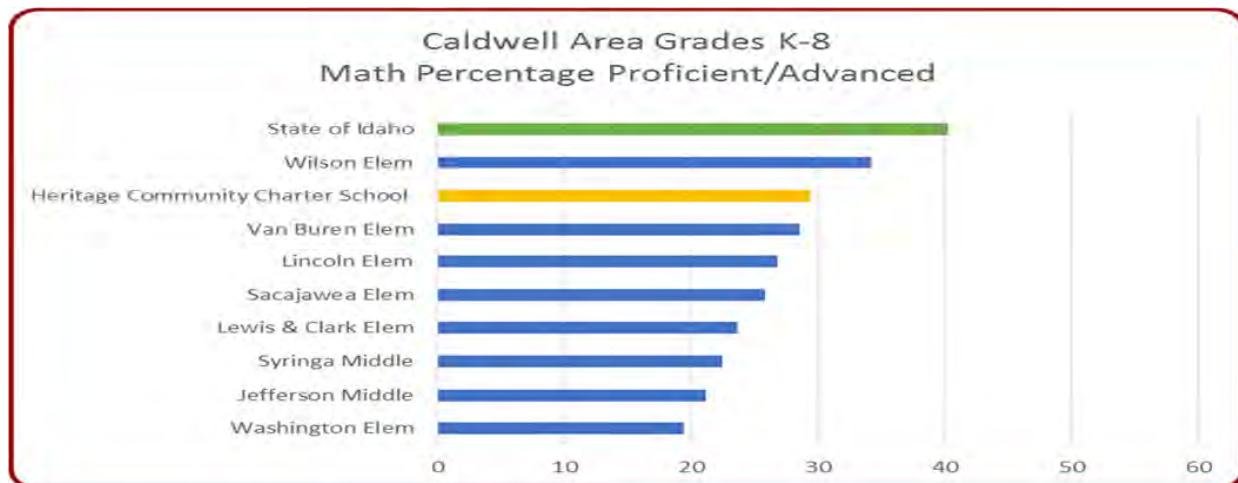
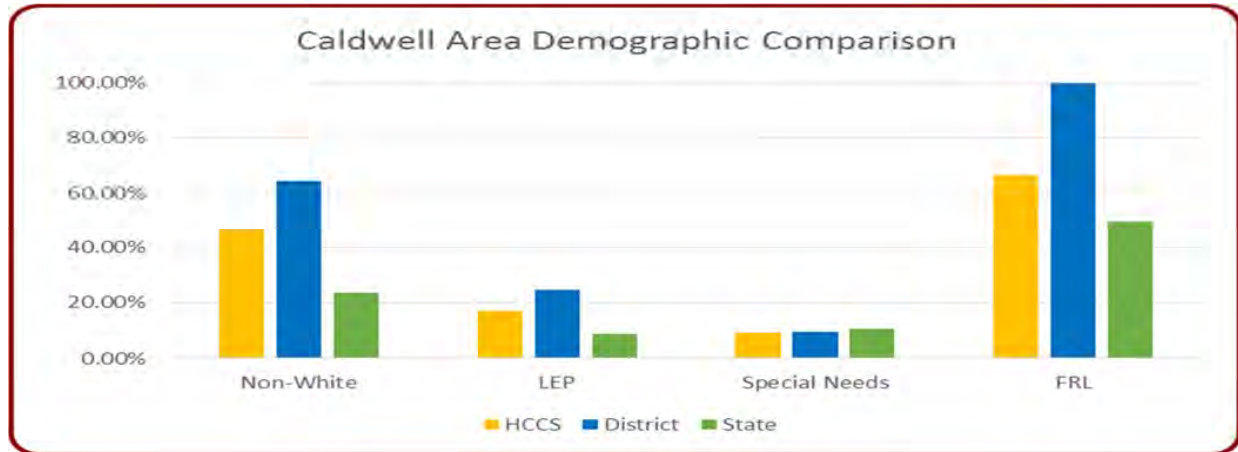
The PCSC authorizes four schools in the Bonneville/Idaho Falls area: Taylor's Crossing Public Charter School (K-12), White Pine Charter School (K-8), Monticello Montessori Charter School (K-8), and American Heritage Charter School (K-12).





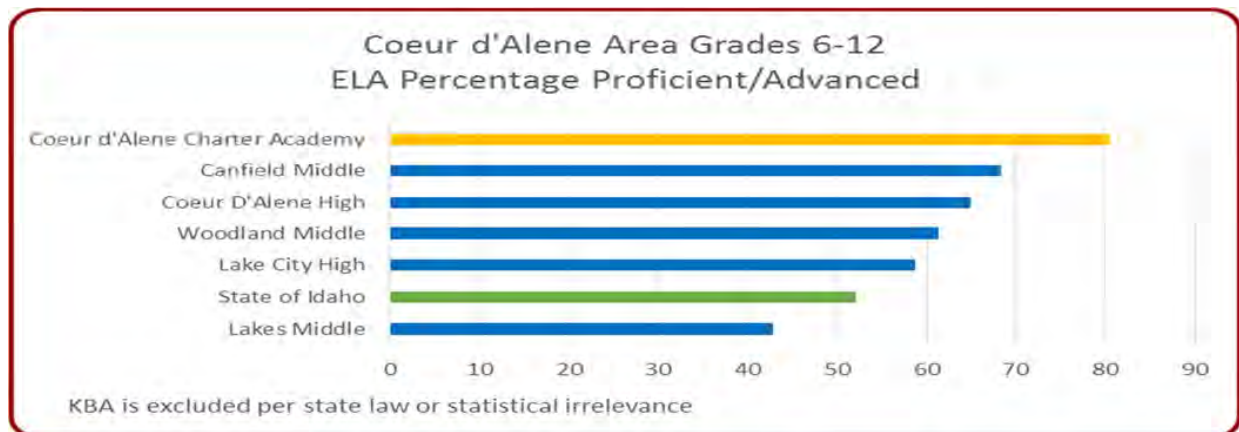
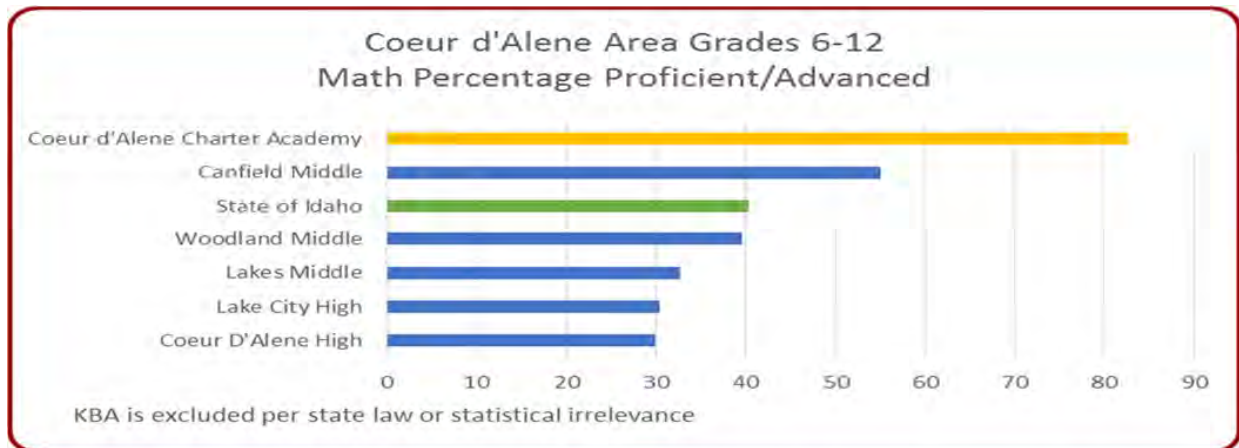
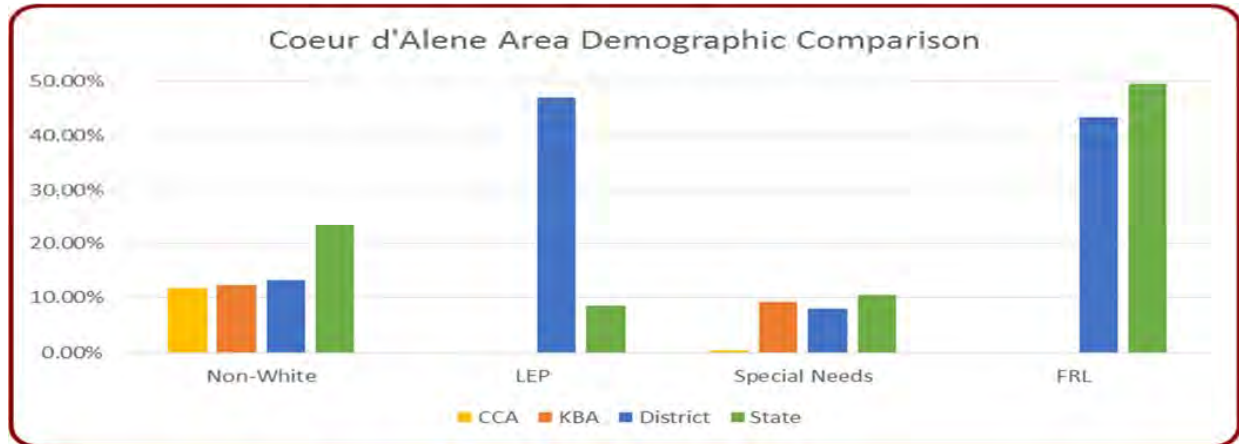
Caldwell Area Comparison Data

The PCSC authorizes one school in the Caldwell area: Heritage Community Charter School (K-8).



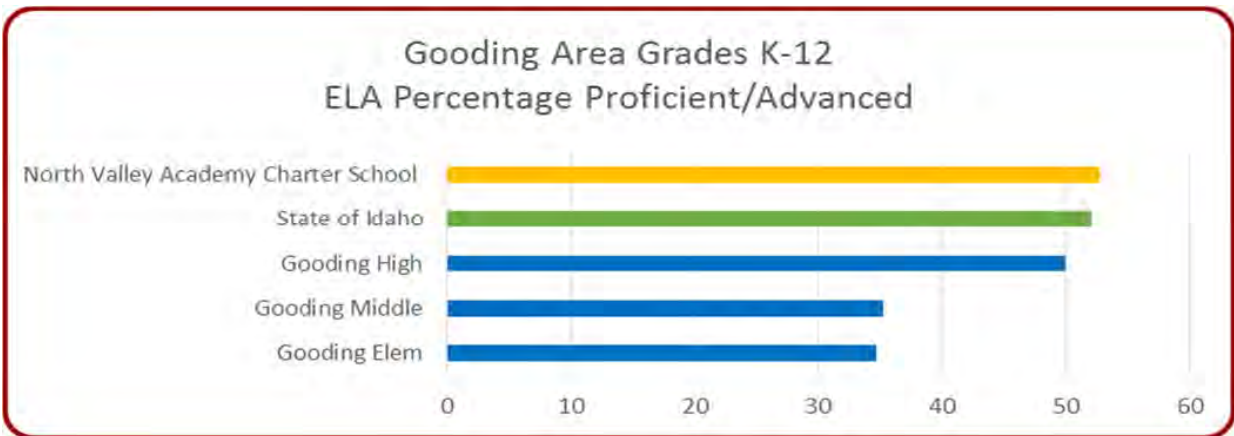
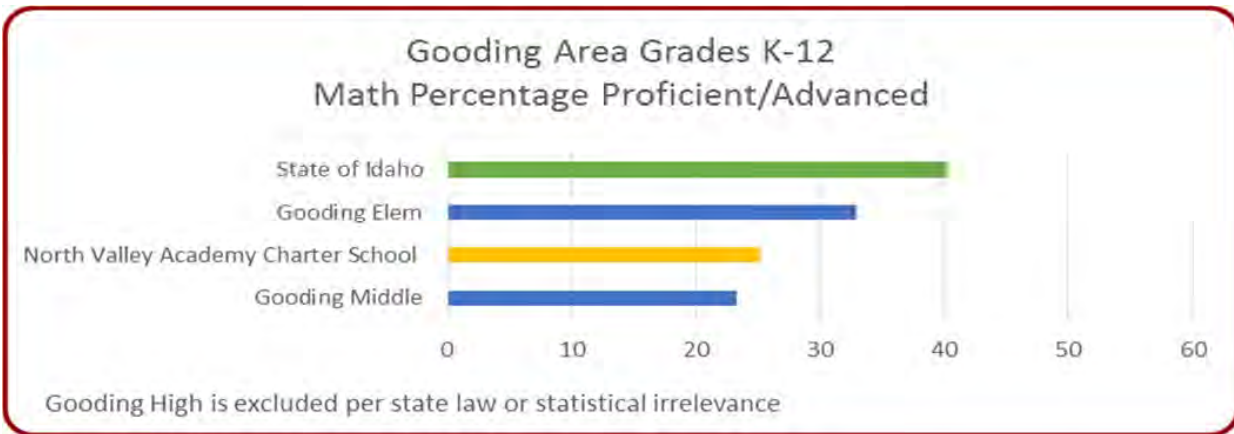
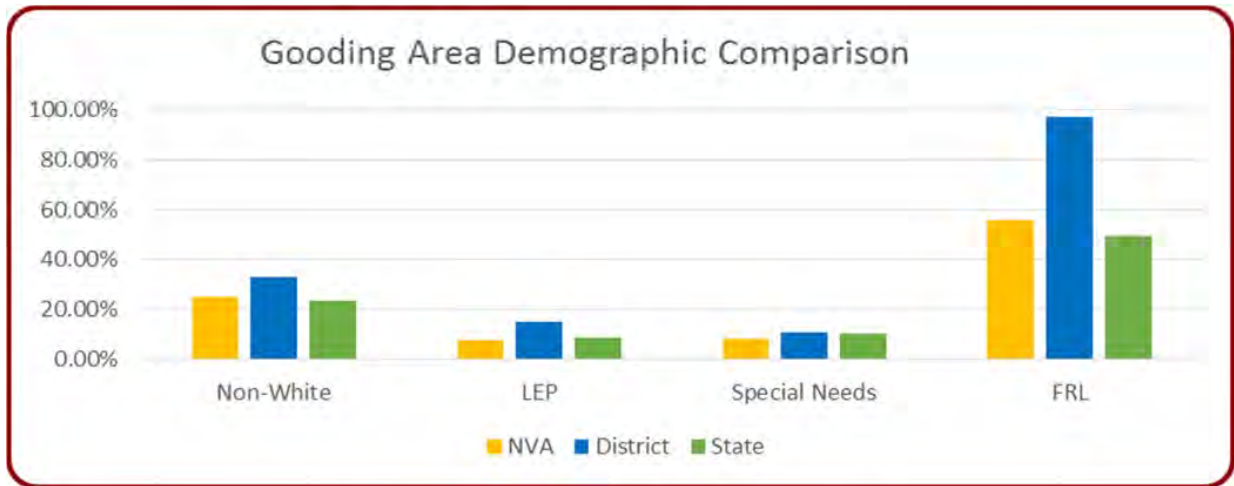
Coeur d'Alene Area Comparison Data

The PCSC authorizes two schools in the Coeur d'Alene area: Coeur d'Alene Charter Academy (6-12) and Kootenai Bridge Academy (11-12). KBA is an alternative, virtual school that serves provides credit recovery services to students from several nearby districts and has a strong on-site component.



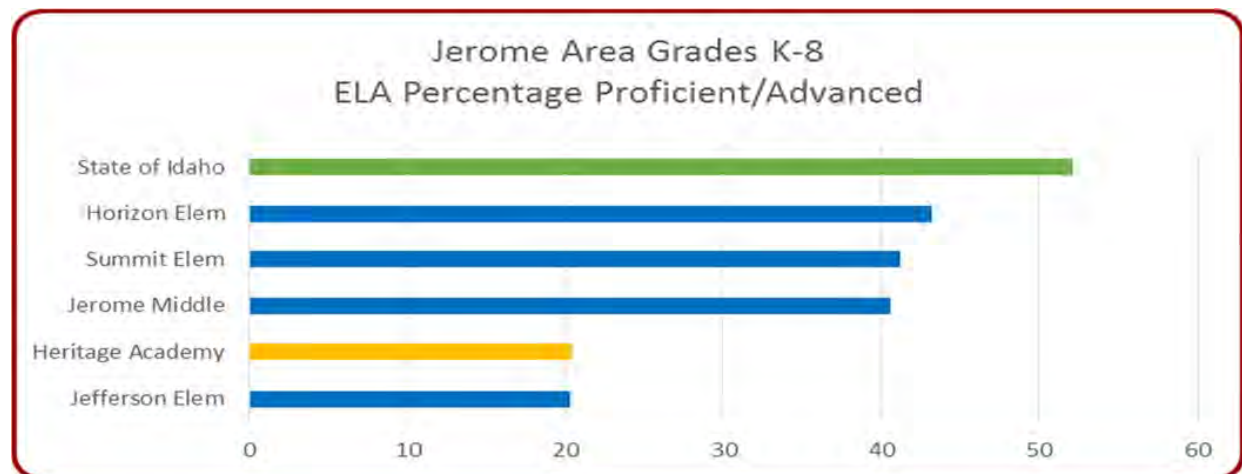
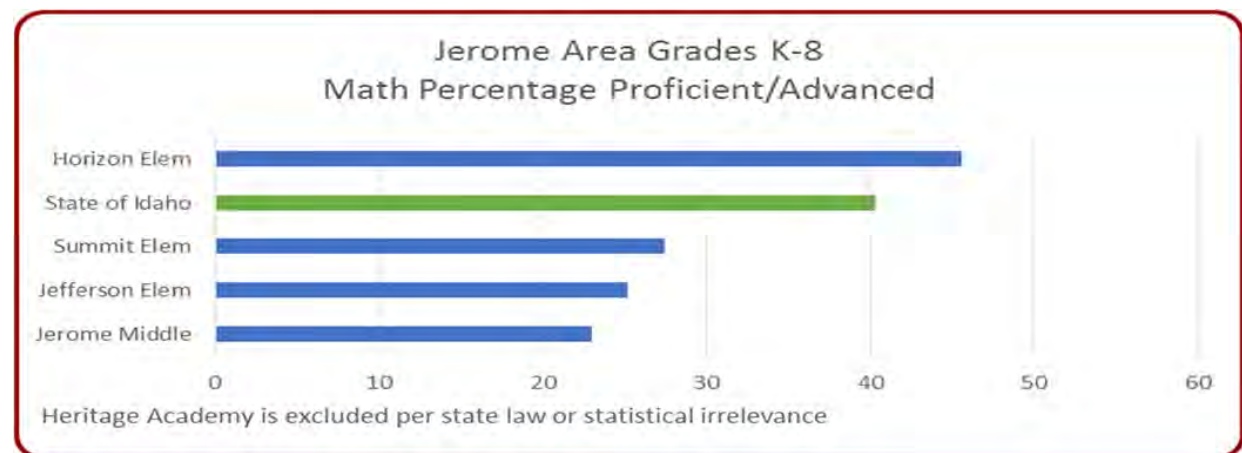
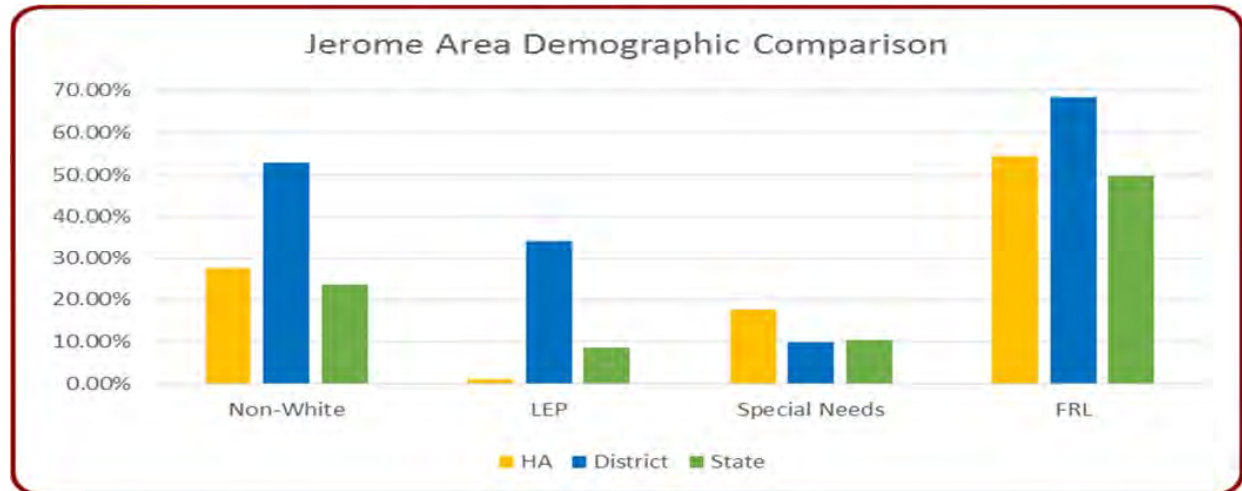
Gooding Area Comparison Data

The PCSC authorizes one school in the Gooding area: North Valley Academy (K-12).



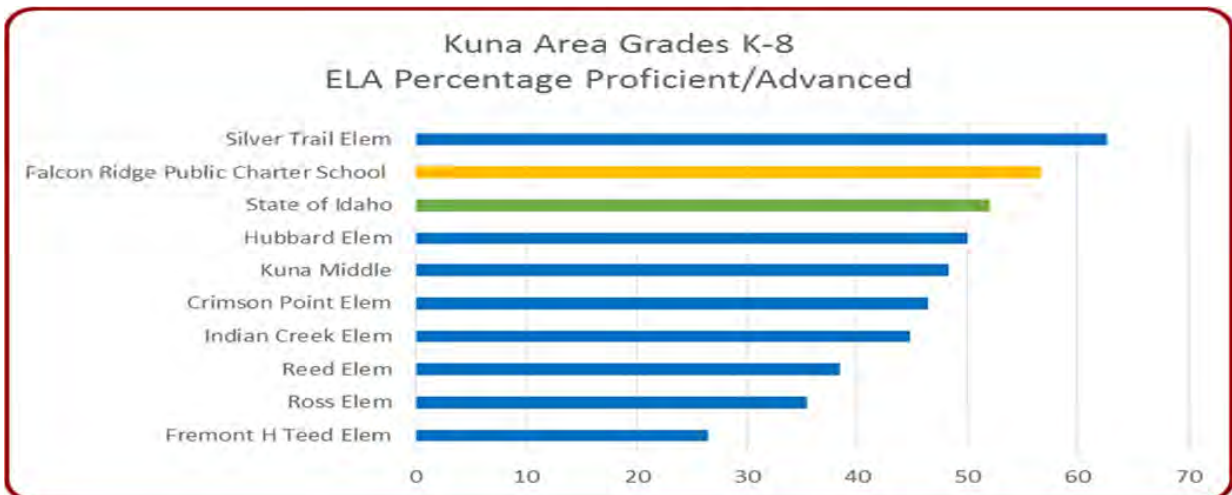
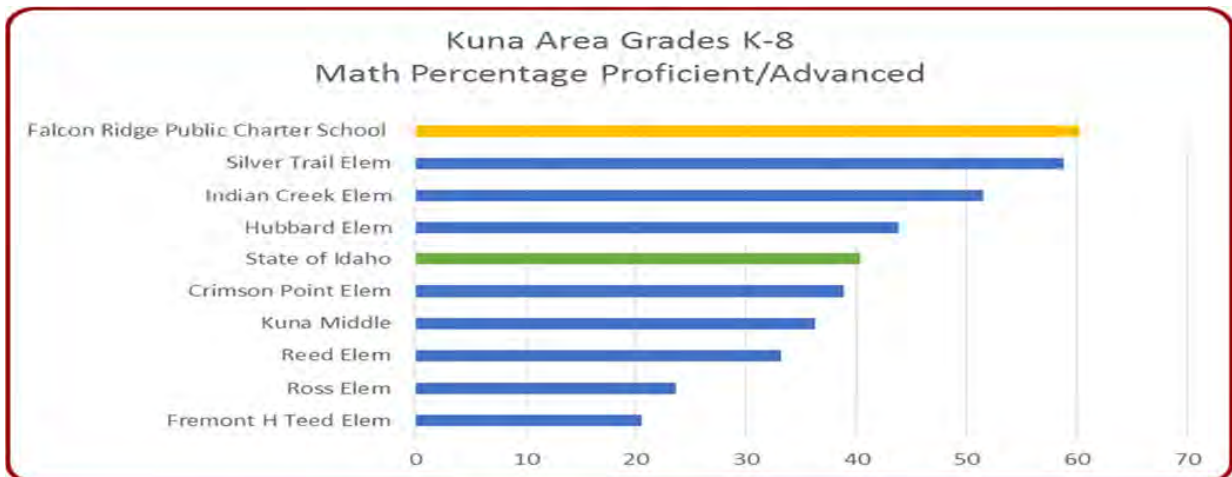
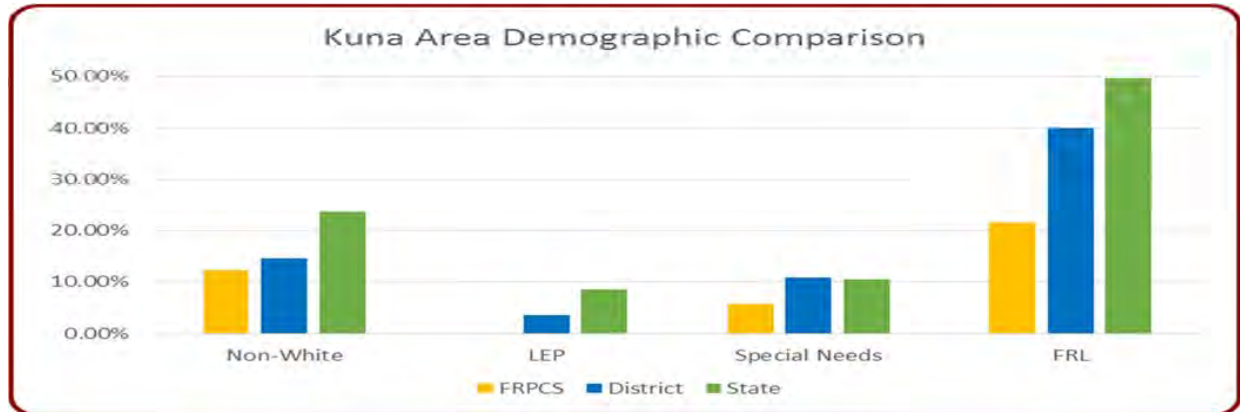
Jerome Area Comparison Data

The PCSC authorizes one school in the Jerome area: Heritage Academy (K-8).



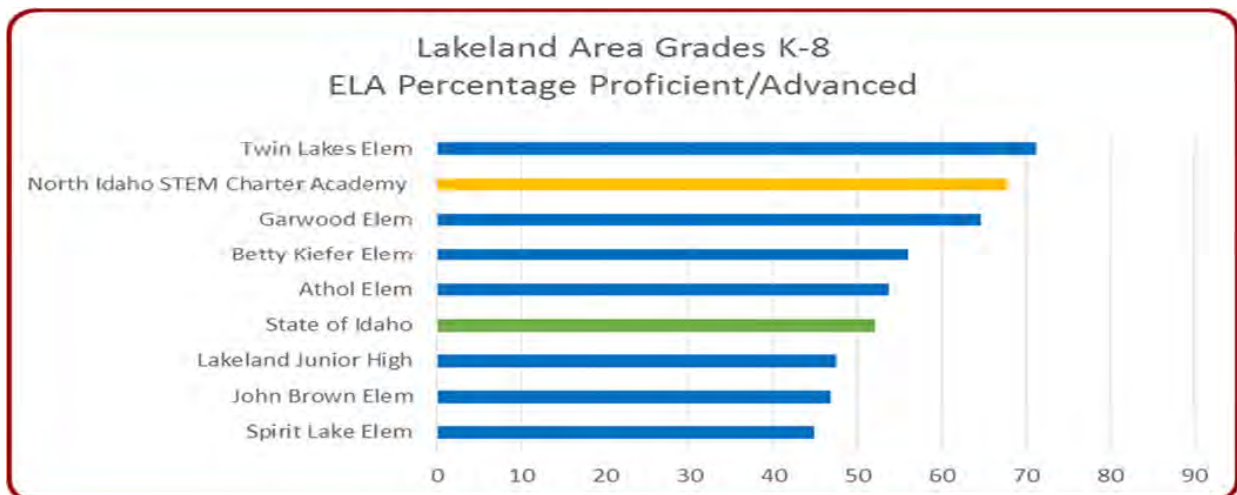
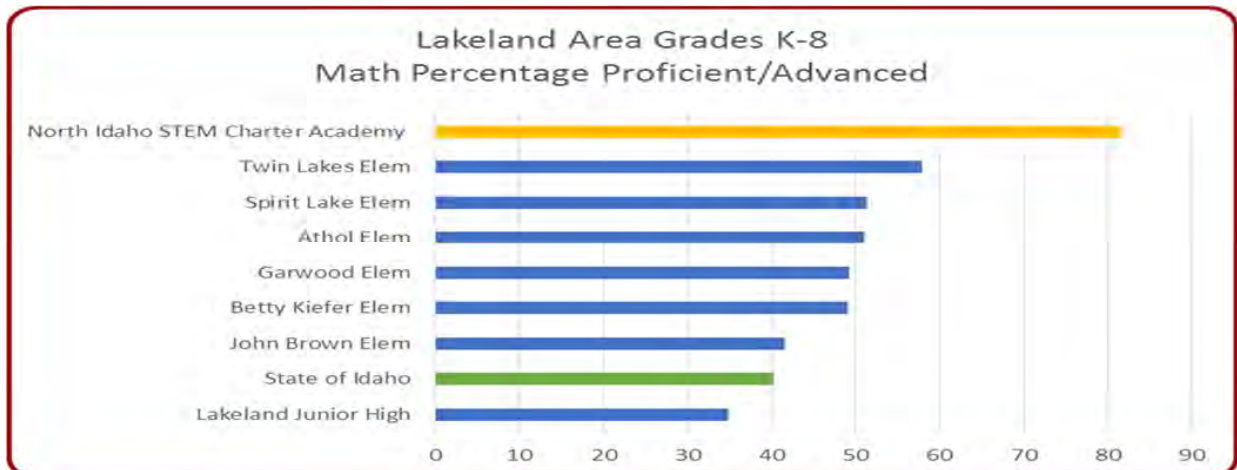
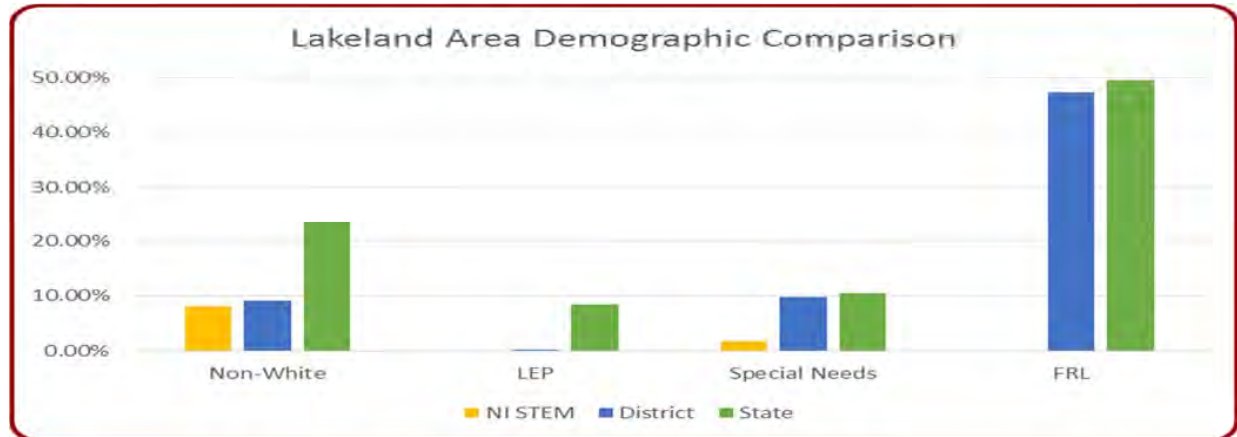
Kuna Area Comparison Data

The PCSC authorizes one school in the Kuna area: Falcon Ridge Public Charter School (K-8).



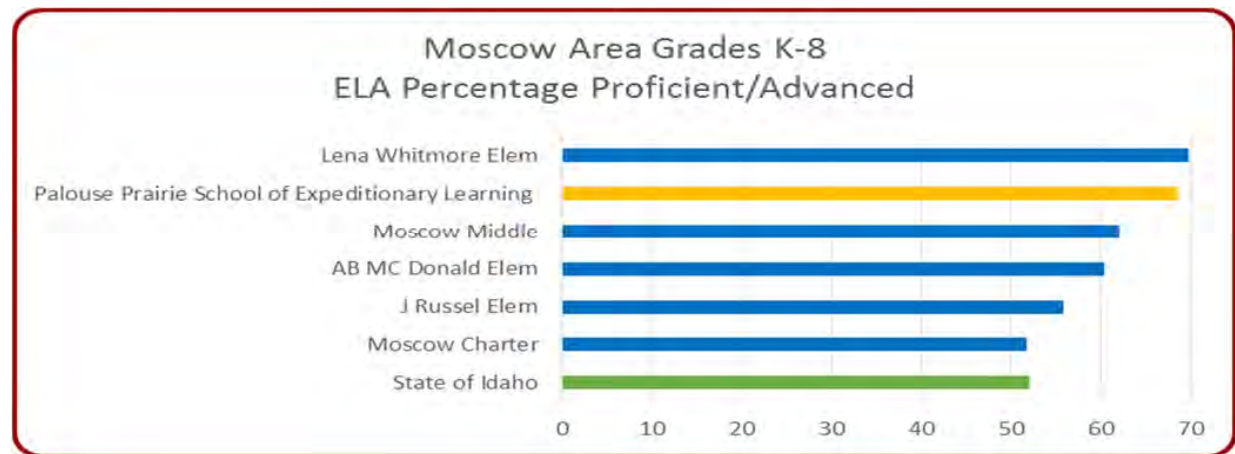
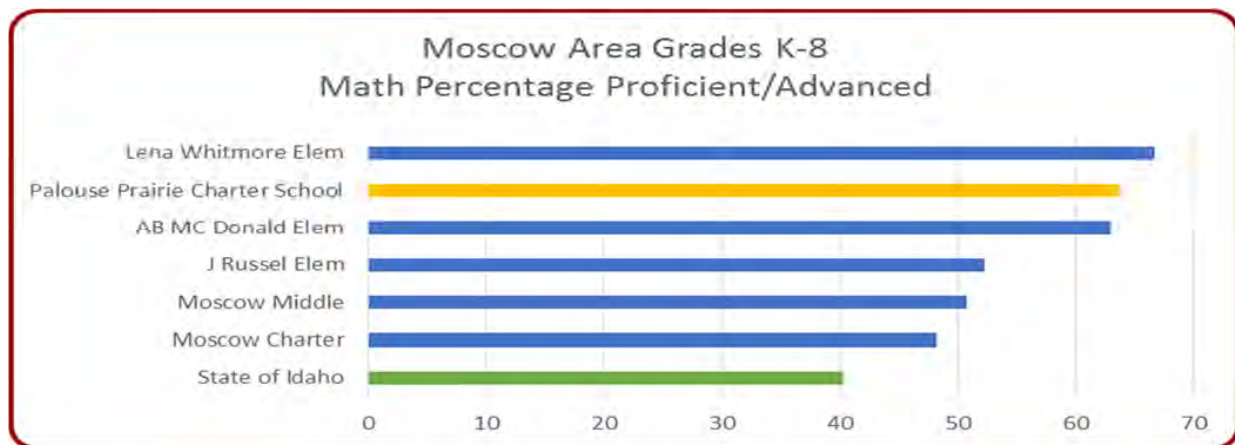
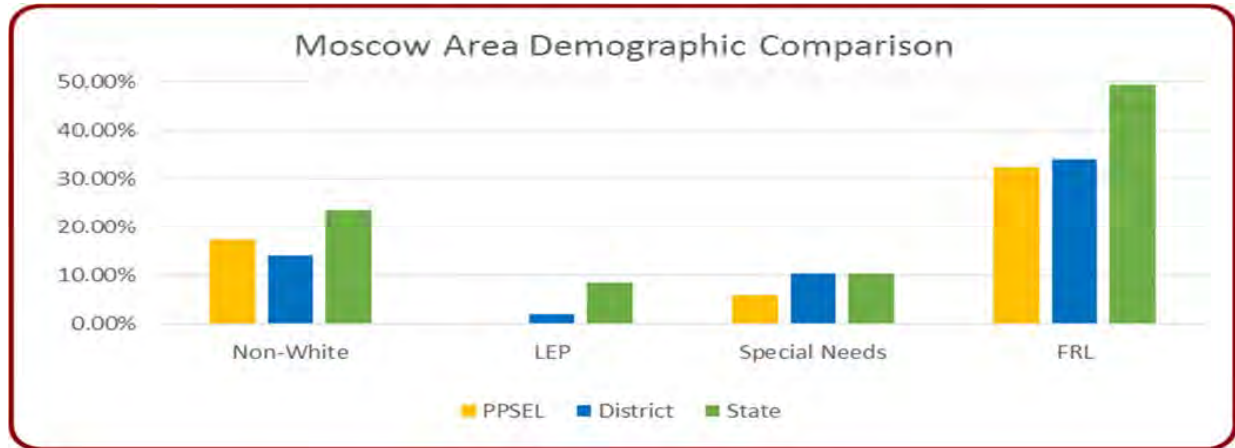
Lakeland Area Comparison Data

The PCSC authorizes one school in the Lakeland area: North Idaho STEM Charter Academy (K-9).



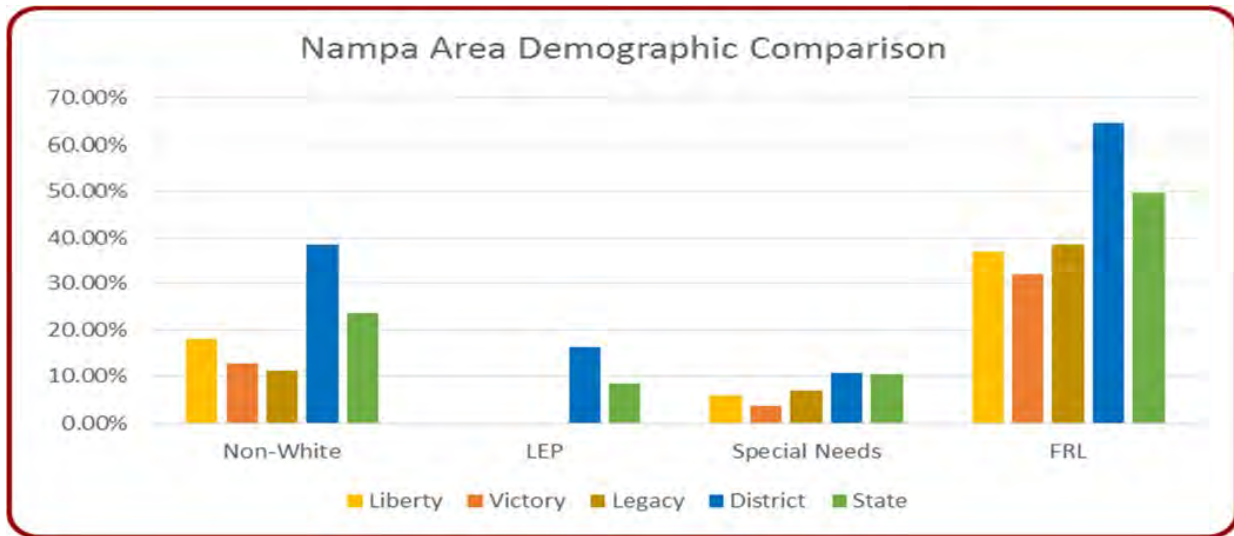
Moscow Area Comparison Data

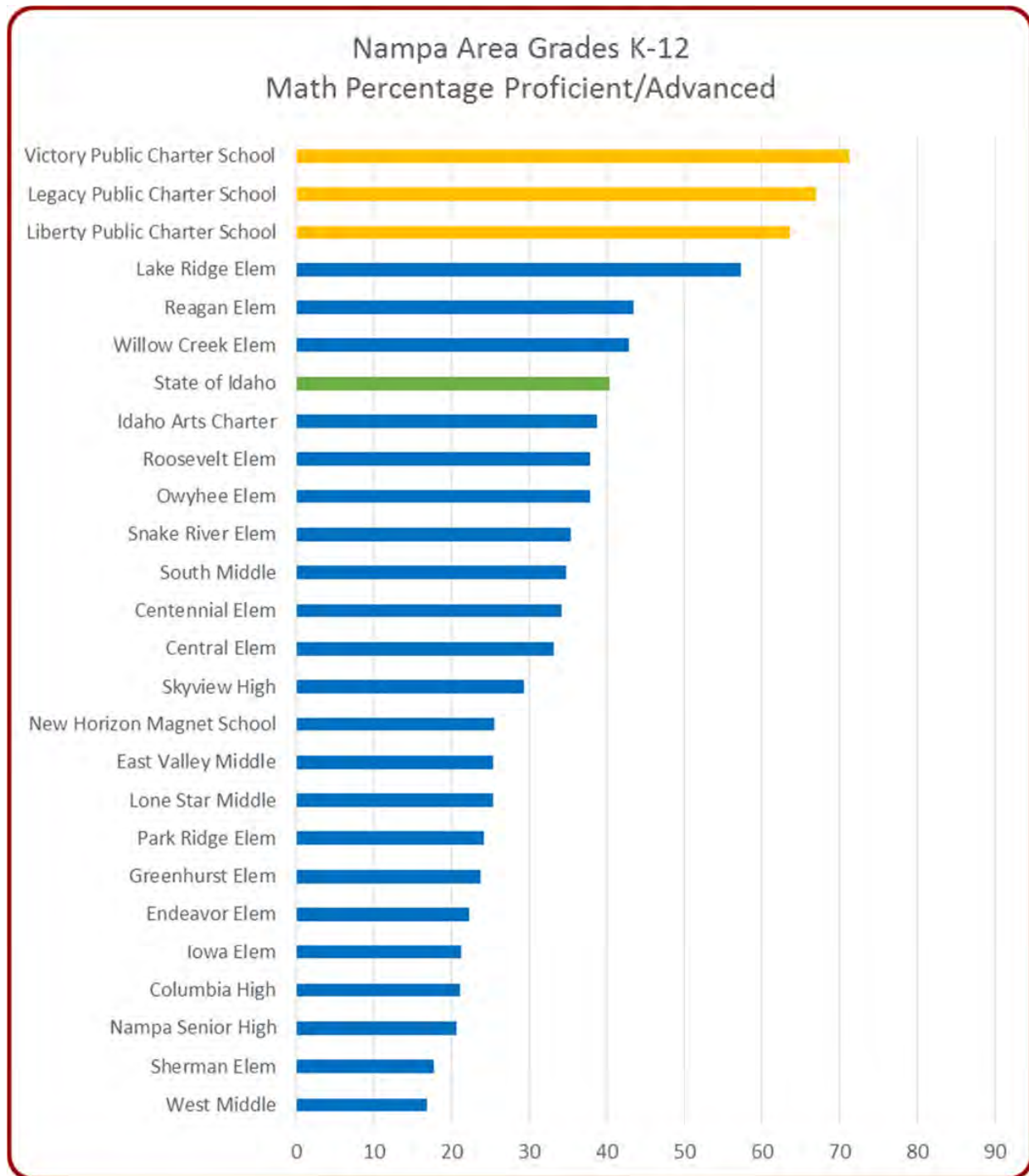
The PCSC authorizes one school in the Moscow area: Palouse Prairie Charter School (K-8).

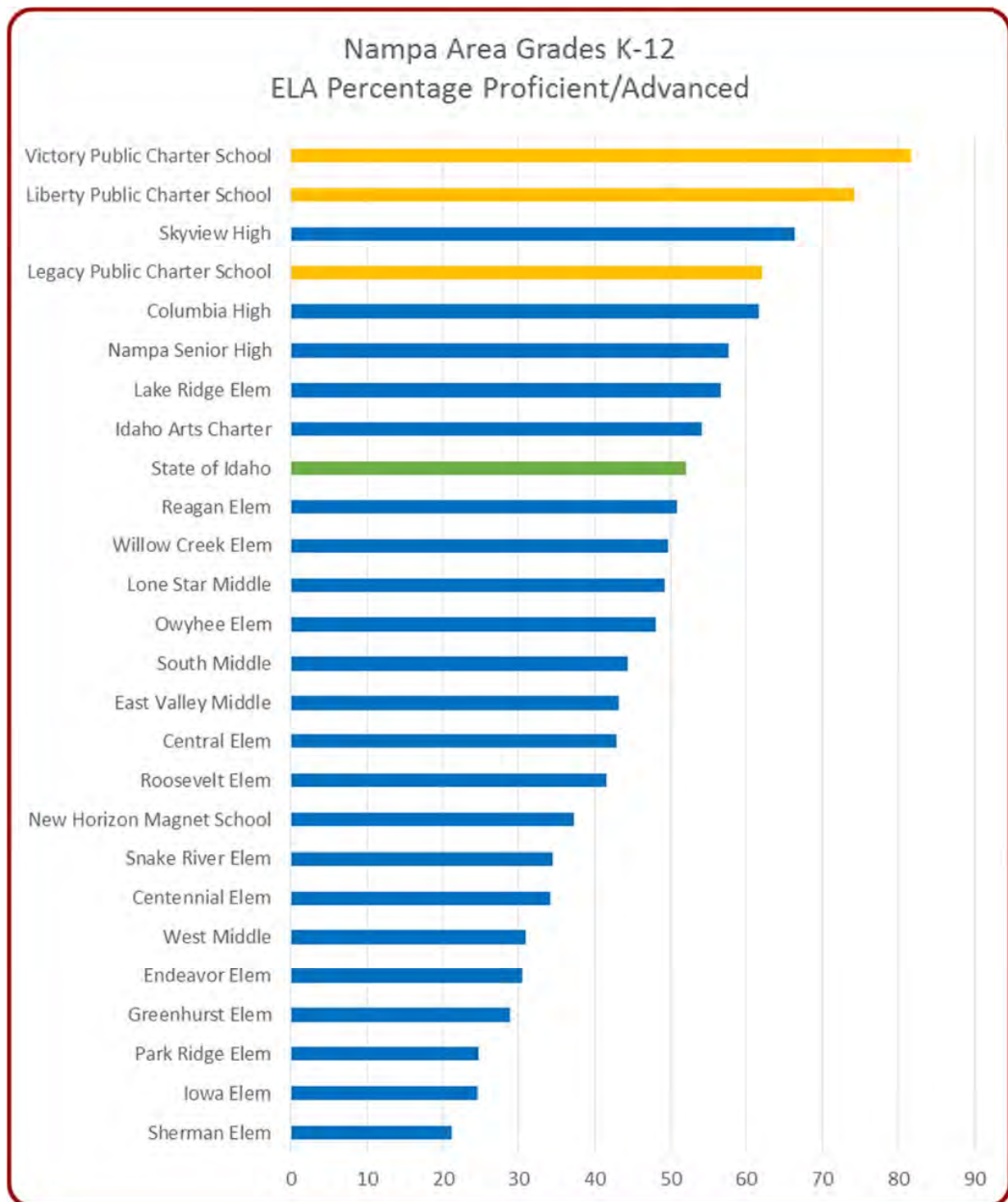


Nampa Area Comparison Data

The PCSC authorizes three schools in the Nampa area: Liberty Charter School (K-12), Victory Charter School (K-12), and Legacy Charter School (K-8).

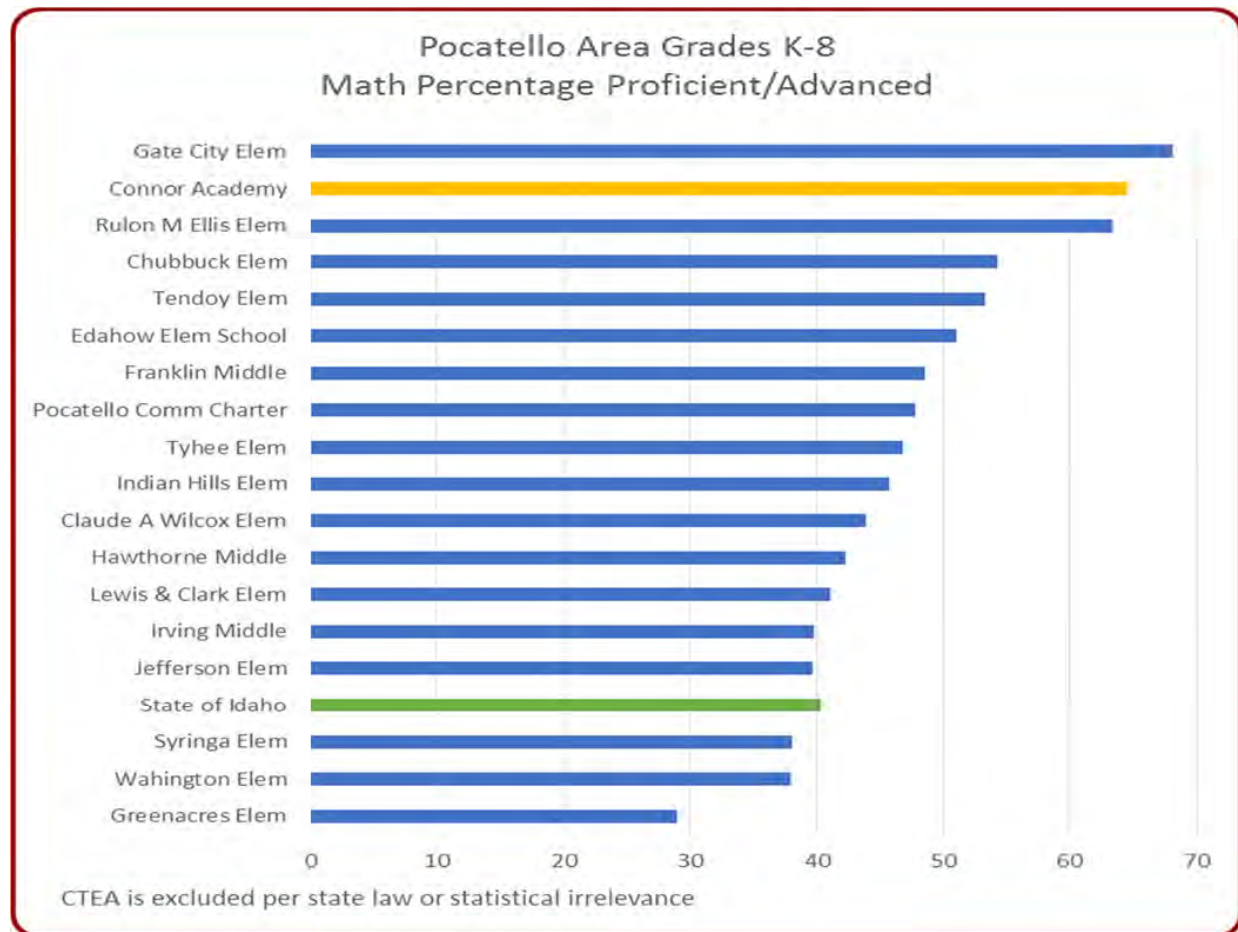
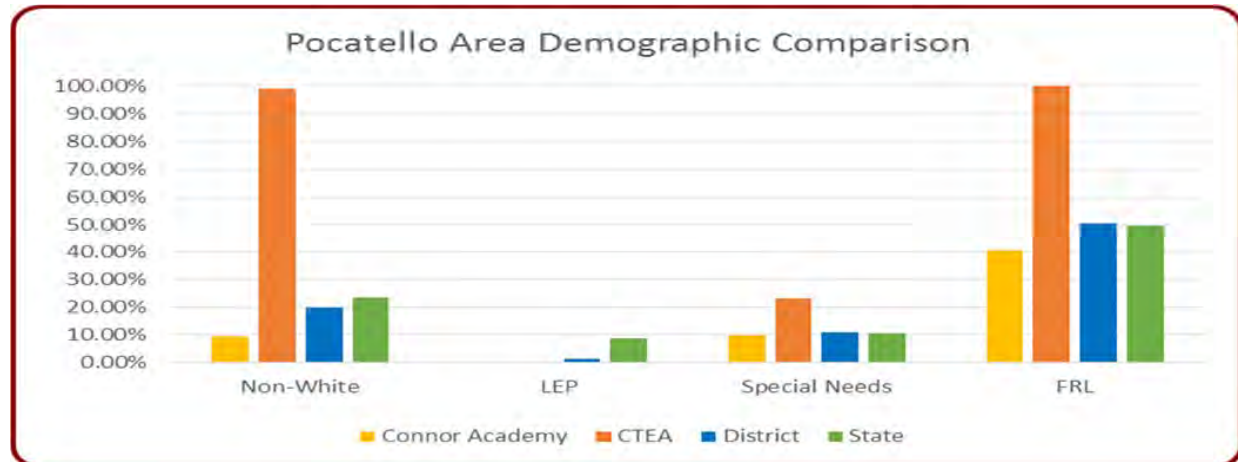


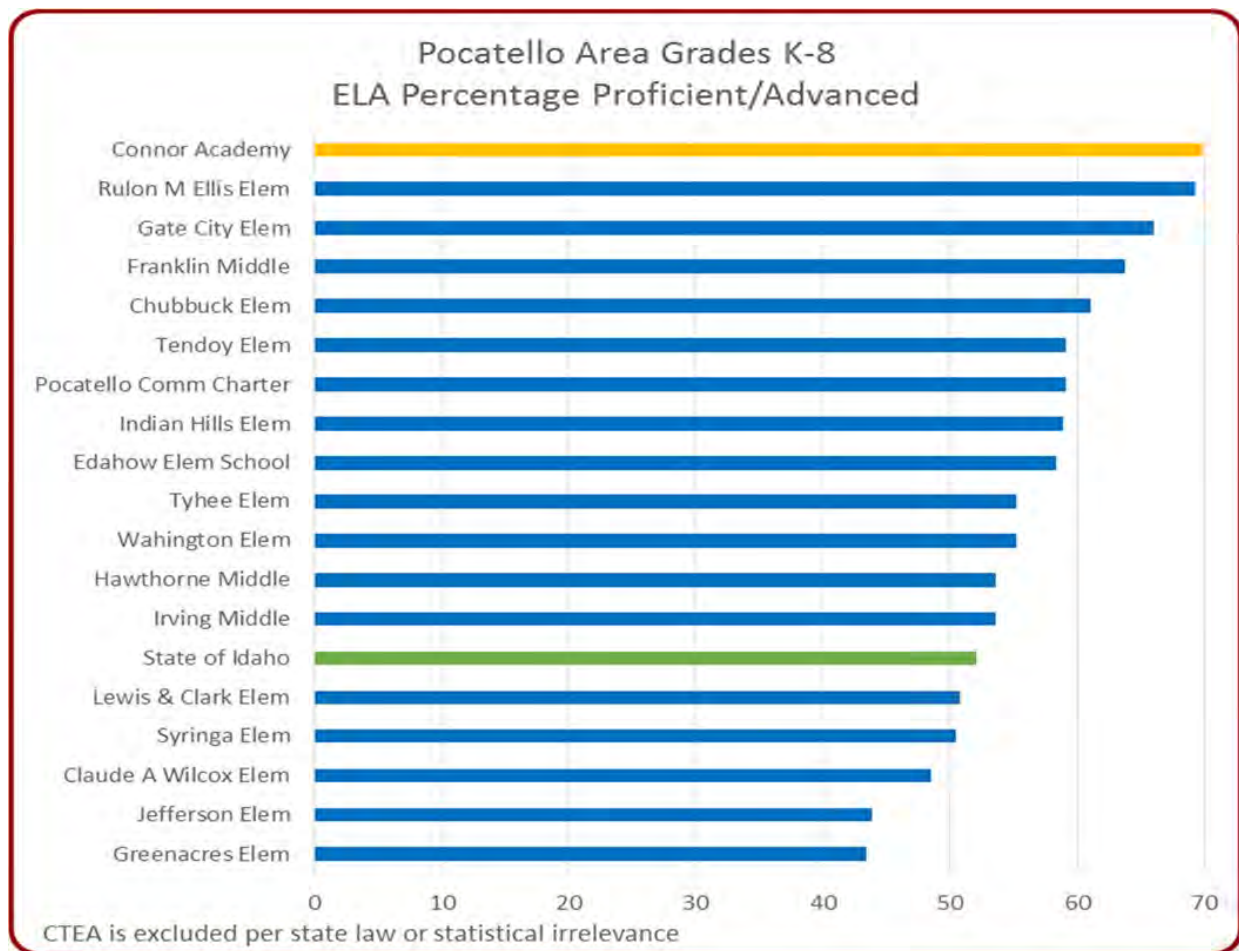




Pocatello Area Comparison Data

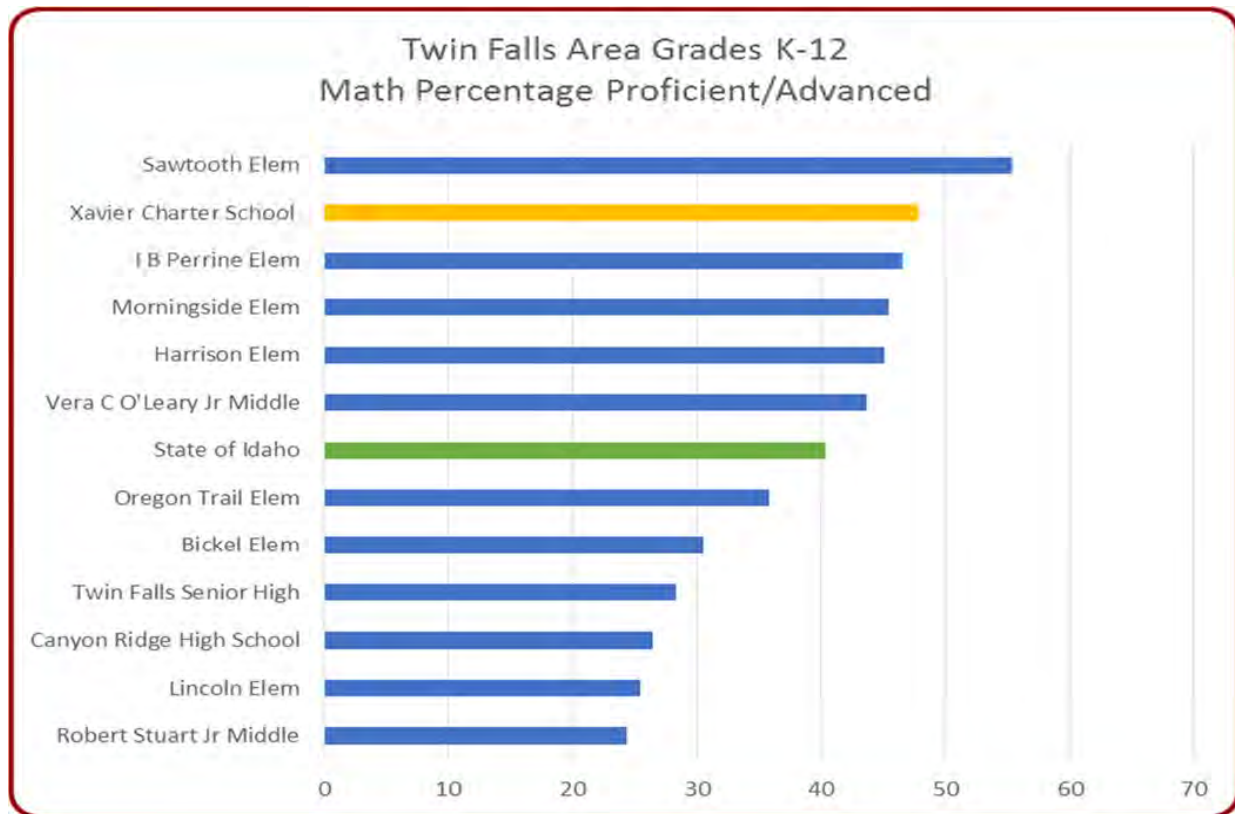
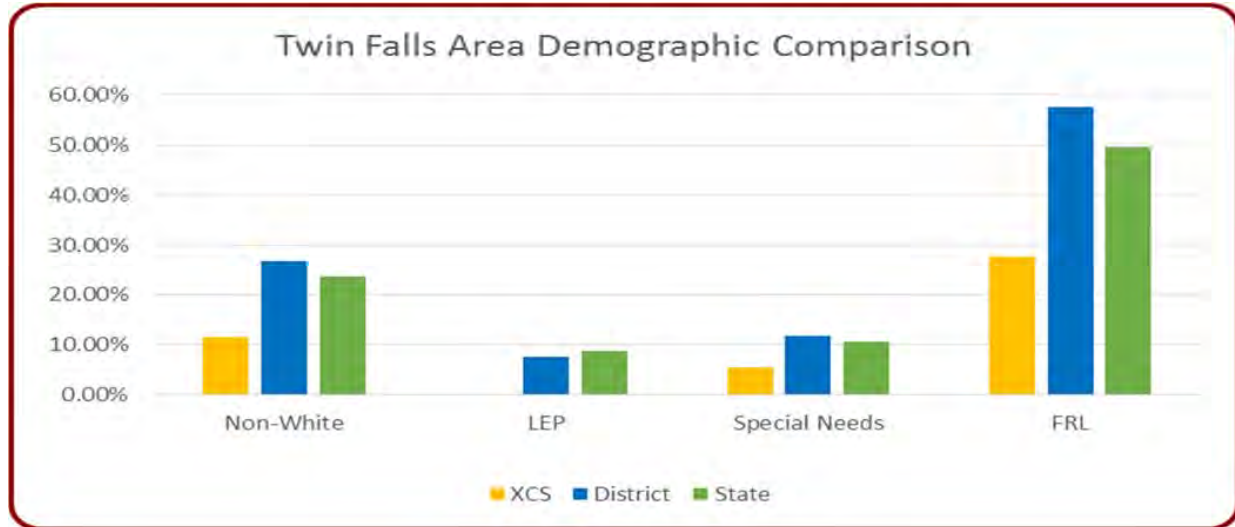
The PCSC authorizes two schools in the Pocatello area: Connor Academy (K-8), formerly known as The Academy, and Chief Tahgee Elementary Academy (K-8).

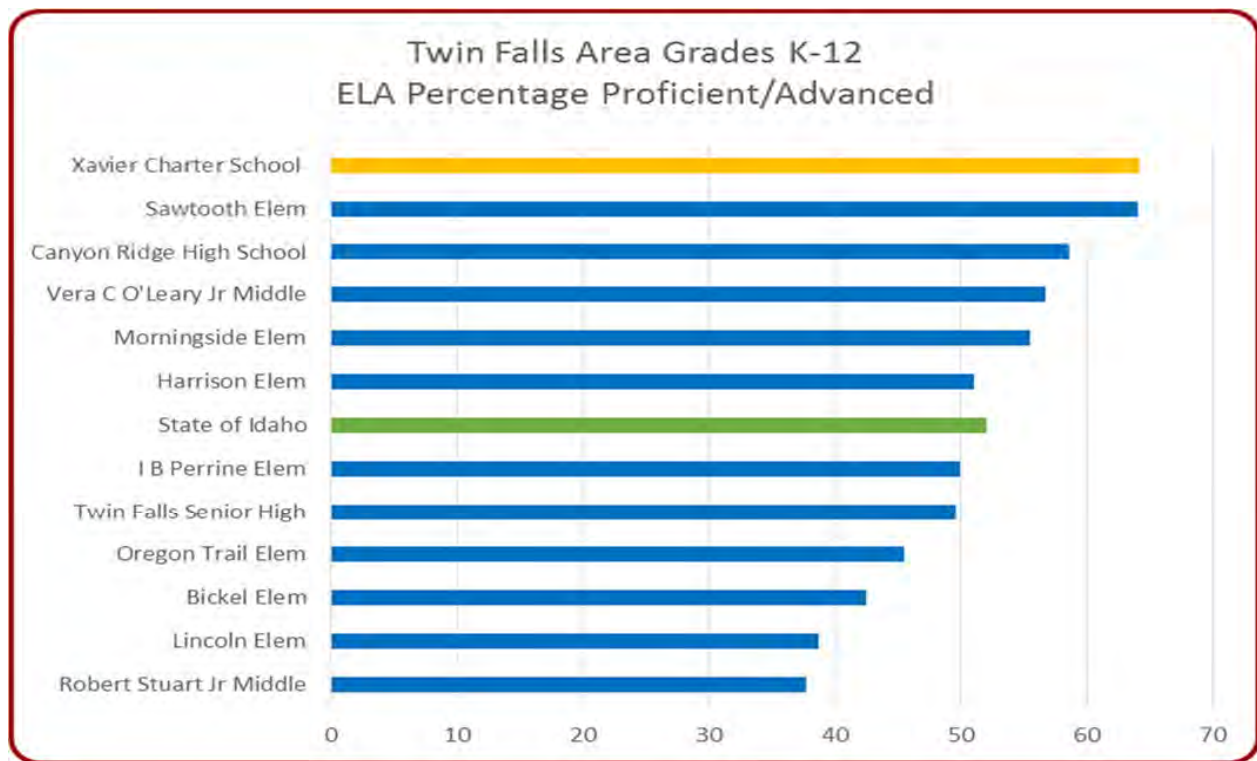




Twin Falls Area Comparison Data

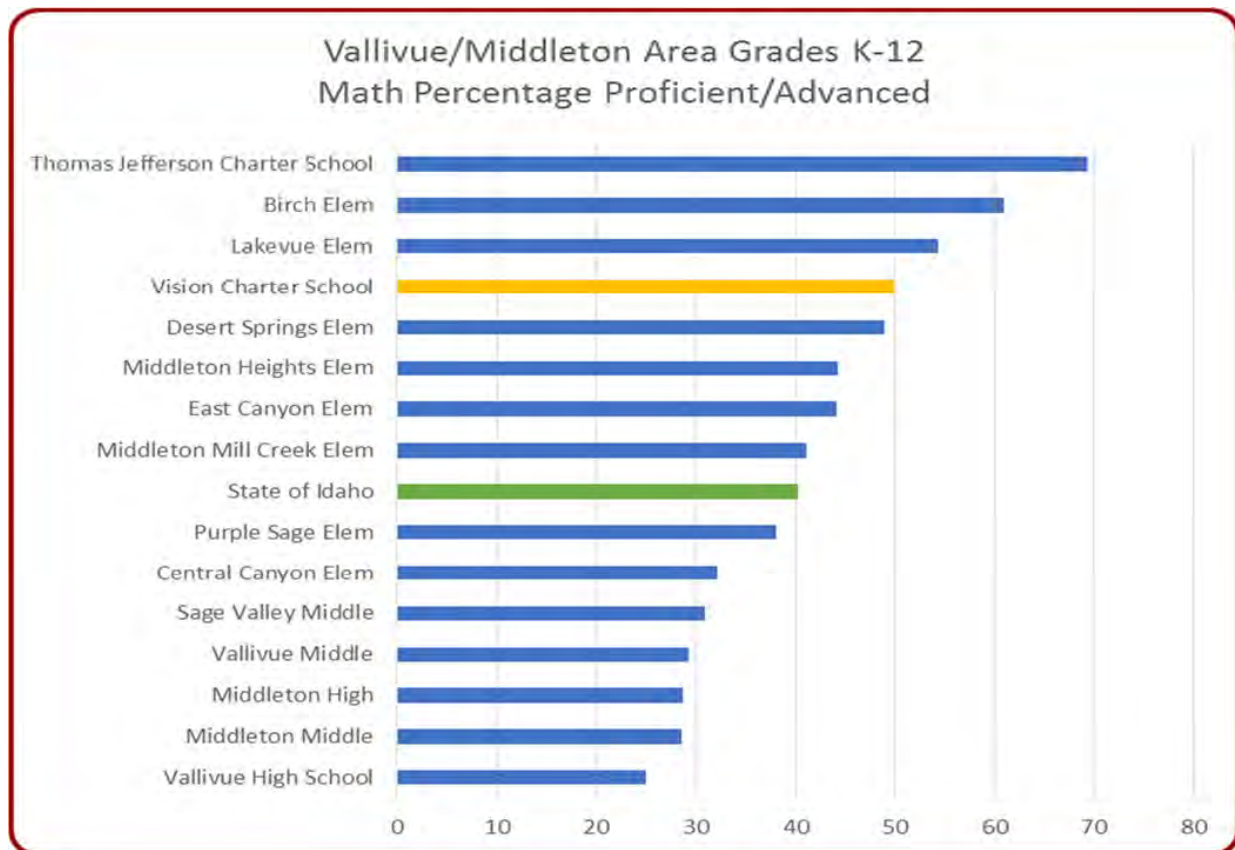
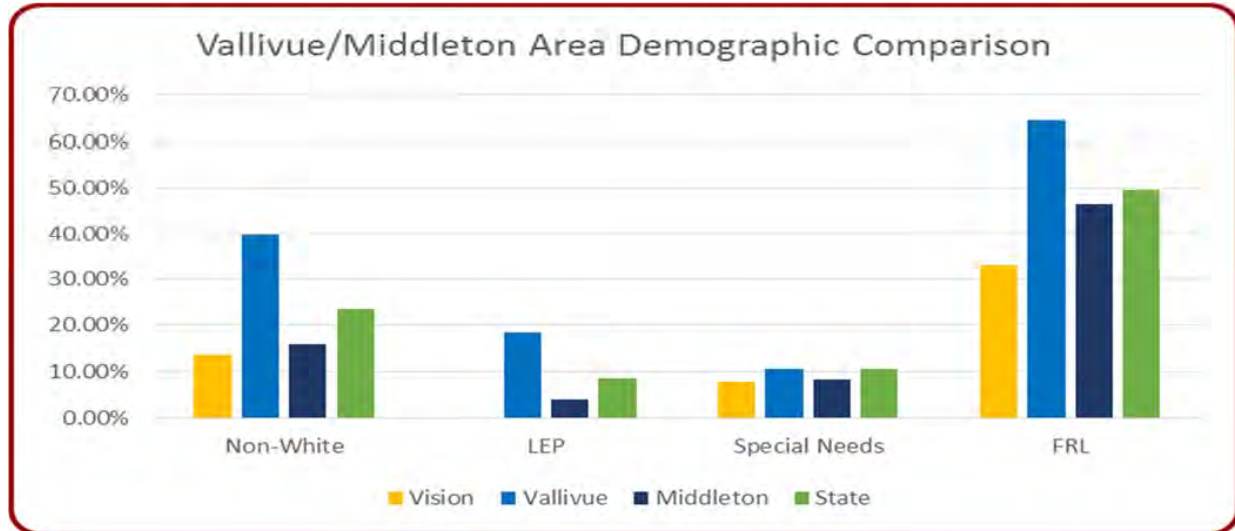
The PCSC authorizes one school in the Twin Falls area: Xavier Charter School (K-12).

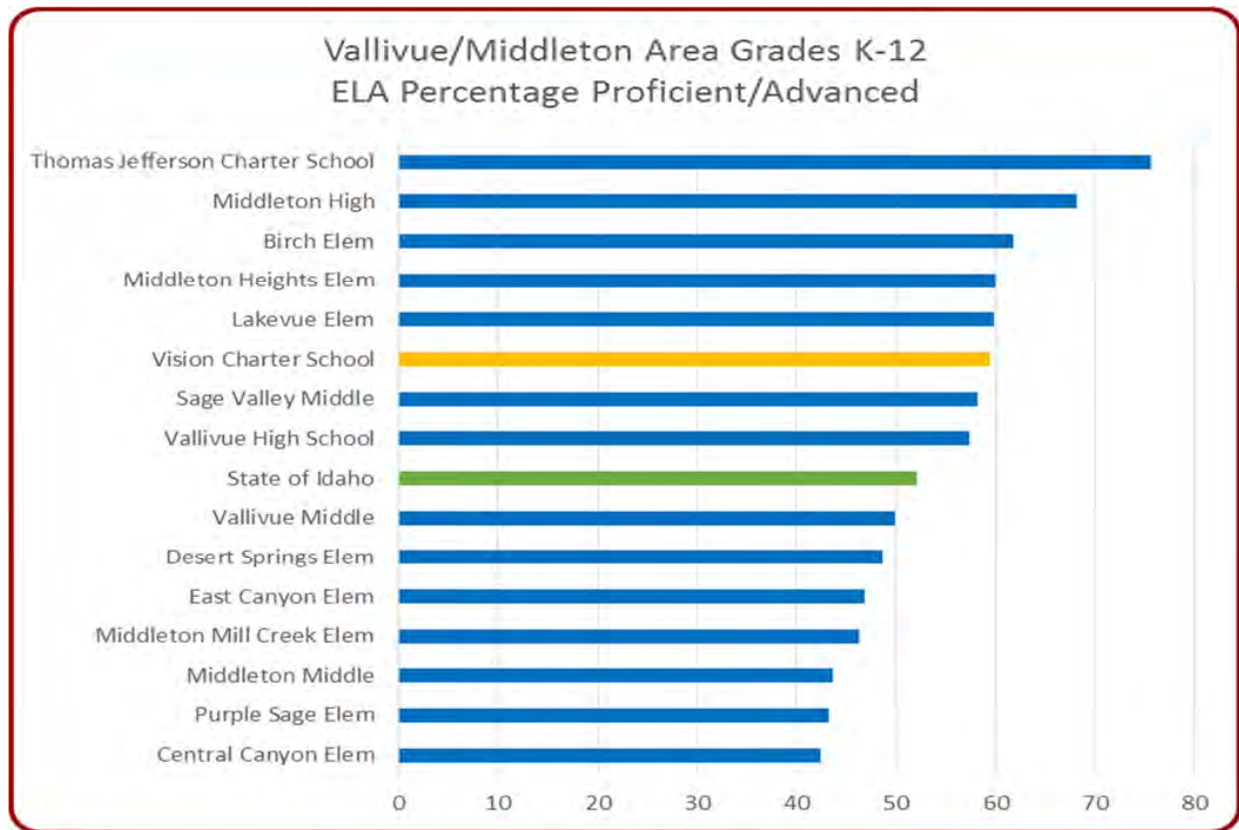




Vallivue/Middleton Area Comparison Data

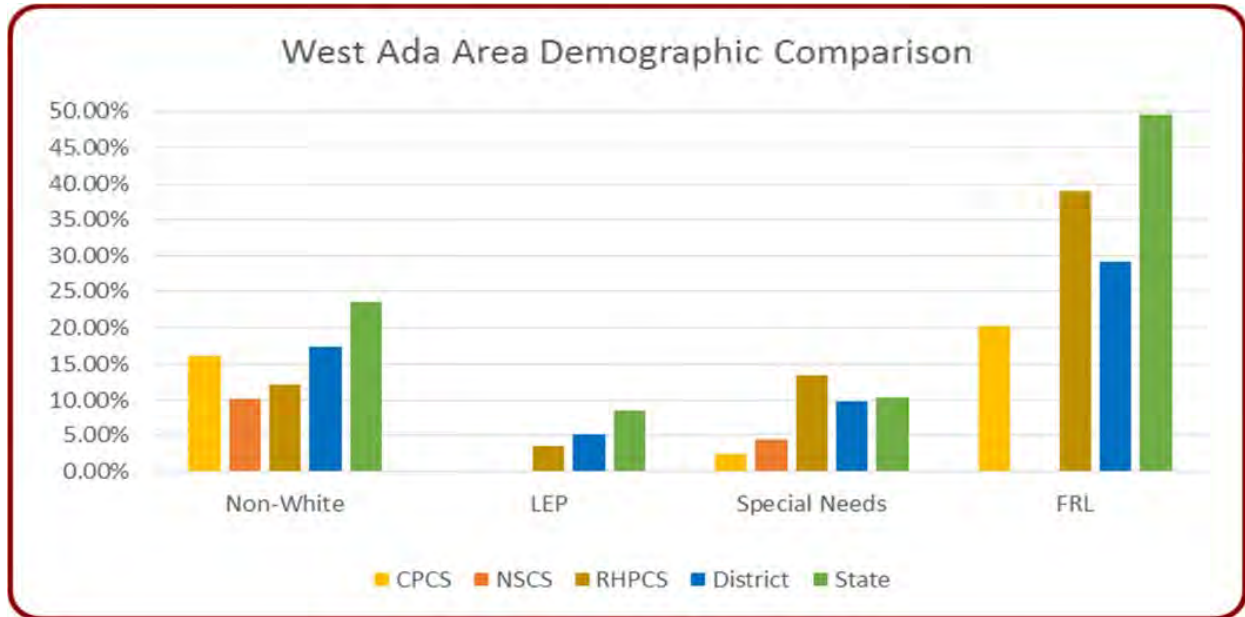
The PCSC authorizes one school in the Vallivue/Middleton area: Vision Charter School (K-12).

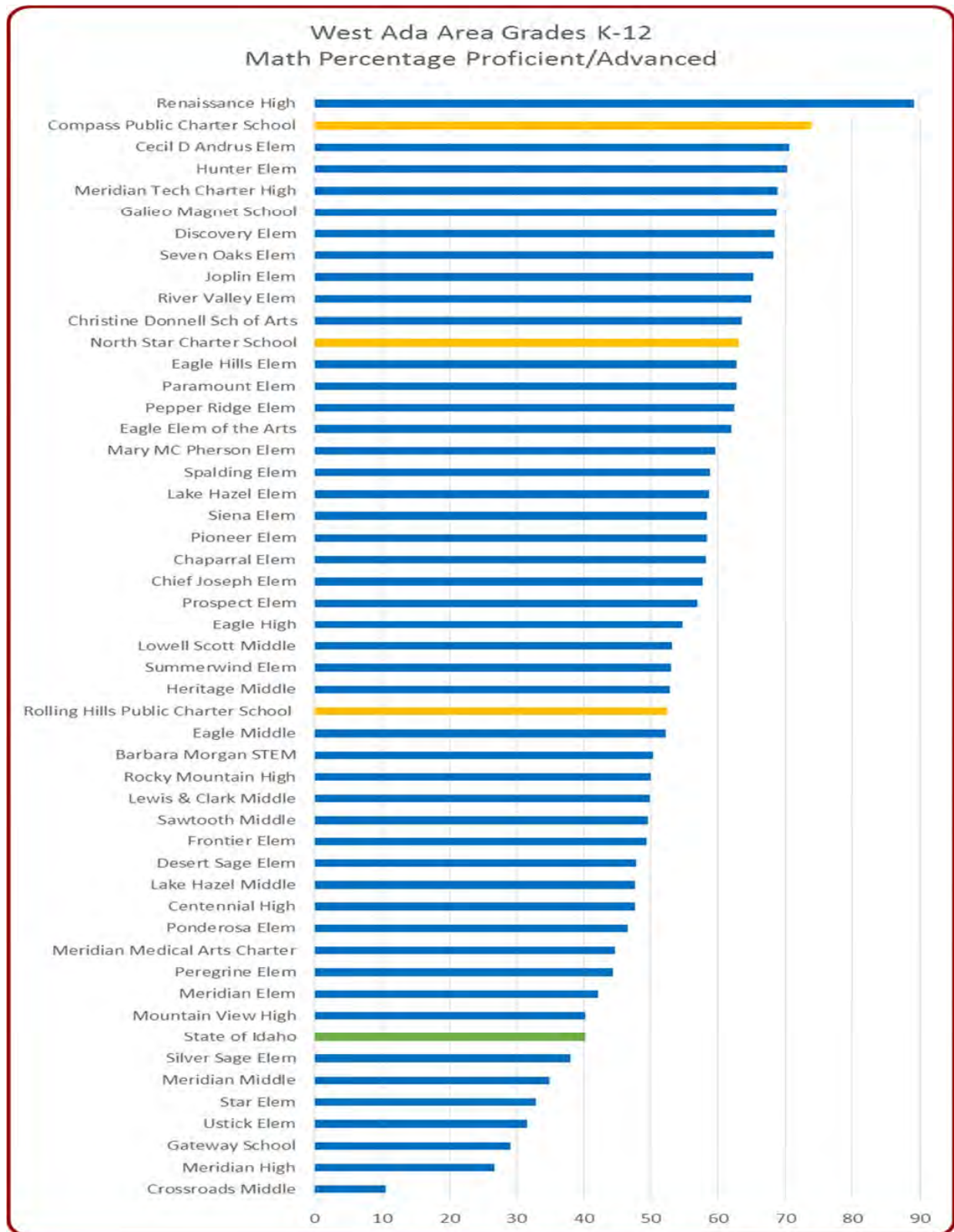


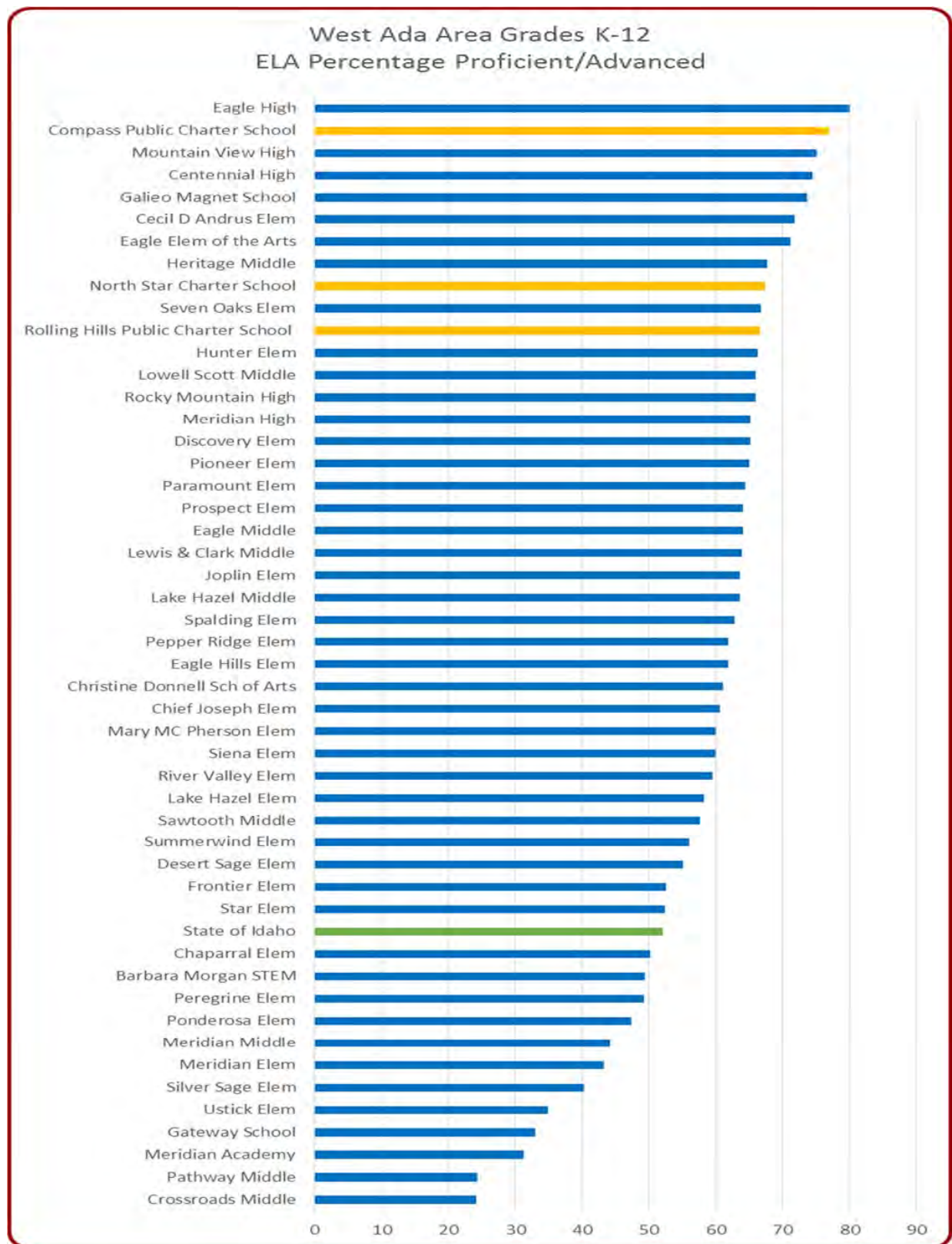


West Ada Area Comparison Data

The PCSC authorizes three schools in the West Ada area: Compass Public Charter School (K-12), North Star Charter School (K-12), and Rolling Hills Public Charter School (K-8).

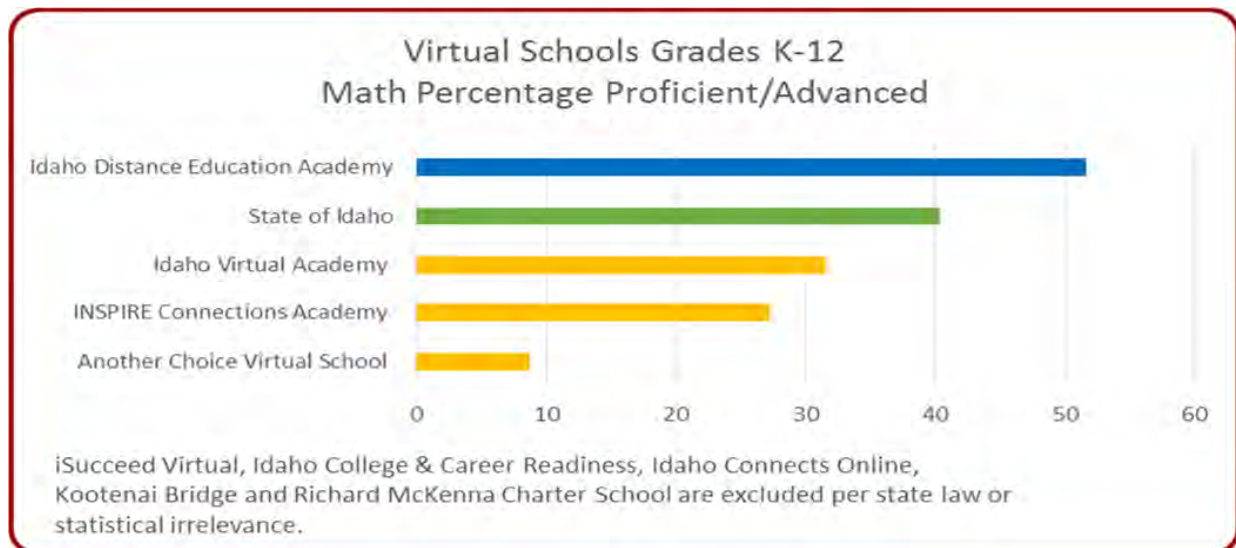
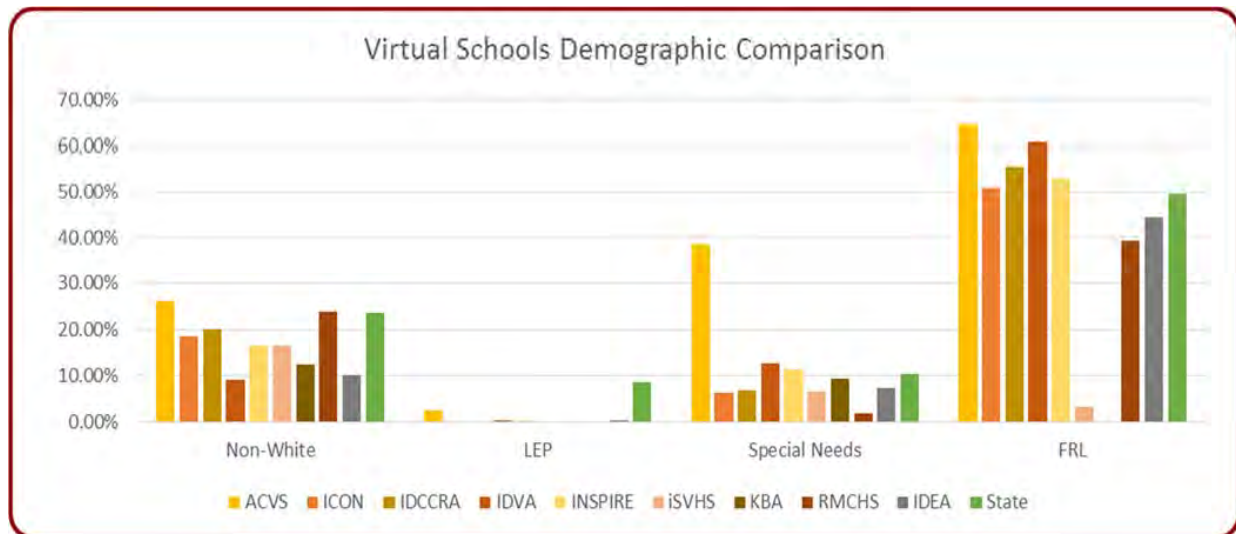


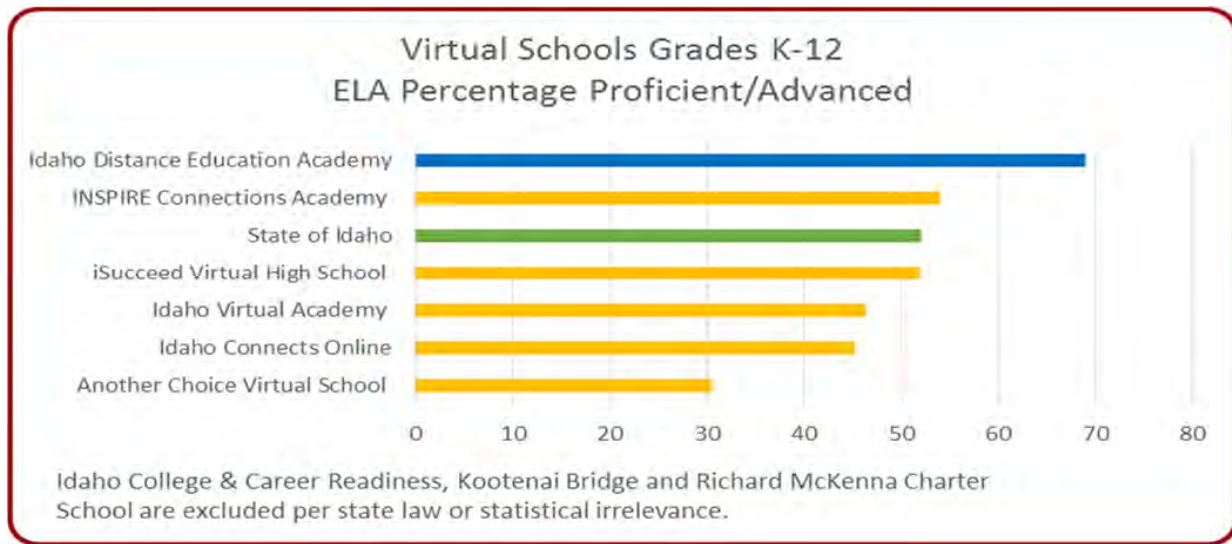




Virtual School Comparison Data

The PCSC authorizes eight virtual schools: Another Choice Virtual School (K-12), Idaho Connects Online (9-12), Idaho College and Career Readiness Academy, Idaho Virtual Academy (K-12), , INSPIRE Connections Academy (K-12), iSucceed Virtual High School (9-12), Kootenai Bridge Academy (11-12), and Richard McKenna Charter High School (9-12). ACVS and KBA serve students across multiple districts; the other schools serve students statewide. KBA and RMCHS's virtual programs serve alternative student populations. Idaho Distance Education Academy (K-12) is a district-authorized virtual school, and is included here for comparison purposes.

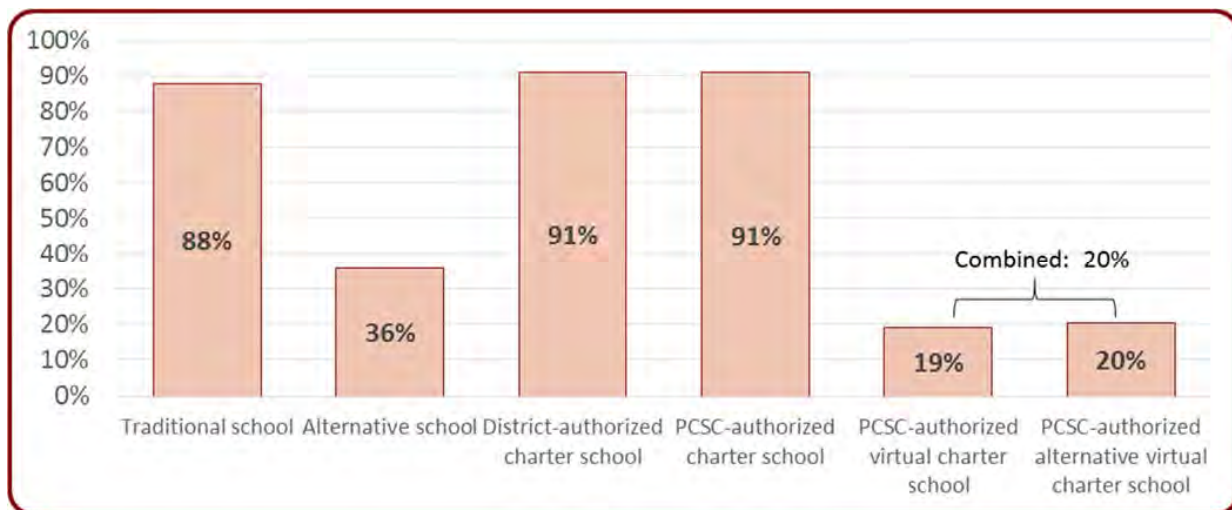




Graduation Rates

The Idaho State Board of Education published the following comparison of high school graduation rates in January 2016. The chart reflects the adjusted cohort graduation rate (ACGR) required by the federal government for the Class of 2014. Due to a significant difference in methodology, these rates cannot be compared with those of 2013.

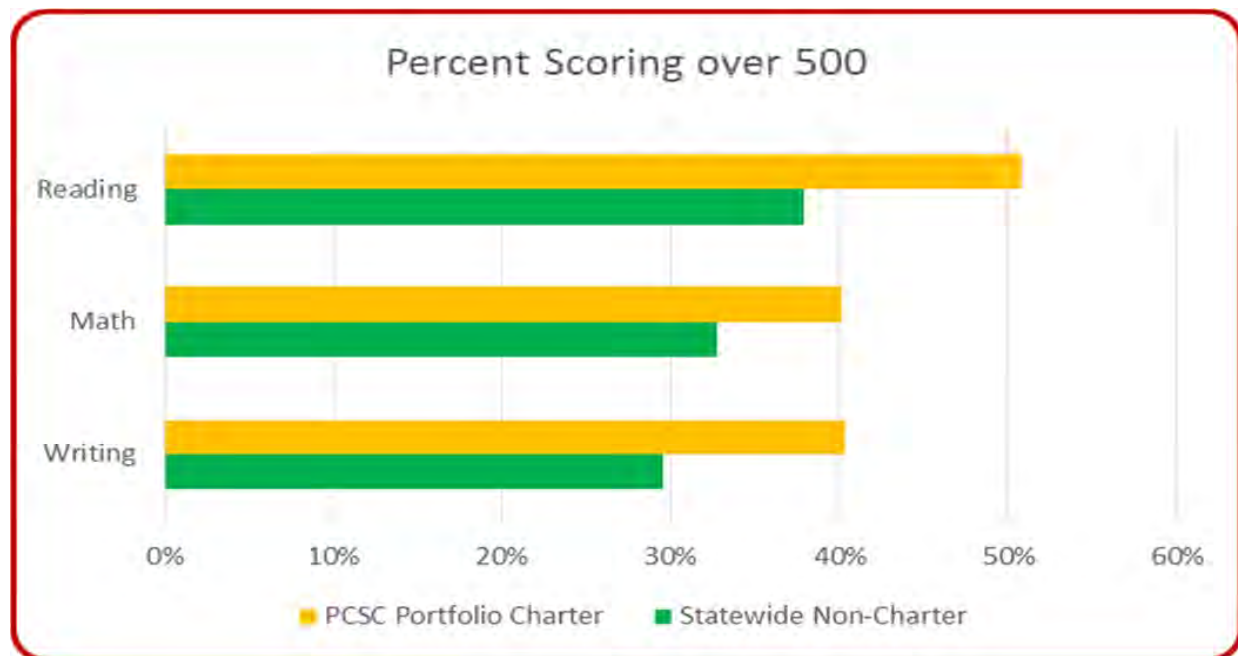
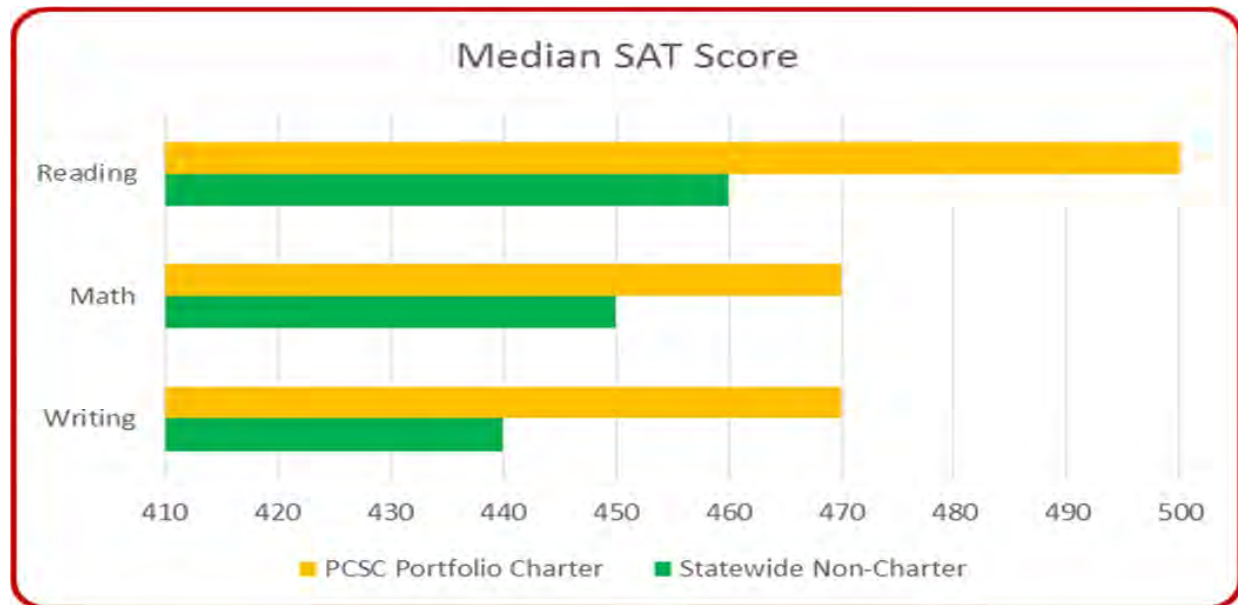
Brick-and-mortar charter schools in the PCSC's portfolio had slightly higher graduation rates than traditional public schools. Virtual schools had significantly lower rates. It may be that students who transfer to virtual schools are more likely to be behind their cohorts than students who transfer to other types of schools. This is a question that needs to be examined. Additionally, virtual schools were less likely than other types of schools to collect required exit data for their students. Students for whom exit data was not collected must be counted as if they did not graduate on time.



SAT Results

SAT results offer additional perspective regarding schools' academic outcomes. Students scoring over 500 on the SAT are considered "college ready."

The following charts compare SAT results for PCSC portfolio schools to those of non-charter schools statewide. The data reflects all 11th and 12th grade students who took the SAT during the 2014-15 school year. In cases where a student tested more than once, only the highest score is used. The non-charter category included 17,788 students; the PCSC portfolio category included 648 students.



Operational Outcomes

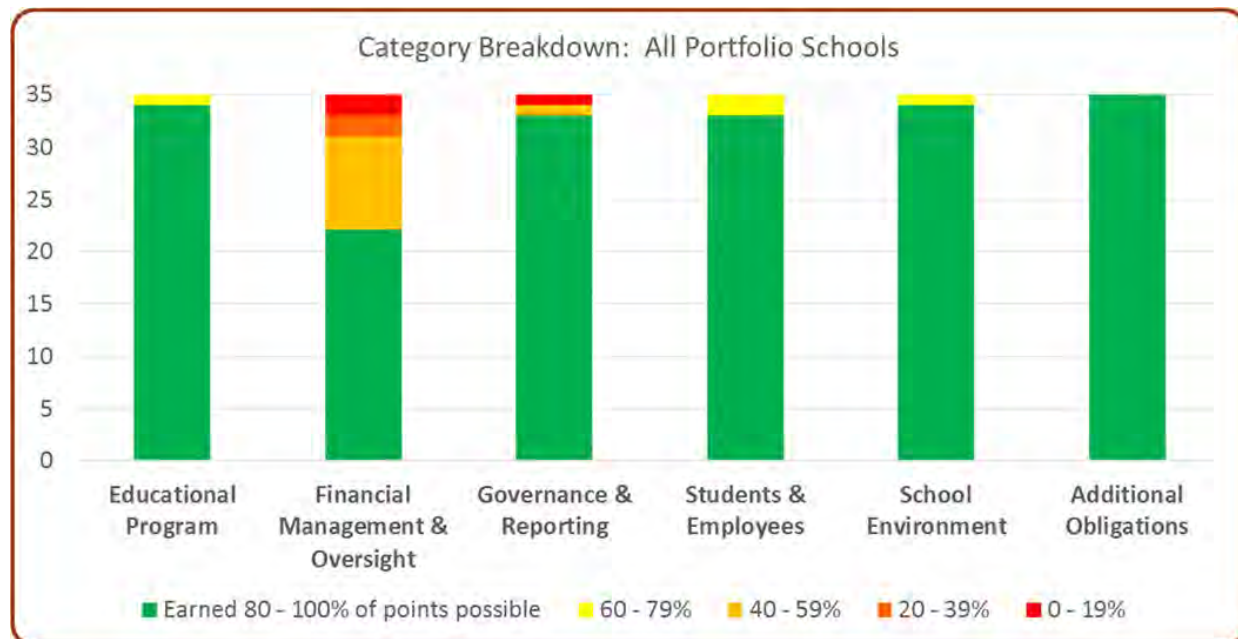
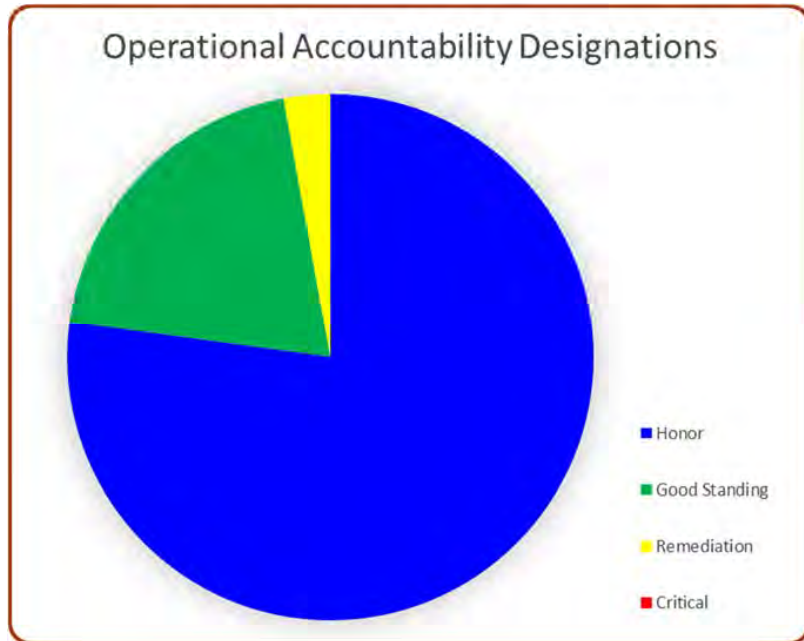
The operational section of the framework assesses a range of management and compliance outcomes.

Most of the measures are designed to reflect not only a school's level of compliance, but also the expediency with which any occasions of non-compliance were resolved.

For example, a school that had special education findings during the year, but proceeded to correct them, will score higher than a school that failed to correct such findings. Similarly, a school that turned in one late report will score higher than a school whose reports were consistently tardy.

Most schools that lost points on operational measures struggled with late reporting, failure to meet transparency requirements, and/or fiscal audit findings.

In the majority of cases, improved results appear to be attainable by increased attention to due dates and professional development for board members and business management personnel.



Financial Outcomes

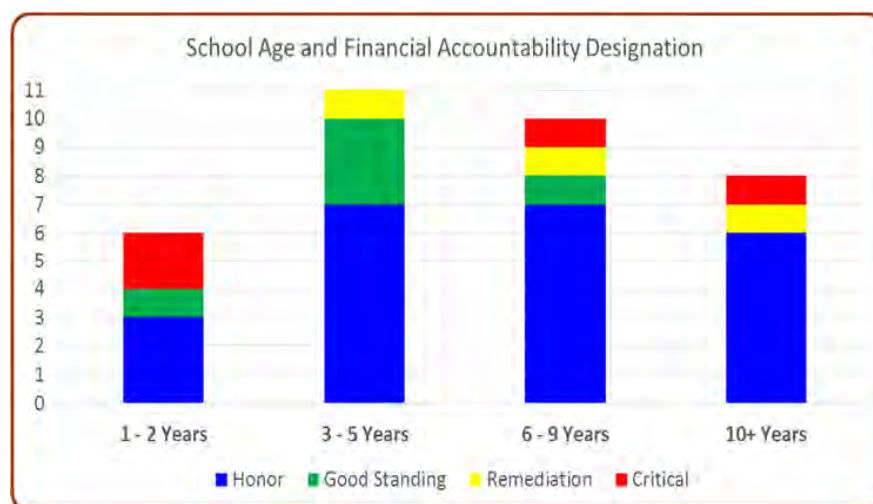
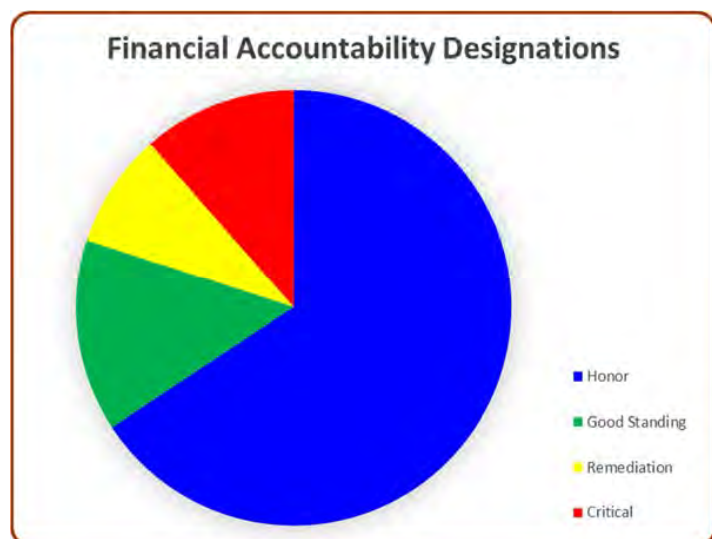
Idaho's public charter schools received \$94,231,644 in state funding during FY15.

Finances represent one of the most common areas in which public charter schools struggle, both in Idaho and nationwide. The Center for Education Reform's 2011 "The State of Charter Schools" report indicated that about 47% of charter school closures occurred for financial or facility reasons, compared to 19% for academic and 34% for operational or other causes. More recent reports indicate a shift toward closures based on academic shortcomings.

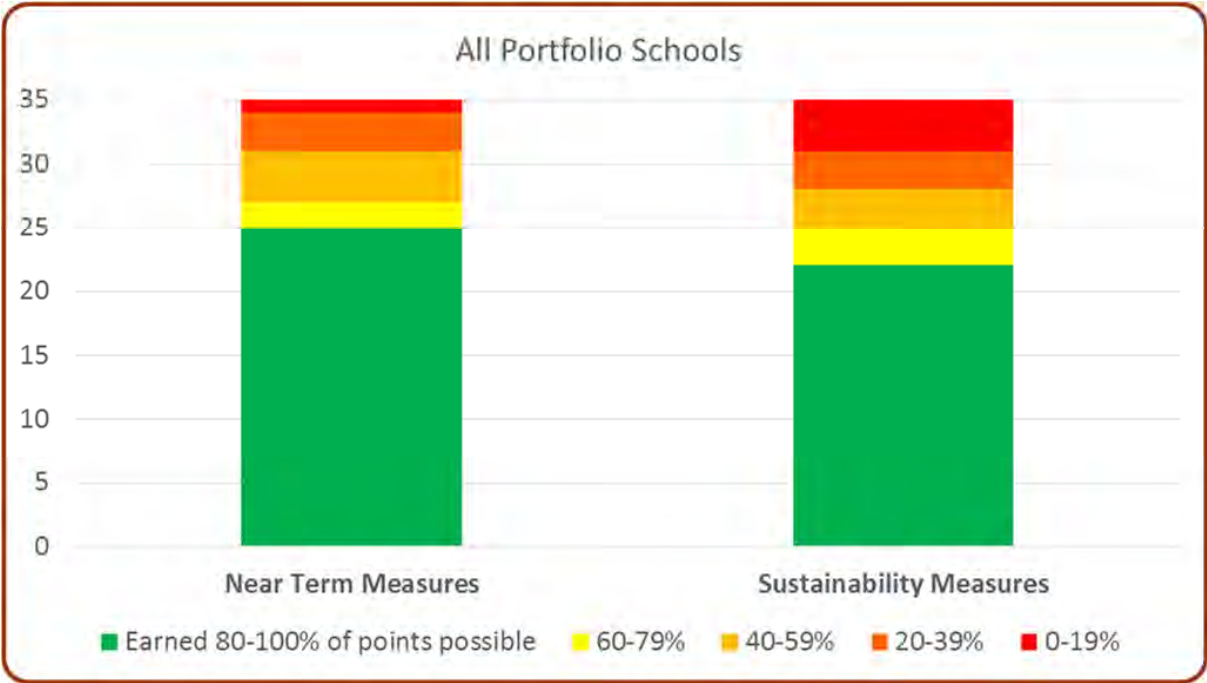
The PCSC's performance framework evaluates schools' near-term financial health and long-term viability. "Near-term" generally refers to the fiscal year following the audit, while "sustainability" refers to the school's viability two or more years in the future. Data is taken mostly from independent fiscal audits, in addition to unit calculation worksheets and ISEE reports.

While the financial measures in the framework serve as an excellent starting place for evaluating schools' financial status, context is critical for full understanding of a school's viability. The data provided here represents scores only; contextual information is available in schools' individual reports.

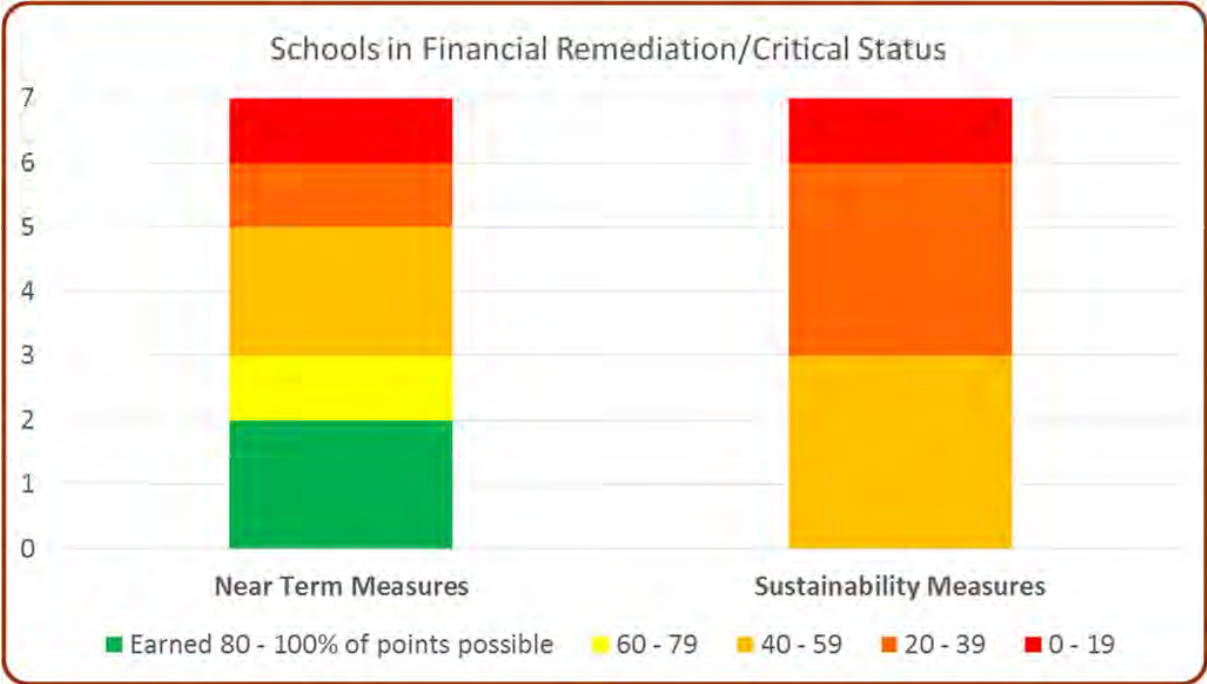
The financial status of PCSC portfolio schools ranges widely. A minority of schools face substantial concern, while 80% are presently in Honor or Good Standing status.



School maturity may be a factor in financial stability. Older PCSC portfolio schools appear more likely to be more financially stable than younger schools. However, longitudinal data will need to be collected in order to determine whether schools' financial status tends to improve over time. It should be noted that financially weak schools are much more likely to close during their early years of operation.



The majority of PCSC portfolio schools score well on near-term measures. Financial sustainability is of somewhat greater concern, with nearly one-third of schools earning fewer than 60% of points possible in this category.



Nearly all of the seven schools falling into the accountability designations of Remediation and Critical face both near-term and sustainability concerns. Review of individual schools' reports provides contextual information.

Demographics

Minority ethnicity, Limited English Proficiency, Special Needs, and Free & Reduced Lunch populations tend to be underrepresented at PCSC portfolio schools by comparison to both state and district levels. Due largely to small sample sizes, inadequate data is available to identify the reasons for these demographic disparities.

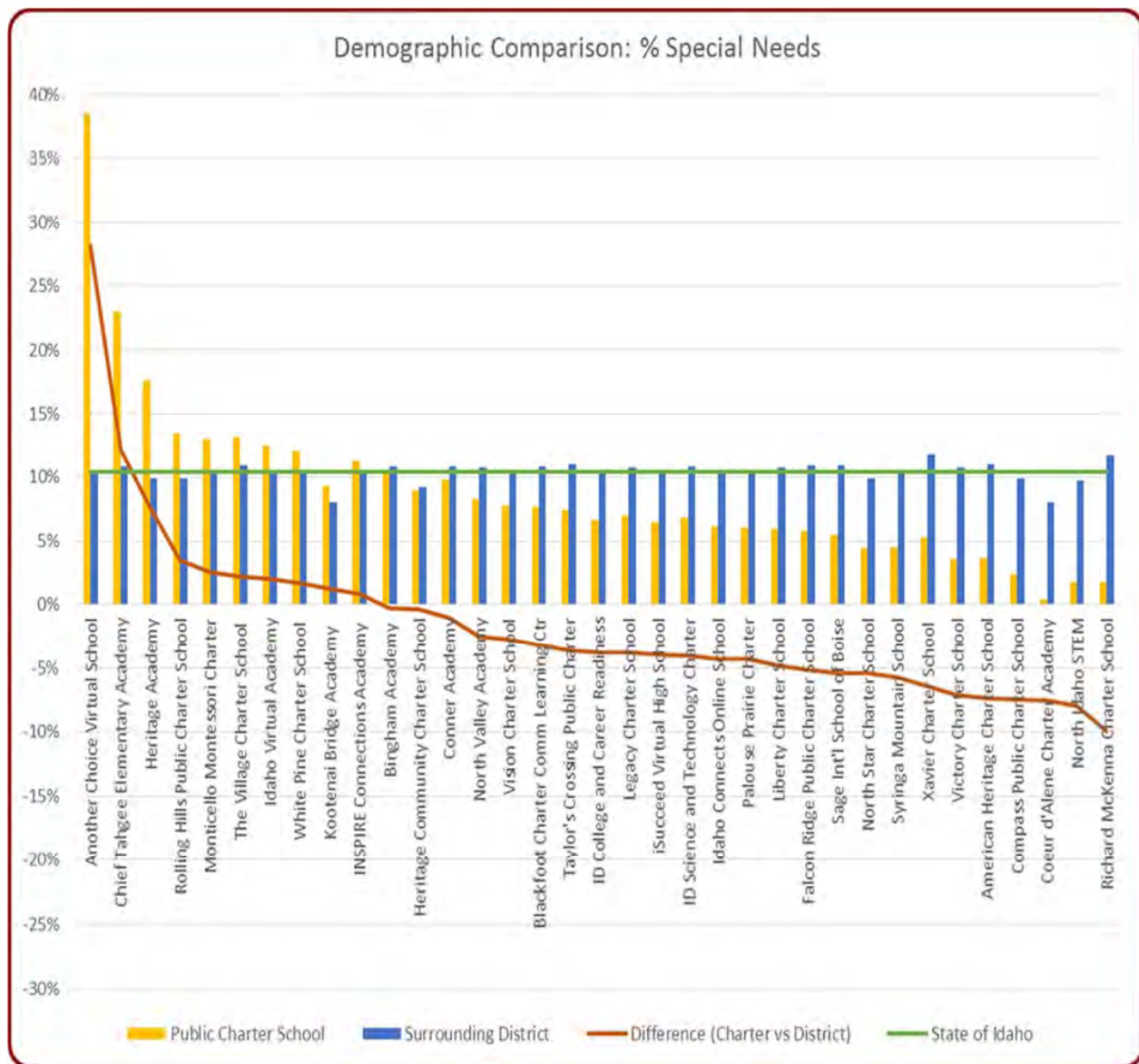
However, in the interest of moving toward a more representative public charter school population, the PCSC has redoubled its efforts to urge new petitioners to provide student transportation and food service; locate their schools in diverse, “walkable” communities whenever possible; tailor recruitment efforts to reach all demographic groups; and budget adequately for provision of student services.

There are notable exceptions to the overall low diversity in Idaho’s public charter schools, including a virtual school whose special education population is 28 percentage points higher than that of the state, as well as a brick and mortar school whose student population is nearly 100% non-white.

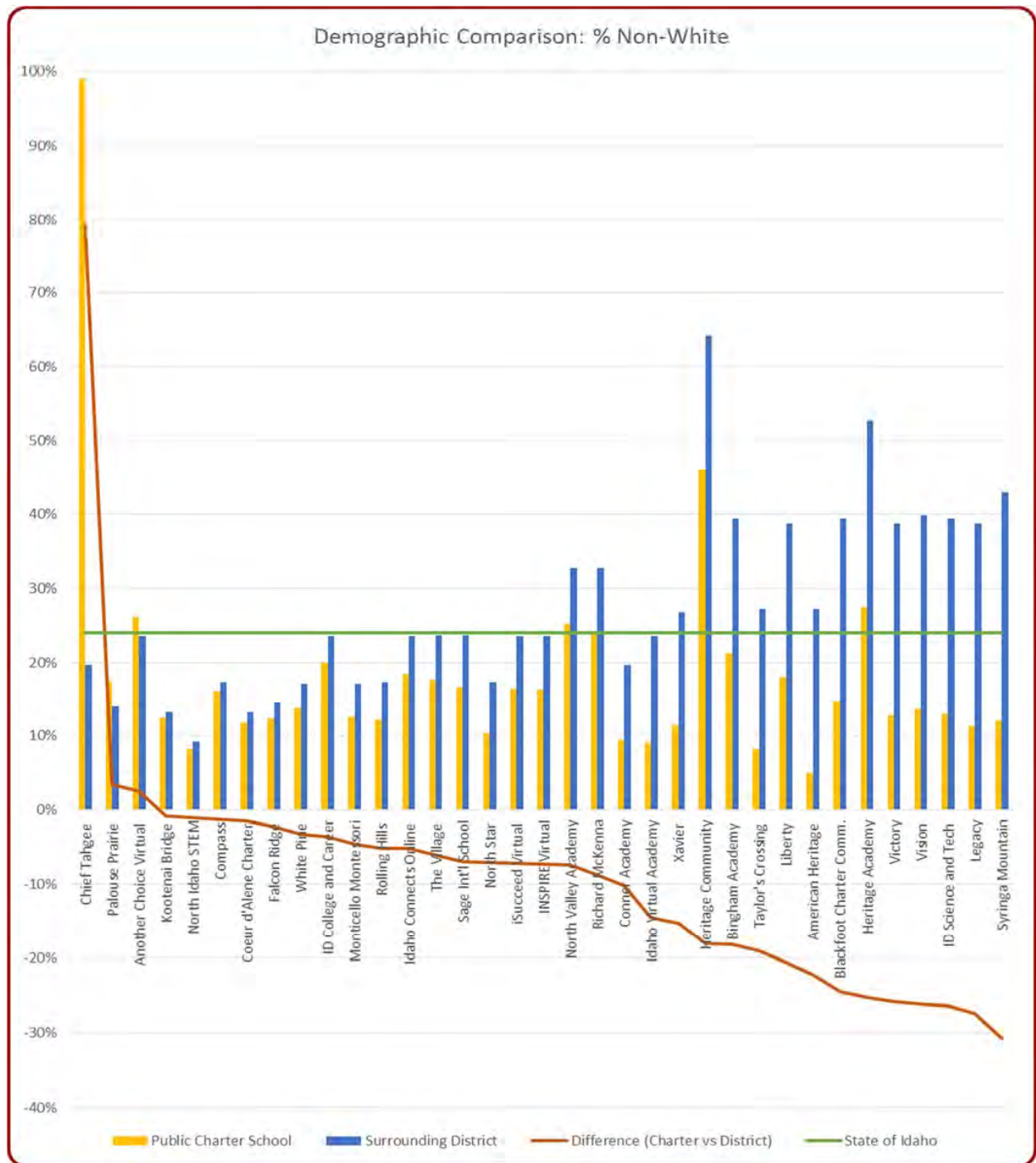
We applaud the efforts of those public charter schools that have gone well beyond basic legal requirements in an effort to recruit minority and underserved populations. The PCSC encourages the entire public charter school community to join in an effort to ensure that all students – regardless of language, ethnicity, economic status, or special needs – feel welcome to enroll and are assured of receiving high quality services at any Idaho public charter school.

The following charts compare PCSC portfolio schools’ student demographics to those of the districts in which they are located. In the case of virtual schools, the “surrounding district” is considered the state as a whole.

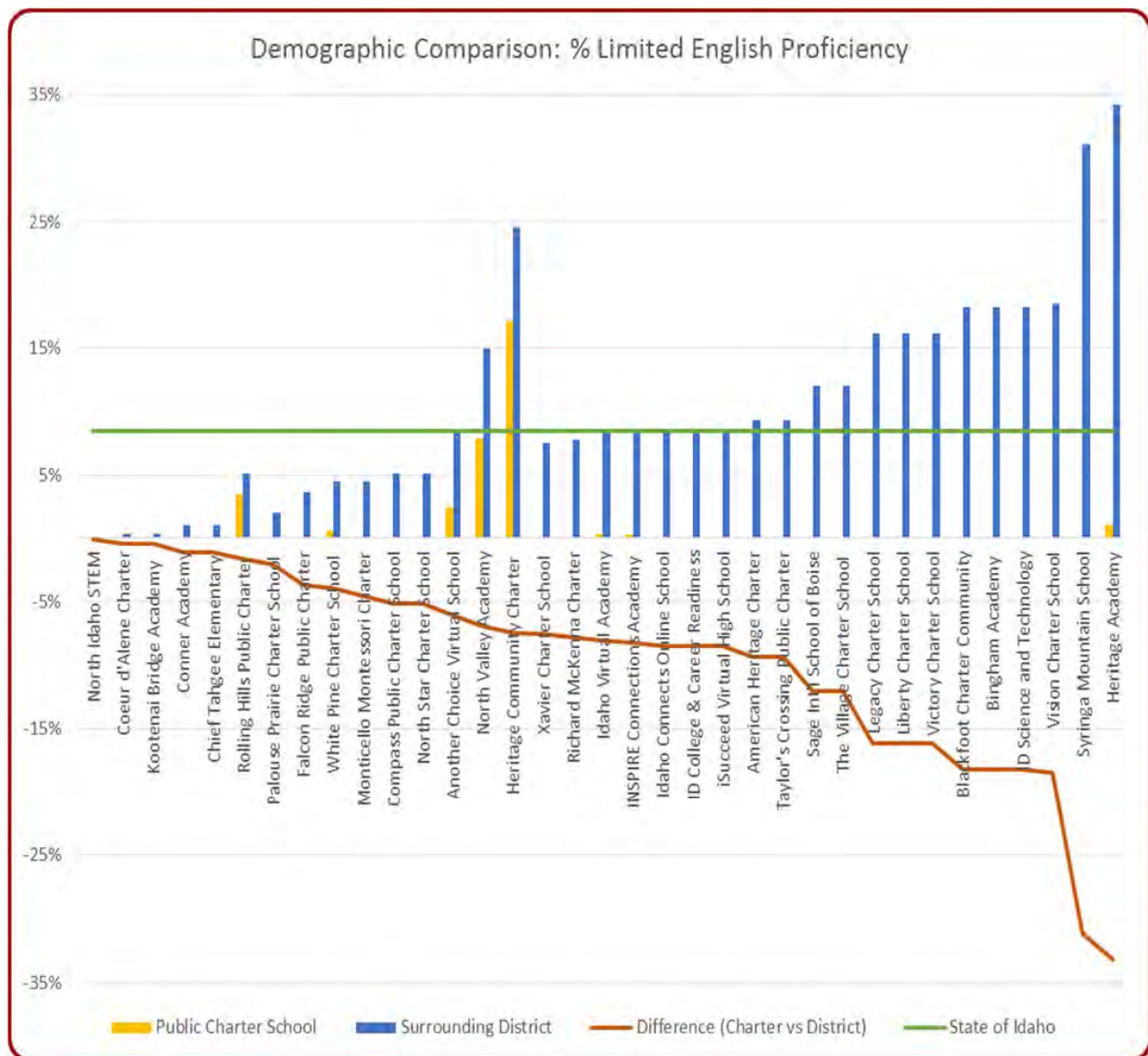
The columns are arranged by degree of difference, indicated by the orange line, between the public charter schools’ populations and those of their surrounding districts.



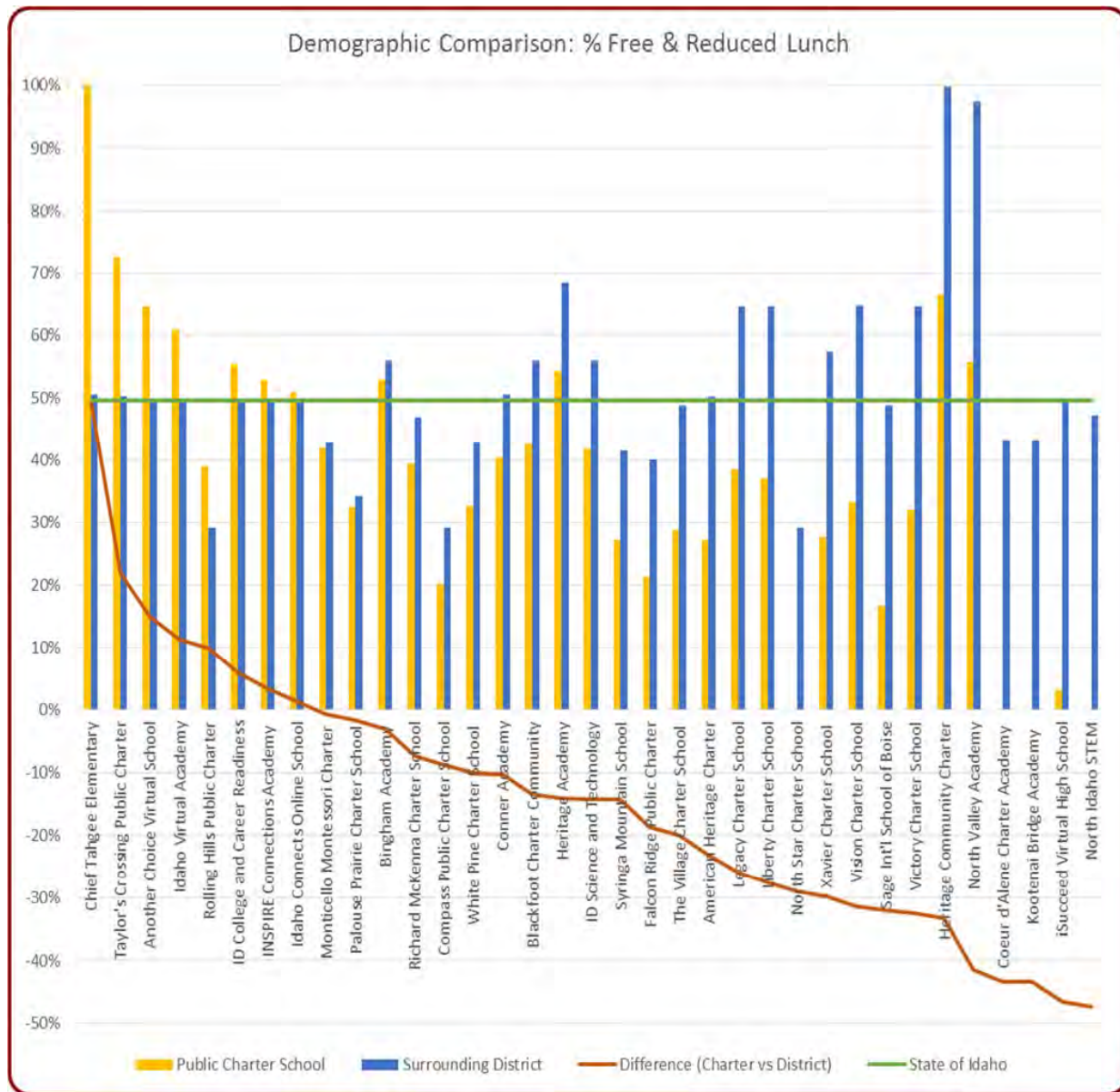
State law provides that public charter schools are obliged to provide the same special education services as all other public schools. 34% of PCSC portfolio schools serve special needs populations within 3 percentage points of their surrounding districts. 11% of PCSC portfolio schools serve a higher percentage of special needs students than their surrounding districts.



State law provides all students with equal opportunity to attend public charter schools, regardless of ethnicity. However, non-white groups are underrepresented at 94% of PCSC portfolio schools; in 79% of these schools, the difference exceeds three percentage points. The PCSC urges the charter community to continue and broaden its efforts to ensure that students of all ethnic and racial backgrounds know they are welcome to enroll.



Students with Limited English Proficiency (LEP) are the most underrepresented group in PCSC portfolio schools. State Department of Education data indicates that 83% of PCSC portfolio schools enroll no LEP students, though identification of, and provision of services for, these students is required by state law. Public charter schools are encouraged to not only increase their multi-language marketing efforts, but also to consider cultural differences when advising their communities of enrollment opportunities.



66% of PCSC portfolio schools serve at least three percentage points fewer students qualifying for Free and Reduced Lunch (FRL) than their surrounding districts. The PCSC applauds those portfolio schools who enroll higher FRL populations than their surrounding districts and encourages all schools to provide services such as transportation and food service in order to ensure that charter school attendance is a viable option for low income families. The majority of PCSC portfolio schools do offer bussing, and many provide meals either with or without federal funding for that purpose.

Looking Ahead

In 2016, the PCSC looks forward to building on the foundations it has laid beginning with the 2013 charter legislation, which significantly clarified the role of an authorizer and Idaho's expectations of its public charter schools.

During an extensive, on-site evaluation in 2014, the National Association of Charter School Authorizers (NACSA) confirmed the PCSC's direction and focus. NACSA also provided recommendations to further assist the PCSC in implementing national best practices for authorizing. The PCSC has prioritized these recommendations and implemented many of them, including developing additional tools to assist petitioning groups, adopting policies related to oversight and renewal, and designing meaningful annual performance reports for schools.

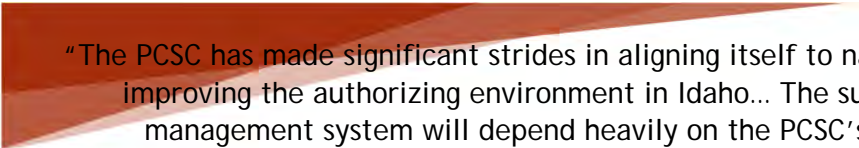
In the coming months, the PCSC will focus on preparing both itself and its portfolio schools for renewal decisions, the first of which will be made in spring 2017. The performance certificate and framework will form the basis of renewal decision-making.

All PCSC portfolio schools have been apprised annually of their outcomes relative to the standards contained in the certificate and framework. During this pre-renewal year, the twelve schools scheduled for renewal consideration in 2017 will receive additional guidance and opportunity to provide data demonstrating their performance outcomes. We will also encourage schools to share their plans for disseminating their successes for the benefit of additional students.

Following thorough and contextually-cognizant examination of schools' academic, operational, and financial outcomes, the PCSC may renew charters for an additional five years of operation. Alternatively, charters may be conditionally renewed dependent upon specific criteria for improvement. The PCSC may also elect to non-renew persistently underperforming schools, which would then close at the end of the school year.

Since its inception in 2004, the PCSC has approved a broad spectrum of charter petitions. The resulting schools have brought to life the dreams of grassroots groups including parents, educators, and business leaders. They have included proven educational models previously unavailable in Idaho, newly-coined educational philosophies, virtual options, schools tailored to at-risk students, and college preparatory pathways.

Now, we look forward to working with these schools toward understanding which have performed as intended and which should make way for stronger, better options among Idaho's schools of choice. The PCSC invites all its stakeholders to join in earnest communication and evaluation of outcomes while bearing in mind, above all, the interests of the students they serve.



"The PCSC has made significant strides in aligning itself to national best practices and improving the authorizing environment in Idaho... The success of the performance management system will depend heavily on the PCSC's ability to implement the certificate and framework with fidelity, as well as providing clear and ongoing communication to schools regarding expectations."

NACSA Authorizer Evaluation Report, August 2014

PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
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IDAHO DIGITAL LEARNING ACADEMY

SUBJECT

Idaho Digital Learning Academy Annual Report

APPLICABLE STATUTE, RULE, OR POLICY

Section 33-5501 through 33-5509, Idaho Code

Idaho Administrative code, IDAPA 08.04.01 Rules Governing the Idaho Digital Learning

BACKGROUND/DISCUSSION

Pursuant to IDAPA 08.04.01 Rules Governing the Idaho Digital Learning Academy (IDLA), an annual report is required to be submitted each year to the State Board of Education. This request is to meet the requirements as outlined in the rule. This report will include Accreditation, Acceptable Use, and an Idaho Digital Learning fee schedule in order to be in compliance with statute and State Board rule.

The 2002 Idaho Legislature created the Idaho Digital Learning Academy as an online, school-choice learning environment (Title 33 Chapter 55, Idaho Code). The Idaho Digital Learning Academy is a state virtual school providing Idaho students with greater access to a diverse assortment of courses. This virtual school was created to address the educational needs of all Idaho students: traditional, home schooled, at-risk, and gifted learners and is a service to Idaho students and schools. Rigorous online courses delivered by highly qualified faculty assists the state in preparing Idaho students to meet Idaho's high school graduation requirements, Idaho standards, and the increased demand from colleges and industry.

IMPACT

Idaho Digital Learning served 22,856 enrollments for 2014-2015 which is a 9% increase over 2013-2014. 99% of the school districts in Idaho participated in 2014-2015. The number one reason for taking IDLA courses is *classes not offered locally*. Other reasons include: scheduling conflicts; advanced placement; dual credit; early graduation; foreign languages; and credit recovery.

ATTACHMENTS

Attachment 1 – Idaho Digital Learning Presentation Information	Page 3
Attachment 2 – 2015-2016 Fee Policy Statement	Page 5
Attachment 3 – Acceptable Use Policy	Page 7
Attachment 4 – Accreditation Confirmation	Page 13

STAFF COMMENTS AND RECOMMENDATIONS

Idaho Administrative Code, IDAPA 08.04.01 requires the Idaho Digital Learning Academy to report annually to the State Board of Education. At a minimum the report must include IDLA's Acceptable Use Policy, IDLA Fee Schedule, and proof of accreditation.

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BOARD ACTION

This item is for informational purposes only. Any action will be at the Board's discretion.

IDAHO DIGITAL LEARNING PRESENTATION INFORMATION

NAMES OF PRESENTERS & TITLES

Dr. Cheryl Charlton, Chief Executive Officer
Dr. Sherawn Reberry, Director of Education Programs
Jacob Smith, Director of Operations
Ryan Gravette, Director of Technology

PRESENTATION TOPICS

2014-2015 Update

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2015-2016 IDLA FEES POLICY STATEMENT

Fees for Idaho Digital Learning (IDLA): The fee schedule for 2015-2016 is determined upon a per-enrollment basis. An "enrollment" is defined as one (1) student enrolled into one (1) IDLA course. IDLA enrollment fees outlined in this Fee Policy apply to all courses offered through IDLA unless noted otherwise below.

IDLA Per-Enrollment Cost: The cost for one (1) enrollment is \$75 for Idaho students.

Smarter Balanced Assessment Consortium (SBAC): Courses designated as SBAC preparatory courses will not incur a per-enrollment cost to the district. See IDLA Course Catalog for list of courses.

Advanced Placement/Dual Credit Courses: Courses designated as "Advanced Placement or Dual Credit" will not incur a per-enrollment cost, unless courses are delivered in a custom session (see Custom Session Courses below).

Students are responsible for any fees that may be charged by universities to receive college credit for Dual Credit Courses. Additionally, students are responsible for any fees that may be charged by the College Board to take the Advanced Placement Exam. Advanced Placement and Dual Credit courses may require additional textbooks (see below).

Custom Session Courses: Any courses requested and implemented through IDLA's Custom Course program will incur costs based on the Custom Session Policy (see IDLA website for MOU Addendum and request form). This includes district requests for Hybrid Custom Sessions. Requirements for custom sessions include a minimum enrollment threshold and cost.

Middle School Keyboarding and Pathways to Success: Beginning in Fall 2015, IDLA will offer middle school Pathways to Success and Keyboarding at \$30 per enrollment when taken in a custom session format (all students located in the same building). Any middle school Pathways to Success and Keyboarding courses in which half the content is delivered (4 units) the IDLA fee is further reduced to \$15 per enrollment.

Scholarships: Scholarships are awarded through an application submitted by the District Site Coordinator. Scholarship submissions should be based on the financial need of the parent/guardian/student and are only available for IDLA courses which are taken in addition to the student's full course load at the local school. Limited, partial scholarships are available for 2015-2016 at \$50 per enrollment.

Textbooks: IDLA provides online textbooks in the majority of content areas and provides access to Libraries Linking Idaho (LiLI-D). In cases where an online textbook is unavailable, the local school district may be responsible to provide the required text(s) according to school district policy. For example, advanced placement, dual credit, and English courses may require additional textbooks or required readings not available online. The local school district is also

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responsible to provide access and assistance to library media centers if necessary. Please refer to the IDLA Course Catalog posted at www.IdahoDigitalLearning.org for a list of required textbooks.

Refund Policy

IDLA requires that all drops are requested or confirmed by the Site Coordinator during the school year. Drop requests initiated by a parent or guardian will be accepted for summer courses only. For a course fee to be eligible for refund and for a student to be exempt from a grade report, a drop must be initiated during the following times:

- **All cohort sessions:**
 - **Orientation:** If the student does not complete orientation, they will not be enrolled in classes and a full refund of fees will be granted.
 - **12 week or Custom Sessions:** The IDLA Office must be notified by Friday of the 2nd week of class to receive a full refund and remove the student from the course.
 - **16 week session:** The IDLA Office must be notified by Friday of the 3rd week of class to receive a full refund and remove the student from the course.
- **Flex sessions:**
 - The drop deadline for all flex classes is 14 days after the student begins the course.
 - If a student is inactive in class for a period of 14 consecutive days, the instructor may initiate a drop process. The Site Coordinator can confirm the drop or request additional time for the student to become active in the course.
- After the drop deadline: Grades will be reported for all students remaining in courses regardless of completion and the full fee will be invoiced to the district.
- Exceptions to the drop-deadline may be requested by the district for extenuating circumstances.

IDLA reserves the right to modify the fee policy. Districts will be notified of any changes.

IDLA ACCEPTABLE USE POLICY

Students should print and review this policy with a parent or guardian to ensure a safe and rewarding experience with IDLA. All students enrolled in any course work of Idaho Digital Learning Academy (IDLA) shall be responsible to comply with all of the policies of their home school district and the policies of IDLA including this Acceptable Use Policy (AUP).

1. The IDLA network is for educational purposes only and includes computers, communication networks, the Internet, and other electronic resources used in the delivery of IDLA courses.
2. All users of IDLA must agree to all of the terms of this AUP prior to being able to access a user account providing access to the IDLA network.
3. Privileges and Rights of IDLA Community Members:

Members of the IDLA community have certain privileges and rights. These include:

A. Safety

- *No student or IDLA personnel shall utilize the IDLA network to access any site that includes, but is not limited to pornography, graphic sexual or violent content, or advocates the use of illegal substances.*
- *Communication on the IDLA network between students shall respect the privacy of all individuals and shall not contain personal information regarding other persons.*
- Bullying or harassment of IDLA users shall not be tolerated. No user of the IDLA network shall engage in any communication or entry that shall have the intent of, or results in, the bullying or harassment of other students or employees of IDLA or utilizes profanity or degrading language directed at known persons. Any user who receives, or believes they are subject of, such communications should immediately notify the IDLA online principal.
- For reasons of privacy and safety, users are prohibited from downloading or uploading photographs of persons other than as may be directly relevant to the required coursework, and any depiction of fellow students or IDLA personnel is expressly prohibited without the written permission of the individual, or permission of that individual's parent or legal guardian if the individual is a minor.
- Any graphic or digital representation must be presented in an appropriate manner in accordance with the local school district's dress code policy. IDLA reserves the right to determine whether a graphic representation is appropriate and to respond accordingly.

B. Access for all users

All IDLA users shall be granted access to as many IDLA services as the available technology and IDLA role will allow. Relevant exploration of the Internet for educational

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purposes is permissible in IDLA courses within the limitations of compliance with this policy and the acknowledgement that certain sites may be offensive to specific individuals. IDLA will make every effort to ensure that course content will be appropriate to the designated grade-level of that course, regardless of the ages of students enrolled in that course.

C. Intellectual Freedom

- Discussion forums within the IDLA course management system are a free and open forum for expression, including all viewpoints within the role and mission of IDLA. The poster of an opinion should be aware that other community members may be openly critical of such opinions.
- Any statement of personal belief is implicitly understood to be representative of the author's individual point of view, and not that of the IDLA, its administrators, teachers, other staff, or the participating schools. Personal attacks are not an acceptable use of IDLA resources at anytime and IDLA instructional staff or administration should be notified. IDLA does not officially endorse any opinions stated on the network.

D. Privacy

In guarding the safety of its students and users, there is no reasonable expectation of privacy in any use of the IDLA network by any user. IDLA is a public educational agency and therefore IDLA personnel, both technology specialists and teaching and/or administrative staff, may periodically access accounts, review emails sent or received, internet sites (including any social networking websites) and chat rooms visited, as well as electronic class discussion materials.

4. The Family Educational Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99) is a Federal law that protects the privacy of student education records.

FERPA gives parents certain rights with respect to their children's education records. These rights transfer to the student when he or she reaches the age of 18 or attends a school beyond the high school level. Students to whom the rights have transferred are "eligible students."

- Parents or eligible students have the right to inspect and review the student's education records maintained by the school. Schools are not required to provide copies of records unless, for reasons such as great distance, it is impossible for parents or eligible students to review the records. Schools may charge a fee for copies.
- Parents or eligible students have the right to request that a school correct records which they believe to be inaccurate or misleading. If the school decides not to amend the record, the parent or eligible student then has the right to a formal hearing. After the hearing, if the school still decides not to amend the record, the

parent or eligible student has the right to place a statement with the record setting forth his or her view about the contested information.

- Generally, schools must have written permission from the parent or eligible student in order to release any information from a student's education record. However, FERPA allows schools to disclose those records, without consent, to the following parties or under the following conditions (34 CFR § 99.31):
 - School officials with legitimate educational interest;
 - Other schools to which a student is transferring;
 - Specified officials for audit or evaluation purposes;
 - Appropriate parties in connection with financial aid to a student;
 - Organizations conducting certain studies for or on behalf of the school;
 - Accrediting organizations;
 - To comply with a judicial order or lawfully issued subpoena;
 - Appropriate officials in cases of health and safety emergencies; and
 - State and local authorities, within a juvenile justice system, pursuant to specific State law.

5. Responsibilities of IDLA users

With the rights and privileges of participation in the IDLA community come certain responsibilities. IDLA users need to familiarize themselves with these responsibilities.

A. Using appropriate language

Profanity or obscenity will not be tolerated. All IDLA community members must use language appropriate for school situations. Inappropriate language includes, but is not limited to language that is: defamatory, inaccurate, abusive, rude, sexually explicit, threatening, harassing, or racially offensive;

B. Avoiding offensive or inflammatory speech

IDLA users must respect the rights of others both in IDLA courses and in the Internet at large. Personal attacks are an unacceptable use of the network. If an IDLA user is the victim of a personal attack, they are responsible to bring the incident to the attention of an IDLA teacher or administrator.

C. Copyright adherence

IDLA users must respect all copyright issues regarding software, information, and attributions of authorship. The unauthorized copying or transfer of copyrighted materials may result in the loss of IDLA privileges.

D. Plagiarism

IDLA users must not engage in plagiarism, which is the act of presenting other peoples' ideas, writings, or products (written or electronic) by claiming them to be one's own and not giving credit to these sources. Forms of plagiarism include: submitting work that is not your own, failing to properly cite words and ideas that are not your own, using direct wording from another source (even a cited one) without quotation marks, or slightly re-wording phrases from another source and passing the phrases as your own.

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E. Cheating

IDLA users must not engage in cheating, which in its various forms includes, but is not limited to: copying another student's work or allowing your work to be copied; allowing someone other than yourself to submit work in your name; using unauthorized assistance on an assessment; allowing someone other than yourself to take an assessment; inappropriate use of a translator in language classes; submitting the same work for multiple courses; or giving answers to other students.

F. Fabricating Data

IDLA users must not engage in fabricating data when completing assignments that require research and/or collecting data. Forms of fabrication include, but are not limited to: falsifying or manipulating data to achieve a desired result; reporting data for an experiment that was not conducted (dry-labbing); or submitting written work with fabricated or falsified sources.

G. Academic Sabotage

IDLA users must not engage in Academic sabotage, which consists of any act that damages another student's work or grade on purpose.

H. False Information

IDLA users must not lie to an instructor, site coordinator, parent, or principal (such as saying an assignment has been completed when it has not, or lying about your grade).

I. Illegal activities

Illegal activities include tampering with IDLA computer hardware or software, unauthorized entry into computers, knowledgeable vandalism or destruction of computer files, or encouraging the use of illegal materials. Use of the IDLA for any illegal activities is prohibited and will result in legal action.

J. System disruption

Intentional or malicious attempts to degrade or disrupt system performance of the IDLA or any other computer system or network are considered criminal activity under state and federal law. IDLA encourages IDLA users to use best practices to avoid unintentional disruption of system performance.

K. Account responsibility

IDLA users have full responsibility for the use of their account. All violations of this policy traced to an individual account name will be treated as the sole responsibility of the owner of that account.

L. User information

IDLA mandates all users to provide current demographic information which includes but is not limited to full name, mailing address, email address, and phone number.

M. Impersonation

All IDLA users must use their own name in the use of the IDLA network. Impersonation

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(logging in as another user or under a false name) is not allowed. (This prohibition does not extend to activities with curricular objectives, such as role-playing within a class discussion, in which users are not attempting to disguise their identities).

N. Anonymity

All IDLA users must use their name on all communication. Anonymity is not allowed. As an educational network, we believe that individuals are responsible for their actions and words;

O. Representation.

When navigating locations on the Internet or using IDLA tools, IDLA users must conduct themselves as representatives of both their respective schools and the IDLA.

P. Email Communication

Email accounts are required to communicate on the IDLA network, and inappropriate email user account names will not be allowed in the system.

6. IDLA assumes no responsibility for Internet access including phone charges, line costs, usage fees, hardware, software, other media, or any other non-specified technology costs associated with a user's connectivity to the Internet or that may be required to access IDLA courses or other instructional resources. IDLA assumes no responsibility for information obtained via the Internet, which may be illegal, defamatory, inaccurate or offensive. IDLA assumes no responsibility for any damages to the user's computer system under any circumstances. The technology requirements of all courses are available on the IDLA website prior to enrollment. Users are solely responsible for acquiring and learning to use all required technology needed to access and complete all online IDLA courses activities.

7. Failure to abide by the IDLA Acceptable Use Policy could result in:

- Report to the local district of the infraction
- Immediate removal of the user's access to IDLA instructional computing resources, which could result in their inability to complete learning activities and subsequent course failure.
- Immediate removal of the user from the course.
- Involvement of law enforcement agencies and possible legal action.

IDLA reserves the right to make modifications to the document at any time without prior notification.

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PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
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IDAHO BUREAU OF EDUCATIONAL SERVICES FOR THE DEAF AND THE BLIND

SUBJECT

Idaho Bureau of Educational Services for the Deaf and the Blind (IESDB) Annual Report

REFERENCE

August 2013 IESDB Provided the Board with report updating the Board with current progress of the Bureau.

February 2015 IESDB Provided the Board with report updating the Board with current progress of the Bureau.

APPLICABLE STATUTE, RULE, OR POLICY

Sections 33-3405(4) and 33-3411, Idaho Code, Idaho State Bureau of Educational Services for the Deaf and the Blind,

BACKGROUND/DISCUSSION

Pursuant to Section 33-3405(4), Idaho Code, the administrator of IESDB shall make an annual report of the bureau's activities to the State Board of Education at a time and in a format designated by the Board. While IESDB was moved out from the Board's direct governance in 2009, the Board retains rulemaking authority for education services for students who are deaf or hard of hearing and/or blind or visually impaired, as well as property rights for the School for the Deaf and Blind.

ATTACHMENTS

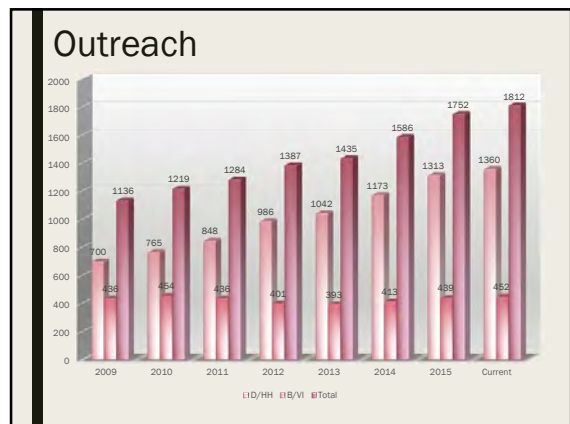
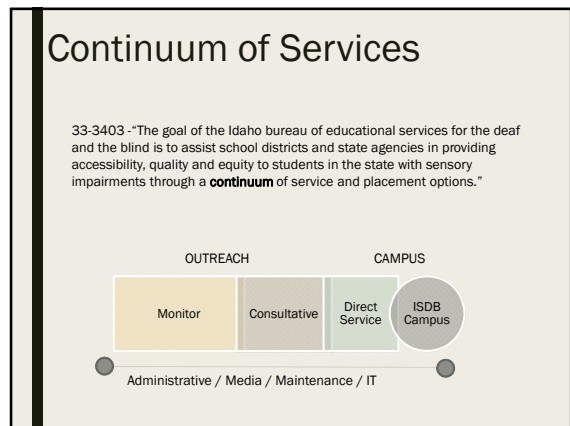
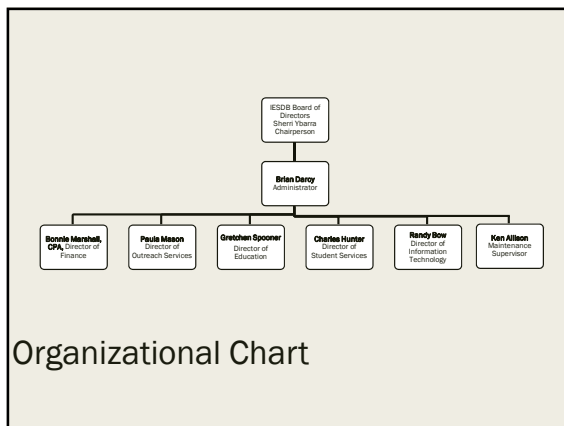
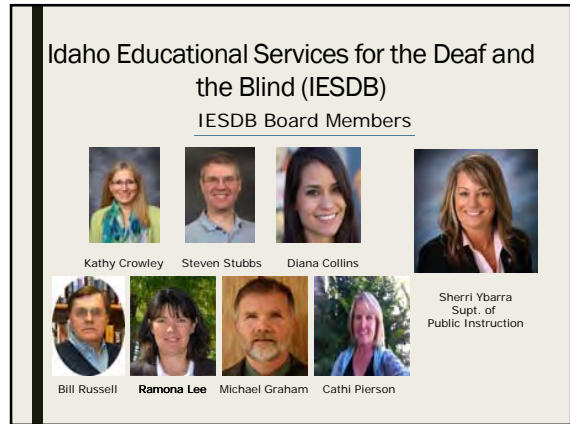
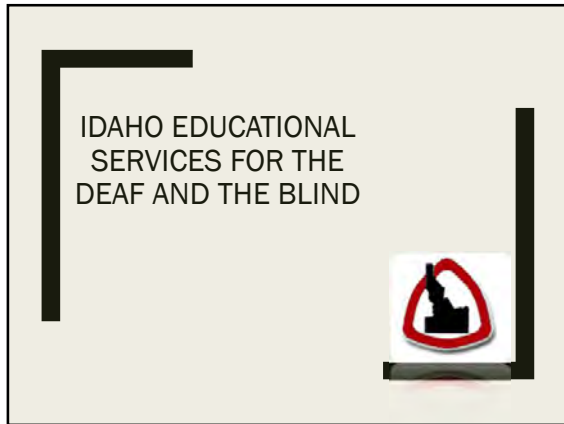
Attachment 1 – IESDB Annual Report

Page 3

BOARD ACTION

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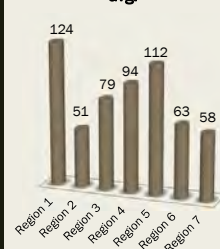
OUTREACH Educational Specialists Provide:

- In **home education** to parents and children of birth to three years old
 - Education – direct instruction to Parent, Child, and Siblings
 - Counseling
 - Service Coordination – Partners with Infant Toddler (H&W)
 - Participate on coaching teams
 - Teach Parent Sign Language or Braille Class
 - Transition planning/meeting – to school age students
- **Support** to all School Districts across the state
 - Consultation – New academic year or newly identified student
 - Assistive Technology identification and loan
 - Media coordination
 - Direct instruction to student – Braille, Mobility, Sign Language, etc.
 - Attend IEP (Individual Education Meetings) or 504 meetings
 - Translation of Math to Nemeth Code (Braille Math)
 - Transition planning – School to work/adult life
 - Service Coordination – Partners with ICBVI, and IDVR
 - Educational Interpreter training and monitoring (per 33-1301)
 - Parent/Sibling Sign Language classes (as needed/available)

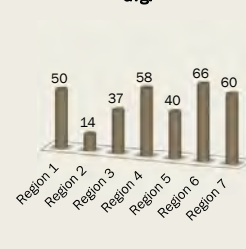
Caseload comparison

(average number of students per Ed. Specialist)

D/HoH Student to Teacher avg.

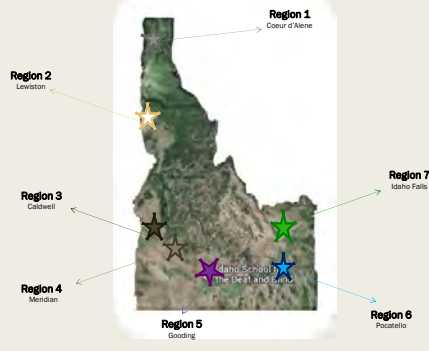


B/VI Student to Teacher avg.

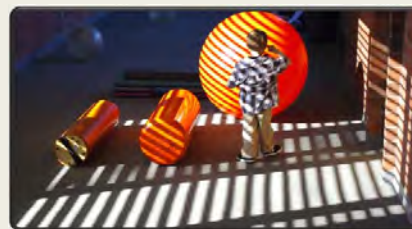


OUTREACH

(by Geographic location)



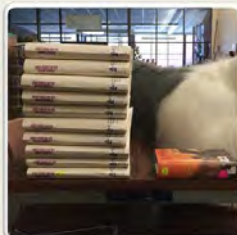
Short Term Programs (STP)



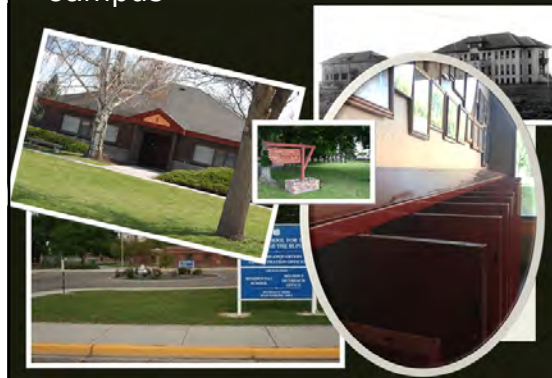
Media/Library Services

If a Blind child is assigned a printed text book as part of their curriculum, the Text book is reproduced in Braille at our Media Center.

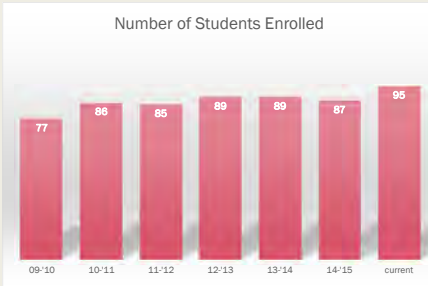
On average, over 50,000 pages are reproduced for students across the state at no cost to any School District.



Campus



Campus



Early Access = Early Learners



Collaboration is the Key to Success

AdvancED Standards



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Education is about Experiences...

...and Conquering Challenges



PLANNING, POLICY AND GOVERNMENTAL AFFAIRS

FEBRUARY 18, 2016



Facility Development

Future Requests



Governor's Recommended Budget



Page 1-45 LBB

Governor's Recommendation (ongoing)

Campus Budget Item Recommendations

■ 1 new Teaching position (B/VI)	\$ 79,200
■ 1 new Teaching position (D/HoH)	\$ 79,200
■ .5 Ass't Tech. Position	\$ 39,600
■ Open/staff Residential cottage	\$172,300 (+\$17,200 one time)
■ CEC 3%	\$128,200
■ Total - Campus (ongoing)	\$ 498,900

Outreach Budget Item Recommendations

• 1 new Teaching position	\$ 79,200
• .5 Ass't Tech. Position	\$ 39,600
• 1 new Sign Language Interpreter	\$ 79,200
• Professional Development	\$ 15,000
• CEC 3%	\$ 59,800
• Total - Outreach (ongoing)	\$ 272,400

Pages 1-47 through 1-50 LBB

Governor's Recommendation (one-time)

Campus Budget Item Recommendations

■ Textbooks	\$3,000
■ Replenish Contingency Fund	\$350,000
■ 1 School Bus	\$115,000
■ Total - Campus	\$ 468,000

Outreach Budget Item Recommendations

• 2 Vehicles (one time @ \$24,800 each)	\$ 49,600
• Total - Outreach	\$ 49,600

Total One time Request \$517,600

Pages 1-46 & 1-48 LBB

Strategic Planning

Current Strategic Plan

- Goal 1 - UNDERSTAND NEEDS
- Goal 2 - DELIVER BEST EDUCATION SERVICES
- Goal 3 - EXPAND ACCESS
- Goal 4 - PROMOTE ENTITY SERVICES
- Goal 5 - GROW REVENUE

Foreseeable Barriers

- Lack of Qualified Teachers
- Recruitment
- Retention
- Funding vs. Demand

Partnerships

- State Department of Education
- Local School Districts
- Health and Welfare – Infant Toddler
- Vocational Rehabilitation
- Council for the Deaf/Hard of Hearing
- Commission for the Blind and Visually Impaired
- Department of Labor



We are all pulling together.



~ Thank you ~

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IDAHO STATE HISTORICAL SOCIETY

SUBJECT

Overview of the Idaho State Historical Museum, expansion renovation, and new educational exhibition experiences.

BACKGROUND/DISCUSSION

To foster a meaningful exploration of Idaho's history, the Idaho State Historical Society is renovating and expanding the Idaho State Historical Museum and developing world-class exhibitions that inspire learning and invite an engaged discussion of Idaho's past and its impact today.

Project Goals:

- To repair and replace aging infrastructure that dates to the Museum's opening in 1950 in order to enhance visitor experience and collections care;
- To expand the Museum to respond to public demand for educational programs and events, feature more artifacts from the Museum's permanent collection, and increase capacity to feature special traveling exhibitions;
- To realize a level of national excellence with exhibits that will inspire Idahoans' sense of pride in our state and serve an essential educational role for students of all ages.

Project Impact:

- To create an essential resource for education and life-long learning for the state;
- To contribute to the economic vitality of our state by growing Idaho's cultural infrastructure and tourism;
- To deep Idahoans' connections to our roots and build a statewide sense of community;
- To empower Idahoans' and give context that Idaho history provides for their present and future lives.

ATTACHMENTS

Attachment 1 – Executive Summary
Attachment 2 – Drawing set

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Page 7

BOARD ACTION

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Idaho State Historical Museum Renovation and Addition *History is Moving, History is Growing, History is Changing*

To foster a meaningful exploration of Idaho's history, the Idaho State Historical Society is renovating and expanding the Idaho State Historical Museum and developing world-class exhibitions that inspire learning and invite an engaged discussion of Idaho's past and its impact today.

Authorized in 1939 by the Idaho Legislature, the original Museum was completed in 1950. The Museum was the first in Idaho and one of the first western museums to be accredited by the American Association of Museums in 1972. The Idaho Historical Museum serves the entire population of the state as well as thousands of visitors to Idaho. 50,000 visitors, tourists, and students experience the Museum's programs and exhibitions annually.

Our facility requires infrastructure enhancements, public interest in the Idaho Historical Museum exceeds our capacity, and our exhibitions need to reflect a more comprehensive telling of Idaho's story.

Project Goals

- **To repair** and replace aging infrastructure that dates to the Museum's opening in 1950 in order to enhance visitor experience and collections care;
- **To expand** the Museum to respond to public demand for educational programs and events, feature more artifacts from the Museum's permanent collection, and increase capacity to feature special traveling exhibitions;
- **To realize** a level of national excellence with exhibits that will inspire Idahoans' sense of pride in our state and serve an essential educational role for students of all ages.

FY 2017 Budget Request

- Governor Recommends up to \$4 million in one-time General Fund support for educational exhibitions. This investment is contingent upon and matches \$4 million from private philanthropic investment.

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- Together the Foundation for Idaho History and the Idaho State Historical Society are leading the \$4 million dollar private fundraising capital campaign for exhibit design, fabrication, and installation.
- An FY 2017 request for \$1.9 million is included in the DPW budget to add to the approved and authorized project building budget of \$6,963,000.
- State Historical Museum to reopen in late 2017.

Project Investment provides the following impact for Idaho and its citizens:

- **Creating** an essential resource for **education** and life-long learning for the state;
- **Contributing** to the **economic vitality** of our state by growing Idaho's cultural infrastructure and tourism;
- **Deepening** Idahoans' connections to our roots and build a statewide **sense of community**;
- **Empowering Idahoans** and giving context that Idaho history provides for their present and **future** lives.

What people are saying

"The State Historical Museum will greatly expand visitors' understanding of Idaho's history through compelling and engaging exhibits that illuminate how Idaho's unique geography shaped our culture and communities. Through a multidisciplinary lens of history, science and culture, students will learn Idaho history and develop creativity and problem-solving skills critical to their future development. As an educator, I also am excited about the chance for all Idahoans to have an unforgettable learning experience at our new museum."

-Idaho First Lady,

Lori Otter

"Through Dia de Los Muertos and other family programming, our State Historical Museum has been exceptional in creating programs with community partners. This type of programming demonstrates to the community the organization's high level of respect and regard for serving Idaho's diverse people and commitment to providing engaging family learning opportunities."

-Alice Mondragón Whitney, AVP Community Relations Banker, Diverse Markets, Zions Bank

"The Boise Metro Chamber of Commerce has long supported the Idaho State Historical Museum, and we have actively lobbied for the Museum's expansion. As the State's largest and oldest business organization, we know the importance of showcasing Idaho's history, culture, industry, and innovation. The Museum will add to our State Capital's rich portfolio of attractions and further enhance Boise as a vibrant destination for all Idahoans and visitors from across the globe."

-Bill Connors, President & CEO, Boise Metro

Chamber of Commerce

Idaho State Historical Society

The Idaho State Historical Society, an executive branch agency, has gathered the state's history since 1881 and is the steward for State historical resources including over 250,000 objects, 100,000 prehistoric specimens, 130,000 feet of government records, 30,000 rolls of microfilm, 500,000 photographs, 5,000 films and videos, 3,100 oral histories, 32,000 maps, 25,000 books and periodicals, and 60 historic structures. The Idaho State Historical Society is an integral education institution teaching historical literacy, manager of essential public records, and fulfills legal requirements of federal historic preservation laws giving Idaho voice to federal decision making. The Idaho State Historical Society illuminates our state's future and helps people of all ages explore and appreciate Idaho's rich past and learn more about themselves.

Contact Information

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janet.gallimore@ishs.idaho.gov

phone - (208) 334-2682

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Idaho State Historical Museum



2205 Old Penitentiary Road – Boise, Idaho 83712
(208) 334-2682 – www.history.idaho.gov

**PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
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Idaho State Historical Museum Renovation and Addition

History is essential to understanding America. Lessons from the past enhance historical literacy, create an informed citizenry, deepen our connections to our communities, and provide understanding of the people and circumstances that paved the way to today. History teaches us about triumphs and mistakes, inspiring us with stories of humanity and perseverance in the face of challenges. History compels us to think beyond our assumptions and find truth.



The Idaho Historical Museum serves the entire population of the state as well as thousands of visitors to Idaho. Every year, 40,000 visitors experience the museum's programs and exhibitions, giving the institution a vital role in Idaho culture: teaching the past in order to inspire, enrich, and engage current and future generations.

To foster a more meaningful exploration of our history, the Idaho State Historical Society is renovating and expanding the Idaho State Historical Museum and developing world-class exhibitions that inspire learning and invite an engaged discussion of Idaho's past and its impact today.

Project goals

- To repair and replace aging infrastructure that dates to the museum's opening in 1950 in order to enhance the building's functionality and environmental controls;
- To expand the museum to accommodate the public demand for programs and expand the capacity to feature special traveling exhibitions;
- To realize a level of excellence with core exhibitions that are inspiring and informative, appeal to Idahoans' sense of pride in the state, serve an essential role for children, families, and school tours, and position the Idaho Historical Museum as a top destination.

Exhibit development guiding principles

- People and the land shape each other.
- History is made by people. People make decisions that have consequences. Everyone is a history-maker.
- Historical decisions made in the past are relevant to contemporary life; our decisions will impact the future.
- Idaho is not an island. Idaho's story has a regional and national context.

Exhibit summaries

Origins Directly off the lobby is an exhibit that will introduce many aspects of our state. Visitors will learn about Idaho's five federally recognized Native American tribes, see artifacts, and be able to hear tribal origin stories. An interactive touchscreen map will show Idaho's many natural and historical attractions. Another interactive map will explain geological forces that shaped Idaho's terrain. The heart of the exhibit is a virtual stream that demonstrates the importance of water in our state. A large projection screen behind the stream will feature a dramatic show of Idaho's varied natural scenery. Throughout a stylized Idaho landscape, visitors will learn about the state's widely diverse ecosystems through interactives that engage all the senses. Finally, a lively media presentation tells the story of how Idaho got its unusual shape.

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Three Faces of Idaho The museum's main survey of Idaho history examines the different ways people in Idaho's three main geographic regions—the forested north, mountainous middle, and arid south—have responded to the challenges of the land. Through artifacts, images, media, and interactive experiences, visitors will be immersed in the history of Idaho's very distinct regions.

The North: Exhibits explore the themes of mining, lumbering, transportation, and refuge. A high-light is an immersive media show that puts visitors in the middle of the 1910 forest fire.

The Middle: Media programs explore recreation, the establishment of Idaho's wilderness areas, and endangered species, with a focus on the restoration of the salmon.

The South: Challenges of developing agriculture in an arid environment take center stage here, with a crops quiz show game and an interactive in which visitors turn off Shoshone Falls and watch the desert bloom.

Treasures of Idaho This gallery will serve as a showcase for Historical Society collections. Exhibits draw on three-dimensional artifacts, archival documents, and archaeological collections, both historic and prehistoric. A primary focus of this gallery will be a revolving exhibit based on the museum's sizable clothing and textile collection. The Treasures gallery will include special climate-controlled cases to ensure conservation of fragile collections while on exhibit.

Creative Play A series of immersive environments based on early professions and trades in Idaho creates the setting for young children to imagine themselves in other places and times. Props and costumes encourage parents and children to engage in pretend play. Environments include a locomotive and train station, a hard rock mine, a Victorian theater, and a construction office and building site.

History Lab Fun hands-on activities introduce visitors to historical primary sources. Visitors will use critical thinking skills while they engage with oral histories, photographs, maps, letters, and architecture in game-like settings. Each activity can be undertaken separately but the room will be transformed into a cohesive docent-led experience for school groups.

What's Your Story This exhibit will focus on the personal stories of individual Idahoans rather than on the broad sweep of historical events. Four themed areas explore stories of people diverse in ethnic background, life experiences, gender, geography, and time period in Idaho history. The themes of Home, Journey, Community, and Turning Points are universal and run through everyone's life. Opportunities will be provided for visitors to contribute their own content that then becomes part of the exhibit.

Temporary Gallery The 2,400-square-foot temporary gallery will allow the museum to present mid- to large-size national traveling exhibitions that currently cannot be shown in this part of the state.

Multipurpose Room This space, which will serve as a home for the museum's historic bar and stained-glass dome, will be used primarily for events and programs. Compact exhibits will highlight the importance of preserving history. The story and mission of the Idaho Historical Society will be told and temporary exhibits will feature the work of the Society's partner "history keepers" around the state.

Community Gallery The museum consistently receives requests from community groups for exhibit space to tell their stories. This designated area on the museum's lower level will allow room for the greater community to engage with museum visitors through their own exhibits.

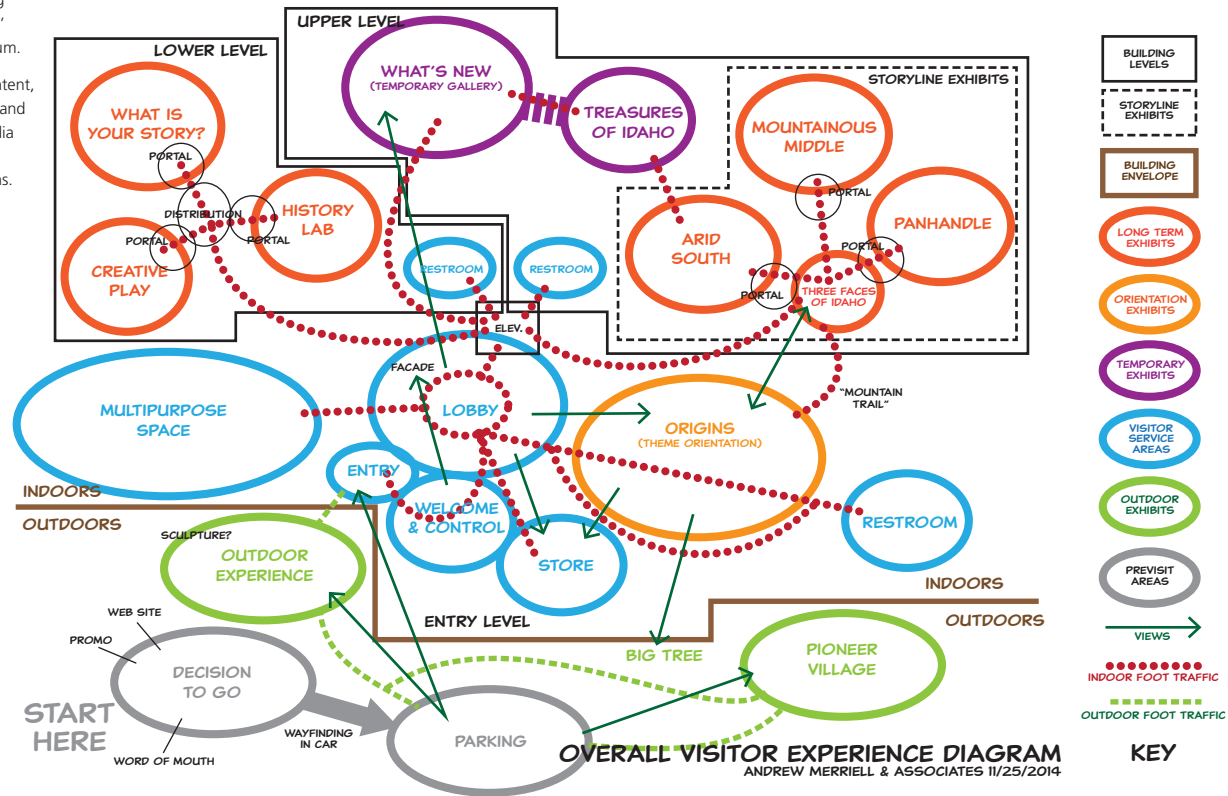
PLANNING, POLICY AND GOVERNMENTAL AFFAIRS

FEBRUARY 18, 2016

VISITOR EXPERIENCE

This diagram shows visitor flow and relationships among the various aspects of visitors' experience in the new Museum.

See Volume 2, Story and Content, for details of exhibit content and activities. See Volume 4, Media Concepts, for electronic and audiovisual media suggestions.



IDAHO STATE HISTORICAL MUSEUM • EXHIBITION MASTER PLAN

VISITOR EXPERIENCE AND FACILITY ZONING



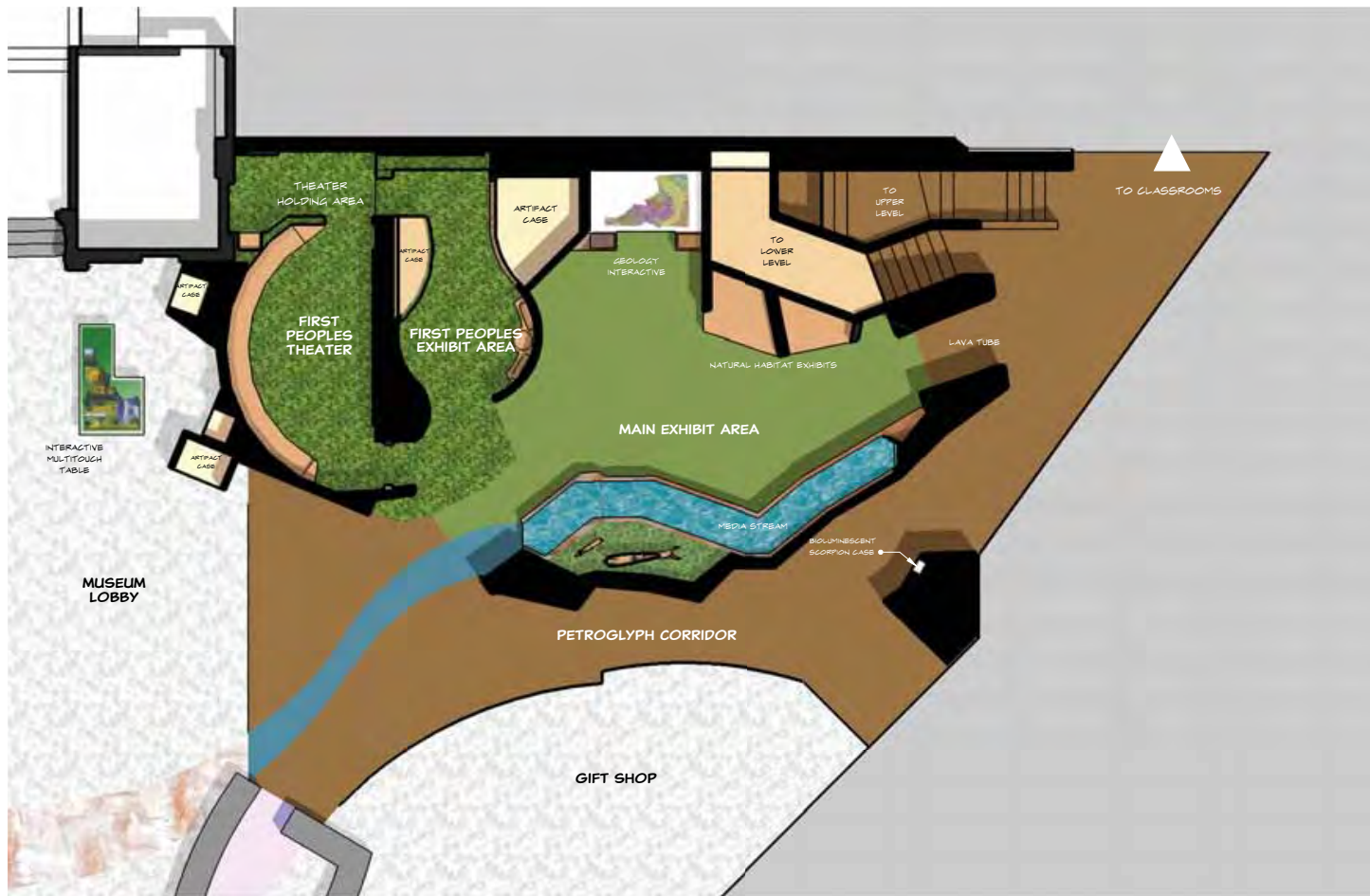
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INTERPRETIVE PLANNING AND DESIGN
1000 OLD SANDY BLVD. SUITE 100
SANDY, UT 84070
(801) 875-4370
www.merrilldesign.com

DATE: NOVEMBER 12, 2015

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ORIGINS EXHIBITION
LOBBY AND
EXHIBIT ENTRY



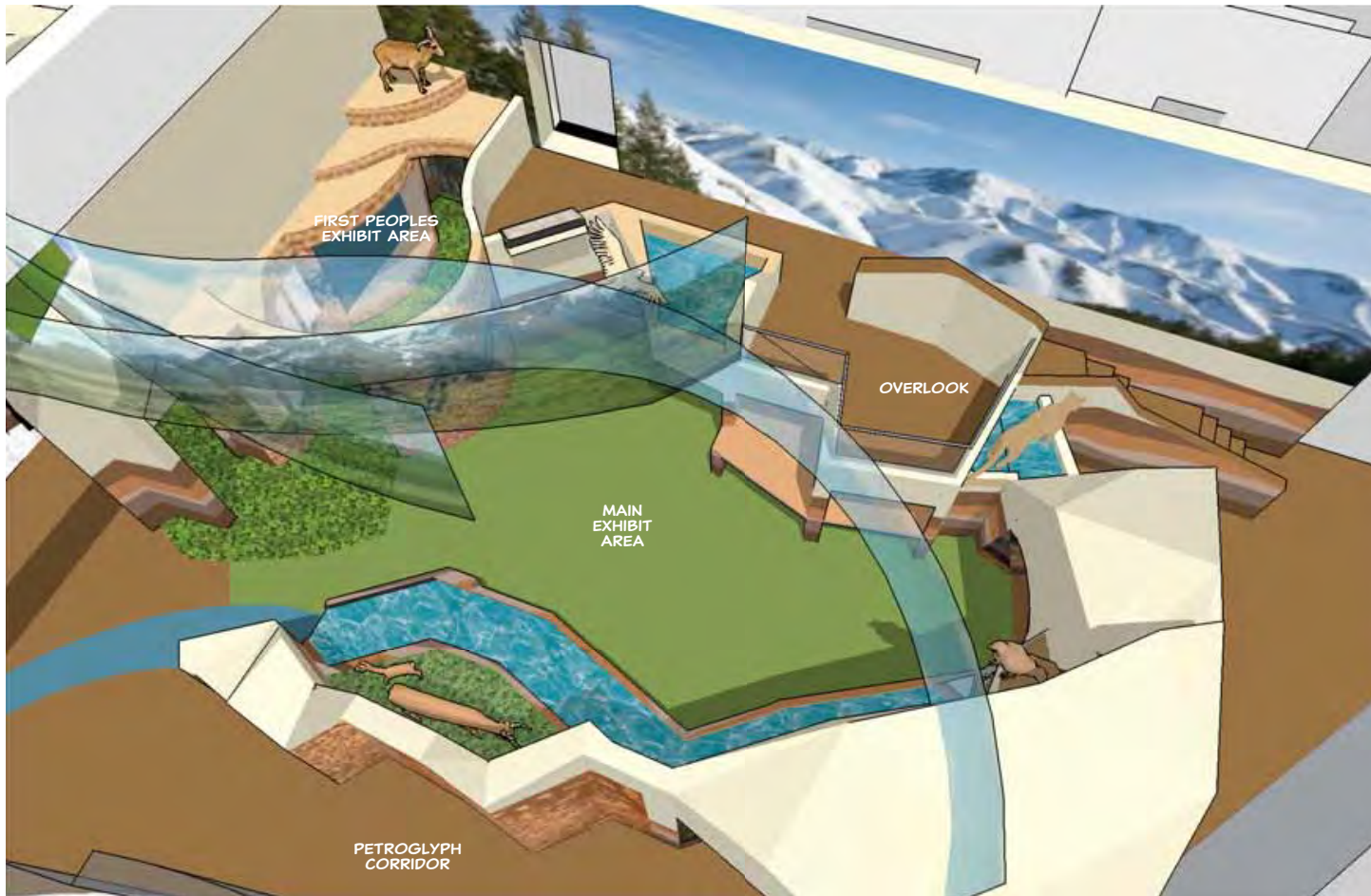
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ORIGINS EXHIBITION
SECTION PLAN



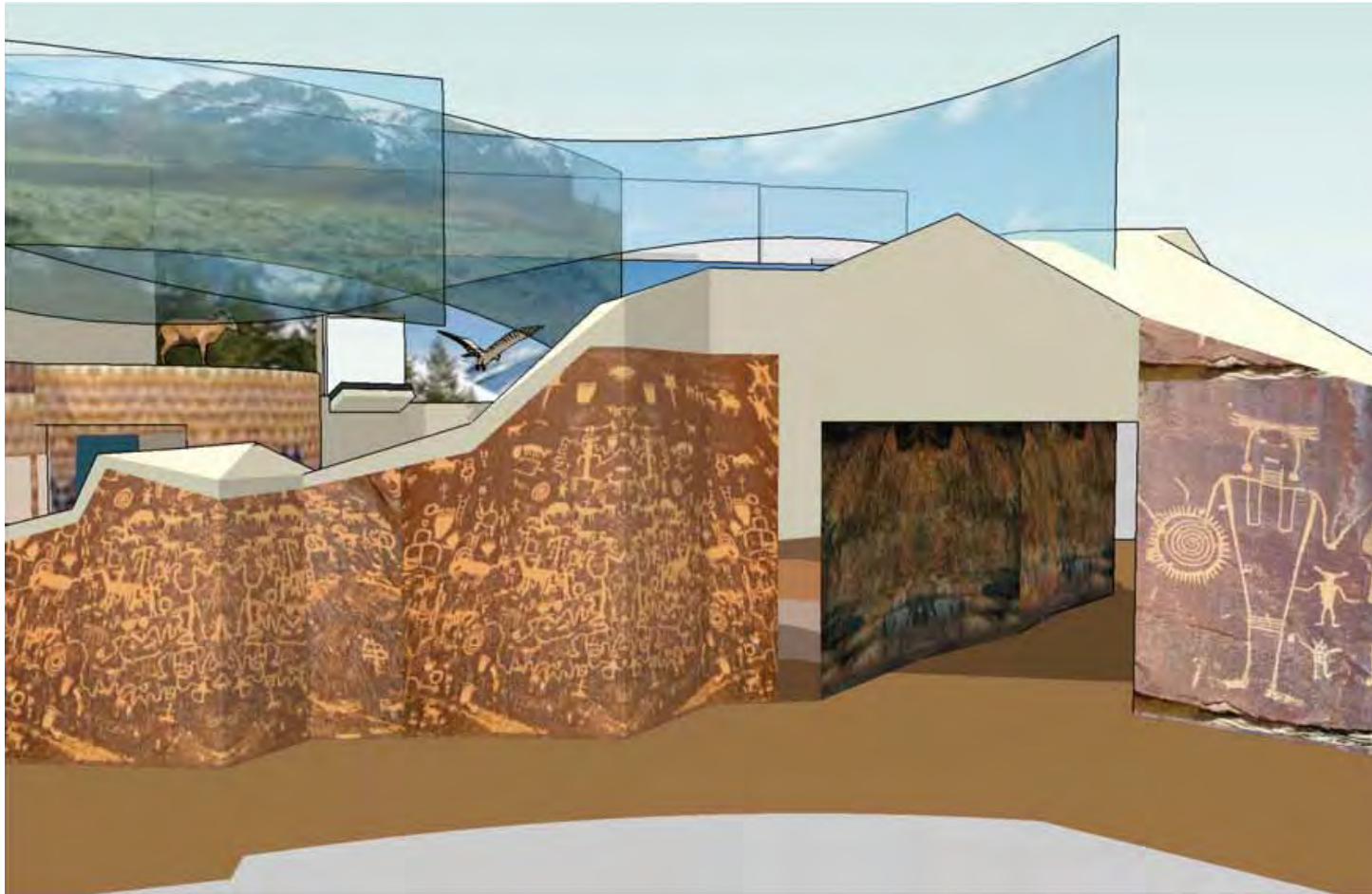
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ORIGINS EXHIBITION
EXHIBITION
OVERVIEW



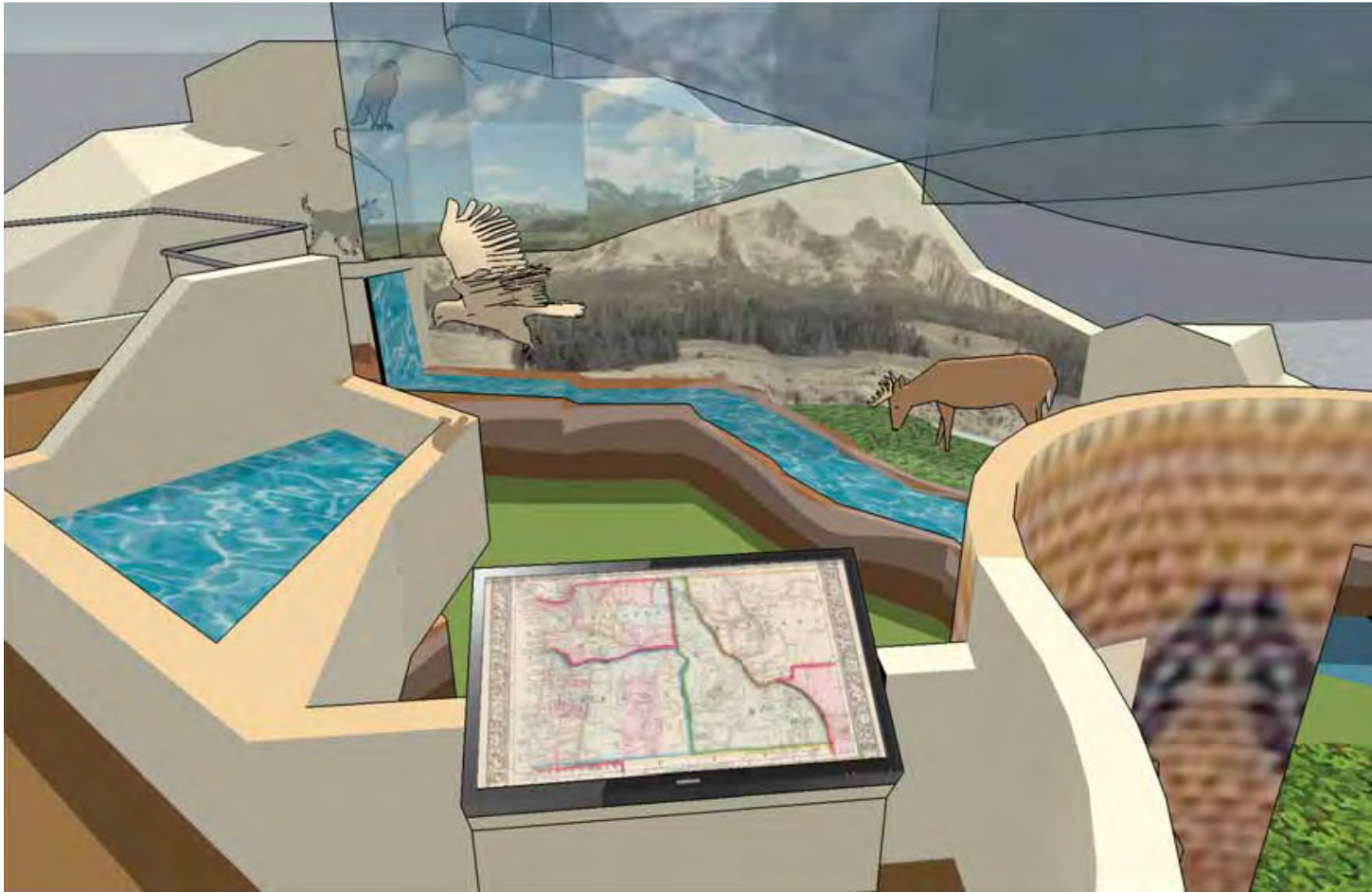
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ORIGINS EXHIBITION
PETROGLYPH
CORRIDOR



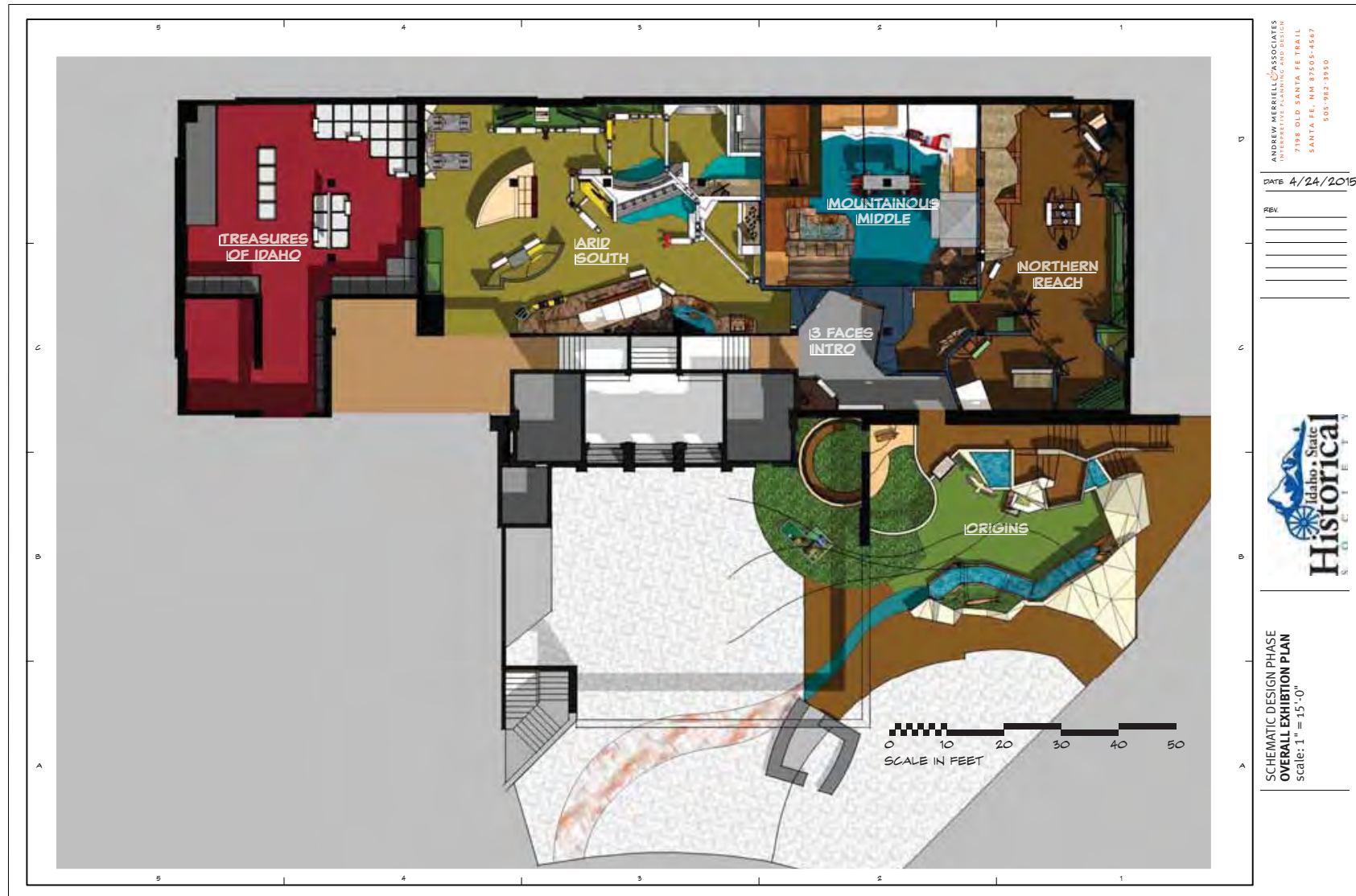
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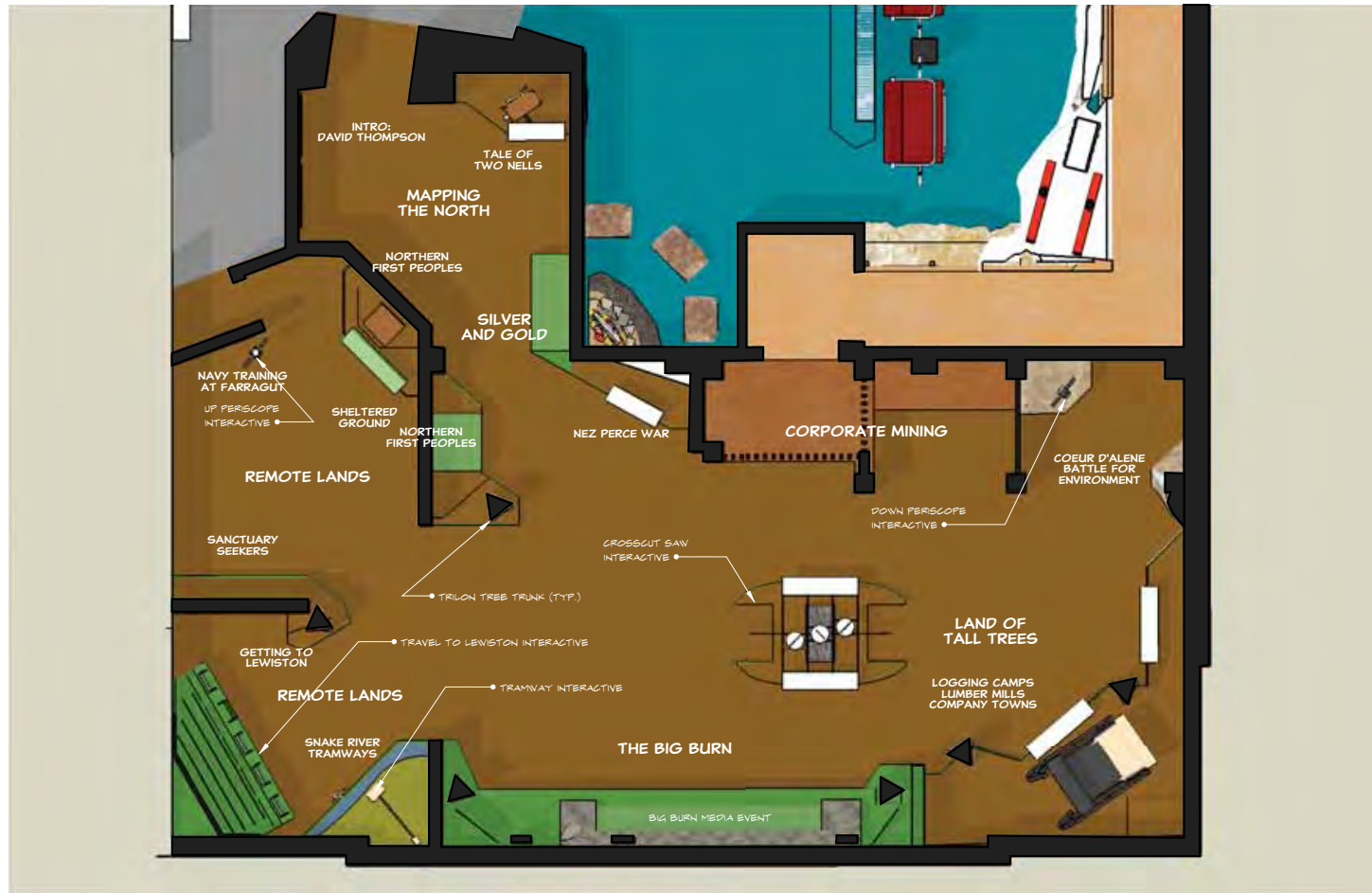
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A14	NO SCALE

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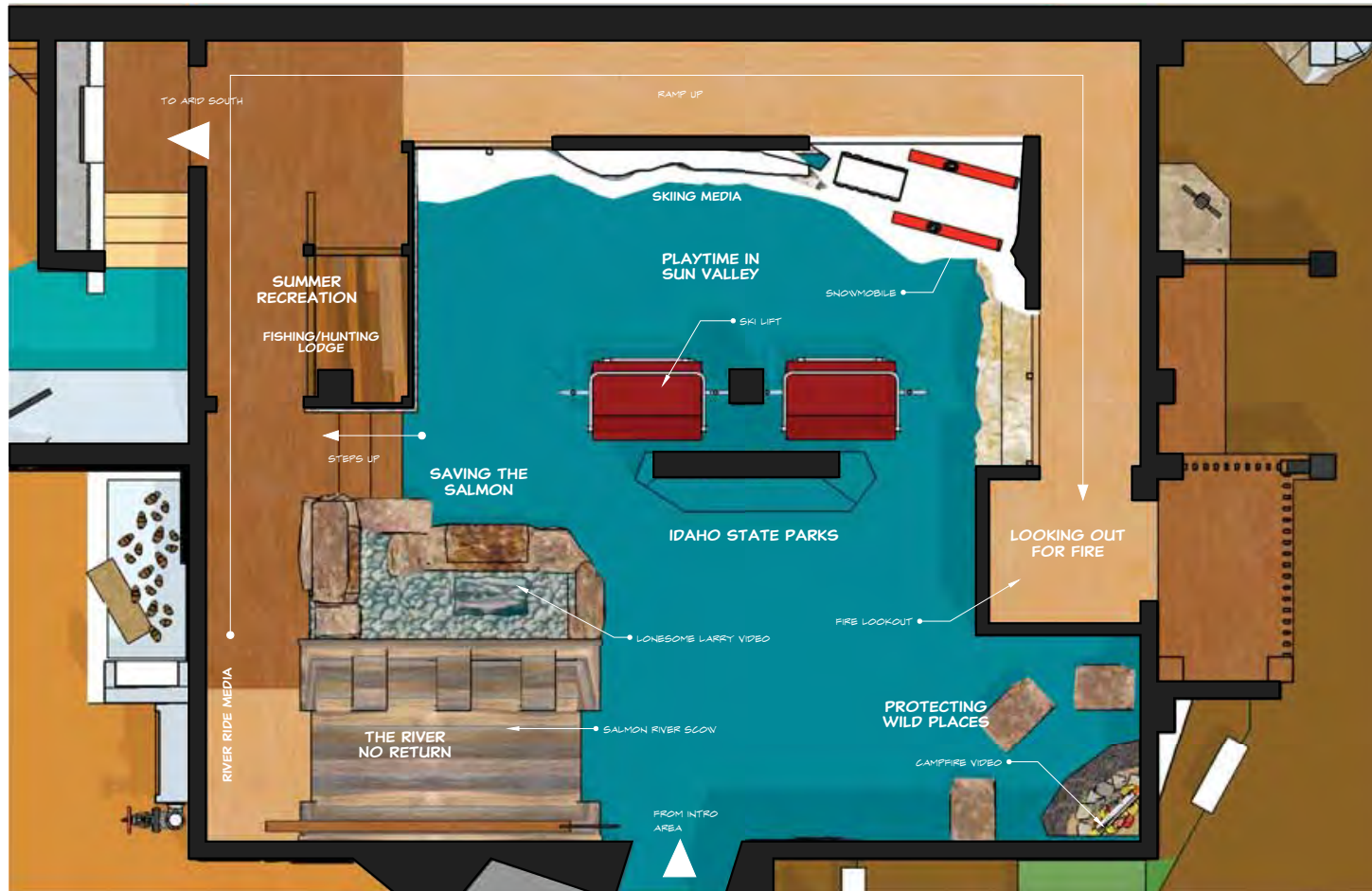


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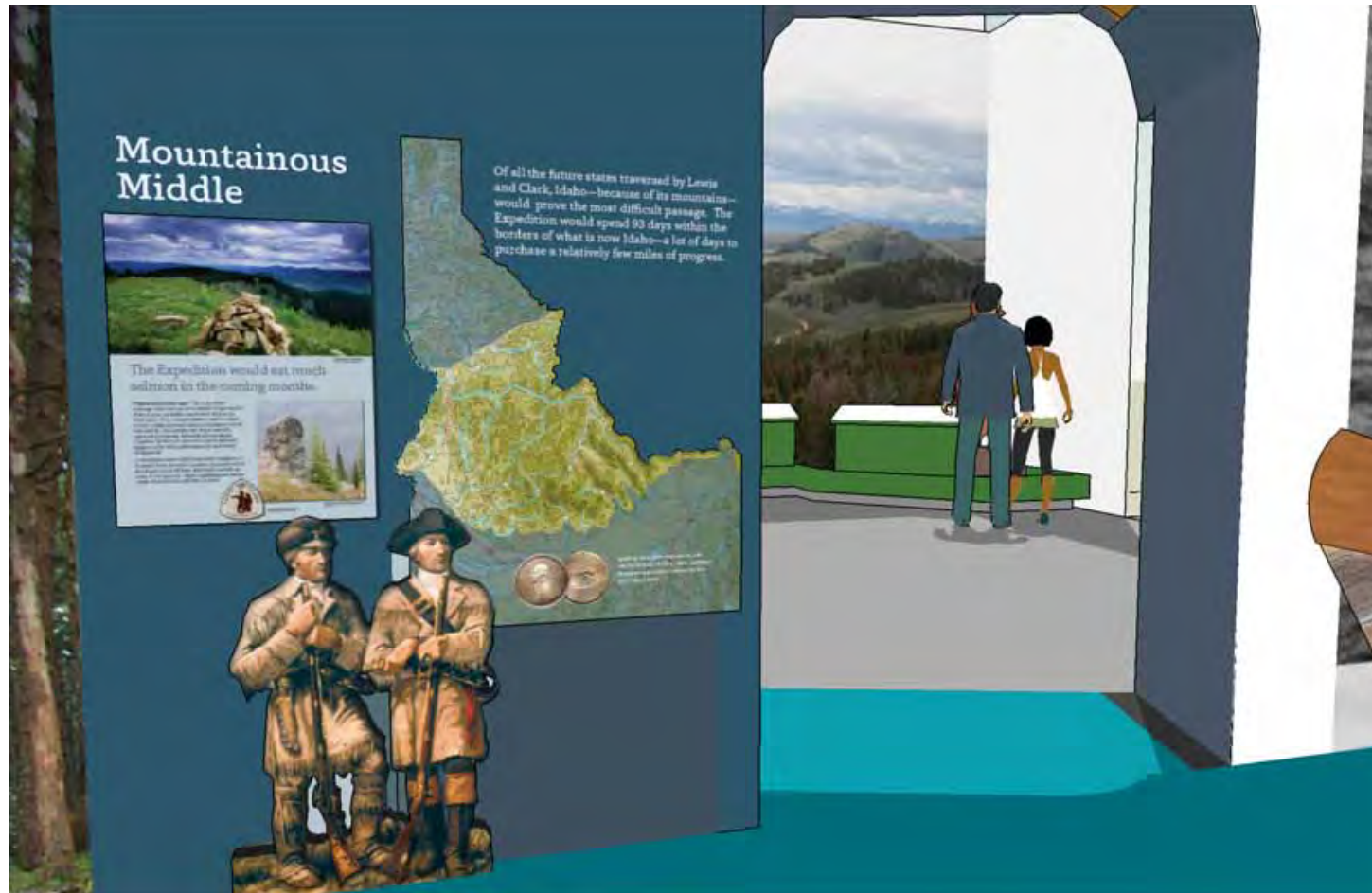
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MOUNTANEOUS MIDDLE
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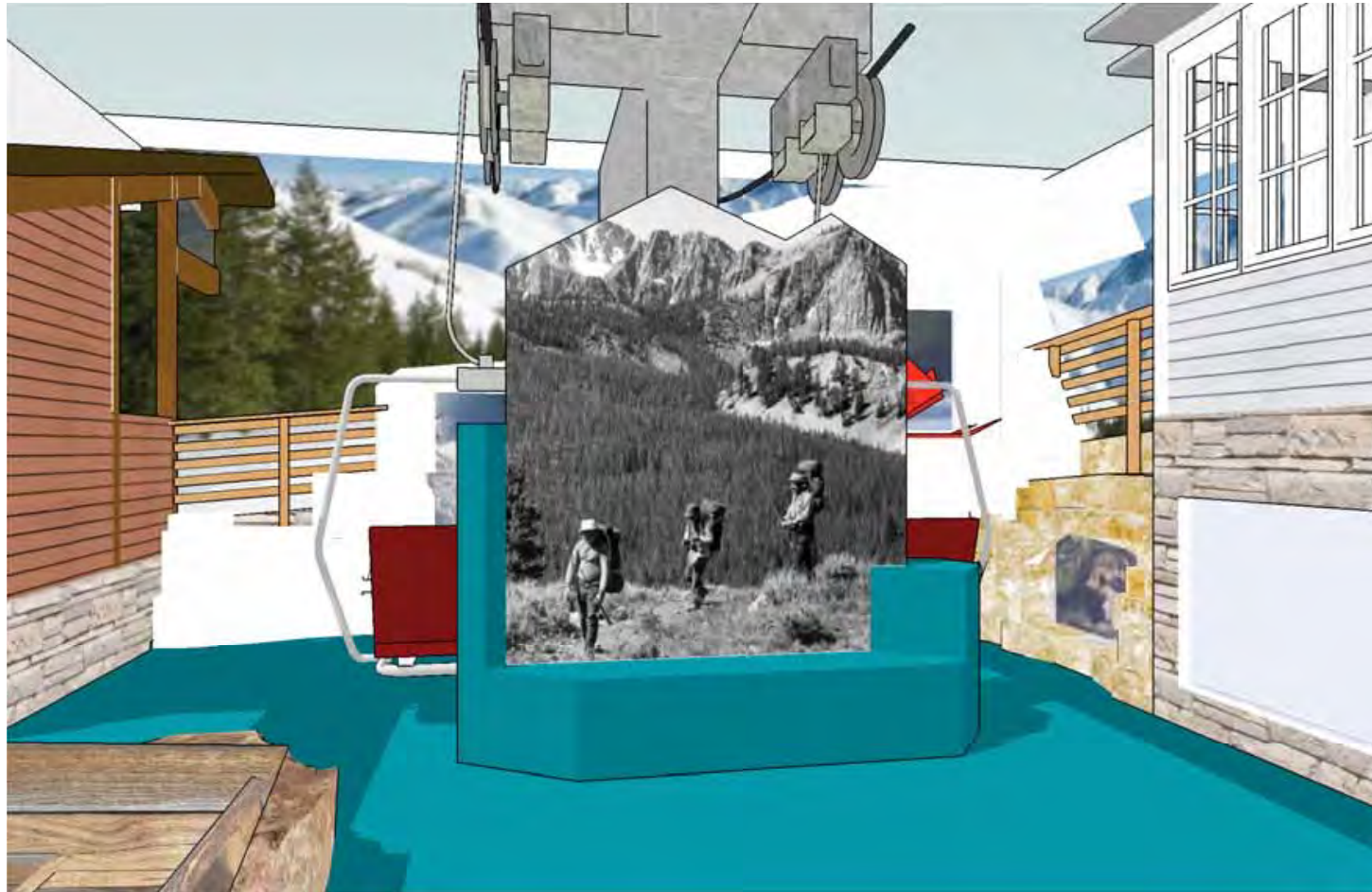
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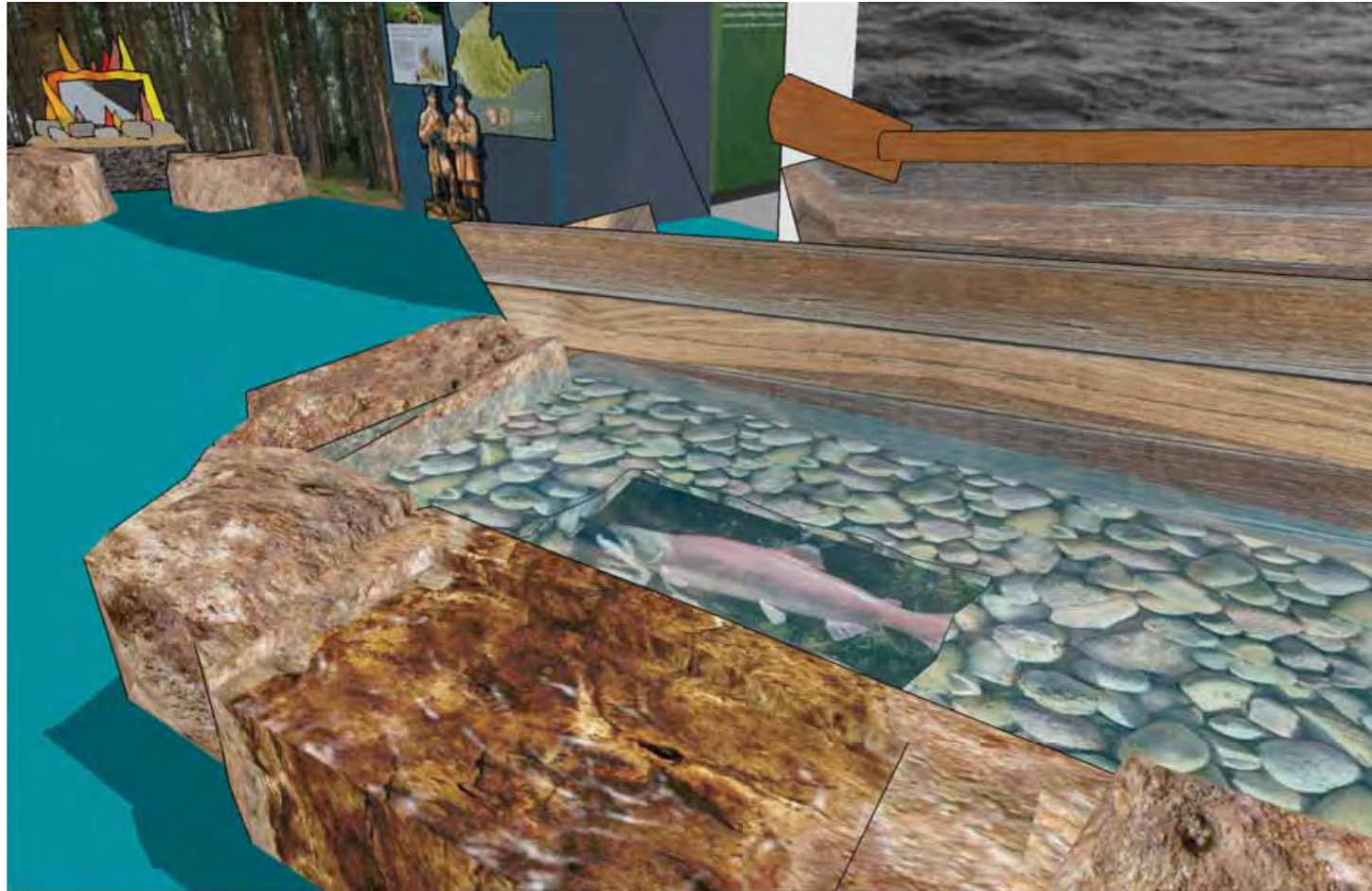
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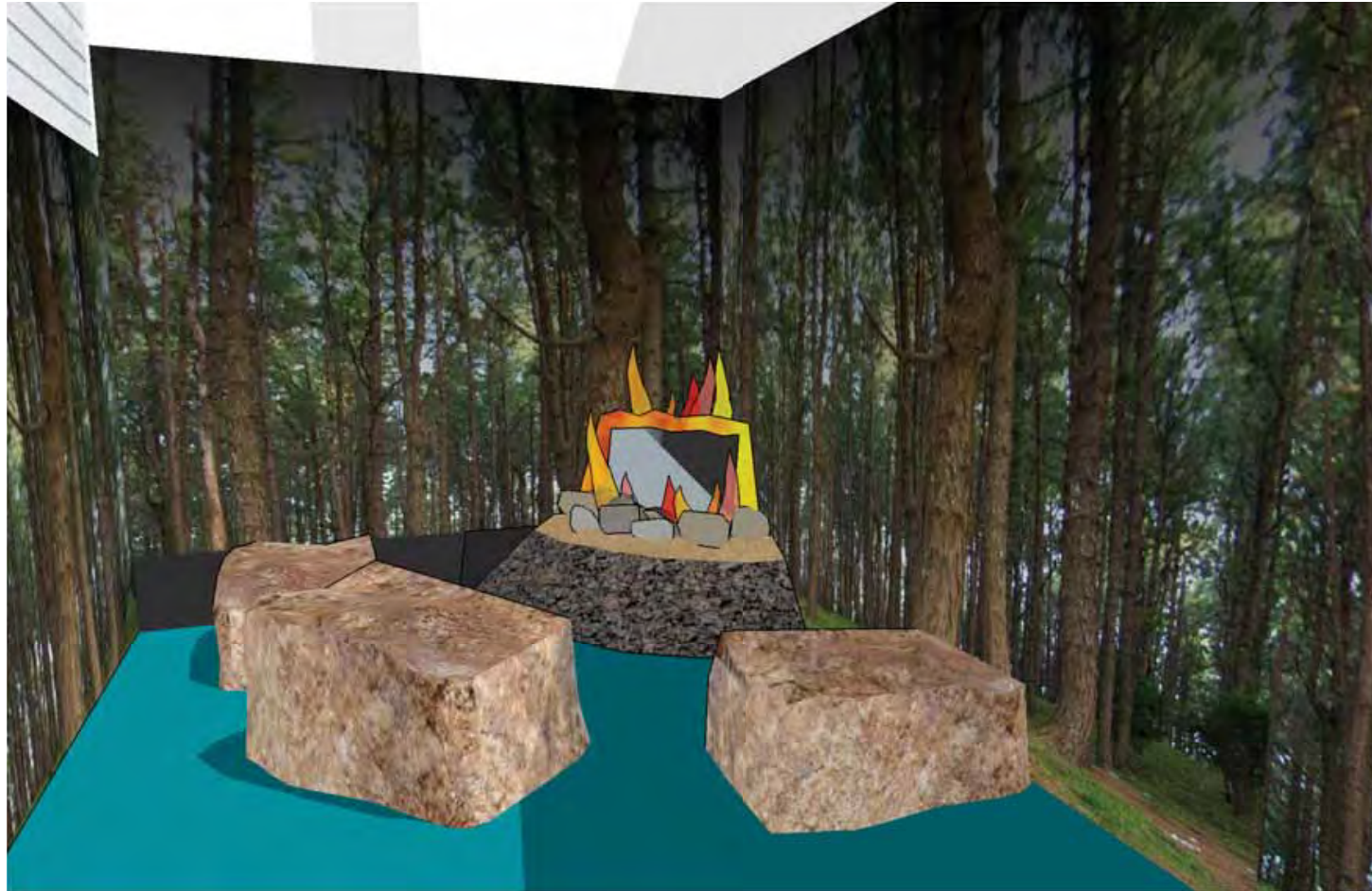
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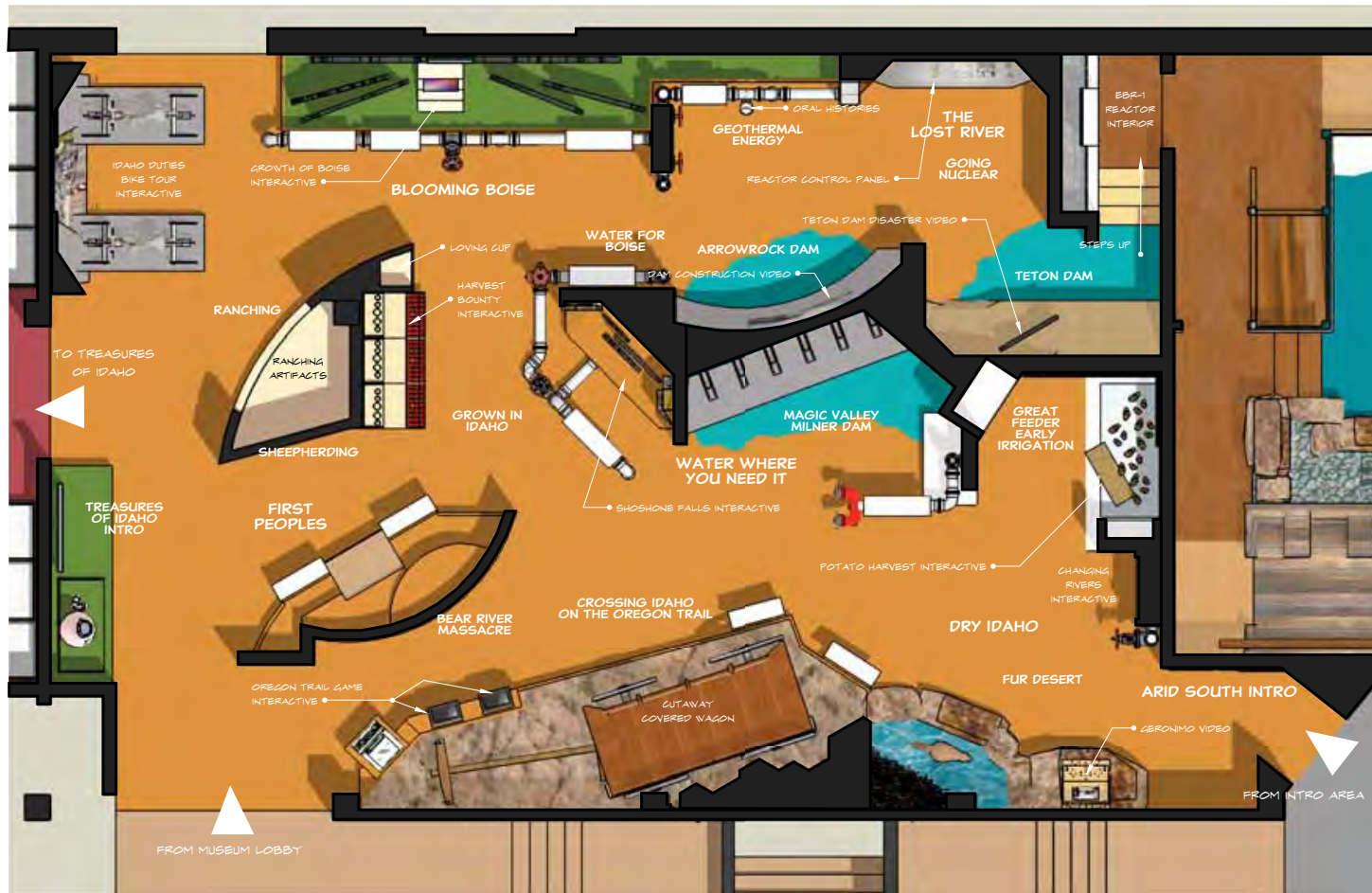
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UPPER LEVEL WEST EXHIBITS
ARID SOUTH
FLOOR PLAN



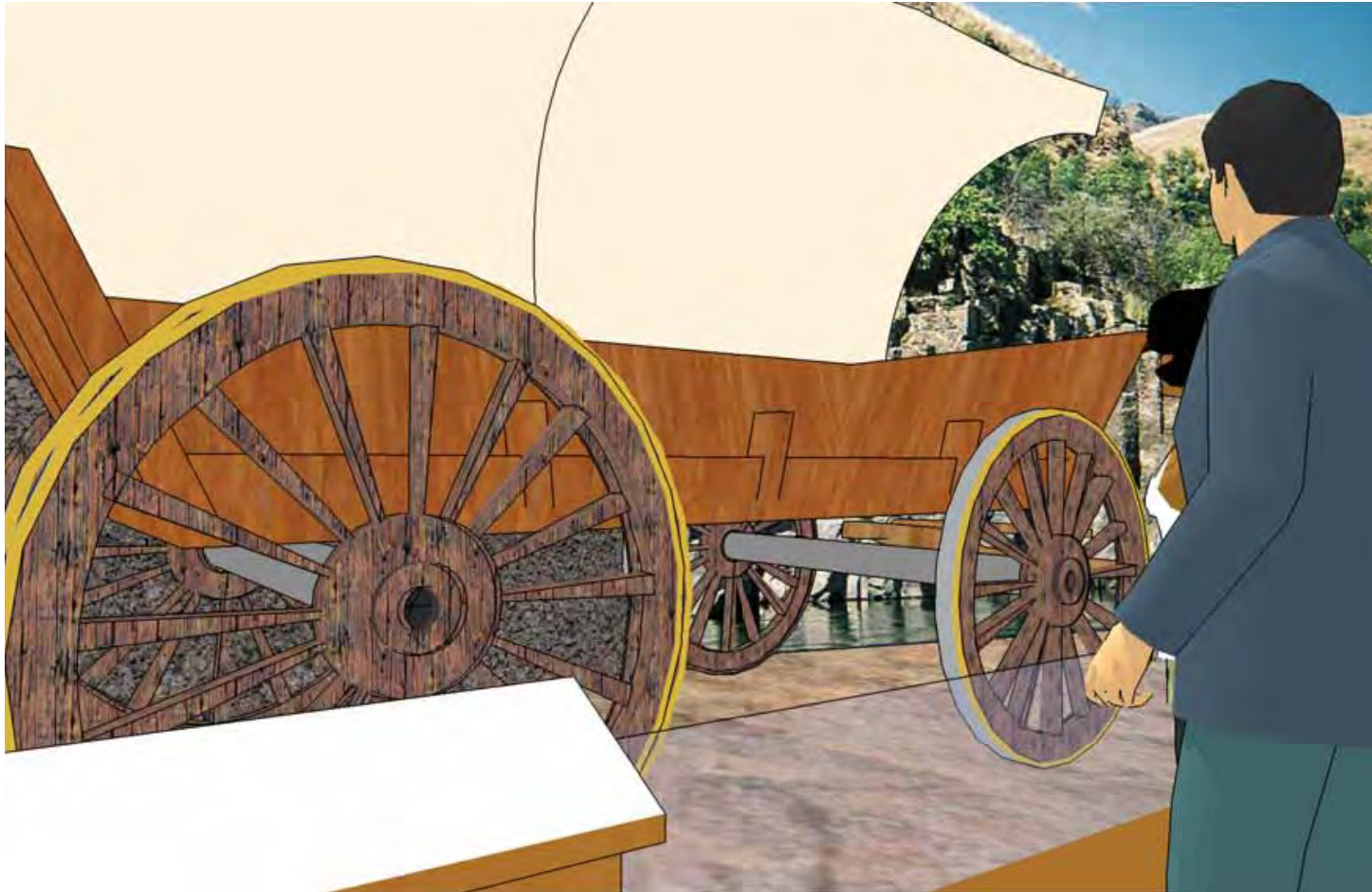
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A :: VIEW OF IDAHO GOES NUCLEAR EXHIBIT
A22 NO SCALE

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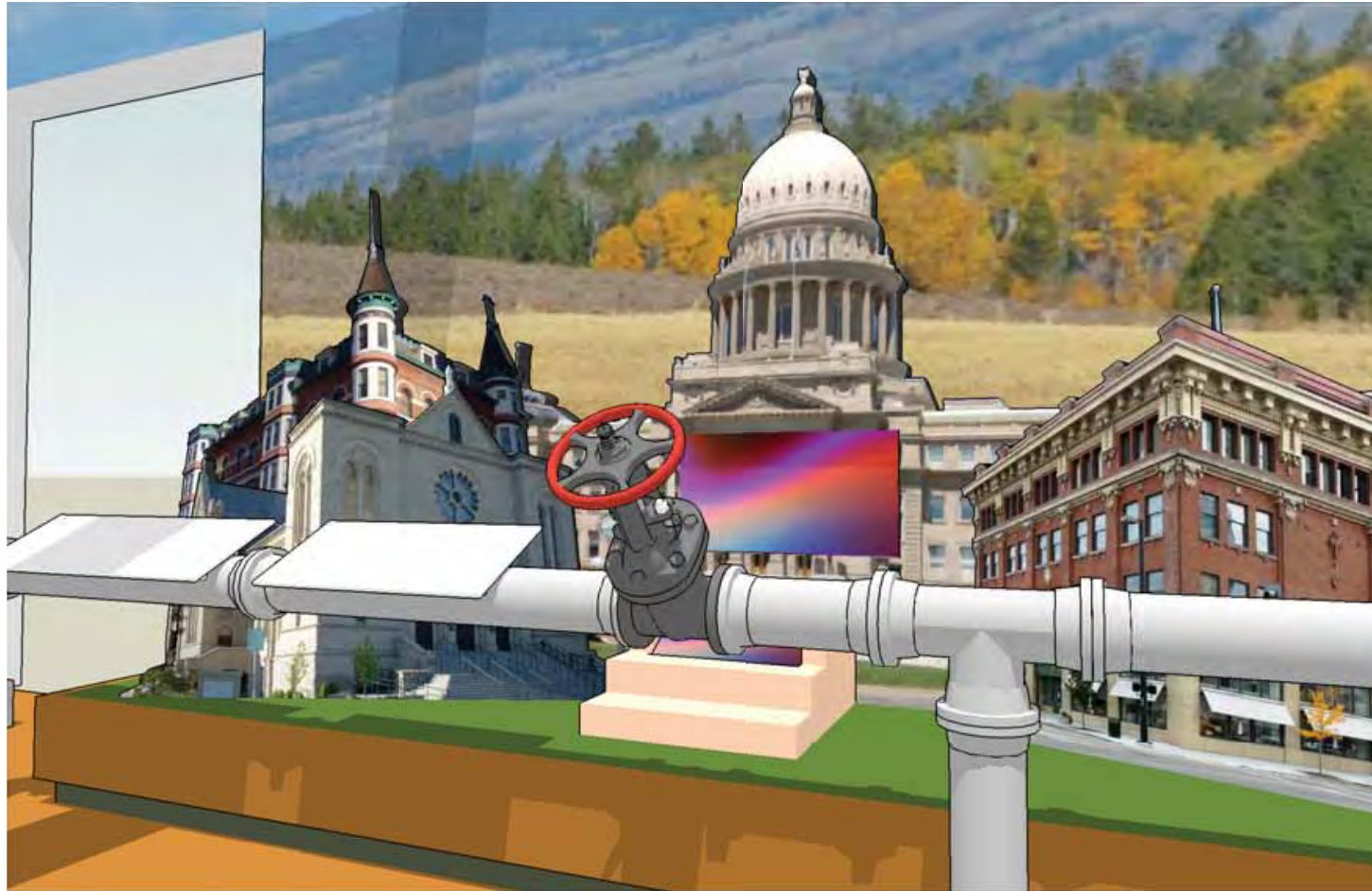


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AS4	SCALE: 3/16"=1'-0"

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TREASURES OF IDAHO
FLOOR PLAN

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Page 27



A :: VIEW OF TREASURES OF IDAHO INTRO EXHIBIT
A25 NO SCALE

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GALLERY VIEWS

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FEBRUARY 18, 2016

SPACE ALLOCATION AND VISITOR FLOW, LOWER LEVEL OF ORIGINAL BUILDING



IDAHO STATE HISTORICAL MUSEUM • EXHIBITION MASTER PLAN

VISITOR EXPERIENCE AND FACILITY ZONING

VOLUME 3 PAGE 14

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CREATIVE PLAY EXHIBIT AREA
TRUE PLAN

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CP1
Page 30





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BOOMTOWN STORE



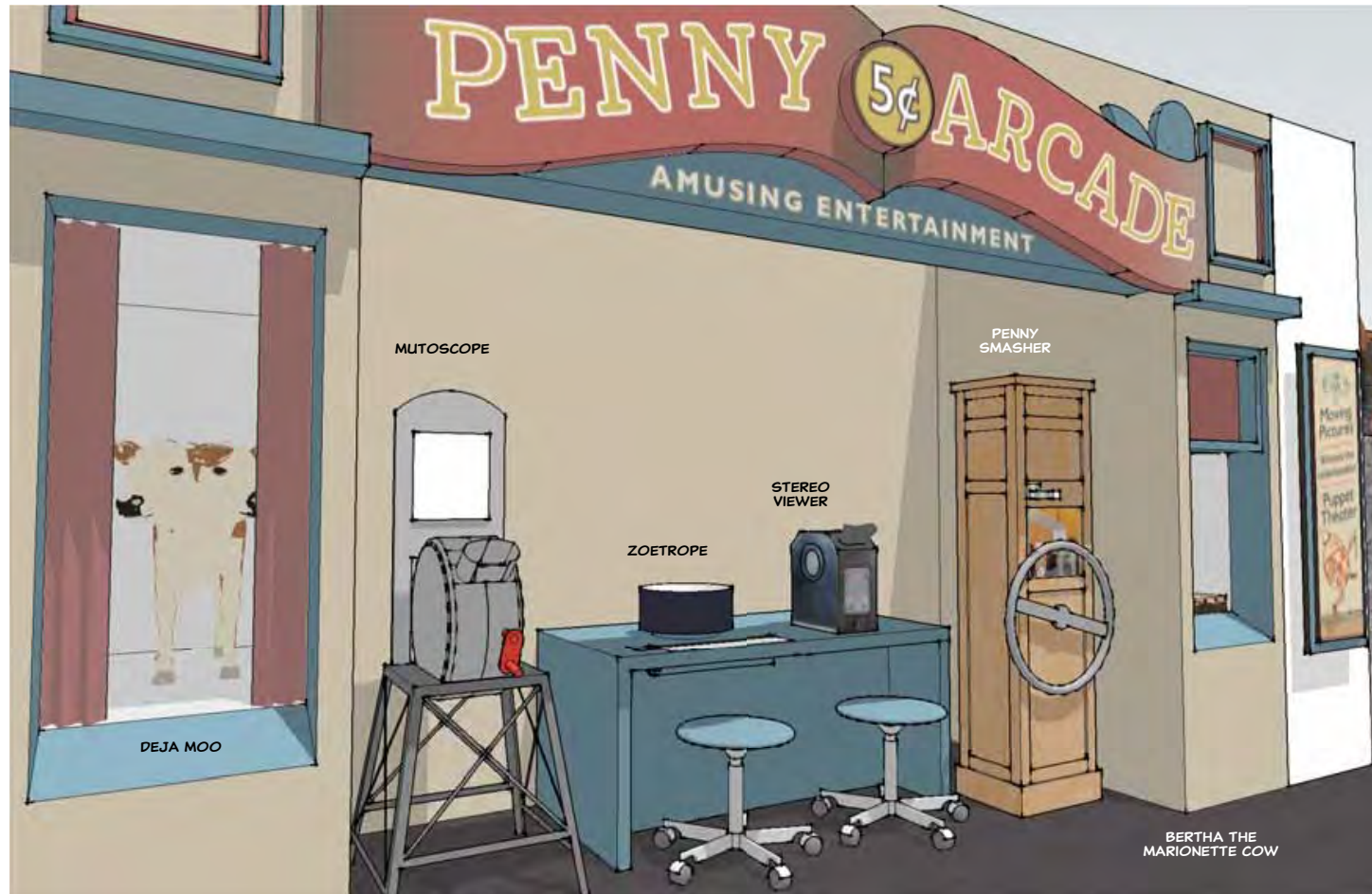
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DEEP UNDERGROUND



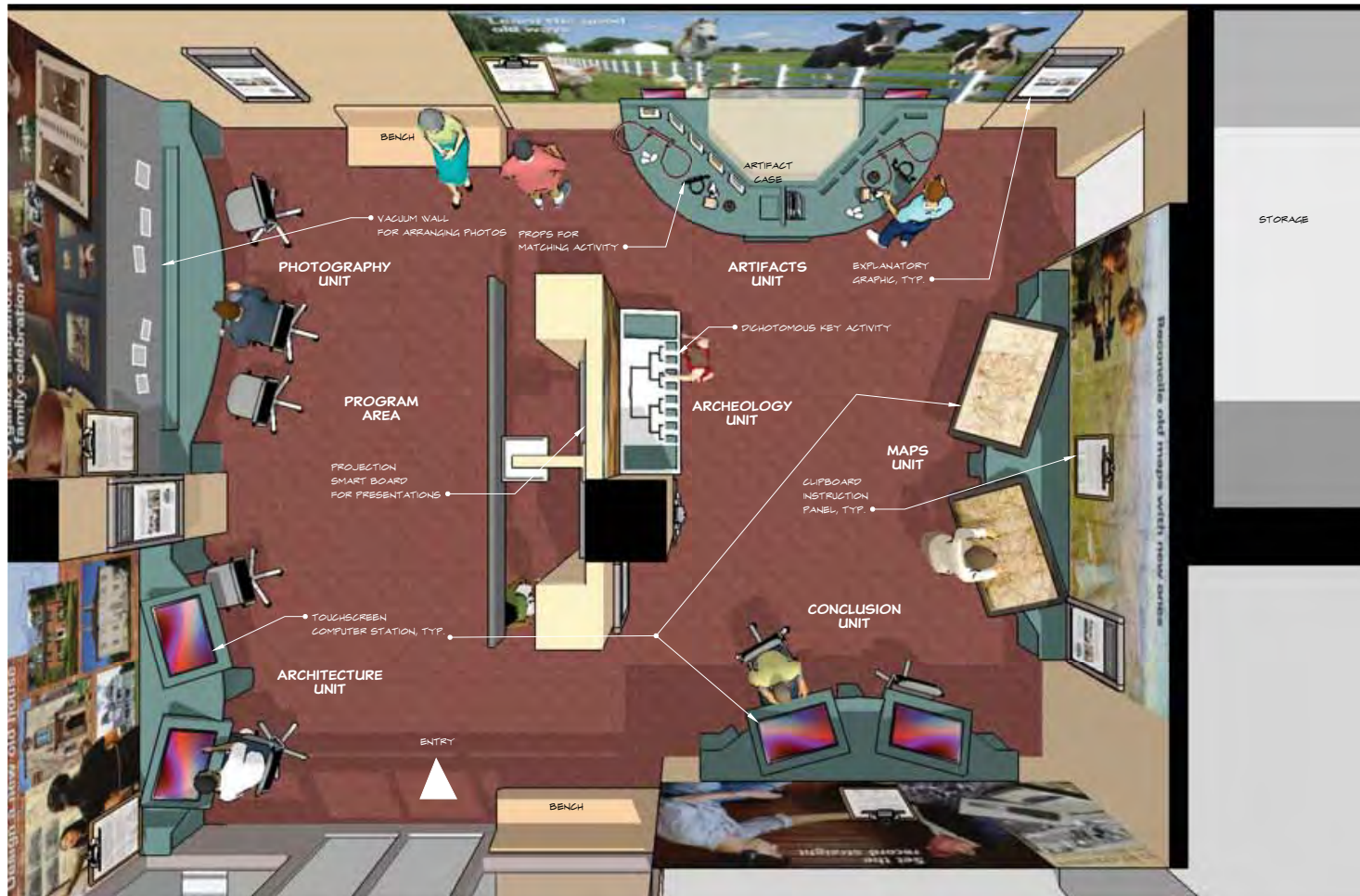
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HISTORY LAB EXHIBIT
PERSPECTIVE
PLAN





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WHAT'S YOUR STORY?
PERSPECTIVE PLAN



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WHAT'S YOUR STORY?
DIGITAL TAPESTRY



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EAST WALL DETAILS



Frank Robinson



Elvina Moulton

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WHAT'S YOUR STORY?
EXHIBIT DETAILS



Morley Nelson

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WHAT'S YOUR STORY?
LOOKING SOUTHWEST

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FEBRUARY 18, 2016**



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SUBJECT

Every Student Succeeds Act (ESSA) Overview

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section III.AA. Accountability Oversight Committee

Section 33-110, Idaho Code – Agency to Negotiate, and Accept, Federal Assistance

Idaho Administrative Code, IDAPA 08.02.02 – Section 111, Assessment in the Public Schools; IDAPA 08.02.02 – Section 112, Accountability; IDAPA 08.02.02 – Section 113, Rewards; and IDAPA 08.02.02 – Section 114, Failure to Meet Adequate yearly Progress (AYP)

BACKGROUND/DISCUSSION

The Elementary Secondary Education Act (ESEA) of 1965 provides for the federal funding of elementary and secondary education and emphasizes equal access to education and high accountability standards. The original bill was directed toward reducing achievement gaps between student groups and providing every child with the same public educational opportunities. The ESEA was reauthorized in 2001 by the No Child Left Behind (NCLB) Act and now by the Every Student Succeeds Act (ESSA) of 2015. The original Act was made up of six “Titles” with two additional Titles being added by 1967. Today the Act consists of nine Title:

- Title I – Improving Basic Programs Operated by State and Local Educational Agencies (Accountability)
- Title II – Preparing, Training, and Recruiting High-quality Teachers, Principals, or Other School Leaders (High-quality Teachers)
- Title III – Language Instruction for English Learners and Immigrant Students
- Title IV – 21st Century Schools
- Title V – State Innovation and Local Flexibility
- Title VI – Indian, Native Hawaiian, and Alaska Native Education
- Title VII – Impact Aid
- Title VIII – General Provisions
- Title IX – Education for the Homeless and Other Laws

While Title I has gotten the most recent attention due to the accountability provisions that are contained in it, all sections will need to be reviewed to determine if there are additional changes that may be necessary to make sure Idaho’s public elementary secondary education assistance is in compliance with the reauthorization. Not all of these sections have been identified at this time. Additionally, there are some areas that while changes due to the reauthorization may not be required, additional state flexibility may be warranted to review how these funds have been directed in the past and if the Board would like to make changes. One example of this would be Title II and the funds used at the state level directed toward achieving high quality teachers.

Section 33-110, Idaho Code designates the State Board of Education as the State Educational Agency (SEA) and authorizes the Board to negotiate with the federal government, and to accept financial or other assistance to further the cause of education. As the SEA the Board has delegated to the State Department of Education (SDE), the responsibility of ensuring many of the federal education requirements are carried out or implemented. Procedurally this is typically carried out by the SDE either bringing forward recommendations or developing plans and then bringing those plans to the Board for approval prior to submittal to the US Department of Education.

Board staff have reviewed the ESSA as well as several summaries created by national groups. A full summary of the ESSA is included as Attachment 1. Staff noted the following substantial changes from the previous federal education requirements.

Funding

- While funding formulas have mostly remained the same, many special programs were eliminated. Funding previously set aside for these special programs will be consolidated into the allocation the state receives for the applicable Title.
- ESSA is effective July 1, 2016 (at federal level) for formula grants, but the FFY 2016 Consolidated Appropriations Act delayed this until the 2017-2018 school year, and the U.S. Department of education has confirmed that funding for formula grants to State Education Agencies (SEAs) and local education agencies (LEAs) will be done according to the previous iteration of the law (NCLB) for the upcoming federal fiscal year.
- SEAs and LEAs are now permitted to transfer funds between certain programs (see Title V summary for more details).

State Plans

- The SEA must submit comprehensive plans for Title I, Title II, Title III and applications for other programs and grants as applicable or desired.
- The Title I, Title II, and Title III plans require meaningful consultation with stakeholders. The Title I plan must be available for public comment for at least 30 days.
- The SEA must give the Governor the opportunity to review and sign the Title I and Title II plans.

Accountability and Assessment (Title I)

- While many of the accountability and assessment requirements are similar to those under the previous law or the ESEA waivers, there is some additional flexibility being given to states. This is particularly true in regards to the goals that states must meet. In the past, states were required to have goals that would lead to a 100% proficiency rate. Under

the new law, states are required to establish their own long-term goals and measurements of interim progress.

- The accountability system must now include at least one measure of “school quality of school success.”
- The state must establish a system that meaningfully differentiates all public schools in the state.

High Quality Teachers (Title II)

The Title II funding formula will change over a number of years until it is based on 20% on the state’s student population and 80% on the state’s low-income student population. It is likely this will result in a decrease in Title II funds for Idaho (there is a hold harmless clause that limits the level of decrease in funds).

Highlighted, New Grant Programs

- Title IV establishes the Student Support and Academic Enrichment Grants, which will be formula grants to SEAs for well-rounded educational opportunities and safe and healthy student activities. The SEA must submit a plan to receive funds.
- Title IX establishes new Preschool Development Grants, which are authorized through the U.S. Department of Health and Human Services (HHS) and will be jointly administered by HHS and the U.S. Department of Education.

IMPACT

This and future ESSA reviews will provide the Board with the opportunity to evaluate existing programs and provide guidance to Board and Department staff on areas that might warrant changes or to identify new programs the state might like to explore.

ATTACHMENTS

Attachment 1 – Every Student Succeeds Act Summary

Page 5

STAFF COMMENTS AND RECOMMENDATIONS

In reviewing the law and third-party summaries, staff noted that there are sections of the law that have been interpreted by third parties quite differently while other areas are more specific and clear. The US Department of Education started implementing the federal rulemaking process to provide additional guidance to states for these areas that are less clear. While there are many areas that Idaho can start moving forward in, due to the complexity of the federal requirements, there will need to be an in-depth review of all areas prior to the implementation of proposed changes.

PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
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BOARD ACTION

This item is for informational purposes only. Any action will be at the Board's discretion.

Every Student Succeeds Act (ESSA) Assessment and Accountability Summary

Overall Changes

- Funding formulas remain essentially the same (with the exception of Title II, Impact Aid). However, many special programs were eliminated with the funding being wrapped into the State's allocation. Additionally, changes were made to how funds can be used.
- Increased authority and flexibility is being given to States regarding standards, assessments, and interventions.
- Terminology changes include: "vocational" to "career" and "limited English proficient" to "English learners".
- Highly qualified teacher (HQT) language is removed and replaced with language requiring that teachers in schools receiving Title I funds be meet state certification and licensure standards.
- There are specific limitations placed on the Secretary of Education throughout.

IMPLEMENTATION ROLLOUT

Implementation

- ESEA waivers in effect until August 1, 2016 (as applicable by state)
- State's current accountability systems are in effect until August 1, 2016
- States must continue to support priority and focus schools during the 2016-2017 school year
- New state accountability systems will take effect in the 2017-2018 school year

Funding

- Programs not substantially similar to something in the new law will receive funds until 9/30/2016
- Programs no longer authorized but substantially similar to something in the new law may finish out multi-year grants
- Programs still authorized may use previously awarded funds under the terms in place prior to enactment and then transition to the new requirements
- ESSA states that the new law is effective July 1, 2016 (at federal level) for formula grants BUT the FY2016 omnibus delayed this until the 2017-2018 school year
- New law effective August 1, 2016 for competitive grants (at federal level)
- Impact Aid changes effective federal fiscal year 2017
- Title II funding formula adjustment will be phased in between enactment and 2020 (see Title II section for more details)

Title I

USE OF FUNDS

- Title I-A formula for setting state allocations remains unchanged
- State must set aside 7% of the Title I allocation to carry out interventions and technical assistance; 95% of these funds must be distributed to LEAs with priority given to those with high

PLANNING, POLICY AND GOVERNMENTAL AFFAIRS

FEBRUARY 18, 2016

numbers of schools identified for support and improvement, those with the greatest demonstrated need, and those who demonstrate a strong commitment to improvement

- State may set aside 3% of the Title I allocation for Direct Student Services; 1% of this may be held for administrative costs with the remainder awarded as subgrants to LEAs with a priority given to identified schools; funds may be used for: academic and CTE coursework, credit recovery, advanced placement, dual / concurrent enrollment programs, tutoring, AP/IB test fees, and transportation for schools implementing school choice
- 95% of funds must go out to LEAs in subgrants (competitive or formula)
- 1% may be used for State administration
- The supplement, not supplant requirement remains, though it is a little more flexible. To ensure compliance, within 2 years of enactment of the new law, LEAs must demonstrate that the process used to allocate State and local funds to schools is the same as it would have been in absence of Title I funds

TITLE I PLANS

- The SEA must submit the State's plan to the U.S. Department of Education for approval
- LEAs must submit their plans to the SEA for approval; the plans must include information as required by federal law and additional information as required by the SEA

State Plan Process

- The SEA is responsible for developing and submitting the State's Title I plan
- The SEA must have meaningful consultation with stakeholders, including: the Governor, members of the State legislature, LEAs (including rural), representative of Indian tribes, teachers, principals, charter school leaders, specialized instructional support personnel, paraprofessionals, administrators, and parents
- The State must make the State Plan available for public comment for at least 30 days
- State plans must be peer reviewed
- State plans must be approved within 120 days unless the Secretary demonstrates that it does not meet the requirements of the law
- State plan shall remain in effect for the duration of the State's participation in Title I; the SEA is expected to periodically review and revise the plan to keep it accurate / relevant

State Plan Contents

- Descriptions of the State's assessments, long-term goals and measurements of interim progress, and the accountability system and system of meaningful differentiation. It is unclear at this time whether the SEA will submit this as an integrated part of the Title I plan or through submission of a revised Accountability Workbook
- Description of the steps the State will take to provide assistance to LEAs and schools supporting early education programs
- Assurance that the state has adopted challenging academic content standards

ASSESSMENTS

Required Administrations

Reading / Language Arts and Math: grades 3-8 and once in the high school grade band of 9-12

Science: once in each of the following grade bands: 3-5, 6-9, 10-12

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- The state may choose to use either a single summative assessment OR “multiple statewide interim assessments during the course of the academic year that result in a single summative score that provides valid, reliable, and transparent information”
- The state may exempt 8th graders in advanced math from the state’s standardized math test under certain conditions (Sec. 1111(b)(2)(C))
- The law specifically allows for state or local laws that allow parents to opt their child out of participation in the statewide assessment(s)
- The 95% participation requirement remains, but the language has changed
 - Consequences for LEAs are left to the state (there are no federally mandated consequences)
 - For the 95% calculation, the denominator will be either 95% of our total student enrollment OR the total number of students who participate in the test, whichever is greater
 - Based on Board staff’s reading (and an initial reading by our Deputy Attorney General), this would mean some additional flexibility in the 95% requirement, since the denominator does not have to be 100% of our enrolled students
 - A request for clarification on this has been sent to the U.S. Department of Education

Other Requirements and Considerations

- The same academic assessments must be used to measure achievement of all public elementary and secondary school students
- Must be aligned with the state’s challenging academic standards
- Must provide “coherent and timely” info about students’ performance on the standards whether the student is at grade level or not
- Must be valid and reliable and consistent with nationally recognized testing standards (must be able to pass peer review)
- Must include multiple measures of students’ academic achievement, including those that measure higher-order thinking (may include portfolios, projects, or performance tasks), and may include measure of growth
- Must provide for participation of all students, including English Language Learners and those with disabilities (appropriate accommodations must be provided for this latter group)
- Must provide data that helps parents, teachers, principals, and school leaders to “understand and address the specific academic needs of students”
 - Reports should be in an understandable and uniform format, and when possible, in a language that parents can understand
- Data must be disaggregated by subgroup, except in cases where there is insufficient data to yield reliable info or if the results would reveal individual students’ personally identifiable info; super-subgroups are no longer allowed (as they have been under the waivers)
 - The state establishes the minimum number of students that we deem necessary to provide disaggregated data (minimum N)
- Computer-adaptive assessments are specifically allowed provided that they measure a student’s academic proficiency based on the state’s standards for his/her grade level
- The state *may* establish a process and criteria to approve LEAs to use a nationally-recognized assessment for high school (for math, ELA, science) instead of the state’s established assessment

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- The state *may* set a target limit on the % of instructional time, per grade, that can be used for testing

STATEWIDE ACCOUNTABILITY SYSTEM

Goals

- The state shall establish ambitious long-term goals and measurements of interim progress towards those goals
- Goals must be established for all students and separately for each subgroup
- Multi-year term established for the goals must be the same for all students and for each subgroup
- For subgroups that are behind, the goals must “take into account the improvement necessary on such measures to make significant progress” in closing the gaps
- Required goals (at a minimum):
 - Improved academic achievement as measured by proficiency, for all students and each subgroup
 - Improved graduation rates, using the four-year adjusted cohort calculation, for all students and each subgroup
 - Increases in the percentage of English learners making progress in achieving English language proficiency as measured on the statewide assessment(s)
- Optional goals (specifically mentioned in the law):
 - Improved graduation rates, using the extended-year adjusted cohort calculation, provided that the goal is more rigorous than the one set using the four-year adjusted cohort calculation

Statewide Accountability System Indicators

- Required indicators
 - For all schools:
 - Academic achievement, as measured by proficiency (all students and by subgroup)
 - Progress of English learners towards English language proficiency
 - 1 or more measures of school quality or student success (which must be the same statewide by grade band)
 - For elementary schools:
 - Academic growth or another academic measure
 - For high schools:
 - 4-year adjusted cohort graduation rate
- Optional indicators (specifically mentioned in the law)
 - For high schools:
 - Extended-year cohort graduation rate
 - Academic growth

System of Meaningful Differentiation

- The state must establish and use, on an annual basis, a system that meaningfully differentiates all public schools in the state
- The system must:

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- be based on the indicators established in the state’s accountability system
- give substantial weight to each academic indicator and the academic indicators, in aggregate, must have “much greater weight” in the system of differentiation than that given to the non-academic indicators (school quality)
- include differentiation of any school in which any subgroup of students is consistently underperforming

School Identification

- Comprehensive Support and Improvement
 - Not less than the lowest performing 5% of all schools in the state
 - Public high schools failing to graduate one third or more of their students
 - Schools who were previously identified for Targeted Support and Improvement that have not made appropriate improvements within a state-established number of years
- Targeted Support and Improvement
 - Subgroup of students is consistently underperforming (as defined by the state)
 - We are waiting for additional clarity regarding a section related to schools who have a subgroup whose performance would have resulted in school being in lowest 5% of all schools- the law indicates that these schools must include strategies for addressing resource inequities in their targeted improvement plan, but it is not clear if any school with this circumstance must be identified for targeted support and improvement OR if they will be identified as a subgroup of those already identified based on having a subgroup that is consistently underperforming
- Process
 - School identification must begin in the 2017-2018 school year and be done at least once every three years.
 - The state must notify each LEA (district) of any school in that district that is identified into either support category.
 - The LEA must work with each school identified for Comprehensive Support and Improvement to establish an improvement plan. The plan must be approved by the school, LEA, and SEA. Schools identified for Targeted Support and Improvement must create a plan for improvement. This plan must be submitted to and approved by the LEA.
 - The state must establish exit criteria for schools to be removed from identification for support and improvement.

Definitions

- Subgroups = economically disadvantaged, students from major racial and ethnic groups, children with disabilities, and English learners
- Four-year adjusted cohort graduation rate = a calculation that includes students in the denominator based on their first-time entry into 9th grade and includes them into the numerator if they complete high school by: clearly indicates that states can choose for the numerator in the calculation to either be the number of students who complete by: a) the conclusion of their fourth year of high school, OR b) the conclusion of the summer session immediately following the fourth year
- Extended-year cohort graduation rate calculation = a calculation, similar to the 4-year cohort graduation rate that includes students in the numerator if they complete high school by: a) the

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conclusion of the year after their cohort should have completed (thus, the fifth year), OR b) the conclusion of the summer session immediately following the fifth year

INNOVATIVE ASSESSMENT AND ACCOUNTABILITY DEMONSTRATION AUTHORITY

- Allows the U.S. Department of Education to authorize applications from up to 7 SEAs to pilot new assessment systems that utilize methods and assessment-types that would not normally be approved for accountability (such as competency-based or instructionally-embedded assessments).
- The demonstration authority period is up to 5 years, with the potential for one extension of up to 2 additional years, provided that the state outlines a plan to transition to statewide use of the innovative assessment system during that 2 year period.
- After an evaluation of the project by the U.S. Department of Education at the conclusion of the first 3 years, if the program is deemed effective, it may be expanded to additional SEAs.

STATE ASSESSMENT GRANTS

- Competitive grants to SEAs to develop and improve the State's assessment system (reliability and validity, assessments for English learners, science assessments, etc.)
- Can also be used for designing State Report Cards

STATE ASSESSMENT SYSTEM AUDIT

- Secretary may award grants to States for auditing assessment systems with the intention of streamlining the system and eliminating unnecessary assessments
- 20% of a State's allocation must be used for grants to LEAs

SCHOOLWIDE ASSISTANCE

- LEA may establish a schoolwide Title I program at any school where a) 40% or more of the children in the school's attendance area are low-income OR b) 40% or more of the children enrolled in the school are low-income
 - A school that operates a schoolwide program may use funds to establish or enhance preschool programs
 - A secondary school that operates a schoolwide program may use funds to operate dual or concurrent enrollment programs
- A school that does not meet this qualification may operate a schoolwide program if the school receives a waiver from the SEA

PARENT AND FAMILY ENGAGEMENT

- LEA must reserve at least 1% of its Title I allocation for parent and family engagement
- Parents and family members must be involved in developing LEA Title I plans and, as applicable, improvement plans
- LEA must conduct annual evaluation of parent and family engagement policies and work to remove barriers to participation

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MIGRANT EDUCATION

- Mostly technical changes and updates to definitions
- Prioritizes services for students who are struggling to meet the State's challenging academic standards and those have dropped out of school

NEGLECTED OR DELINQUENT

- SEA must submit a plan that is focused on State-established outcomes, prioritizes high graduation (diploma attainment), and addresses re-entry for students returning to school from juvenile justice or residential programs
- Allows funds to be used for acquisition of equipment, pay-for-success initiatives, or targeted support for youth who have been in contact with both the child welfare and juvenile justice systems
- LEAs may use the funds for direct services or for subcontracts or cooperative agreements

PER-PUPIL FUNDING FLEXIBILITY

- LEAs may apply directly to the U.S. Department of Education to request a flexibility demonstration agreement that allows the LEA to consolidate federal funds from Titles I, II, III, IV-A, and V-C) with state and local funds to create a weighted per-pupil funding system
- The Secretary may grant up to 50 flexibility demonstration authorizations

PRIVATE SCHOOLS

- SEA must designate an ombudsman to monitor and enforce the requirement for equitable services to be provided to students in private schools
- LEAs must provide documentation demonstrating they have had meaningful consultation with private schools
- Allows services to be provided to private school students directly by the LEA or other government agency or through a third-party contractor
- A private school may file a complaint with the SEA demonstrating that the LEA did not meet its responsibilities for consultation and services; this could result in the SEA providing services directly or through a contractor

Title II

FUNDING

Formula

- Title II formula is being adjusted from enactment to 2020:
 - FFY 2017: 35% of funding based on student population (number of individuals 5-17); 65% based on low-income student population (number of individuals 5-17 who come from families with incomes below the poverty line)
 - FFY 2018: 30% student population; 70% low-income student population
 - FFY 2019: 25% student population; 75% low-income student population

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- FFY 2020: 20% student population; 80% low-income student population
- Hold harmless clause related to the funding formula change: A State's 2001 allotment can only be reduced by 14.29% x the number of years since 2015
- Virtually all Title II special programs have been eliminated (SAHE, MSP, etc.), with funds being consolidated into the state allocation

Use of Funds

- 95% must be used for subgrants to LEAs
 - State may reserve of to 3% of the amount reserved for subgrants to the LEAs for activities for principles and other school leaders
 - Formulas to LEAs are 20% student population; 80% low-income student population
- 1% may be reserved by the State for administration
- 4% may be used for State activities, including: reforming certification, preparation programs, or preparation program standards; developing or improving educator evaluation systems; developing or improving mechanisms to support LEAs in recruiting and retaining educators; providing professional development or technical assistance, etc.
- Supplement, not supplant applies across Title II

TITLE II PLAN

- The SEA must submit the State's plan to the U.S. Department of Education for approval
- LEAs must submit their plans to the SEA for approval; the plans must include information as required by federal law (Sec. 2102(b)) and additional information as required by the SEA

State Plan Process

- The SEA is responsible for developing and submitting the State's Title II plan
- The SEA must have meaningful consultation with stakeholders in the development of the Title II plan, including: the Governor, LEAs, teachers, principals, charter school leaders, specialized instructional support personnel, paraprofessionals, administrators, parents, and other organizations
- The State must also seek advice from the partners described regarding how best to improve the State's activities

State Plan Contents

- Description of how the State will use funds for State activities
- Description of how activities align to the State's challenging academic content standards and how the activities are expected to improve student achievement
- Description of State's certification system
- If the SEA plans to use funds to improve equitable access to effective teachers, a description of how that will be done
- If applicable, a description of how the SEA will implement an educator evaluation system
- Description of how SEA will improve educators' skills to identify and support students with specific learning needs (particularly students with disabilities and English learners)
- Description of how State will use data and consultation to improve activities
- Description of how SEA will encourage opportunities for increased autonomy and flexibility for teachers and principals

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- Description of how State may take action to improve preparation programs
- Assurances that: the SEA will monitor the implementation of activities and provide technical assistance to LEAs, the SEA will ensure collaboration between appropriate entities to promote readiness of new educators, the SEA will comply with requirement for participation by private schools

PREPARATION ACADEMIES

- Teacher, Principal, or Other School Leader Preparation Academy (Preparation Academy): A preparation academy established by a public or other nonprofit entity (it may be an institution of higher education, but is not required to be) with approval from a State Authorizer (designated by the Governor) that prepares educators through concurrent participation in instruction through the academy and significant clinical practice with a mentor educator
- State may use a portion of the 4% of Title II funds withheld for State Activities to support establishment or expansion of Preparation Academies, provided that:
 - it is allowable by State law
 - the amount does not exceed 2% of the State's Title II allocation
 - the State gives preparation academy candidates the same access to State financial aid as candidates in traditional preparation programs
 - the State allows teachers on alternate certificates to teach/work in the State while participating in a Preparation Academy
- The agreement between the State authorizer and the Preparation Academy must include the number of effective teachers, principals or other school leaders (who will demonstrate success in increasing student achievement) the Preparation Academy will prepare
- The Preparation Academy may only award a certificate of completion or degree to a candidate after the teacher demonstrates that he/she is an effective teacher (as determined by the State)
- The State may *not* place unnecessary restrictions on the methods the Preparation Academy will use to prepare candidates, including:
 - requiring faculty to hold advanced degrees
 - requiring a certain number of course credits
 - requiring certain undergraduate coursework of candidates (provided they pass the State-approved content area examination(s))
 - requiring accreditation
 - infrastructure restrictions

RESIDENCY PROGRAMS

- States may establish a School Leader Residency Program and/or a Teacher Residency Program
- School Leader Residency Program: a school-based program that prepares principals and other school leaders through concurrent participation in: a 1-year clinical residency (with substantial leadership responsibilities) in an authentic school setting, mentorship from a principal / school leader, and evidenced-based coursework that is integrated with the residency experience
- Teacher Residency Program: a school-based program that prepares teachers through concurrent participation in: a 1-year residency alongside an effective teacher (as determined by the State) and coursework taught by LEA staff or teacher preparation program faculty
- State may use a portion of the 4% of Title II funds withheld for State Activities to support establishment or expansion of Residency Programs

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TEACHER AND SCHOOL LEADER INCENTIVE PROGRAM (previously Teacher Incentive Fund)

- Competitive grants to SEAs, LEAs, or partnerships
- To assist States, LEAs, and non-profits in developing, implementing, improving, or expanding performance-based compensation systems
- Grant period of up to 3 years, with option for 2 year extension
- Requires a 50% non-federal match

LITERACY FOR ALL, RESULTS FOR THE NATION

- Competitive grants to SEAs
- To enable SEAs to develop or enhance comprehensive literacy instruction plans from early childhood through grade 12
- Grant period of 5 years, with option for 2 year extension
- 95% of grant funds must go to subgrants to LEAs and early childhood education programs
 - Subgrants are divided by age group, with some grants focused on preK, K-5, and 6-12
- 5% of funds may be withheld for activities identified through a needs assessment and through the comprehensive literacy plan, including: technical assistance or administration / monitoring of subgrants, strengthening literacy in educator preparation, reviewing and updating literacy integration into certification, and providing promising instructional practices through the SEAs website

SUPPORTING EFFECTIVE EDUCATOR DEVELOPMENT

- Competitive grants to institutions of higher education (IHEs) or national nonprofits or consortia
- To support activities related to educator preparation (particularly non-traditional preparation) and professional development, with priority given to applications that propose using evidence-based activities
- Grant period of 3 years, with option of 2 year extension
- Requires a 25% non-federal match

SCHOOL LEADER RECRUITMENT AND SUPPORT

- Competitive grants to SEAs, LEAs or partnership
- To support activities designed to recruit, prepare, place, support, or retain effective principals / school leaders in high-need schools
- Grant period of 5 years, with option of 2 year extension
- Requires a 25% non-federal match

STEM MASTER TEACHER CORPS

- Competitive grants to SEAs or partnerships between SEAs and IHEs or non-profits
- To support development of a statewide STEM master teacher corps or the implementation or expansion of effective statewide STEM professional development
- Eliminates the Mathematics and Science Partnership grants (MSP)

Title III

FUNDING

Formula

- Adjusts the formula by clarifying how the number of English learners per state will be determined- using data from the American Community Survey conducted by the Department of Commerce (can use multi-year estimates), using data from States regarding the number of English learners assessed in the state (may use multiple years of data), or a combination of the two.

Use of Funds

- Limits “direct” administrative expenses to 50% of funds not passed through to subgrantees
- Subgrants are limited to 2% direct administrative expenses
- The State may use funds to:
 - Establish and implement standardized, statewide entrance and exit procedures
 - Provide professional development
 - Assist educators in meeting certification requirements for teaching English learners
 - Plan, administer, and evaluate interagency coordinator related to subgrants
 - Provide technical assistance to subgrantees
 - Provide recognition to subgrantees that significantly improve English learners’ achievement

TITLE III PLAN

State Plan Process

- The State must have meaningful consultation with stakeholders in the development of the Title III plan, including: LEAs, teachers, English learner program administrators, parents of English learners, and other relevant stakeholders

State Plan Contents

- Description of how the State will establish and implement standardized, statewide entrance and exit procedures to identify students eligible to receive English learner support services
- Description of how the State will coordinate Title III activities with other programs and activities in other sections of the Act (Title I, II, etc.)
- Description of how the State will provide flexibility to subgrantees to determine the curriculum and activities they believe will be most effective for their program
- Description of how the State will meet the unique needs of English learners
- Description of how the State will monitor subgrantees progress and provide assistance to ineffective programs
- Assurances that: the State will ensure that subgrantees appropriately assess English learners (including ensuring that English learners are assessed for their EL status within 30 days of enrollment), the State will address the needs of all types of school systems (size and urban/rural), the State will award subgrants that are of sufficient size to allow LEAs / programs

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to carry out effective activities for English learners, the agency will monitor subgrants for financial compliance

REPORTING

- Subgrantees must report to the SEA annually
- Report must include:
 - Description of program and activities
 - Number and percentage of English learners meeting State-determined long-term goals and measurements of interim progress, disaggregated by disability
 - Number and percentage of English learners attaining English proficiency
 - Number and percentage of English learners who exit programming
 - Number and percentage of English Learners meeting the State academic standards 4 years after exiting, disaggregated by disability
 - Number and percentage of English Learners who have not attained proficiency within 5 years of initial classification

NATIONAL PROFESSIONAL DEVELOPMENT PROJECT

- Competitive grants to IHEs or “public or private” entities, in consortia with SEA(s) or LEA(s)
- To support provision of professional development to improve classroom instruction for English learners
- Grant period up to 5 years

Title IV

STUDENT SUPPORT AND ACADEMIC ENRICHMENT GRANTS

- New, formula grants to SEAs, with State allocation based on the State’s share of Title I-A funds
- State minimum is 0.5% of total amount

Plans / Applications

- SEA must submit a plan to receive funds. The plan must include:
 - Description of how SEA will use funds for State activities
 - Description of how SEA will ensure awards to LEAs are consistent with formula
 - Assurances that the SEA will: review existing resources in the State and coordinator new activities with those resources; monitor implementation of subgrants and provide technical assistance; provide equitable access to activities to all students
- LEAs must submit applications to the SEA in order to receive subgrants

Use of Funds

- 95% for subgrants to LEAs, allocated by formula based on their share of Title I-A with a minimum subgrant of \$10,000
- 1% may be reserved by the State for administration (the State must report how these funds are expended)
- 4% may be reserved for State activities, including:

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- Monitoring subgrants; providing training, technical assistance or capacity building to LEAs
 - Identifying and eliminating State barriers to coordination / integration of programs
 - Supporting LEAs in providing activities (well-rounded educational opportunities and activities that foster healthy, supportive, drug-free learning environments)
- Supplement, not supplant is in place for this program
- LEAs must prioritize services to schools with the greatest need / largest percentage of low-income students
- LEA activities may include:
 - well-rounded educational opportunities (college and career advising, arts / music programs, STEM, accelerated learning, community involvement, etc.)
 - safe and healthy students activities (drug and violence prevention, mental health services, bullying and harassment prevention, dropout prevention / re-entry, healthy lifestyle, etc.)
 - use of technology (building technological capacity, blended learning, professional development, remote access resources for rural areas, devices, content, adaptive learning programs, etc.)
- LEAs who receive more than \$30,000 have specific, additional requirements
 - Must conduct a needs assessment every 3 years
 - Must spend at least 20% of funds to support at least one “well-rounded” educational opportunity
 - Must spend at least 20% on at least one “safe and healthy students” activity

21ST CENTURY COMMUNITY LEARNING CENTERS

- 93% for subgrants; States must award subgrants of at least \$50,000 for community learning centers, with priority given to applicants who plan to target services to schools identified for improvement, those who are partnering with other entities, and those whose plan will expand accessibility
- 2% may be reserved by the State for administration
- 5% may be reserved for State activities, including:
 - Monitoring and evaluating programs
 - Providing capacity building, training, or technical assistance
 - Evaluation
 - Ensuring that programs align activities to the State’s challenging academic content standards
 - Working with stakeholders to improve State policies and practices to support effective programs
 - Coordinating funds with other federal and state funds to implement high-quality programs
- State must provide timely notification of intent to apply for funding and provide time for a public review of the application
- Defines performance measures (Sec. 4205(b))
- Local subgrant funds may be used for expanded learning programs which: offer at least 300 program hours; supplement (but do not) supplant school-day activities; meet the priorities for all subgrantees

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- Previously allowed use of funds for local subgrants has been expanded to include STEM, computer science, financial literacy, environmental literacy, and building career competencies or readiness (particularly for in-demand fields)

EXPANDING OPPORTUNITY THROUGH QUALITY CHARTER SCHOOLS

Charter Schools Grants

- 12.5% for charter school facilities
 - 50% of this will be distributed in competitive grants to States, nonprofits, or partnerships to use innovative methods to help charter schools with acquisition or construction of facilities (including financing); entities may use 2.5% of funds for administrative costs
 - 50% of this will be distributed through per-pupil facilities aid grants. The federal grant share of these funds must decrease over time: 90% year one, 80% year two, 60% year three, 40% year four, 20% year five. Other organizations can contribute up to 50% of the state share
- 22.5% for national activities
 - 80% in competitive grants to charter management organizations and other non-profits for expansion and replication
 - Entities must show quality financial model, not have significant closures
 - Priority given to applicants serving 60% or more low-income students
 - 9% for applicants who did not receive State awards
 - Remainder for technical assistance and dissemination of best practices
- 65% for Grants to Support High Quality Charter Schools
 - Competitive grants to State entities (SEA, State charter school board, Governor, or charter school support organization)
 - 7% must be reserved by the State to provide technical assistance
 - 3% may be reserved by the State for administration
 - 90% or more must be used for subgrants
 - State grant term is up to 5 years
 - Priority will be given to States with high-quality plans to monitor applicants, provide technical assistance to support quality authorizing, support charters serving at-risk students, use best practices to improve struggling schools, and those that allow entities besides LEAs to be charter school authorizers
 - State must award at least 3 grants per year
 - Expenditures will be reviewed after year two to determine if the grant to the State should be continued
 - Subgrants for opening, expanding, or replicating charters
 - Charters that receive subgrants may use a weighted lottery system to benefit disadvantaged children (if allowable by state law), provided it does not segregate a subset of students

MAGNET SCHOOL PROGRAM

- Maximum grant size \$15 million
- Extends grants from to 5 years (from 3)

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- LEA applications must include evidence of how the program will promote desegregation and academic achievement
- Priority for programs who can demonstrate use of a track record of using evidence-based methods

FAMILY ENGAGEMENT

- 2% may be withheld by federal government for technical assistance
- Grants to “statewide organizations” or a consortia of organizations to establish Statewide Family Enrichment Centers that provide parent education and training and technical assistance to the SEA, LEAs and schools to support family-school partnerships and family engagement programs
- Minimum grant of \$500,000
- 65% of funds must be spent on schools or organizations serving disadvantaged students

NATIONAL ACTIVITIES

Promise Neighborhoods

- At least 3 grants per year
- Grant term of up to 5 years, with option to extend for up to 2 years
- 15% of funds (or more) to rural areas
- 100% match may be waived by Secretary based on hardship
- Grantees must conduct a needs analysis
- Grantees must use at least 50% of funds in year one for support and implementation and must use 25% of funds in year two for the same
- Grantees may not use funds for early childhood summative assessments, or evaluations (except for the specific purpose of improving instruction)

Full-service Community Schools

- At least 10 grants per year
- 15% of funds (or more) to rural areas
- Minimum grant of \$75,000
- Grantees must serve at least 2 schools
- Non-federal match

Academic Enrichment

- Assistance for the Arts
 - Priority to national non-profits
 - Funds to promote arts education
- Ready to Learn
 - Funds for public telecommunications entities
 - To develop and distribute educational programming, material, and digital content (geared towards preschool- and elementary-aged children)
- High-Ability Learners and Learning
 - Reauthorizes Javits Gifted and Talented Program

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Education Innovation and Research Grants

- Competitive grants to SEAs, LEAs, consortia, or partnerships
- 25% (or more) of funds must go to rural areas
- For education innovation and research
- Requires a 10% match, which can be waived

National Activities for School Safety

- Secretary must use a portion of funds for Project SERV (School Emergency Response to Violence)
- Secretary may use funds for other activities to improve student safety directly or through grants, contracts, or cooperative agreements with public/private entities

Title V

- Allows SEAs and LEAs to transfer funds received under Title II-A, Title IV-A, or 21st Century (Sec. 4204(c)(3)) between those provisions or into (but *not* out of) Title I-A, Title I-C, Title I-D, Title IIIA, or Title VB
- Rural education initiative minimum grant amount increased to \$80,000 (from \$25,000)
- If a LEA is eligible for funding under both the Small, Rural School Achievement Program and the Rural and Low-Income School Program, the LEA may choose under which program they would receive funds

Title VI

Note: Sections on Native Hawaiian Education and Native Alaskan Education are also included in this Title, but have not been summarized in this document because of the limited applicability to and infrequency of use by the State of Idaho.

INDIAN EDUCATION

- Grants to LEAs, Indian tribes, Indian organizations, or a consortia
- To develop elementary and secondary school programs that meet the unique cultural, language, and educational needs of Indian students and ensure that all students meet the State's challenging content standards
 - Funds can be used for a wide variety of programs / activities (language restoration; cultural programming; early childhood or family programs; career prep / CTE; violence, abuse or suicide prevention; dropout prevention; family literacy; etc.)
- Allows the Secretary to give grants to entities for health, nutrition, dual enrollment, career prep, etc.
- Allows the Secretary to give grants to increase the number of qualified Indian and Alaska Native teachers or to provide professional development '
 - These grants have a term of up to 3 years, with an option for a 2 year renewal

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- Allows Secretary to give grants to support schools that use Native languages as the primary language of instruction (these grants are new)
- Allows Secretary to give grants to Tribes for education administrative planning, development, and coordination (these grants are new)

Title VII

IMPACT AID

- Gives LEAs more flexibility in demonstrating the value of federal property (may now use facsimiles or other forms of records)
- Adds a new special rule for property that falls within the boundaries of more than one LEA, LEAs containing forest service land, and those that have consolidated
- Simplifies eligibility requirements for federally-connected students
- Eliminates maintenance of effort
- Adds a new hold harmless clause for LEAs facing 20% or more reduction due to an unexpected drop in the eligible population

Title VIII

GENERAL PROVISIONS

- Definitions have been changed
 - Eliminates Highly Qualified Teacher (HQT) definition
 - Adds new definitions for: early college high school, four-year cohort graduation rate, extended year cohort graduation rate, exemplary teacher, core academic subjects, expanded learning time, evidence-based, other school leader
- Clarifies that LEAs consolidating State or local funds for fiscal support teams do not violate supplement, not supplant
- Two or more rural LEAs may submit a combined plan for certain programs (Sec. 8011)
- Clarifies that federal funds may not be used for transportation or for construction or renovation / repair of school facilities unless it specifically authorized by the law (such as with the Charter School Grants)
- SEA must give the Governor the opportunity to review and sign the State plans under Title I, Title II (and 8302, if applicable)

Waivers

- SEA or Indian tribe may submit a request to the Secretary “to waive any statutory or regulatory requirement of this Act”
- LEAs may submit a waiver request to the SEA
- SEA must approve unless the SEA can provide evidence that it does not meet the requirements
- If the waiver is deemed appropriate by the SEA, the SEA submits it to the Secretary
- School may submit a waiver request to the LEA; if the LEA feels it is appropriate, the LEA may submit it to the SEA

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Equitable Services (to Private School Students)

- Outlines the same requirements as outlined in Title I (see previous summary)

Maintenance of Effort

- LEAs will not be subject to sanctions for failure to meet the 90% maintenance of effort in one year, provided that the LEA has not failed to meet the requirement one or more times in the preceding five fiscal years
- Adds a new option to waive an LEA's maintenance of effort requirements due to a change in the LEA's organizational structure (in addition to a previous waiver option for LEAs who have faced a natural disaster)

Title IX

PRESCHOOL DEVELOPMENT GRANTS

- Funds are authorized through the U.S. Department of Health and Human Services (HHS); the program will be jointly administered by HHS and the U.S. Department of Education
- Competitive grants to States; the State must identify a lead agency to coordinate with HHS
- 30% cash or in-kind match required
- Grant term is one year; States may apply for a three-year renewal grant

Use of Funds

- Initial Grant (1 year)
 - Conduct a statewide early learning needs assessment
 - Develop a strategic plan for collaboration and program quality improvement activities
 - Activities that maximize parental choice amongst existing providers/programs
 - Share best practices across the state and amongst providers/programs
 - Improve quality of early learning programs (must be after needs assessment and strategic plan are completed)
- Renewal Grant (3-year)
 - Similar activities
 - 60% of funds in year one must be used for subgrants to expand early learning
 - 75% of funds in year two and year three must be used for subgrants

MCKINNEY-VENTO

- SEA must establish an Office of the Coordinator for the Education of Homeless Children to focus on improving identification and providing technical assistance to LEAs to ensure students' needs are met
- Provides for immediate enrollment of students, regardless of whether they are able to produce student records and even in cases where they miss enrollment deadlines
- Definition of "homeless children" adjusted to eliminate "or are waiting for foster care placement"
 - Change takes effect one year after enactment for any state that does not have a law that defines that phrase

- Change takes affect two years after enactment for any state that has a law defining that phrase
- Information related to a student’s homeless status must be treated as an educational record under FERPA
- The U.S. Department of Education must update and distribute guidance on homeless children’s educational rights

INSTITUTE OF EDUCATION SCIENCES (IES) STUDIES

- Within 90 days of enactment, IES must publish and distribute a report on best practices for “determining a valid, reliable, and statistically significant” minimum N for subgroup disaggregation
- Within 18 months of enactment, IES must study the effectiveness of the Title I formulas

ED-FLEX

- Minor / technical changes
- New allowance to Secretary to approve temporary extensions of existing designations for up to five years

Sources

1. Brustein & Manasevit, 2015. “Every Student Succeeds Act – Summary and Comments.”
2. Council of Chief State School Officers and Penn Hill Group, 2015. “Comparison of Select Elements of ESEA Proposals and Conference Report”
3. Every Student Succeeds Act, 2015. www.ed.gov/essa

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PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
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SUBJECT

Accountability Oversight Committee Statewide Accountability System
Recommendations

REFERENCE

October 2015 Accountability Oversight Committee Chair, Spencer Barzee, presented the committee's general recommendations for the state's new K-12 accountability system

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section III.AA. Accountability Oversight Committee
Section 33-110, Idaho Code – Agency to Negotiate, and Accept, Federal Assistance
Idaho Administrative Code, IDAPA 08.02.02 – Section 111, Assessment in the Public Schools; IDAPA 08.02.02 – Section 112, Accountability; IDAPA 08.02.02 – Section 113, Rewards; and IDAPA 08.02.02 – Section 114, Failure to Meet Adequate yearly Progress (AYP)

BACKGROUND/DISCUSSION

The Accountability Oversight Committee was established in April 2010 as an ad-hoc committee of the Idaho State Board of Education. It provides oversight of the K-12 statewide assessment system, ensures effectiveness of the statewide system, and recommends improvements or changes as needed to the Board.

On December 10, 2015, President Obama signed the Every Student Succeeds Act (ESSA) reauthorizing the Elementary and Secondary Education Act of 1965. Pursuant to ESSA, states must implement new accountability systems aligned to the law by the 2017-2018 school year.

In January 2016, the Policy, Planning and Governmental Affairs Committee requested that the Accountability Oversight Committee lead the efforts to in gathering input and making recommendations to the Board on a new, statewide K-12 accountability system, with the goal of doing a statewide pilot of the system during the 2016-2017 school year. The Accountability Oversight Committee met on January 20, 2016, to discuss this task. The committee's intention is to provide recommendations to the Board that would allow the Board to develop a new accountability system that addresses the requirements outlined in the ESSA, but more importantly, meets the needs of the state. The committee will meet twice per month in February through May to develop recommendations for the Board. In an effort to ensure transparency in the process, all committee meetings will be posted in advance on the State Board of Education website and guests will be welcome to observe meetings. Further, the Accountability Oversight Committee will gather public feedback prior to providing recommendations to the Board. The committee will be inviting testimony from stakeholder groups and the public may

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send comments in writing. The Accountability Oversight Committee's recommendations for a new accountability system will be presented to the Board at the June 2016 meeting.

STAFF COMMENTS AND RECOMMENDATIONS

The Governor's Taskforce for Improving Education recommended the state revamp the accountability structure involving schools and that the existing structure be replaced with a system that was based on accountability for student outcomes. Additionally, the recommendation regarding greater autonomy for school districts was also contingent on accountability for outcomes. At the time, due to the Federal accountability regulations there was not consideration of amending the state's Federal accountability system. With the greater flexibility provided in ESSA and the need to submit a new state Federal accountability plan there is an opportunity to create a single accountability system that meets both the Federal requirements and the state's needs.

Idaho Administrative Code IDAPA 08.02.03, sections 111 through 114, are tied to the state's comprehensive assessment system and the states Federal accountability plan. Any changes to the state's assessment system or accountability requirements will require amendments to these sections of rule.

BOARD ACTION

This item is for informational purposes only. Any action will be at the Board's discretion.

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SUBJECT

2016 Legislative Update

BACKGROUND/DISCUSSION

This item is to provide the Board with an update on Board approved legislation and other education related bills considered during the 2016 legislative session. The Board approved seventeen (17) bills for introduction and has supported one (1) additional concurrent resolution along with seven (7) pieces of legislation related to the Governor's education initiatives for the 2016 legislative session.

After the first month of the legislative session, the following legislation submitted or endorsed by the Board is already moving through the legislative process:

Board Submitted Bills:

H391: Removes the requirement that the Tax Commission report to the Department of Education certain findings or calculations regarding property valuations.

H392: Repeals the Youth Education Account.

S1208: Clarifies the disability determination for the Armed Forces and Public Safety Officer Scholarship. Allows the Board the option to move responsibility for the investment of the Opportunity Scholarship Fund to from the State Treasurer to the Endowment Fund Investment Board.

S1209: Requires community colleges to follow the same requirements as school districts when acquiring and disposing of real property. Pursuant Section 33-601, Idaho Code, school districts are authorized to purchase real property and requires they have a property appraisal conducted within one (1) year prior to any purchase.

S1210: Amends existing law to replace references to professional-technical education with career technical education.

S1232: Updates Chapter 23, Title 33, Idaho Code, pursuant to changes in federal regulations impacting the Rehabilitation Act of 1973, which governs the Idaho Division of Vocation Rehabilitation (IDVR).

Board Supported Bills:

H357: Adds the STEM Education Fund to the educational entities for which a taxpayer would qualify for the existing income tax credit for charitable contributions to education-related funds.

H379: Provides for the creation of K-12 computer science content standards and collaboration with the STEM Action Center, the Board, Industry, and public

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universities and colleges to develop quality computer science professional development and certification or degree programs.

SCR134: Stating findings of the Legislature and supporting the State Board of Education's goal that 60% of Idaho citizens ages 25-34 earn a postsecondary degree or certificate by 2020 to meet the state's workforce needs.

Between the drafting of this document and the Board meeting date, it is expected that more legislation, including but not limited to, literacy, charter school replication and management, and residency determination for tuition purposes will be moving through the legislative process.

The attached summary provides the status of each bill.

IMPACT

Board action through rulemaking may be necessary dependent upon passage of several pieces of legislation.

ATTACHMENTS

Attachment 1 – Idaho Legislature - 2016 Legislative Session

Page 3

STAFF COMMENTS AND RECOMMENDATIONS

Board staff will be prepared to walk the Board through specific legislation to answer questions regarding the impact that a given piece of legislation may have on the state educational system. The Board will have the opportunity to support legislation on which the Board has not already taken a position.

BOARD ACTION

This item is for informational purposes only. Any action will be at the Board's discretion.

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**Idaho Legislature - 2016 Legislative
Session**

Updated 2/15/16

Board **submitted** legislation

Board **endorsed** legislation

<u>Bill No</u>	Description	Last Action	<u>Note</u>
H0357	STEM action center/income tax credit	02/09/2016 Senate - Introduced, read first time; referred to: Local Government & Taxation	Adds the STEM Education Fund to the educational entities for which a taxpayer would qualify for the existing income tax credit for charitable contributions to education-related funds.
H0358	Tax commission, requirement removed	02/15/2016 House - Returned Signed by the President; Ordered Transmitted to Governor	Eliminates the requirement that the Tax Commission provide valuation information to the Board and SDE that is no longer needed by those agencies.
H0364	Approp, labor dept, add'l	02/10/2016 House - Reported Signed by Governor on February 10, 2016	Supplemental appropriation to the Dept. of Labor that includes \$1,553,100 for the State Longitudinal Data System.
H0379	Computer sci initiative/pub schools	02/03/2016 Senate - Introduced, read first time; referred to: Education	Provides for computer science instruction in public schools.
H0387	Community colleges, trustee zones	02/05/2016 Senate - Introduced, read first time; referred to: Education	Amends and adds to existing law to provide for community college trustee zones and related provisions; to revise provisions regarding the addition of territory to community college districts; to revise provisions regarding trustees of Community College Districts; and to revise provisions regarding an appeal from an order of the State Board of Education.
H0391	Adjusted market value report	02/08/2016 Senate - Introduced, read first time; referred to: Education	Removes the requirement that the Tax Commission report to the Department of Education certain findings or calculations regarding property valuations.
H0392	Education, youth ed acct, repealed	02/08/2016 Senate - Introduced, read first time; referred to: Education	Repeals the Youth Education Account.
H0398	Rev'd uniform athlete agents act	02/15/2016 House - Passed: Ayes 67 Nays 1 Abs/Excd 2, title approved, to Senate	Governs relations among student athletes, athlete agents, and educational institutions. It further protects the interest of student athletes and academic institutions by regulating the activities of athlete agents.
H0411	Ed, quality ed loan assist program	02/01/2016 House - Reported Printed and Referred to Ways & Means	Offers teachers an incentive to work in eligible rural schools impacted by a shortage of quality educators. Provides up to \$3,000 in student loan forgiveness each year for four years for eligible teachers.

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<u>Bill No</u>	Description	Last Action	<u>Note</u>
H0412	Ed, tuition stabilization account	02/01/2016 House - Reported Printed and Referred to Ways & Means	Creates a Tuition Stabilization Fund within the Idaho Higher Education Stabilization Fund. The fund is utilized as a mitigation tool to reduce tuition increases at Idaho's public four-year institutions of higher education. Funding is generated from the appropriation of surplus monies in times of economic abundance.
H0413	License plates, Orofino HS Maniacs	02/05/2016 House - Reported out of Committee, Recommend place on General Orders	Amends and adds to existing law to provide for Idaho Friends of the Orofino Maniacs license plates.
H0414	Tax credit, charitable	02/01/2016 House - Reported Printed and Referred to Ways & Means	Adds the opportunity scholarship program to those entities qualifying for an income tax credit as identified in Section 63-3029A, Idaho Code.
H0420	Smarter balanced assessment	02/01/2016 House - Reported Printed and Referred to Ways & Means	Directs the State Superintendent of Public Instruction to begin the process of removing Idaho from the Smarter Balanced Assessment Consortium (SBAC) testing requirements. Taking the SBAC test will not be a requirement for students to graduate from Idaho public schools.
H0424	Income tax credit, tuition/employee	02/01/2016 House - Reported Printed and Referred to Ways & Means	Adds to existing law to provide a state income tax credit for Idaho postsecondary institution tuition and fee payments on behalf of an employee of a taxpayer.
H0428	College savings accounts, unclaimed	02/11/2016 Senate - Introduced, read first time; referred to: Education	Allows the College Savings Program to retain unclaimed accounts.
H0442	Ed, supplemental contracts	02/05/2016 House - Reported Printed and Referred to Education	Allows school districts and charter schools to issue separate contracts for extended days beyond the traditional school year.
H0450	Ed support program, literacy	02/10/2016 House - Reported Printed and Referred to Education	Literacy intervention legislation
H0451	Ed/reading instruction/intervention	02/15/2016 House - Reported out of Committee with Do Pass Recommendation, Filed for Second Reading	Requires parental involvement in the process of developing a reading improvement plan for deficient readers.
H0452	Education, employee accrued sick lv	02/10/2016 House - Reported Printed and Referred to Education	Amends existing law regarding the transfer of accrued sick leave by employees of a state educational agency; and to revise provisions regarding accrued unused sick leave.

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<u>Bill No</u>	Description	Last Action	<u>Note</u>
H0458	Education, advanced opp/rulemaking	02/11/2016 House - Reported Printed and Referred to Education	Consolidates and streamlines sections of code pertaining to Advanced Opportunities for secondary students into a contiguous program, rather than separate, isolated programs. Rather than limit student access to state aid based on student grade level, the proposed changes would allow students to access state support for overload courses, dual credit courses and college credit-bearing or professional-technical examinations at any point in grades 7 through 12. Additionally, students who graduate early can still receive a scholarship to attend an Idaho public postsecondary institution, as is the current practice.
H0459	Ed, comm college start-up account	02/11/2016 House - Reported Printed and Referred to Education	Amends existing law to provide for the Community College Start-Up Account in the Higher Education Stabilization Fund.
H0476	Ed, statewide avg class size estab	02/15/2016 House - Reported Printed and Referred to Education	Currently, data across the State is collected to determine an average class size for each district. The average class size is then used to determine if a school district receives their full use-it or lose-it exemption. If their class size exceeds the statewide average, the district begins to lose their exemption at 1% per year. Because class sizes vary dramatically depending on the student population of the school district, this averaging raises questions of equity of comparison of like and unlike size school districts. This legislation would allow for comparisons of school districts based on their student enrollment. This legislation would use the student enrollment breakdowns already found in Section 33-1002, Idaho Code that are currently used for funding.
H0477	Ed, postsecondary credit scholarship	02/15/2016 House - Reported Printed and Referred to Education	Provides college scholarships to students who earn college credits while in high school. The intent of the bill is to encourage Idaho's high school students to: 1) attend post-secondary schools in Idaho; 2) enter a post-secondary field of study where there are good paying jobs which will help Idaho's economy grow; and 3) take rigorous courses while in high school. The bill requires a matching postsecondary scholarship. A student who earns 10 to 19 college credits will qualify for a \$1000 state scholarship/year, good at any state college or university, for up to two years if a matching scholarship is received. A student who earns 20 or more college credits will qualify for a \$2,000 state scholarship/year for up to two years if a matching scholarship is received. A student who earns an Associate Degree while still in high school will qualify for a full tuition state scholarship/year for up to two years if a matching scholarship is received.
HCR031	Music in schools month/recognized	02/09/2016 Senate - Introduced, read first time; referred to: Education	Stating findings of the Legislature, recognizing the importance of music education in Idaho schools and recognizing Music in Our Schools Month.

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<u>Bill No</u>	Description	Last Action	<u>Note</u>
HCR033	Ed study/pub school funding formula	02/15/2016 House - Reported out of Committee with Do Pass Recommendation, Filed for Second Reading	Stating findings of the Legislature and authorizing the Legislative Council to appoint a committee to conduct a study of the public school funding formula and to make recommendations.
HJR001	Sectarian approps, const amendment	01/28/2016 House - Reported Printed and Referred to State Affairs	Amends the state constitution to allow appropriations or payments (grants, scholarships, loans, etc.) to sectarian or religious institutions or to students or parents of students for educational purposes.
S1208	Scholarships, housing/investment	02/15/2016 House - Read second time; Filed for Third Reading	Clarifies the disability determination for the Armed Forces and Public Safety Officer Scholarship. Allows the Board the option to move responsibility for the investment of the Opportunity Scholarship Fund to from the State Treasurer to the Endowment Fund Investment Board.
S1209	Ed, brd of trust/comm coll district	02/02/2016 Senate - Read third time in full	Require community colleges to follow the same requirements as school districts when acquiring and disposing of real property. Pursuant Section 33-601, Idaho Code, school districts are authorized to purchase real property and requires they have a property appraisal conducted within one (1) year prior to any purchase.
S1210	Professional-technical education	02/15/2016 House - Passed: Ayes 66 Nays 2 Abs/Excd 2, title approved, to Senate	Amends existing law to replace references to professional-technical education with career technical education.
S1232	Vocational rehab, federal acts	02/11/2016 Senate - Read second time; filed for Third Reading	Updates Chapter 23, Title 33, Idaho Code, pursuant to changes in federal regulations impacting the Rehabilitation Act of 1973, which governs the Idaho Division of Vocation Rehabilitation (IDVR).
S1247	Ed, testing requirement exception	02/04/2016 Senate - Reported Printed; referred to Education	Any student who receives special education services shall not be required to successfully complete the civics test or alternate path.
S1248	Pub charter schls/written contracts	02/11/2016 Senate - Read second time; filed for Third Reading	Remove the mandate that charter school teachers must use form contracts approved by the Superintendent of Public Instruction, so that those who are interested could adapt their contracts to better fit the unique needs of their students, teachers and schools.
S1249	STEM action center board	02/11/2016 Senate - Read second time; filed for Third Reading	Adds to existing law establish provisions regarding the STEM Action Center Board's meetings, honorarium and expenses, and organization.

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<u>Bill No</u>	Description	Last Action	<u>Note</u>
S1257	Ed, school district brd trustees	02/15/2016 Senate - Reported out of Committee with Do Pass Recommendation; Filed for second reading	Requires write-in candidates in school board trustee elections to submit five (5) qualified elector signatures from within the trustee zone.
S1266	School districts/ leadership activities	02/08/2016 Senate - Reported Printed; referred to Education	Increases the amount of Leadership Premium moneys from \$850 to \$900 per FTE.
S1267	Ed, mastery-based, cohort	02/08/2016 Senate - Reported Printed; referred to Education	Limits the number of mastery-based education incubators to twenty in the initial cohort. Provides that all funds appropriated by the legislature, for mastery-based education, may be expended on behalf of LEAs or distributed to LEAs at the discretion of the State Department of Education.
S1272	School dist bond credit enhancement	02/09/2016 Senate - Reported Printed; referred to State Affairs	Increases the capacity of the School Bond Credit Enhancement Program to guaranty payments on general obligation school bonds, reducing interest costs.
S1273	Ed, trustee board vacancies, recall	02/09/2016 Senate - Reported Printed; referred to State Affairs	Establishes a process of filling a vacancy on a school board in the case of a recall election for a school board trustee, and to prohibit a school board subject to a recall, when a majority of the board is subject to recall, from allowing a member(s) to resign and the remaining board members appointing a new member to that board until such time as the recall election is certified.
S1279	Stem education fund	02/10/2016 Senate - Reported Printed; referred to Education	Creates the STEM Education Fund to support the initiatives and work of the Idaho STEM Action Center.
S1280	Education, student residency requirements	02/10/2016 Senate - Reported Printed; referred to Education	Amends existing law to revise residency requirements for students of an Idaho public institution of higher education.
S1289	Ed, support program calculation	02/11/2016 Senate - Reported Printed; referred to Education	Adjusts the funding formula for college and career counseling.
S1290	Ed, college and career advisors	02/11/2016 Senate - Reported Printed; referred to Education	Provides clarification that Idaho Code, §33-1212A, is specific to College and Career Advising and not the broader more traditional counseling services that are covered in Idaho Code, §33-1212. Additional amendments require school districts to establish a plan as to how they will address college and career advising for their students and provides for a minimum reporting framework. Annual reporting on college and career advising methods and district established goals will be included in their continuous improvement plan progress reports that are currently outline in Idaho Code, §33-320.
S1291	Ed, adult degree completion scholarship	02/11/2016 Senate - Reported Printed; referred to Education	Adds to provide for the Adult Degree Completion Scholarship and related provisions and to require the State Board of Education to promulgate certain rules.

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<u>Bill No</u>	Description	Last Action	<u>Note</u>
S1292	Ed, tuition lock plan/stabil acct	02/11/2016 Senate - Reported Printed; referred to Education	Amends and adds to existing law to provide for the Tuition Lock Plan for undergraduate students; and to provide for the Tuition Lock Stabilization Account in the Higher Education Stabilization Fund.
S1293	Ed, parental rights in education	02/11/2016 Senate - Reported Printed; referred to Education	Affirms that a student's parent or guardian holds primary responsibility for the education of the student, and the state is in a secondary and supportive role. It also defines the reasonable accommodation offered to parents and guardians, outlines how school districts and public charter schools shall facilitate parental involvement in the education of their children, and provides that parents may withdraw their children from an activity or class. The act requires an annual notice of parental rights be distributed to parents and guardians.
S1307	Ed, election date, school trustees	02/12/2016 Senate - Reported Printed; referred to Education	Amends existing law to revise the election date for school district trustees and to provide a term expiration date for incumbent trustees.
S1308	Ed, school trustee elections	02/12/2016 Senate - Reported Printed; referred to Education	Requiring school district trustees to live in their zones, but allowing all voters in the school district to vote on each trustee.
S1320	Ed, comm college brd trustees/powers	02/15/2016 Senate - Reported Printed; referred to Education	Amend existing law to require community colleges to follow the same requirements as school districts when acquiring and disposing of real property.
S1321	Public schools, Bible use in school	02/15/2016 Senate - Reported Printed; referred to State Affairs	Repeals and adds to existing law to provide when the Bible is permitted to be used in the public schools.
S1330	Ed, school district trustees/meds	02/15/2016 Senate - Introduced; read first time; referred to JR for Printing	Amends existing law to provide that the board of trustees of each school district shall adopt a certain policy and to allow certain students to possess and use certain medications and supplies.
S1331	Ed, public ed stabilization fund	02/15/2016 Senate - Introduced; read first time; referred to JR for Printing	Amends existing laws to revise provisions regarding the Public Education Stabilization Fund, to provide for an annual transfer of certain moneys from the General Fund to the Public Education Stabilization Fund, to provide conditions for such transfer; and to revise an amount to be transferred from the General Fund to the Budget Stabilization Fund.
S1332	Ed, industry partner fund	02/15/2016 Senate - Introduced; read first time; referred to JR for Printing	Adds to existing law to establish the Industry Partner Fund and related provisions and to grant rulemaking authority.
S1333	Ed, broadband infrastructure grants	02/15/2016 Senate - Introduced; read first time; referred to JR for Printing	Adds to existing law to provide the Broadband Infrastructure Improvement Grant Fund and related provisions, to require rulemaking and to define a term.
S1334	Education Opportunity Resource	02/15/2016 Senate - Introduced; read first time; referred to JR for Printing	Repeals existing law relating to the Idaho Education Network and establishes new law to provide the Education Opportunity Resource Act.

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<u>Bill No</u>	Description	Last Action	<u>Note</u>
S1335	Open mtg laws, executive sessions	02/15/2016 Senate - Introduced; read first time; referred to JR for Printing	Amends existing law to revise conditions when an executive session is authorized regarding the acquisition, sale or lease of an interest in real property by a public agency.
S1336	Ed, civics test, individual ed plan	02/15/2016 Senate - Introduced; read first time; referred to JR for Printing	Amends existing law to provide an exception to a certain testing requirement.
S1337	Public charter schools	02/15/2016 Senate - Introduced; read first time; referred to JR for Printing	Amends and adds to existing law regarding public charter schools.
SCR134	Ed, support goal/postsecondary grad	02/15/2016 House - Reported out of Committee with Do Pass Recommendation, Filed for Second Reading	Stating findings of the Legislature and supporting the State Board of Education's goal that 60% of Idaho citizens ages 25-34 earn a postsecondary degree or certificate by 2020 to meet the state's workforce needs.
SCR139	Education brd, rule rejected	02/15/2016 Senate - Reported Printed; referred to 10th order; held one legislative day	RULE REJECTION - Stating findings of the Legislature and rejecting a certain rule docket of the State Board of and State Department of Education relating to Rules Governing Thoroughness.
SCR140	Education brd, rule rejected	02/15/2016 Senate - Reported Printed; referred to 10th order; held one legislative day	RULE REJECTION - Stating findings of the Legislature and rejecting a certain rule docket of the State Board of and State Department of Education relating to Rules Governing Thoroughness.
SCR141	Education brd, rule rejected	02/15/2016 Senate - Reported Printed; referred to 10th order; held one legislative day	RULE REJECTION - Stating findings of the Legislature and rejecting a certain rule docket of the State Board of and State Department of Education relating to Rules Governing Thoroughness.

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IDAHO STATE UNIVERSITY

SUBJECT

Idaho State University Mission and Core Themes

REFERENCE

June 2011

The State Board of Education (the Board) was presented information regarding the revised Northwest Commission on Colleges and Universities (NWCCU) accreditation requirements and the need to update the college and universities' mission statements. There were additional discussions.

September 2011

The Board approved mission statements for the college and universities to meet the NWCCU Year 1 reporting requirements. The Instruction, Research, and Student Affairs (IRSA) committee of SBOE was instructed to work with institutions and come back to the February 2012 Board meeting for a work session on mission statements.

February 2012

The Board approved Idaho State University's mission statement and core themes.

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Sections I.F., I.M., III.I., and III.M.

BACKGROUND/DISCUSSION

In October 2014 Idaho State University (ISU) had its Northwest Commission on Colleges and Universities (NWCCU) Year 7 Comprehensive Self-Evaluation. On January 26, 2015, the NWCCU reaffirmed ISU's regional accreditation. In reaffirming ISU's accreditation, the NWCCU had five recommendations (Attachment 1). NWCCU Recommendation 1 is as follows:

The evaluation committee recommends that Idaho State University either revise its mission statement or review and revise its core themes, indicators, and benchmarks/targets to ensure that they encompass the entirety of the present mission statement (Standard 1.A.2 and 1.B.1).

As part of the process, to not only address Recommendation 1 but also Recommendations 2, 3, and 4, ISU created the Institutional Effectiveness and Assessment Council (IEAC). The IEAC was designed out of a need to more efficiently and inclusively coordinate campus-wide planning, accreditation, academic assessment, and institutional reporting efforts across the University.

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The IEAC is responsible for overseeing the University planning process, coordinating and assessing strategic directions, ensuring that the University meets NWCCU accreditation standards, and implementing the University's strategic planning agenda. The IEAC serves as a coordinated, sustainable system to pursue institutional assessment and effectiveness, with the primary functions are as follows:

- Provide the organizational framework for integrating institutional effectiveness into the fabric of the university.
- Provide integrative and coordinated academic, facilities, technology, and financial planning and implementation.
- Reduce redundancy and increase efficiency, transparency, and accountability among strategic planning, institutional management, university accreditation, state and federal reporting requirements.
- Optimize data and reports system wide.
- Develop an assessment plan that supports the implementation of the strategic plan.
- Enhance consistent and coordinated communication between schools, colleges, departments and administration regarding assessment and institutional effectiveness.
- Provide a forum to share best practices, and generate ideas for process improvement.

The IEAC is composed of a Steering Committee, reporting to the president, and subcommittees, reporting to the IEAC Steering Committee. The IEAC Steering Committee serves in an advisory role, reporting to the President and is comprised of individuals who have the skills, knowledge and authority to lead in this institutional effort. The IEAC Steering Committee is chaired by the Provost/Vice President for Academic Affairs and consists of representatives from across campus. There are six subcommittees (one for each of the four core themes, one for facilities, and one for information technology), and each are chaired by a Vice President, Assistant Vice President, or Director. Subcommittee membership consists of a broad range of representatives from academic affairs, student affairs, finance and administration, technology, operations, faculty, staff, students, including all campus outreach locations. The IEAC Subcommittees report annually to the IEAC Steering Committee on strategic plan fulfillment. They are responsible for assessing how their activities and accomplishments align with the strategic plan and core themes, achievement of their area's associated goals or outcomes, and using data for decisions and improvement.

The IEAC core theme subcommittees worked on reviewing and revising the current core themes, their objectives, and indicators from September through early November. In addition, they evaluated the mission statement. Once their draft work was completed the IEAC Subcommittee chairs made

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recommendations to the IEAC Steering committee on proposed changes to ISU's mission and core themes. The proposed changes were broadly distributed to campus stakeholders (faculty, staff, and students) through email and posted on the IEAC website December 1-14, 2015. At that time, the IEAC steering committee considered feedback from the open forums, various campus meetings, and public comments to arrive at the current proposed draft. The final proposed draft for review and approval by the State Board of Education has been shared with the Council of Deans, Faculty Senate, and campus leadership and no concerns have been expressed.

IMPACT

The proposed changes should address the NWCCU recommendations as well as allow ISU to assess and demonstrate mission fulfillment.

ATTACHMENTS

Attachment 1 – Proposed Mission & Core Themes	Page 5
Attachment 2 – NWCCU Recommendations	Page 9
Attachment 3 – Feedback Process Timeline	Page 13

STAFF COMMENTS AND RECOMMENDATIONS

An accrediting body's evaluation of an institution is based, in part on the institutions mission and core themes and their ability to fulfill their mission and monitor and adapt to progress toward that fulfillment. NWCCU's Standard One evaluates whether an institution: "articulates its purpose in a mission statement, and identifies core themes that comprise essential elements of that mission. In an examination of its purpose, characteristics, and expectations, the institution defines the parameters for mission fulfillment." In addition to accreditation requirements Board policy I.M. requires each institutions strategic plan be in alignment with their Board approved mission statement. Annual review and updates to an institutions strategic plan come to the Board for consideration and input at the April Board meeting. If approved by the Board, Idaho State University's strategic plan will be updated with new mission statement and realigned based on the mission of the institutions.

BOARD ACTION

I move to approve Idaho State University's mission statement and core themes as presented in Attachment 1.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

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Idaho State University Mission & Core Themes

Mission: (approved February 2012)

The Mission of Idaho State University is to advance scholarly and creative endeavors through the creation of new knowledge, cutting-edge research, innovative artistic pursuits and high-quality academic instruction; to use these achievements to enhance technical, undergraduate, graduate, and professional education, health care services, and other services provided to the people of Idaho and the Nation; and to develop citizens who will learn from the past, think critically about the present, and provide leadership to enrich the future in a diverse, global society.

Idaho State University is a public research institution which serves a diverse population through its broad educational programming and basic, translational, and clinical research. Idaho State University serves and engages its communities with health care clinics and services, professional technical training, early college opportunities, and economic development activities. The University provides leadership in the health professions and related biomedical and pharmaceutical sciences, as well as serving the region and the nation through its environmental science and energy programs.

Proposed Revised Mission:

~~The Mission of Idaho State University is a public research-based institution that to advances scholarly and creative endeavors through academic instruction, and the creation of new knowledge, cutting-edge research, innovative and artistic works, pursuits and high-quality academic instruction; to use these achievements to enhance technical, undergraduate, graduate, and professional education, health care services, and other services provided to the people of Idaho and the Nation; and to develop citizens who will learn from the past, think critically about the present, and provide leadership to enrich the future in a diverse, global society.~~

~~Idaho State University is a public research institution which serves a diverse population through its broad educational programming and basic, translational, and clinical research. Idaho State University serves and engages its communities with health care clinics and services, professional technical training, early college opportunities, and economic development activities. The University Idaho State University provides leadership in the health professions and related biomedical and pharmaceutical sciences, as well as serving the region and the nation through its environmental science and energy programs. The University provides access to its regional and rural communities through delivery of preeminent technical, undergraduate, graduate, professional, and interdisciplinary education. The University fosters a culture of diversity, and engages and impacts its communities through partnerships and services.~~

Proposed Revised Mission (clean version):

Idaho State University is a public research-based institution that to advances scholarly and creative endeavors through academic instruction, and the creation of new knowledge, research, and artistic works. Idaho State University provides leadership in the health professions, biomedical, and pharmaceutical sciences, as well as serving the region and

the nation through its environmental science and energy programs. The University provides access to its regional and rural communities through delivery of preeminent technical, undergraduate, graduate, professional, and interdisciplinary education. The University fosters a culture of diversity, and engages and impacts its communities through partnerships and services.

Current Core Theme One:

Core Theme One: Learning and Discovery. Idaho State University promotes an environment that supports learning and discovery through the many synergies that can exist among teaching, learning, and scholarly activity.

Proposed Revised Core Theme One:

Core Theme One: Learning and Discovery. Idaho State University fosters student learning and discovery through teaching, research, and creative activity. ISU delivers high quality academic programs at all levels: technical certificates; undergraduate, graduate, and professional degrees; and postgraduate professional training.

Current Core Theme Two:

Core Theme Two: Access and Opportunity. Idaho State University provides opportunities for students with a broad range of educational preparation and backgrounds to enter the university and climb the curricular ladder so that they may reach their intellectual potential and achieve their goals and objectives.

Proposed Revised Core Theme Two:

Core Theme Two: Access and Opportunity. Idaho State University provides diverse pathways to retention and graduation through educational preparation, academic and co-curricular opportunities, and extensive student support services.

Current Core Theme Three:

Core Theme Three: Leadership in the Health Sciences. Idaho State University values its established leadership in the health sciences with primary emphasis in the health professions. We offer a broad spectrum of undergraduate, graduate, and postgraduate training. We deliver health-related services and patient care throughout the State in our clinics and postgraduate residency training sites. We are committed to meeting the health professions workforce needs in Idaho. We support professional development, continuing education, and TeleHealth services. We are active in Health Sciences research.

Proposed Revised Core Theme Three:

Core Theme Three: Leadership in the Health Sciences. Idaho State University provides statewide leadership in the health sciences. With the academic support of its colleges and the division, the University offers a broad spectrum of degree levels and provides residency training in the health professions. New knowledge is created through biomedical, translational, clinical, rural, and health services research. Teaching, research, practice, and community partnerships provide interprofessional education and excellence in patient care. University clinics provide an environment for learning, inquiry and comprehensive health care service to the community.

Current Core Theme Four:

Core Theme Four: Community Engagement and Impact. Idaho State University, including its outreach campuses and centers, is an integral component of the local communities, the State and the Intermountain region. It benefits the economic health, business development, environment, and culture in the communities it serves.

Proposed Revised Core Theme Four:

Core Theme Four: Community Engagement and Impact. As an integral component of the community, Idaho State University develops partnerships and affiliations through the exchange of knowledge, resources, research, and expertise. Through a diverse university staff, faculty, and student body, ISU provides cultural, social, economic, and other opportunities to enrich the lives of citizens.

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PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
FEBRUARY 18, 2016



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OFFICE OF THE
PRESIDENT
ISU

8060 165th Avenue N.E., Suite 100

Redmond, WA 98052-3981

425 558 4224

Fax: 425 376 0596

www.nwccu.org

January 26, 2015

Dr. Arthur Vailas
President
Idaho State University
921 S. 8th Avenue, Stop 8310
Pocatello, ID 83209-8310

Dear President Vailas: *Art-*

On behalf of the Northwest Commission on Colleges and Universities, I am pleased to report that the accreditation of Idaho State University has been reaffirmed on the basis of the Fall 2014 Year Seven *Mission Fulfillment and Sustainability* Evaluation which was expanded to include the onsite evaluation of Standards Two, Three, Four, and Five. In addition, the University's Year Seven *Mission Fulfillment and Sustainability* Report was to address Recommendations 1 and 2 of the Fall 2011 Year One *Mission and Core Themes* Peer-Evaluation Report as part of an updated response to Standard One. The Commission finds that its expectations with regard to Recommendation 1 of the Fall 2011 Year One Peer-Evaluation Report have been met. However, the Commission determined that its expectations with regard to Recommendation 2 of the Fall 2011 Year One Peer-Evaluation Report still have not been met. Thus the issues are included in Recommendation 1 of the Fall 2014 Year Seven *Mission Fulfillment and Sustainability* Peer-Evaluation Report.

In reaffirming accreditation, the Commission has incorporated Recommendations 4, 6, and 7 of the Fall 2014 Year Seven *Mission Fulfillment and Sustainability* Peer-Evaluation Report in the newly revised Recommendation 4 of the Fall 2014 Year Seven *Mission Fulfillment and Sustainability* Peer-Evaluation Report to cohesively address areas of continuous improvement and sustainability. The newly revised Recommendation 4 of the Fall 2014 Year Seven *Mission Fulfillment and Sustainability* Peer-Evaluation Report states:

The evaluation committee recommends that the institution continues to work to clarify the ways in which it will use assessment results to inform and strengthen programs and services, and to demonstrate institutional improvement, mission fulfillment, and sustainability (Standards 4.A, 4.B, 5.A, and 5.B).

In addition, please note that the Commission has added Standard 1.A.2 to further explicate Recommendation 1 of the Fall 2014 Year Seven *Mission Fulfillment and Sustainability* Peer-Evaluation Report. The Commission requests that the University address Recommendation 1 of the Fall 2014 Year Seven Peer-Evaluation Report in an updated response to Standard One in its regularly scheduled Fall 2015 Year One Report. Moreover, the Commission requests that the University prepare an Ad Hoc Report without a visit in Spring 2016 to address Recommendations 2 and 5 of the Fall 2014 Year Seven *Mission Fulfillment and Sustainability* Peer-Evaluation Report. Further, the Commission requests that the

PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
FEBRUARY 18, 2016

President Vailas
Page Two
January 26, 2015

University address Recommendation 3 and the newly revised Recommendation 4 of the Fall 2014 Year Seven *Mission Fulfillment and Sustainability* Peer-Evaluation Report in its Fall 2017 Mid-Cycle Evaluation Report.

In making these requests, the Commission finds that Recommendations 1, 2, 3, and the newly revised Recommendation 4 of the Fall 2014 Year Seven *Mission Fulfillment and Sustainability* Peer-Evaluation Report are areas where Idaho State University is substantially in compliance with Commission criteria for accreditation, but in need of improvement. However, the Commission determined that Recommendation 5 of the Fall 2014 Year Seven *Mission Fulfillment and Sustainability* Peer-Evaluation Report is an area where Idaho State University does not meet the Commission's criteria for accreditation. According to U.S. Department of Education Regulation 34 CFR 602.20 and Commission Policy, *Commission Action Regarding Institutional Compliance Within Specified Period*, the Commission requires that the University take appropriate action to ensure that Recommendation 5 is addressed and resolved within the prescribed two-year period. A copy of the Recommendations and the Commission Policy are enclosed for your reference.

The Commission commends the University for its approach to providing a safe and secure campus as evidenced by the attention to the well being of the community as a priority, supported by collaboration and partnerships with on-campus and off campus constituents. In addition, the Commission finds laudable the University's commitment to serving and promoting the success of students of diverse interests, backgrounds, and levels of readiness as demonstrated by a near universal commitment among faculty and staff to ensure that students are well served, supported and educated. Moreover, the Commission finds noteworthy the University's continuous engagement in community outreach on many different levels, providing important demonstrable services and interacting integrally with community and regional partners in numerous functions, collaborations, and projects. Lastly, the Commission applauds the University on its process of program prioritization which engages faculty, department heads, professional staff and administrators in a thoughtful, comprehensive, and inclusive process yielding information that appears to be guiding planning, budgeting, and strategic reallocation, potentially serving as a model for continuous improvement and achievement of mission fulfillment.

If you have questions, please do not hesitate to contact me.

Best wishes for a peaceful and fulfilling New Year.


Sincerely,

Sandra E. Elman
President

SEE:rb

Enclosures: Recommendations
Commission Policy, *Commission Action Regarding Institutional Compliance
Within Specified Period*

cc: Ms. Selena Grace, Associate Vice President for Institutional Effectiveness
Ms. Emma Atchley, Board President, Idaho State Board of Education
Dr. Mike Rush, Executive Director, Idaho State Board of Education

***Year Seven Mission Fulfillment and Sustainability Evaluation*
Fall 2014
Idaho State University
Recommendations (Revised)**

1. The evaluation committee recommends that Idaho State University either revise its mission statement or review and revise its core themes, indicators, and benchmarks/targets to ensure that they encompass the entirety of the present mission statement (Standard 1.A.2 and 1.B.1).
2. The evaluation committee recommends that the institution build upon its present governance framework by promoting an environment of transparency and collegiality, resulting in trust that encourages the expression and consideration of the views of faculty, staff, administrators, and students on matters in which they have a direct and reasonable interest (Standard 2.A.1).
3. The evaluation committee recommends that the institution integrate all campus plans into a comprehensive planning process (Standard 3.A.1).
4. The evaluation committee recommends that the institution continue to work to clarify the ways in which it will use assessment results to inform and strengthen programs and services, and to demonstrate institutional improvement, mission fulfillment, and sustainability (Standards 4.A, 4.B, 5.A, and 5.B).
5. The evaluation committee recommends that the institution develop and implement a process of ongoing assessment of student learning outcomes for its General Education program (Standard 4.A).

*Commission Action Regarding Institutional Compliance Within
Specified Period Policy*

If the Commission determines that an institution it accredits is not in compliance with a Commission standard for accreditation or an eligibility requirement, the Commission will immediately initiate adverse action against the institution or require the institution to take appropriate action to bring itself into compliance within a time period that shall not exceed: (1) twelve months, if the longest program offered by the institution is less than one year in length; (2) eighteen months, if the longest program offered by the institution is at least one year, but less than two years, in length; or (3) two years, if the longest program offered by the institution is at least two years in length.

The Commission may extend the period for compliance noted above should it reasonably expect that, based upon the institution's progress toward meeting the Commission's standard for accreditation or eligibility requirement, the institution will come into full compliance within a reasonable timeframe. Should an institution deem that as a result of mitigating circumstances it is not able to comply with the standard for accreditation or eligibility requirement within the specified period of time, the institution may submit a written request to the Commission for additional time to come into compliance with the standard for accreditation or eligibility requirement. The request is to be submitted prior to the time limit for corrective action set forth by the Commission, provide a detailed explanation of the reasons why the institution cannot comply with the standard for accreditation within the designated time period, and demonstrate that the institution is making good progress in meeting the standard for accreditation. Following a review of the request, the Commission will make a determination as to whether the institution has based its request on valid reasons. If the Commission determines that the institution has substantiated good cause for not complying within the specified time period and is making good progress to come into compliance, the Commission will extend the period for achieving compliance and stipulate requirements for continuing oversight of the institution's accreditation during the extension.

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**PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
FEBRUARY 18, 2016**

Feedback Timeline of Events:

Date	Meetings/Open Forums
August & September 2015	<ul style="list-style-type: none"> • August 31: Faculty Senate • September 15: Council of Deans (then as part of the bi-monthly meeting updates) • September 1 – November 6 Subcommittees review/revise draft core theme descriptor language, objectives, and indicators
October 2015	<ul style="list-style-type: none"> • October 1: Faculty/Staff Open Forum – Pocatello/Idaho Falls • October 6: Faculty/Staff Open Forum – Meridian • October 14: Faculty/Staff Open Forum – Pocatello/Idaho Falls • October 19: IEAC Steering Committee Meeting • October 20: Student Open Forum – Meridian • October 21: College of Technology • October 22: College of Arts & Letters
November 2015	<ul style="list-style-type: none"> • November 2: Graduate School • November 3: Advancement, General Counsel, Controller • November 4: Student Open Forum – Pocatello/Idaho Falls • November 16: IEAC Steering Committee Meeting • November 19: Meridian Faculty Advisory • November 30: Faculty Senate
December 2015	<ul style="list-style-type: none"> • December 1 – 14: Campus-wide distribution of proposed, revised mission and core themes for final comments • December 14: IEAC Steering Committee Meeting • December 15 – 18: Consolidate feedback received and prepare final revised draft mission and core themes
January 2016	<ul style="list-style-type: none"> • January 11: Faculty Senate • January 19: Council of Deans
March 1, 2016	<ul style="list-style-type: none"> • Year 1 Report Due & Response to Recommendation 1 and 2 due to NWCCU (without visit as part of regular report) <ul style="list-style-type: none"> Recommendation 1: The evaluation committee recommends that Idaho State University either revise its mission statement or review and revise its core themes, indicators, and benchmarks/targets to ensure that they encompass the entirety of the present mission statement (Standard 1.A.2 and 1.B.1). Recommendation 2: The evaluation committee recommends that the institution build upon its present governance framework by promoting an environment of transparency and collegiality, resulting in trust that

**PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
FEBRUARY 18, 2016**

	encourages the expression and consideration of the views of faculty, staff, administrators, and students on matters in which they have a direct and reasonable interest (Standard 2.A.1)
Fall 2017	<ul style="list-style-type: none">• Response to Recommendations 3 and 4 due to NWCCU Recommendation 3: The evaluation committee recommends that the institution integrate all campus plans into a comprehensive planning process. (Standard 3.A.1) Recommendation 4: The evaluation committee recommends that the institution that the institution continue to work to clarify the ways I which it will use assessment results to inform and strengthen programs and services and to demonstrate institutional improvement, mission fulfillment, and sustainability (Standards 4.A, 4.B, 5.A, and 5.B).

**PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
FEBRUARY 18, 2016**

SUBJECT

Board Policy I.E. Executive Officers – Second Reading

REFERENCE

October 2007	Board approved second reading of Board Policy I.E. Executive Officers.
December 2008	Board approved the first reading with changes of Board Policy I.E. Executive Officers, multi-year contracts.
February 2009	Board discussion of Board Policy I.E. Executive Officers
June 2009	Board approved second reading I.E. Executive Officers with amendments, multi-year contracts.
August 2009	Board Approved first reading with changes of Board Policy I.E.4. Reimbursement of expenses
October 2009	Board approved second reading of Board Policy I.E.4 Reimbursement of expenses
October 2010	Board approved first reading of Board Policy I.E.2. Presidents/Agency Heads allowing CEO's to receive stipends or other forms of compensation for unrelated duties or activities
December 2010	Board approved second reading of Board Policy I.E.2
December 2015	Board approved first reading of Board Policy I.E. Executive Officers

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Sections I.E. Executive Officers.

BACKGROUND/DISCUSSION

From time to time events arise related to the institutions that garner media attention. The current practice has been for the institution presidents to contact the Executive Director and/or the Board president and notify them of any such events. Recently there have been a couple of events involving student athletes that have garnered media attention. In response, the Athletics Committee have discussed ways in which to improve notification or reporting of similar events to the Board office and the Board. As a result of these discussions, the committee is recommending the codification of this practice in the form of the attached policy amendment.

IMPACT

Approval of the policy changes will place in Board policy the requirement that institution presidents report within 24 hours any developments that are likely to be an interest to the media.

ATTACHMENTS

Attachment 1 – First Reading I.E. Executive Officers

Page 3

PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
FEBRUARY 18, 2016

STAFF COMMENTS AND RECOMMENDATIONS

There were no changes between first and second reading. Staff recommends approval.

BOARD ACTION

I move to approve the second reading of proposed amendments to Board Policy section I.E. Executive Officers, incorporating the reporting requirement, as submitted in Attachment 1.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

Idaho State Board of Education

GOVERNING POLICIES AND PROCEDURES

SECTION: I. GENERAL GOVERNING POLICIES AND PROCEDURES

SUBSECTION: E. Executive Officers

February 2016

1. Executive Director

The Executive Director is appointed by and serves in this position at the pleasure of the Board. The Executive Director serves as the chief executive officer of the State Board of Education. Pursuant to Idaho Code 33-102A the Executive Director shall be under the direction of the Board and shall have such duties and powers as are prescribed by the Board. The Executive Director is charged with ensuring the effective articulation and coordination of institution, and agency concerns and is advisor to the Board and the Presidents/Agency Heads on all appropriate matters.

2. Presidents/Agency Heads

a. Responsibilities

The President/Agency Head is the chief program and administrative officer of the institution or agency. The President/Agency Head has full power and responsibility within the framework of the Board's Governing Policies and Procedures for the organization, management, direction, and supervision of the institution or agency and is held accountable by the Board for the successful functioning of the institution or agency in all of its units, divisions, and services.

For the higher education institutions, the Board expects the Presidents to obtain the necessary input from the faculty, classified and exempt employees, and students, but it holds the Presidents ultimately responsible for the well-being of the institutions, and final decisions at the institutional level rest with the Presidents. The Presidents shall keep the Board apprised, within 24 hours, through the Executive Director, of all developments concerning the institution, its employees, and its students, which are likely to be of interest to the public.

b. The Chief Executive Officer is held accountable to the Board for performing the following duties within his or her designated areas of responsibility:

i. Relations with the Board

- 1) Conduct of the institution or agency in accordance with the Governing Policies and Procedures of the Board and applicable state and federal laws.
- 2) Effective communication among the Board, the Board office, and the institution or agency.
- 3) Preparation of such budgets as may be necessary for proper reporting and planning.

PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
FEBRUARY 18, 2016

- 4) Transmittal to the Board of recommendations initiated within the institution or agency.
 - 5) Participation and cooperation with the office of the Board in the development, coordination, and implementation of policies, programs, and all other matters of statewide concern.
 - 6) Notification to Board President or Executive Director of any out-of-state absence exceeding one week.
- ii. Leadership of the Institution or Agency
- 1) Recruitment and retention of employees
 - 2) Development of programs, in accordance with an evolving plan for the institution or agency.
 - 3) In cooperation with appropriate parties, the promotion of the effective and efficient functioning of the institution or agency.
 - 4) Development of methods that will encourage responsible and effective contributions by various parties associated with the institution or agency in the achievement of the goals of the institution or agency.
- iii. Relations with the Public
- 1) Development of rapport between the institution or agency and the public that each serves.
 - 2) Official representation of the institution or agency and its Board-approved role and mission to the public.
- c. Appointment Terms and Conditions
- Each chief executive officer is employed and serves at the pleasure of the Board as an at-will employee. Appointments to the position of President of the higher education institutions and Executive Director of the Board are made by the Board. The Executive Director shall have authority to identify candidates and make recommendations for the appointment of Agency Heads, which must be approved and appointed by the Board. The Board and each chief executive officer may enter into an employment agreement for a term not to exceed five (5) years that documents the period of appointment, compensation, and any additional terms. The Board's Policies regarding Non-classified Employees, Section II, Subsection F, do not apply to the Board's chief executive officers.
- d. Evaluations
- The Agency Heads are evaluated by the Executive Director annually, who makes recommendations to the Board with respect to compensation and employment

PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
FEBRUARY 18, 2016

actions. The Presidents and Executive Director are evaluated by the Board annually. The performance evaluation is based upon the terms of any employment agreement, the duties outlined in the policy and mutually agreed upon goals. Final decisions with respect to compensation and employment actions with regard to chief executive officers are made by the Board.

e. Compensation and Benefits

- i. Each chief executive officer's annual compensation shall be set and approved by the Board. A chief executive officer shall not receive supplemental salary compensation related to his or her service as chief executive officer from an affiliated institutional foundation, or from any other source except that institutional Presidents may receive perquisites or benefits as permitted by topic 3, subtopic d, below. A chief executive officer must disclose to the Board, through its Executive Director or in executive session as appropriate (with updates as necessary), any activities and financial interests, including compensation from an outside source unrelated to his or her service as chief executive officer, that affects or could potentially affect the chief executive officer's judgment or commitment to the Board or the institution.
- ii. In addition to the compensation referred to above, each chief executive officer shall receive the usual and ordinary medical, retirement, leave, educational, and other benefits available to all institutional, and agency employees.
- iii. Each chief executive officer shall receive reasonable and adequate liability insurance coverage under the state's risk management program.
- iv. Relocation and moving expenses incurred by each chief executive officer will be paid in accordance with the policies and rates established by the State Board of Examiners.
- v. Each chief executive officer earns annual leave at a rate of two (2) days per month or major fraction thereof of credited state service.

f. Termination

In the event a chief executive officer's appointment is terminated by Board action (for or without cause), then such individual shall only be entitled to continued compensation or benefits, if any, for which he or she may be eligible under the terms of his or her employment agreement.

3. Institutional Presidents: Housing, Automobile, and Expense Reimbursement

- a. The institutional Presidents are responsible for hosting official functions to promote their respective institutions. At institutions with official residences, the Presidents of such institutions are required to live in the official residences provided.

PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
FEBRUARY 18, 2016

To preserve the image of the institutions and to provide adequate maintenance of state-owned property, the institutions shall provide support services for these residences. This support shall include maintenance and repairs, utilities, and grounds keeping.

In the event that the institution does not own an official residence, a housing allowance will be provided that is similar in value to living in an official residence. In addition, this allowance shall cover reasonable maintenance and repair expenses related to the use of this home as the President's official residence.

- b. Each institutional President shall be provided an automobile. Maintenance, repairs, gas for business use, and insurance shall be provided for this vehicle.

If an institutional President does not elect to use a vehicle provided by the institution, the institution will provide the President a vehicle allowance in lieu of the cost of leasing, automobile maintenance, and insurance. Documented business travel will be reimbursed to compensate for gasoline costs.

- c. The institutional Presidents shall receive reimbursement for official entertainment expenses. Public relations and other out-of-pocket expenses may be reimbursed if they are directly related to the function of the institution as determined by the President. (See fiscal policy for entertainment and related expenses.)
- d. Foundation Provided Funds for Compensation, Perquisites or Benefits

Perquisites or benefits for the institutional Presidents, may be provided by the institution's affiliated foundation meeting all requirements of Section V, Subsection E of the Board's Governing Policies and Procedures if approved by the Board on a case-by-case basis.

4. Institutional Presidents: Official Duties Related Spousal Expenses

The Board acknowledges that the spouse of an institutional president provides valuable service activities on behalf of the institution, the Board, and to the Idaho higher education system. The Board further recognizes that the spouse may be expected to attend certain functions related to the ongoing mission and purposes of the institution. Accordingly, a spouse shall be eligible for reimbursement of authorized official travel and business related expenses, in accordance with the State of Idaho's travel and expense policies, as long as such expenses have a bona fide business purpose. To be a bona fide business purpose the presence and activities of the spouse at the function must be significant and essential (not just beneficial) to the institution. A president's spouse attending official functions as part of protocol or tradition and where the spouse makes an important contribution to the function can be considered serving a business purpose. For example, ceremonial functions, fundraising events, alumni gatherings, community, and recruiting events are examples of activities at which the presence of a spouse may contribute to the mission of the University. If a spouse has no significant role, or performs only incidental duties of a purely social or clerical nature, then such does not constitute a bona fide business

PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
FEBRUARY 18, 2016

purpose. Spousal expenses may not be charged to state funds; various non-state funds controlled by the institution may be used to fund spousal expenses.

5. President Emeritus/Emerita Designation

The Board may choose to grant President Emeritus/Emerita status to a retiring President. President Emeritus/Emerita status should be reserved to honor, in retirement, a president who has made distinguished professional contributions to the institution and who has also served a significant portion of his/her career at the institution. The intent of conferring President Emeritus/Emerita status is to bestow an honorary title in recognition of successful tenure in the Presidential role.

a. Appointment Procedure

An institution may forward a recommendation to the Board that this honorary title be conferred upon a President that is retiring or has retired from the institution. Each institution shall provide for input into the recommendation from the campus community.

b. Rights, Privileges and Responsibilities

Rights and privileges of such a distinction shall be, insofar as resources will allow, similar to those of active institutional staff, including such privileges as:

- i. staff privileges for activities, events and campus facilities;
- ii. receipt of institutional newspaper and other major institutional publications and receipt of employee/spouse fee privilege (see Section V. R.).

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PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
FEBRUARY 18, 2016

SUBJECT

Amendment to Board Policy I.Q. Accountability Oversight Committee – Second Reading

REFERENCE

October 2012	The Board approved the first reading of proposed changes to Board Policy III.AA.
December 2012	The Board approved the second reading of proposed changes to Board Policy III.AA. and moved the policy to section I.Q.
April 2015	The Board approved the first reading of proposed changes to Board Policy I.Q. allowing the Superintendent to designate an alternate in his/her place on the committee.
June 2015	The Board approved the second reading of proposed changes to Board Policy I.Q. allowing the Superintendent to designate an alternate in his/her place on the committee.
December 2015	The Board approved the first reading of proposed changes to Board Policy I.Q.

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section I.Q. Accountability Oversight Committee

BACKGROUND/DISCUSSION

The Board's Accountability Oversight Committee is charged with providing "recommendations to the Board on the effectiveness of the statewide student achievement system and make recommendations on improvements and/or changes as needed." Board Policy I.Q., Accountability Oversight Committee, outlines the membership and responsibilities of the Board's Accountability Oversight Committee. The committee is currently composed of two Board members, the Superintendent of Public Instruction, and four (4) at-large members appointed by the Board.

The proposed changes to the policy would add one additional member to the Accountability Oversight Committee who would be a representative with experience in special education.

IMPACT

The proposed changes would add additional expertise to the committee to provide for thorough recommendations to the Board on the states accountability system.

PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
FEBRUARY 18, 2016

ATTACHMENTS

Attachment 1 – Board Policy I.Q., Accountability Oversight Committee Page 3

STAFF COMMENTS AND RECOMMENDATIONS

There were no changes between first and second reading. Should the Board approve the changes, a recommendation for the new committee member will be brought to the Board at the April Board meeting. Board staff recommends approval.

BOARD ACTION

I move to approve the second reading of amendments to Board Policy I.Q. Accountability Oversight Committee as submitted in Attachment 1.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

PLANNING, POLICY AND GOVERNMENTAL AFFAIRS
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Idaho State Board of Education

GOVERNING POLICIES AND PROCEDURES

SECTION: I. GENERAL GOVERNING POLICIES AND PROCEDURES

SUBSECTION: Q. Accountability Oversight Committee

February 2016

1. Overview

The Accountability Oversight Committee will function as an ad hoc committee of the Idaho State Board of Education and be staffed by the Board's Accountability Program Manager.

2. Duties and Responsibilities

- a. Provide recommendations to the Board on the effectiveness of the statewide student achievement system and make recommendations on improvements and/or changes as needed.
- b. Develop and review an annual report of student achievement. This report shall be compiled collaboratively by Board and State Department of Education staff and submitted to the committee for review. The committee will forward the report to the Board with recommendations annually.

3. Meetings and Operating Procedures

The committee shall meet twice annually, additional meetings may be called by the Chair as needed.

4. Membership

The committee membership shall consist of:

- Two members of the Idaho State Board of Education, appointed by the Board president;
- The Superintendent of Public Instruction or designee; and
- ~~Four~~Five members at-large appointed by the Board, one of which will ~~chair the committee and shall serve a term of one year as chair~~ have experience serving in a school district in a special education capacity. The chair of the committee shall be elected from one of the at-large members and shall serve no more than one consecutive annual term as chair.

5. Terms of Membership

Board members appointed to the committee serve at the pleasure of the president of the Board. Committee members appointed by the Board shall serve two-year terms. An incumbent member may be recommended for re-appointment. All terms shall begin on July 1st and end on June 30th of the year(s) beginning or ending said term.

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Appointments shall be staggered to ensure that no more than two (2) appointments will become vacant in any given year.

An appointee who has reached the end of his or her term shall remain in service as a committee member until re-appointment, or until the appointment of a new member by the Board. Committee officers will be nominated and elected by a vote of the committee.

The Superintendent of Public Instruction or designee will serve as an ex-officio member of the committee.

6. Reporting

This committee shall report directly to the Board.

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SUBJECT

Temporary Rule IDAPA 08.01.14.105, Rules Governing Pay for Success Contracting

APPLICABLE STATUTE, RULE, OR POLICY

Section 33-125B, Idaho Code

BACKGROUND/DISCUSSION

During the 2015 legislative session, section 33-125B, Idaho Code pertaining to pay for success contracting was enacted. The purpose of this section is to allow the State to enter into agreement with private entities whereby the entity bears the burden of financing the cost of a program with the State payments for the services based on the contractor meeting pre-negotiated metrics focused on student outcomes.

This new section of Idaho Code authorizes the State Department of Education to enter into contracts for services based on performance outcomes and created an oversight committee to evaluate proposals and make determination on whether or not the Department of Education will enter into negotiations regarding the proposals. Contracts can be initiated by either the Department of Education identifying a need and releasing a request for information or through individual entities submitting a proposal to the oversight committee. Additionally, the State Board is authorized to promulgate rules for the implementation of the law.

At the close of the 2015 legislative session, Board staff received inquiries regarding the promulgation of rules for this section, given the detail outlined in Section 33-125B, Idaho Code, there were no areas that were identified at the time that needed further clarification. Since that time one proposal was submitted to the oversight committee for consideration. As the proposal worked through the process, a few areas were identified that needed further clarification through Administrative Code. Due to the time that it took to develop the proposal, the areas that needed clarification were not brought forward in time to work through last year's rule promulgation timeline. Because the normal rulemaking process takes close to a year to complete, it has been requested by legislators that the Board consider a temporary rule that would provide the needed clarification and allow for proposals to be submitted to the oversight committee during this next year, rather than waiting until the close of the 2017 legislative session to have clarifications in place.

The areas identified for clarification are:

- the process for an interested party to submit a proposal for the oversight committee's review,
- timeline for which proposals will be submitted to the oversight committee and reviewed, and
- the type of individuals that would make up the negotiation team.

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IMPACT

Approval of the temporary rule will set out guidelines for individuals to submit proposals and timelines for which they can expect the proposal to move through the process.

ATTACHMENTS

Attachment 1 – Temporary Rule IDAPA 08.01.14

Page 3

STAFF COMMENTS AND RECOMMENDATIONS

Temporary rules go into effect at the time of Board approval unless an alternative effective date is specified by Board action. To qualify as a temporary rule, the Governor must find the rule meets one of three criteria: provides protection of the public health, safety, or welfare; or is to come into compliance with deadlines in amendments to governing law or federal programs; or is conferring a benefit. This rule qualifies as a temporary rule as it is coming into compliance with state law.

Following the close of the 2016 legislative session Board staff will initiate the negotiated rulemaking process and bring back a proposed, and then pending, rule for consideration by the Board. If approved by the Board, the pending rule will then go to the 2017 legislature for consideration. If accepted by the legislature the pending rule will become effective at the close of the legislative session.

Staff recommends approval.

BOARD ACTION

I move to approve the Temporary Rule IDAPA 08.01.14. Rules Governing Pay for Success Contracting as submitted in attachment 1.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

**INSTRUCTION, RESEARCH, AND STUDENT AFFAIRS
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TAB	DESCRIPTION	ACTION
1	HIGHER EDUCATION RESEARCH COUNCIL AND STATEWIDE PLAN FOR HIGHER EDUCATION AND RESEARCH ANNUAL UPDATE	Information Item
2	BOARD POLICY III.P. STUDENTS – FIRST READING	Motion to Approve
3	BOISE STATE UNIVERSITY – PH.D IN ECOLOGY, EVOLUTION AND BEHAVIOR	Motion to Approve
4	UNIVERSITY OF IDAHO – MASTER OF PUBLIC ADMINISTRATION, ONLINE FEE REQUEST	Motion to Approve
5	UNIVERSITY OF IDAHO – MASTER OF LAWS PROPOSAL	Motion to Approve
6	UNIVERSITY OF IDAHO – BACHELOR OF SCIENCE, SOCIOLOGY, CRIMINOLOGY EMPHASIS ONLINE	Motion to Approve

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**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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SUBJECT

Higher Education Research Council and Statewide Strategic Plan for Higher Education Research Annual Update

REFERENCE

April 2010	The Board was provided with a summary of the Statewide Strategic Plan for Higher Education Research
October 2010	The Board was provided with an update of the progress made toward the development of the Statewide Strategic Plan for Higher Education Research
December 2011	Board approved the Statewide Strategic Plan for Higher Education Research
December 2012	The Board was updated on the progress made in the Higher Education Research Strategic Plan
December 2013	The Board was updated on the progress made in the Higher Education Research Strategic Plan and received the annual report of the Higher Education Research Council
October 2014	The Board was provided the Performance Measure Report for the Higher Education Research Strategic Plan.
February 2015	The Board approved changes to the Higher Education Research Strategic Plan
October 2015	The Board was provided the Performance Measure Report for the Higher Education Research Strategic Plan

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies and Procedures, Section III.W., Higher Education Research

BACKGROUND/DISCUSSION

Board Policy III.W, Higher Education Research, recognizes the significant role research plays in innovation, economic development and enhanced quality of educational programs. By developing and leveraging the State's unique research expertise and strengths, Idaho's universities and college serve as catalyst to spur the creation of new knowledge, technologies, products and industries. This in turn leads to new advances and opportunities for economic growth.

The Board's Higher Education Research Council (HERC) provides recommendations to the Board regarding statewide collaborative efforts and initiatives to accomplish these goals and objectives. In addition, HERC provides direction for and oversees the use of the limited resources provided by the Legislature for research by promoting research activities that will have the greatest beneficial effect on the quality of education and the economy of the State.

The Statewide Strategic Plan for research assists in the identification of research areas that will enhance the economy of Idaho through the collaboration of academia, industry, and government and are in alignment with identified areas of

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strength at our public universities. The Research Strategic Plan was first approved by the Board in December 2011. The Board has received annual performance measure reports each year. Based on the performance measure reporting of the original strategic plan HERC recommended and the Board approved changes to the plan in February 2015.

The plan represents the role Idaho's research universities play in driving innovation, economic development, and enhancing the quality of educational programs in strategic areas. The plan identifies areas of strength among Idaho's research universities; research challenges and barriers facing the universities; research opportunities Idaho should capitalize upon to further build its research base, goals to build the research pipeline through engaging undergraduate students, and steps for achieving the research vision for Idaho's universities. Additional responsibilities of HERC include the management of the Incubation Fund and HERC IGEM Fund programs, disbursement of Infrastructure Funds and the matching funds for our Idaho EPSCoR Track 1 project (Managing Idaho's Landscapes for Ecosystem Services). Additional responsibilities include receiving annual reporting on the institutions activities in relation to the Center for Advanced Energy Studies (CAES).

Incubation Fund projects are single-year projects that are at the proof-of-concept stage. Through a competitive process, the Council awards funds to those projects where the Principal Investigator can rapidly move their project into the development stage. IGEM Fund projects are those that are designed to develop spin-off companies. While these awards may be for up to three years, the funding is contingent upon successful progress as determined by the Council at an annual review of the project.

CAES is a research and education consortium between the Idaho National Laboratory, the University of Wyoming, and the three Idaho public research institutions: Boise State University, Idaho State University, and the University of Idaho.

Dr. Mark Rudin, the current chair of HERC, will provide the Board with the Council's annual update, including an update on CAES activities.

IMPACT

Taking a strategic approach to invest in the state's unique research expertise and strengths will lead to new advances and opportunities for economic growth and enhance Idaho's reputation as a national and international leader in excellence and innovation. This update will provide the Board with the opportunity to provide HERC, through the Council's Chair, input on areas of focus or strategic direction.

ATTACHMENTS

Attachment 1 – Statewide Strategic Plan for Higher Education Research Page 5
Attachment 2 – FY15 Performance Measure Report Page 13

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Attachment 3 – FY15 Research Activity Report	Page 17
Attachment 4 – FY15 Infrastructure Summary Report	Page 21
Attachment 5 – HERC FY16 Budget Allocation	Page 23
Attachment 6 – FY16 Incubation Fund Summaries	Page 25
Attachment 7 – FY16 IGEM Fund Summaries	Page 41
Attachment 8 – CAES 2015 Annual Report	Page 53

STAFF COMMENTS AND RECOMMENDATIONS

In addition to the responsibility for the creation of the state's Higher Education Research Strategic plan the Council is responsible for approximately \$3.9M in funds used for the mission of HERC and to incentivize industry and institution research partnerships. Attachment 2 is the October 2015 performance measure report, Attachment 3, is the research institutions annual research activity reports, Attachment 4 summarizes the funding categories that HERC is authorized by the Board to allocate funds for, Attachment 5 outlines HERC's FY16 budget allocation, and Attachments 6 and 7 are summaries of the projects funded by HERC in FY16. Attachment 8 is the CAES 2015 annual report.

The strategic plan is monitored annually and updated as needed based on the work of HERC and direction from the Board. HERC uses a competitive process for distributing funds from the Incubation Fund category and the HERC IGEM Fund category. All proposals that are considered must be in alignment with the Board's Higher Education Research Strategic Plan.

BOARD ACTION

This item is for informational purposes only. Any action will be at the Board's discretion.

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STRATEGIC RESEARCH PLAN FOR IDAHO HIGHER EDUCATION

(2016-2020)

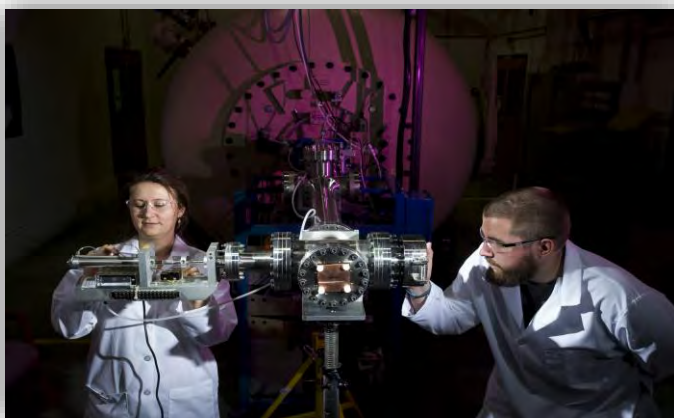
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EXECUTIVE SUMMARY

Research is being increasingly acknowledged by industry, government and education as a key factor in the future economic vitality of Idaho. The universities and colleges of Idaho's system of higher education understand the need for greater collaboration in order to be competitive in today's global environment. Recognizing the need to focus on and emphasize existing strengths and opportunities in Idaho's research community, the vice presidents of research and economic development developed the following statewide strategic plan for research to ensure the greatest potential for achieving a vital and sustainable research base for Idaho. The strategic plan identifies the key research areas that will become the focal points for research and economic development through partnering among academia, industry and government in science, technology, and creative activity.



Research is fundamental to the mission of a university due to its role in knowledge discovery and in providing new ideas for technology commercialization via patents, copyright, licenses and startup companies. University faculty who engage in research and creative activity are at the leading edge of their respective fields. Research also enhances the national reputation of the faculty and the universities. These faculty and their vibrant research programs



attract the best graduate and undergraduate students by providing unique cutting-edge learning experiences in their research laboratories, studios, field sites and classrooms. On the most basic level, research strengthens a university's primary product — innovative, well-educated students ready to enter a competitive workforce.

Research is the foundation of a university's economic development role. The influx of research dollars from external grants and contracts creates new jobs at the university,

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along with the attendant purchases of supplies, services, materials and equipment. The results of the research are new knowledge, new ideas, and new processes, which lead to patents, startup companies, more efficient businesses as well as a highly trained workforce prepared to tackle 21st century challenges.

Idaho's research universities have strengths and opportunities for economic development in 1) Energy, 2) Natural Resource Utilization and Conservation, 3) Biosciences, 4) Novel Materials and 5) Software Engineering.

By focusing collaborative efforts in these areas, the research universities will expand research success by:

- Helping Idaho institutions focus on their research strengths;
- Creating research and development opportunities that build relationships between universities and the private sector;
- Contributing to the economic development of the State of Idaho;
- Enhancing learning and professional development through research and scholarly activity; and
- Building and improving the research infrastructure of Idaho universities to meet current and future research needs.

This statewide Strategic Research Plan for Idaho Higher Education is a tool for identifying and attaining quantifiable goals for research and economic growth and success in Idaho. The plan will be reviewed and updated annually as needed amid the fast-changing pace of research discovery.





VISION

Idaho's public universities will be a catalyst and engine to spur creation of new knowledge, technologies, products and industries that lead to advances and opportunities for economic growth and enhance the quality of life in Idaho and the nation.

MISSION

The research mission for Idaho's universities is to develop a sustainable resource base by:

- Identifying, recruiting and retaining top faculty with expertise in key research areas;
- Building research infrastructure including facilities, instrumentation, connectivity and database systems to support an expanding statewide and national research platform;
- Attracting top-tier students to Idaho universities at the undergraduate and graduate levels and providing outstanding education and research opportunities that will prepare them to excel in future careers;
- Raising awareness among state, national and international constituencies about the research excellence and capabilities of Idaho's universities by developing and implementing targeted outreach, programs and policies; and
- Collaborating with external public, private, state and national entities to further the shared research agenda for the state, thereby promoting economic and workforce development and addressing the needs and challenges of the state, region and nation.



GOALS AND OBJECTIVES

Goal 1: Increase research at, and collaboration among, Idaho universities and colleges to advance areas of research strength and opportunity.

Objective 1.A: Ensure growth and sustainability of public university research efforts.

Performance Measure 1.A.1: Statewide amount of total annual research and development expenditures as reported in the National Science Foundation (NSF) Higher Education Research and Development Survey. Benchmark: 10% increase per year.

Objective 1.B: Ensure the growth and sustainability of the existing collaborative research at the Center for Advanced Energy Studies (CAES).

Performance Measure 1.B.1: Statewide amount of U.S. Department of Energy (DOE) research and development expenditures as reported in the National Science Foundation (NSF) Higher Education Research and Development Survey. Benchmark: 10% increase per year.

Objective 1.C: Expand joint research ventures among the state universities.

Performance Measure 1.C.1: Number of new fully sponsored project proposals submitted by an Idaho University that involve a subaward with another Idaho institution of higher education (in either direction). Benchmark: 50% increase per year.

Performance Measure 1.C.2: Number of new fully sponsored project awards to an Idaho University that involve a subaward with another Idaho institution of higher education (in either direction). Benchmark: 30% increase per year.

Goal 2: Create research and development opportunities that strengthen the relationship between state universities and the private sector.

Objective 2.A: Increase the number of sponsored projects involving the private sector.

Performance Measure 2.A.1: Number of new sponsored projects involving the private sector. Benchmark: 50% increase per year.

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Goal 3: Contribute to the economic development of the State of Idaho.

Objective 3.A: Increase the amount of university-generated intellectual property introduced into the marketplace.

Performance Measure 3.A.1: Number of technology transfer agreements (as defined by AUTM [Association of University Technology Managers]).
Benchmark: 15% increase per year.

Performance Measure 3.A.2: Number of invention disclosures (including plant varieties). Benchmark: 1 for every \$2M of research expenditures.

Performance Measure: 3.A.3: Amount of licensing revenues. Benchmark: 10% increase per year.

Objective 3.B: Increase the number of university startup companies (include startups outside of Idaho).

Performance Measure 3.B.1: Number of startup companies. Benchmark: 10% increase per year.

Goal 4: Enhance learning and professional development through research and scholarly activity.

Objective 4.A: Increase the number of university and college students and staff involved in sponsored project activities.

Performance Measure 4.A.1: Number of undergraduate and graduate students paid from sponsored projects. Benchmark: 20% increase per year.

Performance Measure 4.A.2: Percentage of baccalaureate students who graduated in STEM disciplines and had a research experience. Benchmark: 20% increase per year.

Performance Measure 4.A.3: Number of faculty and staff paid from sponsored projects. Benchmark: 20% increase per year.

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Performance Measure	FY 2012	FY 2013	FY 2014	FY 2015
Statewide amount of total annual research and development expenditures as reported in the National Science Foundation (NSF) Higher Education Research and Development Survey	\$125,146,923.76	\$121,580,993.00	\$142,771,851.00	Not reported until January 2016
Statewide amount of U.S. Department of Energy (DOE) research and development expenditures as reported in the National Science Foundation (NSF) Higher Education Research and Development Survey.	\$10,760,704.00	\$10,262,639.00	\$13,545,198.00	Not reported until January 2016
Number of new fully sponsored project proposals submitted by an Idaho University that involve a subaward with another Idaho institution of higher education (in either direction).	75	106	77	69
Number of new fully sponsored project awards to an Idaho University that involve a subaward with another Idaho institution of higher education (in either direction).	53	48	53	42
Number of new sponsored projects involving the private sector.	92	108	183	133
Number of technology transfer agreements (as defined by AUTM [Association of University Technology Managers]).	20	28	34	50
Number of invention disclosures (including plant varieties)	55	43	47	29
Amount of licensing revenues.	\$478,891	\$404,153	\$1,192,007	\$441,071
Number of startup companies.	0	3	0	0
Number of undergraduate students paid from sponsored projects.	1,746	1,698	1,383	1,699
Number of graduate students paid from sponsored projects.	710	699	860	648
Percentage of baccalaureate students who graduated in STEM disciplines and had a research experience.				
Number of faculty and staff paid from sponsored projects.	2,113	2,310	2,050	2,375
K-20 Statewide Strategic Plan Performance Measures				
Percentage of students participating in undergraduate research.				
Total amount of research expenditures	81,614,760	75,244,872	73,726,315	101,830,918
Institution expenditures from competitive Federally funded grants	\$91,023,902	\$89,099,167	\$81,951,549	\$106,047,448
Institution expenditures from competitive industry funded grants	\$9,337,536	\$9,253,841	\$7,748,543	\$7,389,079
Measure of production of intellectual property:				
Number of startups	0	3	0	0
Number of patents	5	32	13	10
Number of student internships	2,345	2,479	2,109	2,090

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Performance Measure	FY 2012	FY2013	FY 2014	FY2015
Statewide amount of total annual research and development expenditures as reported in the National Science Foundation (NSF) Higher Education Research and Development Survey (See Note B below)	\$97,226,924	\$95,890,993	\$95,593,851	Not available, report due January 2016
Statewide amount of U.S. Department of Energy (DOE) research and development expenditures as reported in the National Science Foundation (NSF) Higher Education Research and Development Survey.	\$6,448,704	\$6,106,639	\$4,613,198	Not available, report due January 2016
Number of new fully sponsored project proposals submitted by an Idaho University that involve a subaward with another Idaho institution of higher education (in either direction).	24	47	24	25
Number of new fully sponsored project awards to an Idaho University that involve a subaward with another Idaho institution of higher education (in either direction).	19	20	10	14
Number of new sponsored projects involving the private sector (see Note A below).	53	69	68	57
Number of technology transfer agreements (as defined by AUTM [Association of University Technology Managers]).	5	6	7	11
Number of invention disclosures (including plant varieties)	28	16	18	14
Amount of licensing revenues.	\$442,875	\$366,571	\$1,156,407	\$419,596
Number of startup companies.	0	2	0	0
Number of undergraduate students paid from sponsored projects.	661	572	489	575
Number of graduate students supported by sponsored projects	503	453	488	574
Percentage of baccalaureate students who graduated in STEM disciplines and had a research experience.	73.30%	76.68%	65.87%	63.29%
Number of faculty and staff paid from sponsored projects.	1,202	1,208	1,153	1,175
K-20 Statewide Strategic Plan Performance Measures				
Percentage of students participating in undergraduate research.	74.42 %	73.95%	66.8%	65.9%
Total amount of research expenditures	\$59,783,877	\$57,426,119	\$56,385,826	\$54,955,421
Institution expenditures from competitive Federally funded grants	\$70,413,770	\$67,910,558	\$64,567,276	\$63,565,943
Institution expenditures from competitive industry funded grants (see Note A below).	\$6,805,705	\$7,322,692	\$5,674,316	\$5,422,896
private sector	1,372,564	1,898,229	1,452,711	1,527,156
private sector federal flow through	5,433,141	5,424,463	4,221,605	3,895,740
Measure of production of intellectual property:				
Number of startups	0	2	0	0
Number of patents	2	23	7	7
Number of student internships	1,740	1,784	1,326	764

Performance Measure Explanatory Notes:

Note A - Number of proposed sponsored projects with private sector - (a) is funding from private sector, and (b) is funding from private sector, federal flow through.

Note B - The FY15 NSF Survey has not been submitted yet, it will be completed in January 2016.

	2012	2013	2014	2015
Institution expenditures from competitive industry funded grants (see Note A).	\$1,372,564 (a); \$5,433,141 (b)	\$1,898,229 (a); \$5,424,463 (b)	\$1,452,711 (a); \$4,221,605 (b)	\$1,527,156 (a); \$3,895,740 (b)
	2012	2013	2014	2015
Number of new sponsored projects involving the private sector (see Note A).	53	53 (a); 16 (b)	53 (a); 15 (b)	45 (a); 12 (b)

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Performance Measure	FY 2012	FY2013	FY 2014	FY 2015
Statewide amount of total annual research and development expenditures as reported in the National Science Foundation (NSF) Higher Education Research and Development Survey	\$27,920,000	\$25,690,000	\$26,568,000	
Statewide amount of U.S. Department of Energy (DOE) research and development expenditures as reported in the National Science Foundation (NSF) Higher Education Research and Development Survey.	4,312,000	4,156,000	4,307,000	
Number of new fully sponsored project proposals submitted by an Idaho University that involve a subaward with another Idaho institution of higher education (in either direction). [1]	26	30	33	26
Number of new fully sponsored project awards to an Idaho University that involve a subaward with another Idaho institution of higher education (in either direction).[2]	16	12	21	15
Number of new sponsored projects involving the private sector. [3]	17	19	22	22
Number of technology transfer agreements (as defined by AUTM [Association of University Technology Managers]).	15	22	27	38
Number of invention disclosures (including plant varieties)	25	24	16	15
Amount of licensing revenues.*	\$36,016	\$37,582	\$35,600	\$21,475
Number of startup companies.	0	1	0	0
Number of undergraduate students paid from sponsored projects.	900	916	607	807
Number of graduate students supported by sponsored projects. **				
Percentage of baccalaureate students who graduated in STEM disciplines and had a research experience.**				
Number of faculty and staff paid from sponsored projects.	661	597	651	676
K-20 Statewide Strategic Plan Performance Measures				
Percentage of students participating in undergraduate research.	28.50%	31.10%	29%	29.40%
Total amount of research expenditures	\$21,830,883	\$17,818,753	\$17,340,489	\$20,613,353
Institution expenditures from competitive Federally funded grants	\$20,610,132	\$21,188,609	\$17,384,273	\$21,042,684
Institution expenditures from competitive industry funded grants	\$2,531,831	\$1,931,149	\$2,074,227	\$1,966,183
private sector	\$395,419	\$215,244	\$134,010	\$266,467
private sector federal flow through	\$2,136,412	\$1,715,905	\$1,940,217	\$1,699,716
Measure of production of intellectual property:				
Number of startups	0	1	0	0
Number of patents	2	7	6	3
Number of Student internships [4]	398	449	411	438

[1] Represents the number of full proposal submissions that involved a financial relationship with another Id

[2] Represents the number of new awards that involved a financial relationship with another Idaho institutio

[3] Represents the number of new awards that involved a financial relationship with the private sector.

[4] Internship information is based on estimates by academic year (e.g., FY09=Academic year Summer 2008 +

* 2012, 2013, 2014 - Licensing revenue includes

\$30k/year for Micron Licensing Restriction

Agreement and is not considered net for OTT.

**Undergraduate and Graduate student totals have been combined into one line as BSU does not have the ability to break this information out.

	2012	2013	2014	2015
Institution expenditures from competitive industry funded grants	a. \$395,419.37	a. \$215,243.91	a. \$134,009.76	a. \$266,467.06
	b. 2,136,411.87	b. \$1,715,905.10	b. \$1,940,216.83	b. \$1,699,715.80

	2012	2013	2014	2015
Number of new sponsored projects involving the private sector. [3]	17	19	a) 10; b) 12	a) 10; b) 12

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Performance Measure	FY 2012	FY 2013	FY 2014	FY 2015
Statewide amount of total annual research and development expenditures as reported in the National Science Foundation (NSF) Higher Education Research and Development Survey			\$20,610,000	
Statewide amount of U.S. Department of Energy (DOE) research and development expenditures as reported in the National Science Foundation (NSF) Higher Education Research and Development Survey.			\$4,625,000	
Number of new fully sponsored project proposals submitted by an Idaho University that involve a subaward with another Idaho institution of higher education (in either direction).	25	29	20	18
Number of new fully sponsored project awards to an Idaho University that involve a subaward with another Idaho institution of higher education (in either direction).	18	16	22	13
Number of new sponsored projects involving the private sector.	22	20	93	54
Number of technology transfer agreements (as defined by AUTM [Association of University Technology Managers]).				1
Number of invention disclosures (including plant varieties)	2	3	13	0
Amount of licensing revenues.	0	0	0	0
Number of startup companies.	0	0	0	0
Number of undergraduate students paid from sponsored projects.	185	210	287	317
Number of graduate students supported by sponsored projects	207	246	372	74
Percentage of baccalaureate students who graduated in STEM disciplines and had a research experience.				71%
Number of faculty and staff paid from sponsored projects.	250	505	246	524
K-20 Statewide Strategic Plan Performance Measures				
Percentage of students participating in undergraduate research.				41%
Total amount of research expenditures				\$26,262,144
Institution expenditures from competitive Federally funded grants				\$21,438,821
Institution expenditures from competitive industry funded grants				
Measure of production of intellectual property:				
Number of startups	0	0	0	0
Number of patents	1	2	0	0
Number of Student internships	207	246	372	888

Performance Measure Explanatory Notes:

of student internships - data are from the Career Placement Internship Program (CPI) that was started in FY2011. Internships arranged by the student are not tracked by the university. Also includes numbers from the Job Location and Development Report.

	2012	2013	2014	2015
Biology - PhD	8	7	0	0
Microbiology - PhD	5	1	0	0
Engineering & Applied Science - PhD	3	6	0	0
Nuclear Science & Eng'g - PhD	2	0	0	0
Applied Physics - PhD	3	5	0	0
Mathematics	4	2	0	0
Chemistry	6	4	0	0
Geology	9	5	0	0
Physics	6	0	0	0
Environmental Engineering	2	1	0	0
Environmental Science & Mgmt	2	1	0	0
Measurement & Control Engineering	4	6	0	0
Nuclear Science & Engineering	8	8	0	0
Civil Engineering	6	3	0	0
Mechanical Engineering	1	4	0	0
Geographic Information Science	9	7	0	0
Microbiology	0	6	0	0
Biology	2	14	0	0
Physics/Health Physics	3	20	0	0
Applied Nuclear Certificate	2	2	0	0
Post-Bacc. Cert. in Geotechnology	5	2	0	0
	90	104	0	2015

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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**Sponsored Project Activity Report
FY2015**

Awards for the Period July 1, 2014 through June 30, 2015

Activity Type	Federal	State	Industry	Other	Total	% of Grand Total
Instruction:						
Sponsored Programs	\$ 2,211,390	\$ 3,421,715	\$ -	\$ 9,750	\$ 5,642,855	
Subtotal Instruction	\$ 2,211,390	\$ 3,421,715	\$ -	\$ 9,750	\$ 5,642,855	14.05%
Research:						
Sponsored Programs	\$ 20,567,228	\$ 704,165	\$ 269,118	\$ 883,402	\$ 22,423,913	
Construction	\$ -	\$ -	\$ -	\$ -	\$ -	
State Research Appropriations	\$ -	\$ 365,700	\$ -	\$ -	\$ 365,700	
Subtotal Research	\$ 20,567,228	\$ 1,069,865	\$ 269,118	\$ 883,402	\$ 22,789,613	56.74%
Other Sponsored Activities:						
Sponsored Programs	\$ 8,258,181	\$ 1,971,984	\$ 3,484	\$ 1,500,938	\$ 11,734,587	
Construction	\$ -	\$ -	\$ -	\$ -	\$ -	
Subtotal Other Sponsored Activities	\$ 8,258,181	\$ 1,971,984	\$ 3,484	\$ 1,500,938	\$ 11,734,587	29.21%
Grand Totals	\$ 31,036,799	\$ 6,463,564	\$ 272,602	\$ 2,394,090	\$ 40,167,055	
Percent of Grand Total	77.27%	16.09%	0.68%	5.96%	100%	100%

Expenditures for the Period July 1, 2014 through June 30, 2015

Activity Type	Federal	State	Industry	Other	Totals	% of Grand Total
Instruction:						
Sponsored Programs	\$ 3,020,641.99	\$ 1,321,178.83	\$ -	\$ 927,858.38	\$ 5,269,679.20	14.42%
Research:						
Sponsored Programs	\$ 18,440,619.06	\$ 1,006,076.73	\$ 258,892.41	\$ 907,764.55	\$ 20,613,352.75	
Construction	\$ -	\$ -	\$ -	\$ -	\$ -	
State Research Appropriations	\$ -	\$ 294,837.01	\$ -	\$ -	\$ 294,837.01	
Subtotal Research	\$ 18,440,619.06	\$ 1,300,913.74	\$ 258,892.41	\$ 907,764.55	\$ 20,908,189.76	57.23%
Other Sponsored Activities:						
Sponsored Programs	\$ 6,889,844.47	\$ 826,848.67	\$ 7,574.65	\$ 2,234,123.71	\$ 9,958,391.50	
Construction	\$ 345,967.99	\$ -	\$ -	\$ -	\$ 345,967.99	
State Other Sponsored Activities Appropriations	\$ -	\$ 50,672.27	\$ -	\$ -	\$ 50,672.27	
Subtotal Other Sponsored Activities	\$ 7,235,812.46	\$ 877,520.94	\$ 7,574.65	\$ 2,234,123.71	\$ 10,355,031.76	28.34%
Grand Totals	\$ 28,697,073.51	\$ 3,499,613.51	\$ 266,467.06	\$ 4,069,746.64	\$ 36,532,900.72	
Percent of Grand Total	78.55%	9.58%	0.73%	11.14%	100%	100%

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS

FEBRUARY 18, 2016

University of Idaho - FY2015 Research Activity Report

Awards for the Period July 1, 2014 through June 30, 2015

	Federal	State	Industry	Other	Total	% of Grand Total	% of Sponsor Total
Instruction:							
Sponsored Programs	\$ 2,172,163.00	\$ 463,026.00	\$ 57,789.15	\$ 1,281,676.75	\$ 3,974,654.90		5.52%
	\$ 2,172,163.00	\$ 463,026.00	\$ 57,789.15	\$ 1,281,676.75	\$ 3,974,654.90	3.73%	
Research:							
Sponsored Programs	\$ 41,930,169.11	\$ 1,729,165.00	\$ 1,656,584.78	\$ 4,255,850.70	\$ 49,571,769.59		68.90%
Federal Land Grant Appropriations (FFY15)	2,742,323.00				2,742,323.00		
State Research/Endowment Appropriations		19,202,167.63			19,202,167.63		
Subtotal Research:	\$ 44,672,492.11	\$ 20,931,332.63	\$ 1,656,584.78	\$ 4,255,850.70	\$ 71,516,260.22	67.19%	
Public Service:							
Sponsored Programs	\$ 15,420,014.54	\$ 1,830,217.53	\$ 170,500.00	\$ 980,376.44	\$ 18,401,108.51		25.58%
Federal Land Grant Appropriations (FFY15)	2,938,282.00				2,938,282.00		
State Extension Appropriations		9,601,785.64			9,601,785.64		
Subtotal Public Service:	\$ 18,358,296.54	\$ 11,432,003.17	\$ 170,500.00	\$ 980,376.44	\$ 30,941,176.15	29.07%	
Construction:							
Sponsored Programs	-	-	-	-	-	0.00%	0.00%
Total Sponsored Programs Funding	\$ 59,522,346.65	\$ 4,022,408.53	\$ 1,884,873.93	\$ 6,517,903.89	\$ 71,947,533.00		
Percent of Total Sponsored Programs	82.73%	5.59%	2.62%	9.06%	100%		100%
Grand Total of All Funding Per Category	\$ 65,202,951.65	\$ 32,826,361.80	\$ 1,884,873.93	\$ 6,517,903.89	\$ 106,432,091.27		
Percent of All Funding	61.26%	30.84%	1.77%	6.13%	100%	100%	

Expenditures for the Period July 1, 2014 through June 30, 2015

	Federal	State	Industry	Other	Institutional	Total	% of Grand Total	% of Sponsor Total
Instruction:								
Sponsored Programs	\$ 2,372,264.90	\$ 88,120.55	\$ 46,206.79	\$ 108,475.44	\$ 502,761.46	\$ 3,117,829.14		3.63%
Other Sources		-			8,956.68	8,956.68		
	\$ 2,372,264.90	\$ 88,120.55	\$ 46,206.79	\$ 108,475.44	\$ 511,718.14	\$ 3,126,785.82	2.36%	
Research:								
Sponsored Programs	\$ 47,485,464.86	\$ 1,479,285.37	\$ 1,580,934.86	\$ 4,236,144.05	\$ 8,345,418.55	\$ 63,127,247.69		73.48%
Sponsored ARRA Stimulus Funding	(10.57)					(10.57)		0.00%
Federal Land Grant Appropriations	3,073,659.74					3,073,659.74		
State Research Appropriations		18,657,901.74				18,657,901.74		
State Endowment/Other Appropriations		3,899,837.27				3,899,837.27		
Other Sources			164,444.03	1,837,945.10	6,731,799.55	8,734,188.68		
Subtotal Research:	\$ 50,559,114.03	\$ 24,037,024.38	\$ 1,745,378.89	\$ 6,074,089.15	\$ 15,077,218.10	\$ 97,492,824.55	73.59%	
Public Service:								
Sponsored Programs	\$ 14,412,476.60	\$ 1,536,187.58	\$ 106,212.78	\$ 903,126.86	\$ 2,711,182.17	\$ 19,669,185.99		22.89%
Federal Land Grant Appropriations	2,433,042.18					2,433,042.18		
State Extension Appropriations		9,634,934.69				9,634,934.69		
Other Sources					129,422.72	129,422.72		
Subtotal Public Service:	\$ 16,845,518.78	\$ 11,171,122.27	\$ 106,212.78	\$ 903,126.86	\$ 2,840,604.89	\$ 31,866,585.58	24.05%	
Construction:								
Sponsored Programs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0.00%	0.00%
Total Sponsored Programs Funding & ARRA Funding Only	\$ 64,270,195.79	\$ 3,103,593.50	\$ 1,733,354.43	\$ 5,247,746.35	\$ 11,559,362.18	\$ 85,914,252.25		
Percent of Total Sponsored Programs	75%	4%	2%	6%	13%	100%		100%
Grand Total of All Funding Per Category	\$ 69,776,897.71	\$ 35,296,267.20	\$ 1,897,798.46	\$ 7,085,691.45	\$ 18,429,541.13	\$ 132,486,195.95	100%	
Percent of All Funding	53%	27%	1%	5%	14%	100%		

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

**Idaho State University
Office for Research Economic Development
Award Breakdown by Funding Agency Type and Project Type
July 1, 2013 through June 30, 2014**

	Federal	State	Industry	Other/Foundation	Totals	Percent of Total
Research	5,286,427	2,725,181	2,414,069	558,146	10,983,823	44%
Training and Instruction	2,226,133	3,421,915	1,459,114	684,240	7,791,402	31%
Other/Public Service	874,194	4,384,868	321,910	666,137	6,247,109	25%
Totals	8,386,754	10,531,964	4,195,093	1,908,523	25,022,334	100%
Percent of Total	34%	42%	17%	8%	100%	

File Name: ISU ORED Annual Awards FY14_final

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

IDAHO STATE UNIVERSITY

8/22/2014

**SPONSORED PROJECT EXPENDITURE REPORT
FY2014**

Expenditures for the Period July 1, 2013 through June 30, 2014

	Federal	State	Industry	Other	Totals	
Training and Instruction	\$5,494,480	\$1,032,060	\$223,607	\$261,629	\$7,011,776	28%
Research	\$11,098,032	\$510,185	\$583,015	\$449,807	\$12,641,039	51%
Other/Public Service	\$4,723,582	\$151,137	\$345,807	\$80,409	\$5,300,935	21%
Totals	\$21,316,093	\$1,693,383	\$1,152,429	\$791,845	\$24,953,750	
Percent of Total	85%	7%	5%	3%	100%	100%

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

Boise State University's Infrastructure funds went towards the following areas:

Structures for Research Seed Funding	\$16,194.49
Salary/Fringe for Tech Transfer Director/Patent Officer:	\$108,953
TOTAL:	\$125,147.49

Idaho State University's Infrastructure funds went towards the following areas:

Graduate Research Assistantships/Research Associates	\$25,000
Flow Cytometer Upgraded Analytical - Fragment Analysis	\$55,006
Other/Research Infrastructure Support	\$70,000
TOTAL:	\$150,006

Lewis-Clark State College Infrastructure funds went towards the following areas:

Technician Support	\$11,037
Other	\$3,000
TOTAL:	\$14,037

Lewis-Clark reported 3 publications in refereed journals in reference to Workforce Training. There was a total of 7 presentations at professional meetings and conferences reported, with 1 grant received as a result of these presentations. There are a total of 2 grants pending as a result of these infrastructure funding. There was a total of 63 students, and 72 faculty involved as participants in these infrastructure funds. To conclude, a total of 2 manuscripts have been submitted.

University of Idaho Infrastructure funds went towards the following areas:

Library Support	\$94,005
Post Doctoral Fellows	\$16,063
Technician Support	\$77,714
Star-Up Funds for New Hires	\$21,442
Other	\$1,239
TOTAL:	\$210,463

As a result of the infrastructure funding UI reported a total of 48 publications in refereed journals; 24 presentations at professional meetings and conferences; 6 grants for \$2,168,576 and 9 grants pending for \$5,668,549; 38 students and 21 faculty; and 19 manuscripts pending.

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**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

FY 2016 Allocation of HERC Funds

	Total	Proposed
	\$3,958,000	Allocation
HERC IGEN		1,900,000
Infrastructure Funds		825,000
Incubation Fund		333,000
Matching Grants (EPSCoR Match)		800,000
Strategic Initiative		100,000
Total	\$3,958,000	
Balance	\$0	
<hr/>		
IGEM Funds		\$2,000,000
BSU	IGEM16-01/IGEM16-02	\$1,200,000
ISU	IGEM16-03	\$700,000
UI		
Transfer	Strategic Initiative	\$100,000
Total IGEN	\$0.00	\$2,000,000
<hr/>		
Research Infrastructure Funds		\$825,000
BSU		\$250,000
ISU		\$250,000
UI		\$250,000
LCSC		\$75,000
Total Infrastructure	\$0	\$825,000
<hr/>		
Matching Award Grants		
NSF-EPSCoR (Managing Idaho's Landscapes for Ecosystem Services - \$20M)		\$800,000
(2013 - 2018)		
Total Matching Grants		\$800,000
<hr/>		
Targeted Research		\$333,000
Idaho Incubation Fund (6th round)		
BSU		\$75,000
ISU		\$61,700
UI		\$196,300
Total Targeted Research	\$0	\$333,000
<hr/>		
Research Centers		
Total Research Center		\$0
<hr/>		
Strategic Initiative		
LCSC		\$25,000
BSU		\$20,000
UI		\$20,000
ISU		\$20,000
Undergraduate Research		\$15,000
		\$100,000
<hr/>		
Total Budget / Allocation		\$3,958,000

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**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

IF16-003 – BSU: Solid State Positioning Device

Principle Investigator: Peter Mullner (\$75,000)

The goal of this project is to build a prototype for a miniature large-stroke positioning device for medical applications such as real-time imaging of the chamber of the human heart. This project will demonstrate proof of concept for a fast, high-precision positioning device for applications such as valves, microsurgery, and semiconductor processing, and for the economic growth in Idaho. Magnetic shape-memory alloys (MSMAs) exhibit multiple functional properties such as magnetic-field-induced strain and deformation-induced change of magnetization, resistivity, and magnetic susceptibility, making this material “smart.” We will utilize the multi-functionality of MSMAs to develop large-stroke actuators consisting of very few parts. Simplicity combined with minimal friction enables miniaturization and light-weight design. The device will be useful for various applications in the medical and semiconductor sectors and potentially in the automotive sector. For this project, our primary industry partner is Acutus Medical, Inc. who does product development at the Medtec Furnace in Boise, Idaho.

Progress:

We have designed, built and tested an electrical actuation device. The device produces locally concentrated, pulsed magnetic fields of up to 300 mT with 0.2 kHz actuation frequency. These parameters are sufficient to drive twin boundaries in Ni-Mn-Ga.

Next project steps include

- Producing single crystal Ni-Mn-Ga MSM elements
- Implementing MSM element with the electrical actuation device
- Demonstrating twin boundary motion with the electrical actuation device
- Designing and building an electrically driven (i.e. solid state) MSM actuator

The expenses for July-December 2015 are summarized in Table 1. The remaining budget as of December 31, 2015 is \$ 55,366.93. The December 2015 spending as \$6,444. The current burn rate exceeds \$8,000.

Expense category	Amount
Salary regular	\$ 8,070.75
Student salary	\$ 7,229.22
Fringe	\$ 2,559.14
Other expense	\$ 1,773.96
Total	\$19,633.07

Table 1

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

There are patents pending and in preparation, specifically: “Electrically driven magnetic Shape Memory Apparatus” (BSU file 158) is pending, and the patent “Magnetic Shape Memory Apparatus with Long Stroke” (BSU file 169) is in preparation.

On November 19, 2015, Shaw Mountain Technology LLC licensed Boise State’s patent US 9,091,251 *Acuation method and apparatus, micropump, and PCR enhanced method*. Effective January 20, 2015, Dr. Mullner registered Shaw Mountain Technology LLC (SMT, <http://www.shawmountaintechnology.com>) with the State of Idaho. SMT is a Boise-based company that produces high-quality, advanced technology. SMT’s priority is to keep product development, manufacturing and company operations located within Idaho. SMT specializes in shape memory alloys, particularly the magnetic shape memory alloy Ni-Mn-Ga, and develops various technologies within the fields of sensors, microfluidics, energy harvesters and actuators.

Starting in August 2015, SMT sponsors a senior design project at Boise State’s College of Engineering. The students are tasked to develop a self-resting power breaker based on magnetic shape memory alloys.

SMT licensed Boise State technology (BSU files 90, 96, 122, see paragraph 5) and considers licensing technology developed in this project. SMT is interested in partnering on this project if continued in FY 2017

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

IF16-006 – UI: Plant Extracts as Natural Pesticides and Potato Sprout Inhibitors

Principle Investigator: Matthew Morra (\$72,900)

Mustard plants contain bioactive compounds that act as a natural pesticide. The highest concentrations of the natural pesticides are in seed meal; solid materials remaining after oil for biodiesel is removed from the seed by crushing. The primary obstacle in using mustard seed meals as bio pesticides is the bulky nature of the materials. We have developed methods to extract concentrate, dry and formulate seed meal extracts, thus generating natural pesticide products targeting weeds, nematodes, and sprout inhibition of stored potatoes. The products will cost less to transport, can be applied more easily, and will be more efficacious than seed meals. Procedures for generating the products have been optimized at the laboratory scale. Our objective is to produce formulated natural pesticides from mustard seed meal extracts such that efficacy testing by our commercialization partners, Farm Fuel, Inc. and 1,4GROUP, Inc., is possible. We propose to produce 25 lbs. of formulated natural pesticide products as shelf-stable powders from each of two different mustard species. Funding in the amount of \$72,900 is requested to purchase specialized spray drying equipment and to provide salary dollars for producing the proposed products. Our commercial partners will produce efficacy data, assist with EPA registration, and potentially market the developed natural pesticide formulations.

Progress:

Sufficient amounts of our sprout inhibitor biopesticide have been produced such that our business partner the 1,4GROUP in Meridian, ID has been able to test efficacy on 20 pounds of potatoes, followed by a larger scale test on 200 pounds of potatoes. In both tests, our product has proven extremely effective. We have sent the 1,4GROUP three separate batches of our extract and each has proven efficacious. Plans are underway to test our product on a 2,000 pound lot of potatoes. Production of a sufficient quantity of product for such testing is ongoing.

Bioherbicidal formulations of our product are ready for shipment to our business partner in Californian, Farm Fuel Inc. Application procedures equivalent to a pesticide label have been drafted. Greenhouse tests of the product to be shipped have demonstrated that it will be phytotoxic to weeds and thus a viable bioherbicide. We are continuing to scale up production based on positive results and successful testing.

Equipment was purchased to dry the seed meal extracts as proposed. The cost of the equipment was \$43,309. Salary dollars in the amount of \$18,700 have not been expended, but a full-time employee has been hired and the burn rate for those dollars is approximately \$3,000 per month. Six months of salary will fully expend the budget by the project end date. We are on track with our spending and expect to expend the budget within the timeline as proposed.

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

One patent has been applied for specifically:

Mustard Meal Extracts as Bio-Pesticides, Morra, M.J., I. Popova, and J. Dubie. US 62/190,552.

An option agreement for product evaluation was signed with the 1,4GROUP. An option agreement with Farm Fuel, Inc. is in review.

Both the 1,4GROUP and Farm Fuel, Inc. are fully engaged. A group of four representatives from the 1,4GROUP visited our facility here in Moscow. The General Manager for the Meridian location was present. I reciprocated by visiting the 1,4GROUP's testing laboratory in order to get a better view of how sprout inhibitor testing was conducted. Plans to utilize the University of Idaho Food Technology Center in Caldwell for scale-up activities were discussed. Discussions are ongoing about expanding testing on other stored products such as sweet potatoes.

Farm Fuel, Inc. is developing a contract to have mustard seed crushed in the Pacific Northwest. This will facilitate co-locating an extraction facility to meet larger production needs for the extracted bio pesticides.

Both companies remain fully engaged with our efforts. Positive testing results have improved and expanded our interaction.

The equipment necessary for our project was purchased, installed, and is now being used to produce our powdered product as proposed. Testing has shown that the products from our efforts are indeed effective. Business partners continue to be enthusiastic. The 1,4GROUP has been especially supportive and continues to test larger and larger lots of potatoes for sprout inhibition based on positive results. Farm Fuel is expanding their company's operations to the Pacific Northwest, an expansion that will improve our interaction and business connection. We are progressing well towards commercializing our products.

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

IF16-013 – ISU: Development of a Commercial Process for I-123

Principle Investigator: Jon Stoner & Frank Harmon (\$61,700)

The goal of this project is to develop a unique process for producing iodine-123 (¹²³I) using an accelerator at the Idaho Accelerator Center (IAC). The project involves building and testing a target, developing an extraction process, and verifying yields and purity. An outcome of this project is a commercial process for production to be utilized by their industry partner, International Isotopes Inc. (INIS) to eventually produce and ship ¹²³I through its customer network.

¹²³I is a widely used SPECT diagnostic imaging isotope with a short, 13 hour half-life that is replacing the more commonly used ¹³¹I. ¹²³I has many advantages over ¹³¹I due to improved image quality and lower patient radiation dose. The disadvantages include a much higher cost and less supply. International isotopes is an FDA approved supplier of ¹³¹I and is interested in supplying ¹²³I. The IAC and INIS are jointly investigating a new method of production using a photo-nuclear reaction instead of a high power cyclotron. The potential advantage would be high purity at an equivalent or lower cost of production.

North American radiopharmaceutical demand in 2012 was approximately \$1.9 billion with SPECT imaging products the bulk of those sales. ¹²³I is the fourth largest usage SPECT isotope with estimated NA sales of approximately \$30 million. If the process development is successful, meets business goals, and achieves FDA approval, this project could lead to an Idaho production facility dedicated to ¹²³I production, operating 5 days/week with several employees. In addition, ¹²³I would be available to intermountain area hospitals and imaging centers, improving growth of their businesses.

The initial plan for this project was to create a gas target system and complete initial evaluations of the nuclear reaction to create I-123 using an electron LINAC. This involved initial simulations and a long design and fabrication process before we obtained initial data. Fortunately, we were able to speed up our research thanks to a working relationship with the INL on another project. INL made available to us several small 0.5 ml glass vials of 10% enriched ¹²⁴Xe. These vials allowed us to quickly analyze reaction yields without the extensive design process of a complete target. Instead, we were able to use a very simplified target system, irradiate the material, and analyze the production rate. The value of the vials supplied gratis by INL was near \$1000.

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016

Progress:

1). Experiment #1 – Reaction yields at 40 MeV. In this experiment, we irradiated a 0.5 ml vial of 10% enriched ^{124}Xe at 1.6 kW and 40 MeV for 3 hours. The following HPGe gamma spectrum shows the results from one time point and clearly shows the Xe-123 and I-123 daughter.

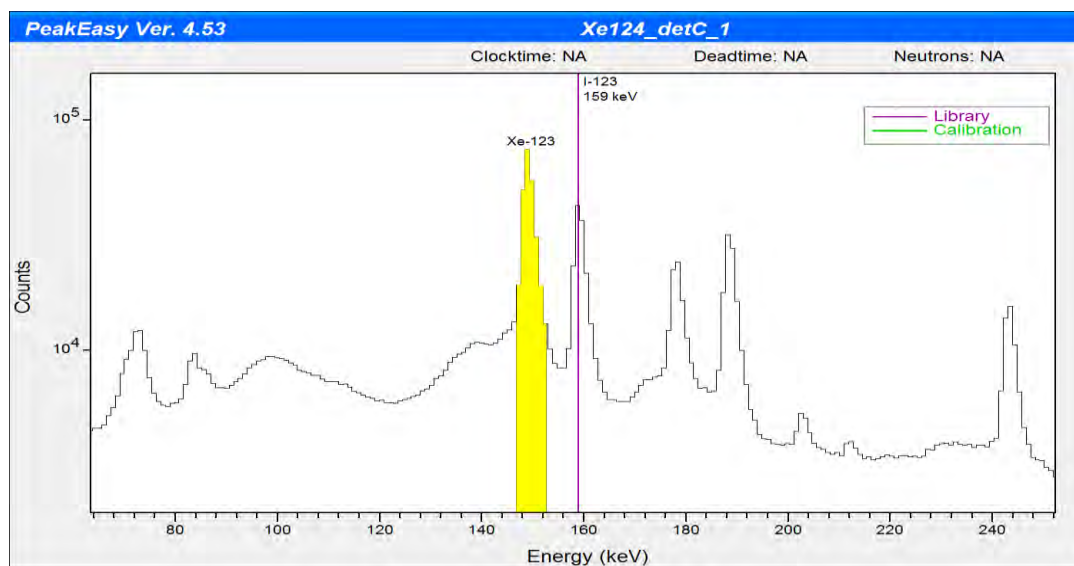


Figure 1 HPGe spectrum of 22 MeV irradiated Xe-124 at ~3 hour post irradiation

Since Xe-123 decays into I-123 with a half-life of about 2 hours, maximum yield is achieved after 4-6 hours. Figure 2 shows the yield of ^{123}I from this experiment, ~ 2.2 uCi at 5 hours.

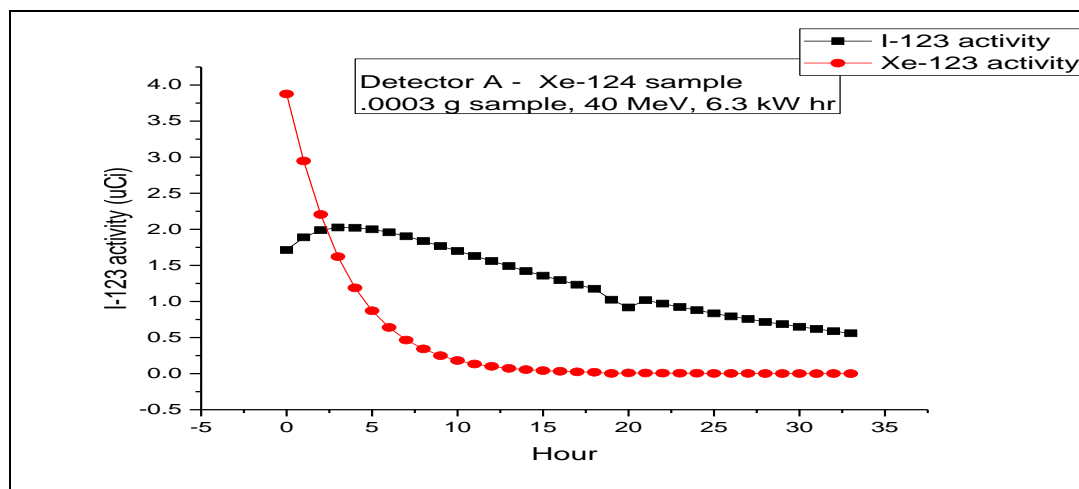


Figure 2 40 MeV yields, 0.5 ml sample 6.3kWhr

2). Experiment #2: In this experiment we irradiated a 0.5 ml vial of 10% enriched ^{124}Xe at 40 MeV and a higher power than the first experiment. As expected, yields were significantly improved. Figure 3 shows the yields achieved with 23 kW hrs.

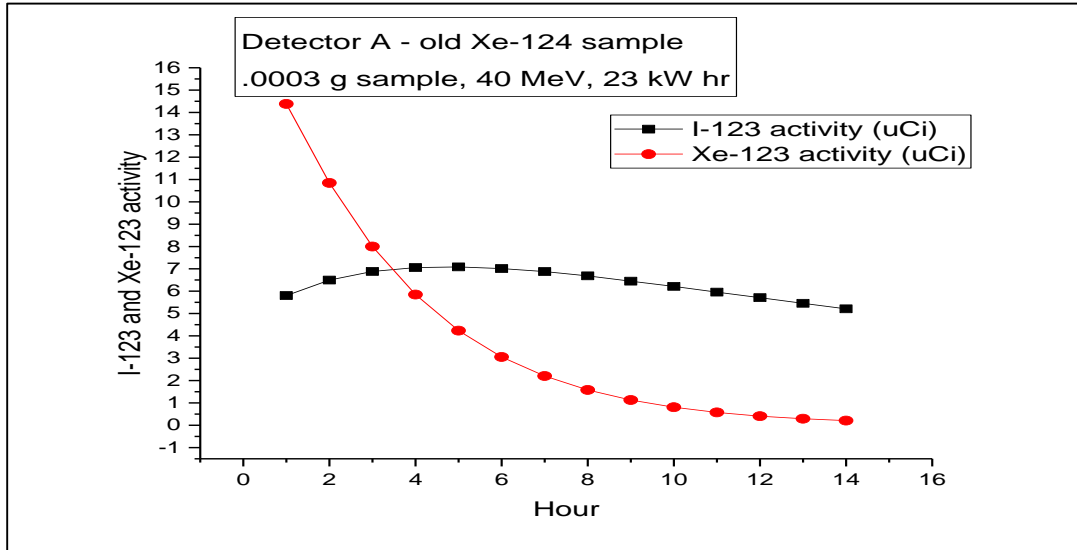


Figure 3 40 MeV activation for 3 hours

Summary of experimental results:

Our experiments show that we can achieve ~ 1.4 mCi/g/kw*hr of ^{123}I from a ^{124}Xe target at 40 MeV. This equates to a potential 525 mCi of activity/one liter enriched target per 10 hour day. This is what we had predicted in our initial proposal and we are pleased with experimental confirmation.

Next steps:

We are proceeding with the design/build of a suitable target to scale up our process to one or more liters of gas at 1-5 atm of pressure. The figure 4 shows the current design.



**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

FINANCIAL Summary FY 2016 to December 16th, 2015

	<u>Budget</u>	<u>Spent</u>	<u>Balance</u>
<u>Total Personnel</u>			
<u>Costs</u>	<u>35,260.00</u>	<u>11,489.59</u>	<u>23,770.41</u>
Materials and Supplies	2,440.00	424.39	2,015.61
Beam Time	10,000.00	-	10,000.00
Capital	14,000.00	-	14,000.00
Totals	<u>61,700.00</u>	<u>11,913.98</u>	<u>49,786.02</u>

Re-budget Request

Our initial budget as listed above allows for 14,000 for purchase of capital. We had anticipated being able to acquire most of the system needed for the gas target from established vendors. We have determined that no system has been created yet by others that is adequate for our process and therefore we request to move the capital budget into materials and supplies and labor so that we can build the required equipment in house. The re-budget request is to increase Materials and supplies by \$4000 and Personnel costs by \$10,000.

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

IF16-014 – UI: Developing All-Natural Low GI Potato

Principle Investigator: Amy Lin (\$61,700)

Glycemic response can be modulated by designing a food matrix that is more resistant to digestion. Traditionally, such modification can be achieved through chemical processing and genetic approaches, which raise more health concerns. The proposed all-natural techniques include three major approaches: (1) selecting potato varieties with the proper biochemical characteristics to respond to another two approaches; (2) incorporating some food ingredients to form a new food matrix; (3) applying various hydrothermal treatments to manipulate potato tissues. The modified potatoes, "all-natural low GI potato," will then be further processed to powder form for use as a food ingredient. The commercialized product will target several food markets including processed potato, health food, and gluten-free (or allergen-free) markets.

Progress:

The goal for the first year of funding was to establish a database of Idaho potato cultivars and modify potato tubers using natural approaches to modulate glycemic response (The proposed timeline is attached at the end of this report). In the first 3 months (October-December, 2015), we have examined five major and well developed Idaho cultivars and applied some techniques to modify the microstructure of those potato tubers. In the next progress report, we plan to complete the examination of new lines of potatoes developed in Idaho. For the modification, we plan to optimize the technique for modifying microstructure and introduce a second technique to incorporate guest molecules (natural ingredients) into potato. In addition, we plan on reporting the change in glycemic response resulting from the combined techniques.

The expenses for October-December 2015 are summarized in Table 1. The remaining budget as of December 31, 2015 is \$ 42,976.

	<i>Salary & fringe</i>	<i>Graduate student fees</i>	<i>Travel</i>	<i>Equipment</i>	<i>Consultant</i>	<i>Operation and suppliers</i>	<i>Total</i>
Budgeted	21,868	8,200	4,932	1000	19,000	6,700	61,700
Balance	13,012	4,089	2,168	1000	19,000	3,687	42,976

Table 1

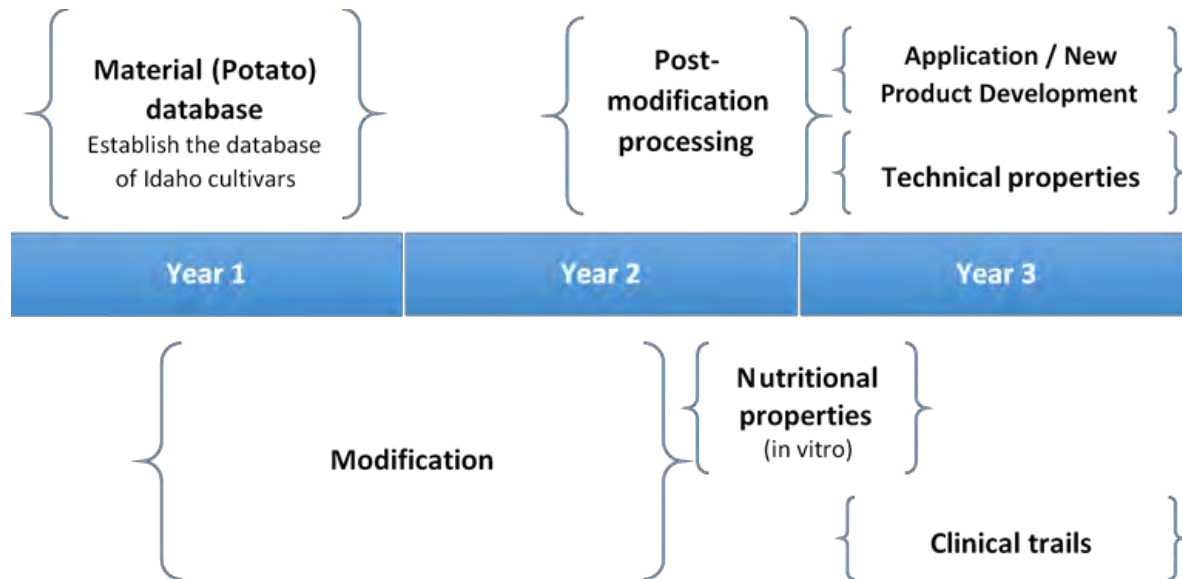
The potato industry has shown their excitement about this project. The PI met some current and potential partners in Minneapolis (MN), Caldwell (ID) and Portland (OR) in October 2015 to engage industry partners. Companies such as Simplot and McCain are interested in knowing our progress of this project.

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Though this project “all natural low GI potato” was not funded until late September 2015, it has gotten a lot of attention from the potato industry and researchers in this area. Thus, we have received strong support from researchers to provide us necessary research materials. Industry partners also shared a wealth of experience and ideas of this project. Students have screened some major cultivars developed in Idaho, and will select the second batch of potatoes to broaden the screening in Feb, 2016.

Appendix: The proposed timelines:

The project timelines includes screen potato varieties, develop the proposed technology (modification), produce powder form product, assess nutritional and technical quality, and demonstrate the application. During year 1, we expect to complete the variety selection and produce preliminary data of the proposed technology. It will take additional two years, working with the industry collaborators to bring the new products to market.



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IF16-015 – UI: N-E-W Terra™: An Enhanced Efficiency Fertilizer (EEF) Manufactured from Biochar

Principle Investigator: Daniel Strawn (\$61,700)

The project objective is to successfully filter and harvest N-E-W Terra™ enhanced efficiency fertilizer from our 2013 patent-pending wastewater treatment process N-E-W Tech™ and to use our UI Office Technology Transfer disclosed new technology: “N-E-W Terra™: A System and Process for Manufacture of an Enhanced Efficiency Fertilizer” in horticulture studies and in advanced soil, water, plant research to determine efficacy engineering economics, scale-up potential and market potential.

Progress:

In this period we have successfully recovered enough modified biochar from catalytic reactive filtration (N-E-W Tech™) using dairy water from the UI dairy lagoon as the process influent to start early plant growth trials. We call this biochar fertilizer product N-E-W Terra™. This established the system process required for upcycling nutrients into a product that can be recovered and potentially used as an enhanced efficiency fertilizer. We have submitted the samples for nutrient testing, have developed protocols that are in line with methods used by the fertilizer industry (following the Association of American Plant Food Control Offices (AAPFCO)) to measure enhanced efficiency fertilizer properties, and prepared the experimental design for plant growth trials. Initial lab test indicate the biochar has low salinity, which is a good first hurdle to clear.

Preliminary plant trials will begin in February 2016 to test the effects of N-E-W Terra™ on plant growth, and lab testing of N-E-W Terra™. We are planning another production trial of N-E-W Terra™ at the end of February at a waste water treatment plant, and another trial at a dairy in March. We will be testing the physicochemical properties of the N-E-W Terra™ generated from these trials to determine their potential use as enhanced efficiency fertilizers. Another more extensive growth trial will commence in March and carry through June 2016.

As of Dec 31, 2015, we have spent \$10,000 to purchase a Dow Tequatics advanced filtration unit, a critical piece of equipment needed to recover N-E-W Terra™ from N-E-W Tech™. We secured \$20,000 from the University of Idaho Agriculture Experiment Station to purchase this unit as a fully assembled skid (plug-and-play), saving 6-8 weeks of time that would otherwise have been required for us to assemble the unit based on the filter alone. Burn rate is \$1,667 per month, or 3% per month. Although the Burn rate is currently low, incurred expenses for analytical cost in January are pending, and planned high analytical costs as we move to the testing phase of N-E-W Terra™ (including hiring an undergraduate intern) will use remaining funds.

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The project involves five faculty, two graduate students, nine undergraduate students (including a senior thesis), and one senior staff engineer. We are in process of finding an undergraduate researcher to assist in the plant growth trials.

Patents have been filed, specifically:

Möller, G., Strawn, D.G., Baker, M. and Stags, G. Continuation in Part, Functionalized Biochar Water Treatment, Provisional Patent Application. 2016

Möller, G., Strawn, D.G. Biochar Water Treatment, PCT Application No. PCT/US2014/066677. Patent Pending. 2014

A University of Idaho N-E-W Tech™/N-E-W Terra “Biochar Water Treatment” Option and Technology Evaluation Agreement License was signed with BlueXGreen, LLC (BXG). BXG is a new Idaho start-up company formed in 2015 by six seasoned senior partners in the fields of business, science and engineering as an emerging green tech/clean tech accelerator. BXG’s mission is to help research products from the University of Idaho and Washington State University navigate the early “valley-of-death” pathway to commercialization for promising research innovations. Professor Strawn and Möller are partners in BXG and have initiated appropriate university research conflict of interest documentation. N-E-W Tech™/N-E-W Terra™ has received interest for commercial licensing in the U.K. and by a Southern California investment group, in addition to corporate interest in rights of first refusal licensing options.

Since September, 2015, we have had regular communications with Dr. Terry Tindall, the Director of Agronomy at J.R. Simplot Company on progress and product development. We provide him updates on our results, successes and challenges. Our planned meeting at our dairy recovery trial in December was thwarted by severe winter storms that halted our dairy operations for most of the month. Current plans are for Dr. Tindall to have a site visit in February or March. With their permission and encouragement, we are adding a Simplot logo to the list of research partners on our N-E-W Tech™ water treatment trailer that is producing the N-E-W Terra™ nutrient upcycled fertilizer. We are also working with secondary partners Blue Water Technologies, Inc. (Hayden, ID), DOW Clean Filtration Technologies, LLC (Redwood City, CA), Kemira, (Oulu, Finland), Regenix Dairy Waste Management (Ferndale, WA), and Evergreen Engineering (Peterborough, UK).

As part of our great progress, we have submitted the \$326,000 research proposal “INFEWS N/P/H₂O: Molecular Mechanisms of Resource Recovery in a Functionalized Biochar - Catalytic Oxidation - Reactive Filtration Water Treatment Process” to the National Science Foundation Innovations in the Food, Energy Water System RFP in November 2015; we should receive feedback in the 1st quarter of 2016.

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An invited case study article N-E-W Tech™/N-E-W Terra™ appeared online and in the January 2016 paper issue of the engineering trade magazine Control Design with a total distribution of \$193,000: <http://www.controldesign.com/articles/2015/scalable-control-system-is-at-the-heart-of-water-treatment-process-skid-plc/?show=all>, IGEN is recognized in this publication.

The University of Idaho/State of Idaho N-E-W Tech™/N-E-W Terra™ project is submitted as a 12-month, almost \$600,000 total commitment of [Activities and Actions to Build a Sustainable Water Future-2016 White House Water Summit](#) announcement. The White House Water Summit follows the announcement of what has been characterized in December 2015 by USA Today as a “[moonshot for water](#)” where innovations in science and technology are a central focus.

N-E-W Tech™/N-E-W Terra™ is central in a novel “whole system architecture” dairy waste management approach submitted to the [Nutrient Recycling Challenge](#), a \$20K prize competition searching the globe for new ideas to support animal agriculture operations. The concept paper was submitted by the new Idaho start-up company BlueXGreen, LLC, in cooperation with the University of Idaho.

The University of Idaho College of Agriculture and Life Sciences produced and released a 2-minute YouTube video “[Creating a Sustainable Water Supply](#)” about N-E-W Tech™/N-E-W Terra™. The video, which recognizes IGEN funding, is publically available at: <https://www.youtube.com/watch?v=DnpvY4cWKEI>. The video and accompanying UI-CALS [AgKnowledge](#) write-up were emailed to all members of the Idaho Legislature.

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FY16 - Incubation Fund Summary

FY16 - Incubation Fund Summary									Involvement		Inventions and Discoveries						Industry Involvement
NUMBER	INST.	P.I.	Project Title	Project Summary	Reporting Year	Awarded	Expended	Balance	Faculty	Student	Patents	PVP Apps	Copyrights	Licenses	Start Ups	# of Companies	
IF16-003	BSU	Peter Mullner	Solid State Positioning Device	To build a prototype for a miniture large-stroke positioning device for medical applications such as real-time imaging of the chamber of the heart	2016	\$75,000.00	\$19,633.07	\$55,366.93	2	5	2	0	0	1	0	1	
IF16-006	UI	Matthew Morra	Plant Extracts as Natural Pesticides and Potato Sprout Inhibitors	Purchase specialized spray drying equipment and provide salary dollars for producing the proposed products.	2016	\$72,900.00	\$43,309.00	\$29,591.00	1	0	1	0	0	1	0	2	
IF16-013	ISU	Jon Stoner-Frank Harmon	Development of a Comercial Process to Produce ^123I Using an Electron LINAC	To create an isotope supply and research hub for Idaho at the IAC to drive commercial and research growth in the intermountain region. This ^123I is a 13 hour medical isotope used as a SPECT diagnostic tool for imaging organs in the body, especially the thyroid, and detecting various cancers.	2016	\$61,700.00	\$11,913.98	\$49,786.02	1	0	0	0	0	0	0	0	
IF16-014	UI	Amy Lin	Developing All-Natural Low GI Potato	To produce an "all natural low GI potato" with moderate glycemic impact and gut health promotion through a unique combination of three approaches: Potato variety selection, product formulation, and new processing techniques	2016	\$61,700.00	\$18,724.00	\$42,976.00	1	1	0	0	0	0	0	5	
IF16-015	UI	Daniel Strawn	N-E-W Terra™: An Enhanced Efficiency Fertilizer (EEF) Manufactured from Biochar	To use the N-E-W Terra™ along with patent-pending N-E-W Tech™ in horticultural studies and in advnaced soil, water, plant research to determine efficiency, engineering economics, scale-up potential and market potential.	2016	\$61,700.00	\$10,000.00	\$51,700.00	5	11	2	0	0	1	0	7	
IF 16					TOTALS:	\$333,000.00	\$103,580.05	\$229,419.95	10	17	5	0	0	3	0		

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IGEM16-001

Boise State University – Computer Science at Boise State University – An Investment in Idaho’s Future (\$700,000)

The focus of the Boise State University project is on accelerating the growth in the areas of Cyber Security and Big Data to expand research, industry collaboration and teaching capacity. The Computer Science Department continues to increase its formal and informal connections with industries, and the IGEN hires are integral to growing partnerships with those industries. The strategic faculty hires that were made in the first round of HERC funding will be key in the progress of this project.

The University has made significant additional infrastructure enhancements to help support the faculty recruitment and retention, receiving a \$1 million grant from the Idaho Department of Labor along with a \$280k match from eight industry partners. This grant and match allowed the University to hire three additional lecturers and support staff. These hires will be focused in the areas of Big Data, Cyber Security, Human Computer Interaction, and Computer Science Education research; along with the capability to create a Big Data track in both the Masters and PhD programs.

As part of the previous IGEN grant (FY13-FY15), the Department restructured the first two undergraduate Computer Science classes into three classes to allow students more time to absorb the material. Along with other strategies, this has led to an improvement in retention in the freshmen computer science course from 65% to 85% over the last two years.

This project plan involves four strategies that align with our objectives. The first strategy involves maintaining IGEN funding for 4 faculty lines to leverage the tactical hires we made with the first round of HERC funding to grow programs in cyber-security and big data. The second strategy involves promoting greater integration and collaboration between the Department and Industry. The third strategy focuses on how the CS department can integrate, support and impact interdisciplinary research across the University and support entrepreneurship. The fourth strategy will focus on continued growth of the student pipeline through techniques to attract, retain and graduate a higher quantity of quality students.

Strategy One Progress: Sustain Current Faculty Lines and Continue Forward Trajectory

The Computer Science Department was successful in hiring and retaining five faculty members using the original IGEN grant (one full professor, two associate professors, one assistant professor and one clinical professor) – Three of the faculty are in the area of software engineering while one is in the area of data science and databases and another visualization. Dr. Jim Conrad has been moved to another line and the others are being supported by the IGEN grant.

Dr. Vijay Dialani left for industry (Linkedin) in August, 2015. The department was able to hire Dr. Edoardo Serra of Calabria, Italy in 2012. Since then he has held research positions at UCLA and University of Maryland. Dr. Serra’s expertise is in the field of Data Science with applications in precision agriculture, cybersecurity, data-privacy, and national security. His expertise also includes probabilistic models, optimization, databases, and artificial intelligence. He has taken the

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lead role for the IGEM project that Dr. Dialani has started in collaboration with Simplot and built up a research lab with four graduate students and a post-doctoral research.

Another strong impact of the IGEM grant has been in the additional hiring that the department has done in the last six months. Using the eight lines provided by JFAC funding, the department has **successfully hired seven faculty in six months**. In each case, the faculty hired were the top choices in the respective areas of research. Given the extremely competitive nature of hiring in computer science that has been very gratifying. The list of the faculty is shown below (with the PhD granting University in parentheses).

- *Data Science*: Dr. Edoardo Serra (university of Calabria, Italy),
Dr. Francesca Spezzano (University of Calabria, Italy)
- *Cyber Security*: Dr. Gaby Dagher (Concordia University, Canada),
Dr. Jidong Xiao (College of William and Mary)
- *Human Computer Interaction*: Dr. Jerry Falls (University of Maryland),
Dr. Michael Ekstrand (University of Minnesota)

Strategy Two Progress: Industry Partnerships

The CS Department continues to increase its formal and informal connections with industry and the IGEM hires are integral to the following initiatives and connections.

Growing partnerships with industry. Boise State University will support and encourage CS faculty to establish partnerships with industry via joint research projects, service on industrial boards, consulting and faculty and student involvement. We have several ongoing examples of faculty working with our industry partners:

- In the last 6 months, Dr. Time Andersen has worked as a consultant at Micron, and is also currently working as a consultant at Appdetex, a local startup company.
- Dr. Sole Pera is working on the advisory board at ReleVent City, a recent Boise startup.
- Dr. Sole Pera has also volunteered as an advisor/mentor for B-launch.
- Dr. Steve Cutchin is working as a consultant for Digital Mechanics, a 3D capture and reconstruction startup.
- Drs. Andersen, Cutchin, Jain, Serra, and Spezzano are working with the J.R. Simplot Co. on a joint funded research project in Precision Agriculture, helping them to fuse information from multiple sources (such as historical yield data, satellite imagery, sensor data, and etc.) to assist farmers in intelligent decision making. This project also involves multiple graduate students and a post-doc. This collaborative effort is leading to additional collaborative projects and proposals, with proposals involving Simplot planned for both NSF's PFI:BIC and INFEWS tracks.
- During the reporting period Drs. Andersen, Cutchin, Jain, Serra, and Spezzano worked on a \$2.5m grant proposal from NSF's CISE:CRI track. This grant involves industry partners Micron, HP, and Data Vortex. It also involves researchers from Rice University, Georgia Tech, and Indiana University.
- 7 Industry partners committed to donate an additional \$140,000 to expand the CS Scholarships program, which has allowed us to offer 21 scholarships to students for the 2016-2017 academic year. These scholarships are designed to encourage and help

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students to finish their degree faster. The industry partners who donated are AppDetex, Clearwater, Cradelpoint, HP, Impact Sales, MetaGeek, and Whitecloud

Community Events. The CS Department continues to host *Boise Code Camp* and participate in *Develop Idaho* and *Hackfort* to strengthen connections with industry and entrepreneurs. Code camp has grown to over 1000 participants in 2015 and is now the largest code camp in the Northwest. Hackfort has grown and will partner with Develop Idaho this year to host a combined event.

Senior Design Projects. **The senior capstone projects, which are sponsored by local industry partners, has grown 50% in the last year, from 10 in academic year 2014, to 15 this academic year.** We are working with companies from multiple sectors including high-tech, health care, government, finance, transportation, marketing, merchandising and agriculture. The companies who are sponsoring projects include: BoomBoxBody, toGetHERout.com, TransitFox, Willoop, RecallInfoLink, Zamzows, Clearwater Analytics, Kairosys.net, Noteworthy Recruiting, Whitecloud Analytics, WinCo, and zData.

Industrial Advisory Board. Alden Sutherland, VP and Chief information Security Officer at AmericsourceBergen (a Fortune-16 company that recently bought multi-billion dollar local company MWI), currently heads the board. The board meets at least twice yearly with the department and provides feedback and strong support for curriculum, facilities, and hiring. Faisal Shah, a leading entrepreneur in Boise, has also joined the board.

Strategy Four: Enhancing the Student Pipeline

The changes made in the lower division curriculum have resulted in higher retention. Specifically we have gone from 65% to 85% retention in CS 1 course and the effects have percolated up the course sequence. During the first IGEN grant, we were able to double the number of bachelor's degree graduates (from 25 to 47). The upward trend continues as we expect 60+ graduates this year.

Another important data point comes from course-pairing. In this analysis, we examined the pass rate of CS 1 students in the subsequent CS 2 course (sophomore level CS 221). Historically, 78% of the CS1 students passed CS 2. **With improvements in the CS 1 course, 90% of the new batch of students passed CS 2, a significant uptick.** This data was collected over four semesters of the new courses versus ten years of the older style courses. This research was highlighted by the NSF WIDER PERSIST research grant last semester in their annual report and the CS department was asked to present a testimonial to their advisory board. The faculty is now propagating the new styles of teaching and learning to more courses in the curriculum.

With the hiring of new faculty, the department is now also working on developing a PhD program as mentioned earlier. The PhD program has the potential to significantly increase the research profile of the department and to draw top-notch talent to come to Boise State University and potentially end up in local industry.

The IDoCode project (funded by the National Science Foundation) to introduce high quality computer science in high schools is also progressing well in its second year. We now have 40 teachers in two cohorts and are recruiting for the third cohort to start in Summer 2016. These teachers will offer fourteen new sections of AP Computer Science Principles course in Fall 2016.

This new national course is designed to get a diverse group of students excited about computer science, which will lead to a bigger and better-prepared pipeline of students going on to college.

Future Plans

The department is well on its way to further sustained growth in all areas. We expect to hire three more faculty this Spring with the JFAC lines. **We expect the number of graduates to be over 60 this year, which would be a 240% increase from three years ago!** The research activity is staying at an all time high level and the interaction with industry continues to increase.

Faculty and Student Participation

Five faculty and six graduate research assistants were supported directly on this grant. The supported faculty has in turn worked with more students and staff because of grants they received. Three graduate students that were working with the faculty that has left are now working with two other new faculty: Dr. Sole Pera and Dr. Francesca Spezzano. As a result there were a total of **seven faculty, 43 students and one post-doc** that were supported directly or indirectly (excluding the three PIs). Additionally, 7 students have started internships at local companies because of the renewal of the Expand.CS program this fall.

Patents and Copyrights

There are no patents or copyrights to report at this time.

Startups and Technology Licenses

CS faculty were directly involved in two new startups:

- SilVR City Productions, where Dr. Steve Cutchin is the President and founder along with one co-founder. SilVR City is a Virtual Reality Production Company based on the technology developed in Dr. Cutchin's lab.
- relEVENT city, is a five-person Boise tech-start up building a mobile event recommendation application. Dr. Sole Pera is on their advisory board and is a shareholder. Her research is directly applicable to the startup. relEVENT city recently won the Boise Metro Chamber of Commerce launched competition, presented its work at an international recommendation conference (RecSys) in Vienna, Austria last month, presented at the Boise Metro Annual Economic Summit, and was recently featured in the Boise Weekly and Idaho Business Review.

Students were directly involved in the following five new startups, supported by Co-PI Jim Conrad via the Senior Design course. Several of these startups are in conjunction with Boise State Venture College.

- BoomBoxBody.com – Boise Startup. Social workouts.
- toGetHEROut.com – Athletic Activities for women.
- Willoop – An LLC startup working on a Living Will service/apps
- Kairosys.net – Startup in Agriculture Decision Support Solutions.
- Noteworthy Recruiting – Boise startup that matches high school musicians with their preferred college marching bands.

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Expenditure Report

Five Faculty and six graduate assistants were directly supported via the IGEM grant during this period.

Budget for July 2015 to December 2015				
Category	Salary	Fringe	Tuition	Total
Faculty	\$217,792.56	\$62,277.12		\$280,069.68
Graduate Assistants	\$64,808.64	\$4,990.67		\$69,799.31
Operating Costs			\$20,280.00	20280
	\$282,601.20	\$67,267.79	\$20,280.00	\$370,148.99

\$700,000 of awarded funding for FY16, funding that is remaining for FY16 is \$329,851.

IGEM16-002

Boise State University – Enhancing Capabilities in Nanotechnology and Microfabrication at Boise State (\$500,000)

Economic growth in this industry is enabled by innovative research and development using advanced processing techniques to create new materials, structures, and devices. These new products have broad impacts within industries as diverse as agriculture, medicine, transportation, and energy. This project will enhance the capabilities of the IML and nanotechnology fabrication at BSU, which will in-turn educate the current and future workforce, offering programs that will support local companies, and the ability to conduct leading edge research that attracts external funding. Idaho companies who are partnering with Boise State on this project are interested in a wide variety of capabilities. The results of this project would allow these companies to perform research and development activities which would otherwise be too costly as well as offer the potential to expand their business by improving the performance or increasing yields of existing products in addition to developing completely new products.

The primary objectives of this project are to:

- a) Augment existing capabilities of the IML and Nanotechnology Research Corridor at Boise State.
- b) Expand expertise in emerging research areas of flexible/printed electronics, thin-filmed and 2D materials, and neuromorphic computing.
- c) Forge stronger industrial partnerships and collaboration and deliver more direct access to the advanced facilities and research at Boise State.
- d) Provide additional opportunities for both industrial and academic education and training in nanotechnology and microelectronics.

Advanced processing techniques are critical to the successful development and manufacturing of new materials and electronic devices. This project upgrades the infrastructure and improves capabilities in the Idaho Microfabrication Laboratory such that it can continue to support research throughout Idaho as well as catalyze product development and manufacturing in the State.

Progress:

From the start of funding in September 2015, we immediately began the process of purchasing year 1 equipment and supplies as well as starting work on facility infrastructure upgrades. A list of related project objectives and outcomes is:

- Purchase of a Bruker Dektak XT-A stylus profilometer for measuring nanometer to micrometer height variations in semiconductor samples. This equipment arrived and was installed at the end of September and has already found heavy internal and external use, including an hourly contract with American Semiconductor, Inc.
- Purchase of laboratory consumables including a gold sputtering target which is used to support various faculty research projects.
- Upgrade of the Hitachi 4500 scanning electron microscope (SEM) which is currently the highest resolution SEM at Boise State.
- Installation of additional and replacement of some old de-ionized water plumbing to increase the quality of clean room water.

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- Examined the feasibility of adding end point detection to the Veeco inductively couple plasma etcher (ion mill). Unfortunately, although this item was included in the year 1 budget, no vacuum port is available for attachment of such an instrument. Purchase of similar equipment for this instrument or the similar Oxford Plasma Lab 100 etcher will be re-evaluated in year 3.
- In place of the end point detector, purchase of the Fuji Dimatix materials inkjet printer originally scheduled for year 3 was moved forward. This decision was made primarily in response to interest in the tool both from Boise State faculty as well as several local companies including American Semiconductor, PakSense, Simplot, PKG, Biomark, and others.
- Full refurbishment of the vacuum pump for the CHA thermal evaporation deposition system.
- Purchase of all supplies including stainless steel tubing for an ultra-pure nitrogen distribution system inside the clean room.
- Full clean room-compatible window tinting to eliminate all UV light from the lithography bay and improve patterning results.
- Initiation of the hiring process for both the technical support engineer (near completion) and the new ECE faculty member (phone interviews completing by February 12, 2016).
- Purchase of three wet chemical processing stations (acid, base, and solvent purchase of only two benches, but the company was able to offer a significant discount as well as an upgrade to a gently used bench, resulting in the same total cost. Together, these three pieces of equipment will significantly increase the usability and safety factor of the facility, and include advanced capabilities such as automated touch screen process control, advanced spin-coating station, ultrasonic heated processing bath, integrated hot plates, and handheld sprayers for de-ionized water and ultra-pure nitrogen.

Expenditure Report

As of January 29th, 2016, approximately \$414,000 of the \$500,000 year 1 budget has been encumbered or spent. For the five months since receiving funds, that corresponds to a **burn rate of approximately \$83,000/month**. However, large purchases make that rate quite varied, these major items include:

- \$47,500 for the Fuji Dimatix DMP-2831 Materials Printer
- \$52,000 for the Bruker Dektak XT-A stylus profilometer
- \$187,707 for the three new wet chemical processing stations from JST Manufacturing, Inc.
- \$36,404 in total for supplies for facility and equipment upgrades.
- Approximately \$40,000 in salary and associated fringe for IML staff, with \$52,000 remaining (counted in the encumbered amount).

Several other items are still expected to be purchased including safe chemical storage cabinets for acids, bases, and solvents to accompany the new wet benches, clean room tables for the profilometer, computers, an upgraded optical microscope with digital camera, as well as several facility and infrastructure upgrades (electrical, nitrogen, chilled water, etc.). The total cost of the listed physical items is expected to be on the order of \$25,000.

Faculty and Student Participation

There are no students or faculty supported directly by this project currently. The hiring process has been initiated and there were 64 applicants in all. Of these, 12 are scheduled to be interviewed by phone in the first two weeks of February 2016, and on-campus interviews of 3-4 candidates will take place in March 2016. Once the new faculty member officially begins their appointment in August, funds will be used for their specific research start-up needs, as well as for the stipend and fees of two ECE graduate students for the remainder of the project.

Patents and Copyrights

There are no patents or copyrights to report at this time.

Startups and Technology Licenses

At this time there are no start-up businesses created as a result of the funding. However, memristor (resistive memory) technology developed by Professor Kris Campbell in the ECE department has been licensed by Knowm, Inc. and M. Alexander Nugent Consulting (MANC) of Santa Fe, NM. If their projects proceed as expected, as much as \$100,000 could be spent in the IML over the next few years.

Industry Partners

Several new agreements with Idaho businesses have been put in place since the start of the project to use the IML and new equipment and processes contained in it, these include:

- American Semiconductor, Inc. (Boise, ID), which as used the new Bruker stylus profilometer for approximately 6 hours (>\$200) during the first three months of ownership of the tool.
- Fiberguide, inc. (Caldwell, ID) has spent approximately \$1300 using the current wet bench for process development and anticipates heavy use of the new benches when they arrive.
- Collaborative use of the Bruker stylus profilometer (approximately \$1500 spent to date) for a joint project with Idaho National Laboratory (INL), with additional use planned for the future.

Closing Statements

On-site interviews of the new technical support engineer have begun and we expect to extend an offer to one of these very qualified candidates within the next week. Phone interviews for faculty will be completed in approximately two weeks, and on-campus interviews are expected to finish by the end of March so a competitive offer can be made early in the faculty recruiting cycle.

IGEM16-003

**Idaho State University – Wide Bandgap and Harsh Environment Semiconductor
RD&D Capability (\$700,000)**

Wide bandgap and harsh environment semiconductors are currently on the cutting edge of research in materials science, solid state physics, and electrical engineering fields around the globe. The focus of this project is to bring new jobs and economic growth to Idaho while providing the ability to grow as an industry center in this area. The material systems for this project hold several key scientific and engineering advantages over existing semiconductor material systems with the ability to operate with higher efficiencies, higher currents, and higher outputs; these materials hold a strategic focus in energy harvesting and green energy solutions.

This project will unite all stages of advanced wide bandgap semiconductor device fabrication as well as extreme environment semiconductors with a special emphasis on the fundamental building blocks of semiconductor growth. Additional capabilities will be added to meet the growing needs for bulk wide bandgap semiconductor materials as well as epitaxial growth of novel bandgap engineered semiconductor films and establish a demonstration pilot scale production capability.

Progress:

1. Summary of project accomplishments for the period just completed and plans for the coming reporting period:

All pieces of equipment have been purchased and are being installed.

2. Summary of budget expenditures for the period just completed (include project burn rate):

\$649,617.95 of \$700,000 has been expended as of February 1, 2016.

3. Numbers of faculty and student participation resulting from the funding, including internships:

Currently 3 students, two faculty and two engineers are participating.

4. List patents, copyrights, plant variety protection certificates received or pending:

N/A

5. List technology licenses signed and start-up businesses created:

NA

6. Status of private/industry partnerships (include enough information to judge level of engagement):

EJ Proprietary has committed \$150,000, NuMat, Inc has committed \$200,000 in funding for the current fiscal year.

Although the project started after the expected date of 07/01/2015 due to the late release of funds, the project is on track as described in the proposal. "The project is predominantly focused around the acquisition, commissioning, and demonstration of four major pieces of research infrastructure. In the first quarter, the capital equipment purchases will be made. Due to the long lead times for the fabrication of several of the components of the systems, the next six months will be devoted to acquisition and installation of the systems. The last three months will be devoted to demonstration of the growth capabilities of the systems."

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INSTRUCTION, RESEARCH AND STUDENT AFFAIRS

FEBRUARY 18, 2016

3 Year Awards									Involvement		Inventions and Discoveries					Industry Involvement
NUMBER	INST.	P.I.	Project Title	Project Summary	Reporting Year	Awarded	Expended	Balance	Faculty	Student	Patents	PVP Apps	Copyrights	Licenses	Start Ups	# of Companies
IGEM16-001	BSU	Amit Jain	Computer Science at Boise State University - An Investment in Idaho's Future	Project plan involves four strategies. 1)Sustain faculty in emerging areas of strength 2)Tighter Industry Integration, 3)Interdisciplinary Research and Economic Development Activity 4) Enhancing the Student Pipeline	2016	\$700,000	\$370,149	\$329,851	7	43	0	0	0	0	7	22
					2017	\$700,000		\$700,000								
					2018	\$700,000		\$700,000								
IGEM16-002	BSU	Kurtis Cantley	Enhancing Capabilities in Nanotechnology and Microfabrication at Boise State	Project seeks to upgrade the materials characterized and microelectronic processing capability of the Idaho Microfabrication Laboratory (IML), supporting technology development and economic growth in the State of Idaho.	2016	\$500,000	\$414,000	\$86,000	0	0	0	0	0	1	0	3
					2017	\$500,000		\$500,000								
					2018	\$500,000		\$500,000								
IGEM16-003	ISU	Eric Burgett	Wide Band Gap and Harsh Environment Semiconductor RD&D Capability	The proposed effort leverages several strategic components at the RISE Complex and aims to develop a focused research, development and demonstration capability in the growth and characteriazation of functionalized wide band gap and harsh environment semiconductors.	2016	\$700,000	\$649,618	\$50,382	2	3	0	0	0	0	0	2
					2017	\$700,000		\$700,000								
					2018	\$700,000		\$700,000								
IGEM 16					TOTALS:	\$5,700,000	\$1,433,766.94	\$1,729,851.01	7	43	0	0	0	0	7	
						\$4,266,233.06										

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CAES Center for Advanced
Energy Studies

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS

FEBRUARY 18, 2016



CAES has become a proven model that institutions throughout the world aspire to replicate.

Message from the Director:

CAES is about using the power of collaboration to solve complex technical challenges as a team. CAES is about regional partnerships that create opportunities for our students, industries, and research centers. CAES is about leveraging regional partnerships for global competitiveness. And most importantly, CAES is about enabling a clean energy future for generations to come.

When the concept of Idaho's independent research institutes coming together to share research, staff, and educational resources was first imagined, it seemed like an impossible goal. However, since CAES was formally established in 2009, it has become a proven model that institutions throughout the world aspire to replicate. Last year, we expanded to a regional collaboration when University of Wyoming joined the team.

This year, the CAES collaboration has placed added emphasis on research that increases industry competitiveness while opening more opportunities for our students. We're developing innovations to help industry compete and to help our nation realize a clean energy future. As the world is rapidly changing its approach to energy, CAES is helping discover new approaches for energy production and energy use that will allow us to stay competitive in this dynamic landscape. It is estimated that \$67 trillion dollars will be invested in energy technology globally over the next 25 years. CAES researchers will

help regional stakeholders compete for a share of these markets, and will help our students compete for jobs. The future will be exciting indeed!

Over the past year, we've had many exciting advances. We expanded our materials and catalysis capabilities by bringing in capabilities like the Temporal Analysis of Products (TAP) reactor and a picoindenter for in-situ tests in the Microscopy and Characterization Suite. We are developing some big, impactful projects, including the Frontier Observatory for Research in Geothermal Energy (FORGE) and the food-energy-water nexus. We brought in new high-caliber research staff to help take our research to the next level. We established an Industry Advisory Board to enhance public-private partnerships and engage industry partners to work with CAES on technology commercialization for maximum impact.

CAES had a great year and we look forward to continue building world-class capabilities, working with the region's best researchers, educating the next generation of energy scientists, and using our expertise to help industry succeed in fast-paced global markets.

Sincerely,

A handwritten signature in black ink, appearing to read 'Steven Aumeier'.

Steven Aumeier

Director, Center for Advanced Energy Studies

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016

FY 2015 | By the Numbers

INVESTMENTS:

\$3 MILLION
STATE OF IDAHO INVESTMENT IN CAES

\$347,000
UNIVERSITY OF WYOMING INVESTMENT IN CAES

**\$16.93
MILLION**
RESEARCH PROGRAM AND OTHER FUNDING FOR CAES
INCLUDING LABORATORY DIRECTED RESEARCH AND
DEVELOPMENT FUNDING AND RESEARCH GRANT AWARDS
FROM DOE, NSF, NRC, AND PRIVATE INDUSTRY

**\$6.84
MILLION**
IDAHO NATIONAL LABORATORY'S INVESTMENT IN
INFRASTRUCTURE, OPERATIONS, AND RESEARCH

COVER: THE TEMPORAL ANALYSIS
OF PRODUCTS (TAP) REACTOR
LOCATED IN CAES.

OUTREACH:

1558
VISITORS TOURED THE CAES IDAHO
FALLS FACILITY IN FY 2015

1891
VISITORS EXPERIENCED THE
CAES COMPUTER-ASSISTED VIRTUAL
ENVIRONMENT (CAVE) 3-D DATA
IMMERSION RESEARCH
ENVIRONMENT

237
CAES PRESENTATIONS, PUBLICATIONS,
AND PROCEEDINGS IN FY 2015

84
CAES AFFILIATES COLLABORATED
WITH 84 COMPANIES

STUDENT IMPACT:

87
STUDENTS FROM THE CAES PARTNER
UNIVERSITIES INTERNEED AT
IDAHO NATIONAL LABORATORY IN
AREAS INCLUDING MECHANICAL
ENGINEERING, MATERIALS SCIENCE,
GEOTECHNOLOGY, NUCLEAR
ENGINEERING, AND COMPUTER
SCIENCE

249
STUDENTS WORKED ON CAES-
RELATED PROJECTS IN AREAS
INVOLVING ELECTRICAL GENERATION
TECHNOLOGIES (NUCLEAR, COAL,
GAS, RENEWABLE), ENERGY POLICY,
MATERIALS SCIENCE ENGINEERING,
NUCLEAR SCIENCE, AND HUMAN
FACTORS AND STATISTICS



"I was particularly struck by the conversations I've had since I arrived here [at CAES]. Frankly, I hadn't realized the extent to which you have moved in tying your efforts together with those of industry, [tying] your efforts with academia...Frankly, you're far ahead of most of the places I go and talk about this...It's commendable on your behalf."

-Norm Augustine (above center), retired chairman and CEO of Lockheed Martin and a member of a special committee convened by Energy Secretary Moniz to assess the effectiveness of the Department of Energy national laboratories, visited the Center for Advanced Energy Studies as a guest of the University of Wyoming on April 8, 2015.

Regional Leadership

CAES co-sponsors Intermountain Energy Summit

On Aug. 18-19, the Center for Advanced Energy Studies (CAES) at INL co-sponsored the Second Annual Intermountain Energy Summit in Idaho Falls to provide an opportunity for individuals of the energy community to come together to discuss environmental and energy topics, and present ideas on how to best overcome various obstacles. This year's theme, the Energy-Water Nexus, was of interest due to changing weather patterns leading to drought conditions in much of the Western states. Pressure from growing populations and increased energy extraction is exacerbating the impact of increasingly limited freshwater availability. Speakers and notable attendees included: John Kotek, DOE assistant secretary for Nuclear Energy, Lynn Orr, DOE undersecretary for Science and Energy, U.S. senators Jim Risch and Mike Crapo, Rep. Mike Simpson, Idaho Lt. Gov. Brad Little, NRC Commissioner Kristine Svinicki, Asst. Secretary of the Navy Dennis McGinn and the EPA's Lek Kadeli.



Energy Policy Research Conference 2015

In September 2015, over 100 attendees from 28 universities and colleges, 18 industry or nonprofit organizations and three national laboratories came together for the 5th Energy Policy Research Conference in Denver, Colorado. Each year, the CAES Energy Policy Institute, headquartered at Boise State University, organizes and hosts the conference. Over the course of this year's two-day conference, participants gave 55 presentations across 14 panels on topics ranging from "Coal Regulation and the Clean Power Plan" to "Renewables Integration: Scenarios and Novel Approaches." Jim Rogers, former CEO and Chairman of Duke Energy, delivered the keynote address. Select papers from the conference were published in a symposium issue of The Electricity Journal (October 2015).

KEYNOTE SPEAKER JIM ROGERS,
FORMER CEO AND CHAIRMAN OF
DUKE ENERGY, THE LARGEST UTILITY
IN THE U.S., ADDRESSES THE CROWD
AT THE ENERGY POLICY RESEARCH
CONFERENCE.

CAES PROGRAM
DEVELOPMENT DIRECTOR
MICHAEL HAGOOD
ADDRESSES THE
INTERMOUNTAIN ENERGY
SUMMIT (ABOVE).

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS

FEBRUARY 18, 2016

5th International Advanced Coal Technologies Conference

The 5th International Advanced Coal Technologies Conference (IACTC) took place in Jackson Hole, Wyoming, on Oct. 6-7, 2015. Each year, the conference rotates among United States, Australian, and Chinese locations. The IACTC conferences seek to advance, through collaboration with global partners in policy, education, and research, the environmental and economic use of coal to meet world energy sustainability and security. The theme of the 2015 IACTC conference was to explore new opportunities for coal through carbon engineering and CO₂ utilization and storage.

The conference brought together an international array of leading energy experts from government, industry, academic, and research sectors to discuss and share recent advancements in the development and deployment of low-emission coal-based power and carbon-emission mitigation technologies. The conference was hosted by the University of Wyoming School of Energy Resources (SER) in conjunction with Shaanxi Provincial Institute of Energy Resources & Chemical Engineering.



Meetings and Workshops

In 2015 CAES hosted or sponsored over 20 meetings that attracted researchers from the region and beyond:

- 69th Northwest Regional Meeting (NORM) of the American Chemical Society
- Advanced Nuclear Manufacturing & Supply Chain Conference (Premiere Technology)
- Big Data Workshop
- Clean Coal Technology Research Fund Symposium
- Energy Education Summit
- Energy Policy Research Conference
- Intermountain Energy Summit
- International Advanced Coal Technologies Conference
- International Conference on Future Technologies for Wind Energy - WindTech 2015
- Landscape Discussion on Energy Law and Policy in the Rockies
- Materials, Modeling, Simulation, and Visualization (MMSV) Workshop
- Midwest Energy Conference- St. Louis- Energy Workforce Development
- Modeling, Experimentation & Validation (MeV) Summer School
- Nuclear Innovation Workshop
- Nuclear Security, Alternative Technologies and Consequence, Management for the Health Physicist Workshop
- Small Modular Reactor Working Group
- Snake River Geothermal Workshop
- Symposium G: Next Generation Electrochemical Energy Storage and Conversion Systems
- University of Idaho Engineering Design Expo
- University of Wyoming Meet and Greet
- Western Initiative for the Dairy Environment Workshop

PANELISTS AT THE 5TH
INTERNATIONAL ADVANCED
COAL TECHNOLOGIES
CONFERENCE IN JACKSON
HOLE, WYOMING.

Research with Impact

Leading the next generation of geothermal energy research

CAES and INL are at the forefront of one of five groups pursuing the development of Enhanced Geothermal Systems for the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy.

The Snake River Geothermal Consortium is proposing to create an engineered geothermal reservoir 8,000 to 12,000 feet below land surface in the southwest corner of the INL site. Water will be circulated through the reservoir to harvest natural geothermal heat for producing electricity.

Phase 1 studies for the Frontier Observatory for Research in Geothermal Energy (FORGE) are underway thanks to \$400,000 that DOE awarded to INL in April. CAES' Dr. Robert Podgorney believes the consortium has a good chance of being one of three participants selected for Phase 2, which involves up to \$29 million in funding.

Besides INL and CAES, other members of the consortium include DOE's National Renewable Energy Laboratory and Lawrence Livermore National Laboratory. The Center for Advanced Energy Studies includes Idaho State University, Boise State University, the University of Idaho and the University of Wyoming. The University of Oklahoma and the University of Utah have joined the consortium, and an advisory panel representing regulatory agencies, industry and environmental groups is on board. Private-sector partners include Baker Hughes, U.S. Geothermal, Campbell Scientific, Alaska's Chena Power and Mink Geohydro.

"This is a great example of how the national labs will operate in the future, developing highly competitive industry, academic, government and laboratory partnerships that increase U.S. energy security and economic competitiveness; INL and CAES are national leaders in this regard, and FORGE is a great example of what we can do in the future," said Steven Aumeier, INL Associate Laboratory Director and Director of CAES.



Drying and detoxifying coal with carbon-free energy

Idaho National Laboratory and University of Wyoming are researching whether heat from a nuclear reactor can be used to dry and detoxify coal from the Powder River Basin. Drying coal with carbon-free energy like what is anticipated from NuScale's small modular reactor could improve the combustion efficiency and reduce CO₂ emissions, thus helping states that depend on coal-fired power meet increasingly stringent EPA requirements.

DR. ROBERT PODGORNEY
HANDLES SAMPLES AT THE
USGS CORE SAMPLE LIBRARY.

Increasing the Safety of Nuclear Plant Components

Idaho State University received a \$200,000 grant from INL in 2015 to research the performance of nuclear power plant components under flooding conditions. The research, led by Dr. Chad Pope, encompasses small-scale testing of components to develop testing methodologies and gain insight into mathematical models to be used to represent component reliability. The research also includes investigation into the use of Smoothed Particle Hydrodynamic (SPH) modeling, a computational method used for simulating fluid flows.



BOISE STATE UNIVERSITY
MECHANICAL ENGINEERING
STUDENTS KAHIL WILLIAMS
AND JOEL HOOD LOOK AT A
CONTROL PANEL.

Enhancing Industry Energy Efficiency

The CAES Energy Efficiency Research Institute Industrial Assessment Center (CEERI-IAC) based out of Boise State University is a DOE-sponsored program that offers businesses in the Mountain West in-depth energy assessments of their plant sites. An IAC team – typically junior- and senior-year mechanical engineering students from Boise State, Idaho State or the University of Idaho – studies the production methods and energy usage of a plant. The team meets the company representatives and takes tours, collects data and makes observations on how energy might be saved, and therefore, energy costs reduced. Within 60 days of the site visit, the team compiles a confidential report, including a detailed analysis and recommendations specific to the company site. On average, a visit by an IAC team will save a regional business more than \$55,000 a year and pay for itself within 12 to 18 months. To date, the Center has helped approximately 60 companies become more energy-efficient with their assessments.

International Nuclear Safety Research

With a long-term solution for spent nuclear fuel disposal still in the distance, South Korea, which relies on nuclear energy for more than one-third of its electricity, is looking at pyroprocessing as a means of dealing with its growing stockpile.

Idaho State University and the Korea Atomic Energy Research Institute have engaged in fundamental nuclear safety research that will be necessary to any pyroprocessing facility that might be built. Work has been done under three contracts. The first addressed pyroprocessing safety and regulations. The second expanded on the first, delving into hazard evaluation and safety system selection. The third, a \$160,000 contract issued in September 2015, focuses on a pre-conceptual facility design, including initial hazard analysis, shielding and criticality safety and probabilistic risk analysis. Research is led by Dr. Chad Pope.



THE PALISADES RESERVOIR
IN THE CARIBOU-TARGHEE
NATIONAL FOREST.

Addressing the World's Food, Energy, and Water Needs

By 2050, the world's population is expected to reach 9.6 billion. As a consequence, food production must nearly double by that time using roughly the same amount of energy and water. The University of Idaho-led Center for Advanced Energy Studies initiative on Food-Energy-Water is working on solutions to meet this rising demand and challenge to our resources.

Food processing requires lots of water and energy and is central to Idaho and the region's agricultural economy. Regional industries have major challenges in updating food processing infrastructure, reducing energy demand, minimizing impacts on the environment and conserving water. A new generation of workers needs to be educated to operate new technologies and solve problems for industries that are vital to our society and the world. The University of Idaho, in partnership with CAES, is stepping up to the challenge by exploring several research opportunities that will lead to more efficient food production and processing.

"NEET" Research

Drs. Yanliang Zhang and Darryl Butt of Boise State University are leading a team that is researching how to keep tabs on the workings inside nuclear power plants under extreme conditions, like Fukushima in 2011. Zhang and Butt, a CAES associate director, are attempting to see whether heat from a nuclear power plant can be harnessed to drive self-powered sensor networks. Their work is being funded by a three-year \$980,804 grant from the Department of Energy called a Nuclear Energy Enabling Technologies (NEET) research and development and infrastructure award. Self-powered sensors eliminate the need for both an external energy supply and power cables. Their work is in collaboration with Dr. Vivek Agarwal of Idaho National Laboratory, and Dr. Zhifeng Ren at University of Houston. The research will significantly expand the existing partnership between BSU and Idaho National Laboratory, and will provide opportunities to train undergraduate and graduate students.

Race for Rare Earth Elements

In 2014, the University of Wyoming joined CAES. With \$750,000 from the state of Wyoming, INL and UW began research this year on recovering and processing rare earth elements from domestic coal and coal by-products using methods that are efficient, cost-conscious and environmentally benign. The 17 rare-earth elements in the periodic table that are plentiful in the earth's crust but typically not found in economically exploitable ore deposits. Since 2000, there has been an explosion in demand for items that require rare earth elements: cell phones, tablets, computers, cameras, etc. Rare earth compounds are in batteries that power every electric vehicle and hybrid-electric vehicle. After China began selling rare earth elements at very low prices in the 1980s, production in the United States eventually flat-lined. When China cut exports in 2010, rare earth prices skyrocketed. That motivated new production in the United States and other countries.

Prestigious Nuclear Engineering Grant

The University of Idaho's Nuclear Engineering Program received a \$434,048 faculty development grant, part of \$16.6 million the NRC awarded to academic institutions in 2015. This will allow the faculty to improve its experimental capabilities and computational resources. The funds will also provide summer support, allowing the faculty to develop ideas into relevant research proposals and new courses for the nuclear engineering program and its core capabilities: thermal hydraulics, passive safety systems, nuclear materials, fuel cycle and safeguarding and increased sustainability. The end result is not only innovative research but a greater number of well-educated graduates entering the nation's technological workforce. With the award of the FY-15 grants, the NRC has awarded more than \$138 million since the program began in 2007.



CAES SCIENTISTS ARE
RESEARCHING HOW TO RECOVER
AND PROCESS RARE EARTH
ELEMENTS FROM DOMESTIC COAL
AND COAL BY-PRODUCTS.

\$1,000,000

CAES RESEARCHERS WON
TWO NATIONAL SCIENCE
FOUNDATION EARLY CAREER
AWARDS OF \$500,000 EACH

Operating Safely and Effectively

Operations

During 2015, the CAES consortium performed a comprehensive review of CAES operations, safety protocols, and practices. This was the first comprehensive review since CAES was established and provided an opportunity to examine protocols and practices against real operational history and activities. The review indicated that with some modest adjustment, the protocols and practices are effective when consistently implemented. The review also demonstrated that over time there is a possibility for loss of critical knowledge of systems as staff transition out of CAES, so the team is developing a more structured process to transfer knowledge of specific critical systems and operational practices.

New Premier Capabilities & Equipment

Microscopy and Characterization Suite

Hysitron PI 95 TEM PicoIndenter

This TEM sample holder from Hysitron (right), in CAES' MaCS Lab, is capable of direct-observation nano-mechanical testing inside a transmission electron microscope (TEM). The PI 95 has been carefully designed for compatibility with JEOL, FEI, Hitachi, and Zeiss microscopes. With it, it is not only possible to image the mechanical response of nanoscale materials, but also to observe microscopic deformation mechanisms in real time.

479

NUMBER OF HOURS MACS WAS
BOOKED IN JULY 2014

866

NUMBER OF HOURS MACS WAS
BOOKED IN JULY 2015

81%

INCREASE IN HOURS BOOKED
FROM JULY 2014 TO JULY 2015



CLOSE-UP VIEW OF THE NEW
PICOINDENTER IN MACS.



TAP Reactor System for Materials Characterization

Temporal Analysis of Products

Installed in late September at the CAES facility in Idaho Falls, the Temporal Analysis of Products (TAP) reactor system gives researchers a new, very rare capability to support advanced manufacturing. There are fewer than 20 TAP systems in the world and, counting the one at CAES, only three in the United States. Researchers plan to use TAP to design more energy-efficient catalysts for building chemical intermediates from abundant domestic shale gas rather than breaking down petroleum. These chemicals are essential to making products as diverse as disposable diapers and diesel fuel.

X-ray Diffractor

Located in CAES' Advanced Materials Lab, the X-ray diffractor is used to detect structures in crystalline materials, metals and alloys, minerals, organic and inorganic compounds and polymers. Diffraction allows for quick, nondestructive analysis without the need for extensive sample preparation. It gives laboratories around the world the ability to quickly characterize unknown materials in such fields as metallurgy, mineralogy, forensic science, archaeology, condensed matter physics, and the biological and pharmaceutical sciences.



REBECCA FUSHIMI ON THE TAP
REACTOR (TOP) AND JATUPORN
BURNS ON THE X-RAY DIFFRACTOR
IN THE CAES ADVANCED MATERIALS
LABORATORY (BOTTOM).



UNIVERSITY OF WYOMING'S
3-D CAVE. PHOTO COURTESY
OF UW.

CAES Capabilities at University of Wyoming

Since University of Wyoming joined CAES in October 2014, CAES collaborators have gained access to a host of new capabilities. Highlights include:

Shell 3-D Visualization Center, Advanced Research Computing Center, and the NCAR-Wyoming Supercomputer

The Energy Innovation Center's Shell 3-D Visualization Center houses the only four-walled, 3-D CAVE (Cave Automatic Virtual Environment) in Wyoming and is much like the Computer-Assisted Virtual Environment (CAVE) located in the CAES Idaho Falls facility. One of the laboratory's many capabilities is its ability to model oil, gas, and water movements and interactions in the subsurface environment, which will aid researchers and energy companies in deriving maximum value from their mineral resources.

The laboratory connects via 10-gigabit lines to one of the most powerful supercomputers in the region – the Wyoming National Center for Atmospheric Research Supercomputing Center (NWSC) located west of Cheyenne and UW's Advanced Research Computing Center (ARCC) – both essential for the complex simulations required in today's energy research.



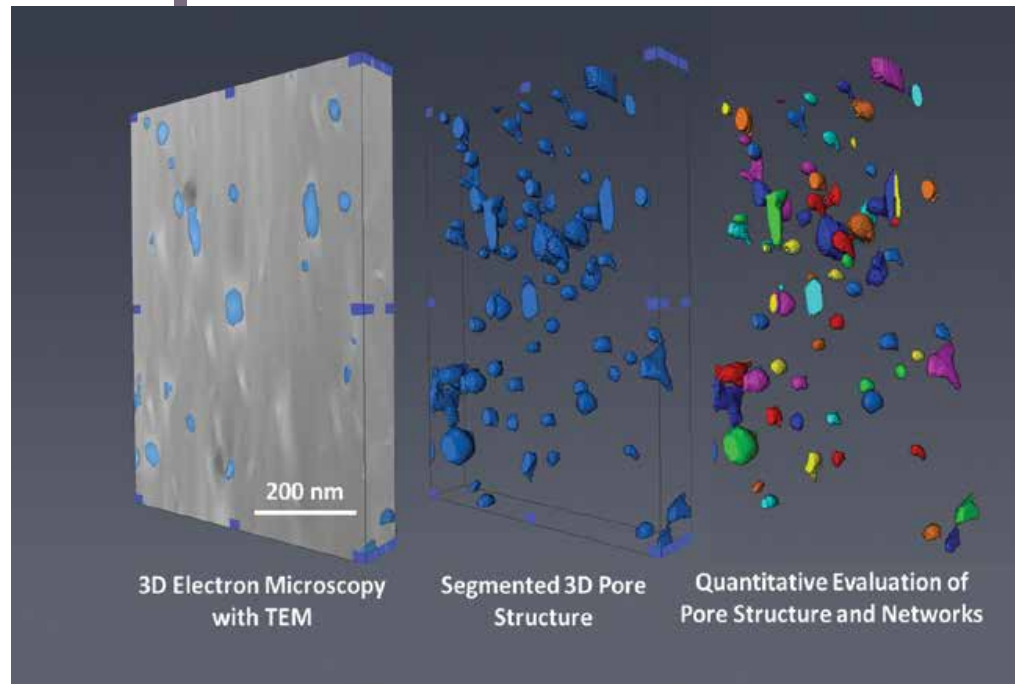
Hess Digital Rock Physics Laboratory

The Hess Digital Rock Physics Laboratory located in the Energy Innovation Center includes the most advanced high-resolution 3-D X-ray microscope available for studying underground oil and natural gas reservoirs. UW is the world's first university to provide access to this state-of-the-art tool.

Peabody Energy Advanced Coal Technology Laboratory

Located on the first floor of the Energy Innovation Center, the Peabody Energy Advanced Coal Technology Laboratory is used primarily to analyze and research coal conversion technologies. Scientists are researching methods to convert low-value fossil resources into higher-value products – or advanced conversion. This lab also supports research in the conversion of natural gas and coal into various manufactured products and liquid fuels.

UNIVERSITY OF WYOMING'S PEABODY ADVANCED COAL LAB
(ABOVE) AND HESS DIGITAL ROCK PHYSICS LABORATORY
(INSET). PHOTOS COURTESY OF UNIVERSITY OF WYOMING



3-D TOMOGRAPHY OF SHALE MATERIALS TAKEN WITH A TRANSMISSION ELECTRON MICROSCOPE.

3-D Software

Boise State University acquired Avizo, a 3-D analysis program for scientific and industrial data (CAES in Idaho Falls has Amira, a similar software). In materials science, geosciences or engineering applications, Avizo offers state-of-the-art image data processing, exploration and analysis features within an intuitive workflow and easy-to-use graphical user interface. It is being used to model shale formations by a team at CAES that includes BSU's Patrick Price and INL's Earl Mattson and Hai Huang.

Ceramic Fiber Testing

Dr. Darryl Butt, BSU's Materials Science and Engineering Department chairman and an associate director of CAES, procured capabilities for testing the strength of ceramic fibers as thin as 1/10th the diameter of a human hair. CAES is working in collaboration with Advanced Ceramic Fibers, an Idaho Falls startup company producing high-performance, low-cost alpha silicon carbide/carbon fibers for use in specialty applications and metal and ceramic matrix composites. Butt also received \$80,000 from Idaho's Higher Education Research Council for two gloveboxes.

\$80,000

RECEIVED FROM IDAHO'S HIGHER EDUCATION RESEARCH COUNCIL FOR TWO GLOVEBOXES

ESTEC Upgrades

In response to a growing need for engineering technicians in the energy sector, the College of Technology at Idaho State University has established the Energy Systems Technology and Education Center (ESTEC) on the Idaho State University campus

in Pocatello. Partnership with CAES has supported the department's ability to produce graduates with the precise skills required by the energy industry. Upgrades include installation of a Distributive Control System (DCS) with Programmable Logic Controllers (PLC) integration and additional

SMART transmitters that communicate through wireless and HART protocols.

AN ESTEC STUDENT
DEMONSTRATES A
WIRELESS VALVE.



Environmental Chambers

Purchased with an Idaho Global Entrepreneurial Mission (IGEM) grant, the benchtop environmental chambers in the Micron Engineering Center at BSU can produce extended temperature ranges as cold as -70 C. They allow for testing the durability of advanced energy materials, particularly those used in batteries, at extreme conditions without having to use a larger, stand-alone chamber.

Linseis LFA 1000 Laser Flash

The Linseis LFA 1000 Laser Flash is the most modular and precise instrument for measuring the thermal diffusivity, conductivity and specific heat values of solids, powders and liquids. It is capable of six simultaneous samples ranging in temperature from minus 125 to 2800°C. Purchased with money from CAES' Micron donation, it is located on the Boise State University campus.

Linseis LSR -3

If waste heat from hot engines and combustion systems could be captured and converted into electricity with thermoelectric devices, it could save billions of dollars. Linseis has developed the LSR -3 for evaluating Seebeck Coefficient/Electric Resistance measurements from minus 100 up to 1500°C. This capability is located on the Boise State University and is primarily being used for CAES-related thermoelectric research.

PS6100 Spectroscopy

Located in Boise State University's Micron Engineering Center, Positron Annihilation Spectroscopy is a nondestructive materials testing technique that detects defect concentrations and residual stress in materials. Its common use is to investigate the source of large component failures in a nondestructive manner.

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS FEBRUARY 18, 2016

People: Appointments, Awards, and Accomplishments

Geoffrey Black, Boise State University associate professor of economics, won the 2015 Energy Policy Institute Associate of the Year award.



GEOFFREY BLACK, WINNER
OF THE 2015 ENERGY POLICY
INSTITUTE ASSOCIATE OF THE
YEAR AWARD.

Darryl Butt, Boise State University, received the Richard E. Tressler Materials Science Award and Lecture from Penn State University.

Indrajit Charit, University of Idaho, won the ASM-IIM Visiting Lectureship Award.

John Gardner, director of the CAES Energy Efficiency Research Institute based out of Boise State University, was elected a fellow of the American Society of Mechanical Engineers (ASME).

Robert Hiromoto, University of Idaho, submitted an Invention Disclosure Record (IDR) # BA-871, titled, "Branch and Bound Algorithm for Optimization of Dynamic Systems using LENDIT Metrics and S2R2 Sets," submitted by Joseph Nielsen, Robert E. Hiromoto and Akira Tokuhito.

Courtney Hollar, a Boise State University graduate student, received a three-year National Science Foundation Graduate Fellowship.

Adamu Kadiri, an Idaho State University doctoral student, received the Roy G. Post Foundation Scholarship (nuclear waste management).

Nick Kempf, a graduate student at Boise State University, received a three-year DOE NEUP Graduate Fellowship.

Jay Kunze, Idaho State University, won a five-year Specialized Training of Nuclear Regulatory Commission (NRC) Inspectors on Motor Operated Valves award from the NRC Training Center in Chattanooga, Tennessee.

Masego Lepule, Boise State University student, won a William Fulbright Fellowship.

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS FEBRUARY 18, 2016

Gabriel Potirniche, University of Idaho, received a University Mid-Career Faculty Award.

Deepesh Poudel, an Idaho State University doctoral student, won the 2015 HPS F. Ward Whicker Scholarship, and award for graduate studies in health physics.

Luke Schoensee, a Boise State University undergraduate student, received a best paper award at the International Conference on Thermoelectrics.

Matthew Swenson, Boise State University student, won Best Student Poster Award in Microstructural Processes in the Irradiated Materials Symposium at The Minerals, Metals & Materials Society (TMS) Annual Meeting in Orlando, Florida.

Janelle Wharry, assistant professor of materials science and engineering at Boise State University, won a Nuclear Regulatory Commission Faculty Development Award.

Janelle Wharry, assistant professor of materials science and engineering at Boise State University, received a Nuclear Regulatory Commission Young Faculty Award.

Claire Xiong, assistant professor of materials science and engineering at Boise State University, won a Faculty Early Career Development (CAREER) award from the National Science Foundation.

New Research Staff

Dr. Rebecca Fushimi **Research Scientist, Idaho National Laboratory**

In summer 2015, CAES and INL's Materials Science & Engineering Department welcomed research scientist Dr. Rebecca Fushimi. Prior to coming to CAES, Dr. Fushimi was the executive director of the Langmuir Research Institute in St. Louis, Missouri, and an adjunct professor at St. Louis University. Her previous research focused on catalyst development and using a unique transient kinetic characterization technique (known as Temporal Analysis of Products, or TAP). In her current position, Dr. Fushimi will continue research using TAP and plans to expand use of TAP to interfacial chemistry and materials characterization.



Dr. Bob Borrelli **Assistant Professor, Nuclear Engineering,** **University of Idaho**

In July 2015, CAES and University of Idaho welcomed Dr. Bob Borrelli as an assistant professor of nuclear engineering. Dr. Borrelli received his doctorate in nuclear engineering from the University of California-Berkeley. He then worked as a research associate at the University of Tokyo and postdoctoral researcher at UC-Berkeley. His dissertation and University of Tokyo research focused on radionuclide modeling in a high-level waste repository. Dr. Borrelli's UC-Berkeley postdoctoral and current research involves scientific computing applications to the development of safeguardability methodologies for the advanced fuel cycle.



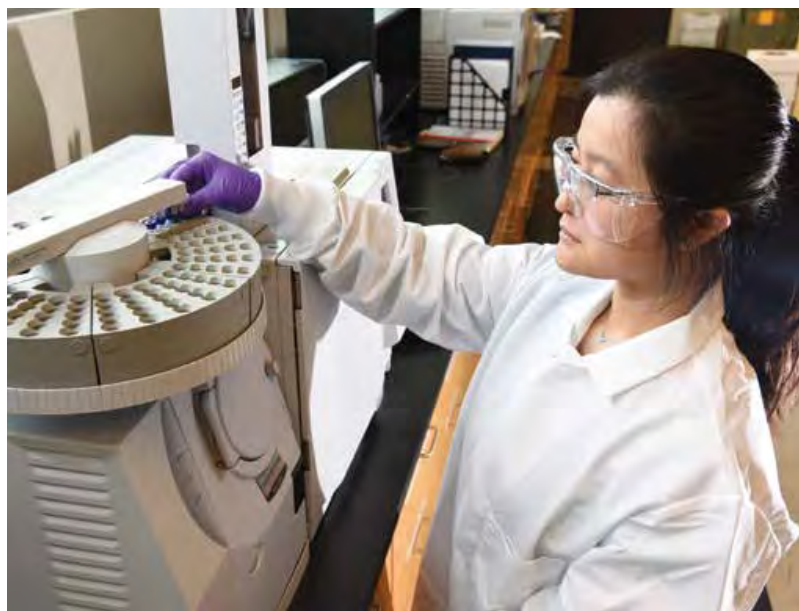
Education & Outreach

1891

VISITORS EXPERIENCED THE CAES COMPUTER-ASSISTED
VIRTUAL ENVIRONMENT (CAVE) 3-D DATA IMMERSION
RESEARCH ENVIRONMENT.

1558

VISITORS TOURED CAES ON 90 DIFFERENT TOURS OF
THE CAES FACILITY IN 2015.



New CAES Competitive Graduate Assistantship Program

This year, University of Idaho (UI) and University of Wyoming (UW) created new CAES graduate assistantship programs to catalyze interdisciplinary, cooperative energy research and academic programs, promote workforce development, and engage industry partners in transformational energy programs. The program also promotes enhanced faculty-to-faculty inter-institutional collaboration requiring students in the program to work on a project that involves participation from at least two CAES member institutions. The University of Idaho program supports a UI graduate student at the master's or doctoral level for up to two years.

This year's UI CAES graduate assistants were electrical-civil engineering student Taylor Romenesko, working with Dr. Erik R. Coats on a project to integrate algal biomass into a broad-based Dairy Manure Resource Recovery Technology, and doctoral student Meng Shi, working with Dr. Haiyan Zhao on novel heterogeneous catalysts for synthetic fuels.

University of Idaho

CAES GRADUATE
ASSISTANT MENG SHI
FROM UNIVERSITY OF
IDAHO WORKS IN THE CAES
ANALYTICAL CHEMISTRY
LABORATORY.

This year, University of Wyoming funded four CAES graduate assistantships for collaborative research projects and one additional graduate assistant to develop a Western Energy Corridor Resource Map. The UW graduate assistantship topics include evaluating unconventional rare earth element resources from energy production in Wyoming, the technical, economical, and geological feasibility of rare earth element extraction from the nation's most prolific coal resources, nanocatalysts and separation technologies for advanced energy conversion and produced water treatment, and rare earth element catalyst research.



121

EVENTS HELD IN CAES IN 2015

963

TOTAL NUMBER OF
STEM VISITORS

THE FIRST PLACE BOISE
STATE UNIVERSITY TEAM AT
THE 2015 COLLEGIATE WIND
COMPETITION HELD AT NREL'S
NATIONAL WIND TECHNOLOGY
CENTER JUST SOUTH OF
BOULDER, COLORADO.
(PHOTO BY DENNIS
SCHROEDER / NREL)

Boise State University Wins Collegiate Wind Competition 2015

Seven teams of students from across the country gathered at the National Renewable Energy Laboratory's National Wind Technology Center (NWTC) for a fierce blade-to-blade wind turbine rematch. At the Department of Energy Collegiate Wind Competition 2015 Engineering Contest, teams of undergraduates tested original designs of model wind turbines in an on-site wind tunnel and presented their technical designs to wind technology experts. The Boise State University team took first place, winning the competition with an innovative wind turbine design.



BOISE STATE
UNIVERSITY



“This internship was an amazing opportunity to understand what a job in scientific research would look like. It helped me to understand what I would like to do in my life.”

—INL 2015 summer intern

INL SUMMER INTERN LOREN
ANDERSON (TOP). AN INL INTERN
RESEARCHES A SUPER CRITICAL
FLUIDS CATALYST (BOTTOM).

Internships

This year, 87 interns worked on CAES-related projects or came from CAES partner universities and worked on Idaho National Laboratory projects. CAES and INL internships provide opportunities for the best and brightest students to further their education by working with world-class scientists and engineers, plus showcase universities and INL to researchers from around the world. Interns have the opportunity to learn how to solve real-world problems under the guidance of distinguished scientific and technical experts.



INSTRUCTION, RESEARCH AND STUDENT AFFAIRS

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Idaho State University

McKenzie Whitesides, BA, English
Joseph Pehrson, BA, Art and Business
Wyatt Hill, BS, Psychology
Sergio Hernandez, BS, Microbiology
Caryn Wendt, BS, Civil Engineering
Spencer Denton, BS, Computer Science
Larinda Nichols, BS, Nuclear Engineering
Mary Toston, BS, Nuclear Engineering
Rhett Backstrom, BS, Computer Science
Colter Rasmussen, BS, Electrical Engineering
Sam Giegel, BS, Nuclear Engineering
Shane Rielly, BS, Computer Science
Nicholas Wilmot, BS, Accounting
Brady Smith, BS, Accounting
Jordan Castle, BS, ESTEC
Julie Tomchak, BS, ESTEC
Jacob Ivie, BS, ESTEC
Bret Scott, BS, ESTEC
Jonathon Taylor, BS, ESTEC
Jonathon Taylor, BS, Mechanical Engineering
Korbin Traugher, BS, Mechanical/Nuclear Engineering
Sean McClellan, BS, ESTEC
Daniel Beaderstadt, BS, ESTEC
Cameron Nielsen, BS, ESTEC
Marko Sterbentz, BS, Computer Science
Nanie VanDyke, BS, Biology
Marie Holmer, MS, Geotechnology
Robin Baker, MS, Nuclear Engineering
Dane Sterbentz, MS, Nuclear Engineering
Shiloh Elliott, MS, Geographical Information Systems

University of Idaho

Payton McGriff, BA, Architecture
Mary Ellen Case, BS, Chemistry
Morgan Dieckmann, BS, Civil Engineering
Leilani Beard, BS, Environmental Sciences
Michael West, BS, Electrical Engineering
Hillary Hanson, BS, Applied Mathematics
Hayden Smotherman, BS, Physics
Keith Drew, BS, Computer Science
Callan McGriff, BS, Mining Engineering
Emily Mariner, BS, Computer Science
Jeffery Porter, BS, Chemical Engineering
Matthew Brown, BS, Computer Science
Matthew Dieckmann, BS, Mechanical Engineering
Cristofer Farnetti, BS, Mechanical Engineering
Paden Rumsey, BS, Computer Science
Hannah Pearson, BS, Computer Science
Kateryna Savchenko, MA, Psychology
Brendi Heath, MS, Environmental Science
Zachary Spielman, MS, Experimental Psychology
Lei Tu, PhD, Nuclear Engineering
Thomas Ulrich, PhD, Neuroscience
Kamshad Eshghi, PhD, Electrical Engineering

Washington State University

Rachel Wood, MA, Geophysics
Mathew Snow, PhD, Radiochemistry

Boise State University

Arthur Figueiredo, BS, Materials Science
Alex Schmidt, BS, Mechanical Engineering
Riley Parrish, BS, Material Science and Engineering
John Mulvaney, BS, Nuclear Engineering
John-Paul Stroud, BS, Materials Science

Stanford University

Yayu Hew, PhD, Aero/Astro Engineering

University of Southern California

Juha Nieminen, MS, Astronautical Engineering
Brian Franz, PhD, Astronautical Engineering
Adarsh Rajguru, PhD, Astronautical Engineering

Hillcrest High School,

Cole Mortensen, HS, General Studies

Skyline High School,

Ryan Myers, HS, General Studies

Brigham Young University-Idaho

Andrew Johnson, BA, Mechanical Engineering
Brittany McGuinness, BA, Biology

University of Wyoming

John Brouwer, BS, Energy Resource Management
Rajiv Khadka, PhD, Computer Science

Utah State University

Matthew Ralphs, MS, Mechanical Engineering
Kurt Harris, PhD, Mechanical Engineering

Texas A&M University

Akansha Kumar, PhD, Nuclear Engineering

University of Utah

Manas Pathak, PhD, Chemical Engineering
Gorakh Pawar, PhD, Chemical Engineering

Virginia Tech

Meng-Jen Wang, PhD, Nuclear Engineering

Missouri S&T

Mikayla Molnar, BS, Nuclear Engineering
Philip Rexing, BS, Nuclear Engineering

University of Tennessee

Kelsa Benesky, PhD, Nuclear Engineering

University of North Texas-Denton

Sabbashish Meher, PhD, Material Science and Engineering

University of Alabama

Kevin Schillo, PhD, Aerospace Systems Engineering

Georgia Institute of Technology

Alexander Moore, PhD, Nuclear Engineering

DID YOU KNOW?

CAES AFFILIATES HOSTED 87 INTERNS FROM 18 ACADEMIC INSTITUTIONS IN 2015.

87

Advancing Industry Competitiveness

84

COMPANIES CAES WORKED
WITH ON COLLABORATIVE
EFFORTS IN FY 2015

CAES Industry Advisory Board Established

Primarily two drivers are defining the future outlook for global energy demands and infrastructure transitions: 1) a dramatic increase in the human population, and 2) the contribution of greenhouse gases to global climate change. This will place unprecedented pressure on our ability to provide sufficient energy, water and food. Our energy systems will undergo enormous transitions as we add more clean and renewable sources to existing fossil fuel and nuclear sources.

To meet this grand global challenge, CAES must leverage our collective expertise to partner with the private sector to advance regional energy solutions that have global impact. Our CAES Strategic Plan (2016-2022) calls out the necessity for CAES to become a national and global model for federal and state agencies to work effectively with the private sector. This year, we formed a CAES Industry Advisory Board to help develop a path forward for enhanced public-private partnerships. The Industry Advisory Board will provide guidance and assistance for how CAES, and its consortium members, can engage with industry partners and enable technologies to be commercialized.



Industry Advisory Board

Bill Bellamy, CH2M HILL,
Fellow & Sr. VP

Paul Kjellander,
Idaho Public Utilities
Commission,
President

Jay Larsen, Idaho
Technology Council,
President & Founder

Jeff Malmén, IDACORP &
Idaho Power,
VP for Public Affairs

Jim Nottingham,
LJ Enterprise
(Hewlett-Packard),
VP and General Manager

Janine Rush-Byers,
Micron,
University Relations
Manager

David Spurling, Simplot,
Sr. VP, Secretary, and
General Counsel

Raino Zoller, Trailhead,
Executive Director

CAES Work with Industry in FY 15

Industry highlights from this year include:

BSU's Energy Policy Institute collaborates with NuScale Power

The Center for Advanced Energy Studies' Energy Policy Institute (EPI) is working with NuScale Power, a developer of small modular nuclear reactors, to analyze the potential "economies of small" over the life cycle of a plant. EPI's David Solan and Dave Koehler are collaborating with BSU Economics Associate Professor Geoff Black and the University of Idaho's Fatih Aydogan (nuclear engineering) and Steven Peterson (economics) on the project.

NanoSteel Co. uses MaCS for advanced steel testing

NanoSteel used the CAES Microscopy and Characterization Suite to elucidate basic structural features in the development of next generation Advanced High Strength Steel (AHSS). They used Atom Probe Tomography combined with advanced sample preparation using Focused Ion Beam (FIB) at MaCS to study the chemical hierarchy of nanoscale grains and grain boundaries.

Accelerating Lab Impact – Lab-Corps Pilot Program

In 2014, the Department of Energy launched a \$2.3 million pilot program called Lab-Corps to accelerate the transfer of innovative clean energy technologies from the national laboratories into the commercial marketplace. CAES affiliate Idaho National Laboratory is one of seven laboratories participating in the Lab-Corps pilot program. INL selected two entrepreneurial teams, both

consisting of three people: a principal investigator, an entrepreneurial lead and an industry mentor. Each team focuses on one new technology.

INL's teams have the advantage of being able to tap into CAES universities. CAES members participating in Lab-Corps include Idaho State University's Small Business Development Center, Boise State University Venture College, and the Technology Deployment team at INL. This unique program allows the students working on the market assessments for the teams to get real-world experience and the INL teams to receive invaluable data.

Autonomous Systems Center of Excellence Fosters Cooperation and Innovation

In 2015, CAES and the Idaho Department of Commerce established the Idaho Autonomous Systems Center of Excellence (ASCE, pronounced "ace").

ASCE was created to foster the swift development, deployment, and commercialization of technologies that advance the competitiveness of the region, especially in the area of agriculture technology. ASCE has already generated regional economic benefits and is driving new business, university, and government partnerships. ASCE is intent on using unmanned aerial systems to take regional agriculture to the next level of high-tech.

ASCE provides a range of products and services for unmanned aerial systems (UAS) developers, researchers and users in need of access to test ranges, facilities, and most importantly, the equipment and personnel to acquire, analyze and visualize large complex data sets.



ASCE PROVIDES A RANGE OF
PRODUCTS AND SERVICES
FOR UNMANNED AERIAL
SYSTEMS (UAS) DEVELOPERS,
RESEARCHERS, AND USERS.

Publications, Presentations, & Proceedings

1. Aijlavajhala, M. S., Y. Gonzalez-Velo, C. Poweleit, H. Barnaby, M. N. Kozicki, D. P. Butt, and M. Mitkova, 2014, "New Functionality of Chalcogenide Glasses for Radiation Sensing of Nuclear Waste," *Journal of Hazardous Materials* 269: 68-73.
2. Ailavajhala, M. S., Y. Gonzalez-Velo, C. D. Poweleit, H. J. Barnaby, M. N. Kozicki, D. P. Butt, and M. Mitkova, 2014, "Thin Ge-Se Films as a Sensing Material for Radiation Doses," *Physica Status Solidi B* 251(7): 1347-1353.
3. Aijlavajhala, M. S., Y. Gonzalez-Velo, C. Poweleit, H. Barnaby, M. N. Kozicki, K. Holbert, D. P. Butt, and M. Mitkova, 2015, "Unraveling the Gamma Radiation Induced Effects in Floppy and Rigid Ge-Containing Chalcogenide Thin Films," submitted to *Journal of Applied Physics*.
4. Akbas, S., V. Martinez-Quiroga, F. Aydogan, C. Allison, and A. Ougouag, 2015, "Survey Coupling Schemes in Traditional Coupled Neutronics-Thermal-Hydraulics Codes," ASME 2015 International Mechanical Engineering Congress and Exposition, upcoming presentation IMECE201552990, Houston, Texas, November 13-19, 2015.
5. Alanko, G. A., B. J. Jaques, A. Bateman, and D. P. Butt, 2014, "Mechanochemical Synthesis and Spark Plasma Sintering of Cerium Silicides," *Journal of Alloy Compounds* 616: 306-311.
6. Alanko, G. A. and D. P. Butt, 2014, "Mechanochemical Synthesis of Cerium Monosulfide," *Journal of American Ceramic Society* 97(8): 23572359.
7. Alanko, G. A. and D. P. Butt, 2014, "Mechanochemical Synthesis of Uranium Sesquioxide," *Journal of Nuclear Materials* 451: 243248.
8. Alanko, G. A., D. Osterberg, B. J. Jaques, M. Hurley, and D. P. Butt, 2015, "Kinetics of the Nitridation of Dysprosium During Mechanochemical Processing," *Journal of Alloy Compounds* 620: 413-420.
9. Allahar, K. N., M. Hurley, E. Sapper, and D. P. Butt, 2014, "Simulation of the Relaxation Potential Profile of an ac-dc-ac Test," *International Journal of Corrosion* 1-12, 819476.
10. Allahar, K. N., J. Burns, B. Jaques, Y. Q. Wu, L. Charit, J. Cole, and D. P. Butt, 2014, "Ferritic Oxide Dispersion Strengthen Alloys by Spark Plasma Sintering," *Journal of Nuclear Materials* 443(1-3): 256-265.
11. Allahar, K., M. Hurley, E. Sapper, and D. P. Butt, 2015, "Interpretation of the Relaxation Potential Profile of an ac-dc-ac Test," accepted for publication in *Journal of Electrochemical Society*.
12. Allahar, K. N., M. Shaltry, D. P. Butt, M. Simpson, S. Phongikaroon, and K. Bateman, 2015, "EIS and CV Methods for Monitoring SmCl_3 Concentration in Molten LiCl-KCl Eutectic," submitted to *Electrochemical Acta*.
13. Allen, T. R., D. Kaoumi, J. P. Wharry, Z. Jiao, C. Topbasi, A. Kohnert, L. Barnard, A. Certain, K. Field, G. S. Was, D. L. Morgan, A. T. Motta, B. D. Wirth, and Y. Yang, 2015, "Characterization of Microstructure and Property Evolution in Advanced Cladding and Duct: Materials Exposed to High Dose and Elevated Temperature," *Journal of Materials Research* 30: 1246.
14. Andrews, B. and G. P. Potirniche, 2014, "Explicit and Implicit Lifetime Assessment Methods of 9Cr1Mo Steel Under Combined Creep and Fatigue Loads Using a Strip Yield Model," *International Mechanical Engineering Congress and Exposition (IMECE2014)*, Toronto, Canada, November 14-20, 2014.
15. Andrews, B. and G. P. Potirniche, 2015, "Constitutive Creep-Fatigue Crack Growth Methodology in Two Steels Using a Strip Yield Model," *Engineering Fracture Mechanics* 140: 72-91.
16. Aydogan, F., G. Black, M. Black, and D. Solan, 2015, "Quantative and Qualitative Comparison of Light Water and Advanced Small Modular Reactors," *Journal of Nuclear Engineering and Radiation Science*, Nuclear Safety Special Issue, DOI: 10.1115/1.4031098.
17. Aydogan, F. and G. Roth, 2015, "Six-Field Governing Equation Development for Advanced System Codes," 16th International Topical Meeting on Nuclear Reactor Thermalhydraulics (Nureth-16), 13089, Chicago, Illinois, August 30-September 4, 2015.
18. Aydogan, F., 2015, "Coupling between RELAP5 and LabVIEW," Hacettepe University, March 12, 2015.
19. Aydogan, F., 2015, "More Conservative Governing Equations," Texas A&M, January 21-22, 2015.
20. Aydogan, F., 2015, "New Developments in Nuclear Safety," in *International Nuclear Power Plants Summit*, March 19, 2015.
21. Aydogan, F., 2015, "Space Reactors," Istanbul Technical University, May 5, 2015.
22. Aydogan, F., J. Pack, and Z. Fu, 2015, "Qualitative and Quantitative Evaluation of Coupling Approaches for Coupling of RELAP and LabVIEW," *Nuclear Science and Engineering Journal*, RELAP5-3D Special Issue, NSE15-4.
23. Aydogan, F. and G. Roth, 2015, "Development of Governing Equations Based on Six Fields for the RELAP Code," *Nuclear Science and Engineering Journal*, NSE14-149.
24. Bartel N., M. Chen, V. P. Utgikar, X. Sun, I.-H. Kim, R. Christensen, and P. Sabharwal, 2015, "Comparison of Compact Heat Exchangers for Application as the Intermediate Heat Exchanger for Advanced Nuclear Reactors," *Annals of Nuclear Energy* 81: 143-149.
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26. Bian, J., J. Wu, R. Ulic, C. Karthik, and Y. Wu, 2015, "Structural Stability and Microwave Dielectric Properties of $(1-x)\text{Ba}(\text{Mg}_{1-x}\text{W}_{1-x})\text{O}_3-\text{Ba}(\text{RE}_{0.2}\text{W}_{0.8})\text{O}_3$ ($\text{RE} = \text{Sm}, \text{Dy}, \text{Y}, \text{Yb}$) Solid Solutions," *Journal of the European Ceramic Society* 35: 1431.
27. Black, G., M. T. Black, D. Solan, and D. Shropshire, 2015, "Carbon Free Energy Development: A Decision Framework for the Deployment of Small Modular Nuclear Reactors," *Renewable and Sustainable Energy Reviews* 43(1): 83-94.
28. Blay E.S., S. G. Schwabedissen, S. C. Reed, P. P. Sheridan, T. S. Magnuson, and K. A. Lohse, 2015, "Variation in Biological Soil Crust Bacterial Diversity with a Changing Climate," *Idaho Conference on Undergraduate Research 2015*, Boise, Idaho, July 29-30, 2015.
29. Braine, T., B. J. Jaques, J. Watkins, and D. P. Butt, 2015, "Preparations for Hydrothermal Corrosion of Uranium Nitride Composite Fuels," *Idaho Conference on Undergraduate Research*, Boise, Idaho, July 30, 2015.
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31. Burns, J., Y. Wu, D. P. Butt, J. Taylor, K. Morser-McIntyre, 2015, "Vickers Hardness and Depth-Sensing Hardness in ODS Alloys," *TMS2015*, Orlando, Florida, March 15-19, 2015.
32. Butt, D. P. and P. Price, 2014, "The Stability of Syngas Membrane Materials," University of Wyoming, Laramie, Wyoming, November 2014.

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS

FEBRUARY 18, 2016

33. Butt, D. P. and J. Neri, 2014, "The Construction of Art and Artists," *da Vinci Dialogues*, Idaho Discovery Center, Boise, Idaho, November 2014.
34. Butt, D. P. and P. Price, 2014, "Phase Transformations and Expansion Behavior in Ca Substituted Lanthanum Ferrites," *MS&T Annual Meeting*, Pittsburgh, Pennsylvania, October 2014.
35. Butt, D. P., 2015, "Phase Transformations and Stability of Oxygen Ion Conducting Membranes for Syngas Production," Penn State University, Richard E. Tressler Lecture, March 2015.
36. Butt, D. P. and P. Price, 2015, "Thermochemical Stability of Lanthanum Orthoferrite, Oxygen Ion Conducting Materials," Imperial College, London, April 2015.
37. Butt, D. P. and B. J. Jaques, 2015, "Research Activities in Synthesis and Performance of Uranium Nitride-Based Nuclear (Composite) Fuels," *3rd Annual CARAT Meeting*, Hopkins, South Carolina, July 13, 2015.
38. Cárdenas, E. S., E. T. E. Reedy, H. A. Seipel, B. H. Failor, and A. W. Hunt, 2015, "Comparison of Fission Signatures from β -delayed γ -ray and Neutron Emissions," *Nuclear Instruments & Methods in Physics Research A* 792: 67.
39. Carlisle, J., S. Kane, D. Solan, M. Bowman, and J. Joe, 2015, "Public Attitudes Regarding Large-Scale Solar Energy Development in the US," *Renewable and Sustainable Energy Reviews* 48: 835–847.
40. Charit, I., S. Pasebani, Y. Wu, J. Burns, K. N. Allahar, D. P. Butt, and J. I. Cole, 2015, "Lanthana-Bearing Nanostructured Ferritic Steels via Spark Plasma Sintering: Microstructural Characteristics and Mechanical Behavior," submitted to *Journal of Nuclear Materials*.
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42. Chen, M., I. Kim, X. Sun, R. N. Christensen, I. Skavdahl, V. Utgikar, and P. Sabharwal, 2014, "Preliminary Design of a Helical Coil Heat Exchanger for a Fluoride Salt-Cooled High-Temperature Test Reactor," *2014 ANS Winter Meeting*, Anaheim, California, November 2014.
43. Chen, W.-Y., Y. Miao, Y. Wu, C. A. Tomchik, K. Mo, J. Gan, M. A. Okuniewski, S. A. Maloy, and J. F. Stubbs, 2015, "Atom probe study of irradiation-enhanced α' precipitation in neutron-irradiated Fe-Cr model alloys," *Journal of Nuclear Materials* 426: 242.
44. Chen, M., I. Kim, X. Sun, R. N. Christensen, V. Utgikar, and P. Sabharwal, 2015, "Transient Analysis of an FHR Coupled to a Helium Brayton Cycle," *Progress in Nuclear Energy* 83: 283–293.
45. Csarnovics, I., M. R. Latif, T. Nichol, W. Kuang, M. Mitkova, M. Veres, S. Kokenyesi, 2015, "Dual Effects of Photo-Darkening and Photo-Bleaching in Ge-Se Films," *Journal of Material Science and Engineering A* 5(1–20): 78–86.
46. Collins, J. A., G. P. Potirniche, and S. R. Daniewicz, 2015, "Failure Modes: Performance and Service Requirements for Metals," *Mechanical Engineers' Handbook: Materials and Mechanical Design*, 4th Edition, Volume 1, Editor: M. Kutz, Wiley.
47. Cutler, R., J. Lu, J. Mok, C. Deng, K. Smith, J. Zhang, and H. Xiong, 2015, "A Redox-Active Porous Organic Framework for Efficient Energy Storage in Na-ion Batteries," (poster) *MRS 2015 Spring Meeting*, San Francisco, California, April 2015.
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52. Dolph, C. K., D. J. Da Silva, and J. P. Wharry, 2015, "Effective Strain Hardening Coefficient for Irradiated 9 wt% Cr ODS Alloy by Nano-Indentation and TEM," *Materials Research Society Fall Meeting*, Boston, Massachusetts, scheduled for November 2015.
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54. Dunzik-Gougar, M. L., 2014, "Irradiated Graphite: Characterization and Treatment for Recycle or Disposal," seminar at INET, Tsinghua University, China, November 2014.
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INSTRUCTION, RESEARCH AND STUDENT AFFAIRS

FEBRUARY 18, 2016

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66. Guillen, D. P., 2015, "Radiation Effects on the Thermophysical Properties of a New Neutron Absorbing Material," *2015 TMS Annual Meeting*, Orlando, Florida, March 15–19, 2015.
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SUBJECT

Board Policy III.P. Students – Student Health Insurance – First Reading

REFERENCE

April 2012	State Board of Education (Board) consideration of several options for SHIP policy waiver. Motion failed.
September 2012	Board considered first reading of amendments to SHIP policy. Motion failed.
April 2013	Board consideration of SHIP policy one-year waiver for Lewis-Clark State College with respect to mandatory student health insurance coverage. Returned to committee for further consideration.
December 2013	Board returned SHIP policy to committee for further consideration.
January 2015	Board approved first reading of proposed changes to Board Policy III.P.16 student health insurance.
February 2015	Board approved second reading of III.P.16.
August 2015	Board approved the first reading of proposed changes to Board Policy III.P.16.
October 2015	Board approved second reading of proposed changes to Board Policy III.P.16
December 2016	Board approved waiver to Board Policy III.P.16.b.i (which contained the definition of minimum required elements for “Affordable Care Act (ACA)-compliant” health insurance policies) and III.P.16.b.iv (actions required in the event of “non-compliance” with Board policy).

APPLICABLE STATUTES, RULE OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section III.P.16.

BACKGROUND / DISCUSSION

In December 2015 the Board waived two sub paragraphs of the Student Health Insurance policy. The waiver:

1. Eliminated the definition of “ACA-compliant” policies (which had listed ten mandatory criteria which, as determined upon later investigation, do not necessarily apply to ACA-compliant, large group policies, and would have categorized a large number of adequately-insured students as out of compliance with Board policy); and
2. Removed the mandatory guidelines previously in effect for full-time students found to be out of compliance with Board policy, giving institution presidents the discretion to deal with students on a case-by-case or group basis. The waiver prevented students who were covered under their parents’ large group health policies from being classified as non-compliant after institutional audits of students’

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insurance coverage. The waiver also enabled continued enrollment of students who fell into the “coverage gap” (incomes too low to qualify for federal subsidies which would have assisted them in acquiring insurance, but too high to qualify for Medicaid under Idaho’s current criteria). These students, many of whom were recognized by federal authorities as exempt from having to acquire health insurance, were automatically identified as non-compliers under Board policy and therefore ineligible to enroll as full-time students, regardless of other arrangements that they and their families had made. The temporary waiver has also provided more flexibility to institutions working with students and families for whom an “ACA-compliant” policy with high annual costs (\$2,500 to \$3,000 per year) and high deductible levels (often over \$1,000 per year) might put access to any the five institutions covered by Board policy out of reach.

The Board specified that the current waiver would remain in effect until September 1, 2016 (in order to prevent disruption to student enrollment through the fall 2016 semester)—or until amendment to policy Board III.P.16, whichever occurs first. Though the current waiver provides relief to the institutions and affected students for the current semester (spring 2016) and those hoping to enroll full-time in the upcoming (fall 2016) semester, the Board office continues to receive many calls of concern from students, families, insurance providers, and legislators regarding the mandatory health insurance provisions in Board policy.

Federal regulations and guidelines on health insurance are still in flux, as are the various plans offered by insurance providers. There is an ongoing “shake out” of firms participating in state health insurance exchanges. The one constant factor appears to be increasing costs, sometimes accompanied by reduced benefits. It is difficult to predict additional changes which may affect individuals, families, and institutions after the upcoming federal elections. It is also difficult for the Board to put in place a, “one size fits all” policy on student health insurance that would allow the flexibility needed on a group or case-by-case basis by students; or the discretion needed by the institutions to deal with their unique student populations, in-house health support/medical resources, and local community characteristics.

The proposed amendment would restore a measure of the flexibility and discretion enjoyed by the four four-year institutions and the technical college prior to the establishment of the Board’s original student health insurance policy that became effective July 1, 2003. The original justification for the Board’s policy—that uninsured students might pose an unsustainable drain on county and state contingency funds—has not been realized. With the advent of federal laws and guidelines on individual and employer health insurance, Board policy no longer serves as the primary determinant on whether students should be insured and, if so, in what manner. The proposed amendment would “level the playing field” so that students at the five institutions covered under current Board policy would be treated in the same manner as students at Idaho’s community colleges; and full-time students could have the same flexibility on health insurance matters that part-

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time students currently enjoy—subject to requirements which may be established by the presidents of the institutions.

IMPACT

The proposed amendment will eliminate the Board-level mandate that full-time students must obtain health insurance policies. The amended policy will give the presidents of Boise State University, Idaho State University, Lewis-Clark State College, the University of Idaho, and Eastern Idaho Technical College the authority to establish health-insurance requirements for all or particular groups of students (e.g., international students, intercollegiate athletes, students in designated health-profession or student teachers, etc.). Institutions would continue to be authorized to offer their own optional or mandatory insurance programs or health support programs funded by student activity or point of service fees. The amended policy would note that, when required by an institution, insurance and/or mandatory health support fees are authorized uses of student financial aid.

ATTACHMENTS

Attachment 1 – Section III.P.16. Student Health Insurance

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STAFF COMMENTS AND RECOMMENDATIONS

The proposed amendment should ameliorate problems which are impacting hundreds of students at each of the five institutions covered by current Board policy and reduce the volume of complaints/concerns expressed by students, parents, and legislators. The amended policy is better-suited to the current situation at the national, state, and local levels. The amendment provides appropriate flexibility to the institutions and their students. It is anticipated that the amended policy will have a positive impact on access, enrollment, and affordability at the affected institutions. Staff recommends approval.

BOARD ACTION

I move to approve the amendment to Board policy III.P.16, as presented in attachment 1.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

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Idaho State Board of Education

GOVERNING POLICIES AND PROCEDURES

SECTION: III. POSTSECONDARY AFFAIRS

SUBSECTION: P. STUDENTS

February 2016 ~~October 2015~~

The following policies and procedures are applicable to or for any person designated as a student at an institution under governance of the Board. A "student" means any person duly admitted and regularly enrolled at an institution under governance of the Board as an undergraduate, graduate, or professional student, on a full-time or part-time basis, or who is admitted as a non-matriculated student on or off an institutional campus.

1. Nondiscrimination

It is the policy of the Board that institutions under its governance must provide equal educational opportunities, services, and benefits to students without regard to race, color, religion, sex, national origin, age, handicap, or veterans status, including disabled veterans and veterans of the Vietnam era in accordance with:

- a. Title VI of the Civil Rights Act of 1964, as amended, 42 U.S.C. 2000d *et seq.*, which prohibits discrimination on the basis of race, color, or national origin in programs and activities receiving federal financial assistance.
- b. Section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. 794, which prohibits discrimination on the basis of handicap in programs and activities receiving federal financial assistance.
- c. Title IX of the Education Amendments of 1972, as amended, 20 U.S.C. 1681 *et seq.*, which prohibits discrimination on the basis of sex in education programs and activities receiving federal financial assistance.
- d. The Age Discrimination Act of 1975, as amended, 42 U.S.C. 6101 *et seq.*, which prohibits discrimination on the basis of age in programs or activities receiving federal financial assistance.
- e. Chapter 59, Title 67, Idaho Code, and other applicable state and federal laws.

2. Sexual Harassment

Each institution must establish and maintain a positive learning environment for students that is fair, humane, and responsible. Sexual discrimination, including sexual harassment, is inimical to any institution.

Sexual harassment violates state and federal laws and the Governing Policies and Procedures of the Board. "Sexual harassment" means an un-welcomed sexual advance, request for sexual favors, or behavior, oral statements, or physical conduct of a sexual nature when:

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- a. submission to such conduct is made either explicitly or implicitly a term or condition of a student's grade, receipt of a grade, or status as a student;
- b. an individual student's submission to or rejection of such conduct is used as a basis for a decision affecting the student; or
- c. such conduct has the purpose or effect of substantially interfering with a student's learning or learning performance, or creating an intimidating, hostile, or offensive learning environment.

Each institution must develop and make public procedures providing for the prompt, confidential, and equitable resolution of student complaints alleging an act of sex-based discrimination, including sexual harassment.

3. Academic Freedom and Responsibility

Institutions of postsecondary education are conducted for the common good and not to further the interests of either the individual student or the institution as a whole. Academic freedom is fundamental for the protection of the rights of students in learning and carries with it responsibilities as well as rights.

Membership in an academic community imposes on students an obligation to respect the dignity of others, to acknowledge the right of others to express differing opinions, and to foster and defend intellectual honesty, freedom of inquiry and instruction, and free expression on and off the campus of an institution. Expression of dissent and attempts to produce change may not be carried out in ways which injure individuals, damage institutional facilities, disrupt classes, or interfere with institutional activities. Speakers on the campuses must not only be protected from violence but must also be given an opportunity to be heard. Those who seek to call attention to grievances must do so in ways that do not significantly impede the functioning of the institution.

Students are entitled to an atmosphere conducive to learning and to fair and even treatment in all aspects of student-teacher relationships. Teaching faculty may not refuse to enroll or teach a student because of the student's beliefs or the possible uses to which the student may put the knowledge gained from the course. Students must not be forced by the authority inherent in the instructional role to make personal or political choices.

4. Catalog and Representational Statements

Each institution will publish its official catalogue and admissions, academic, and other policies and procedures which affect students. (See *also* "Roles and Missions," Section III, Subsection I-2.)

Each institutional catalogue must include the following statement:

Catalogues, bulletins, and course or fee schedules shall not be considered as binding contracts between [institution] and students. The

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[institution] reserves the right at any time, without advance notice, to: (a) withdraw or cancel classes, courses, and programs; (b) change fee schedules; (c) change the academic calendar; (d) change admission and registration requirements; (e) change the regulations and requirements governing instruction in and graduation from the institution and its various divisions; and (f) change any other regulations affecting students. Changes shall go into force whenever the proper authorities so determine and shall apply not only to prospective students but also to those who are matriculated at the time in [institution]. When economic and other conditions permit, the [institution] tries to provide advance notice of such changes. In particular, when an instructional program is to be withdrawn, the [institution] will make every reasonable effort to ensure that students who are within two (2) years of completing graduation requirements, and who are making normal progress toward completion of those requirements, will have the opportunity to complete the program which is to be withdrawn.

No employee, agent, or representative of an institution may make representations to, or enter into any agreement with, or act toward any student or person in a manner which is not in conformity with Board Governing Policies and Procedures or the approved policies and procedures of the institution.

5. Student Records

The collection, retention, use, and dissemination of student records is subject to the requirements of the Family Educational Rights and Privacy Act of 1974, as amended, and implementing regulations. Each institution will establish policies and procedures for maintenance of student records consistent with the act and implementing regulations and will establish and make public an appeals procedure which allows a student to contest or protest the content of any item contained in his or her institutional records.

6. Residency Status - Procedure for Determination

Rules and procedures for the determination of residency status for purposes of paying nonresident tuition are found in the State Board of Education Rule Manual IDAPA 08.01.04.

7. Full-Time Students

a. Undergraduate Student

For fee and tuition purposes, a “full-time” undergraduate student means any undergraduate student carrying twelve (12) or more credits (or equivalent in audit and zero-credit registrations).

i. Student Body Officers and Appointees

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For fee and tuition purposes, the president, vice president, and senators of the associated student body government are considered full-time students when carrying at least the following credit loads: (a) president, three (3) credits and (b) vice president and senators, six (6) credits.

ii. Editors

Editors of student published newspapers are recognized as full-time students when carrying a three credit load, and associate editors are recognized as full-time students when carrying a six credit load.

b. Graduate Student

For fee and tuition purposes, a “full-time” graduate student means any graduate student carrying nine (9) or more credits, or any graduate student on a full appointment as an instructional or graduate assistant, regardless of the number of credits for which such instructional or graduate assistant is registered.

8. Student Governance

The students at each institution may establish a student government constitution for their own duly constituted organization, which must be consistent with Board Governing Policies and Procedures. Each student constitution must be reviewed and approved by the Chief Executive Officer. Any amendments to the student constitution must also be reviewed and approved by the Chief Executive Officer.

9. Student Financial Aid

Each institution will establish policies and procedures necessary for the administration of student financial aid.

a. Transfer of Delinquent National Direct Student Loans. (See Section V, Subsection P)

b. Student Financial Aid Fraud

Each institution under governance of the Board should, as a matter of policy, initiate charges against individuals who fraudulently obtain or misrepresent themselves with respect to student financial aid.

10. Fees and Tuition

a. Establishment

Policies and procedures for establishment of fees, tuition, and other charges are found in Section V, Subsection R, of the Governing Policies and Procedures.

b. Refund of Fees

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Each institution will develop and publish a schedule for refund of fees in the event a student withdraws in accordance with regulations governing withdrawal.

11. Student Employees

a. Restrictions

No student employee may be assigned to duties which are for the benefit of personal and private gain, require partisan or nonpartisan political activities, or involve the construction, operation, or maintenance of any part of any facility which is used for sectarian instruction or religious worship. No supervisor may solicit or permit to be solicited from any student any fees, dues, compensation, commission, or gift or gratuity of any kind as a condition of or prerequisite for the student's employment.

b. Policies and Procedures

Each institution will develop its own policies and procedures regarding student employment, including use of student employment as a part of financial assistance available to the student. Such policies and procedures must ensure that equal employment opportunity is offered without discrimination and that wage administration is conducted in a uniform manner. Such policies also must include a statement of benefits available to student employees, if appropriate.

c. Graduate Assistants

Each institution is delegated the authority to appoint within the limitations of available resources graduate assistants in a number consistent with the mission of the institution. Graduate assistantships are established to supplement a graduate student's course of study, with employment appropriate to the student's academic pursuits.

Each institution will establish its own procedures for appointment of graduate assistants which will include (a) qualifications, (b) clear and detailed responsibilities in writing, and (c) maximum number of hours expected and wages for meeting those requirements.

Matriculation, activity, and facility fees for graduate assistants will be paid either by the student or by the department or academic unit on behalf of the student. Graduate students will be covered by appropriate insurance in accordance with institutional procedures for work-related illness or injury.

d. Hourly or Contractual Employment

Each institution may employ students on an hourly or contractual basis in accordance with the needs of the various departments or units, available funds, and rules of the Division of Human Resources (or the University of Idaho classified employee system) or federal guidelines when work-study funds are used.

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12. Student Conduct, Rights, and Responsibilities

Each institution will establish and publish a statement of student rights and a code of student conduct. The code of conduct must include procedures by which a student charged with violating the code receives reasonable notice of the charge and is given an opportunity to be heard and present testimony in his or her defense. Such statements of rights and codes of conduct, and any subsequent amendments, are subject to review and approval of the chief executive officer.

Sections 33-3715 and 33-3716, Idaho Code, establish criminal penalties for conduct declared to be unlawful.

13. Student Services

Each institution will develop and publish a listing of services available to students, eligibility for such services, and costs or conditions, if any, of obtaining such services.

14. Student Organizations

Each student government association is responsible, subject to the approval of the institution's chief executive officer, for establishing or terminating student organizations supported through allocation of revenues available to the association. Expenditures by or on behalf of such student organizations are subject to rules, policies, and procedures of the institution and the Board.

15. Student Publications and Broadcasts

Student publications and broadcasts are independent of the State Board of Education and the institutional administration. The institutional administration and the State Board of Education assume no responsibility for the content of any student publication or broadcast. The publishers or managers of the student publications or broadcasts are solely liable for the content.

16. Student Health Insurance

Students are responsible for making arrangements for coverage of their medical needs while enrolled in a post-secondary institution on a part or full time basis. Accidents, injuries, illnesses, and other medical needs of students (with limited exceptions in the case of student employees of an institution who experience workplace injuries within the course and scope of their employment) typically are not covered by the institution's insurance policies. The types and levels of medical/clinical support services available to students varies among the institutions and among the local communities within which institutions conduct operations.

~~The Board's student health insurance policy is a minimum requirement. Each institution, at its discretion, may adopt policies and procedures more stringent than those provided herein.~~

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a. Health Insurance Coverage Offered through the Institution

Each institution, at the discretion of its chief executive officer, may provide the opportunity for students to purchase health insurance through an institution-offered plan. ~~Health insurance offered through the institution shall be Affordable Care Act (ACA) compliant.~~ Institutions are authorized to provide student health insurance plans through consortium arrangements, when this option serves the interests of students and administration. Institutions which elect to enter contractual arrangements to offer student health insurance plans (either singly or through consortium arrangements) shall comply with applicable Board and State Division of Purchasing policies. Institutions which elect to offer health insurance plans to their students are authorized, at the chief executive officer's discretion, to make student participation in such plans either optional or mandatory.

b. Mandatory Student Health Insurance

Each institution, at the discretion of its CEO, may require all or specified groups of students (for example, international students, intercollegiate athletes, health professions students engaged in clinical activities, student teachers, etc.) to carry health insurance that meets coverage types and levels specified by the institution. Administration and enforcement of any such health insurance requirements, and procedures for dealing with any exceptions thereto, lies within the authority of the institution.

~~Every full-fee paying full-time student (for purposes of federal financial aid) attending classes in Idaho shall be covered by an ACA compliant health insurance policy. Students without proof of health insurance coverage shall be ineligible to enroll full-time at an institution. Each institution shall monitor and enforce student compliance with this policy.~~

i. ~~"ACA compliant" means a health insurance policy which meets the minimum coverage requirements classified by the ACA as "essential health benefits." Essential health benefits include items and services within at least the following 10 general categories: ambulatory patient services; emergency services; hospitalization; maternity and newborn care; mental health and substance use disorder services, including behavioral health treatment; prescription drugs; rehabilitative and habilitative services and devices; laboratory services; preventive and wellness services and chronic disease management; and pediatric services (including oral and vision care).~~

ii. ~~Proof of Insurance. All full-time students shall provide proof of ACA compliant health insurance coverage. Proof of health insurance coverage shall include at least the following information:~~

~~1) Name of health insurance carrier~~

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- ~~2) Policy number~~
- ~~3) Contact information for employer, insurance company or agent who can verify coverage~~
- ~~4) Attestation by the student, parent or guardian that health insurance policy is ACA compliant~~

~~Along with proof of insurance, students shall certify they will maintain active and continuous ACA-compliant insurance coverage for the duration of their time enrolled as a full-time student.~~

~~iii. Temporary Insurance Coverage. A full-time student may have a non-ACA compliant policy before registration for their first semester of attendance, but such a student shall sign an affidavit that they will enroll in ACA compliant insurance by the end of the first available health insurance exchange open-enrollment period. At no other time may a full-time student be enrolled without ACA compliant insurance.~~

~~iv. Non-compliance. A student found to be out of compliance with this policy while enrolled at an institution, shall be ineligible for full-time enrollment in future terms (fall, or spring) until insurance is obtained and proof thereof is certified; provided however, that if health insurance is offered through an institution and a student is found in non-compliance, the institution may default enroll the student into the institution's student health insurance plan and charge the student's account.~~

c. Other Medical Support Services and Fees

Institutions are authorized to support or supplement students' medical needs through services provided by college/university clinics, health centers, cooperative arrangements with community/regional health care providers, etc. In cases where such services are provided, institutions are authorized to establish optional or mandatory fees to cover the delivery cost of such services.

d. Financial aid considerations.

Any medical insurance or health services-related fees which are mandated by an institution as a condition of participation in any institutional program are considered a bona fide component of the institution's cost of college and are a legitimate expenditure category for student financial aid.

17. Students Called to Active Military Duty

The Board strongly supports the men and women serving in the National Guard and in reserve components of the U.S. Armed Forces. The Board encourages its institutions to work with students who are called away to active military duty during the course of an academic term and provide solutions to best meet the student's current and future

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academic needs. The activated student, with the instructor's consent, may elect to have an instructor continue to work with them on an individual basis. Additionally, institutions are required to provide at least the following:

- a. The activated student may elect to completely withdraw. The standard withdrawal deadlines and limitations will not be applied. At the discretion of the institution, the student will receive a "W" on his or her transcript, or no indication of enrollment in the course(s).
- b. One hundred percent (100%) of the paid tuition and/or fees for the current term will be refunded, as well as a pro-rated refund for paid student housing fees, meal-plans, or any other additional fees. Provided, however, that if a student received financial aid, the institution will process that portion of the refund in accordance with each financial aid program.

18. Student Complaints/Grievances.

The State Board of Education and Board of Regents of the University of Idaho, as the governing body of the state's postsecondary educational institutions, has established the following procedure for review of institution decisions regarding student complaints/grievances:

- a. The Board designates its Executive Director as the Board's representative for reviewing student complaints/grievances, and authorizes the Executive Director, after such review, to issue the decision of the Board based on such review. The Executive Director may, in his/her discretion, refer any matter to the Board for final action/decision.
- b. A current or former student at a postsecondary educational institution under the governance of the Board may request that the Executive Director review any final institutional decision relating to a complaint or grievance instituted by such student related to such individual's attendance at the institution. The student must have exhausted the complaint/grievance resolution procedures that have been established at the institution level. The Executive Director will not review complaints/grievances that have not been reported to the institution, or processed in accordance with the institution's complaint/grievance resolution procedures.
- c. A request for review must be submitted in writing to the Board office to the attention of the Chief Academic Officer, and must contain a clear and concise statement of the reason(s) for Board review. Such request must be received in the Board office no later than thirty (30) calendar days after the student receives the institution's final decision on such matter. The student has the burden of establishing that the final decision made by the institution on the grievance/complaint was made in error. A request for review must include a copy of the original grievance and all proposed resolutions and recommended decisions issued by the institution, as well as all other documentation necessary to demonstrate that the student has strictly

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followed the complaint/grievance resolution procedures of the institution. The institution may be asked to provide information to the Board office related to the student complaint/grievance.

- d. The Chief Academic Officer will review the materials submitted by all parties and make a determination of recommended action, which will be forwarded to the Executive Director for a full determination. A review of a student complaint/grievance will occur as expeditiously as possible.
- e. The Board office may request that the student and/or institution provide additional information in connection with such review. In such event, the student and/or institution must provide such additional information promptly.
- f. The Board's Executive Director will issue a written decision as to whether the institution's decision with regard to the student's complaint/grievance was proper or was made in error. The Executive Director may uphold the institution's decision, overturn the institution's decision, or the Executive Director may remand the matter back to the institution with instructions for additional review. Unless referred by the Executive Director to the Board for final action/decision, the decision of the Executive Director is final.

The Board staff members do not act as negotiators, mediators, or advocates concerning student complaints/grievances.

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BOISE STATE UNIVERSITY

SUBJECT

Ph.D. in Ecology, Evolution, and Behavior

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section III.G.

BACKGROUND/DISCUSSION

Boise State University (BSU) proposes to create a new program that will award a Ph.D. degree in Ecology, Evolution, and Behavior (PhD in EEB). The proposed program will be offered face-to-face in BSU's regional service area.

The creation of the program follows directly from the principles of Program Prioritization. Boise State University identified programs in the Department of Biological Sciences as being among the strongest at BSU: the BS in Biology, MS/MA in Biology, and MS in Raptor Biology all placed in the first quintile, and were at the 100th, 88th, and 90th percentiles respectively. Because of these rankings and because there is substantial need for increased instructional capacity at the undergraduate level, the Department of Biological Sciences is an excellent candidate for investment of new resources.

Subsequent to Program Prioritization, the department developed a comprehensive and holistic plan that would substantially increase the quality, relevance, productivity, and efficiency of the department and its programs at both the graduate and undergraduate levels. The plan involves two primary components: (i) create a robust PhD in EEB and (ii) make a number of substantial changes to undergraduate biology instruction and degree programs.

The proposed PhD in EEB will be transdisciplinary, bringing together faculty members from three academic departments (Biological Sciences, Geosciences, and Anthropology), a research center (Human-Environment Systems), and three organizations: the U.S. Geological Survey Snake River Field Station, The Peregrine Fund, and the Intermountain Bird Observatory. The proposed program will also make substantial use of collaborations with faculty members at the University of Idaho (UI) and Idaho State University (ISU).

The proposed program will train interdisciplinary scientists to use theory from biological, physical, and social sciences to contribute to basic research and solve applied problems. Students will develop new understanding of complex ecosystems, and the organisms that inhabit and interact in them, as a means for delivering actionable and understandable knowledge to our nation's public and decision-makers.

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Investment in the creation of a PhD in EEB will yield a wide range of substantial benefits. First, PhD-level teaching assistants will expand the instructional capacity of an over-enrolled suite of baccalaureate programs at relatively low cost. The resulting expansion will overcome bottlenecks that now impede progress of BS-degree seeking students across biological and health sciences programs. The department will also expand use of Learning Assistants and revise their undergraduate curriculum. These changes will lead to increased student success, retention, and progression to degree; increased credit hour production (estimated at a worth of \$600k); and an increase in the number of baccalaureate graduates in the biological and health sciences.

Second, PhD-level students take on more complex and longer-duration research projects compared to master's-level students, thereby increasing research productivity, increasing success in securing research grants, and enabling BSU faculty members to better collaborate with faculty members at UI and ISU. Importantly, much of the increased research productivity would involve current faculty members who have substantial latent scholarly potential that can only be realized with implementation of a PhD program. Note that increased research productivity and increased inter-institutional collaboration are goals of the Board's Strategic Plan for Research

In addition, increased research productivity will enhance the value of the university to organizations with which BSU faculty members have long-standing and productive collaborations (e.g., USGS Snake River Field Station, The Peregrine Fund, U.S. Fish and Wildlife Service, U.S. Bureau of Land Management, Idaho Department of Fish and Game) and with which partnerships are now developing (e.g., Greg Carr's Gorongosa Restoration Project).

Third, the proposed program aligns closely with the mission of the Idaho Experimental Program to Stimulate Competitive Research (EPSCoR) program, which is to build research competitiveness of the state's universities. The main area of EPSCoR investment at BSU is the Human-Environment Systems Center, which is directly related to the proposed PhD in EEB. The state has made substantial investments in support of the Idaho EPSCoR mission; for example, hundreds of thousands of dollars of the annual higher education budget are necessary to support faculty members at UI, ISU, and BSU – positions that were initially supported by EPSCoR funds. To make the most of this and other investments by the state requires Boise State University to develop the programs necessary to achieve its greatest potential in terms of research productivity, graduate education, and the long-term retention and productivity of these faculty investments.

The proposed program will also contribute to the long-term sustainability of Idaho's EPSCoR program by demonstrating substantial return on the investment of National Science Foundation (NSF) resources. Dr. Peter Goodwin, Director of Idaho's EPSCoR program, stated in his letter of support:

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“The proposed PhD ... is a logical next step to build on past investments and ensure the continued growth and sustainability of these initiatives. Failure to establish a PhD program will inhibit the research growth and ONEIdaho partnerships established across the state and beyond.”

Fourth, the program will provide place-bound Treasure Valley biologists and anthropologists with the opportunity to advance professionally. The Treasure Valley is home to a number of federal and state agencies, non-governmental organizations, environmental consulting firms, and educational institutions with employees who would benefit from the proposed program.

Finally, the proposed program will enable BSU to expand the use of Vertically Integrated Projects (VIPs), which use teams of undergraduate students, graduate students, and faculty members to solve complex research problems. VIPs are designed to increase the quality of both undergraduate and master-degree programs at Boise State University. Increased coursework associated with the proposed program also will increase the quality of existing master-degree programs in biological sciences and anthropology.

In summary, creation of a PhD in EEB at BSU entails a logical, responsible, efficient, and cost-effective use of resources. The investment will reap significant dividends in terms of building the research and educational training capacity of the state (NSF-EPSCoR goal), further establishing Idaho's higher education system as a leader in the field of ecological research and education (Idaho-EPSCoR goal), and provide numerous benefits to all of Idaho's institutions of higher education by enhancing opportunities for cross-institutional collaboration (Idaho-SBOE goal).

There exist several programs at UI and ISU that have partial overlap with the proposed PhD in EEB: UI offers PhD's in Natural Resources, in Environmental Science, and in Biology. ISU offers PhD's in Biology and in Microbiology.

IMPACT

The budget for the proposed program reaches approximately \$1.5M in ongoing funding by the fourth year, with an estimated \$600k derived from increased enrollments that will result from increased undergraduate teaching capacity. Also by the fourth year, approximately \$1.2M of one-time funds is budgeted, with approximately \$900k of that derived from federal grants.

ATTACHMENTS

Attachment 1 –Ph.D. in Ecology, Evolution, and Behavior Proposal with Appendixes A through G.	Page 5
Attachment 2 – Appendix H: Faculty CVs for the proposal	Page 115

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STAFF COMMENTS AND RECOMMENDATIONS

Boise State University (BSU) proposes the creation of a new academic program that will award a Ph.D. in Ecology, Evolution, and Behavior. BSU projects an incoming cohort of 7 students each year with a total average enrollment of 40 students in the program at any one time once the program is fully up and running.

The proposed Ph.D., in Ecology, Evolution, and Behavior is consistent with BSU's Five-Year Plan. Currently, as per Board Policy III.Z, no institution has the statewide program responsibility to offer a Ph.D. degree in Ecology, Evolution, and Behavior. The UI has raised concerns with BSU's proposed program based on overlap with its existing Ph.D. in Natural Resources (for which it has statewide program responsibility) and its PhDs in Environmental Studies and Biology. BSU argues that although there is partial overlap, the benefits of the creation of the program far outweigh any negative aspects that arise from whatever degree of duplication that partial overlap represents.

The proposal went through the program review process and was presented to the Council on Academic Affairs and Programs (CAAP) on January 14, 2016. CAAP held considerable discussion regarding the proposed program, and discussed concerns expressed by the University of Idaho (UI) regarding statewide mission and duplication of existing programs offered by the UI. While it was acknowledged that there is some program overlap with UI programs, CAAP (a) recommended the proposal to be forwarded to IRSA with recommendation and (b) requested an interpretation of mission responsibilities in terms of statewide program responsibilities and its application to this specific program. That discussion was held at IRSA on February 4, 2016; IRSA recommends approval.

Staff recommends approval.

While the proposed budget for this program indicates BSU is not requesting new appropriated funding, Board Staff received questions about whether BSU intends to request state funding in the future (as it did with its College of Innovation and Design, for example). Upon inquiry, BSU stated it was unsure.

BOARD ACTION

I move to approve the request by Boise State University to create a new academic program that will award a Ph.D. in Ecology, Evolution, and Behavior.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

Idaho State Board of Education
 Proposal for Graduate and Doctoral Degree Program



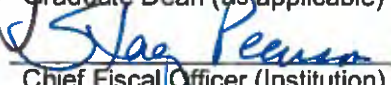

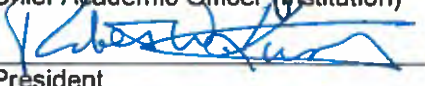
Date of Proposal Submission:	
Institution Submitting Proposal:	Boise State University
Name of College, School, or Division:	College of Arts and Sciences
Name of Department(s) or Area(s):	Department of Biological Sciences

Program Identification for Proposed New, Modified, or Discontinued Program:

Title:	Ecology, Evolution, and Behavior <u>and</u> Ecology, Evolution, and Behavior with emphasis in Global Change Biology	
Degree:	Doctor of Philosophy	
Method of Delivery:	Face-to-Face	
CIP code (consult IR /Registrar)	26.1301 Ecology 26.1303 Evolutionary Biology 26.0708 Animal Behavior and Ethology	
Proposed Starting Date:	Fall, 2017	
Indicate if the program is:	<input checked="" type="checkbox"/> >>Regional Responsibility<<	<input type="checkbox"/> Statewide Responsibility

Indicate whether this request is either of the following:

- | | |
|--|---|
| <input checked="" type="checkbox"/> New Graduate Program | <input type="checkbox"/> Contract Program/Collaborative |
| <input checked="" type="checkbox"/> New Doctoral Program | <input type="checkbox"/> Expansion of an Existing Graduate/Doctoral Program |
| <input type="checkbox"/> New Off-Campus Graduate Program | <input type="checkbox"/> Consolidation of an Existing Graduate/Doctoral Program |
| <input type="checkbox"/> New Off-Campus Doctoral Program | <input type="checkbox"/> Discontinuation of an existing Graduate/Doctoral Program |

	11/25/15
College Dean (Institution)	Date
	11/24/2015
Graduate Dean (as applicable)	Date
	11/28/2015
Chief Fiscal Officer (Institution)	Date
	11/28/15
Chief Academic Officer (Institution)	Date
	12/1/15
President	Date

Vice President for Research (as applicable)	Date
Academic Affairs Program Manager	Date
Chief Academic Officer, OSBE	Date
SBOE/OSBE Approval	Date

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Before completing this form, refer to Board Policy Section III.G., Program Approval and Discontinuance. This proposal form must be completed for the creation of each new program and each program discontinuation. All questions must be answered.

- 1. Describe the nature of the request.** Will this program be related or tied to other programs on campus? Please identify any existing program, option that this program will replace.

Boise State University (BSU) proposes the creation of a new **Ph.D. in Ecology, Evolution, and Behavior (EEB)** as the next step in our progression as a research university.

The creation of a PhD in EEB will produce important benefits that include the following:

- Production of scientists able to solve complex and important problems. The proposed program will train interdisciplinary scientists to use theory from biological, physical, and social sciences to contribute to basic research and solve applied problems. Students will develop new understanding of complex ecosystems, and the organisms that inhabit and interact in them, as a means for delivering actionable and understandable knowledge to our nation's public and decision-makers.
 - The program will strengthen BSU's work with two long-standing key partners, the Peregrine Fund and the US Geological Survey's Snake River Field Station, as well as with a wide range of other organizations such as the US Bureau of Land Management and the Idaho Department of Fish and Game.
 - The program will greatly increase BSU's ability to create new partnerships, such as our new relationship with Greg Carr and his Gorongosa Restoration Project being undertaken in Gorongosa National Park in Mozambique. On September 8, 2015, a Memorandum of Understanding (Appendix A) between BSU and the Gorongosa Restoration Project was finalized; that MOU lays the groundwork for the creation of research projects that will address many of the challenges faced by Gorongosa Park. Already, BSU researchers have visited the park, and additional visits are planned.
- Increased success and sustainability of Idaho's EPSCoR efforts. Instead of representing an "unnecessary duplication" of programs among the universities, the similarity of the proposed programs with programs at the University of Idaho (UI) and Idaho State University (ISU) is highly desirable.
 - The new program will join with robust PhD programs at the University of Idaho and at Idaho State University (ISU) to strengthen research collaborations among institutions and help ensure the long-term sustainability of Idaho's EPSCoR effort. Without the proposed program, there is increased danger of losing funding and of attrition of highly-qualified faculty members. With the new program, Idaho's EPSCoR program will have greater success, to the benefit of UI and ISU.
 - A key goal of Idaho EPSCoR is to build research capacity at the PhD-level; importantly, the program relies on student cohorts across institutions to help build this capacity and to increase collaboration among Idaho's institutions. Idaho's EPSCoR effort is led by the University of Idaho, and the Project Director (UI faculty member Dr. Peter Goodwin) has lent his unequivocal support to the creation of BSU's PhD in EEB, stating in his letter of support,

"The proposed PhD ... is a logical next step to build on past investments and ensure the continued growth and sustainability of these initiatives. Failure to establish a PhD program will inhibit the research growth and ONEIDaho partnerships established across the state and beyond."

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Dr. Goodwin also noted that,

“PhD programs and PhD students carry much of the load in conducting research and bring a technical capacity and quality of student that is not possible at the undergraduate or masters level.”

- **Implementation of key Program Prioritization actions.** In Dickeson’s (2010) program prioritization model, institutional effectiveness is increased by investing in the expansion of the strongest programs at the institution. BSU’s program prioritization revealed that the programs of the Department of Biological Sciences are among the strongest at BSU: the BS in Biology, MS/MA in Biology, and MS in Raptor Biology all placed in the first quintile, and were at the 100th, 88th, and 90th percentiles respectively. Our investment will have two aspects:
 - At the graduate level, the new Ph.D. will be created, resulting in (i) the production of scientists able to work in transdisciplinary settings to solve complex ecological and evolutionary problems, (ii) increased research productivity and inter-institutional collaborations, and (iii) increased teaching capacity at the undergraduate level.
 - At the undergraduate level, the curriculum is being revised and instructional assignments restructured, resulting in (i) removal of bottlenecks to student progression in the BS Biology program, one of the largest on campus, (ii) removal of bottlenecks in courses taken by students in health sciences majors (e.g., nursing, pre-medical studies), and (iii) increased quality of the existing BS in Biology program and in the BA in Anthropology program by facilitating undergraduate training and interaction with PhD students through teaching and research opportunities.

Foundations of the proposed PhD program:

The proposed program will be built on a foundation that consists of the following:

1. A strong conceptual core.

The proposed PhD in EEB is grounded in the belief that to successfully address the complex ecological and evolutionary problems of the day, science and scientists must have three key components. First, scientists must develop a traditional foundation of disciplinary depth of knowledge and expertise. Second, scientists must develop skills and expertise that transcend disciplinary boundaries, including the communication skills necessary to translate their expertise to the public and scientists outside of their discipline. Third, scientists must be adept at developing collaborative partnerships that cross disciplinary, organizational, and geographical boundaries.

2. A Strong EPSCoR program and robust inter-institutional collaborations.

The proposed PhD in Ecology, Evolution, and Behavior is a natural fit for Idaho’s EPSCoR program, which has a focus on human-environment interactions in its current Track 1 award, entitled “Managing Idaho’s Landscape for Ecosystem Services – MILES.” The MILES program is hiring 12 new faculty members in the human environment systems theme, 4 of whom will be at Boise State. The EEB PhD program will help Idaho to retain these competitive faculty members by providing an advanced graduate degree program for their graduate students. As noted by Dr. Peter Goodwin, Project Director of Idaho EPSCoR,

“The proposed program will provide an important institutional foundation that will build Idaho’s statewide ability to compete for competitive federal research funding, to recruit high caliber faculty, attract high quality graduate students and to train Idaho’s workforce for the future.”

The proposed PhD will benefit from existing collaborative research endeavors. There are numerous examples of successful (i.e. extramurally funded) inter-institutional collaborations among faculty at BSU, ISU, and UI. These include collaborations stimulated by past and on-going EPSCoR awards, cross-

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institutional research projects supported by the Center for Advanced Energy Studies, and collaborative research projects funded by NSF. Examples of ongoing and recent research collaborations:

- NSF-funded research: “Modeling the Tradeoffs of Food-, Fear-, and Thermal-Scapes to Explain Habitat Use by Mammalian Herbivores”. A collaboration of faculty members Forbey at BSU, and Rachlow and Thorton at UI.
- NSF-funded research: “Does noise pollution filter vertebrate communities and have cascading consequences for insects, plants and ecosystems?” A collaboration of faculty members Barber at BSU and Reinhardt at ISU.
- US Fish and Wildlife Service and US Forest Service-funded research: “Hybrid speciation in *Castilleja christii*.” A collaboration of faculty members Smith at BSU and Tank at UI.
- NSF-funded research: “Integrated modeling and visualization of coupled socio-ecological systems and associated spatiotemporal patterns in ecosystem services. A collaboration of faculty members Flores at BSU and Smith at UI.
- NSF-funded research: “Novel interdisciplinary flume experiments to investigate the role of the hyporheic zone in greenhouse gas generation.” A collaboration of faculty members Feris and Benner at BSU and Tonina at UI.
- NSF-funded research: “Collaborative Research: How do hydrology and biogeochemistry control carbon flux from headwater streams to the atmosphere?” A collaboration of faculty members Feris at BSU and Tonina at UI.
- US Department of Agriculture-funded research: “Enhancing greenhouse gas mitigation and economic viability of manure management systems via production of value added carbon sequestration strategies”. A collaboration of faculty members Feris at BSU and Coats at UI.
- US Department of Agriculture-funded research: “Strengthening Seed Grant: Addressing the threat of Pale Cyst Nematodes (PCN) to potato crops using remote sensing.” A collaboration of faculty members Glenn at BSU, Delparte at ISU and Dandurand at UI.
- NSF-funded research: “Reynolds Creek Critical Zone Observatory, Hypothesis testing and model parameterization of soil respiration across a range of experimentally altered hydroclimates to enable predictions of ecosystem carbon balance in a changing climate, Determining interactive effects of climate induced changes in precipitation regime on soil microbial community structure and function.” A collaboration of faculty members Lhose at ISU, Flores and Benner at BSU, Seyfried at USDA ARS.
- US Bureau of Land Management-funded research: “Effects of Juniper Removal on the Nutritional Quality of Sagebrush in South-central Oregon.” A collaboration of faculty members Forbey at BSU and Reece at UI.
- NSF-funded research: “Cascading effects of urbanization on ecosystems.” A collaboration of faculty members de Graaff at BSU and Reinhardt at ISU.

3. Successful PhD Programs at Sister Institutions

The new program will join a strong family of highly successful and productive PhD programs and their faculties at UI and ISU, thereby providing ample opportunities for collaboration and for the sharing of coursework and other resources. UI offers a PhD in Natural Resources, a PhD in Biology, and a PhD in Environmental Science. ISU offers a PhD program in Biology and a PhD in Microbiology.

Dr. Michael Thomas, Director of ISU’s Molecular Research Core Facility, recognized the potential for collaborations in his letter of support,

“As [BSU’s] PhD program comes on line, they will be in a better position to join with ISU faculty in inter-institutional granting efforts that will bring new funding to both campuses. Such collaborative arrangements will become common between ISU and BSU, and both of our institutions will benefit.”

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Dr. Tim Frazier, Assistant Professor in UI's Department of Geography at UI, states in his letter of support that

"The EEB Ph. D. program will open new opportunities to train graduate students in fields at the interface of human and natural systems, which opens a host of new collaboration avenues between my research group at the University of Idaho and faculty at Boise State."

4. Depth in key transdisciplinary areas

As described in the following section, the faculty members of the proposed program have a wide breadth of expertise; they also have a penchant for transdisciplinary interaction. They are from three academic departments (Biological Sciences, Anthropology, and Geosciences) and one research group (Human-Environment Systems) at BSU and from two key partner organizations (the Peregrine Fund and the U.S. Geological Survey).

The program will have notable strength in the following seven areas, each of which requires a transdisciplinary perspective to achieve progress:

- **Raptor biology.** As top predators, raptors (birds-of-prey such as hawks, eagles, falcons, and owls) are sensitive to environmental change and are excellent indicators of ecosystem integrity. Although raptor biology is focused on a group that is relatively narrow in taxonomic terms, it is a group that is globally ubiquitous and culturally important, and many species in the group have protected status. In addition, the research of the raptor biologists at Boise State and affiliates spans a wide range of disciplines, including immunology, endocrinology, behavioral ecology, evolutionary genetics, reproductive physiology, conservation biology, and landscape ecology. Boise State is internationally recognized for research on raptor biology and maintains the nation's only Master's program in Raptor Biology. This program is supported by faculty members in the Department of Biological Sciences and key affiliate faculty from the Peregrine Fund and the USGS. Close proximity to the Morley Nelson Snake River Birds of Prey National Conservation Area and Lucky Peak Observatory (managed by Boise State's Intermountain Bird Observatory) provides exceptional opportunities to study local raptors year round. Additionally, worldwide interest in conservation of raptors and their environment takes researchers to distant field sites in Africa, South American, and other locations.
- **Chemical ecology.** The composition and concentration of chemicals in cells, tissues, organisms and the environment can strongly influence the behavior, distribution, and evolution of organisms. The University's investments in the Biomolecular Research Center (BRC) and in remote sensing technology in Geosciences have established exceptional opportunities for ecologists to benefit from state-of-the-art bioanalytical instrumentation to study the role of chemicals in ecological systems. For example, confocal and electron microscopy, micro-CT, and histology for imaging chemicals and x-ray diffraction, NMR, and mass-spectrometry for identifying and quantifying chemicals used primarily by biomolecular faculty allow ecologists to study chemical interactions occurring within organisms at small biological scales (cells and tissues) in the laboratory. In addition, access to near infrared spectrometers used primarily by geoscience faculty allow ecologists to study the fate and consequences of chemicals at larger spatial scales (live organisms, habitats, and landscapes) in the field.
- **Plant evolution and diversity.** The study of evolution involves multiple biological scales, from changes that occur at the population level from one generation to the next, to changes that occur at higher taxonomic levels and track diversity over millions of years. Botanical research at Boise State encompasses the full range of these scales and includes studies on vascular plants that are native to western North America and tropical regions of the world, plants that are invasive in North America and elsewhere, and fungal organismal diversity. The Snake River Plains herbarium, Boise State's collection of plant specimens includes over 50,000

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vascular plant specimens and over 15,000 fungal collections. These collections span over 100 years of plant collecting activity and are an important resource for monitoring plant diversity.

- **Biogeochemistry:** Availability of nutrients, productivity of ecosystems, distributions of species and the outcomes of their interactions are commonly determined or influenced by the complex interplay between biological, chemical, geological, and hydrological factors. Mechanistic understanding and predictive quantification of these processes is hampered by complex temporally and spatially variable interactions among these factors. The focus of the field is to improve our understanding of complex biogeochemical systems and to enhance our ability to predict how they will respond to perturbation. EEB faculty and their collaborators in BSU's Department of Geosciences and at UI and ISU have long running extramurally funded projects in this area.
- **Human Behavioral Ecology:** *Human behavioral ecology* applies evolutionary theory to the study of human behavior, explaining how adaptive behavior is expected in response to a broad range of environmental variables. HBE examines variation in human behavior within and between populations in light of competing life-history demands of growth, development, reproduction, mate acquisition, parental care, and non-kin cooperation. The expertise in the Department of Anthropology covers a range of human somatic and reproductive effort, including resource utilization and environmental interactions (present-day, historical, and prehistoric), reproductive decision-making and parenting, effects of environmental stress on growth and development, and evolution of social norms.
- **Global change biology.** The phrase *Global change biology* refers to any consistent trend in the environment that affects the biological systems of a substantial part of the globe. Humans are key drivers in creating global change through climate change, introduction of invasive species, and land use change via urbanization and sprawl, to name a few. Rapid, consistent drivers of change can create threats to natural systems that may be slow to respond. However, many threats to species and systems remain poorly understood, and therefore require substantial research effort. In addition, understanding the mechanism by which populations respond to environmental change will provide insight to the evolutionary ecology of a species or life history strategy. EEB faculty members in Biological Sciences, Anthropology, and Geosciences have research programs that address issues of global change biology, the coupled nature of human behavior and changes to natural systems.
- **Human-Environment Systems.** The Human Environment Systems (HES) initiative is a key component of the new College of Innovation and Design, and represents a focused integration of several of the above concepts. The four new faculty members in HES will be tasked with performing research at the human-environment interface. Their research will improve our understanding of how humans respond to and drive environmental change, and will therefore help to enable smart and sustainable growth at local, regional, national, and international scales. Climate change, food security, and species conservation are several of the global sustainability problems in which human and environmental systems intersect and interact.

5. *Strength of faculty*

The foundation of any PhD program is its faculty.

- The proposed program has at its core the faculty of the Department of Biological Sciences, with strong research programs in raptor biology, behavioral ecology, sensory ecology, chemical ecology, endocrinology, microbial community ecology, aquatic ecology, plant and fungal evolutionary biology and systematics, ecopharmacology, plant and animal physiological ecology, terrestrial plant-soil interactions, and biogeochemistry. Faculty members from the Human Environment Systems (HES) initiative in the College of Innovation and Design will also be key participants. The first two hires will have joint appointments with the Department of

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Biological Sciences and will add to the faculty base for the PhD program. Importantly, the skills and knowledge of these faculty members will add diversity and depth to graduate coursework and will expand the base of graduate advisors for the program.

- Faculty members in the Departments of Anthropology and Geosciences will be key participants in the program by advising students, teaching courses, and serving on graduate committees; thus, the program will build capacity for strong research programs in human behavioral ecology, geographic information systems, hydrology, and biogeochemistry.
- Participation of scientists from the U.S. Geological Survey's Forest and Rangeland Ecosystem Science Center (a federal research agency located on the Boise State Campus) and The Peregrine Fund, (a non-profit organization located in Boise) will create a collaborative and diverse environment for student training and a broad perspective about career paths for graduates. Already, these collaborators directly contribute to strong research programs in raptor biology (both locally and on an international scale), endangered species biology, ecosystem ecology, , biogeochemistry, global change biology, landscape ecology, conservation biology, ecological inventory and monitoring research and development, and restoration and management of ecological systems.

Over the past 9 years EEB faculty at Boise State have been awarded more than \$10 million in extramural research funds (see listings in CVs in Appendix G). These faculty led efforts have contributed significantly to expanding the research portfolio at Boise State. Extramural awards have come from multiple, competitive funding agencies (e.g. NSF, USDA, NIH, BLM, Forest Service, National Park Service, DOD, EPA, etc.), and have supported both interdisciplinary and disciplinary research.

EEB faculty members at Boise State have a strong international presence, which indicates their strength as researchers and their ability to connect with collaborators world-wide. They have published with international co-authors, for example, with collaborators from China, Germany, Belgium, United Kingdom, Colombia, Jamaica, Madagascar, and New Zealand. They serve on international graduate thesis committees, routinely are invited to present at international meetings (e.g. China, Columbia, Germany, Mexico, etc.), and host international Fulbright scholars and international speakers at Boise State (e.g. scientists from Iraq, Mexico, Switzerland, Ghana, and Uruguay, among others).

EEB faculty and students perform field research in Indonesia, Central America, Asia, and Europe, activities that directly expose the international scientific community to the caliber of faculty-led research at Boise State. Boise State maintains an active Herbarium that directly contributes to international research projects via specimen exchange in both Europe and Asia. Recent data indicate data from our herbarium are being accessed globally, with the majority of international requests for material originating from Europe. The faculty member who is the director of the herbarium serves as Editor-in-Chief for Systematic Botany, an international journal with approximately 50% of the submissions coming from outside the US.

Faculty members in the Department of Anthropology have international co-authors on publications on human reproductive ecology and evolutionary demography, have collaborators in Europe, Asia, Africa, South America, India, Russia, and Canada, and have been the recipients of multiple Fulbright awards that have resulted in development of collaborations between BSU and international faculty members.

Participating Faculty Members (see CVs in Appendix H)			
Name	Position	PhD Institution	Brief Research Description
BSU Department of Biological Sciences			
Jesse Barber	Assistant Professor	Wake Forest U	Sensory ecology, animal behavior, conservation biology
Marc Bechard	Professor	Washington State U	Raptor biology and ecology; habitat use in raptors
Jim Belthoff	Professor	Clemson U	Behavioral ecology, animal behavior, and avian biology

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Marie-Anne de Graaff	Assistant Professor	Wageningen U	Plant/Soil interactions in terrestrial ecosystems
Kevin Feris	Associate Professor	U Montana	Microbial community ecology; bioremediation studies
Jennifer Forbey	Associate Professor	U Utah	Physiological, chemical and pharmacological ecology
Eric Hayden	Assistant Professor	Portland State U	RNA evolution, biomedical & biotechnical molecules
Julie Heath	Associate Professor	U Florida	Avian biology and conservation ecology
Peter Koetsier	Professor	Idaho State U	Aquatic ecology; lotic macroinvertebrate ecology
Steve Novak	Professor	Washington State U	Plant evolutionary biology; introduced species
Ian Robertson	Professor	Simon Fraser U	Insect behavior and ecology; plant-insect interactions
Marcelo Serpe	Professor	U California Davis	Plant biochemistry and physiology
James Smith	Professor	U Wisconsin	Plant molecular systematics, cladistic analyses
Merlin White	Associate Professor	U Kansas	Fungal molecular systematics, arthropod-associated fungi
BSU Human-Environment Systems Initiative, College of Innovation and Design			
Jodi Brandt	Assistant Professor	U of Wisconsin	Land use science, remote sensing, conservation biology
Neil Carter	Assistant Professor	Michigan State U	Socio-environmental systems
BSU Department of Anthropology			
Samantha Blatt	Visiting Asst Prof	Ohio State U	Osteology, dental morphology/histology, bioarchaeology
Kathryn Demps	Assistant Professor	U California Davis	Cultural evolution, behavioral and evolutionary ecology
Christopher Hill	Professor	Southern Methodist U	Environmental archaeology-geoarchaeology
Mark Plew	Professor	Indiana U	Archaeology of Western North America
Kristin Snopkowski	Assistant Professor	U New Mexico	Human behavioral ecology, evolutionary demography
Pei-Lin Yu	Assistant Professor	Southern Methodist U	Ethnoarchaeology, human response to climate change
John Ziker	Professor	U Calif Santa Barbara	Kinship, social organization, and demography
BSU Department of Geosciences			
Shawn Benner	Associate Professor	U Waterloo	Ecohydrology, biogeochemistry
Alejandro Flores	Associate Professor	MIT	Ecohydrology and modeling, remote sensing
Nancy Glenn	Professor	U Nevada Reno	Remote sensing, image analysis, geological engineering
Matt Kohn	Distinguished Professor	Rensselaer Polytechnic Institute	Geochemistry, petrology, and paleoecology
Jen Pierce	Associate Professor	U New Mexico	Geomorphology & Paleoclimatology
BSU Intermountain Bird Observatory			
Jay Carlisle	Research Director ; Research Asst Prof	U South Dakota	Avian migration and physiological ecology
US Geological Survey			
Matthew Germino	Supervisory Research Ecologist	U Wyoming	Plant-soil-climate relationships; biophysical ecology
Todd Katzner	Research Wildlife Biologist	Arizona State U	Conservation biology, ornithology, mammalogy
Steven Knick	Supervisory Research Ecologist	U Montana	Spatial and temporal dynamics of western US shrublands
David Pilliod	Supervisory Research Ecologist	Idaho State U	Herpetology, wildlife ecology, stream & fire ecology
Douglas Shinneman	Supervisory Research Fire Ecologist	U Wyoming	Fire , landscape, restoration and, plant ecology
The Peregrine Fund			
David Anderson	Director Gyrfalcon Conservation Project	Louisiana State U	Raptor biology; ecological structure and function
Chris McClure	Dir Amer. Kestrel Partnership, Quantitative Ecol.	Auburn U	Vertebrate monitoring and ecological modeling

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Rick Watson	V.P., Director International Programs	U Witwatersrand	Raptor ecology and conservation
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6. Key Partnerships

Participation of scientists from three key partner organizations is important to the success of the program: the Peregrine Fund, the USGS Forest and Rangeland Ecosystem Science Center's Snake River Field Station, and the Gorongosa Restoration Project. Access to a PhD program in EEB will allow us to leverage these relationships even further, while simultaneously strengthening the operations of the partner organizations. The research scientists in both organizations are all affiliate graduate faculty in the Department of Biological Sciences and would continue in this role with the addition of a PhD in EEB. These relationships will provide immediate and important expansion of our PhD training and advisory capacity beyond that provided by the tenure-track faculty at BSU.

The Peregrine Fund, located in Boise, is a non-profit organization dedicated to conservation and study of raptors. They advance the knowledge of avian biology, ecology, and conservation through research, training, and education to improve global environmental health and to conserve biological diversity. The Peregrine Fund has on-going projects in North American, Africa, Asia, the Arctic, and the Neotropics.

The Peregrine Fund is very interested in maintaining and growing their strong connection with Boise State via new opportunities for student training at the PhD level. Peregrine Fund scientists now co-advise MS level students in the MS Raptor Biology and MS Biology programs. A former postdoctoral research associate from Boise State is the quantitative ecologist for the Peregrine Fund who collaborates with BSU EEB faculty on NSF proposals and on-going research projects in population modeling in response to noise and light pollution. The on-going collaborations between BSU and the Peregrine Fund and the involvement of MS students in Peregrine Fund research projects indicate how this relationship has helped build our current graduate programs and research portfolio; a new PhD will further strengthen these connections. As noted by Peter Jenny, President of The Peregrine Fund in his letter of support (see Appendix E),

"The 30-year partnership between The Peregrine Fund and Boise State University at the Master's degree level has been important for collaboration on research and student training in the field of raptor biology, ecology and conservation. A Ph.D. program in the Department of Biological Sciences would be valuable to The Peregrine Fund because it will increase opportunities for research collaboration at an advanced academic level not previously available to us locally and for which we have had to seek the collaboration of other universities in the past. The program would benefit from our partnership because of the depth and geographic scope of expertise in raptor biology and conservation brought by our scientists, and the opportunities these would provide to students participating in the Ph.D. program."

The USGS Forest and Rangeland Ecosystem Science Center's Snake River Field Station (USGS FRES SRFS) is located on the Boise State University campus. The scientists of the SRFS work throughout the western United States, particularly in the public lands of the Intermountain West, Great Basin, and Columbia Plateau. Their work addresses wildlife monitoring protocols; sage-grouse distribution, population trends, and habitat associations; rangeland ecology and restoration; invasive-species management; fire ecology; avian ecology; regional ecological assessments; ecosystem structure and function (including biogeochemistry); effects of global change on ecosystems, wildlife species, and habitats; alternative energy development and wildlife; and biological statistics.

The SRFS has a strong current and historic relationship with Boise State's Department of Biological Sciences. The strong cooperative relationship between BSU and the USGS has also benefitted researchers in the departments of Geosciences, Engineering, and Public Policy. The SRFS director and

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BSU Biological Sciences faculty were instrumental in developing the Raptor Biology MS program at BSU and acquiring the funding necessary to support graduate teaching assistantships in that program. A number of SRFS scientists currently serve as graduate faculty at BSU. In the past 5 years, SRFS scientists have served on 17 graduate thesis committees, having acted as major advisor for 6 of those graduate students. SRFS scientists also have co-taught and delivered course content in graduate level courses in Biology and Anthropology. Finally, a number of graduates of our master's programs have found employment with the SRFS.

The new PhD will expand the depth and continuity of the teaching relationship and enable longer term research program development. It will also provide EEB PhD candidates a conduit to SRFS research and work which will allow them to develop an intimate familiarity with, and therefore become well trained for, thus providing an avenue of post-graduate career development.

As noted in the attached letter from Ken Berg, Director of the USGS FRESC, in his letter of support (see Appendix E),

"The research scientists of the ... USGS FRESC ... have enjoyed a highly collaborative and mutually beneficial relationship with the faculty, staff, and students of Boise State University (BSU), particularly those in the Biology Department, since the late 1980s."

"USGS FRESC has other field stations on university campuses, including Oregon State University and University of Washington, which have established PhD programs. We have enjoyed long and successful collaborations with the students, faculty, and staff of these institutions, and have had the honor of playing key roles in the successful educational experiences of a great many PhD students, and the formation of many excellent scientists, resource managers, and conservation professionals. We look forward to sharing in similarly successful endeavors with BSU, and to working with all those involved in the EEB PhD program."

Boise State has recently entered into a memorandum of understanding with Gorongosa Restoration Project at Gorongosa National Park (GNP) in Mozambique. This agreement represents a novel and valuable opportunity for research and graduate training for Boise State faculty and students as well as for developing an international exchange with students from Mozambique.

As noted in the attached letter from Dr. Piotr Naskrecki, Associate Director of the E.O.Wilson Biodiversity Laboratory of the Gorongosa Restoration Project,

"We believe that a partnership between Gorongosa Restoration Project and the Boise State University, recently formalized through a Memorandum of Understanding, will provide BSU students and researchers with opportunities to conduct ground-breaking projects in ecology and conservation, leading to not only advances in science but also more effective conservation of one of Africa's greatest protected areas."

The agreement will provide early career opportunities for students and faculty to travel to GNP and integrate those experiences into the ongoing research at GNP in the form of graduate research projects at GNP. Our goal will be to provide a unique life experience and cohort building experience for our students, and to stimulate opportunities for long-term and in-depth research at GNP. In so doing, we will improve the understanding of the biodiversity and ecology of the park while producing the knowledge necessary to make well informed conservation decisions for management of GNP and other tropical ecosystems.

We will also build on our relationship with GNP to expand our portfolio of programs established for exchange of international scholars to include exchanges involving students and scientists from Mozambique coming to BSU to study and collaborate. In addition, we will develop opportunities for scientists and faculty members from Boise State to do research at GNP and to develop in short educational courses for local and regional scientists and students.

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7. Strong Collaborative Relationships with Other Agencies and Organizations

Besides The Peregrine Fund and USGS FRESA, the Boise area is home to a number of other agencies and organizations with which Boise State faculty members have a long history of collaboration. The following are example quotes from letters of support located in Appendix F.

"In 1992, our botanists transferred the Idaho Department of Fish and Game Herbarium to Boise State's Snake River Plains Herbarium, and since that time, we have made extensive use of the specimens stored there. Now that the herbarium collections have been digitized, we access them online frequently—even daily during particular stages of our research. This herbarium is a unique and valuable resource for the Idaho Natural Heritage Program and all of Idaho." Dr. C. Lynn Kinter, State Botanist with the Idaho National Heritage Program of Idaho Department of Fish and Game

"For more than 15 years, the Department of Biological Sciences at Boise State University has closely collaborated with the Idaho Fish and Wildlife Office to study and research conservation issues of concern to the Service. This work has involved past and ongoing graduate studies of Idaho's native fish, wildlife and plants including Columbia spotted frog; two endemic Idaho ground squirrels and rare southwestern Idaho native plants. The knowledge gained from these studies has been instrumental in our understanding of the ecology of these and other species of conservation concern and has served to inform our decisions on their management and protection." Michael Carrier, State Supervisor, Idaho Fish and Wildlife Office, US Fish and Wildlife Service.

Over the years, BLM managers and resource specialists have directly benefitted from numerous research studies completed by BSU faculty and Master's level graduate students on a wide variety of species, ecosystems and ecosystem components relevant to the BLM." Jeffery L. Foss, Deputy State Director, Resources, Idaho State Office, US Bureau of Land Management

"For over a decade the Idaho BLM State Office has been a key collaborator with BSU in the development of this herbarium. The breadth of these collections and their robust digital recordation allows for rapid, comprehensive access of salient botanical information critical to questions in ecology and evolution, and helps inform regional land management issues." Anne Halford, Idaho State Botanist, US Bureau of Land Management.

8. Unique research infrastructure

Boise State has existing and planned research infrastructure unique to the state and region. Examples include the Dry Creek Experimental watershed and Reynolds Creek Critical Zone Observatory, Intermountain Bird Observatory, the Snake River Plains Herbarium, the Crossroads Museum, and laboratories in bioacoustics and soundscapes, endocrinology, and stable isotopes. In addition, our proximity to important and unique natural areas, such as the Snake River Birds of Prey National Conservation Area, and decision-makers in state and federal agencies will foster projects and collaborations that are relevant at the local, regional, and national level. See Appendix C for additional detail.

9. Highly Productive Department

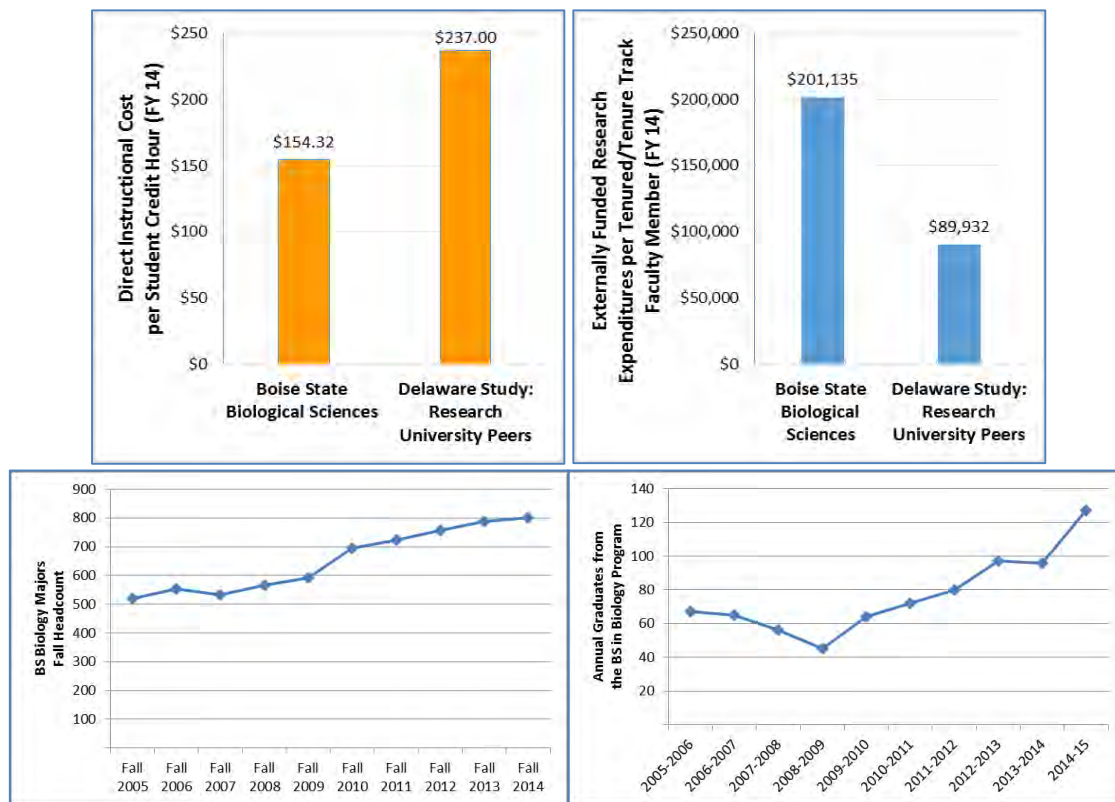
The Department of Biological Sciences is among the most productive and efficient at the university, and is therefore a "good bet" for investment of resources.

More specifics describing the productivity and efficiency of the Department of Biological Sciences are as follows:

- Measures of instructional productivity for the Department of Biological Sciences for FY2014, cast in terms of the percent of Delaware Study Peers (see <http://www.udel.edu/IR/cost/>), indicate that the cost to deliver a student credit hour is about 65% that of Delaware Study research university peers (see figure).

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- Research productivity, as measured by research expenditures, is more than twice that of Delaware Study research university peers (see figure).
- For every dollar of budget spent on instruction, the Department of Biological Sciences produces credits worth approximately \$1.50 in tuition revenues.
- The undergraduate program in the Biological Sciences has seen a steady increase in the number of enrollments and graduates, as can be seen by the accompanying graphs. Enrollments and graduates have increased 54% and 89%, respectively, over the last decade, as shown in the figures below.



10. Successful history with Master's programs in the biological sciences.

The Department of Biological Sciences has a history of managing two very successful MS programs, Raptor Biology and Biology, which ranked in the top 90% and 88% of programs, respectively, during Boise State's program prioritization process. The MS in Raptor Biology was created in 1987, and has graduated 32 students in the last decade. The MS/MA in Biology was created in 1997, and has graduated 87 students in the last decade.

Chapters from student theses have been published articles in a wide range of journals, including top tier journals, such as: Animal Behavior, Annals of Botany, Arthropod-Plant Interactions, Botany, Canadian Journal of Zoology, Condor, Ecological Entomology, Ecology, Ecology and Evolution, Ecoscience, Environmental Entomology, Environmental Science and Technology, General and Comparative Endocrinology, HortTechnology, Hydrobiologia, Journal of Applied Ecology, Journal of Avian Biology, Journal of Field Ornithology, Journal of Freshwater Ecology, Journal of Mammalogy, Journal of Parasitology, Journal of Raptor Research, Journal of the North American Benthological Society (now Journal of Freshwater Science), Journal of Wildlife Management, Mycorrhiza, North American Journal of Fisheries Management, Plant Ecology, Plant Soil, PLoS One, Proceedings of the Royal Society of London: Series B, Soil Biology and Biochemistry, Studies in Avian Biology, The Auk,

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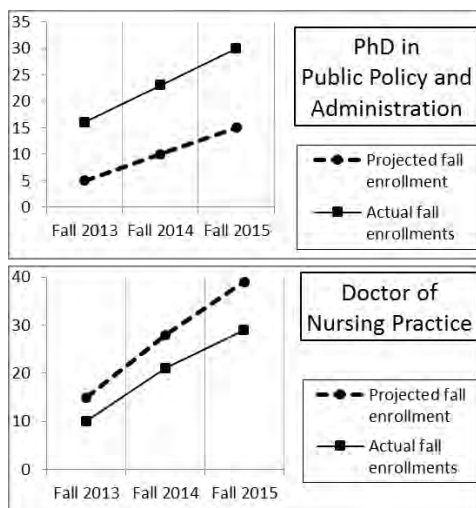
Transactions of the American Fisheries Society, Western North American Naturalist, Wildlife Biology, and Wildlife Society Bulletin.

The Raptor Biology Program is an internationally recognized program with a 97% placement rate of students in career positions related to their degree program. For example, many graduates have been or are currently employed at government agencies (e.g., Alaska Department of Fish & Game; Montana Fish Wildlife and Parks, Idaho Fish and Game, Environmental Protection Agency, US Forest Service, Bureau of Land Management, US Fish & Wildlife Service, USGS), national conservation and science projects (e.g., Landscape Conservation Cooperatives and Joint Ventures), non-profit organizations (e.g., American Bird Conservancy, Rocky Mountain Bird Observatory), or as academics.

11. Past success with new doctoral programs

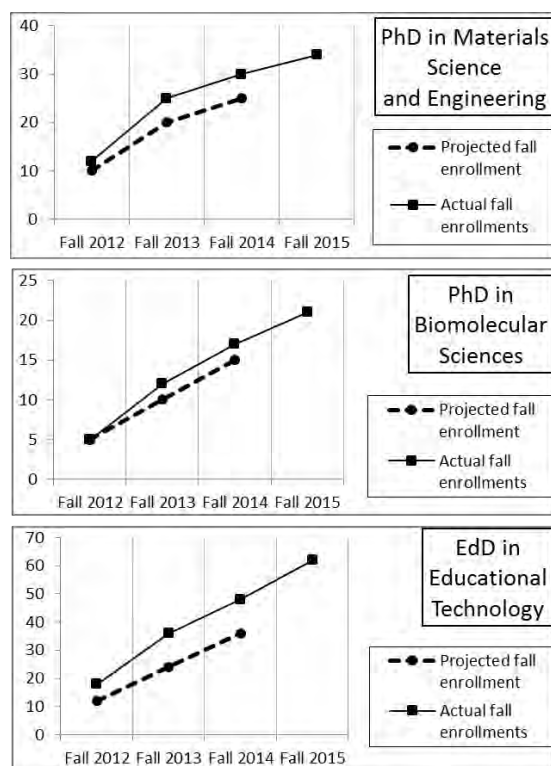
BSU has initiated five new doctoral programs since 2010. In the proposal for each program, we projected enrollments for the first three years. Thus the approval by the SBOE was, in part, based on a promised productivity from each program. The accompanying graphs depict projected enrollment and actual enrollment for each of those five programs.

Three programs were initiated in Fall 2012: PhDs in Materials Science and Engineering and in Biomolecular Sciences and an EdD in Educational Technology. As can be seen in the figures, enrollments in all three programs surpass projections. One notable accomplishment is that the PhD in Materials Science and Engineering was able to produce three graduates in only its second year of existence and one in its third year. The first graduates from the PhD in Biomolecular Science and the EdD in Educational



Technology are expected in 2015-16.

Two programs were initiated in the 2013-14 academic year, a PhD in Public Policy and Administration and a Doctor of Nursing Practice. The former is well ahead of projected enrollments and the latter enrollments



robust enough to support the self-support program, although they lag somewhat behind initial projections.

- List the objectives of the program.** The objectives should address specific needs the program will meet. They should also identify the expected student learning outcomes and achievements. *This question is not applicable to requests for discontinuance.*

Broad-scale Objectives

Boise State has five objectives in the creation of this new PhD program: (i) produce scientists able to solve complex and important problems; (ii) provide access to local students to progress professionally; (iii) enhance the relevance, quality, efficiency, productivity of our existing undergraduate and graduate programs; (iv) enhance the research productivity of the faculty, and (v)

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increase and enhance opportunities for collaboration with other Idaho institutions.

1. *Produce scientists able to solve complex and important problems*

The EEB Ph.D. program will train students in the use of novel integrative approaches that draw strength from both traditional and non-traditional knowledge sets. Students will bring to bear unique perspectives on complex problems, and graduates from this program will become the next generation of EEB scientists. A key component of this program is the development of collaboration and communication skills. Students will be expected to engage with the public, media, and policy makers to increase the dissemination of scientific knowledge and to expand the implementation of science-based decision-making.

One of the primary mechanisms for catalyzing student understanding of complex ecological challenges will be the programmatic-level emphasis and cluster structuring of student training. The goals of these two approaches are to engage students and faculty in high-level discussions of the detailed processes that structure ecosystems and human-ecosystem interactions from multiple disciplinary, agency, and public perspectives. These components of the program are built upon the premise that complex processes and problems may not necessarily be understandable, or accurate actionable solutions produced, from single disciplinary perspectives. For example, this program will have an optional emphasis in Global Change Biology that arises from the growing need to understand how natural and human systems interact in a time of global change. This emphasis will build upon strong core training in EEB with the addition of graduate coursework from the Geosciences, Anthropology, Economics, Public Policy, and other disciplines. In addition, students will have opportunities to participate in issue-focused clusters such as: invasive species biology, climate change, plant systematics, coupled human and natural systems, raptor ecology, among others.

A key component to translating scientific understanding of ecological systems to decision makers is advanced training in science communication. Therefore, students will be trained to be experts in communicating science to broad and diverse audiences. EEB scientists working on complex or contentious topics need to be prepared to, without bias, clearly present the uncertainties, present complex data visually, handle/diffuse difficult or hostile situations, talk with the press, and integrate perspectives. Our students will be trained to be able to speak with members of research groups from other disciplines, stakeholder groups, such as non-governmental organizations (NGOs), agencies, government officials, community organizations, k-12 schools, etc. and the general public.

To appropriately express the value of communications and self-regulated learning skills development, PhD students will be encouraged to acquire a new Digital Badge in Science Communication through Boise State's College of Innovation and Design (COID). Biological Sciences, Geosciences, Anthropology, Human-Environment Systems, and Communications faculty will participate in course delivery of this digital badge, thereby providing advanced communications training for PhD students and stimulating research across traditional disciplinary boundaries.

2. *Enhance BSU's contribution to EPSCoR and to Idaho's research productivity*

The success of Idaho EPSCoR relies on the research productivity of faculty members and on the richness of collaboration among the institutions. The creation of the PhD in EEB will be an action that Idaho EPSCoR can cite as a key component of the long-term sustainability of research productivity in Idaho, as has been done regarding the creation in 2013 of ISU's PhD in Geosciences. Idaho EPSCoR's final report for the project "Idaho Research Infrastructure Improvement: Water Resources in a Changing Climate" states, "*...the ISU Geosciences department was granted permission this year to offer a PhD degree in Geosciences. The Idaho EPSCoR program helped significantly in this success through investments in new Geoscience faculty and as a motivator and an advocate for this new degree. ISU Geosciences will now be able to attract and retain highly qualified students and increase collaboration through advising and proposal writing with faculty at other Idaho universities.*"

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Creation of a PhD program in EEB at BSU will make BSU, UI, and ISU collaborators more competitive for long-term support from the NSF, specifically, for a Long Term Ecological Research site (LTER) competition at NSF. These are large long-term awards (i.e. \$900k/year for 5 years, with renewals every 5 years). The majority of LTER sites have been in operation for more than 2 decades. Currently there are 24 LTER sites funded by the NSF. During 2016 there will be a competition for a new LTER site specifically for semi-arid ecosystems. BSU EEB faculty members, along with collaborators at UI, ISU, USGS, and the USDA Agricultural Research Station, are extremely well positioned to be competitive for this opportunity.

Creation of the proposed program will enhance other funding opportunities.

- BSU will be able to apply for additional funding opportunities that specifically target PhD level training (e.g., NSF's Integrative Graduate Education and Research Traineeship Program, NSF's Alliances for Graduate Education and the Professoriate, and DOE's Science Graduate Student Research Program).
- BSU will be better able to pursue funding that develops connections between academic institutions and industry (e.g., NSF's Grant Opportunities for Academic Liaison with Industry Program and NSF's Science, Technology, and Society Program).

The new program will also increase BSU's contribution to the SBOE's "Strategic Research Plan for Idaho Higher Education (2016-2020)." That plan focuses on increasing research in the state, with focus on collaboration among institutions. The new PhD will enable BSU faculty members to secure more research grant funding and to better support the research and policy efforts of partners in the private and government sectors. The new program will increase BSU's contribution to the following performance measures of SBOE's strategic research plan: state-wide research expenditures, number of new grant submissions and awards that involve subawards with another Idaho institution, number of new awards involving the private sector, number of faculty members and students paid from sponsored projects, and percentage of baccalaureate students graduating in STEM disciplines and with research experience.

3. Enhance the relevance, quality, productivity, and efficiency of existing undergraduate and graduate programs.

The BS in Biology program scored in the top quintile in Program Prioritization because it is relevant and of high quality, and because it is highly productive and efficient. The analyses of Program Prioritization also revealed a number of opportunities to further increase relevance, quality, productivity, and efficiency.

First, biology degree programs are laboratory-intensive, and it is the upper division laboratories that are acting as bottlenecks in Boise State's program, limiting overall capacity to create graduates and also slowing the completion of those who do progress to graduation. The proposed PhD program will create opportunities for PhD candidates to gain teaching experience in the laboratories of those upper division courses, enabling expansion of lab section capacity and throughput in a much less costly manner than the addition of tenure-track faculty members.

Second, several lower division courses required of students in health science degree programs (e.g., nursing, pre-professional, radiologic sciences, respiratory care) act as bottlenecks, limiting progression of students to graduation. The proposed PhD program will enable some shift of MS-level teaching assistant capacity to those lower division courses.

Third, at the same time the PhD program is being developed, the department is reforming its core curriculum with the support of an award from an NSF WIDER-PERSIST program. The new core will focus on evidence-based instructional practices and streamline the current curriculum by minimizing overlap and redesigning courses to (i) deliver a common set of core courses in biology that provide all students with the same strong base of biological knowledge and (ii) develop upper division tracks

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within which students can become more highly trained in their sub-discipline in biology of choice.

The proposed PhD will also increase the quality and relevance of the BS in Biology program and the BA Anthropology program because it will substantially increase the number of opportunities for undergraduate students to participate in research. At present, a substantial number of BS students work with our master's students; the PhD program will increase that number. In addition, a PhD program will allow us to increase our use of Vertically Integrated Projects (VIPs), a concept pioneered at Georgia Tech (<http://vip.gatech.edu/new/>) and Purdue (<https://engineering.purdue.edu/vip/>) that is designed to promote balanced student growth through the undergraduate years, provide structure and flexibility for students and develop a strong sense of comradery that increases retention and satisfaction. The VIP structure encourages interaction between all levels of education and experience, with more senior members tutoring and working with novices, and the opportunity for new researchers to get more involved as they gain skills. The interplay between all levels in a laboratory increases productivity and develops communication skills.

At the graduate-program level, a common concern of students is that there is not enough diversity of coursework. The creation of a new PhD program will provide master's-level students in Biology and in Anthropology with a substantial expansion the diversity of available graduate-level coursework.

4. *Provide opportunities for local students to progress and provide employees for local organizations.*

In the Treasure Valley there are a number of government, non-governmental organizations, businesses, and educational institutions with employees (i) who would benefit professionally from acquisition of a PhD in EEB but (ii) are place-bound and unable to travel to other areas of the state to pursue doctoral level education. Examples of such employers are the US Fish and Wildlife Service, the Idaho Department of Fish and Game, the US Bureau of Land Management, the Nature Conservancy, Idaho Power, and the College of Western Idaho. A PhD program located in the state's capital, where several federal and state agencies, businesses, non-governmental organizations, and educational institutions are head-quartered, would provide opportunity for professional advancement for the employees of those organizations.

"We believe this program provides an opportunity for CWI faculty engagement and professional development, as well as a relevant and intriguing long-term academic pathway for our students in multiple disciplines of study." Susan Knights, Assistant Dean, STEM, College of Western Idaho

"I am a non-traditional student who is a single father and a graduate of the Boise State Biology program. I am interested in pursuing graduate work for the attainment of an advanced degree in biology; however, relocating for graduate work is very difficult to do. Having such a program offered at Boise State would allow students like me to advance academically and professionally without forcing the family hardship of relocation." Daniel Melody

"As a graduate of the Raptor Biology MS (2012), I would appreciate the opportunity to advance my career in science without having to subject my new family to a long-distance move." "...staying in Boise will allow me to continue to cultivate my connections in the local scientific community, and develop my knowledge of local ecology and politics." Eric Nolte

"Since receiving my MS from Boise State, I have often thought about continuing my education and pursuing a PhD." "In my field, as the Executive Director of a university academic program, having a terminal degree would be favorable and allow for continued growth of my career and the organization I lead. However, because my family is based in Boise, Idaho, and because my current position also keeps me tied to the local community, I have not pursued a PhD in Biology." Greg Kaltenecker, Executive Director, Intermountain Bird Observatory, Boise State University

The same organizations have a need for employees of the sort that would graduate from the proposed

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program.

"In my current capacity as an epidemiologist for the Division of Public Health at the Idaho Department of Health and Welfare, I see broad potential for this program to provide both higher quality interns and prospective employees in the future." "I was pleased to see that the proposed PhD program includes coursework in modeling social behavior. There is growing interest within public health in using this type of modeling to understand such things as how influenza might spread or which set of interventions would most likely reduce obesity in a population." Robert Graff, PhD, Chronic Disease and Environmental Health Epidemiologist, Bureau of Community and Environmental Health, Idaho Division of Health and Welfare

5. Enhance contribution to and collaboration with agencies and other organizations.

Located in Boise are a number of governmental agencies and non-governmental organizations. Boise State has a long history of partnership with these organizations, and a PhD program would serve to strengthen those partnerships. The following are example quotes from letters of support located in Appendix F.

"A PhD program in Ecology, Evolution and Behavior will provide a nearby team of scientists could help Zoo Boise ensure that the funds being generated...are spent on credible projects that have a real chance for success." "Zoo Boise's latest project involves helping to restore Gorongosa National Park in Mozambique...This new program at Boise State could help increase Idaho's influence in saving a place described by Dr. E. O. Wilson as 'the most biologically diverse national park on earth.'" Steve Burns, Director, Zoo Boise.

"The envisioned PhD program contains key transdisciplinary areas for research and training which are of interest to DOE-ID in its stewardship of INO and the INL site. Especially relevant is the area of Biogeochemistry..." Richard Provencher, Manager, Idaho Operations Office, US Department of Energy.

"Canyon County Parks and specifically Celebration Park has a twenty year history of cooperative ventures with various departments at Boise State University." "We are very excited about the new Ph.D. program. We feel that it is a timely, valuable and culturally important contribution the already stellar academic offerings at your University." Tom Bicak, Director, Canyon County parks, Recreation, and Waterways.

"Having access to doctoral students who are working across disciplines to solve complex problems will be of tremendous benefit to our science center. From sharing breakthroughs of highly relevant and well-funded research programs with our adult and teen audiences to highlighting possible career paths to budding young scientists, I can see many ways that this expansion will enrich our partnership and community." Kristine Barney, Executive Director, Discovery Center of Idaho

"A Ph.D. would be able to address complex ecological and evolutionary botanical research vital to decision making of the agency and relevant to society. We would like to continue collaborative efforts with your research programs..." Alma Hanson, PhD, Forest Botanist, Natural Resources, Payette National Forest.

Program Intended Learning Outcomes and Assessment Plan:

Program Intended Learning Outcomes: <i>Students who graduate from the program will be expected to have the following skills and knowledge:</i>	Direct measures of Achievement of Intended Learning Outcomes	Indirect Measure of Achievement of Intended Learning Outcomes
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1. Graduates will be able to pose relevant research questions and will be able to conduct independent research using the scientific method to address those questions.	Proposal and comprehensive exam, dissertation research and defense	Exit interview with students, faculty observations and discussions
2. Graduates will be able to effectively communicate the results of scientific research in both written and oral form to scientific and public audiences.	Required proposal and oral presentation, dissertation and defense, EEB 603 and 604 assignment	Exit interview with students, faculty observations and discussions, presentations at professional meetings
3. Graduates will be able to acquire and utilize information to address scientific questions.	Completion of proposal and dissertation, comprehensive exam,	Exit interview with students, faculty observations and discussions
4. Graduates will be able to apply biology, mathematics, chemistry, geosciences, or human ecology as appropriate to their research and the understanding of ecological and evolutionary processes.	Assignments in coursework, dissertation research and defense	Exit interview with students, faculty observations and discussions
5. Graduates will have achieved a level expertise in their discipline.	Dissertation research and defense, publications	Exit interview with students, faculty observations and discussions

3. Briefly describe how the institution will ensure the quality of the program (i.e., program review). Will the program require specialized accreditation (it is not necessary to address regional accreditation)? If so, please identify the agency and explain why you do or do not plan to seek accreditation. *This question is not applicable to requests for discontinuance.*

The following measures will ensure the high quality of the proposed program:

Regional Institutional Accreditation: Boise State University is regionally accredited by the Northwest Commission on Colleges and Universities (NWCCU). Regional accreditation of the university has been continuous since initial accreditation was conferred in 1941. Boise State University is currently accredited at all degree levels (A, B, M, D).

Program Review: Internal program evaluations will take place every five years as part of the normal departmental review process conducted by the Office of the Provost. This process requires a detailed self study (including outcome assessments) and a comprehensive review and site visit by external evaluators. The review process is being considerably strengthened as a result of Program Prioritization with the inclusion of new metrics and a pre-review by the Provost's Office.

Graduate College: The program will adhere to all policies and procedures of the Graduate College, which is a member of the Council of Graduate Schools (Washington, D.C.), the leading authority on graduate education in the United States. The Graduate College has broad institutional oversight of all graduate degree and certificate programs.

Departmental of Biological Sciences Oversight: The proposed new PhD in EEB will build on a significant foundation of experience within the department of managing graduate programs successfully. Existing graduate programs include MS degrees in Biology, Raptor Biology and a MA degree in Biology. The graduate student community of the department currently includes approximately 40 MS students. The majority of MS students graduate 3 years after initial matriculation, and the first cohort of EEB doctoral students will graduate in May, 2022 (assuming a

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program start date of Fall 2017). Thus, the Department of Biological Sciences has the organizational structures, policies and procedures already in place to manage graduate programs successfully and to ensure that students receive the individual mentoring, guidance, and professional development needed to progress through their programs in a timely manner.

Existing graduate and undergraduate programs in the department will receive collateral benefits from the addition of the proposed new PhD program, helping them to become even stronger. The presence of advanced graduate students and their dissertation research in the department creates an environment that fosters student-to-student mentoring and creates more opportunities for hands-on participation (particularly of undergraduates) in advanced, applied research. We have seen this outcome as a byproduct of our existing Master's programs, and it is consistent with national studies of the potential benefits of research-intensive graduate programs on undergraduate education (e.g., Boyer Commission on Educating Undergraduates, 1998; NRC Committee on Undergraduate Science Education, 1999). Aspects of departmental management plans for the new PhD program are described below.

Student Mentoring and Program Assessment: On-going program evaluation and assessment at the department level will provide essential information to help ensure the long-term quality of the program. Assessment activities will allow monitoring of individual student progress in the program so challenges can be recognized early and managed effectively. Integrated and evaluated over time, this feedback can also be used to fine-tune and adjust the overall program design, as needed to maintain excellence. Components of the student mentoring and outcomes assessment plan include:

- *Appointment of a Major Advisor who has the primary responsibility for day-to-day mentoring and professional development of their students* – Identification of the advisor will be strongly encouraged for admission to the program.
- *Planning of academic course work* – Students will work with their advisor and committee to complete a Program Development Form (PDF), which identifies the calendar of course work necessary for students to complete their degree requirements. Each student's PDF is updated on an annual basis, providing an opportunity for the advisor and student to review the plan and make corrections, additions, etc., as necessary. Completed PDFs are placed in each student's departmental file.
- *Evaluation of the dissertation proposal* – Students must submit to their Supervisory Committee a dissertation proposal describing in sufficient detail the proposed scope of work, anticipated scientific impact, timeline, and a plan for obtaining and utilizing the resources necessary to complete the research. A complete draft of the thesis proposal must be submitted by the beginning of the third semester. The student will be required to present a 30 min oral proposal presentation with a 15-20 min questions session. The draft proposal is evaluated by the committee and returned to the student with comments and suggestions for revision (if necessary). A final dissertation proposal must be submitted by the end of the third semester. A copy of the dissertation proposal and the committee's evaluation/comments is placed in the student's departmental file.
- *Progress and competency in graded coursework* – How students perform in the classroom will provide a direct metric of progress and achievement – particularly in the early portion of the program when much of the required course work is typically taken by students.
- *The Comprehensive Examination* - As discussed below (#6), the comprehensive exam represents a significant milestone and an important assessment tool for monitoring how well students have assimilated information from various sources and integrated it into a comprehensive knowledge of Ecology, Evolution, and Behavior. It will have both an oral and written component.

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- *Participation in Clusters* – Each year, students will be required to identify a cluster for participation. The EEB program will offer 4-6 clusters a year for in-depth learning in an area of EEB. Clusters will be proposed by 2-4 Department of Biological Sciences or affiliate faculty and approved by the EEB Graduate Studies Committee. Clusters may include discussion of interdisciplinary perspectives on EEB topics, common areas of research, or applied problem areas. Cluster activities could include: discussion of the primary literature, field visits, technique development, applied problem solving, or proposal or paper writing. Annual proposal of clusters will allow for motivated selection of topics while still providing in-depth access. Possible topics include: Behavioral Ecology, Molecular Ecology and Phylogenetics, Microbial Ecology, Biology of Invasive Species, Biology of Stress and Fear, Raptor Biology, Critical Zone Biology, or Climate Change. It is expected that this list of Cluster topics will be continually modified as the program grows and the important topics for discussion change with new information, new faculty, and new students.
- *Dissertation defense* – the culminating activity of the program is the oral presentation and public defense of the dissertation (discussed in more detail below).
- *Exit interview* – Following completion of the degree, as students transition out of the department, we will conduct an exit interview to evaluate their experiences in the program, determine if their expectations were met, and obtain specific suggestions for ways to improve the program.
- *3-year post-graduation follow-up interview with alumni* – The department will contact and interview alumni approximately 3 years after graduation to assess whether or not the program was effective in giving the students the practical skills and knowledge necessary to achieve success in the ‘real world.’ Feedback from the alumni will be factored into decisions about restructuring of coursework or other aspects of the program (as needed).

To ensure that program monitoring and outcomes assessment are conducted fairly, effectively and consistently, the Department of Biological Sciences will maintain an Education Program Director staff position beginning January 2016, with a core responsibility of organizing and implementing substantive assessment plans for all degree programs in the department, including the new PhD, and writing development proposals.

Graduate Studies Committee: The EEB Graduate Studies Committee (GSC) for the Ecology, Evolution, and Behavior PhD program will consist of a member of the Department of Biological Sciences who serves as the EEB program coordinator, 2-3 additional EEB faculty from the Department of Biological Sciences, and at least one faculty from an affiliate department or agency. The duties of the Graduate Studies Committee include development of recommendations for admission of prospective graduate students, decisions on transfer credits and required background courses, decisions on the award of departmental graduate fellowships and assistantships, and approval of Supervisory Committees for graduate students.

Supervisory Committee: The Supervisory Committee is charged with general guidance of the doctoral student, including design and approval of the program of study, administration of the comprehensive examination, supervision of the dissertation research, and participation in the dissertation defense. The Supervisory Committee consists of a major advisor who acts as chair, and at least three additional members, two of whom must be members of the University regular or research faculty and must also be members of the Graduate Faculty. Additional members may be appointed when such appointments enhance the function of the Committee. A majority of the committee membership must hold appointments in the Department of Biological Sciences or one of the affiliate EEB Departments. Students are encouraged to have at least one member of their committee who is external to the advisor’s department.

Application and Admission Requirements: Applicants to the PhD program in Ecology, Evolution,

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and Behavior will be required to have a Bachelor's or Master's degree in biological sciences, wildlife ecology, or a related discipline from an accredited college or university. Admission will be competitive and will be based on previous experience in the field, transcripts, professional references, scores on the general test of the Graduate Record Examination (GRE), and evaluation of a letter of intent describing previous research experience and the applicant's professional interests and plans for the future.

- 4. List new courses that will be added to your curriculum specific for this program.** Indicate number, title, and credit hour value for each course. Please include course descriptions for new and/or changes to courses. *This question is not applicable to requests for discontinuance.*

EEB 601 PRINCIPLES AND PROCESSES IN ECOLOGY, EVOLUTION, AND BEHAVIOR I (3-3-4)(F).

Discusses principal ecological processes and interactions, both biotic and abiotic, that organisms rely on and perform to acquire the necessary energy, water, carbon, and nutrients for growth, metabolism, and reproduction. Mechanisms driving evolutionary responses at the species and population levels are discussed in the context of how evolutionary processes influence ecosystem level responses to a variety of factors, including changing climate, anthropogenic use patterns, species invasions, and nutrient cycles.

EEB 602 PRINCIPLES AND PROCESSES IN ECOLOGY, EVOLUTION, AND BEHAVIOR II (3-3-4)(S).

Builds on the principles and processes of ecology and evolution discussed in EEB 601. Expands and explores in the context of contemporary responses of ecosystems and organisms to changing anthropogenic influences on ecosystems. PREREQ: EEB 601.

EEB 603 SCIENCE AND COMMUNICATION I (3-0-3)(F). Focuses on philosophy and process of conducting science, concept development, and experimental design. Emphasizes practical skills in sampling schemes, data management, metadata, accessing publicly available data, and using research-related software. Development of written and oral skills through preparing proposals and papers and delivering presentations. Application of different strategies for communicating with other scientists, collaborators, decision-makers, media, and the public.

EEB 604 SCIENCE AND COMMUNICATION II (3-0-3)(S). Continues the focus, skills development and practice begun in EEB 604. PREREQ: EEB 603.

EEB 605 CURRENT RESEARCH IN EEB (2-0-2). Invited and contributed presentations on current topics in ecology, evolution, and behavior. Examines presentation style and effective techniques. Examination of literature on current topics, contributing to speaker scheduling and hosting. May be repeated for credit.

EEB 606 SCIENCE AND SOCIETY IN THE GREAT BASIN (3-0-3). Case studies by local biologists from academia, government agencies, and private organizations using science to solve ecological problems in the Great Basin. Examines how different stakeholders study, manage, and conserve the wildlife, plants, soils and climate that shape the Great Basin. Includes applied communication of science to the public through outreach that promotes management of healthy landscapes and wildlife in local ecosystems.

EEB 607 QUANTITATIVE METHODS FOR POPULATION AND HABITAT ANALYSIS (2-2-3). Theory and methods of how to use empirical data to make valid inferences about populations and habitats. Uses software and literature applied to various types of analyses of population and habitat data and models, including traditional, Bayesian, and hierarchical models that explain survival, occupancy, and abundance. Focus on reliable estimation of population parameters, measures of precision for estimates, and use of covariates to explain population patterns.

EEB 608 SPATIAL ECOLOGY (3-0-3). Focuses on both techniques (geospatial mapping and modeling) and problems (landscape connectivity, animal movement strategies associated with spatial ecology). Examination of mechanisms that can cause spatial pattern formation in species distributions and of metapopulation dynamics and dispersal strategies. Selection and use of appropriate software for spatial analyses. Includes both theoretical sessions and computer exercises.

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EEB 609 ADVANCED COMMUNITY ECOLOGY (3-0-3). Fundamentals of community ecology and current theories and quantitative tools for determining community assembly rules, describing diversity patterns, and linking community structure to community functions.

EEB 610 MICROBIAL ECOLOGY (3-0-3). Focuses on the relationships among and biogeochemical role of microorganisms in natural communities. Topics structured to demonstrate the linkages between microbial ecology, diversity, and evolution. Strengths, limitations, and caveats of modern microbial methods for assessing ecological interactions. Role of microbial metabolism in controlling elemental cycling on local to global scales.

EEB 501 SENSORY ECOLOGY AND EVOLUTION (3-0-3). Examination of how information transmission, via various sensory systems, mediates animal behavior and shapes biological processes, such as predator/prey interactions and species' distributions. Discussion of the impacts of anthropogenic sensory pollution on ecological function.

EEB 611 CHEMICAL ECOLOGY AND EVOLUTION (3-0-3). Surveys topics related to the chemical ecology and co-evolutionary interactions between plant and herbivores. Material focuses on quantifying doses of chemical defenses in plants and responses of herbivores to those defenses from an evolutionary, physiological, pharmacological and ecological perspective. Design, conduct, analyze and present an experiment testing and hypothesis related to chemical ecology and evolution.

EEB 612 PLANT ECOPHYSIOLOGY (3-0-3). Responses of plants in terrestrial ecosystems to, and interaction with, environmental conditions. Physiological responses of plants and their ecosystems to environmental factors and stressful conditions. Interaction of plants with environment to capture, use and cycle resources such as carbon, water and nutrients. Emphasis on plant responses and plant-soil-atmosphere interactions from a global environmental change perspective such as increased carbon dioxide concentration and temperature and altered precipitation patterns.

EEB 613 LANDSCAPE AND CONSERVATION GENOMICS (3-0-3). Application of evolutionary analysis to real-world biological problems. Use of large data sets and diverse computational approaches in analyzing population structure, signatures of natural selection, and demographic and disease-related processes. Emphasizes human-driven global changes that accentuate or disrupt natural evolutionary processes and linkages at the individual, population, community, and species levels. Includes a focus on the consequences of landscape-level patterns to the spatial genetic structure of populations.

EEB 614 PHYLOGENETICS AND ADVANCED EVOLUTION (3-0-3). Explores the basics of phylogenetics, applications, and current software used to generate histories of organisms. Interpretation of macro-evolutionary processes using phylogenetic history. Topics include multiple sequence alignment, genomic data analysis, generation of phylogenetic trees via parsimony, likelihood and Bayesian methods as well as networks. Examines phylogenetic trees for ancestral character state reconstruction, molecular dating, biogeography, climate shifts, and species trees.

EEB 615 BIODIVERSITY AND ECOSYSTEM FUNCTION (3-0-3). Quantifies patterns of biodiversity and discusses the ecological implications of biodiversity loss at the level of the community, ecosystem and landscape. Community ecology focus on biotic interactions such as competition, trophic interactions, bottom-up and top-down control and stability of food webs. Biodiversity impacts on interactions between organisms and the abiotic environment. Landscape level focus on effects of changes in biodiversity on structure and dynamics of natural and cultural landscapes.

EEB 616 THE CARBON DILEMMA (3-0-3). Explores tradeoffs between different ecosystem functions and services provided by carbon. Several (interlinked) scientific questions important for resolving or managing carbon are discussed and novel research questions are identified.

EEB 617 ECOSYSTEM ECOLOGY (3-0-3). Influence of biological, ecological and physical processes on energy and elemental cycling (C, N, P). Consideration of roles of microorganisms, plants and animals and

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whole ecosystems. Factors regulating the ecosystem function, including soils, climate, disturbance, and human activities, are considered from the molecular to the global scale.

EEB 618 EARTH'S BIOGEOCHEMICAL CYCLES AND CLIMATE CHANGE (3-0-3). Examines the underlying natural science of global change. Presents and evaluates major processes affecting C, N, and P cycles at ecosystem levels with biogeochemical ecosystem models. At the global scale level, the C, N, and P cycles are examined across the Earth's compartments. Emphasizes how these cycles are linked and how regulation among cycles takes place. Functioning of natural cycles and the anthropogenic effects on these cycles are assessed.

EEB 619 MODELING SOCIAL BEHAVIOR (3-0-3). A survey of modeling approaches used to analyze social behavior from an evolutionary/ecological perspective. Focus on analytical, agent-based, and statistical modeling.

EEB 620 POPULATION GENETICS (3-0-3). Theoretical population genetics and its relationship to natural and experimental populations. Single locus and multilocus systems, history of a gene in a population, diffusion approximations, suitability of models to natural and experimental populations. Theories of selection, neutrality, drift, recombination, mutation, and isolation and statistical tests and experimental methods for detecting these forces.

EEB 621 ADVANCED ECOLOGICAL DATA ANALYSIS (3-0-3). Utilizes existing datasets. Provides 'hands-on' training in data analysis with goal of publishable article. Focuses on data issues, selection of appropriate models and problems of interpretation. Topics vary by participants, but may include mixed models, non-linear modeling, scripting, and manipulating data.

- 5. Please provide the program completion requirements to include the following and attach a typical curriculum to this proposal as Appendix B. For discontinuation requests, will courses continue to be taught?**

Credit hours required:	66
Credit hours required in support courses:	23
Credit hours in required electives:	13
Credit hours for thesis or dissertation:	30
Total credit hours required for completion:	66

- 6. Describe additional requirements such as preliminary qualifying examination, comprehensive examination, thesis, dissertation, practicum or internship, some of which may carry credit hours included in the list above.**

Comprehensive Examination: The objective of the comprehensive examination is to judge depth and breadth of knowledge in Ecology, Evolution, and Behavior. The examination is to be developed and administered by the Supervisory Committee. A student must take the comprehensive examination prior to the end of their fifth semester. The Comprehensive exam will consist of both a written and oral portion test.

The written portion may consist of either: 1) a review paper on a topic in Ecology, Evolution, or Behavior that has been approved by the Supervisory Committee, or 2) written responses to a series of questions developed by the Supervisory Committee. The Supervisory Committee, with input from the student, will choose the format for the written portion of the exam.

The supervisory committee will conduct the oral portion of the exam after successful completion of the written portion of the exam. During the oral exam students are expected to demonstrate solid, in-depth, academic knowledge related to Ecology, Evolution, and Behavior. The decision of whether a student passes or fails the comprehensive exam rests with the committee members. If a student fails the initial examination, the committee has the option of allowing a student to repeat the examination one time. If a repeat examination is granted by the Supervisory Committee, it must

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occur within 3 months of the initial examination. Failure of the Comprehensive Examination will result in dismissal from the Ph.D. program.

Dissertation Requirements: The dissertation must be the result of independent and original research by the student and must constitute a significant contribution to ecological and evolutionary knowledge equivalent to multiple peer-reviewed publications. The style and format of the dissertation are to conform to the standards of the Department of Biological Sciences and the Graduate College.

Dissertation Defense: A public defense of the dissertation is scheduled after the Supervisory Committee has reviewed a draft that is considered to be nearly a final version. The defense committee consists of the student's entire supervisory committee plus a graduate faculty representative (GFR). The date of the defense is determined jointly by the Supervisory Committee and the student and must be consistent with any guidelines provided by the Graduate College. The first part of the defense will be a public oral presentation of the dissertation. The second part will be an oral exam. At the conclusion of the final oral examination, the GFR calls for a vote by the voting members of the defense committee to determine the examination result which must be either pass or fail. A student who fails the defense may be permitted to try again but failure a second time will result in dismissal from the program.

Final Approval of the Dissertation: If the defense is completed with a result of pass, the Supervisory Committee prepares a statement describing final requirements such as additions or modifications to the dissertation and any additional requirements such as archival of data. When these requirements have been met, the approval page of the dissertation is signed by the Chair of the Committee.

7. Identify similar programs offered within Idaho or in the region by other colleges/universities.
If the proposed request is similar to another state program, provide a rationale for the duplication.

As can be seen by the following table, every research university in Idaho and in adjacent states has a PhD program similar to that proposed at Boise State University. Such programs are highly typical of research universities.

Listing of Relevant PhD Programs at Research Universities in States adjacent to Idaho (Includes all institutions with the Carnegie Basic Classifications of "Research University [high research activity]" and "Research University [very high research activity]." Also includes Boise State University, which presently has the Carnegie Basic Classification of "Master's Universities [larger programs]" but which is expected to be reclassified to as "Research University [high research activity]" in 2015)		
State	University	Relevant PhD programs
Idaho	Idaho State University	PhD in Biological Sciences PhD in Microbiology
	Boise State University	PhD in Ecology, Evolution, and Behavior (proposed)
	University of Idaho	PhD in Natural Resources PhD in Biological Sciences PhD in Environmental Science
Montana	University of Montana	PhD in Anthropology PhD in Fish and Wildlife Biology PhD in Organismal Biology and Ecology PhD in Systems Ecology PhD in Forestry

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	Montana State University	PhD in Biological Sciences PhD in Fish and Wildlife Biology PhD in Microbiology PhD in Ecology and Environmental Sciences
Nevada	University of Nevada Las Vegas	PhD in Anthropology PhD in Biological Sciences PhD in Environmental Science
	University of Nevada Reno	PhD in Anthropology PhD in Ecology, Evolution, and Conservation Biology
Oregon	University of Oregon	PhD in Anthropology PhD in Biology PhD in Environmental Sciences, Studies, and Policy
	Portland State University	PhD in Biology
	Oregon State University	PhD in Applied Anthropology PhD in Botany & Plant Pathology PhD in Environmental Sciences PhD in Fisheries Science PhD in Forest Ecosystems and Society PhD in Rangeland Ecology & Management PhD in Sustainable Forest Management PhD in Wildlife Science PhD in Zoology
Utah	University of Utah	PhD in Anthropology PhD Ecology, Evolution, Organismal Biology PhD in Microbial Biology
	Utah State University	PhD in Biology PhD in Ecology PhD in Forestry PhD in Range Science PhD in Wildlife Biology PhD in Fisheries Biology
Washington	University of Washington	PhD in Aquatic & Fishery Sciences PhD in Biology PhD in Biocultural Anthropology PhD in Environmental & Forest Sciences PhD in Microbiology PhD in Oceanography PhD in Quantitative Ecology & Resource Management
	Washington State University	PhD in Anthropology PhD in Botany PhD in Environmental & Natural Resource Sciences PhD in Zoology
Wyoming	University of Wyoming	PhD in Anthropology PhD in Ecology PhD in Rangeland Ecology and Watershed Management PhD in Zoology and Physiology

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In Idaho, no state institution has statewide responsibility for any program in the biological sciences (CIP code 26.xx Biological and Biomedical Sciences.)

Idaho State University offers two programs that have some overlap with the proposed program: a PhD in Biology and a PhD in Microbiology. University of Idaho offers three programs that have some overlap with the proposed program: a PhD in Biology, a PhD in Natural Resources, and a PhD in Environmental Science. The University of Idaho offers two other programs with a lesser similarity to the proposed program, a PhD in Bioinformatics and Computational Biology and a PhD in Water Resources.

SBOE Policy III.Z specifies that “unnecessary” duplication of programs should be avoided. That is, a new program should be created only if it is not feasible for existing programs at other institutions to fulfill the need for the proposed program, and only if it provides a net benefit to the state and its citizens.

Given the existence of two similar programs at ISU and three similar programs at UI,
why does it make sense to offer a PhD in Ecology, Evolution, and Behavior at BSU?

First, failure to approve the program would directly contradict the mission of the Idaho EPSCoR program. That mission is to build research competitiveness of the state's universities, and a successful EPSCoR program requires success at all three of Idaho's universities. Approval of the proposed program will be a significant win for Idaho's EPSCoR program, and will demonstrate a huge return on investment, thereby making future proposals to NSF and other EPSCoR participating agencies more likely to be successful. To repeat a quote from Dr. Peter Goodwin, Project Director of Idaho EPSCoR,

“The proposed PhD ... is a logical next step to build on past investments and ensure the continued growth and sustainability of these initiatives. Failure to establish a PhD program will inhibit the research growth and ONEIdaho partnerships established across the state and beyond.”

The state has made substantial investments in support of the Idaho EPSCoR mission; for example, more than \$700K of the annual higher education budget is necessary to support 12 faculty members at UI, ISU, and BSU that are being funded initially by EPSCoR funds. To make the most of this and other investments by the state requires that BSU develop the programs necessary to achieve its greatest potential in terms of research productivity and graduate education.

Second, failure to approve the proposed program would contradict the intent of SBOE's “Strategic Research Plan for Idaho Higher Education.” Approval will expand funding opportunities (especially from federal agencies), increase inter-institutional collaboration, and enable the use of PhD students to provide greater depth and scope of research than can master's students.

Third, creation of the program directly follows from the principles of Program Prioritization.

- Creation of the program represents investment of resources in top quintile programs.
- Undergraduate programs in the Biological Sciences are at full capacity, requiring additional investment to meet demand. Masters students in the Biological Sciences are currently producing high-level theses through research programs with ample external funding to support PhD students. Consequently, the development of a PhD program at this time is timely, allowing the department to expand undergraduate instructional capacity through faculty and teaching assistantships while developing additional graduate coursework in a synergistic fashion.
- We estimate that the new program, in conjunction with curricular revision, will yield more than \$600k in revenue by year three resulting from increased enrollments associated with current and future demand.

Fourth, no other program in the state can provide many of the benefits that will result from the proposed program.

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- No other program can provide local, place-bound Treasure Valley biologists with the opportunity to advance professionally. The Treasure Valley is the home for a number of federal and state agencies, non-governmental organizations, environmental consulting firms, and educational institutions, each with employees who would benefit.
- No other program in the state can provide the same strong partnerships to the US Geological Service's Snake River Field Station, the Peregrine Fund, and the Gorongosa Restoration Project. These organizations have strong ties to Boise State, and both will benefit from involvement with the proposed program.
- No other program has the same combination of strengths in the transdisciplinary areas of raptor biology, global change biology, plant evolution and diversity, chemical ecology, biogeochemistry, human behavioral ecology, and human-environment systems. Therefore, no other program will bring the same perspectives to bear on solving the complex problems that face us.

Degrees/Certificates offered by school/college or program(s) within disciplinary area under review

Institution and Degree name	Level	Specializations within the discipline (to reflect a national perspective)	Specializations offered within the degree at the institution
BSU Proposed: PhD in Ecology, Evolution, and Behavior (CIP codes 26.1301, 26.1303, 26.0708)	doctoral	BSU's proposed program includes the following three fields: CIP 26.1301 Ecology. CIP Definition: A program that focuses on the scientific study of the relationships and interactions of small-scale biological systems, such as organisms, to each other, to complex and whole systems, and to the physical and other non-biological aspects of their environments. Includes instruction in biogeochemistry; landscape and/or marine/aquatic dynamics; decomposition; global and regional elemental budgets; biotic and abiotic regulation of nutrient cycles; ecophysiology; ecosystem resilience, disturbance, and succession; community and habitat dynamics; organismal interactions (co-evolution, competition, predation); paleoecology; and evolutionary ecology.	Transdisciplinary strengths in: >Raptor biology >Chemical ecology >Plant evolution and diversity >Global change biology >Biogeochemistry >Human behavioral ecology Specific areas of specialization depend on the expertise of individual faculty members.
ISU: PhD in Biology (CIP code 26.0101) PhD in Microbiology (CIP code 26.0502)	doctoral	CIP 26.1303 Evolutionary Biology. CIP Definition: A program that focuses on the scientific study of the genetic, developmental, functional, and morphological patterns and processes, and theoretical principles; and the emergence and mutation of organisms over time. Includes instruction in molecular and morphological systematics; genetics and development; evolutionary transformation; paleobiology and paleontology; morphogenesis; mutation; locomotor, biomechanical and craniodental form and function; evolutionary theory; and systematic biology.	The ISU Department of Biological Sciences website lists four core research areas: >Ecology and Evolution >Biomedical, Anatomy & Physiology >Biochemistry, Microbiology, and Molecular Biology >Science Education Specific areas of specialization depend on the expertise of individual faculty members.
UI PhD in Biology (CIP code 26.0101) PhD in Natural Resources (CIP code 03.0201)	doctoral	CIP 26.0708 Animal Behavior and Ethology. CIP Definition: A program that focuses on the scientific study of the psychological and neurological bases of animal sensation, perception,	The UI Department of Biological Sciences website states that research in the department is clustered in four main focus areas: >Reproductive Biology, >Evolution and Ecology, >Neurobiology, and >Cellular and Molecular Biology. The UI PhD in Natural Resources has participation by three departments, which indicate the areas of emphasis a student could

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PhD in Environmental Science (CIP code 03.0104)	<p>cognition, behavior, and behavioral interactions within and outside the species. Includes instruction in ethology, behavioral neuroscience, neurobiology, behavioral evolution, cognition and sensory perception, motivators, learning and instinct, hormonal controls, reproductive and developmental biology, community ecology, functional behavior, and applications to specific behaviors and patterns as well as to specific phyla and species.</p>	<p>explore: Conservation Social Sciences; Fish and Wildlife Sciences; and Forest, Rangeland, and Fire Sciences Department.</p> <p>The UI PhD in Environmental Science “emphasizes an integrated approach for students committed to studying and solving environmental problems. Over 100 faculty from throughout the university work across traditional disciplines to provide students with a comprehensive education in environmental mitigation and problem solving</p>
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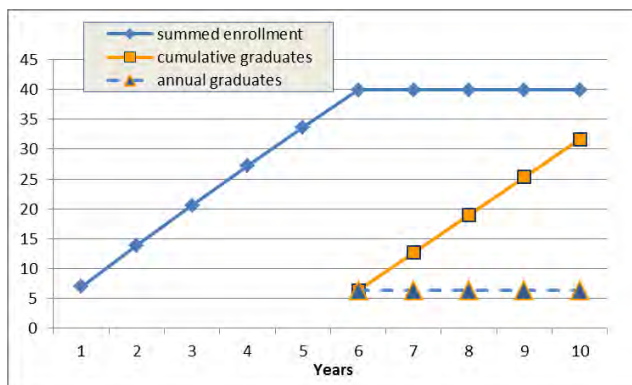
8. Describe the methodology for determining enrollment projections. If a survey of student interest was conducted, attach a copy of the survey instrument with a summary of results as **an Appendix**. *This question is not applicable to requests for discontinuance.*

Our estimate is based on the following:

1. All students will be on funded assistantships, either state-funded teaching assistantships, research grant-funded research assistantships, or training grant-funded assistantships.
2. Six years to finish the program.
3. Incoming cohort of 7 students each year.
4. A yearly probability of attrition of 2%, yielding a 9.6% attrition probability during the six year career.
5. There will be more than sufficient numbers of incoming students to fill the incoming cohort, resulting from recruitment efforts and from interest among alumni and existing students.

The above assumptions yield the following results (as depicted in the accompanying figure:

1. An estimated 6.5 students will graduate each year, once the sixth year of the program is reached.
2. A total average enrollment of 40 students in the program at any one time once the program is fully up and running.
3. Of those 40 enrolled, 22 will be on state-funded assistantships and a minimum of 18 will be on grant-funded assistantships. The size of our incoming cohort will be adjusted in accordance with the number of grant-funded assistantships held by students.



9. Enrollment and Graduates. Using the chart below, provide a realistic estimate of enrollment at the time of program implementation and over three year period based on availability of students meeting the criteria referenced above. Include part-time and full-time (i.e., number of majors or other relevant data) by institution for the proposed program, last three years beginning with the current year and the previous two years. Also, indicate the projected number of graduates and graduation rates.

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Institution	Relevant Enrollment Data			Number of Graduates			Graduation Rate
	Current (Fall 2014)	Year 1 Previous	Year 2 Previous	Current (2014-15)	Year 1 Previous	Year 2 Previous	
BSU: PhD in Ecology, Evolution, and Behavior (proposed)	The program will begin in Fall of 2017. We project that we will admit cohorts averaging 7 students each year. This will yield the projected enrollments depicted above, leveling out at roughly 40 once the program is fully up and running.			We project that first students will graduate from the program after 6 years in the program. Based on cohort size and on a typical attrition rate of 10%, we project an average of 6.5 graduates per year once the program is fully up and running.			6.5 per year
ISU PhD in Biology	11	12	15	3	1	6	~5 per year
PhD in Microbiology	2	1	1	0	0	1	~1 per year
UI PhD in Biology (includes Microbiology, Molec. Bio., & Biochem)	15	19	21	7	5	3	~5 per year
PhD in Natural Resources	45	59	61	17	8	10	~9 per year
PhD in Environmental Science.	31	31	27	7	4	6	~4 per year

10. Will this program reduce enrollments in other programs at your institution? If so, please explain.

No. Creation of the new program will create a vibrant research and teaching culture that will attract undergraduates and additional Master's students.

11. Provide verification of state workforce needs such as job titles requiring this degree. Include State and National Department of Labor research on employment potential. Using the chart below, indicate the total projected job openings (including growth and replacement demands in your regional area, the state, and nation.) Job openings should represent positions which require graduation from a program such as the one proposed. Data should be derived from a source that can be validated and must be no more than two years old. *This question is not applicable to requests for discontinuance.*

a. Describe the methodology used to determine the projected job openings. If a survey of employment needs was used, please attach a copy of the survey instrument with a summary of results as in an **Appendix**.

The proposed program will provide local, place-bound students with access to a program that will advance them professionally. The Treasure Valley is the home for a number of federal and state agencies, non-governmental organizations, environmental consulting firms, and educational institutions, each potentially with employees who would benefit.

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To calculate the figures in the above table:

1. We used US Department of Labor data only because it includes information on educational level. State-level need is estimated from national-level data.
2. Although "Postsecondary Teachers" includes positions relevant to the proposed program (e.g., community college instructors in biology), that classification is very broad, including all disciplines, and would yield a gross overestimate of need; therefore that classification was not included.
3. Five other classifications were included: Zoologists and Wildlife Biologists; Biological Scientists, All Other; Conservation Scientists; Environmental Scientists and Specialists, Including Health; and Anthropologists and Archeologists. Each of these classifications is undoubtedly broader than the set for which the proposed program would prepare students. In partial compensation, we deliberately did not include two classifications that would include some jobs for which the proposed program is relevant: Microbiologists and Hydrologists.
4. We calculated the nationwide number of new openings as the number of job openings times the percent in that job who hold doctorates. This is very likely an underestimate given that the level of education required for such jobs is increasing over time. The resulting number was divided by 10 to yield the yearly number of job openings.
5. We calculated the number of existing bachelor's level and master's level employees who could benefit from advancing with a doctoral degree as the average of 2010 and 2020 employment numbers times the sum of the percentages of bachelor's and master's employees presently in those jobs. The resulting number was divided by 10 to reflect that the pool of potential students is finite, and would be replenished by retirements and other job transitions.
6. State need was calculated as 0.5% of the national need to reflect the percent of the nation's population in Idaho. Local regional need was calculated as 50% of the state need to reflect the percent of Idaho's population in the local area.

		A	B	C	D	E	F	=C*K	=((A+B)/2)*(D+E)
2010 National Employment Matrix title and code		Employment		Job openings due to growth and replacement needs, 2010-20	Percent of Employees at each educational level (2009)			Nationwide number of new openings at Doctoral level (1000's)	Nationwide number of existing Bachelor's and Master's who could potentially advance with doctorate (1000's)
		2010	2020		Bachelor's degree	Master's degree	Doctoral or professional degree		
Zoologists and Wildlife Biologists	19-1023	19.8	21.3	5.9	44.4	28.8	21.2	1.3	15.0
Biological Scientists, All Other	19-1029	35.8	38.0	10.3	44.4	28.8	21.2	2.2	27.0
Conservation Scientists	19-1031	23.4	24.6	4.0	63.5	17.5	3.9	0.2	19.4
Environmental Scientists and Specialists, Including Health	19-2041	89.4	106.1	43.2	48.1	35.6	10.0	4.3	81.8
Anthropologists and Archeologists	19-3091	6.1	7.4	3.8	36.7	36.9	16.1	0.6	5.0
							Totals>>>	8.5	148.3
							Yearly need>>	0.9	14.8
							actual number needed per year (not in 1000's)>>	850.0	14827.8
							Total national need:		15677.8
							State need (0.5% of national):		78.4
							Regional need (50% of state need):		39.2
Excluded from Calculations									
Postsecondary Teachers	25-1000	1,756.0	2,061.7	586.1					
Microbiologists	19-1022	20.3	22.9	7.2	44.4	28.8	21.2		
Hydrologists	19-2043	7.6	9.0	3.6	48.1	35.6	10.0		

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	Year 1	Year 2	Year 3
Local (Regional)	39	39	39
State	78	78	78
Nation	15,678	15,678	15,678

- b. Describe how the proposed change will act to stimulate the state economy by advancing the field, providing research results, etc.

The proposed program will stimulate the economy by acting as a vehicle for bringing in additional federal funding. We conservatively estimate that the program, once fully up and running, will result in an increase of \$3M in federal funding entering Idaho per year. In addition, results from research projects will result in more enlightened and efficient use of state and federal funds for managing natural systems. Finally, strong graduate programs attract undergraduate students (including those from out of state) who are interested in eventually pursuing graduate degrees. Evidence of this benefit exists for the MS in Raptor Biology program, which attracts undergraduate students to the Department of Biological Sciences who are interested in gaining research experience with birds of prey.

- c. Is the program primarily intended to meet needs other than employment needs, if so, please provide a brief rationale.

The new program will increase opportunities for collaboration among faculty members at the three institutions and increase the amount of federal grant money flowing into Idaho. The EPSCoR program strives to increase the strength of inter-institutional collaborations; therefore creating programs that increase collaboration opportunities will create a more successful and robust EPSCoR program.

The proposed program will provide important research on a variety of challenges that face humans and the natural systems we depend on, including global climate change, invasive species, and endangered species. The proposed program has strengths in the transdisciplinary areas of raptor biology, global change biology, plant evolution and diversity, chemical ecology, biogeochemistry, and human behavioral ecology. Importantly, the program focuses on training scientists to better communicate with a wide range of audiences; thus, EEB graduates will be able to address a societal gap – a disconnect between science, public knowledge, and policy – and will therefore be able to speak to the direct application of research results to decision-making.

The program will provide strong partnerships to the US Geological Service's Snake River Field Station, The Peregrine Fund, and the Gorongosa Restoration Project. All three organizations have strong ties to Boise State, and all will benefit from involvement with the proposed program.

As collateral benefits, the program will: (i) increase efficiency in undergraduate biology and health sciences programs, (ii) increase quality and relevance of undergraduate programs because of increased opportunity for research experience, and (iii) increase richness of coursework available to existing master's level programs in biology, anthropology, and geosciences.

- 12. Will any type of distance education technology be utilized in the delivery of the program on your main campus or to remote sites? Please describe. *This question is not applicable to requests for discontinuance.***

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The proposed program will be delivered primarily face-to-face. However, it is anticipated that several courses will be shared among the three universities.

13. Describe how this request is consistent with the State Board of Education's strategic plan and institution's role and mission. This question is not applicable to requests for discontinuance.

SBOE Strategic Plan	Relevance of proposed program
GOAL 1: A WELL EDUCATED CITIZENRY >Objective B: Higher Level of Educational Attainment – Increase the educational attainment of all Idahoans through participation and retention in Idaho's educational system.	>The proposed program will provide local professionals with the opportunity to advance professionally
GOAL 2: CRITICAL THINKING AND INNOVATION The educational system will provide an environment for the development of new ideas, and practical and theoretical knowledge to foster the development of individuals who are entrepreneurial, broadminded, think critically, and are creative. >Objective A: Critical Thinking, Innovation and Creativity – Increase research and development of new ideas into solutions that benefit society.	>The proposed program will focus on research that will address important problems, e.g., global climate change
GOAL 3: EFFECTIVE AND EFFICIENT DELIVERY SYSTEMS Ensure educational resources are used efficiently. Objective A: Cost Effective and Fiscally Prudent – Increased productivity and cost-effectiveness.	The proposed program: >will provide additional teaching capacity that will help alleviate bottleneck courses and promote graduation of students with baccalaureate degrees, in support of Complete College Idaho >builds on already strong master's programs >will enhance the quality and relevance of undergraduate and master's programs

The proposed program aligns remarkably well with the SBOE's "Strategic Research Plan for Idaho Higher Education (2016-2020)," and will contribute substantially to three goals, four objectives, and six performance measures listed below.

Goal 1: Increase research at, and collaboration among, Idaho universities and colleges to advance areas of research strength and opportunity.

Objective 1.A: Ensure growth and sustainability of public university research efforts.

Performance Measure 1.A.1: Statewide amount of total annual research and development expenditures as reported in the National Science Foundation (NSF) Higher Education Research and Development Survey.

Objective 1.C: Expand joint research ventures among the state universities.

Performance Measure 1.C.1: Number of new fully sponsored project proposals submitted by an Idaho University that involve a subaward with another Idaho institution of higher education (in either direction).

Performance Measure 1.C.2: Number of new fully sponsored project awards to an Idaho University that involve a subaward with another Idaho institution of higher education (in either direction).

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Goal 2: Create research and development opportunities that strengthen the relationship between state universities and the private sector.

Objective 2.A: Increase the number of sponsored projects involving the private sector.

Performance Measure 2.A.1: Number of new sponsored projects involving the private sector.

Goal 4: Enhance learning and professional development through research and scholarly activity.

Objective 4.A: Increase the number of university and college students and staff involved in sponsored project activities.

Performance Measure 4.A.1: Number of undergraduate and graduate students paid from sponsored projects.

Performance Measure 4.A.2: Percentage of baccalaureate students who graduated in STEM disciplines and had a research experience.

Performance Measure 4.A.3: Number of faculty and staff paid from sponsored projects.

The highlighted portions of Boise State University's mission statement are especially relevant to the proposed program:

*Boise State University is a **public, metropolitan research university** offering an array of undergraduate and **graduate degrees** and experiences that foster student success, lifelong learning, community engagement, **innovation and creativity**. **Research and creative activity advance new knowledge and benefit students, the community, the state and the nation**. As an integral part of its metropolitan environment the university is engaged in professional and continuing education programming, **policy issues**, and promoting the region's economic vitality and cultural enrichment.*

The proposed program has substantial relevance to Boise State's core themes regarding Undergraduate Education, Graduate Education, and Research and Creative Activity, as described in the following table:

BSU Core Themes	Relevance of proposed program
<p>Core Theme One: Undergraduate Education Our university provides access to high quality undergraduate education that cultivates the personal and professional growth of our students and meets the educational needs of our community, state, and nation. We engage our students and focus on their success.</p> <p>>Core Objective 1.1: Access and completion. Students of all backgrounds have the opportunity and support needed to pursue and successfully complete their undergraduate degree programs.</p> <p>>Core Objective 1.2: Relevance. Our undergraduate students develop depth and breadth in the skills, knowledge, and experiences required to ensure their success in the 21st</p>	<p>>The proposed program will provide additional teaching capacity, which will reduce bottlenecks for biology and health sciences majors, facilitating timely completion and supporting Complete College Idaho.</p> <p>>The research experience gained by undergraduate students will be highly relevant</p>

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<p>century world.</p> <p>>Core Objective 1.3: Quality. In addition to developing depth of knowledge, understanding, and skill in their respective disciplines, our undergraduate students are engaged in an education that stresses the liberal arts. They master enduring skills and habits of mind that transcend disciplinary boundaries, achieve a breadth of knowledge and understanding over a range of disciplines, receive a solid grounding in civic and ethical responsibility, and become aware of the global community and their connection to it.</p>	<p>to their success.</p> <p>>The research experience gained by undergraduate students will increase the quality of education for those students.</p>
<p>Core Theme Two: Graduate Education</p> <p>Our university provides access to graduate education that addresses the needs of our region, is meaningful in a global context, is respected for its high quality, and is delivered within a supportive graduate culture.</p> <p>>Core Objective 2.1: Access. We provide students of all backgrounds with access to graduate educational opportunities in formats that are appropriate, flexible, accessible, and affordable.</p> <p>>Core Objective 2.2: Relevance. Our graduate students develop skills, knowledge, and experiences that are relevant and valuable locally, regionally, nationally, and globally.</p> <p>>Core Objective 2.3: Quality. Our graduate programs are composed of advanced and integrated learning experiences that provide disciplinary depth and interdisciplinary connections, and that reinforce the overall scholarly output of the university.</p>	<p>>The proposed program will provide opportunities for professional advancement for place-bound local biologists.</p> <p>>The program is focused on the solving of highly relevant problems.</p> <p>>The program will make use of “cluster” structure of student training to engage students in learning from a multidisciplinary perspective.</p>
<p>Core Theme Three: Research and Creative Activity</p> <p>Through our endeavors in basic and applied research and in creative activity, our researchers, artists, and students create knowledge and understanding of our world and of ourselves, and transfer that knowledge to provide societal, economic, and cultural benefits. Students are integral to our faculty research and creative activity.</p> <p>>Core Objective 3.1: Access. Community members can connect with and benefit from our researchers, artists, and students. Our students are true collaborators in our activities.</p> <p>>Core Objective 3.2: Relevance. Our efforts in research and creative activity have direct and beneficial impact on the community, state, nation, and global community.</p> <p>>Core Objective 3.3: Quality. We pursue research and creative activity that brings about discovery of fundamental knowledge and produces a better understanding of the human condition and our world. The work of our researchers, artists, and students has substantial disciplinary impact and contributes to the overall reputation of the university.</p>	<p>>The proposed program will provide relevant research to our key partner organizations as well as to other agencies, non-governmental organizations, etc., in the area.</p> <p>>Research pursued by graduate students and faculty members will focus on problems of high relevance.</p> <p>>The program builds on highly successful and high quality master’s programs. Focus on quality is a key attribute of all doctoral programs at Boise State.</p>

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- 14. Describe how this request fits with the institution's vision and/or strategic plan.** *This question is not applicable to requests for discontinuance.*

Goals of Institution Strategic Plan Mission	Proposed Program Plans to Achieve the Goal
Goal 1: Create a signature, high quality educational experience for all students.	>The proposed program will be one-of-a-kind because of its six transdisciplinary strengths. >It will enhance the quality of undergraduate programs, and will increase the quality of the Raptor Biology master's program, the only master's program in raptor biology in the nation.
Goal 2: Facilitate the timely attainment of educational goals of our diverse student population.	>A side benefit of the proposed program is a decrease in the bottleneck courses that affect biology and health sciences majors, thereby supporting Complete College Idaho.
Goal 3: Gain distinction as a doctoral research university.	>The proposed program will substantially increase the research output of faculty members, the reputation of the university, and the number of doctoral graduates.
Goal 4: Align university programs and activities with community needs.	>The proposed program will provide place-bound biologists with opportunities for further education. >The program will increase the productivity of our two key partners: the Peregrine Fund and the USGS. >The program will provide research highly relevant to locally-based organizations.
Goal 5: Transform our operations to serve the contemporary mission of the university.	>Creating the proposed program follows directly from the tenets of program prioritization: the university should invest in the departments and programs (such as those of the Department of Biological Sciences) that are of the highest effectiveness and efficiency. >The program will have important collateral benefits in increasing efficiency and quality of existing undergraduate and graduate programs.

- 15. Is the proposed program in your institution's Five-Year plan? Indicate below.** *This question is not applicable to requests for discontinuance.*

Yes x No

If not on your institution's Five-Year plan, provide a justification for adding the program.

- 16. Explain how students are going to learn about this program and where students are going to be recruited from (i.e., within institution, out-of-state, internationally). For requests to discontinue a program, how will continuing students be advised of impending changes and consulted about options or alternatives for attaining their educational goals?**

Recruitment to the program will be coordinated with the recruiting staff of the graduate college. Recruitment at a local level of local, place-bound professionals will occur primarily by informal contact between faculty members and those professionals and their organizations. We anticipate some recruitment of highly qualified Boise State undergraduate and master's-level students.

Because of the transdisciplinary nature of the program, we believe that the program will have broad appeal, enabling us to recruit students nationally and internationally as well. In the field of ecology,

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evolution, and behavior, students are motivated to apply to graduate programs because of the strength of faculty research and program reputation. Our recruitment plan has a 3-pronged approach for attracting high quality applicants: 1) support of faculty travel to professional conferences, 2) create a highly visible and informative web presence, and 3) support the visits of colleagues from external institutions. Faculty attendance at professional conferences serves several important functions for research, including networking to recruit students into labs. Students attend conferences to meet potential mentors, and conferences provide excellent opportunities for faculty members to meet applicants in-person and to judge the quality of their past research experience by attending oral or poster presentations. Also, potential applicants will likely make use of the internet to search for graduate programs. We intend to have a highly visible web presence, with up-to-date information on opportunities, success stories, and where-are-they-now information about graduates. Finally, we will host regular visits from colleagues at other research institutions to give seminars and have informal meetings with graduate students and faculty. Such visits are key to publicizing a strong and successful training program. These colleagues quickly become part of program by recruiting at their home institution when they suggest their students apply to Boise State.

17. In accordance with Board Policy III.G., an external peer review is required for any new doctoral program. Attach the peer review report as **Appendix D**.

18. **Program Resource Requirements.** Using the *Excel spreadsheet* provided by the Office of the State Board of Education indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first three fiscal years of the program. Include reallocation of existing personnel and resources and anticipated or requested new resources. Second and third year estimates should be in constant dollars. Amounts should reconcile budget explanations below. If the program is contract related, explain the fiscal sources and the year-to-year commitment from the contracting agency(ies) or party(ies). Provide an explanation of the fiscal impact of the proposed discontinuance to include impacts to faculty (i.e., salary savings, re-assignments).

Notes:

1. The budget information that follows depicts the first three years of the program, beginning with FY18, and therefore does not depict the program at full capacity, which will occur in the sixth year of the program.
2. The budget information that follows includes only those expenditures and resources that are associated with the PhD program. As is described in the text of the proposal, the proposed PhD program is moving forward at the same time as a major revision of the curriculum and teaching structure of the undergraduate BS Biology curriculum. That revision, which has its own associated costs, is based on results from Program Prioritization, is in support of the Complete College Idaho Initiative, and will result in an increased number of BS Biology graduates as well as a shortened time to degree and increased quality of the program.

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Program Resource Requirements.

- Indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first **four** fiscal years
- Include reallocation of existing personnel and resources and anticipated or requested new resources.
- Second and third year estimates should be in constant dollars.
- Amounts should reconcile subsequent pages where budget explanations are provided.
- If the program is contract related, explain the fiscal sources and the year-to-year commitment from the contracting agency(ies) or party(ies).
- Provide an explanation of the fiscal impact of any proposed discontinuance to include impacts to faculty (i.e., salary savings, re-assignments).

I. PLANNED STUDENT ENROLLMENT

		FY 18		FY 19		FY 20		FY 21	
		FTE	Headcount	FTE	Headcount	FTE	Headcount	FTE	Headcount
A. New enrollments		7.0	7	14.0	14	21.0	21	28.0	28
B. Shifting enrollments		0	0	0	0	0	0	0	0
Budget Notes:									
I.A. Headcount is estimated from the model described in section 8 above. Student FTE is calculated as 1.0 FTE per 24 credits in one year.									

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II. REVENUE										
			FY 18		FY 19		FY 20		FY 21	
			On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
	1. New Appropriated Funding Rec		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	2. Institution Funds		\$418,242	\$50,000	\$658,753	\$350,000	\$840,877	\$350,000	\$939,485	\$350,000
	3. Federal			\$196,641		\$394,416		\$666,728		\$894,290
	4. New Tuition Revenues from Increased Enrollments		\$150,000	\$0	\$300,000	\$0	\$450,000	\$0	\$600,000	\$0
	5. Student Fees		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	6. Additional Tuition Revenue		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total Revenue		\$568,242	\$246,641	\$958,753	\$744,416	\$1,290,877	\$1,016,728	\$1,539,485	\$1,244,290
Budget Notes:										
II.3. Grants and agency funding is considered one-time funding and is shown here to fund:										
	Summer salary for faculty members accounting for one-third of faculty FTE devoted to dissertation credit hours.									
	GA salaries at \$25k for 1, 2, 3, and 6 students in FY18, FY19, FY20, and FY21 respectively									
	Tuition waivers for the same GA's									
	Operating expenses (@\$10k) for 7, 14, 21, and 28 students in FY18, FY19, FY20, and FY20 respectively									
	Postdoctoral researchers: 1, 2, 4, 4 FTE in FY18, FY19, FY20, and FY20 respectively									
II.4. Projected additional tuition revenue that will result from increased retention and recruitment in the undergraduate biology program.										
	Ongoing is defined as ongoing operating budget for the program which will become part of the base.									
	One-time is defined as one-time funding in a fiscal year and not part of the base.									

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III. EXPENDITURES									
		FY 18		FY 19		FY 20		FY 21	
		On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
A. Personnel Costs									
1. FTE		9.6	2.2	17.2	4.4	24.2	7.7	29.1	11.1
2. Faculty		\$77,771	\$14,981	\$148,162	\$30,803	\$222,331	\$56,837	\$291,919	\$82,440
3. Adjunct Faculty		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4. Graduate Assistants		\$150,000	\$25,000	\$300,000	\$50,000	\$450,000	\$75,000	\$550,000	\$150,000
5. Research Personnel		\$81,300	\$45,000	\$110,550	\$90,000	\$110,550	\$180,000	\$110,550	\$180,000
6. Directors/Administrators		\$10,000	\$0	\$10,000	\$0	\$10,000	\$0	\$10,000	\$0
7. Administrative Support Personnel		\$40,000	\$0	\$40,000	\$0	\$40,000	\$0	\$40,000	\$0
8. Fringe Benefits		\$85,175	\$22,993	\$132,049	\$46,281	\$170,008	\$88,893	\$202,364	\$103,854
9. Other:									
Total FTE Personnel and Costs		\$444,246	\$107,975	\$740,761	\$217,084	\$1,002,889	\$400,730	\$1,204,833	\$516,294

Budget Notes:

III.A.1. FTE is the sum of FTEs for all rows. Graduate assistants are counted as 1.0FTE each.

III.A.2. "Faculty" costs consist of the portions of the percent of salary assigned to this program as per the tables in Section 18.a.

Grants are assumed to pay for summer salary for most faculty members, and much of graduate student advising occurs during summer. In order to depict the contribution of grant funds to graduate student advising, we make the assumption that that faculty salary costs associated with one-third of dissertation credit hours is covered by grants

III.A.4. Graduate assistantships awarded to students @ \$25k for an 11 month appointment.

State funded: 6, 12, 18, and 22 in FY 18, 19, 20, and 21 respectively.

Grant funded: estimated at 1, 2, 3, 6 in FY 18, 19, 20, and 21 respectively.

III.A.5. Consists of research personnel on appropriated funding (first four) and grant funding (Postdocs):

0.5FTE of a Database and collections manager

0.65 FTE of a GIS and visualization expert

0.33 FTE for research faculty member charged with program development and assessment and with grant writing

0.65 FTE for a statistician/modeler

Grant funded postdoctoral researchers: 1.0, 2.0, 4.0, 4.0 FTE in FY 18, 19, 20, and 21 respectively.

III.A.6. Administrator is the director of the PhD program, who will received 0.13 FTE of salary in addition to standard 9-month salary.

III.A.7. Support personnel is a 1.0FTE administrative staff member

III.A.8. Fringe is calculated as 35% for staff and faculty and 8% for graduate assistants

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		FY 18		FY 19		FY 20		FY 21	
		On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
B. Operating Expenditures									
1. Travel		\$30,000	\$7,000	\$30,000	\$14,000	\$30,000	\$21,000	\$30,000	\$28,000
2. Professional Services		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3. Other Services		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4. Communications		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5. Materials and Supplies		\$0	\$70,000	\$0	\$140,000	\$0	\$210,000	\$0	\$280,000
6. Rentals		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7. Materials & Goods for Manufacture & Resale		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8. Miscellaneous		\$24,000	\$0	\$24,000	\$0	\$24,000	\$0	\$24,000	\$0
9. Tuition Waivers & Ins @ \$11,666		\$69,996	\$11,666	\$139,992	\$23,332	\$209,988	\$34,998	\$256,652	\$69,996
Total Operating Expenditures		\$123,996	\$88,666	\$193,992	\$177,332	\$263,988	\$265,998	\$310,652	\$377,996
Budget Notes:									
III.B.1. Travel consists of									
\$30k per year of recruitment costs (faculty travel to professional meetings and campus visits for top applicants)									
\$1000 per year per GA for student travel to professional meetings; grant funded.									
III.B.5. Materials and supplies for graduate student research are assumed to be funded by faculty-obtained grants;									
estimated at \$10k per student per year. Considered one-time									
III.B.8. Miscellaneous consists of									
\$12k to 36k for publication costs									
\$12k miscellaneous operating expenses									
III.B.9: Tuition waivers and insurance are required for all students on graduate assistantships @ \$11,666 each									

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		FY 18		FY 19		FY 20		FY 21	
		On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
C. Capital Outlay									
1. Library Resources		\$0	\$0	\$24,000	\$0	\$24,000	\$0	\$24,000	\$0
2. Equipment		\$0	\$50,000	\$0	\$350,000	\$0	\$350,000	\$0	\$350,000
Total Capital Outlay		<u>\$0</u>	<u>\$50,000</u>	<u>\$24,000</u>	<u>\$350,000</u>	<u>\$24,000</u>	<u>\$350,000</u>	<u>\$24,000</u>	<u>\$350,000</u>
D. Capital Facilities Construction or Major Renovation									
E. Indirect Costs (overhead)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL EXPENDITURES:		<u>\$568,242</u>	<u>\$246,641</u>	<u>\$958,753</u>	<u>\$744,416</u>	<u>\$1,290,877</u>	<u>\$1,016,728</u>	<u>\$1,539,485</u>	<u>\$1,244,290</u>
Net Income (Deficit)		<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Budget Notes:									
III.C.1. Library consists of new journal titles required to support the proposed program.									
III.C.2. Equipment consists of									
two new field vehicles @ \$25k purchased each year									
\$300k of faculty startup in each of three years									

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a. Personnel Costs

Faculty and Staff Expenditures

Project for the first three years of the program the credit hours to be generated by each faculty member (full-time and part-time), graduate assistant, and other instructional personnel. Also indicate salaries. After total student credit hours, convert to an FTE student basis. Please provide totals for each of the three years presented. Salaries and FTE students should reflect amounts shown on budget schedule.

Notes:

1. The following faculty salary tables depict typical levels of effort and cost associated with the proposed program. Given that the start date is two years away, the information that follows can only be regarded as placeholder, illustrative information.

FY2018 (salaries depicted using constant FY2016 dollars) Name, Position & Rank	Annual Salary Rate (9 month base rate)	Faculty FTE Assignment to this Program	Value of FTE Effort to this Program	Projected Student Credit Hours	FTE Students (1 FTE = 24 credits taken in a year)
Biological Sciences					
Jesse Barber, Asst Prof	\$69,618	0.08	\$5,802	10	0.42
Marc Bechard, Prof	\$89,415	0.08	\$7,451	10	0.42
James Belthoff, Prof	\$89,524	0.08	\$7,460	10	0.42
Marie-Anne de Graaff, Asst Prof	\$67,476	0.08	\$5,623	10	0.42
Kevin Feris, Assoc Prof	\$93,787	0.08	\$7,816	10	0.42
Jennifer Forbey, Assoc Prof	\$75,983	0.08	\$6,332	10	0.42
Eric Hayden, Asst Prof	\$67,476	0.00	\$0	0	0.00
Julie Heath, Assoc Prof	\$76,149	0.13	\$9,519	21	0.88
Peter Koetsier, Prof	\$87,756	0.13	\$10,970	21	0.88
Stephen Novak, Prof	\$88,068	0.13	\$11,009	21	0.88
Ian Robertson, Prof	\$87,402	0.13	\$10,925	21	0.88
Marcelo Serpe, Prof	\$87,714	0.00	\$0	0	0.00
James Smith, Prof	\$88,192	0.00	\$0	0	0.00
Merlin White, Assoc Prof	\$75,754	0.04	\$3,156	7	0.29
To be named	\$65,000	0.00	\$0	0	0.00
To be named	\$65,000	0.00	\$0	0	0.00
To be named	\$65,000	0.00	\$0	0	0.00
To be named	\$65,000	0.00	\$0	0	0.00
Anthropology					
Samantha Blatt, Vis Asst Prof	\$53,522	0.13	\$6,690	17	0.71
Kathryn Demps, Asst Prof	\$54,704	0.00	\$0	0	0.00
Mark Plew, Prof	\$79,394	0.00	\$0	0	0.00
Kristin Snopkowski, Asst Prof	\$54,621	0.00	\$0	0	0.00
Pei-Lin Yu, Asst Prof	\$54,621	0.00	\$0	0	0.00
John Ziker, Prof	\$82,199	0.00	\$0	0	0.00
Geosciences					
Shawn Benner, Assoc Prof	\$87,298	0.00	\$0	0	0.00
Alejandro Flores, Assoc Prof	\$74,007	0.00	\$0	0	0.00
Nancy Glenn, Prof	\$105,831	0.00	\$0	0	0.00
Matt Kohn, Prof	\$93,580	0.00	\$0	0	0.00
Jennifer Pierce, Assoc Prof	\$72,968	0.00	\$0	0	0.00
Human Environmental Systems, CID					
Jodi Brandt, Asst Prof	\$75,005	0.00	\$0	0	0.00
Neil Carter, Asst Prof	\$75,005	0.00	\$0	0	0.00
To be named	\$75,005	0.00	\$0	0	0.00
To be named	\$75,005	0.00	\$0	0	0.00
USGS and Peregrine Fund	N/A	0.00		0	0.00
Totals		1.17	\$92,752	168	7.00

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FY2019 (salaries depicted using constant FY2016 dollars) Name, Position & Rank	Annual Salary Rate (9 month base rate)	Faculty FTE Assignment to this Program	Value of FTE Effort to this Program	Projected Student Credit Hours	FTE Students (1 FTE = 24 credits taken in a year)
Biological Sciences					
Jesse Barber, Asst Prof	\$69,618	0.08	\$5,802	10	0.42
Marc Bechard, Prof	\$89,415	0.08	\$7,451	10	0.42
James Belthoff, Prof	\$89,524	0.08	\$7,460	10	0.42
Marie-Anne de Graaff, Asst Prof	\$67,476	0.21	\$14,058	31	1.29
Kevin Feris, Assoc Prof	\$93,787	0.08	\$7,816	10	0.42
Jennifer Forbey, Assoc Prof	\$75,983	0.08	\$6,332	10	0.42
Eric Hayden, Asst Prof	\$67,476	0.08	\$5,623	10	0.42
Julie Heath, Assoc Prof	\$76,149	0.08	\$6,346	10	0.42
Peter Koetsier, Prof	\$87,756	0.21	\$18,283	31	1.29
Stephen Novak, Prof	\$88,068	0.21	\$18,348	31	1.29
Ian Robertson, Prof	\$87,402	0.08	\$7,284	10	0.42
Marcelo Serpe, Prof	\$87,714	0.08	\$7,310	10	0.42
James Smith, Prof	\$88,192	0.13	\$11,024	21	0.88
Merlin White, Assoc Prof	\$75,754	0.13	\$9,469	21	0.88
To be named	\$65,000	0.13	\$8,125	21	0.88
To be named	\$65,000	0.04	\$2,708	7	0.29
To be named	\$65,000	0.04	\$2,708	7	0.29
To be named	\$65,000	0.00	\$0	0	0.00
Anthropology					
Samantha Blatt, Vis Asst Prof	\$53,522	0.21	\$11,150	31	1.29
Kathryn Demps, Asst Prof	\$54,704	0.00	\$0	0	0.00
Mark Plew, Prof	\$79,394	0.04	\$3,308	7	0.29
Kristin Snopkowski, Asst Prof	\$54,621	0.00	\$0	0	0.00
Pei-Lin Yu, Asst Prof	\$54,621	0.00	\$0	0	0.00
John Ziker, Prof	\$82,199	0.00	\$0	0	0.00
Geosciences					
Shawn Benner, Assoc Prof	\$75,629	0.00	\$0	0	0.00
Alejandro Flores, Assoc Prof	\$71,885	0.13	\$8,986	21	0.88
Nancy Glenn, Prof	\$103,293	0.00	\$0	0	0.00
Matt Kohn, Prof	\$91,333	0.00	\$0	0	0.00
Jennifer Pierce, Assoc Prof	\$72,968	0.00	\$0	0	0.00
Human Environmental Systems, CID					
Jodi Brandt, Asst Prof	\$75,005	0.08	\$6,250	10	0.42
Neil Carter, Asst Prof	\$75,005	0.04	\$3,125	7	0.29
To be named	\$75,005	0.00	\$0	0	0.00
To be named	\$75,005	0.00	\$0	0	0.00
USGS and Peregrine Fund	N/A	0.00		0	0.00
Totals		2.33	\$178,965	336	14.00

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FY2020 (salaries depicted using constant FY2016 dollars) Name, Position & Rank	Annual Salary Rate (9 month base rate)	Faculty FTE Assignment to this Program	Value of FTE Effort to this Program	Projected Student Credit Hours	FTE Students (1 FTE = 24 credits taken in a year)
Biological Sciences					
Jesse Barber, Asst Prof	\$69,618	0.28	\$19,145	39	1.63
Marc Bechard, Prof	\$89,415	0.28	\$24,589	39	1.63
James Belthoff, Prof	\$89,524	0.15	\$13,429	18	0.75
Marie-Anne de Graaff, Asst Prof	\$67,476	0.15	\$10,121	18	0.75
Kevin Feris, Assoc Prof	\$93,787	0.28	\$25,791	39	1.63
Jennifer Forbey, Assoc Prof	\$75,983	0.15	\$11,397	18	0.75
Eric Hayden, Asst Prof	\$67,476	0.21	\$14,058	31	1.29
Julie Heath, Assoc Prof	\$76,149	0.08	\$6,346	10	0.42
Peter Koetsier, Prof	\$87,756	0.21	\$18,283	31	1.29
Stephen Novak, Prof	\$88,068	0.08	\$7,339	10	0.42
Ian Robertson, Prof	\$87,402	0.13	\$10,925	17	0.71
Marcelo Serpe, Prof	\$87,714	0.08	\$7,310	10	0.42
James Smith, Prof	\$88,192	0.13	\$11,024	17	0.71
Merlin White, Assoc Prof	\$75,754	0.13	\$9,469	17	0.71
To be named	\$65,000	0.21	\$13,542	31	1.29
To be named	\$65,000	0.08	\$5,417	10	0.42
To be named	\$65,000	0.13	\$8,125	21	0.88
To be named	\$65,000	0.00	\$0	0	0.00
Anthropology					
Samantha Blatt, Vis Asst Prof	\$53,522	0.15	\$8,028	18	0.75
Kathryn Demps, Asst Prof	\$54,704	0.00	\$0	0	0.00
Mark Plew, Prof	\$79,394	0.04	\$3,308	7	0.29
Kristin Snopkowski, Asst Prof	\$54,621	0.08	\$4,552	10	0.42
Pei-Lin Yu, Asst Prof	\$54,621	0.13	\$6,828	21	0.88
John Ziker, Prof	\$82,199	0.08	\$6,850	10	0.42
Geosciences					
Shawn Benner, Assoc Prof	\$75,629	0.00	\$0	0	0.00
Alejandro Flores, Assoc Prof	\$71,885	0.00	\$0	0	0.00
Nancy Glenn, Prof	\$103,293	0.00	\$0	0	0.00
Matt Kohn, Prof	\$91,333	0.13	\$11,417	21	0.88
Jennifer Pierce, Assoc Prof	\$72,968	0.00	\$0	0	0.00
Human Environmental Systems, CID					
Jodi Brandt, Asst Prof	\$75,005	0.21	\$15,626	31	1.29
Neil Carter, Asst Prof	\$75,005	0.08	\$6,250	10	0.42
To be named	\$75,005	0.00	\$0	0	0.00
To be named	\$75,005	0.00	\$0	0	0.00
USGS and Peregrine Fund	N/A	0.00		0	0.00
Totals		3.63	\$279,168	504	21.00

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FY2021 (salaries depicted using constant FY2016 dollars) Name, Position & Rank	Annual Salary Rate (9 month base rate)	Faculty FTE Assignment to this Program	Value of FTE Effort to this Program	Projected Student Credit Hours	FTE Students (1 FTE = 24 credits taken in a year)
Biological Sciences					
Jesse Barber, Asst Prof	\$69,618	0.28	\$19,145	39	1.63
Marc Bechard, Prof	\$89,415	0.28	\$24,589	39	1.63
James Belthoff, Prof	\$89,524	0.15	\$13,429	18	0.75
Marie-Anne de Graaff, Asst Prof	\$67,476	0.28	\$18,556	39	1.63
Kevin Feris, Assoc Prof	\$93,787	0.15	\$14,068	18	0.75
Jennifer Forbey, Assoc Prof	\$75,983	0.23	\$17,729	28	1.17
Eric Hayden, Asst Prof	\$67,476	0.15	\$10,121	18	0.75
Julie Heath, Assoc Prof	\$76,149	0.15	\$11,422	18	0.75
Peter Koetsier, Prof	\$87,756	0.28	\$24,133	39	1.63
Stephen Novak, Prof	\$88,068	0.28	\$24,219	39	1.63
Ian Robertson, Prof	\$87,402	0.28	\$24,036	39	1.63
Marcelo Serpe, Prof	\$87,714	0.15	\$13,157	18	0.75
James Smith, Prof	\$88,192	0.21	\$18,373	31	1.29
Merlin White, Assoc Prof	\$75,754	0.08	\$6,313	10	0.42
To be named	\$65,000	0.13	\$8,125	17	0.71
To be named	\$65,000	0.21	\$13,542	31	1.29
To be named	\$65,000	0.13	\$8,125	17	0.71
To be named	\$65,000	0.21	\$13,542	31	1.29
Anthropology					
Samantha Blatt, Vis Asst Prof	\$53,522	0.19	\$10,258	25	1.04
Kathryn Demps, Asst Prof	\$54,704	0.08	\$4,559	10	0.42
Mark Plew, Prof	\$79,394	0.00	\$0	0	0.00
Kristin Snopkowski, Asst Prof	\$54,621	0.08	\$4,552	10	0.42
Pei-Lin Yu, Asst Prof	\$54,621	0.08	\$4,552	10	0.42
John Ziker, Prof	\$82,199	0.21	\$17,125	31	1.29
Geosciences					
Shawn Benner, Assoc Prof	\$75,754	0.08	\$6,313	10	0.42
Alejandro Flores, Assoc Prof	\$65,000	0.00	\$0	0	0.00
Nancy Glenn, Prof	\$65,000	0.00	\$0	0	0.00
Matt Kohn, Prof	\$65,000	0.13	\$8,125	21	0.88
Jennifer Pierce, Assoc Prof	\$65,000	0.00	\$0	0	0.00
Human Environmental Systems, CID					
Jodi Brandt, Asst Prof	\$75,005	0.28	\$20,626	39	1.63
Neil Carter, Asst Prof	\$75,005	0.08	\$6,250	10	0.42
To be named	\$75,005	0.08	\$6,250	10	0.42
To be named	\$75,005	0.04	\$3,125	7	0.29
USGS and Peregrine Fund	N/A	0.00		0	0.00
Totals		4.93	\$374,359	672	28.00

Assumptions of the above calculations:

1. Enrollments of 7, 14, 21, and 28 in FY18, 19, 20, and 21 respectively.
2. Students take a full time load of 12 credits per semester.
3. Full time equivalency (FTE) is calculated according to SBOE guidelines of 12 credits per semester equals one FTE.
4. Students in first two years take on average, each semester, 7 credits of coursework and graduate seminar and 5 credits of research.
5. Students in year three through six take on average, each semester, 9 credits of dissertation coursework and 3 credits of coursework/graduate seminar.

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6. Faculty assignments to courses and to graduate students are arbitrary at this time because this model is constructed for illustrative purposes only.
7. One faculty FTE equals 24 credits of course load or 120 credits of dissertation credits per year.
8. Salaries of faculty members are FY2016 salaries for a 9-month base, and are kept constant in FY16 dollars for purposes of this model.

Project the need and cost for support personnel and any other personnel expenditures for the first three years of the program.

Research Personnel			
FY2018 (calculated using constant FY2016 dollars)	Annual Salary Rate (12 month base rate)	FTE Assignment to this Program	Value of FTE Effort to this Program
Name, Position & Rank			
To be named, Database and collections manager	\$45,000	0.5	\$22,500
To be named, Research Faculty	\$60,000	0.33	\$19,800
To be named, Statistician and modeler	\$60,000	0.65	\$39,000
Postdoctoral Researchers (1)	\$45,000	1.0	\$45,000
Totals:		2.48	\$126,300

Research Personnel			
FY2019 (calculated using constant FY2016 dollars)	Annual Salary Rate (12 month base rate)	FTE Assignment to this Program	Value of FTE Effort to this Program
Name, Position & Rank			
To be named, Database and collections manager	\$45,000	0.5	\$22,500
To be named, GIS visualization	\$45,000	0.65	\$29,250
To be named, Research Faculty	\$60,000	0.33	\$19,800
To be named, Statistician and modeler	\$60,000	0.65	\$39,000
Postdoctoral Researchers (2)	\$45,000	2.0	\$90,000
Totals:		4.13	\$200,550

Research Personnel			
FY2020 and subsequent years (calculated using constant FY2016 dollars)	Annual Salary Rate (12 month base rate)	FTE Assignment to this Program	Value of FTE Effort to this Program
Name, Position & Rank			
To be named, Database and collections manager	\$45,000	0.5	\$22,500
To be named, GIS visualization	\$45,000	0.65	\$29,250
To be named, Research Faculty	\$60,000	0.33	\$19,800
To be named, Statistician and modeler	\$60,000	0.65	\$39,000
Postdoctoral Researchers (4)	\$45,000	4.0	\$180,000
Totals:		6.13	\$290,550

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Database and collections manager: Manage herbarium and vertebrate collections, assist with data storage, database construction, archiving data, preparing data for publication, retrieving data from public sources, data sharing. Will result in increased data integrity and will meet requirements of external funders and journals for data storage and sharing.

Data visualization: will provide expertise in spatial data analysis and enhanced visual representation of findings. Consult with faculty and students on spatially explicit data, mapping, and visualization. Will result in the development of skill sets for efficient visual communication with scientists and non-scientists.

Research faculty member: focused on PhD, master's and undergraduate program development and assessment. Will pursue extramural grant funding opportunities for program development and the building of infrastructure.

Statistician and modeler: Provide statistical consulting to students and faculty. Results in increased quality of experimental design and analysis, increased proposal success, and increased likelihood of publishing in high impact journals. Will contribute to student training and thereby increase graduate placement: quantitative skills are #1 predictor of employment in EEB fields.

Support Personnel			
FY2018 and subsequent years (calculated using constant FY2016 dollars)	Annual Salary Rate (12 month base rate)	FTE Assignment to this Program	Value of FTE Effort to this Program
Name, Position & Rank			
To be named, Administrative Support	\$40,000	1	\$40,000
Totals:		1	\$40,000

EEB Program Administrative Assistant: will provide increased capacity for grants administration; will handle paperwork associated with awards, travel, and assessment for graduate programs; will coordinate recruitment and answer general inquiries; will provide data management for program; will do web development.

Graduate Assistants			
FY2018 (calculated using constant FY2016 dollars)	Annual Salary Rate (12 month base	FTE Assignme nt to this Program	Value of FTE Effort to this Program
Name, Position & Rank			
To be named, Graduate Assistants (appropriated funded)	\$25,000	6	\$150,000
To be named, Graduate Assistants (grant and agency funded)	\$25,000	1	\$25,000
Totals:		7	\$175,000

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FY2019 (calculated using constant FY2016 dollars)	Annual Salary Rate (12 month base	FTE Assignme nt to this Program	Value of FTE Effort to this Program
Name, Position & Rank			
To be named, Graduate Assistants (appropriated funded)	\$25,000	12	\$300,000
To be named, Graduate Assistants (grant and agency funded)	\$25,000	2	\$50,000
Totals:		14	\$350,000
FY2020 (calculated using constant FY2016 dollars)	Annual Salary Rate (12 month base	FTE Assignme nt to this Program	Value of FTE Effort to this Program
Name, Position & Rank			
To be named, Graduate Assistants (appropriated funded)	\$25,000	18	\$450,000
To be named, Graduate Assistants (grant and agency funded)	\$25,000	3	\$75,000
Totals:		21	\$525,000
FY2020 (calculated using constant FY2016 dollars)	Annual Salary Rate (12 month base	FTE Assignme nt to this Program	Value of FTE Effort to this Program
Name, Position & Rank			
To be named, Graduate Assistants (appropriated funded)	\$25,000	22	\$550,000
To be named, Graduate Assistants (grant and agency funded)	\$25,000	6	\$150,000
Totals:		28	\$700,000

One set of graduate assistantships will be teaching assistants funded from appropriated funds. Six new assistantships will be added each of the first three years of the program and four more will be added in the fourth year, for a total of 22.

Another set of graduate assistantships will be research assistants funded from faculty research grants, training grants, and agency funds. It is expected that in many cases, students will rotate off of teaching assistantships and onto research assistantships, thereby freeing up teaching assistantships for incoming students. We conservatively estimate that by year 7 of the program, 18 students will be on funded research assistantships.

Administrative Expenditures

Describe the proposed administrative structure necessary to ensure program success and the cost of that support. Include a statement concerning the involvement of other departments, colleges, or other institutions and the estimated cost of their involvement in the proposed program.

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Administrators			
FY2018 and subsequent years (calculated using constant FY2016 dollars)	Annual Salary Rate (9 month base rate)	FTE Assignment to this Program	Value of FTE Effort to this Program
Name & Position			
To be named, Director of PhD EEB Graduate Program, Associate Professor	\$75,000	0.13	\$10,000
Totals:		0.13	\$10,000

b. Operating Expenditures

Briefly explain the need and cost for operating expenditures (travel, professional services, etc.)

1. Travel consists of:
 - a. \$30k per year of recruitment costs (faculty travel to professional meetings and campus visits for top applicants)
 - b. \$1000 per year per GA for student travel to professional meetings; grant funded.
2. Materials and supplies are funded by faculty-obtained grants; estimated at \$10k per student per year. Considered one-time because not appropriated.
3. Miscellaneous consists of:
 - a. \$12k to 36k for publication costs
 - b. \$12k miscellaneous operating expenses
4. Tuition waivers and health insurance are required for all students on graduate assistantships @\$11,666

c. Capital Outlay

- (1) Library resources
 - (a) Evaluate library resources, including personnel and space. Are they adequate for the operation of the present program? If not, explain the action necessary to ensure program success.
 - (b) Indicate the costs for the proposed program including personnel, space, equipment, monographs, journals, and materials required for the program.
 - (c) For off-campus programs, clearly indicate how the library resources are to be provided.

Library resources are nearly adequate for the proposed program because of the following:

1. Boise State has a long history with master's level programs in biology and anthropology and with doctoral and master's programs in geosciences, and has therefore built up substantial library resources in those areas.
2. Albertsons Library has been unwavering in its pursuing contracts with publishers that provide a wide range of journal accessibility instead of one-by-one accessibility.
3. Albertsons Library has enhanced interlibrary loan accessibility to those resources not owned by the library.

Albertson Library has estimated that the additional resources necessary for the program, in the form of journal titles requested by the faculty of the proposed program, can be purchased for \$23,000 per year.

Title	Publisher	Price
Biology Letters	The Royal Society	\$2,164
Current Biology	Cell Press	\$4,884
Evolution and human behavior (previous title: Ethology and Sociobiology)	Elsevier	\$1,577

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ISME Journal	Nature Publishing Group	\$1,372
Journal of Theoretical Biology	Elsevier	\$6,612
Nature Climate Change	Nature Publishing Group	\$3,593
Proceedings of the Royal Society B: Biological Sciences	The Royal Society	\$2,696
Total new subscriptions cost		\$22,898

(2) Equipment/Instruments

Describe the need for any laboratory instruments, computer(s), or other equipment. List equipment, which is presently available and any equipment (and cost) which must be obtained to support the proposed program.

Equipment required for the proposed program falls into two categories:

1. Access to field vehicles is very important to the program, and during the first three years of the program, four (of a total of six) field vehicles will be purchased at ~\$25,000 each.
2. Start-up costs for two new faculty members, to be hired during the first three years of the program, at \$300k each. Specifics of the use of those funds will depend on the specifics of the research programs of the faculty members hired.

d. Revenue Sources

- (1) If funding is to come from the reallocation of existing state appropriated funds, please indicate the sources of the reallocation. What impact will the reallocation of funds in support of the program have on other programs?

The strategy we will use for assigning necessary reallocation of state funds will be similar to that used for four PhD programs we have implemented over the last decade in Materials Science & Engineering, Electrical & Computer Engineering, Biomolecular Science, and Public Policy and Administration. The overall budget of the proposed program is designed to increase incrementally, year by year, over a 6 year period, thereby enabling us to accrue the necessary reallocation of appropriated funding through a combination of salary savings derived from the replacement of retired senior faculty with new junior faculty and fee revenues that result from increased enrollment. Our primary focus will be on ensuring permanent appropriated funding for faculty members, staff members, and graduate assistants.

Coincident with the creation of the PhD program will be a substantial revision of the undergraduate curriculum. The additional teaching capacity created by the PhD program and the increased quality and efficiency of the undergraduate program (resulting from the impact of the PhD program and from curricular revision) are expected to result in increased retention and recruitment of biology majors and increased retention of students in service courses offered by the Department of Biological Sciences. Increased retention and recruitment will result in an increase in tuition revenue that is projected to eventually exceed \$600,000. Such a tuition increase will reduce our reliance on the reallocations described above.

- (2) If the funding is to come from other sources such as a donation, indicate the sources of other funding. What are the institution's plans for sustaining the program when funding ends?

Not Applicable

- (3) If an above Maintenance of Current Operations (MCO) appropriation is required to fund the program, indicate when the institution plans to include the program in the legislative budget request.

Not Applicable

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- (4) Describe the federal grant, other grant(s), special fee arrangements, or contract(s) to fund the program. What does the institution propose to do with the program upon termination of those funds?

The budget of the proposed program relies on federal grants and agency funds for summer salary, graduate assistantship salary and tuition/insurance, operating expenses for graduate assistantships (estimated at \$10k per year each), and postdoctoral researchers. Long term sustainment of required funding is feasible because:

1. Program faculty members have a history of high success with securing grants.
2. New staff members hired as part of the program will increase success in securing grants.
3. The creation of the new program will enable faculty members to seek PhD training grants.
4. New faculty members will be hired with the expectation of grant success, and the granting of tenure will depend on success in securing grants.

- (5) Provide estimated fees for any proposed professional or self-support program.

Not Applicable

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MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING (“**MOU**” or “**Agreement**”) is made on the ____ day of _____ of 2015. This Agreement is effective July 1, 2015 (“**Effective Date**”) and expires on June 30, 2018 (“**Termination Date**”).

BETWEEN

- 1) PARQUE NACIONAL DA GORONGOSA (“**PNG**”), represented by the Park Administrator, Mateus Mutemba, and the GORONGOSA RESTORATION PROJECT (“**GRP**”), represented by G.C. Carr and referred to herein as the “**Grantors**”; and
- 2) Boise State University an institution of higher education of the State of Idaho and located at 1910 University Drive, Boise Idaho United States of America, and referred to herein as the “**Permittee**.”
- 3) Grantors and Permittee together are collectively referred to herein as “**Parties**” and individually as a “**Party**.”

WHEREAS

- A. By Internal Resolution nº 4/2007, of December 18th, the Government of Mozambique approved the Agreement for the Long Term Administration of PNG with the Greg Carr Foundation, Inc., a Delaware, general non-profit corporation, (now conducting business as GRP) (the “**LTA**”). The purpose of the LTA is: “to jointly develop the administration of the [PNG]

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in order to ensure that the ecosystem will be preserved and that a sustainable tourism industry will be established.”

- B. The PNG Scientific Services Department under the LTA is responsible to “to collect and evaluate” scientific data in respect of PNG and to “develop relationships with world-class academic and other scientific institutions.”
- C. The Permittee is a public metropolitan research university with more than 22,000 students. Located in Idaho’s capital city, Permittee has a growing research portfolio and plays a crucial role in the region’s knowledge economy and famed quality of life. Examples include:
 - i. Permittee is an important center of production, dissemination and transfer of knowledge;
 - ii. Permittee has aptitudes and know-how in many relevant areas; and
 - iii. Permittee has, as part of its mission, the creation, analysis, transfer and dissemination of culture, science and technology which, through investigation, academic training and service delivery to the community, contributes to social and economic development, protection of the environment, promotion of social justice and citizenship awareness and responsibility, and thus to the consolidation of the power based in knowledge.
- D. The Permittee and the Grantors are in the process of investigating collaboration opportunities to facilitate the further scientific description and exploration of the PNG and the work of the Permittee. The Parties anticipate that long-term agreements may result from pursuing collaboration opportunities.
- E. The Parties desire to encourage and promote cooperation in research, learning, training, and services as per Exhibit A to this MOU, attached hereto and incorporated herein by this reference.

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- F. The Parties desire the form and cost for individual activities of cooperation under this MOU to be agreed upon by both Parties and that each project entered into by the Parties under this MOU will be governed by its own project document.
- G. The Parties endeavor to facilitate all formalities in connection with the preparation, negotiation and implementation of activities within the framework of this MOU and to maintain close and direct contact.
- H. Neither Party desires to have any legal obligation to the other Party with respect to any matter referred to in this MOU, unless and until a written formal agreement implementing the principles herein has been executed by duly authorized representatives of the Parties.
- I. Except as otherwise expressly provided in the formal agreement mentioned above, each Party desires to pay all of its own costs, expenses and liabilities incurred in connection with this MOU.
- J. Neither Party desires to have the other Party use any of its tradenames, service marks, trademarks or logos (collectively, the "Marks") without first giving express written approval, and that if such written permission is granted, the Parties desire that the non-owning Party will comply with the owning Party's reasonable requirements, including using the "circle R" indication of a registered trademark (i.e., ®). For Permittee, such permission can only be granted by Permittee's Office of Trademark Licensing and Enforcement; applications for such permission should be sent via email to licensing@boisestate.edu.

NOW THEREFORE, in consideration of the foregoing recitals, mutual promises hereinafter contained and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

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1. PURPOSE AND SCOPE OF WORK

A. Collaboration between Grantors and Permittee could include:

- i. Permittee staff and students working with Grantors conducting studies, developing research, and undertaking student opportunities at PNG or elsewhere.
- ii. This specifically allows: (a) Permittee staff and Grantors to jointly develop research opportunities and to pursue joint grant opportunities; and (b) for the development of student independent study and internship opportunities including the development of graduate and post-doc research opportunities.

B. The research may include (but are not limited to):

- i. Formation of collaborations with organizations to plan, design, and implement programs;
- ii. Economic evaluation of the programs and assistance with program financing; and
- iii. Study of the impact of cultural, social, and economic policies and approaches.

C. Substantive areas of collaboration may include, without limitation, the following sectors, and at the intersection of one or more of these sectors:

- i. Wildlife, including birds;
- ii. Environmental;
- iii. Economic Development;
- iv. Policy;
- v. Education;
- vi. Water;
- vii. Weather and climate change;
- viii. Geosciences;

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- ix. Biology including, without limitation, global change biology and ecology, evolution and behavior;
 - x. Human and natural ecosystem interfaces;
 - xi. Anthropology; and
 - xii. Archeology.
- D. The purpose of this Agreement is to authorize the Permittee to conduct scientific research, and related educational programming, in the PNG to gain a deeper understanding of interactions and organisms occurring areas of the PNG. This is a not-for-profit project being conducted for academic and educational-related purposes.

2. GRANTORS' UNDERTAKINGS

- A. Pursuant to this Agreement, the Grantors hereby acknowledge the Permittee may require reasonable access to all areas of PNG subject to time and spatial restrictions for safety, logistical and other reasons as decided from time to time by PNG management.
- B. As a demonstration of a long lasting collaboration, the Grantor will offer two naming benefits to the Permittee including (i) naming of a "Boise State University Suite" located on one of the scientific accommodation units and referring to it as such and (ii) representing the "Boise State University" academic logo alongside other partners at the entrance of the E.O. Wilson Science Laboratory. Per recital J herein above, all use of Permittee's name and/or logo must be pre-authorized by Permittee's Office of Trademark Licensing and Enforcement.

3. SCIENTIFIC SUPPORT SERVICES

- A. Grantors will make available Scientific Support Services to the Permittee in order to facilitate scientific research. These Scientific Support Services

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will include, but are not limited to, research permits, ranger support, laboratory and office use, accommodations (e.g., lodging and meals), vehicle usage and others. Fees associated with Scientific Support Services are subject to change over time.

- B. The Grantors hereby agree to a “Favored Nation” clause to protect the Permittee and ensure that fees associated with Scientific Support Services will remain as low as those paid by other parties utilizing Scientific Support Services.
- C. Notwithstanding recital H herein above, upon signing of this Agreement, the Permittee agrees to pay USD 50,000 to the Grantors specifically and only for Permittee’s future use of Scientific Support Services. Costs incurred by the Permittee for the use of Scientific Support Services will be deducted from the USD 50,000 pre-payment. As of the Termination Date (or earlier if this Agreement is terminated before the Termination Date), Grantors will promptly refund Permittee that portion of the USD 50,000 pre-payment Permittee has not expended, if any.

4. TRANSFER BY THE PERMITTEE

- A. The Permittee may not, without the prior written consent of the Grantors, cede, assign or transfer this Agreement or any of its rights, interests, or obligations hereunder.

5. KEY CONTACTS AND NOTICES

- A. Any notice to be given under this Agreement shall be in writing and shall be effective when delivered by: (i) certified mail with return receipt requested; (ii) hand delivery with signature or delivery receipt provided by a third party courier service (e.g., FedEx, UPS); or (iii) facsimile transmission if verification of receipt is obtained to the designated

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representative of the Party as indicated below. A Party may change its designated representative for notice purposes at any time by written notice to the other Party. The initial representatives of the Parties are as follows:

GRANTORS

Marked for the attention of: Director of Scientific Services

Physical address:

Parque Nacional da Gorongosa
Edifício da Ami SDV
Av. Poder Popular
Nr. 264 Quinto Andar
Beira, Moçambique

Email: stalmans@gorongosa.net; science@gorongosa.net

Cell: +258 823003418

PERMITTEE

Marked for the attention of: Karen Henry, Executive Director, Office of Sponsored Programs

Physical address:

Boise State University
Office of Sponsored Programs
1910 University Drive
Boise, Idaho 83725-1135 (USA)

Email: osp@boisestate.edu

Telephone: +1 (208) 426-4420

Facsimile: +1 (208) 426-1048

6. MISCELLANEOUS

A. Governing Law, Jurisdiction and Venue. This Agreement shall be governed by and construed under the laws of the State of Idaho, United States of America without regard to its principles or rules of conflicts of laws. Any claim arising under or related to this Agreement shall be filed and tried in the State District Court, Ada County, State of Idaho, United

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- States of America. Nothing in this Agreement shall be construed as impairing the general powers of the Grantors for supervision, regulation, and control of PNG property.
- B. The Agreement may be modified by written consent of all of the Parties to cover the need for any alterations that may arise subsequent to the Effective Date of this Agreement.
 - C. If any term or provision of this Agreement is held to be invalid or illegal, such term or provision shall not affect the validity or enforceability of the remaining terms and provisions.
 - D. No term or provision of this Agreement shall be waived and no breach excused unless such waiver or consent shall be in writing and signed by the Party claimed to have waived or consented. No waiver of a breach shall be deemed to be a waiver of a different or subsequent breach.
 - E. This Agreement terminates upon the earliest of the Parties entering into a formal long-term agreement superseding this MOU, the Termination Date, or mutual agreement. Either Party may terminate this Agreement, without cause, upon not less than ninety (90) days' written notice, given in accordance with the Notice provisions of this Agreement. Termination of this Agreement shall not relieve a Party from its obligations incurred prior to the termination date. Surviving any termination or expiration are:
 - (i) any cause of action or claim of either Party, accrued or to accrue, because of any breach or default by the other Party; and
 - (ii) any provisions in this Agreement that by their nature are intended to survive.
 - F. The recitals and exhibit of this Agreement are incorporated herein by this reference as if set forth in full herein.
 - G. This Agreement may be executed in multiple counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same Agreement. Facsimile signatures and e-mailed PDF copies

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of original signatures shall both be deemed to be original signatures for all applicable purposes.

7. VARIATIONS

Any addition, amendment, change, extension or cancellation to this Agreement shall be binding only if in writing and signed by authorized representatives of each Party.

8. DISPUTE RESOLUTION

The Parties shall use their best efforts to settle any disputes between themselves amicably.

IN WITNESS WHEREOF, the Parties have executed this Agreement effective as of the Effective Date.

BOISE STATE UNIVERSITY

**PARQUE NACIONAL DA
GORONGOSA**

By: Mark Rudin
Title: Vice President, Division of
Research and Economic Development

By: M. Mutemba
Title: Park Administrator

**GORONGOSA RESTORATION
PROJECT**

By: G.C. Carr
Title: Director and Member of Oversight
Committee of Parque Nacional da
Gorongosa

EXHIBIT A

**Non-exhaustive List of Examples of Cooperation in Research, Learning,
Training and/or Services**

Research

- Involvement by Permittee staff and students in existing research and monitoring projects;
- Defining and implementing new research projects;
- Publishing the results of research in the PNG.

Learning

- Visits to and stay in the PNG by groups of students and staff from Permittee for formal classes and informal learning as part of a structured Permittee teaching program.

Training

- Hosting of PNG interns and young scientists at Permittee for formal and informal training;
- Training of PNG interns, technicians and other Mozambican scientists in various research techniques, including bird capture, sampling and monitoring;
- Participation by Permittee staff as instructors in various training courses offered by PNG for PNG staff and other Mozambican researchers;
- In-service training of Mozambican field assistants who aid Permittee staff and students with the field and laboratory aspects of research and monitoring projects in the PNG.

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Appendix B: Curriculum

Doctor of Philosophy in Ecology, Evolution, and Behavior	
<i>Course Number and Title</i>	<i>Credits</i>
EEB 601 Principles and Processes in Ecology, Evolution, and Behavior I	4
EEB 602 Principles and Processes in Ecology, Evolution, and Behavior II	4
EEB 603 Science and Communication I	3
EEB 604 Science and Communication II	3
EEB 605 Current Research in EEB (2 cr)	4
Quantitative Requirement (choose at least 1 course from the following): ANTH 504 Statistical Methods in Anthropology (3 cr) BIOL 601 Biometry (4 cr) BIOL 603 Advanced Biometry (4 cr) EEB 607 Quantitative Methods for Population and Habitat Analysis (3 cr) EEB 621 Advanced Ecological Data Analysis (3 cr) GEOPH 522 Data Analysis and Geostatistics (3 cr) GEOS 505 Introduction to Numerical Methods for the Geosciences (3 cr) MATH 572 Computational Statistics (3 cr) MATH 573 Time Series Analysis (3 cr) MATH 574 Linear Models (3 cr)	3-4
Approved electives courses in ANTH, BIOL, BMOL, BOT, EEB, GEOS, ZOOL or related fields as approved by the supervisory committee and by the coordinator of the EEB doctoral program.	13-14
EEB 691 Doctoral Comprehensive Examination	1
EEB 693 Dissertation	30
<i>Total</i>	66

Doctor of Philosophy in Ecology, Evolution, and Behavior Emphasis in Global Change Biology	
<i>Course Number and Title</i>	<i>Credits</i>
EEB 601 Principles and Processes in Ecology, Evolution, and Behavior I	4
EEB 602 Principles and Processes in Ecology, Evolution, and Behavior II	4
EEB 603 Science and Communication I	3
EEB 604 Science and Communication II	3
EEB 605 Current Research in EEB (2 cr)	4
Quantitative Requirement (choose at least 1 course from the following): ANTH 504 Statistical Methods in Anthropology (3 cr) BIOL 601 Biometry (4 cr)	3-4

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BIOL 603 Advanced Biometry (4 cr) EEB 607 Quantitative Methods for Population and Habitat Analysis (3 cr) EEB 621 Advanced Ecological Data Analysis (3 cr) GEOPH 522 Data Analysis and Geostatistics (3 cr) GEOS 505 Introduction to Numerical Methods for the Geosciences (3 cr) MATH 572 Computational Statistics (3 cr) MATH 573 Time Series Analysis (3 cr) MATH 574 Linear Models (3 cr)	
Human Behavior and Ecology (choose 1-2 courses from the following): ANTH 501 Adaptation And Human Behavior (3 cr) ANTH 502 Human Evolutionary History and Development (3 cr) ANTH 521 Human Paleoecology of North America (3 cr) ANTH 530 Advanced Topics in Evolutionary Anthropology (3 cr) ANTH 531 Economic Anthropology (3 cr) ANTH 532 Game Theory and Human Cooperation (3 cr) CRP 502 Economic Applications to Community and Regional Planning (3 cr) CRP 551 Sustainable Development (3 cr)	3-6
Earth Sciences (choose 1-2 courses from the following): BIOL 628 Geographic Information Systems in Biology (3 cr) GEOG 570 (GEOS 570) Earth System Science and Global Warming (3 cr) GEOS 511 Hydrology: Land-Atmosphere Interaction (3 cr) GEOS 580 Selected Topics in Watershed Hydrology (1-3 cr) GEOS 585 Selected Topics in Isotope Geoscience (1-3 cr) GEOS 605 Topics in Geomorphology (3 cr) GEOS 607 Paleoclimatology and Paleoceanography (3 cr) GEOS 620 Coupled Land-Atmosphere Modeling (3 cr) GEOS 621 Global Hydrologic Change (3 cr) GEOS 633 (CE 633) Contaminant Hydrogeology (3 cr) GEOS 636 Stable Isotope Geochemistry (3 cr) GEOS 638 Radiogenic Isotope Geochemistry and Geochronology (3 cr)	3-6
Approved elective courses in ANTH, BIOL, BMOL, BOT, EEB, GEOS, ZOOL or related fields as approved by the supervisory committee and by the coordinator of the EEB doctoral program.	4-5
EEB 691 Doctoral Comprehensive Examination	1
EEB 693 Dissertation	30
<i>Total</i>	66

Appendix C: Unique Infrastructure Resources

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Snake River Plains Herbarium: 50,000, and growing, collections of vascular plants primarily from southwest Idaho over the past 50 or so years. Historical and current collections map vegetation and vegetation change. The private lichen collection of Dr. Roger Rosentreter is also housed here and is likely to be turned over to Boise State in the near future - approximately 15,000 collections of lichens make this a premiere collection.

Consortium of Pacific Northwest herbaria: Online searchable website for plant collections. Data from Boise State's plant collections are contributed to this and merge with data from an additional 50+ collections in the region.

Raptor Research Center: The Raptor Research Center offers faculty and students the unusual opportunity to pursue research in the field of raptor biology and ecology. Its staff provides administrative as well as logistical support. The Center supports field research by supplying research field vehicles and field equipment. Through its affiliation with the Department of Biological Sciences, the Center also offers research opportunities to conduct laboratory focused studies with faculty in the department. The Center also supports research by funding travel for faculty and students to scientific meetings and to provide support for publication costs such as page charges.

Intermountain Bird Observatory: The Intermountain Bird Observatory is a non-profit academic research and community outreach program of Boise State University focused on impacting human lives and contributing to conservation through a combination of research, education, and community engagement. We conduct many research and monitoring projects across the region and do so in collaboration with numerous partners, including faculty and students (both graduate and undergraduate) at Boise State University. We maintain a remote field site where we have long-term, on-going research on songbird and raptor migration. This site has been used to study the effects of climate change on migration phenology and energetics, the effects of noise on bird distributions and behavior, and other topics related to global change and ecology. In particular, many graduate students have designed innovative and successful Master's thesis projects around our existing research and monitoring program, which allows students access to long-term data sets while also conducting shorter-term experimental studies.

Biomolecular Research Center: The Biomolecular Research Center (BRC) at Boise State is a collaborative research center designed to provide a supportive environment for interdisciplinary research and education with opportunities for students and faculty members alike. The focus of the BRC is the study of biomolecules with emphasis on proteins and protein interactions. The BRC represents a comprehensive collection of instrumentation and facilities ideal for the characterization of biomolecules and their role in a variety of biomedical and environmental processes. The university recently provided approximately \$1.5 million to remodel 5,195 square feet of laboratory and office space to support instrumentation and a shared research core facility in the BRC. The mission of the center is to facilitate multidisciplinary research and research training programs in biomolecular sciences with a goal of increasing the level of biomolecular research achieved at Boise State University and in our region. To support current and future collaborative science, the BRC provides networking and training events for students, staff and faculty investigators at Boise State such as grant writing and publication writing events, hosting nationally recognized researchers for seminars, sponsoring training for shared scientific research instrumentation and support for travel to external trainings and conference events. In addition to internal support, the BRC also provides networking and collaboration opportunities with other Idaho institutions through the Idaho INBRE Network. These institutions include College of Western Idaho, Northwest Nazarene University, College of Idaho and the Boise Veterans Affairs Medical Center in the Treasure Valley; College of Southern Idaho in the Magic Valley, Idaho State University and Brigham Young University-Idaho in eastern Idaho; as well as University of Idaho, Lewis-Clark State College and North Idaho College in Idaho's panhandle. Through these long-held Idaho research collaborations, investigators,

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staff and students are additionally offered the opportunity for networking and collaboration with the wider Western IDeA states including Alaska, Hawaii, Nevada, New Mexico, Wyoming and Montana. This broader collaboration expands the possibilities of for growth in research collaboration and resource exchange for all the biomedical research investigators in our region.

Crossroads Museum: In cooperation with Canyon County Parks, Recreation and Waterways the Department of Anthropology shares responsibility for the Crossroads Museum located near Melba, Idaho within Celebration Park-- Idaho's only archaeological park. Crossroads is a working field station housing classroom and laboratory facilities and a 20 bed dormitory. The facility hosts archaeological, biological, ecological and geological programs through the Desert Studies Institute—a cooperative program between the Department of Anthropology and Canyon County. The facility provides research opportunities for natural science faculty and students conducting research in southwestern Idaho.

Sensory ecology laboratory: A Sensory Ecology Laboratory is located on the 2nd floor of the Science Building on the campus of Boise State University. The computer room (15m²) has 6 computing workstations for graduate students. The lab room (20m²) is equipped with a hood and counter space. The animal housing room (12m²) is a certified animal care facility with stainless steel counters and cabinetry on a separate HVAC system. The indoor flight room (7m x 8m x 3.5m, 56m²) is a custom-designed animal imaging (bioacoustic and videographic) facility, engineered for a low background sound level (anechoic foam lining on all walls and ceiling, custom HVAC system and double walls) outfitted with 4 high speed cameras and illuminated with infrared floodlights. 4 ultrasonic microphones, 4 sonic microphones and 6 broadband speakers are mounted in the facility.

Stable isotope laboratory. The Stable Isotope Laboratory (SIL) is an education, research, training and service facility within the Department of Geosciences at Boise State University. This isotope ratio mass spectrometer facility serves research and teaching needs for stable isotope ratio users principally within the Departments of Geosciences, Biological Sciences, and Anthropology. Our analytical flexibility and competitive rate structure promote stable isotope services for research and industry and foster collaborations with other universities as well as federal, state and local agencies. The BSU SIL houses two main instruments: 1) A 2010 ThermoFisher Delta V Plus continuous flow isotope ratio mass spectrometer coupled with ConFlo IV/EA, TC/EA, and GasBench II. This instrumentation allows measurement of the stable isotopes of hydrogen, carbon, nitrogen, oxygen and sulfur (δD , $\delta^{13}C$, $\delta^{15}N$, $\delta^{18}O$ and $\delta^{34}S$) on a diversity of natural samples (carbonate, phosphate, organic plant, animal, soil, sediment, water, and atmospheric gas). We accommodate both natural abundance and isotopically enriched samples for all the species mentioned above. 2) A 2011 Los Gatos Research Liquid Water Isotope Analyzer, which is a Cavity Ring-Down (spectroscopic) instrument for the measurement of the stable isotopes of hydrogen and oxygen in liquid water samples. The SIL also maintains extraction lines and sample preparation facilities for numerous materials including carbonates, phosphates (both CO₃ and PO₄ components), plant and animal water, bulk organic matter, collagen, chitin and keratin, and cellulose.

Appendix D1: Report of External Evaluators

Site Visit Report

Review of the Proposal for Doctor of Philosophy (PhD) in Ecology, Evolution, and Behavior and Ecology, Evolution, and Behavior with an emphasis in Global Change Biology

Site Visit 6-7 October 2014

Lynn Bohs, University of Utah

Anthony Fiumera, Binghamton University

Julie Young, USDA National Wildlife Research Center, Utah State University

Overall Recommendation

The review team was impressed with the quality of research within the Departments of Biological Sciences, Anthropology, and Geosciences that would contribute to a Ph.D. program in Ecology, Evolution, and Behavior (EEB). The productivity of faculty and students and high level of extramural funding is remarkable. We were especially impressed with the enthusiasm for developing a Ph.D. program we observed within the university and local community. The addition of a Ph.D. program in EEB at Boise State University (BSU) will advance its research capabilities, increase the prestige of the department and university, and help it gain national and international recognition. We recommend implementing a Ph.D. program. We expect a successful program if funded at the requested level.

Strengths of Proposal

Faculty Productivity and Innovation: The existing faculty, housed in several departments, is one of the many strengths of this interdisciplinary Ph.D. proposal. As outlined in the proposal, participating faculty have a strong record of extramural funding, more than \$10 million in the last 9 years. They are also publishing in prominent journals such as *Proceedings of the National Academy of Sciences*, *Applied and Environmental Microbiology*, and the *Journal of Wildlife Management*. Their work is internationally recognized as highlighted by numerous international collaborations. The research being conducted in ecology, evolution, and behavior at BSU is also highly innovative, utilizing novel technologies to address important scientific questions that will benefit the local community.

Graduate Student Mentoring: The faculty members also appear to be excellent mentors for their existing M.S. students. The current graduates students used the terms, “accessible”, “available”, “willing to help”, “helps me network with future employers” when describing their faculty mentors. The relationship between the

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faculty and their students is also evident in terms of graduate student productivity. Many M.S. students are authors on multiple published articles in peer-reviewed journals.

Existing Interdisciplinary Collaborations: The established collaborations within and between departments is another existing strength. Faculty members from Anthropology, Biological Sciences, and Geosciences are collaborating and mentoring students together. Experience working with individuals from a diversity of areas will be critical for EEB students to succeed in the future.

Agency Relationships: The program has strong existing ties with local federal and state agencies and non-profit research organizations, including USGS, DOD, BLM, US Forest Service, USFWS, Idaho Department of Health and Welfare, and the Peregrine Fund. The agencies and organizations work closely with faculty and graduate students to accomplish shared goals. The proximity of agency offices, BSU, and field sites enables a strong foundation for collaborative studies.

Local Ecosystem: The sagebrush-steppe ecosystem is the focus of many current and continuing research projects at BSU conducted by faculty spread across multiple departments. The location of Boise in the midst of this ecosystem facilitates accessibility to field sites and long term projects. The fragility of this system in the face of changes in climate, land use, invasive species, etc. means that research in this area is highly relevant to land management, recreation, conservation, and local economies. The BSU faculty and regional partners such as the Peregrine Fund, USGS, BLM, and US Forest Service make this a premier location for the integrated study of sagebrush steppe. The proposed Ph.D. program will make BSU a destination for students and researchers involved in studying this system.

Local Community: Located in southwestern Idaho far from the other flagship universities of Idaho, BSU serves place-bound students. Boise is the state capital and one of the largest metropolitan areas in Idaho, so BSU can take advantage of considerable home-grown talent as well as contribute expertise to state-wide issues of natural resource management.

Broad and Integrative Focus: The faculty and partner institutions have considerable expertise at all levels, from biogeochemistry to human impacts and land use. This holistic, transdisciplinary approach is highly appealing and effective in addressing complex problems beyond the scope of a single department or college. It is likely that the new Ph.D. program will expand expertise at BSU to be even more effective in examining complex ecosystem-scale issues.

Raptor Program: The raptor biology program is a well-known and respected program, with 97% of the graduates obtaining jobs in their field. It currently recruits excellent graduate students from across the U.S. and attracts global financial support. The program's global reputation can be leveraged to recruit high-quality Ph.D. students during the initial years of the EEB program, a critical component to the long-term success of a Ph.D. program.

Program Support: There was universal enthusiasm for developing this Ph.D. program. The proposal was built from the ground-up, developed by faculty within the various affiliated departments. Throughout the review process, support was evident from graduate students, faculty, and university administration. There was also strong support from federal and state agencies and non-profit research organizations within the community.

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Well Prepared: The proposal was well thought out. It is evident that the faculty and administration used past experiences in developing new Ph.D. programs to develop this proposal and its components. The likelihood of this program succeeding is strong because the university has experience creating new Ph.D. programs and several faculty have been engaged in the process previously (e.g., Molecular Biosciences).

Areas of Improvement

Coursework: The formal coursework requirements for the proposed Ph.D. program seem too high and may limit graduate student and faculty productivity. The focus of the Ph.D. should be the research experience. We feel that formal coursework should be kept to a minimum such that students can focus on their research projects. Extensive coursework requirements could also limit research opportunities for students that need to be in the field during specific times of the year. Furthermore, the number of new classes that are proposed may place too high a teaching burden on faculty. A limited number of new courses could benefit both the existing M.S. program and also the proposed Ph.D. program. We suggest a reduction in the amount of formal coursework required for the Ph.D. degree and consider offering a smaller number of new courses and propose a timeline for the long term establishment of these courses.

Graduate Student Involvement: There was a lack of input by graduate students on this proposal and in general with departmental issues. M.S. student involvement in writing this proposal could enhance its quality, especially if their input was used to determine which new classes to propose. A graduate student representative at faculty meetings would facilitate communication between faculty and graduate students and give students a voice.

Expertise in Animal Behavior: While faculty from the Anthropology Department are well-suited to study aspects of human behavior, there is a lack of faculty highlighted in the proposal that focus on animal behavior. The department should consider using 1-2 of the faculty lines created within this proposal to hire faculty that specialize on animal behavior but can work on interdisciplinary studies.

Education/Outreach: The current proposal does not explicitly include a strong education/outreach component. Scientific outreach is a national priority in STEM disciplines and a required component as Broader Impacts in NSF grant proposals. Graduate students should be encouraged and trained in education and outreach to K-12 students, underserved communities, and the general public as an integral part of their graduate training. External funding opportunities exist for implementing outreach initiatives outside the avenues for funding basic research. The proposed EEB program might consider hiring a faculty or staff member dedicated to coordinating outreach efforts to provide novel opportunities for interaction of students and scientists with the community. Such a person could also oversee a graduate course on Scientific Communication and Outreach.

Recruitment: The success of the Ph.D. program will hinge on the recruitment of high quality graduate students. Special emphasis on recruiting excellent students will be especially important in the early years of the program. Ideas for recruitment strategies include producing an excellent web page, personal interactions with faculty and current and former BSU students at meetings, and a recruiting weekend that will bring promising applicants to BSU to meet faculty, see the facilities, and network with other potential graduate students. Social events to introduce and welcome new graduate students and ongoing activities are important in creating a cohesive scientific and social community among the graduate students and faculty.

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Graduate Student Support: The stipend level is important to attract and retain high quality students and the proposed Ph.D. stipend seems competitive for the region. However, the differential pay scales between M.S. and Ph.D. student may lead to Ph.D. to M.S. attrition or a “two-tiered system”. Although the proposed Ph.D. proposal would increase the stipends of M.S. students there will be differential pay between the students. What would stop a “M.S.” student from enrolling in the Ph.D. program to secure the higher rate of funding only to drop down to the M.S. and complete the M.S. degree? The Biology Department does expect that most students enrolling in the program will already have M.S. degrees, so this may not be a valid concern.

Areas of Strength: The six areas of strength should be modified into a broader conceptual framework. As written, the six areas do not fully capture the integration of fields. The framework could stress the vertical integration of faculty strengths and expertise, from biogeochemistry to human behavioral ecology. Using a holistic approach and highlighting overlapping areas of expertise among faculty will be more effective in communicating the transdisciplinary nature of the proposal, which was very evident during the review process.

Relationship with Other Universities in Idaho

The committee does not see the proposed Ph.D. program at BSU as duplicating or being in conflict with other Idaho institutions. In fact, we believe the addition of a Ph.D. program at BSU will enable additional opportunities for collaboration and enhancement of graduate education and research in Idaho. Since duplication seems to be a concern, we recommend amending the proposal to address this issue head-on. The strengths of the other institutions should be identified and acknowledged explicitly in the proposal and statements included to the effect that duplication in these areas is neither present nor planned.

Geographic Location: BSU is geographically quite distant from the two other major universities in Idaho. As such, it serves a considerable local clientele rooted in the area and unable to attend these other institutions. Boise’s location in the sagebrush-steppe ecosystem allows a unique opportunity to examine multiple layers of questions related to the biology and use of this endangered system. Faculty expertise concentrated on this ecosystem is not duplicated elsewhere and constitutes an impressive base of knowledge for studies of the local and regional landscape.

Human Ecology and Behavior: The inclusion of faculty in Anthropology in the EEB program is unique and not duplicated elsewhere to our knowledge. Incorporating human history, impacts, and perceptions is critical for successful management of regional ecosystems.

Agency Relationships: There are several agencies based out of Boise and the local area that want to further collaborative relationships by supporting Ph.D. students and their research projects. The proximity of such organizations and the focal ecosystem are unique to BSU. Agencies based within the region expressed appreciation in being able to work directly and in-person with faculty and students at BSU. A Ph.D. program would not diminish or duplicate collaborations at other universities but work to strengthen existing relationships between BSU faculty and regional organizations and agencies.

Core Facilities: Expensive molecular facilities are already partitioned among Idaho research institutions. For example, Boise State maintains a state of the art proteomics facility while University of Idaho maintains a genomics facility. This non-redundancy enhances the overall capabilities of researchers at Idaho institutions in a very complementary manner.

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Appendix D2: Response to External Reviewers focused on “Areas of Improvement” Identified by Reviewers.

Reviewers: “Coursework: The formal coursework requirements for the proposed Ph.D. program seem too high and may limit graduate student and faculty productivity. The focus of the Ph.D. should be the research experience. We feel that formal coursework should be kept to a minimum such that students can focus on their research projects. Extensive coursework requirements could also limit research opportunities for students that need to be in the field during specific times of the year. Furthermore, the number of new classes that are proposed may place too high a teaching burden on faculty. A limited number of new courses could benefit both the existing M.S. program and also the proposed Ph.D. program. We suggest a reduction in the amount of formal coursework required for the Ph.D. degree and consider offering a smaller number of new courses and propose a timeline for the long term establishment of these courses.”

BSU Response: The EEB plan requires the minimum amount of coursework allowable by the Boise State Graduate College. We require 4 core courses, 2 seminars, and 1 quantitative course. We feel the benefits of cohort building and shared knowledge in the core out-weigh the trade-offs in coursework burden. However, we agree with the reviewers about the high course load. To address the issue of course-load, we have provided a lot of flexibility in the list of courses that satisfy each requirement. For example, there are 11 possible courses that could satisfy the quantitative requirement. We will continue to work with the Graduate College in institutional reform that would allow for reduced course requirements

Reviewers: “Graduate Student Involvement: There was a lack of input by graduate students on this proposal and in general with departmental issues. M.S. student involvement in writing this proposal could enhance its quality, especially if their input was used to determine which new classes to propose. A graduate student representative at faculty meetings would facilitate communication between faculty and graduate students and give students a voice.”

BSU Response: This is a great idea. Since the review, the graduate students have formed the Biology Graduate Students Association which is a group of students that work with department leadership to build more regular bridges in formal and informal interactions. In addition, we will have a graduate student representative participate in the EEB Graduate Studies Committee.

Reviewers: “Expertise in Animal Behavior: While faculty from the Anthropology Department are well-suited to study aspects of human behavior, there is a lack of faculty highlighted in the proposal that focus on animal behavior. The department should consider using 1-2 of the faculty lines created within this proposal to hire faculty that specialize on animal behavior but can work on interdisciplinary studies.”

BSU Response: Although animal behavior faculty members were not highlighted in the proposal, we in fact have several faculty members who study animal behavior, and therefore have a: Jesse Barber, James Belthoff, Jennifer Forbey, Julie Heath, and Ian Robertson.

Reviewers: “Education/Outreach: The current proposal does not explicitly include a strong education/outreach component. Scientific outreach is a national priority in STEM disciplines and a required component as Broader Impacts in NSF grant proposals. Graduate students should be encouraged and trained in education and outreach to K-12 students, underserved communities, and the general public as an integral part of their graduate training. External funding opportunities exist for implementing outreach initiatives outside the avenues for funding basic research. The proposed EEB program might consider hiring a faculty or staff member dedicated to coordinating outreach efforts to provide novel opportunities for interaction of students and scientists with the community. Such a person could also oversee a graduate course on Scientific Communication and Outreach.”

BSU Response: This program will include a new research faculty position that specializes in science education and science communication. This person will help to build opportunities for graduate students to practice their communication and outreach skills. Furthermore, we should point out that two faculty, Drs. Forbey and

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Heath, have strong outreach components of their research. Forbey's lab runs *IdahoWatch* and *Adopt a Scientist*. IdahoWatch aims to bring the field to the classroom. Working with local teachers, IdahoWatch helps inspire critical thinking while teaching real-life in the field techniques to students. Heath's *Project BoB: Blogging with Biologists* pairs college students conducting research with elementary school students in virtual conversations about research, biology, and careers in science.

Reviewers: "Recruitment: The success of the Ph.D. program will hinge on the recruitment of high quality graduate students. Special emphasis on recruiting excellent students will be especially important in the early years of the program. Ideas for recruitment strategies include producing an excellent web page, personal interactions with faculty and current and former BSU students at meetings, and a recruiting weekend that will bring promising applicants to BSU to meet faculty, see the facilities, and network with other potential graduate students. Social events to introduce and welcome new graduate students and ongoing activities are important in creating a cohesive scientific and social community among the graduate students and faculty."

BSU Response: We like this idea and will have an open-house week where potential students come to participate in department tours, seminars, and events. We will include visits to field sites.

Reviewers: "Graduate Student Support: The stipend level is important to attract and retain high quality students and the proposed Ph.D. stipend seems competitive for the region. However, the differential pay scales between M.S. and Ph.D. student may lead to Ph.D. to M.S. attrition or a "two-tiered system". Although the proposed Ph.D. proposal would increase the stipends of M.S. students there will be differential pay between the students. What would stop a "M.S." student from enrolling in the Ph.D. program to secure the higher rate of funding only to drop down to the M.S. and complete the M.S. degree? The Biology Department does expect that most students enrolling in the program will already have M.S. degrees, so this may not be a valid concern."

BSU Response: We have similar concerns, thus we will work to increase stipends for MS students. Faculty will work with applicants to decide which program will best suit applicants' needs and career objectives.

Reviewers: "Areas of Strength: The six areas of strength should be modified into a broader conceptual framework. As written, the six areas do not fully capture the integration of fields. The framework could stress the vertical integration of faculty strengths and expertise, from biogeochemistry to human behavioral ecology. Using a holistic approach and highlighting overlapping areas of expertise among faculty will be more effective in communicating the transdisciplinary nature of the proposal, which was very evident during the review process."

BSU Response: We appreciate this comment and have revised our proposal to reflect that concept that we are bridging across several field to build depth and strength in studies of human and environmental systems. At the same time, Boise State has created a new research center, the Human-Environment Systems initiative, which will be an important partner in providing support for the EEB program.

FEBRUARY 18, 2016

EPSCoR in Idaho**Experimental Program to Stimulate Competitive Research**

875 Perimeter Drive, University of Idaho, Moscow ID 83844-3029
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<http://www.uidaho.edu/epscor>

October 6, 2014

Dr. Jim Munger
Vice Provost for Academic Planning
Boise State University
Boise, ID 83725

Dear Dr. Munger:

The EPSCoR program supports the Idaho Science and Technology (S&T) Plan through several funding mechanisms including the Research Infrastructure Improvement (RII) awards. Under the deliberate guidance of the State EPSCoR Committee, Idaho's Universities and Colleges work together to build critical mass of faculty, students and equipment across the state in key areas under a philosophy of ONEIdaho. These important investments are also intended to support University Strategic Plans and assist colleges and departments achieve their aspirations. Building Idaho's research enterprise in the key areas highlighted by the State S&T Plan requires equipment, talented faculty, undergraduate and graduate students. PhD programs and PhD students carry much of the load in conducting research and bring a technical capacity and quality of student that is not possible at the undergraduate or masters level.

Idaho EPSCoR, Boise State University and other Universities have invested significantly during the past 5-year Track 1 Award (Water Resources in a Changing Climate) and the current Track 1 Award (Managing Idaho's Landscape for Ecosystem Services - MILES). The proposed PhD in Biological Sciences is a logical next step to build on past investments and ensure the continued growth and sustainability of these initiatives. Failure to establish a PhD program will inhibit the research growth and ONEIdaho partnerships established across the state and beyond. These investments have included the creation of new faculty positions and the support of nationally recognized early career faculty such as Dr. de Graaff and Dr. Feris in Biological Sciences. Other current EPSCoR faculty supported at Boise State University include Dr. Heath, Dr. Barber, and Dr. Demps and these EPSCoR supported faculty will also be key future faculty participants in the proposed PhD. It will be difficult to retain highly productive young researchers in this area of Biological Sciences without a PhD program as PhD students are a key element in the research enterprise and an important career metric for most researchers. The loss of key faculty or lack of PhD students will be a serious detriment to developing our state-wide capabilities in natural resource management.

The proposed program will provide an important institutional foundation that will build Idaho's state-wide ability to compete for competitive federal research funding, to recruit high caliber faculty, attract high quality graduate students and to train Idaho's workforce for the future.

Sincerely,

Peter Goodwin
Idaho EPSCoR Project Director

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FEBRUARY 18, 2016**



**United States Department of the Interior
U. S. GEOLOGICAL SURVEY**

Forest & Rangeland Ecosystem Science Center
777 NW 9th, Suite 400
Corvallis, OR 97330-6169

November 24, 2015

Jim Munger, PhD
Vice Provost for Academic Planning
Professor of Biological Sciences
Boise State University
Boise, ID 83725

Dear Dr. Munger,

The research scientists of the U.S. Geological Survey's Forest and Rangeland Ecosystem Science Center (USGS FRESC) have enjoyed a highly collaborative and mutually beneficial relationship with the faculty, staff and students of Boise State University (BSU), particularly those in the Biology Department, since the late 1980s. Together, we have promoted a research and educational partnership in the ecological and natural resource disciplines to achieve improvements in the conservation and management of natural systems in Idaho and the western United States. The creation of a Doctor of Philosophy in Ecology, Evolution and Behavior (PhD, EEB) will significantly expand the capacity of USGS and BSU to cooperatively engage in relevant, multidisciplinary research that will provide scientific understanding and technology needed to meet the increasingly complex demands of rapidly changing natural systems.

FRESC's Snake River Field Station (SRFS), which is located on BSU campus, was initially created as a Raptor Research Center, and its scientists were key to the development of BSU's Raptor Research program. Although birds of prey remain an important focus for SRFS, the science capability and research programs have expanded in recent years and diversified to meet the needs of resource managers throughout the western US. This growth has occurred in part because SRFS scientists have been highly successful in working at the cutting edge of environmental research, which includes wildlife monitoring, sage-grouse biology, rangeland ecology and restoration, invasive species, fire ecology, plant physiological ecology, avian ecology, ecosystem structure and function, effects of climate change on ecosystems, alternative energy development/wildlife interactions, and biological statistics.

As BSU Biology has grown in similar directions, the strong cooperative relationship between BSU and the USGS has been advantageous to the teaching, research, and extension activities of both institutions. For instance, USGS scientists have adjunct affiliations with BSU. In that capacity, they co-teach courses and seminars, provide guest lectures, and serve on graduate committees, often as major advisors of student research. In the last 5 years, USGS scientists have participated on 17 graduate-student committees and have been major advisors to 6 of those. USGS scientists have benefited from the energy and stimulation that students bring to their research programs, and from the personal satisfaction that comes from leading and mentoring future scientists. In turn, USGS has funded research assistant positions, increased the breadth of training opportunities and added to the diversity of job-related experiences available to BSU students. The addition of PhD students will greatly expand on these benefits. PhD students bring a higher level of dedication and professionalism to the relationship. Their longer-running and more complex research pursuits are better matches with the scope and scale of typical USGS research projects, so

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they can be more involved in the full life-cycle of the scientific process, and realize finished products and publications with their degree programs. As a result, throughout the USGS, when both PhD and MS students are available as collaborators, financial and training investments in PhD students are often higher than for MS students (which in 2012/13 USGS provided \$105,000 to support BSU MS student research).

We also expect the number and scope of our interactions with BSU faculty to increase with the addition of an EEB PhD program. USGS scientists collaborate on numerous interdisciplinary research projects with BSU faculty members. Although Biology is the primary partner, we also work with members of Geosciences, Engineering, and Public Policy and Administration. USGS has co-authored grants with BSU, and provided direct funding for science. For instance, in the last two years, USGS brought approximately \$885,000 to BSU. As more graduate students, particularly PhDs, are brought into the mix, the variety and amount of research performed by BSU will increase, as will the opportunities for collaboration. Just as we have increasingly shared research, we have also shared research infrastructure. This includes laboratory capacity, field sites, equipment and instrumentation, and geographic information systems (GIS) support. As the PhD program grows, so will the shared infrastructure resource, improving the research capacity of Biology faculty and USGS scientists alike.

One of the most important interactions of this collaboration has been the USGS's ability to hire BSU students and graduates into pre-professional and professional positions. Over the last 5 years, we have employed 41 students to support various research projects. We provide on-the-job training, convey a variety of skills useful in both field and lab science, and expose them to future career paths in federal science, resource management, and conservation. Many BSU graduates are hired into professional positions by the USGS and other government agencies as a result of their federal training, experiences, and professional connections. Given the strong presence of USGS partner agencies such as the U.S. Fish and Wildlife Service, the Bureau of Land Management, and Idaho Fish and Game in Boise, BSU students have a ready conduit for realizing career opportunities. Conversely, many current, local employees of USGS and its partner agencies are interested in furthering their education. Some of these agencies have programs that support employee development, and having access to a local PhD program in the center of Idaho's resource management community may be highly desirable.

USGS FRESC has other field stations on university campuses, including Oregon State University and University of Washington, which have established PhD programs. We have enjoyed long and successful collaborations with the students, faculty and staff of these institutions, and have had the honor of playing key roles in the successful educational experiences of a great many PhD students, and the formation of many excellent scientists, resource managers, and conservation professionals. We look forward to sharing in similarly successful endeavors with BSU, and to working with all those involved in the EEB PhD program.

Sincerely,



Ken Berg, Director
U.S. Geological Survey, Forest and Rangeland Ecosystem Science Center

FEBRUARY 18, 2016

THE PEREGRINE FUND

CONSERVING BIRDS OF PREY WORLDWIDE



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Madagascar

30 October 2015

Jim Munger, Ph.D.
Vice Provost for Academic Planning
Professor of Biological Sciences
Boise State University
Boise, ID 83725

Dear Professor Munger:

I am writing to express our enthusiastic support for the proposed Ph.D. program in Ecology, Evolution, and Behavior at Boise State University.

The 30-year partnership between The Peregrine Fund and Boise State University at the Master's degree level has been important for collaboration on research and student training in the field of raptor biology, ecology and conservation. A Ph.D. program in the Department of Biological Sciences would be valuable to The Peregrine Fund because it will increase opportunities for research collaboration at an advanced academic level not previously available to us locally and for which we have had to seek the collaboration of other universities in the past. The program would benefit from our partnership because of the depth and geographic scope of expertise in raptor biology and conservation brought by our scientists, and the opportunities these would provide to students participating in the Ph.D. program.

Since founding in 1970 The Peregrine Fund has supported graduate student research with training, supervision and finances as part of our mission to develop capacity for raptor research and conservation worldwide. Since moving from our origins at Cornell University to Boise in 1984 and forming the partnership with Boise State University, we have assisted the graduation of 65 M.Sc. and 24 Ph.D. students. Among Master's students 25% graduated from Boise State University, while 63% graduated from universities in Africa, Asia, Europe and Latin America. Among Doctoral students, 67% graduated from other U.S. and 33% from other foreign universities. A Ph.D. program at Boise State University would facilitate the greater participation of higher level students in our programs locally and internationally.

One of the advantages of training students is that we have the opportunity to select the best to continue working with us to achieve meaningful conservation of raptors, their habitats, and the biodiversity they support around the world. Among Boise State University Master's graduates we now employ Russell Thorstrom who directs our island conservation projects from Madagascar to the Caribbean; Hernan Vargas who directs our student training and research program in Latin America; David Anderson who directs our Arctic climate change program; and others have gone on to important conservation and research positions from Alaska to Mongolia.

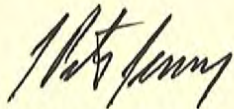
**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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The opportunity to collaborate with researchers at Boise State University is vital to The Peregrine Fund's need to answer critical conservation questions requiring a diversity of expertise that we could not support on our own. We have benefitted from specialized spatial, statistical, eco-physiological and population ecology analyses and advice. We have also partnered in bringing international scientific conferences to Boise State University that advance the state of knowledge on issues such as lead (Pb) poisoning of wildlife and humans from spent ammunition, and the effects of climate and other environmental change on predator-prey dynamics in the Arctic. Solutions to these conservation problems would likely also benefit from the interdisciplinary nature of the proposed Ph.D. program since solutions often revolve around human behavior and an understanding of social anthropology.

A Ph.D. program at Boise State University might benefit employees of The Peregrine Fund by providing an opportunity to advance academically while concurrently working on conservation projects. We encourage employees to expand their training, and currently have one employee enrolled in a Ph.D. program at a university in Arizona.

We wish you success in bringing the Ph.D. program in EEB to Boise State University. Participation of scientists from The Peregrine Fund would be an important contribution to the success of the program and would simultaneously strengthen the operations of The Peregrine Fund in achieving our mission to conserve raptors, their habitats, and biodiversity worldwide.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'J. Peter Jenny', written in a cursive style.

J. Peter Jenny
President

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**



Laboratório de Biodiversidade E.O.Wilson, Parque Nacional da
Gorongosa, Moçambique

E.O. Wilson Biodiversity Laboratory, Gorongosa National Park,
Mozambique

Chitengo, November 30th, 2015

Jim Munger, PhD
Vice Provost for Academic Planning
Professor of Biological Sciences
Boise State University
Boise, ID 83725

Dear Prof. Munger,

On behalf of the E.O. Wilson Biodiversity Laboratory at Gorongosa National Park in Mozambique I would like to express our strong support for the creation of a new Doctoral Degree Program in Ecology, Evolution, and Behavior at the Boise State University.

The Wilson Laboratory in Gorongosa, a new scientific facility in Mozambique's flagship protected area, exists to facilitate research that informs the national park's restoration efforts, and to provide logistical base and support for students and scientists, both local and visiting, who are interested in conducting long-term projects in ecology, biodiversity conservation, and other aspects of organismal biology. Opened in March 2014, the laboratory is quickly becoming Mozambique's most important hub of research in conservation biology, with emphasis on synergistic collaboration and fostering Mozambican students and young researchers. It currently includes basic laboratory facilities (microscopes, cold storage for fresh material and frozen tissue samples, an oven etc.) as well as a synoptic herbarium and an entomological collection. In 2016 the laboratory will be expanded to include a chemical laboratory and a DNA facility dedicated to extraction and amplification of genetic material. The Wilson Laboratory provides comfortable accommodation for 14 students/researchers, which will be expanded in 2016 to allow for at least 30 concurrent visitors to laboratory.

Gorongosa National Park (GNP) offers unparalleled opportunities for research in a variety of biological questions and conservation problems. It is home to some of the biologically richest and geologically most diverse ecosystems on the African continent. Situated at the southernmost end of the African Great Rift Valley, it encompasses four major ecological zones, each with its own climate, water regime, plant communities, and animals. It covers an area of approximately 4,000 km² and spans the elevation gradient from sea-level floodplains of Lake Urema to high alpine meadows of Mt. Gorongosa. Its borders encompass caves and deep gorges of the Cheringoma Plateau, vast savannas of the Valley floor, and the relict rainforest of Mt. Gorongosa. Since 2012 researchers have documented the presence of 3,860 species of animals and plants in the park, including

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146 species of mammals and 405 species of birds. The avifauna of the park is particularly rich in water birds, with globally significant breeding colonies of several species of storks and others. Equally importantly, raptors (Acciptridae) are represented by 29 species, including 5 species of globally threatened vultures. The invertebrate fauna of Gorongosa, while still insufficiently documented, appears to be exceptionally rich, including many freshwater crustaceans and cave arthropods. The vascular flora of the park consists of 1,713 documented species, including several endemics. The synoptic collection of animals and plants at the Wilson Lab provides a convenient resource for identification of species for visiting students and researchers.

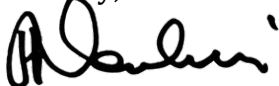
In addition to projects focusing on organismal interactions or ecological processes, Gorongosa provides the perfect platform to explore the intersection of natural and anthropogenic ecosystems. The growing pressure from the human population around the park creates a high risk of human-animal conflict, and researchers at the Wilson Lab, in collaboration with the Dept. of Conservation and the Dept. of Agriculture at GNP, are actively pursuing projects that aim to mitigate the human impact on the protected area, while helping improve the livelihood of its surrounding communities by developing modern sustainable agriculture that offers alternatives to hunting and slash-and-burn practices.

Examples of doctoral projects recently or currently being conducted in the park include:

- Asymmetric reassembly of ungulate communities in Gorongosa National Park (Princeton University)
- Landscape ecology of war-driven mammal decline in Gorongosa National Park (Princeton University)
- Human-wildlife interactions in Gorongosa National Park (University of California, Berkley)
- Population dynamics of lions in Gorongosa National Park (University of California, Santa Cruz)
- Tri-trophic interaction in fungal-arboreal-avian assemblages (Coimbra University, Portugal)

We believe that a partnership between Gorongosa Restoration Project and the Boise State University, recently formalized through a Memorandum of Understanding, will provide BSU students and researchers with opportunities to conduct ground-breaking projects in ecology and conservation, leading to not only advances in science but also more effective conservation of one of Africa's greatest protected areas.

Sincerely,



Piotr Naskrecki, PhD
Associate Director, E.O. Wilson Biodiversity Laboratory
Gorongosa Restoration Project



INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016

Academic Affairs
P.O. Box 3010
Nampa, ID 83653

Dr. Jim Munger
Vice Provost for Academic Planning
Professor of Biological Sciences
Boise State University
Boise, ID 83725

November 23, 2015

Dear Dr. Munger:

College of Western Idaho offers this letter in support of Boise State University's proposed Ph.D. program in Ecology, Evolution, and Behavior (EEB). We believe this program provides an opportunity for CWI faculty engagement and professional development, as well as a relevant and intriguing long-term academic pathway for our students in multiple disciplines of study.

Ecology, Evolution, and Behavior poses a potential for future partnerships between College of Western Idaho and Boise State University faculty. Many of CWI's masters-prepared faculty members are BSU graduates, including faculty teaching Anthropology, Geology, and Biology. Notably, our ecology and field biology faculty is a graduate of BSU's Raptor Biology program and is now a mentor in BSU's Research Experience for Undergraduates in Raptor Research. He continues to work with his former BSU graduate professors as well as with current BSU undergraduate students conducting raptor research. Our Geology faculty member is a graduate of BSU's Geosciences program and maintains his connection with the program by leading student studies abroad through Boise State's Summer Field Camp Program in Geology. These examples illustrate the continued engagement of former graduates in Boise State programs—a connection that benefits current BSU students, as well as CWI faculty and, by extension, the community college students they teach.

Students become familiar with long-term options through the relationships they form with faculty, and their goals are often inspired by faculty who are actively engaged in their discipline. CWI faculty engagement with BSU counterparts strengthens the transfer pathway for students. When choosing a major, community college students often consider the extended academic pathways that are locally accessible; a Ph.D. program in EEB broadens graduate level options for associate degree transfer students from several majors.

Additionally, local access to a Ph.D. program in EEB also provides an option for graduate progression or professional development that would be of interest to our faculty from a broad range of disciplines. Partnership with the four-year universities in the state is extremely important to CWI's mission and we look forward to future opportunities for collaboration and collegial engagement with BSU.

Sincerely,

A handwritten signature in black ink, appearing to read "Brenda Pettinger", is written over a faint, large, stylized "CW" watermark in the background.

Brenda Pettinger
Assistant Vice President for Academic Affairs

phone 208.562.3305
brendapettinger@cwidaho.cc



INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016
United States Department of the Interior
Fish and Wildlife Service



Idaho Fish And Wildlife Office

1387 S. Vinnell Way, Room 368

Boise, Idaho 83709

Telephone (208) 378-5243

<http://www.fws.gov/idaho>

SEP 10 2014

Jim Munger, PhD
Vice Provost for Academic Planning
Professor of Biological Sciences
Boise State University
Boise, ID 83725

Dear Jim Munger:

I am writing this letter to express support for the creation of a new PhD. in Ecology, Evolution, and Behavior (EEB) Program at Boise State University. The proposed expansion of the Department of Biological Sciences graduate programs will further enhance the already high quality of Boise State University graduates, many of whom are currently employed by the US Fish and Wildlife Service's Idaho Fish and Wildlife Office here in Boise.

For more than 15 years, the Department of Biological Sciences at Boise State University has closely collaborated with the Idaho Fish and Wildlife Office to study and research conservation issues of concern to the Service. This work has involved past and ongoing graduate studies of Idaho's native fish, wildlife and plants including Columbia spotted frog; two endemic Idaho ground squirrels and rare southwestern Idaho native plants. The knowledge gained from these studies has been instrumental in our understanding of the ecology of these and other species of conservation concern and has served to inform our decisions on their management and protection. Creation of the EEB PhD program would allow even more opportunities for long term research projects that would provide even more benefit to the Service.

The Service's Idaho and Fish and Wildlife Office currently employs five fish and wildlife biologists with degrees from Boise State's Department of Biological Sciences graduate programs. That is testament to the excellent preparation Boise State graduates receive for careers in state and federal natural resource jobs. Additionally, creation of a new PhD program will foster new fields of research as well as new and exciting graduate degree options for natural resource professionals in Idaho.

We have a strong and sustained interest in continuing our collaborative relationship with Boise State's Department of Biological Sciences. Therefore, BSU's proposed new EEB PhD program at Boise State has my fullest support.

Sincerely,

Michael Carrier
State Supervisor

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016



Department of Energy

Idaho Operations Office
1955 Fremont Avenue
Idaho Falls, ID 83415

September 26, 2014

Dr. James Munger
Professor & Vice Provost for Academic Planning
Department of Biology
Boise State University
Boise, ID 83725-1515

SUBJECT: Support of Boise State University's Proposal for Creation of New Ph.D.

Dear Dr. Munger:

I am writing to support Boise State University's proposal for creation of a new Ph.D. in Ecology, Evolution, and Behavior (EEB), which is intended to prepare scientists to work in transdisciplinary settings to solve the complex ecological and evolutionary problems of the day. Based on the proposal as presented, it seems likely that creation of this new doctoral program would enhance the beneficial relationship between Department of Energy, Idaho Operation Office (DOE-ID) and Boise State University (BSU).

DOE-ID and the Idaho National Laboratory (INL) have had very positive experiences with BSU. BSU is one of the partners in the Center for Advanced Energy Studies, (CAES), and through CAES has provided important research which supports the DOE mission in areas including oxidation studies on zirconium materials in low-enriched uranium fuels, irradiation creep in graphite, and examination of the materials properties of oxide fuels and oxide dispersion strengthened (ODS) alloys for nuclear reactors. Policy researchers at BSU affiliated with CAES have performed important studies on "up-front financing options for energy efficiency for small businesses" and on the "economic impact of small modular reactors". Recently, under a \$2.8 million grant from the U.S. Department of Energy's SunShot Initiative, a group of researchers from Idaho, including Boise State and the INL, developed *PVMapper*, a geographic information system (GIS) that helps large-scale photovoltaic project developers take social preferences and constraints into account when siting new solar energy plants. All of these examples demonstrate that the research at BSU supports the mission of the Energy Department to "ensure America's security and prosperity by addressing its energy, environmental and nuclear challenges through transformative science and technology solutions".

As a partner in CAES, BSU provides leadership for the Microscopy and Characterization Suite (MaCS), a state-of-the-art materials characterization laboratory that provides cross-cutting capabilities that supports INL and the DOE in several important areas of research and development. MaCS is complementary to the Boise State Center for Materials Characterization (BSCMC) that was established in 2006. The MaCS facility has made it possible for researchers to examine irradiated fuel at the nanoscale level, and this capability has resulted in a new

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FEBRUARY 18, 2016**

Dr. James Munger

-2-

September 29, 2014

understanding of how nuclear fuel changes throughout the fuel's irradiation life cycle. Data from the MaCS lab has been used to establish new models and simulation of irradiated nuclear fuel at the atomic and meso-scale levels.

Boise State Students have proven integral to the success of CAES. The INL has had numerous BSU interns and students over the last several years. These students have contributed to DOE-relevant research, including research on biomass for producing biofuels, research on geothermal systems, and the research funded by the Nuclear Energy University Programs.

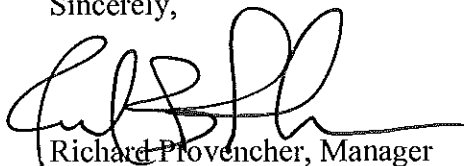
The INL comprises almost 900 square miles of primarily sagebrush-steppe ecology, is positioned over the Snake River Plain aquifer, and has supported and continues to support numerous facilities since its inception. Managing the site requires an understanding of the ecology, the potential impacts and benefits of any new actions, and consideration of input from the public and other stakeholders such as federal land-management agencies and the state of Idaho. The ability to integrate these kinds of inputs from multiple disciplinary, agency, and public perspectives into a decision process is one of the goals of the proposed Ph.D. in Ecology, Evolution, and Behavior, a worthwhile endeavor.

The envisioned PhD program contains key transdisciplinary areas for research and training which are of interest to DOE-ID in its stewardship of INL and the INL site. Especially relevant is the area of *Biogeochemistry*, which will examine the productivity of ecosystems, distributions of species and the outcomes of their interactions and how those interactions are determined or influenced by the complex interplay between biological, chemical, geological, and hydrological factors. Improving our understanding of complex biogeochemical systems and enhancing our ability to predict how they will respond to perturbation could potentially be relevant to DOE decision-making about activities on the INL site.

While the DOE-ID cannot commit to any future funding or employment to BSU or its students, clearly the DOE encourages graduate level education in the field of science and technology.

Again, DOE-ID expresses support to Boise State in its quest to create a new PhD program in Ecology, Evolution, and Behavior. This program would add to the already strong and mutually beneficial relationship between DOE and Boise State University.

Sincerely,

A handwritten signature in black ink, appearing to read 'Richard Provencher', is written over a horizontal line.

Richard Provencher, Manager
Idaho Operations Office



INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016

355 Julia Davis Drive • Boise, Idaho 83702 • (208) 608-7760 • (208) 384-3194 fax

November 29, 2015

Jim Munger, PhD
Vice Provost for Academic Planning
Professor of Biological Sciences
Boise State University
Boise, Idaho 83725

Dear Jim:

I am writing on behalf of Zoo Boise to support Boise State University's efforts to create a new PhD program in Ecology, Evolution and Behavior. A few years ago Zoo Boise has changed its mission into to help address the extinction crisis. Visitors to Zoo Boise help generate hundreds of thousands of dollars on an annual basis to help fund conservation projects in Idaho and around the world. As you know, successful conservation depends on a number of factors.

First and foremost is solid science. A PhD program in Ecology, Evolution and Behavior will provide a nearby team of scientists could help Zoo Boise ensure that the funds being generated by hundreds of thousands of Idahoans are spent on credible projects that have a real chance for success.

The second factor is partnerships. Successful conservation work requires teams of people with different skill sets to tackle all the different challenges. PhD level biologists are always key members of these teams. In the past, Boise State biologists have worked with Zoo Boise and the College of Idaho on our Southern Idaho ground squirrel project. In return, Zoo Boise has worked with Boise State Professor, Dr. Jesse Barber, to provide holding space for bats used in his predator-prey research.

Zoo Boise's latest project involves helping to restore Gorongosa National Park in Mozambique. Gorongosa, once one of Africa's most important parks, was destroyed during a civil war. Nearly all the mammals were killed and eaten by the soldiers. One million acres was essentially emptied of all its animal life. Gorongosa is now being restored. Animals are finding the way back to the park and others are being reintroduced. Guiding and studying this process, arguably one of the greatest ecological experiments of all time, will requires generations of future PhD level scientists. Already, Marc Bechard of Boise State is studying Hooded Vultures in the Park and several members of BSU's Intermountain Bird Observatory are currently in the park studying the bird life. Soon, Dr. Jesse Barber will be in Gorongosa studying the interactions between bats and insects. The restoration of Gorongosa has numerous ties to Idaho. The effort is being led by Greg Carr, an Idahoan from Ketchum, Zoo Boise, and Bob Poole, a wildlife film maker from Ketchum. This new program at Boise State could help increase Idaho's influence in saving a place described by Dr. E. O. Wilson as the "most biologically diverse national park on earth."

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A PhD program is built on the foundation of a solid undergraduate biology department. Zoo Boise has benefited from Boise State biology graduates who are now employed as Zookeepers, served as interns and make up a good portion of our volunteer program. Building a PhD program on top of that solid will only increase the opportunities for Zoo Boise and Boise State to work together even more in the future.

Zoo Boise supports Boise State University's efforts to create this new doctoral program and urge the Idaho State Board of Education to support this effort.

Sincerely,



Steve Burns
Director
Zoo Boise

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016



United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Idaho State Office
1387 South Vinnell Way
Boise, Idaho 83709-1657



SEP 30 2014

Dr. James Munger, Ph.D.
Vice Provost for Academic Planning
Professor of Biological Sciences
Boise State University
Boise, Idaho 83725

Dear Dr. Munger,

Thank you for your letter of September 6, 2014, regarding a proposed new Doctoral program at Boise State University (BSU). The Bureau of Land Management (BLM) is highly supportive of the proposed Doctoral Program in Ecology, Evolution and Behavior. Over the years, BLM managers and resource specialists have directly benefitted from numerous research studies completed by BSU faculty and Master's level graduate students on a wide variety of species, ecosystems and ecosystem components relevant to the BLM. For example, past research efforts led by Drs. Bechard, Belthoff, Novak, Wicklow-Howard, you and others, encompassed various raptors of concern, Columbia spotted frogs, biological soil crusts and migratory songbirds. Idaho BLM has recently worked closely with Dr. Jennifer Forbey and her laboratory on important research related to pygmy rabbit and sage-grouse diet selection and habitat quality, topics that are helping to refine how we conserve and manage habitat for these species of concern.

As you may be aware, Idaho BLM also supports the Intermountain Bird Observatory (IBO) (previously the Idaho Bird Observatory), via a recently initiated Interagency Assistance Agreement with the U.S. Fish and Wildlife Service. The IBO provides crucial expertise in the conservation and monitoring of migratory songbirds, raptors and other species, so we anticipate that the Observatory would also benefit from a Doctoral program at BSU by providing advanced opportunities for graduate students to pursue more in-depth studies of birds in the Intermountain Region.

Over the years, numerous BSU graduates have gone on to become employed as biologists, botanists, ecologists, managers or in other roles in the BLM, many having completed Master's degrees at BSU. A Ph.D. program would provide additional opportunities for graduate students as well as working professionals to pursue advanced studies, furthering career options and opportunities.

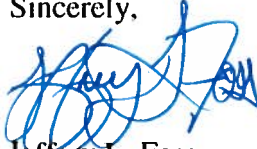
In closing, the BLM's current and future needs will always revolve around employing graduates with solid biological and ecological expertise in species, ecosystems and ecosystem processes. Increasingly, it is becoming crucial that graduates possess a solid, working understanding of how these factors relate to resource management and land use planning, and that they are able to see the big picture and think "outside the box". The proposed Doctoral program would facilitate that.

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FEBRUARY 18, 2016**

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As you proceed, we encourage you to ensure that the Doctoral program embrace a strong applied ecology emphasis focused on contemporary land management issues including landscape ecology, species-habitat relationships, ecosystem processes, and climate change vulnerability. Thank you for the continued coordination between BSU and Idaho BLM.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Jeffery L. Foss', is written over a circular blue stamp or seal.

Jeffery L. Foss
Deputy State Director
Resources

October 3, 2014

Jim Munger, PhD
Vice Provost for Academic Planning
Professor of Biological Sciences
Boise State University
Boise, ID 83725


Dear Dr. Munger,

It is with enthusiasm that I support Boise State University (BSU) creating a new PhD in Ecology, Evolution, and Behavior. As a BSU alumnus, I am proud to see the university continuing to develop and evolve in developing rigorous, scientific and relevant programs. I benefited greatly from BSU's outstanding Environmental Health program, which focused on the scientific and programmatic skills needed to succeed in the workforce while also emphasizing the importance of strong written and verbal communications.

As the former Director of the Department of Environmental Quality and the current State Director for The Nature Conservancy, I have had the opportunity to work with and supervise many BSU graduates and students. Employers, like the DEQ and The Nature Conservancy, have benefited greatly from having a qualified applicant pool for employment and for working in partnership with BSU in many areas of research.

It is critical in maintaining a strong workforce in Idaho that students and employees have opportunities to pursue advance degrees in the scientific and natural resource areas. The Nature Conservancy is an organization based on scientific principles and a hallmark of our success is collaboration with other organizations. Our employees often pursue advanced degrees and this particular degree would be of great interest to our scientists. In addition, it would provide value to collaborate with BSU on research within this area.

Sincerely,



Toni Hardesty
State Director

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016



IDAHO DEPARTMENT OF
HEALTH & WELFARE

C. L. "BUTCH" OTTER – Governor
RICHARD M. ARMSTRONG – Director

SONJA SCHRIEVER, RN – Chief
BUREAU OF COMMUNITY & ENVIRONMENTAL HEALTH
450 West State Street, 6th Floor
PO Box 83720
Boise, ID 83720-0036
PHONE 208-334-6960
FAX 208-334-6573

September 10, 2014

Dr. John P. Ziker
Professor and Chair, Department of Anthropology, Boise State University
1910 University Drive
HEMG, Room 55
Boise, Idaho 83725-1950

Dear John Ziker,

After reviewing the proposal for a PhD program in Evolution, Ecology, and Behavior at Boise State University (led by the Department of Biological Sciences in conjunction with the Departments of Anthropology and Geosciences) I wholeheartedly express my support in this endeavor. In my current capacity as an epidemiologist for the Division of Public Health at the Idaho Department of Health and Welfare, I see broad potential for this program to provide both higher quality interns and prospective employees in the future. In addition, several aspects of the proposed program's goals and coursework would be of particular value to my organization. Perhaps of highest importance in this regard would be providing training to growing body of students on how to effectively communicate the results of scientific research to both scientific and public audiences, along with training on how to pose scientific research questions and how to conduct research using the scientific method.

The interdisciplinary nature of public health is increasingly needed for us to better understand and prepare for future public health threats. As such, there is high potential for the Division of Public Health to become consumers of information produced from the proposed program. Information on the science of global change may produce a range of key insights including a better understanding of climate change impacts, and any consequent human health effects, in Idaho along with insight into the biology of invasive species in the state (in particular those with zoonotic disease potential). I was pleased to see that the proposed PhD program includes coursework in modeling social behaviors. There is growing interest within public health in using this type of modeling to understand such things as how influenza might spread or which set of interventions would most likely reduce obesity in a population. Having a pool of graduates with a skill set in modelling has the potential to provide great value to our everyday public health work. In short, I am confident that the knowledge gained, and products produced, by students of the proposed PhD program would be of value to the Division of Public Health and enthusiastically support the above mentioned Boise State University departments in this endeavor.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert Graff". The signature is fluid and cursive, with a large, sweeping flourish at the end.

Dr. Robert Graff, PhD
Chronic Disease and Environmental Health Epidemiologist
Bureau of Community and Environmental Health, Division of Public Health, Idaho Department of Health and Welfare

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**



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WWW.DCIDAHO.ORG

Board of Directors

October 4, 2014

Officers

*NorRae Spohn
President*

Jim Munger, PhD
Vice Provost for Academic Planning
Professor of Biological Sciences
Boise State University
1910 University Drive
Boise, ID 83725

*Ron Dorn, MD
Immediate Past
President*

*George Harad
President Elect*

Dear Dr. Munger,

*Steve Simpson
Treasurer*

I am excited to hear of your plans to propose a Ph.D. in Ecology, Evolution, and Behavior. As an alumna of the Department of Biological Sciences (DBS) and the leader of a nonprofit partner organization, I can attest to the strength of your current programs and the benefits that this new program will provide to our community.

*Hilary Soltman, Esq.
Secretary*

Directors

The Discovery Center relies on the expertise of partners like Boise State's DBS to offer a wide array of educational programming. As leaders in informal science education, we are a portal to the public and pride ourselves on offering a casual and fun venue for scientists to connect with the community and share their work. We regularly invite Boise State DBS faculty and students to participate in our programming and are grateful for the breadth and depth of experience they bring as well as the department's strong culture of collaboration.

Dean Klein

Amy Moll Ph.D.

Barbara Morgan

Ormond Rankin

The areas on which this Ph.D. program will focus are of critical importance to our community. Having access to doctoral students who are working across disciplines to solve complex problems will be of tremendous benefit to our science center. From sharing breakthroughs of highly relevant and well-funded research programs with our adult and teen audiences to highlighting possible career paths to budding young scientists, I can see many ways that this expansion will enrich our partnership and community.

Michael Sullivan

Brad Surkamer

Chris Taylor

Advisory Board

I enthusiastically support your proposal and look forward to working with the new students and faculty your program will attract!

Linda Clark, Ed.D

Sincerely,

Lynnette Davis

Frank Finlayson

A handwritten signature in blue ink that reads "Kristine Barney".

Kristine Barney
Executive Director
(M.A. 2009)



INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016

2355 Old Penitentiary Rd
Boise, ID 83712
PHONE (208) 343-8649
FAX (208) 343-3601
www.idahobotanicalgarden.org
info@idahobotanicalgarden.org

September 29, 2014

Dr. Jim Munger, PhD
Vice Provost for Academic Planning
Professor of Biological Sciences
Boise State University
Boise, ID 83725

Dear Dr. Munger:

We are writing in support of Boise State University's proposal to create a new Ph.D. in Ecology, Evolution, and Behavior (EEB), to be housed and administered in the Department of Biological Sciences. The Idaho Botanical Garden serves many roles in the community, from providing a venue for weddings, concerts and memorials, to our holiday lights and harvest festival extravaganzas, from multiple levels of educational programming, to plant and seed collections, botanical and horticultural collaborations, and conservation efforts. We do not claim to be a scientific institution, but, because of our 4,000 member base, our network reaches across the educational and financial spectrum of the Treasure Valley. To this end, we have worked with BSU Biology Department faculty by providing sites (undeveloped buffer areas in the foothills) for field experimental studies, and we use the Snake River Plain Herbarium for reference purposes, depositing specimens, and seeking taxonomic advice. The Idaho Botanical Garden hires and collaborates with graduates of BSU's Biology Department, particularly those with a botany emphasis, as it provides a local and ready pool of qualified individuals to assist with our native plant propagation, seed collection, and plant collection accessioning efforts.

The proposal to create a new Ph.D at BSU will facilitate collaborative opportunities between BSU and the Idaho Botanical Garden, particularly in the field of invasive plant species ecology and native plant biology, taxonomy, and conservation. We look forward to such opportunities, and appreciate the chance to offer our support.

Sincerely,
Christine Wiersema, Executive Director

Ann DeBolt, Botanist

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016

Canyon County Parks, Recreation and Waterways

1115 Albany St., Caldwell, ID 83605

Lake Lowell Office: 208-440-4600

Celebration Park: 208-455-6022



23 September, 2014

To: Dr. Kevin Feris, Chair, Department of Biology, BSU

From: Tom Bicak, Director

Re: New Ph.D. in Ecology, Evolution and Behavior

Dear Dr. Feris:

This letter is in support of the proposed Ph.D. program in Ecology, Evolution and Behavior at Boise State University. Canyon County Parks and specifically Celebration Park has a twenty year history of cooperative ventures with various departments at Boise State University. The Desert Studies Institute, an Extended Studies program, Archaeological Field Schools and a myriad of workshops bringing together regional faculty, agencies and students have enriched the academic and off-campus opportunities for the Boise State community. We are very excited about the new Ph.D. program. We feel that it is a timely, valuable and culturally important contribution to the already stellar academic offerings at your University. This program creates great potential for world-class research, and for training scholars with a keen understanding of the physical and biological worlds and the ability to apply their powerful knowledge to our contemporary issues and problems. It would be difficult to identify a more noble scholarly endeavor than the proposed Ph.D. in Ecology, Evolution and Behavior.

Canyon County Parks continues to grow its infrastructure with the Crossroads Museum and programing to enhance the undergraduate and graduate education locally and nationwide. We look forward to working with your doctoral students and your students in general as they realize their academic aspirations.

Sincerely,

Tom Bicak

Director

Department of Biological Sciences
 College of Science and Engineering
 921 South 8th Avenue, Stop 8007 • Pocatello, Idaho 83209-8007

9 September 2014

Dr. Kevin Feris
 Chair, Department of Biological Sciences
 Boise State University

Dear Dr. Feris,

I'm writing to express my strong support for Boise State University's NOI describing their proposed PhD in Ecology, Evolution and Behavior. My motivation for supporting BSU's NOI is simple: **a healthy PhD program at BSU is in the best interest of ISU.** It is undeniable that their proposed PhD degree will foster increased research on the BSU campus by enhancing their competitiveness for extramural funding. I contend that it will improve the research enterprise on **our** campus, too. I see at least four tangible benefits for ISU as a result of BSU's proposed program:

- The largest benefit to ISU is in **collaborative research opportunities** with our colleagues at BSU. As their PhD program comes on line, they will be in a better position to join with ISU faculty in inter-institutional granting efforts that will bring new funding to both campuses. Such collaborative arrangements will become common between ISU and BSU, and both of our institutions will benefit. To facilitate this, I propose we invite BSU faculty to ISU every semester for research seminars and encourage faculty at both institutions to invite their colleagues to sit on PhD advisory committees.
- The **creation of joint programs for research and training**, modeled after the successful Center for Advanced Energy Studies (CAES), and the NIH Infrastructure Network for Biomedical Research Excellence (INBRE) programs, build on partnerships between institutions that each bring something useful to the table. With the proposed PhD program, BSU will be able to form new and productive partnerships with ISU that will strengthen both institutions.
- As director of **ISU's Molecular Research Core Facility (MRCF)**, I am thrilled by prospect of increased research activity at BSU, which will result in larger numbers of samples processed at the MRCF. Our second largest pool of academic customers (after ISU), BSU faculty constitutes an essential part of the demand for next-generating sequencing and advanced imaging.
- Metropolitan regions with PhD-granting institutions **enhance industry and economic development**. This has held back Boise for many years. The benefits of enhanced economic activity in Boise will be felt in Pocatello, too, by providing opportunities for our graduates and by increasing state tax revenue (that will find its way to ISU).

There has been concern about program duplication, but I would like to see that concern put to rest. While ISU and UI have various PhD programs in the biological sciences, the uniqueness of a graduate program is reflected in the constitution of the faculty and students that contribute to the program, not in the titles of the coursework that the students take. This program is an essential addition to BSU that will also benefit similar (but distinct) programs at ISU and UI.

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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Last, I'd like to point out that supporting this NOI is simply the right thing for ISU to do. In the past, reluctance to do so was on perceived and historical antagonism between institutions of higher education in Idaho. But this antagonism was misplaced and unproductive. True rivalries are based not on attempts to hold back the competition, but on comparative achievements. The lamentable argument that ISU or UI would benefit by hamstringing BSU's evolution was simply dishonorable and counterproductive. As faculty members strive to play a larger role in the responsible stewardship of our great institution, it behooves us to recognize and embrace opportunities to form partnerships with our sister institutions. For ISU, arrangements with BSU, with whom we have so much to gain as partners, are of utmost importance.

A handwritten signature in black ink, appearing to read 'Mike Thomas', enclosed within a thin black rectangular border.

Michael A. Thomas
Professor, Department of Biological Sciences
Academic Director, Molecular Research Core Facility

Geography Department

McClure Hall 203
PO Box 443021
Moscow, Idaho 83844-3021

Phone: 208-885-6216

Fax: 208-885-2855

geog@uidaho.edu

www.scihome.uidaho.edu/geography

Prof. James Munger
Vice Provost for Academic Planning
Office of the Provost
Boise State University
1910 University Dr.
Boise, ID 83725

Dear Professor Munger:

It is my pleasure to provide this letter of collaborative support for Boise State University's Ph. D. proposal in Ecology, Evolution, and Behavior (EEB). This unique doctoral program represents an important opportunity to: (1) strengthen research collaborations between our universities, (2) develop mutually beneficial and non-duplicative degree programs to meet the research challenges of the 21st century, and (3) add research capacity and graduate student training to the state.

The EEB Ph. D. program will open new opportunities to train graduate students in fields at the interface of human and natural systems, which opens a host of new collaboration avenues between my research group at the University of Idaho and faculty at Boise State. As a geographer, my research interests lie in topics relating to risk assessment and perception, vulnerability, hazards, climate change impacts, and resilience and mitigation and adaptation. The EEB Ph. D. program will allow me to develop competitive research proposals to the National Science Foundation (and other federal and state agencies) with faculty like Alejandro Flores, Jennifer Forbey, Nancy Glenn, Julie Heath and others at Boise State. I anticipate these research proposals being oriented around issues of sustainability, climate change, and land management that are central to Idaho's economy and environment. These collaborative projects have the potential to bring enthusiastic graduate students to the EEB Ph. D. program and graduate programs at the University of Idaho to work as a team to address critical issues facing Idaho.

To conclude, I am happy to provide this letter of collaborative support for my colleagues at Boise State and look forward to working as a team with their faculty and students for the benefit of all Idaho.

Sincerely,

Tim G. Frazier
Assistant Professor
Department of Geography & Faculty in The Bio-Regional Planning Program
Director - Hazards and Climate Impacts Research Center (HazCIRC)
Co Director - GIS and Education Outreach Center (GISEOP)
University of Idaho

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

Jason Kreidler
Research geographer
Western Geographic Science Center, USGS
970 Lusk Street
Boise, ID 83706

September 18, 2014

Professor Kevin Feris
Department of Biology
Boise State University
Boise, ID 83725

Dear Professor Feris:

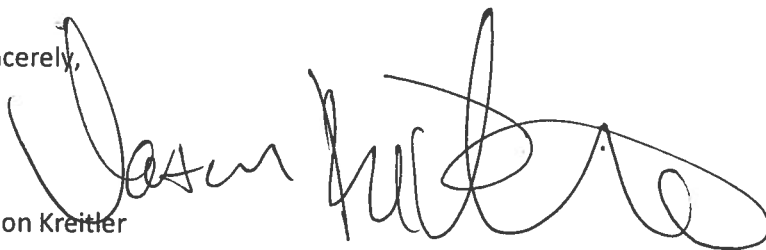
This letter has two purposes, both of which are related to potential future collaborative opportunities with Biology Department faculty and students at Boise State. On multiple occasions colleagues have mentioned your department is petitioning the State Board of Education for a doctoral program in biology. I am very supportive of this, and could potentially help support students in ecology and biology at BSU. As an early career researcher I would benefit from an increased graduate enrolment for potential research assistants and research opportunities. I am currently employing four students, but only one at Boise State. For convenience and ease of communication I would prefer if all my research assistants were local.

Furthermore, if a graduate student's interests aligned closely with mine, or my participation would be particularly useful, I would be interested in advising or serving on graduate committees as an affiliated faculty. Many of my colleagues from the Snake River Field Station are affiliated faculty and find it rewarding and useful.

Please let me know if I can provide additional support as you prepare your case for a doctoral program in biology, and when convenient I would welcome the chance to discuss affiliated status.

Sincerely,

Jason Kreidler

A handwritten signature in black ink, appearing to read 'Jason Kreidler', written over a horizontal line.

CC: Julie Heath

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016



IDAHO DEPARTMENT OF FISH AND GAME

600 S Walnut / P.O. Box 25
Boise, Idaho 83707

C.L. "Butch" Otter / Governor
Virgil Moore / Director

October 15, 2014

Jim Munger, Ph.D.
Vice Provost for Academic Planning
Professor of Biological Sciences
Boise State University
Boise, ID 83725

Dear Jim:

As you know, I have worked closely with Boise State University's (BSU) Department of Biological Sciences since the mid-1990s. I have been an active member of the Adjunct Graduate Faculty (served as the major advisor to five successful graduate students in the MS and MA programs) and have taught numerous upper division courses for the Department. I now work for the Idaho Department of Fish and Game (IDFG) as Manager of the agency's Wildlife Diversity Program – a statewide staff of 16 FTEs with primary responsibility for managing those species not hunted, fished, or trapped (i.e., nongame and threatened/endangered wildlife, and rare plants).

In my current capacity with IDFG, I am aware of several BSU graduates that currently work for either IDFG or our federal partners in the field of natural resource management (i.e., the U.S. Fish and Wildlife Service, the Bureau of Land Management, or the U.S. Forest Service). Numerous BSU faculty (and their students) also collaborate closely with my program specifically on research projects involving raptors, small mammals, insects, and plants.

As a result of these experiences, therefore, I believe I have an ideal perspective from which to wholeheartedly support BSU's proposal to create a new Ph.D. program in Ecology, Evolution, and Behavior (EEB). The development of a Ph.D. in EEB is a natural extension of what is currently a very solid program and one which, in my opinion, is long overdue.

Besides the obvious benefit to BSU and its students and faculty, a Ph.D. in EEB would generate new opportunities for my staff, as well as other IDFG employees in the Treasure Valley, to pursue higher education – something that I know several are interested in doing. In reality, a doctoral program at BSU provides the only practical way Boise-based staff could achieve such a goal. In addition, one-third of my staff (5 FTEs) possess a Ph.D. from other institutions; having BSU graduates with a Ph.D. in the local community would therefore be significant when I am recruiting new personnel during future job openings.

Keeping Idaho's Wildlife Heritage

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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Another significant benefit of a Ph.D. in EEB to the program here at IDFG that I manage, would be the opportunity for enhanced collaboration on research projects of mutual interest. Information needs on nongame birds, including raptors, as well as a large suite of other *Species of Greatest Conservation Need* identified in Idaho's State Wildlife Action Plan are far beyond the capacity of my small staff. As such, I could envision active engagement by Ph.D. students and EEB faculty on advanced research topics with applied natural resource management implications.

Finally, a Ph.D. program in EEB might generate additional opportunities for IDFG and other agency staff in the Treasure Valley to join BSU's Adjunct Graduate Faculty; in doing so they could potentially advise Ph.D. students, serve on graduate student committees, and teach upper division courses. Wildlife professionals outside of academia have the ability to further expand graduate student experiences and knowledge. We also play a key role in helping such students prepare for entry into the applied sciences workforce when they graduate from a program such as a Ph.D. in EEB.

In summary, I fully endorse BSU's proposal to develop a new Ph.D. program in EEB. Benefits to the Department of Biological Sciences, BSU, the local community, agencies such as IDFG, and the State of Idaho are numerous, tangible, and clear. If there's any additional information I can provide to help support this important proposal, please do not hesitate to contact me at rex.sallabanks@idfg.idaho.gov or on (208) 287-2754.

Sincerely,

A handwritten signature in blue ink that reads "Rex Sallabanks". The signature is fluid and cursive, with the first name "Rex" and last name "Sallabanks" clearly distinguishable.

Rex Sallabanks, Ph.D.
Manager, Wildlife Diversity Program

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016



IDAHO DEPARTMENT OF FISH AND GAME

600 S Walnut / P.O. Box 25
Boise, Idaho 83707

C.L. "Butch" Otter / Governor
Virgil Moore / Director

26 September 2014

Kevin Feris, Department Chair
Department of Biological Sciences
1910 University Dr. MS1515
Boise State University
Boise, Idaho 83725-1515

Dear Dr. Feris:

I am writing in support of the creation of a new Ph.D. program in Ecology, Evolution, and Behavior (EEB) at Boise State University. The Department of Biological Sciences is well-positioned to provide a high-quality Ph.D.-level educational experience, and such a program would benefit the university, the State of Idaho, and the field of biology as a whole.

Over the past decade or more, I have had many collegial interactions with Boise State faculty members and found them to be very knowledgeable in their fields and helpful to my botany research in the Idaho Natural Heritage Program. In recent years, the most notable connections have been with rare plant research by Jim Smith and Ian Robertson. I found their studies to be thorough, high-quality, and directly applicable to important conservation questions. Also, Boise State faculty member Steve Novak was a very helpful member of my Ph.D. committee when I was a student at Washington State University. Ph.D. students would benefit greatly by working with faculty members of this caliber.

In my botany research at Idaho Department of Fish and Game, I have employed undergraduate and graduate students from the Department of Biological Sciences and found them to be well-prepared for the roles in which they were hired, particularly work on rare plants, native plant communities, and invasive species.

In 1992, our botanists transferred the Idaho Department of Fish and Game Herbarium to Boise State's Snake River Plains Herbarium, and since that time, we have made extensive use of the specimens stored there. Now that the herbarium collections have been digitized, we access them online frequently—even daily during particular stages of our research. This herbarium is a unique and valuable resource for the Idaho Natural Heritage Program and all of Idaho. It will be well-utilized by Ph.D. students, and will benefit from their contributions.

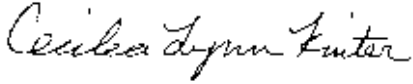
Apart from my work here at Idaho Department of Fish and Game, I have served as Adjunct Graduate Faculty in BSU's Department of Biological Sciences. I taught four courses (Plant Diversity and Evolution in 2006, and the first half of the spring semester of General Biology in 2005, 2006, and 2009), guest-lectured in other courses on several occasions, and took two teaching workshops. During that time, I talked with undergraduate lab assistants and graduate

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

researchers, attended biology seminars, and used the greenhouse, herbarium, and laboratories. In each instance, I was very pleased with the students and the teaching and research facilities.

In summary, I whole-heartedly support the creation of a new Ph.D. program in EEB, and look forward to continued interactions with the Department of Biological Sciences.

Most sincerely,

A handwritten signature in cursive script that reads "Cecilia Lynn Kinter".

C. Lynn Kinter, Ph.D.
State Botanist
Idaho Natural Heritage Program

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016



United States
Department of
Agriculture

Forest
Service

Payette
National
Forest

Supervisor's Office
500N Mission Street
McCall, ID 83638

File Code: 2670

Date: September 15, 2014

Jim Smith, Ph.D.
Director of Snake River Plains Herbarium
Department of Biology
Boise, State University
Boise, ID 83725-1515

Dear Dr. Smith:

Your goal of developing a Ph.D. program in Ecology, Behavior and Plant Evolution and Diversity at Boise State is exciting. As the Forest botanist on the Payette National Forest who has worked with the Biology Department in the past on collaboration efforts in botany, I feel the Ph.D. program would be very useful to the Forest Service.

A Ph.D. would be able to address complex ecological and evolutionary botanical research vital to the decision making of the agency and relevant to society. We would like to continue collaborative efforts with your research programs and look forward to working with you on future projects as funding is forthcoming.

Sincerely,

/s/ Alma M. Hanson
Alma M. Hanson Ph.D.
Forest Botanist, Natural Resources
Payette National Forest



IRSA

Caring for the Land and Serving People

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**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

Kevin Feris, Biological Sciences Department Chair
Boise State University
Department of Biology
Science Bldg. Room 217-B
Boise, ID 83725-1515

Dear Dr. Feris,

The upcoming development of a new Ph.D program in Ecology, Evolution and Behavior at Boise State University will increase collaborations across other biological disciplines within BSU and other educational institutions. One such discipline is Plant Evolution. The study of evolution can occur at multiple biological scales, from changes that occur at the population level from one generation to the next to changes that occur at higher taxonomic levels and track diversity over millions of years. Botanical research at Boise State encompasses the full range of these scales and includes studies on vascular plants that are native to western North America and tropical regions of the world, plants that are invasive in North America and elsewhere as well as fungal organismal diversity.

Of key interest to any new biological program is The Snake River Plains Herbarium, Boise State's collection of plant specimens includes over 50,000 vascular plant specimens and over 15,000 fungal collections. The emphasis of the collections is mainly on south and central Idaho, but includes representatives of global diversity. These collections span over 100 years of plant collecting activity and are an important resource for monitoring plant diversity.

For over a decade the Idaho BLM State Office has been a key collaborator with BSU in the development of this herbarium. The breadth of these collections and their robust digital recordation allows for rapid, comprehensive access of salient botanical information critical to questions in ecology and evolution, and helps inform regional land management issues. Thank you for the opportunity to provide support of this program and highlight the value botanical resources such as The Snake River Plains Herbarium play in past, current and future research endeavors.

Sincerely,

Anne S. Halford

Anne S. Halford
BLM Idaho State Botanist
1387 S. Vinnell Wy.
Boise, ID 83709

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016



BOISE STATE UNIVERSITY

DEPARTMENT OF BIOLOGICAL SCIENCES

Intermountain Bird Observatory

26 September 2014
James Munger, PhD.
Vice Provost for Academic Planning
Professor of Biological Sciences
Boise State University
Boise, ID 83725

Dear Dr. Munger,

I am writing to you in support of the newly-proposed PhD program in Ecology, Evolution, and Behavior at Boise State University. As a graduate from Boise State's MS in Raptor Biology program, I have been very successful in the field of avian biology and conservation. My training and experiences gained through Boise State have opened doors, made introductions, and have allowed me to build a lasting and rewarding professional career in science and academia. Boise State University does a great job in preparing its graduates for real-world futures, and a quick look at where its Raptor Biology and Biology graduates have been placed shows their far-reaching impact on not only national, but also international research and conservation efforts.

Since receiving my MS from Boise State, I have often thought about continuing my education and pursuing a PhD. This terminal degree would certainly help me with fundraising efforts, academic standing, and increased compensation. In my field, as the Executive Director of a university academic program, having a terminal degree would be favorable and allow for continued growth of my career and the organization I lead. However, because my family is based in Boise, Idaho, and because my current position also keeps me tied to the local community, I have not pursued a PhD in Biology.

Having such a program here at Boise State would open up many new doors for someone like myself. I think that there are many qualified candidates who are similarly tied to this community who could contribute greatly to Boise State by entering a Doctorate program in Ecology, Evolution, and Behavior. I fully support this endeavor and hope that it is looked upon favorably by the State Board of Education and both public and private funding entities. This program would be a wonderful addition to Boise State University and would personally benefit me in my career. I look forward to establishment of this new program at Boise State and wish you luck in this endeavor.

Sincerely,

Gregory S. Kaltenecker, Executive Director
Intermountain Bird Observatory
Boise State University
Boise, ID 83725

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

Dear Dr. Munger,

I was very excited to hear from you about the proposed PhD in Ecology, Evolution, and Behavior at Boise State University. My wife and I, after some time traveling around hunting for work, have decided to return to Boise. We are expecting our first child at the end of October. As a graduate of the Raptor Biology MS (2012), I would appreciate the opportunity to advance my career in science without having to subject my new family to a long-distance move.

Currently I am working for the BSU Biology department as an adjunct instructor, teaching Human Anatomy and Physiology Labs, as I did as a Teaching Assistant. At my current level of education, and in the present political climate, full-time work in ornithological research is frequently only available on short-term contract. I have been judged well-qualified for several permanent positions at government agencies and nonprofit organizations, but I have lost these opportunities to candidates with PhD degrees or more local knowledge.

Pursuing a PhD in Ecology, Evolution, and Behavior in Boise seems to be an ideal solution. The proposed new curriculum includes many courses of great interest to me, and, I believe, to my potential employers. The availability of new teaching assistantships for upper-division labs would also be an exciting opportunity for me. Furthermore, staying in Boise will allow me to continue to cultivate my connections in the local scientific community, and develop my knowledge of local ecology and politics.

I'll be crossing my fingers, and looking forward to news of this program's approval.

Sincerely,

Eric G. Nolte

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

Dear Dr. Munger,

My name is Jacob Newman-Holmquist and I am writing to you about my interest in the PhD program that you are proposing at Boise State University. I graduated from Boise State in 2007 with my BS in Biology with an emphasis in Environmental Biology. At that time I think things in my life made it difficult to go straight to graduate school. Over the past seven years I have put in over 500 applications to various organizations and with each of the five interviews I had gotten each position was filled with someone with a master's degree. The only work that I have been able to find that uses my degree is a part time summer job with a company that collects bugs that are helping control invasive species (toad flax, green spurge, and knap weed.) This job is far from a career but it gets me out in the field and doing something that I love. Over the few years or so my situation in life has vastly improved. I got married and just recently adopted my 7 year old step-son. We moved to Missoula, MT three years ago to take care of my grandmother's estate after she passed. I was hoping while I was here I would be able to find employment with the forest service or fish and game or return to school at the University of Montana but the job prospects are the same as in Boise and we decided that my wife going to nursing school now and me going to graduate school after she graduated was our best option. At this point in our lives we are planning on moving back to Boise in two years after my wife graduates and the family affairs up here are taken care of. After that I was planning on trying to get a master's degree at Boise State so when I received your email about the PhD program I was thrilled.

I think that Boise State offering this degree would allow me to reach my full potential as a scientist. A PhD degree would allow me to not only further my career but also allow me to study things that I otherwise would not be able to do. I have always been curious about naturally rare species and what has driven them to be rare. Are they a new species that just hasn't had the time to grow their population or are they an old species whose time on the planet has just about run out? Or is it something totally different that just hasn't been thought of before? These questions run through my mind every time I see a news article or report but in my current position I am unable to do much except think and speculate. I also am intrigued by the epidemic of invasive species. Having Dr. Novak for several of my classes as well as my current summer job I cannot help but want to figure out a way to manage the growth of the invasive species epidemic and wanting to find new and efficient ways of getting our land back to a more natural state.

For me, Boise State offering this program is very important. I am married and have a 7 year old son and my wife and I want to have more children. Although going somewhere else is not a complete impossibility, our entire family support structure is in Boise. My mother and father as well as my sister, mother-in-law, two brother-in-laws and numerous aunts, uncles and cousins all live in the treasure valley. If we moved somewhere else we would have to delay our family until I graduated but if we stayed in Boise we could live in my mother's rental property for minimal costs as well as have the support from my other family members for child care. It would also mean that my children could grow up around family and not have to be moving around every couple of years. My seven year old has already lived in four different states and I want him to be able to feel stable and secure and make friends that he won't have to leave in a few years.

Overall I think a PhD program in Ecology, Evolution, and Behavior would not only benefit me but the whole community in Boise. It would create a base of educated and knowledgeable scientists that

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

could teach the city, state and surrounding areas more about what is going on in this world and develop a core of scientists that this country is severely lacking in. The scientific community needs more voices in the world and giving people the opportunity to get the education and experience needed to get their voices heard is vitally important. I want to be one of those voices.

Sincerely,

Jacob Newman-Holmquist

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

Dr. Munger

I am writing in response to the proposed implementation of a new Ph.D. program at Boise State. I am in full support of the creation of a new program, a PhD in Ecology, Evolution, and Behavior. As a student and a native Idahoan, I would be interested in enrolling in such a program due chiefly to the five primary areas of focus proposed. My research interests lie in direct alignment with these areas. Specifically, Chemical Ecology and how the production and distribution of naturally occurring chemical compounds can directly affect the spatial dispersion of species and species behavior.

I am a non-traditional student who is a single father and a graduate of the Boise State Biology program. I am interested in pursuing graduate work for the attainment of an advanced degree in biology; however, relocating for graduate work is very difficult to do. Having such a program offered at Boise State would allow students like me to advance academically and professionally without forcing the family hardship of relocation. Additionally, as stated in the program proposal, implementation of such a program would result in higher collaborations and funding flow to the university which would have a direct feedback into the local economy. Local landscape and species diversity also make Boise State the ideal place for such a program.

Located on the convergence of three distinct biomes with multiple micro-climate regions, micro-scale ecosystems and riparian corridors scattered throughout, the Treasure Valley is the ideal location for such transdisciplinary programs focused on natural systems. With desert shrub scape habitat, coniferous forests, and grassy mountain meadows all within a 20 minute drive from each other and connected by a network of streams and waterways, the Treasure Valley is the perfect place to study ecosystem interactions as well as anthropogenic effects on those systems. Additionally, the Treasure valley and adjacent valleys of southern Idaho are among the most geologically active locations in the west. Boise State is situated in the heart of the Treasure Valley with easy and inexpensive access to all of this making it the perfect institution for such a transdisciplinary program.

For me personally, the ability to pursue such a degree locally would aid greatly in helping me achieve my professional goals while maintaining family cohesiveness. The attainment of such a degree would make me and others potential students similarly situated more competitive in the professional market with greater opportunities for success. In a classical positive feedback cycle, this success would, in turn, reflect great credit on the program, faculty, department and university as a whole; solidifying, at least in part, Boise States quest to become a competitive research institution of distinction. Thank you for your time and attention.

Respectfully:
Daniel P. Melody

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**



Dr. James Munger,

I recently graduated from Boise State with a M.Sc. degree in Raptor Biology (August 2013), under the guidance of Dr. Julie Heath. I am currently employed full-time as Conservation Biologist at the raptor-research non-profit HawkWatch International, based in Salt Lake City, Utah. While I am not currently searching for enrollment in a PhD program, I foresee myself possibly being interested in pursuing a PhD in the future. I would potentially be interested in pursuing a PhD in Ecology, Evolution, and Behavior from Boise State, however it would likely be project specific. Meaning that my pursuit of enrollment in a PhD program (Boise State or another institution) would depend greatly on the specific research project I would be focused on. Have recently graduated, I am also looking to take some time off from academic life to further pursue my research interests. That being said, I could see myself looking to enroll in a PhD program within the next 5 years.

My experiences as a Master's student at Boise State were generally positive, and I would do it again given the choice. However, if I were to pursue a PhD at Boise State, I would like to see some changes, particularly in the diversity of coursework offered to graduate students. As it stands, there are very few graduate level courses offered to only graduate students. Most of my Master's coursework was in classes featuring mainly undergraduate students, and there were even limited choices within these upper-level undergraduate courses. I would like to see a commitment to the expansion of coursework consistently offered to graduate students at Boise State before I would potentially pursue a PhD here.

Sincerely,

Neil Paprocki
Conservation Biologist
HawkWatch International
2240 South 900 East
Salt Lake City, UT 84106
npaprocki@hawkwatch.org

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

Lillian McKinley
24979 Hartley Lane
Middleton, ID 83644

James Munger
Boise State University
1910 University Drive
Boise, ID 83725

To James Munger:

The purpose of this letter is to express my full support of the proposed Ph.D. Program in Ecology, Evolution, and Behavior at Boise State University. I completely believe that Boise State University and the City of Boise have the resources to facilitate this program successfully. There are already great achievements in the Master's programs at Boise State, including the unique M.S. in Raptor Biology program. Add in the many unique resources in the community, such as the Intermountain Bird Observatory, the Peregrine Fund, USGS, and the Dry Creek Experimental Watershed, and a sure-fire recipe for success will be made. This is why I think that it is definitely time for Boise State to expand its Ph.D. options by adding a Ph.D. in Ecology, Evolution, and Behavior.

I personally love the Boise area and would love to be able to stay in the area to pursue my doctorate. I really enjoyed my undergraduate studies at Boise State and am sad to have to move away to pursue graduate school. Other Idaho institutions have similar programs to the one being proposed at Boise State and I believe that it is definitely time that Boise State begins to compete with these other colleges. If a Ph.D. program in Ecology, Evolution, and Behavior at Boise State is developed, I guarantee that I will apply to the program.

My main organisms of interest are Birds of Prey and Boise State is the premiere location to study these creatures. The addition of a Ph.D. program in Ecology, Evolution, and Behavior would give students further opportunity to study Birds of Prey and advance their careers. This is exactly the type of program I would like to enroll in and I am in full support of adding a Ph.D. program in Ecology, Evolution, and Behavior to Boise State University's degree programs. I hope that I and many other students are given the opportunity to apply to be doctoral candidates at Boise State in this field and I fully believe that this program will benefit Boise State and the City of Boise.

Thank you,

Lillian McKinley

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Appendix H: Curricula Vitae of Participating Faculty Members			
Name	Position	Brief Research Description	Page
BSU Department of Biological Sciences			
Jesse Barber	Assistant Professor	Sensory ecology, animal behavior, conservation biology	H-2
Marc Bechard	Professor	Raptor biology and ecology; habitat use in raptors	H-12
Jim Belthoff	Professor	Behavioral ecology, animal behavior, and avian biology	H-19
Marie-Anne deGraaff	Assistant Professor	Plant/Soil interactions in terrestrial ecosystems	H-26
Kevin Feris	Associate Professor	Microbial community ecology; bioremediation studies	H-34
Jennifer Forbey	Associate Professor	Physiological, chemical and pharmacological ecology	H-52
Eric Hayden	Assistant Professor	RNA evolution, biomedical & biotechnical molecules	H-65
Julie Heath	Associate Professor	Avian biology and conservation ecology	H-68
Peter Koetsier	Professor	Aquatic ecology; lotic macroinvertebrate ecology	H-83
Steve Novak	Professor	Plant evolutionary biology; introduced species	H-99
Ian Robertson	Professor	Insect Behavior and Ecology; Plant-insect interactions	H-122
Marcelo Serpe	Professor	Plant biochemistry and physiology	H-128
James Smith	Professor	Plant molecular systematics, cladistic analyses	H-133
Merlin White	Associate Professor	Fungal molecular systematics, arthropod-associated fungi	H-151
BSU Human-Environment Systems Initiative, College of Innovation and Design			
Jodi Brandt	Assistant Professor	Land use science, remote sensing, conservation biology	H-165
Neil Carter	Assistant Professor	Socio-environmental systems	H-171
BSU Department of Anthropology			
Samantha Blatt	Visiting Asst Prof	Bioarchaeology; growth and development; osteology	H-177
Kathryn Demps	Assistant Professor	Human behavioral ecology; cultural evolution	H-185
Christopher Hill	Professor	Geoarchaeology; historical ecology	H-189
Mark Plew	Professor	Human ecology, ethnobiology	H-204
Kristin Snopkowski	Assistant Professor	Human behavioral ecology and demography	H-242
Pei-Lin Yu	Assistant Professor	Ethnoarchaeology; Neolithic Asia; climate change	H-247
John Ziker	Professor	Human kinship; evolution of cooperation	H-259
BSU Department of Geosciences			
Shawn Benner	Associate Professor	Ecohydrology, biogeochemistry	H-281
Alejandro Flores	Associate Professor	Ecohydrology and modeling, remote sensing	H-287
Nancy Glenn	Professor	Remote sensing, image analysis, geological engineering	H-299
Matt Kohn	Distinguished Prof	Geochemistry, petrology, and paleoecology	H-323
Jen Pierce	Associate Professor	Geomorphology & Paleoclimatology	H-350
BSU Intermountain Bird Observatory			
Jay Carlisle	Res Director	Avian migration and physiological ecology	H-366
USGS Forest and Rangeland Ecosystem Science Center's Snake River Field Station			
Matthew Germino	Superv Res Ecol	Plant-soil-climate relationships; biophysical ecology	H-370
Todd Katzner	Res Wildl Biol	Ecology, animal movement, conservation biology	H-380
Steven Knick	Superv Res Ecol	Spatial and temporal dynamics of western US shrublands	H-399
David Pilliod	Superv Res Ecol	Herpetology, wildlife ecology, stream & fire ecology	H-406
Douglas Shinneman	Superv Res Fire Ecol	Fire, landscape, restoration and, plant ecology	H-415
The Peregrine Fund			
David Anderson	Dir Gyrfal Cons Proj	Raptor biology; ecological structure and function	H-420
Chris McClure	Dir. Amer Kest Par	Vertebrate monitoring and ecological modeling	H-423
Rick Watson	VP, Dir Int Prog	Raptor ecology and conservation	H-427

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Jesse R. Barber

Boise State University, Department of Biological Sciences
1910 University Drive, Boise, ID, 83725-1515

EMAIL jessebarber@boisestate.edu OFFICE 208-426-3202 CELL 208-789-1123

EDUCATION

Ph.D.	Wake Forest University	Biology	2007
M.S.	University of Wyoming	Zoology & Physiology and Neuroscience	2002
B.S.	University of Wyoming	Psychology with honors	1998

PROFESSIONAL APPOINTMENTS

Assistant Professor

2011 – Present. Boise State University, Department of Biological Sciences

Postdoctoral Research Associate

2007-2011. Colorado State University, Department of Fish, Wildlife and Conservation Biology in collaboration with the Natural Sounds and Night Skies Division of the National Park Service.

TEACHING EXPERIENCE

Boise State University

General Biology II (BIOL 192, Introductory course, second half - Animal Biodiversity, 4 credits, Spring Semester, ~200 students, taught 4 times)

Comparative Vertebrate Anatomy and Lab (ZOOL 301 and 301L, Undergraduate course with two labs per week, 4 credits, Fall Semester, taught 4 times)

Sensory Ecology (BIOL 497/597, Graduate/Undergraduate course, 3 credits, Fall or Spring Semester, taught 2 times)

Bioacoustics (BIOL 597, Graduate course, 3 credits, Spring Semester, taught 2 times)

Graduate Seminars (BIOL 598; Topics: Sensory Pollution, Trophic Cascades, Protected Areas in a Changing World, 1 credit each, Fall and Spring Semesters)

RESEARCH GRANTS

2014-2018	National Science Foundation, Dynamics of Coupled Natural and Human Systems (600K Total, 300K to Boise State) CNH: Soundscapes as an element in coupled human and natural systems. <i>PI</i> with Co-PIs: Peter Newman (Penn State), Chris Monz (Utah State) and Clint Francis (Cal Poly).
2014-2016	National Park Service (95K) The Phantom Gas Field: Impacts of energy extraction noise on ecosystems, <i>PI</i>
2011–2015	National Science Foundation - Integrative Organismal Systems (269K) Collaborative Research: Alternative strategies and evolutionary routes in the escalation of the bat-moth arms race: Ultrasonic stridulation in hawkmoths, <i>PI</i> with Co-PI Akito Kawahara.

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2011-2015	National Park Service (267K) Roadway noise and foraging behavior in bats and birds: A phantom field experiment, <i>PI</i>
2013-2014	French Guiana Nouragues Travel grant (12K) Bat-hawkmoth interactions at the Nouragues tropical research station, <i>Co-PI</i> with A. Kawahara (Florida)
2013	NESCent NSF Catalysis grant (travel and meeting costs for 25 participants, April 24-28 2014) Anthropogenic Sensory Stimuli as Drivers of Evolution: A conceptual synthesis and roadmap for an integrated citizen-science research network, <i>Co-PI</i> with Caren Cooper (Cornell) and Clint Francis (Cal Poly).
2013	Idaho EPSCoR, National Science Foundation (11K) Cascading effects of noise pollution on ecosystems, <i>PI</i> (an ongoing collaboration with Keith Reinhardt (Idaho State; plant physiologist).
2012	Osher Faculty Research Grant, Boise State University (4K) Monitoring forest owl migration, expanding community outreach and assessing the impacts of anthropogenic noise on owl hunting ability, <i>Co-PI</i> with Greg Kaltenecker (Idaho Bird Observatory).
2011	Michigan Technological University (120K, 2K to Boise State) , Michigan Coastal Management Program, State of Michigan, Offshore bat activity over Lake Michigan wind resource areas, 2011, <i>Co-PI</i> with Joseph Bump (Michigan Tech)
2010	American Philosophical Society (5K) Bat-moth interactions in the Old World, <i>PI</i>
2008	University of Wyoming-NPS Research Center (2.2K) Background sound level and avian predator-prey interactions, <i>PI</i>
2007	American Museum of Natural History (1.5K) Biosonar jamming in the bat-moth arms race, <i>PI</i>
2005	Richter Foundation (5K) Biosonar jamming in the Ecuadorian cloud forest, <i>PI</i>

PROPOSALS IN REVIEW

National Science Foundation - Division of Environmental Biology, full proposal (*pending*) Collaborative Research: RUI: Direct and indirect effects of natural sounds on the structure of vertebrate insectivore communities, with Clint Francis (Cal Poly). 1 million (522K to Boise State).

National Geographic Society's Committee for Research and Exploration, full proposal (*pending*) Moth tails divert bat attack: The evolution of acoustic deflection in the bat-moth arms race. *PI*. 25K.

PUBLICATIONS

Monz C, D'Antonio A, Lawson S, **Barber JR**, Newman P (*in press*) The Ecological Implications of Visitor Transportation in Parks and Protected Areas: Examples From Research in US National Parks. *Journal of Transport Geography*.

Bunkley JP and **Barber JR** (2015) Noise Reduces Foraging Efficiency in Pallid Bats (*Antrozous pallidus*). *Ethology* 121(11):1116-1121.

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Ware HE, McClure CJW, Carlisle J, **Barber JR** (2015) A phantom road experiment reveals traffic noise is an invisible source of habitat degradation. *Proceedings of the National Academy of Sciences* 112(39):12105-12109.

Swaddle J, Francis C*, **Barber JR***, Cooper C*, Kyba CMC, Dominoni D, Shannon G, Aschehoug E, Goodwin S, Kawahara AY, Luther D, Spoelstra K, Voss M, Longcore T (2015) A framework to assess evolutionary responses to anthropogenic light and sound. *Trends in Ecology and Evolution* 30(9):550-560. ***Outcome of NSF NESCent Catalysis grant: Co-PI with C. Francis, PI C. Cooper.**

McClure CJW, Korte AC, Heath JA, **Barber JR** (2015) Pavement and riparian forest shape the bird community along an urban river corridor. *Global Ecology and Conservation* 4:291-310.

Kawahara* AY, **Barber* JR** (2015) Tempo and mode of anti-bat ultrasound production and sonar jamming in the diverse hawkmoth radiation. *Proceedings of the National Academy of Sciences* 112(20): 6407-6412. ***Authors contributed equally**

Barber JR, Leavell BC, Keener AL, Breinholt JW, Chadwell BA, McClure CJW, Hill GM, Kawahara AY (2015) Moth tails divert bat attack: evolution of acoustic deflection. *Proceedings of the National Academy of Sciences* 112(9):2812-2816.

Bunkley JP, McClure CJW, Kleist NJ, Francis CD, **Barber JR** (2015) Anthropogenic noise alters bat activity levels and echolocation calls. *Global Ecology and Conservation* 3:62-71.

Ponce F, Breinholt J, Hossie T, **Barber JR**, Janzen D, Hallwachs W and Kawahara AY (2014) Molecular phylogeny and evolution of larval eyespots in *Eumorpha* hawkmoths. *Molecular Ecology* DOI:10.1111/syen.12111

Bunkley JP and **Barber JR** (2014) An observation of apparent teaching behavior in the pallid bat, *Antrozous pallidus*. *Western North American Naturalist* 74(2):249-252.

McClure CJW, Ware HE, Carlisle J, Kaltenecker G, **Barber JR** (2013) An experimental investigation into the effects of traffic noise on distributions of birds: Avoiding the phantom road. *Proceedings of the Royal Society of London Series B* 80: 20132290.

Barber JR*, Kawahara AY* (2013) Hawkmoths produce anti-bat ultrasound. *Biology Letters* 9: 20130161. ***Authors contributed equally**

Francis CD*, **Barber JR*** (2013) A framework for understanding noise impacts on wildlife: an urgent conservation priority. *Frontiers in Ecology and the Environment*. doi:10.1890/120183 ***Authors contributed equally**

Brown CL, Hardy AR, **Barber JR**, Fristrup KM, Crooks KR, Angeloni LM (2012) The Effect of Human Activities and Their Associated Noise on Ungulate Behavior. *PLoS ONE* 7(7): e40505.

Barber JR, Burdett CL, Reed SE, Warner KA, Formichella C, Crooks KR, Theobald DM, Fristrup KM (2011) Anthropogenic noise exposure in protected natural areas: estimating the scale of ecological consequences. *Landscape Ecology*. 26:1281-1295.

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Corcoran AJ, **Barber JR**, Hristov NI, Conner WE (2011) How do tiger moths jam bat sonar? *Journal of Experimental Biology*. 214:2416-2425.

Barber JR, Crooks K, Fristrup K (2010) The costs of chronic noise exposure for terrestrial organisms. *Trends in Ecology and Evolution*. 25(3):180-189.

Corcoran AJ*, Conner WE*, **Barber JR*** (2010) Anti-bat tiger moth sounds: Form and function. *Current Zoology*. 56(3):358-369. **Authors contributed equally*

Corcoran AJ, **Barber JR**, Conner WE (2009) Tiger moth jams bat sonar. *Science*. 325:325-327.

Barber JR, Brown C, Fristrup KM, Hardy AR, Angeloni L, Crooks KR (2009) Conserving the wild life therein: The effects of man-made noise on animal ecology. *Park Science* 26:26-31.

Barber JR, Chadwell B, Garrett N, Schmidt-French B, Conner WE (2009) Naïve bats discriminate arctiid moth warning sounds but generalize their aposematic meaning. *Journal of Experimental Biology*. 212:2141-2148.

Barber JR, Conner WE (2007) Acoustic mimicry in a predator-prey interaction. *Proceedings of the National Academy of Sciences* 104(22): 9331-9334.

Barber JR, Conner WE (2006) Tiger moth responses to a simulated bat attack: Timing and duty cycle. *Journal of Experimental Biology* 209:2637-2650.

Barber JR, Razak KA, Fuzessery ZM (2003) Can two streams of auditory information be processed simultaneously? Evidence from the gleaning bat *Antrozous pallidus*. *Journal of Comparative Physiology A* 189:843-855.

PUBLICATIONS IN REVIEW (manuscripts available upon request)

McClure CJW, Ware HE, Carlisle JD, **Barber JR** (*in review*) Noise pollution from a phantom road alters the age structure of a community of migrating birds. *Biological Conservation*.

Mason TJ, McClure CJW, **Barber JR** (*in review*) Anthropogenic noise impairs owl hunting behavior. *Biological Conservation*.

Zhong M, Hill GM, Gomez JP, Plotkin D, **Barber JR**, Kawahara AY (*in review*) Characterizing Lepidoptera wing shape with geometric morphometrics: Saturniid hind wings as a case study. *Journal of the Lepidopterists Society*.

Breinholt JW, Mitter C, Zwick A, Regier JC, **Barber JR**, Kawahara AY (*in review*) Correlated evolution of body size, proboscis length and larval host plant use in hawkmoth pollinators: a phylogenetic perspective. *Oikos*.

BOOK CHAPTERS

Newman P, Taff D, **Barber JR**, Fristrup K (2015) Natural Soundscapes. In: *Wildland recreation: ecology and management*. Edited by Hammitt, WE, Cole DN, Monz, C. John Wiley & Sons.

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Conner WE, Hristov NI, **Barber JR** (2008) Sound strategies: Acoustic aposematism, startle and sonar jamming. In: *Tiger Moths and Woolly Bears: Behavior, Ecology and Evolution of the Arctiidae*. Edited by W.E. Conner. Oxford University Press.

RECENT PRESENTATIONS

100th Annual Ecological Society of America Meetings, August 9-14 2015, Baltimore, MD.
Symposium: Ecological Acoustics: Conceptual and Technological Advances in Ecology Through Sound. Invited Talk: An experimental investigation into the effects of traffic noise on birds: The Phantom Road project.

Plenary Address at the International Ecology and Transportation Meetings in Malmo, Sweden, Sept. 16-19, 2014. Talk: *An experimental investigation into the effects of traffic noise on birds: The Phantom Road project.*

The Wildlife Society, Milwaukee WI, Oct. 5-10 2013. Invited Talk: *An experimental investigation into the effects of traffic noise on distributions of birds: Avoiding the phantom road.*

Animal Behavior Society, Boulder CO, July 27-Aug. 1 2013. Invited Talk: *The function and evolution of hawkmoth anti-bat sounds.*

Lepidopterists Society Annual Meeting, Gainesville, FL, June 27-July 1 2013. Talk: *The function and evolution of hawkmoth anti-bat sounds.*

Society for Integrative and Comparative Biology, San Francisco, CA, Jan. 3-7, 2013. *Symposium: When Predators Attack: Sensing and Motion in Predator-Prey Interactions, Invited Talk: Escalation of the bat-moth arms race.*

Idaho Chapter of the Wildlife Society, Boise, ID, March 5-8, 2012. Talk: *Anthropogenic noise exposure: estimating the scale of ecological consequences.*

Grand Teton Resource Symposium, Grand Teton National Park, UWNPS Research Station, Sept. 5-8, 2011, Invited Talk: *The costs of anthropogenic noise exposure for wildlife.*

Federal Aviation Administration, Aviation Noise Impacts Roadmap Annual Meeting in Washington DC, April 19-20, 2011, Invited Talk: *Anthropogenic noise exposure in protected natural areas: estimating the scale of ecological consequences.*

RECENT INVITED SEMINARS

Idaho State University, Oct. 2014; University of Montana, March 2013; University of Colorado, Boulder, March 2013; University of California, Riverside, Oct. 2011

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EXAMPLE STUDENT PRESENTATIONS

Bunkley JP, Barber JR. Living in Noise: The Effects of Anthropogenic Noise on the Foraging Efficiency of a Gleaning Bat and Distributions of a Natural Bat Assemblage. The Wildlife Society, 2013 Annual Conference, Milwaukee WI, Poster Presentation

Bunkley JP, Barber JR. *Hunting in Noise: How Road and Gas Compressor Noise Affect the Foraging Efficiency of a Gleaning Bat*. 50th Animal Behavior Society Meeting, Boulder, CO, July 28 - August 1, 2013. Talk. #Featured in Science News: "Noise may disrupt a bat's dinner: Mechanical cacophony can drown out the whispers of moving insect prey", Susan Milius, August 7, 2013

Bunkley JP, Barber JR. The Idaho Chapter of The Wildlife Society Conference, Coeur d'Alene Idaho, 11-14 March, 2013, *Hunting in Noise: How Road and Gas Compressor Noise Affect Foraging Latency in the Gleaning Bat, Antrozous pallidus*. Talk.

Keener AL, Barber JR. 2014. *Investigating Subtle Behavior in a Predator-Prey Interaction using the Pallid Bat (Antrozous pallidus)*. Presented at the 2014 Idaho Conference on Undergraduate Research. Boise State University, Boise, ID. Talk.

Keener AL, Barber JR. 2014. *Can bats tell footstep sounds apart?: A test of novel prey discrimination in the pallid bat, Antrozous pallidus*. Presented at the 11th Annual Undergraduate Research and Scholarship Conference. Boise State University, Boise, ID. Poster

Mason JT, **McClure CJW**, Barber JR. Talk: *The impact of natural gas compressor station noise on northern saw-whet owl hunting ability*. American Ornithological Union, 23-28 Sept. 2014.

McClure, C.J.W., **H.E. Ware**, J. Carlisle, G. Kaltenecker, and J. R. Barber. An experimental investigation into the effects of traffic noise on distributions of birds: Avoiding the phantom road. Presented at 131st Stated Meeting of the American Ornithologists' Union. Chicago, IL. August 14, 2013.

Ware HE, McClure CJW, Carlisle JD, Barber JR. Talk: *Road noise reduces foraging and stopover efficiency of migrating songbirds*. American Ornithological Union, Estes Park, CO, 23-28 Sept. 2014.

Ware HE. Talk: *Does road noise degrade stopover habitat for migrating songbirds?* Joint Meeting of the Idaho Chapter and Northwest Section of The Wildlife Society, 3-8 March, 2014. #Best Student Talk Award.

EXAMPLE STUDENT AWARDS

JP Bunkley (graduate student)

2013 Bat Conservation International Student Research Scholarship, 2013, \$2500
Idaho Chapter of The Wildlife Society Student Scholarship, 2013, \$250

AL Keener (undergraduate researcher)

Northwest Scientific Association Student Award, 2014, \$1,500

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McNair Research Scholarship, 2014, \$2,800
McNair Scholar, Boise State University

J Rubin (graduate student)

Sigma Xi Grants in Aid of Research, 2015, \$500
Boise State, Michael W. Butler Ecological Research Award, 2015, \$3000

HE Ware (graduate student)

Best Student Presentation, Idaho Chapter of the Wildlife Society Conference, 2014.
Educator of the Year Golden Eagle Audubon Society, 2014
Idaho Chapter of the Wildlife Society Graduate Student Scholarship, 2013
Western Field Ornithologists Scholarship Membership, Student Award, 2012

RECENT OUTREACH AND POLICY PRESENTATIONS

Invited Panel Discussion: Bridging Research on the Responses of Terrestrial and Marine Animals to Anthropogenic Sound, The Wildlife Society Annual Conference, Milwaukee WI, Oct. 5-10 2013

Presentation on bat hunting behavior filmed with high-speed cameras, 2013 White-Nose Syndrome Workshop, Boise, ID, Sept. 3-6 2013.

Workshop on Noise in Communities and Natural Areas, Denver, CO, *Noise Changes Animal Behaviors and Distributions*, Aug, 27, 2013.

Held a Viewing of a Documentary on Light Pollution ('*The City Dark*') at the Student Union Building on Boise State University campus. April, 11 2012.

Southwest Idaho Birders Association, Nampa, ID, *The Costs of Anthropogenic Noise Exposure for Animals*, Dec. 13, 2012.

Golden Eagle Chapter of the Audubon Society, Boise ID, *The Costs of Anthropogenic Noise Exposure for Animals*, Dec. 06, 2011.

University of California, Riverside, Conservation Biology Brown Bag Series, *The Costs of Anthropogenic Noise Exposure for Wildlife*, Oct. 21, 2011.

Federal Aviation Administration, Aviation Noise Impacts Roadmap Annual Meeting in Washington DC, April 19-20, 2011. I was the sole representative for the ecological/wildlife biology community explaining to government administrators the data on noise impacts to wildlife. This opportunity arose from a working group I helped organize a few months earlier—Wildlife Response to Aviation Noise In Protected Natural Areas, at the USDOT/Volpe Center in Cambridge, MA, Sept. 21-21, 2010.

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OUTREACH TEACHING AND PUBLICATION

Spring 2012: Osher Lifelong Learning Institute, *Sensory Worlds of Animals*. This course, targeted at the Osher Institute's population of learners over 55 years of age, consisted of 4 meetings of 2 hours each. Approximately 60 students.

Idaho Watchable Wildlife Newsletter, Idaho Fish and Game, *A Louder World for Wildlife*, Summer 2012.

PROFESSIONAL SERVICE

Reviewer for Conservation Biology, Journal of Experimental Biology, Environmental Management, Frontiers in Physiology, Biodiversity and Conservation, Proceedings of the Royal Society of London Series B, Biology Letters, Animal Behaviour, Frontiers in Ecology and Evolution, Acta Chiropterologica

External reviewer for the Smithsonian Institution, Canada Foundation for Innovation, National Science Foundation, Biotechnology and Biological Sciences Research Council of the UK

Panel Member for the National Science Foundation

UNIVERSITY SERVICE

Member of the Institutional Animal Care and Use Committee, 2011-2015 (rejoining in 2016).
Member of the Human-Environment Interactions Cluster Hiring Committee, 2014-2015.

DEPARTMENTAL SERVICE

Member of the Undergraduate Curriculum Revision Committee, 2013-present
Member of Hiring Committee, 2013-2014
Member of the Transitional Working Group, Summer 2013
Seminar series organizer 2012/2013 academic year

CURRENT MENTORING

Eli Cinto Meija	M.S. Graduate Student
Juliette Rubin	M.S. Graduate Student
Mitch Levenhagen	M.S. Graduate Student

Undergraduate Researchers (9): Adam Keener, Krystie Miner, Melissa Eschenbrenner, Kelzie Hafen, Amanda Lofthus, Amanda Hardy, Brett Howell, Nate Azevedo, Michael Brownlee

M.S. Graduate Committee Member: Tempe Reagan, Erin Pikcilingis, Sara Pourzamani.

Member of PhD Committee: Peter Houlihan (University of Florida, Akito Kawahara's lab)

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PAST MENTORING

Dr. Chris JW McClure	Postdoctoral Scholar
Jessie Bunkley	M.S. Graduate Student
Allison Korte	M.S. Graduate Student (originally the late Al Dufty's student)
Heidi Ware	M.S. Graduate Student
Tate Mason	M.S. Graduate Student

Undergraduate Researchers (13): Jacque Pena, Roy Olvera, Mackenzie Whyte, Adrianna Romero, Patrick Niedermeyer, Cydney Middleton, Leo Ohyama, Zoe Mroz, Taylor Parker, Annie Baxter, Jillian Greene, Bailee Riesberg, Kaisha Young

Graduate Committee Member: Gina Patton, Erin Wonder, Jamie Groves, Rob Spaul

PROFESSIONAL ORGANIZATIONS

North American Society for Bat Research
Society for Conservation Biology
Animal Behavior Society

SELECT PRESS

Hawkmoths jam bat sonar (Kawahara and Barber 2015): covered by National Geographic magazine, Phys.org and other news outlets. 5-15.

Moth tails divert bat attack (Barber et al. 2015): covered by Science, National Geographic magazine, Science News, Popular Science, Smithsonianmag.com, Phys.org and other news outlets. 2-15

David Attenborough's Conquest of the Skies featured our bat-moth research in a recent film. 1-2015

Phantom Road paper (McClure et al. 2013): covered by Science News, BBC, NPR and other news outlets, 11-2013.

Hawkmoth Anti-bat Ultrasound Discovery (Barber and Kawahara 2013): covered by Science News, Nature, BBC, National Geographic, Natural History Magazine, LiveScience and other news outlets, 7-2013.

New York Times Magazine, 'Whisper of the Wild', 3-2012

NPR All Things Considered, Bat-Moth Interaction, 2-2012

U.S. News and World Report, Soundscapes, 3-11-11

NPR Morning Edition, Soundscapes, 3-03-11

REFERENCES

William E. Conner (Ph.D. Advisor)
Professor
Wake Forest University
Department of Biology
Phone: (336) 758-5315
conner@wfu.edu

Kevin Crooks (Postdoctoral Mentor)
Professor
Colorado State University
Dept. Fish, Wildlife and Cons. Biology
(970) 491-7936
kcrooks@warnercnr.colostate.edu

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Kurt Fristrup (Postdoctoral Mentor)
Senior Scientist
National Park Service
Natural Sounds and Night Skies Division
(970) 267-2102
kurt_fristrup@nps.gov

Kevin Feris (Current Chair)
Associate Professor
Boise State University
Department of Biological Sciences
(208) 426-5498
kevinferis@boisestate.edu

CURRICULUM VITAE - MARC BECHARD

NAME

Marc Joseph Bechard

EDUCATION

B.A. in Biology, State University of New York, Oswego, 1971

M.S. in Botany, Washington State University, Pullman, 1974

Ph.D. in Zoology, Washington State University, Pullman, 1980

PROFESSIONAL EXPERIENCE

1972-73: Teaching Assistant, Department of Biology, Washington State University, Pullman, Washington

1973-74: Laboratory Technician, Air Pollution Research Center, Washington State University, Pullman, Washington

1974-75: Research Technician, Department of Plant and Soil Sciences, University of Idaho, Moscow, Idaho

1975-80: Teaching Assistant, Department of Biology, Washington State University, Pullman, Washington

1980-81: Assistant Professor, Department of Natural Sciences, University of La Verne, La Verne, California

1981-83: Assistant Professor, Department of Biological Sciences, Marshall University, Huntington, West Virginia

1983-85: Assistant Professor, Department of Biology, Boise State University, Boise, Idaho

1985-88: Associate Professor, Department of Biology, Boise State University, Boise, Idaho

1988-90: Professor and Coordinator of Graduate Studies, Department of Biology, Boise State University, Boise, Idaho

1990-98: Professor, Associate Chair, and Coordinator of Graduate Studies, Department of Biology, Boise State University, Boise, Idaho

1998-present: Professor, Department of Biology, Boise State University, Boise, Idaho

2013-present: Director, Raptor Research Center, Department of Biology, Boise State University, Boise, Idaho

GRADUATE LEVEL TEACHING

Biology 606 – Raptor Ecology

Biology 597 – Special Topics

Biology 594 – Graduate Seminar

GRANT FUNDING (LAST 10 YEARS)

Idaho Power Company. 2005. Pesticide and heavy metal contamination in Bald Eagles nesting in southern Idaho. Grant amount \$36,000.

U.S. Fish and Wildlife Service. 2005. Use of bird deterrents to reduce mortality of Ospreys and other birds at fish farms in Colombia. Grant amount \$64,000.

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016

Idaho Department of Fish and Game. 2006. Heavy metal contamination in Bald Eagles in Idaho. Total grant amount - \$15,000.

U.S. Fish and Wildlife Service and Bureau of Reclamation. 2008. Effects of recreational developments on the population of Bald Eagles at Lake Cascade. Total grant amount - \$31,000.

Iberdrola Renewables, Horizon Wind, First Wind. 2010. Mortality of fledgling ferruginous, red-tailed, and Swainson's hawks at wind farms in eastern Oregon. Grant amount \$150,000.

PUBLICATIONS (LAST 10 YEARS)

Anderson, D.L., D.A. Wiedenfield, M.J. Bechard, and S.J. Novak. 2004. Avian diversity in the Moskitia Region of Honduras. *Ornitologia Neotropical* 15:447-482.

Ojeda, V., M.J. Bechard, and A. Lanusse. 2004. Primer registro de nidificación del peuquito (*Accipiter chilensis*) en Argentina. *El Hornero* 19:41-43.

Fairhurst, G.D., and M.J. Bechard. 2005. Relationships between winter and spring weather and Northern Goshawk (*Accipiter gentilis*) reproduction in northern Nevada. *Journal of Raptor Research* 39:229-236.

Bechard, M.J., and C.S. Weidensaul. 2005. Feather molt by Swainson's Hawks (*Buteo swainsoni*) on the austral grounds of Argentina. *Ornitologia Neotropical* 16:267-270.

Colorado, G.J., M.J. Bechard, C. Márquez, and A.M. Castaño. 2006. Raptor migration in the Cauca River valley of northern Colombia. *Ornitologia Neotropical* 17:161-172.

Bechard, M.J., G.D. Fairhurst, and G.S. Kaltenecker. 2006. Occupancy, productivity, turnover, and dispersal of Northern Goshawks in portions of the northeastern Great Basin. *Studies in Avian Biology* 31:100-108.

Bechard, M.J., C. Márquez-Reyes, and H.F. Lopez Arévalo. 2007. The threat of Central and South American aquaculture facilities to Ospreys and other piscivorous birds. Pages 78-87 in *Neotropical raptors* (K.L. Bildstein, D.R. Barber, and A. Zimmerman, Eds.). Hawk Mountain Sanctuary, Orwigsburg, PA, U.S.A.

Bildstein, K.L., M.J. Bechard, P. Porras, E. Campo, and C.J. Farmer. 2007. Seasonal abundances and distributions of Black Vultures (*Coragyps atratus*) and Turkey Vultures (*Cathartes aura*) in Costa Rica and Panama: evidence for reciprocal migration in the Neotropics. Pages 47-60 in *Neotropical raptors* (K.L. Bildstein, D.R. Barber, and A. Zimmerman, Eds.). Hawk Mountain Sanctuary, Orwigsburg, PA, U.S.A.

Hasselblad, K., and M.J. Bechard. 2007. Male Northern Goshawk home ranges in the Great Basin of south-central Idaho. *Journal of Raptor Research* 41:150-155.

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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- Marti, C.D., M.J. Bechard, and F.M. Jacksic. 2007. Food habits. Pages 129-154 in *Raptor research and management techniques* (D.M. Bird, and K.L. Bildstein, Eds.). Hancock House Publishers, Blaine, WA, U.S.A.
- Baladron, A.V., L.M. Biondi, M.S. Bo, A.I. Malizia, and M.J. Bechard. 2009. Red-backed Hawks supply food to scavenging Chimango Caracaras. *Emu* 109:260-264.
- Bechard, M.J., D.N. Perkins, G.S. Kaltenecker, and S. Alsup. 2009. Mercury contamination in Idaho Bald Eagles, *Haliaeetus leucocephalus*. *Bulletin of Environmental Contamination and Toxicology* 83:698-702.
- Bildstein, K.L., M.J. Bechard, C. Farmer, and L. Newcomb. 2009. Narrow sea crossings present a significant barrier to migrating Griffon Vultures *Gyps fulvus*. *Ibis* 151:382-391.
- Rogers, H.M., M.J. Bechard, G.S. Kaltenecker, and A.M. Dufty, Jr. 2010. Modulation of the adrenocortical stress response in three North American *Accipiters* during fall migration. *Journal of Raptor Research*
- Bechard, M.J., C.S. Houston, and J.H. Sarasola. 2010. Swainson's Hawk (*Buteo swainsoni*). In A. Poole and F. Gill [Eds.], *The birds of North America*, No. 265. The Academy of Natural Sciences, Philadelphia, PA and The American ornithologists' Union, Washington, DC.
- Kochert, M.N., M.R. Fuller, L.S. Schueck, L. Bond, M.J. Bechard, B. Woodbridge, G.L. Holroyd, M.S. Martell, and U. Banasch. 2011. Migration patterns, use of stopover areas, and austral summer movements of Swainson's Hawks. *Condor* 113:89-106.
- Houston, C.S., P.D. McLoughlin, J.T. Mandel, M.J. Bechard, M.J. Stoffel, D.R. Barber, and K.L. Bildstein. 2011. Breeding home ranges of migratory Turkey Vultures near their northern limit. *Wilson Journal of Ornithology* 123:472-478.
- Sarasola, J.H., J.J. Negro, M.J. Bechard, and A. Lanusse. 2011. Not as similar as thought: Sexual dichromatism in Chimango Caracaras is expressed in exposed skin but not the plumage. *Journal of Ornithology* 152:473-479.
- Keeley, W.H., and M.J. Bechard. 2011. Flushing distances of Ferruginous Hawks nesting in rural and exurban New Mexico. *Journal of Wildlife Management* 75:1034-1039.
- Baladron, A.V., M.S. Bo, A.I. Malizia, and M.J. Bechard. 2011. Food habits of the Roadside Hawk (*Buteo magnirostris*) during the nonbreeding season in the southeastern Pampas of Argentina. *Journal of Raptor Research* 45:257-261.
- De Lucas, M., M. Ferrer, M.J. Bechard, and A.R. Munoz. 2012. Griffon Vulture mortality at wind farms in southern Spain: distribution of fatalities and active mitigation measures. *Biological Conservation* 147:184-189.

- Ferrer, M., M. de Lucas, G.F.E. Janss, E. Casado, A.R. Munoz, M.J. Bechard, and C.P. Calabuig. 2012. Weak relationship between risk assessment studies and recorded mortality in wind farms. *Journal of Applied Ecology* 49:38-46.
- Baladron, A.V., A. I. Malizia, M.S. Bo, M.S. Liebana, and M.J. Bechard. 2012. Population dynamics of the Southern Short-tailed Opossum (*Monodelphis dimidiata*) in the Pampas of Argentina. *Australian Journal of Zoology* 60:238-245.
- Hedlin, E.M., C.S. Houston, P.D. McLoughlin, M.J. Bechard, M.J. Stoffel, D.R. Barber, and K.L. Bildstein. 2013. Winter ranges of migratory Turkey Vultures in Venezuela. *Journal of Raptor Research* 47:145-152.
- Miller, R.A., J.D. Carlisle, M.J. Bechard, and D. Santini. 2013. Predicting nesting habitat of Northern Goshawks in mixed aspen-lodgepole pine forests in a high-elevation shrub-steppe dominated landscape. *Open Journal of Ecology* 3:109-115.
Doi:10.4236/oje.2013.32013

PRESENTATIONS

- Bechard, M.J., M.N. Kochert, M.R. Fuller, B. Woodbridge, and J.H. Sarasola. 2005. Aspects of the annual migration of Swainson's Hawks (*Buteo swainsoni*) between North and South America. XI Reunión Argentina de Ornitología, Asociación Ornitología del Plata, Buenos Aires, Argentina.
- Maceda, J.J., J.H. Sarasola, L. Bragagnolo, M. Santillán, R. Pereyra Lobos, M. Reyes, A. Lanusse, and M.J. Bechard. 2005. Nidos activos de Águila Coronada (*Harpyhaliaetus coronatus*) en las provincias de La Pampa y Mendoza, Argentina. XI Reunión Argentina de Ornitología, Asociación Ornitología del Plata, Buenos Aires, Argentina.
- Bildstein, K.L., M.J. Bechard, P. Porras, y E. Campos. 2006. Seasonal abundances and distributions of Black (*Coragyps atratus*) and Turkey (*Cathartes aura*) Vultures in Costa Rica and Panama: evidence of reciprocal migration in the Neotropics. Neotropical Raptor Congress, Iguazu Falls, Argentina.
- Maceda, J.J., V. Salvador, J. Sarasola, L. Sympson, M. Santillan, M. Reyes, L. Bragagnolo, M.J. Bechard, A. Lanusse, y C. Solaro. 2006. Comportamiento y monitero de nidos del aguila coronada (*Harpyhaliaetis coronatus*) en el centro de Argentina a partir de video camara. Neotropical Raptor Congress, Iguazu Falls, Argentina.
- Marquez, C., M.J. Bechard, y V.H. Venegas. 2006. Efectividad de metodos de proteccion para evitar la depredacion de peces por parte del aguila pescadora (*Pandion haliaetus*) y otras aves piscivoras en infraestructura piscicola en Colombia. Neotropical Raptor Congress, Iguazu Falls, Argentina.

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

- Shook, J.E., and M.J. Bechard. 2006. Dietary analysis of Northern Hawk Owls in interior Alaska. Alaska Bird Conference, Juneau, Alaska.
- Sympton, L., A. Trejo, P. Capllonch, V. Sympton, V. Ojeda, M. Gelain, M.J. Bechard, Y K.L. Bildstein. 2006. Distribucion y patrones migratorios del aguilucho andino (*Buteo albigula*). Neotropical Raptor Congress, Iguazu Falls, Argentina.
- Zucchini, M., M.J. Bechard, and K.L. Bildstein. 2006. Flight strategies of Neotropical migrant raptors in Panama. Neotropical Raptor Congress, Iguazu falls, Argentina.
- Hasselblad, K.W., and M.J. Bechard. 2006. Northern Goshawk foraging habitat selection in central Idaho, U.S.A. North American Ornithological Conference, Veracruz, Mexico.
- Keeley, W.H., and M.J. Bechard. 2006. Comparison of Ferruginous Hawk diet between two grasslands in New Mexico. North American Ornithological Conference, Veracruz, Mexico.
- Perkins, D.N., M.J. Bechard, S.J. Novak, and J.F. Smith. 2006. Population genetics of Bald Eagles (*Haliaeetus leucocephalus*) in southern Idaho: interactions of life history with reductions in population size. North American Ornithological Conference, Veracruz, Mexico.
- Houston, C.S., D.R. Barber, M.J. Bechard, J. Mandel, K.L. Bildstein, and K. Machin. 2006. New information on Turkey Vulture movements. North American Ornithological Conference, Veracruz, Mexico.
- Marquez, C., M.J. Bechard, V. Vanegas. 2007. The effectiveness of using bird deterrent devices to reduce fish depredation by Ospreys (*Pandion haliaetus*) and other fish-eating birds at aquaculture facilities in Colombia. VIII Neotropical Ornithological Congress, Maturin, Venezuela.
- Zucchini, M., M.J. Bechard, and K.L. Bildstein. 2007. Flight strategies of Neotropical migrant raptors in Panama. Raptor Research Foundation Annual Meeting, Allentown, PA, U.S.A.
- Alsup, S., M.J. Bechard, and M.N. Kochert. 2008. Productivity of Swainson's Hawks nesting in urban and suburban areas of southern Idaho. Raptor Research Foundation Annual Meeting, Missoula, MT, U.S.A.
- Alsup, S., M.J. Bechard, M.N. Kochert. 2008. Productivity of Swainson's hawks nesting in urban and suburban areas of Idaho. Wildlife Society Annual Meeting, Tampa, FL, U.S.A.
- Bechard, M.J., C. Marquez, and V.H. Vanegez. 2008. Mortality of Ospreys and other birds at fish farm facilities in Central and South America. American Ornithologists' Union Annual Meeting, Portland, OR, U.S.A.

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- Kochert, M.N., M.R. Fuller, L. Schewick, M.J. Bechard, B. Woodbridge, G. Holroyd. 2008. Aspects of the migration of Swainson's Hawks. Raptor Research Foundation Annual Meeting, Missoula, MT U.S.A.
- Kochert, M.N., M.R. Fuller, L. Schewick, M.J. Bechard, B. Woodbridge, and G. Holroyd. Aspects of the migration of Swainson's Hawks. Idaho Chapter, Wildlife Society Meeting, Boise, ID, U.S.A.
- Marti, C., M.J. Bechard, and F. Jaksic. 2008. Raptor Food Habits. Raptor Research Foundation Annual Meeting, Missoula, MT, U.S.A.
- Bechard, M.J., L. Simpson, D. Barber, and K.L. Bildstein. 2010. The White-throated: the first transequatorial migrant from southern South America. Bird Migration and Global Change: Movement ecology and conservation strategies. Algeciras, Spain.
- Kolar, P., and M.J. Bechard. 2010. Mortality of fledgling hawks at wind farms in eastern Oregon. Wind Energy Working Group Annual Meeting, Denver, CO.
- Bechard, M.J., L. Simpson, D. Barber, and K.L. Bildstein. 2011. The White-throated Hawk: the first transequatorial migrant raptor from southern South America. Neotropical Ornithological Congress, Cuzco, Peru.
- Miller, R.A., L.L. Lapinel, J.D. Carlisle, M.J. Bechard, and D. Santini. 2011. Northern Goshawk (*Accipiter gentilis*) breeding and productivity relative to prey abundance within the Sawtooth National Forest. Raptor Research Foundation Annual Meeting, Duluth, MN.
- Kolar, P., and M.J. Bechard. 2011. Impacts of wind turbines on *Buteo* hawk nesting success and fledgling mortality in the Columbia Plateau Ecoregion. Raptor Research Foundation Annual Meeting, Duluth, MN.
- Bechard, M.J., and P. Kolar. 2012. Impacts of wind farms on the nesting and mortality of hawks in eastern Oregon. I Congreso Iberico sobre Energia Eolica y Conservacion de la Fauna, Jerez, Spain.
- Kolar, P., M.J. Bechard. 2012. Impacts of wind farms on the nesting and mortality of fledgling hawks in eastern Oregon. Wind Energy Working Group Annual Meeting, Denver, CO.
- Miller, R.A., J.D. Carlisle, M.J. Bechard, and D. Santini. 2013. Predicting nesting habitat of Northern Goshawks in mixed aspen-lodgepole pine forests in a high-elevation shrub-steppe dominated landscape. Great Basin Consortium, January 14-15, 2013, Boise State University, Boise ID.
- Miller, R.A., J.D. Carlisle, and M.J. Bechard. 2013. Breeding ecology of the Northern Goshawk (*Accipiter gentilis*) within a unique prey and forest landscape of the western United States. Idaho Chapter of the Wildlife Society, March 11-13, 2013, Coeur d'Alene, ID.

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

RESEARCH RELATED SERVICE

1996: Co-Chairman, Local Committee for the joint meeting of the American Ornithologists' Union and Raptor Research Foundation, Boise State University, Boise, Idaho.
1996-2001: Editor-in-Chief, *The Journal of Raptor Research*
2000-present: Faculty Advisor, Idaho Bird Observatory
2001-present: Director, El Centro para Estudio y Conservación de las Aves Rapaces en la Argentina, Facultad de Ciencias exactas y Naturales, Universidad de La Pampa, Santa Rosa, La Pampa, Argentina
2004-present: Associate Editor, *The Journal of Wildlife Management*
2004-2013: Associate Editor, *The Auk*
2004-present: Board member, Neotropical Raptor Network, The Peregrine Fund, Inc., Boise, Idaho
2006: Chair, Scientific Program Committee for the meeting of the Neotropical Raptor Network, Iguazu Falls, Argentina

GRADUATED GRADUATE STUDENTS

Dawn McAnis – major professor
Robin Spahr – committee member
Jennifer Smith – co-major professor
Ted Swem – major professor
Tad Phelps – major professor
Jim Younk – major professor
Al Leary – major professor
Aimee Pope – major professor
Loren Gilson – committee member
William Kelley – major professor
Dusty Perkins – major professor
Heather Rogers – major professor
Patrick Kolar – major professor
James Birkelman – major professor
Edward Levine – major professor
Kristin Hasselblad – major professor
Laurie Hanaska-Brown – major professor
Gregory Kaltenecker – major professor
Graham Fairhurst – major professor
Rhonda Smith – major professor

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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Curriculum vita
James R. Belthoff

Education

Ph.D. 1992 Clemson University, Zoology
M.S. 1987 Eastern Kentucky University, Biology
B.S. 1982 Colorado State University, Wildlife Biology

Professional Experience

Department Chair (2006 - 2010)

Associate Department Chair (2005 - 2006)

Director of Graduate Studies (2003 - 2006)

Professor (2001 - present)

Associate Professor (1998 - 2001)

Assistant Professor (1993 - 1997)

Department of Biological Sciences, Boise State University, Boise, Idaho 83725.

Senior Biologist (1992 - 1993)

3D/Environmental Services, Inc., 781 Neeb Road, Cincinnati, Ohio 45233.

Research Assistant (1991 - 1992)

U.S. Fish and Wildlife Service, SC Cooperative Wildlife Research Unit, Department of Aquaculture, Fisheries, and Wildlife, Clemson University, Clemson, South Carolina 29634.

Graduate Level Teaching Experience

Advanced Biometry (BIOL 603)

Advanced Topics in Animal Behavior (BIOL 562)

Animal Behavior with Laboratory (ZOOL 534)

Applied Raptor Biology (BIOL 605)

Basic and Applied Data Analysis in Biology (BIOL 525)

Basic and Applied Statistics using Computers (BIOL 597)

Behavioral Ecology (BIOL 533)

Graduate Seminars (BIOL 598)

Applied Biostatistics

Advanced Biostatistics (several different topics, including Mixed Modeling, Survival Analysis, Circular Statistics)

Applied Avian Biology

Avian Mating Systems

Current Research in Ecology and Evolution

GK-12 Informal Education in Science Learning Centers

Selected Topics in Dispersal and Migration

Grant Funding (last 10 years)

2013-2015 *Idaho Transportation Department.* Assessing feasibility of mitigating barn owl-vehicle collisions in southern Idaho. \$89,000

2013-2016 *National Science Foundation.* Research Experiences for Undergraduates (REU) Site – Raptor Research. \$338,526

2012-2014 *U.S. Fish and Wildlife Service.* The prevalence of plague-causing *Yersinia pestis* in fleas infesting burrowing owls. \$48,386

2009-2011 *Boise National Forest, USDA Forest Service.* Forest owls. \$5,000

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- 2009-2012 *National Science Foundation*. Acquisition of a stable isotope mass spectrometer for Earth science and ecological research (Co-PI). \$376,603
- 2008-2009 *U.S. Fish & Wildlife Service*. Role of contaminants in roadway mortality of barn owls. \$5,000
- 2008-2013 *National Science Foundation*. Utilizing local resources and education settings to stimulate K-12 learning (Co-PI). \$2.21 million
- 2006 *Federal Highway Administration/Idaho Department of Transportation*. Mitigating barn owl mortality along highways. \$12,000
- 2008-2010 *U.S. Department of Agriculture National Research Initiative, CREES*. Understanding linkages between agricultural and natural systems: trophic structure, pesticide exposure, and costs and benefits of group living. \$100,000
- 2005-2006 *Boise National Forest, USDA Forest Service*. Breeding ecology of flammulated owls and effects of forestry practices. \$22,000
- 2005-2006 *Idaho Department of Fish and Game State Wildlife Grant*. Flammulated Owls and Idaho's Dry Forests. \$20,764
- 2004 *U.S. Bureau of Land Management*. Burrowing owl surveys in the Shoshone Field Office. \$18,000
- 2004 *Boise State University Faculty Research Grant Program*. Raptor mortality along Interstate Highways in s. Idaho: Assessment, analysis, and possible mitigation strategies. \$5,000

Refereed Publications (last 10 years)

- *Riding, C.S. and J.R. Belthoff. Removal of old nest material decreases reuse of artificial burrows by burrowing owls. *Wildlife Society Bulletin*: in review.
- *Boves, T.J. and J.R. Belthoff. Ornamentation in North American barn owls: Does spottiness indicate quality in *Tyto alba pratincola*? *Condor*: submitted.
- *Scholer, N.M., M. Leu, and J.R. Belthoff. 2014. Factors associated with flammulated owl and northern saw-whet owl occupancy in southern Idaho. *Journal of Raptor Research*: 48:128-141.
- *Boves, T.J. and J.R. Belthoff. 2012. Roadway mortality of barn owls in Idaho, USA. *Journal of Wildlife Management* 76:1381-1392.
- Bush, S.E., S.M. Villa, *T.J. Boves, D. Brewer, and J.R. Belthoff. 2012. Influence of bill and foot morphology on the ectoparasites of barn owls. *Journal of Parasitology* 98:256-261.
- *Welty, J.L, J.R. Belthoff, J.R. Egbert, and H. Schwabl. 2012. Relationships between yolk androgens and nest density, laying date, and laying order in western burrowing owls (*Athene cunicularia hypugaea*). *Canadian Journal of Zoology* 90:182-192.
- Faircloth, B.C., A. Title, K. Tan, *J. Welty, J.R. Belthoff, and P.A. Gowaty. 2010. Eighteen microsatellite loci developed from western burrowing owls (*Athene cunicularia hypugaea*). *Conservation Genetics Resources* DOI: 10.1007/s12686-010-9214-5.
- Johnson, D.H., D.C. Gillis, M.A. Gregg, J.L. Rebholz, J.L. Lincer, and J.R. Belthoff. 2010. Users guide to installation of artificial burrows for burrowing owls. Tree Top Inc., Selah, Washington. 34 pp.
- Hunt, W.G., R. Watson, J.L. Oaks, C.N. Parish, K.K. Burnham, R.L. Tucker, J.R. Belthoff, and G. Hart. 2009. Lead bullet fragments in venison from rifle-killed deer: potential for human dietary exposure. *PLoS ONE* 4: e5330. doi:10.1371/journal.pone.0005330
- *Barnes, K.P. and J.R. Belthoff. 2008. Probability of detection of flammulated owls using nocturnal broadcast surveys. *Journal of Field Ornithology* 79:321-328.
- *Leppert, L., T.V. Zadorozhny, J.R. Belthoff, A.M. Dufty, Jr., S.L. Stock, G. Kaltenecker, and J.F. Smith. 2006. Sex identification in four owl species from Idaho: DNA and morphometrics. *Journal of Raptor Research* 40:291-294.
- *Moulton, C.E., *R.S. Brady, and J.R. Belthoff. 2006. Association between burrowing owls and agriculture: potential underlying mechanisms. *Journal of Wildlife Management* 70:708-716.

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- *Moulton, C.E., *R.S. Brady, and J.R. Belthoff. 2005. A comparison of breeding season food habits of burrowing owls nesting in agricultural and nonagricultural habitat in Idaho. *Journal of Raptor Research*: 39:429-438.
- Belthoff, J.R. 2005. Using artificial nests to study nest predation in birds. *The American Biology Teacher* 67:105-110.
- *Moulton, C.E., *R.S. Brady, and J.R. Belthoff. 2004. Territory defense of nesting burrowing owls: responses to simulated conspecific intrusion. *Journal of Field Ornithology* 75:288-295.

Conference Presentations (last 10 years)

- *Wade, J.L. and J. Belthoff. 2014. Behavioral responses of burrowing owls to experimental conspecific brood parasitism. Annual Meeting of the Raptor Research Foundation, Corpus Christi, Texas.
- Pourzamani, S.M., *J.L. Wade, S. Wysocki, J. Holderman, and J. Belthoff. 2014. Assessment of road proximity, land use, and power transmission lines on characteristics of predator and scavenger visits to burrowing owl nests in the Morley Nelson Snake River Birds of Prey National Conservation Area (NCA), Idaho. Annual Meeting of the Raptor Research Foundation, Corpus Christi, Texas.
- *Regan, T., C. McClure, A. Kociolek, M. Lowe, and J. Belthoff. 2014. Modeling occupancy of barn owls in southern Idaho, USA in relation to roadway mortality. Annual Meeting of the Raptor Research Foundation, Corpus Christi, Texas.
- *Pikilingis, E., S. Hanser, J. Thompson, C. Badten, E. Yensen, A. Kociolek, M. Lowe, and J. Belthoff. 2014. Relationships between prey abundance and barn owl-vehicle collisions along Interstate 84 in southern Idaho: Does small mammal abundance drive variation in roadway mortality of owls? Annual Meeting of the Raptor Research Foundation, Corpus Christi, Texas.
- S. Wysocki, *J.L. Wade, S.M. Pourzamani, and J. Belthoff. 2014. Is sunbathing in burrowing owls a response to ectoparasite infestation? 2014 Annual Meeting of the Raptor Research Foundation, Corpus Christi, Texas.
- *Wade, J.L. and J.R. Belthoff. 2014. Responses of burrowing owls to experimental changes in clutch size: Are burrowing owls determinate or indeterminate egg-layers? Fourth International Burrowing Owl Symposium, Pasco, Washington.
- Thompson, J., *E. Pikilingis, S. Hanser, C. Badten, and J. Belthoff. 2014. Relationship between prey abundance and barn owl-vehicle collisions along Interstate 84 in southern Idaho. Annual meeting of the M.J. Murdoch Charitable Trust, Partners in Science, Vancouver, Washington.
- Badten, C., *E. Pikilingis, S. Hanser, J. Thompson, and J. Belthoff. 2014. Relationship between prey abundance and barn owl-vehicle collisions along Interstate 84 in southern Idaho. Fourth Annual Idaho Conference on Undergraduate Research, Boise State University, Boise, Idaho.
- Belthoff, J.R. 2012. Ecology, behavior and management of burrowing owls in southern Idaho. Burrowing Owl Symposium, Annual meeting of the Society of Range Management, Spokane, Washington.
- *Boise State GK-12 Team. 2012. Scientists in learning centers: Boise State's innovative GK-12 partnership with informal science educators. Annual meeting of the National Science Foundation GK-12 program, Washington, DC.
- *Groves, J. and J.R. Belthoff. 2012. Investigation of behavioral responses of burrowing owls to experimental brood parasitism in southwestern Idaho. Annual meeting of The Wildlife Society, Portland, Oregon.
- Belthoff, J.R. 2011. Roadway mortality of barn owls in the USA. The Barn Owl Trust, Ashburton, Devon, United Kingdom.
- Viskupic, K. and *Boise State GK-12 Team. 2011. Professional development for graduate students through outreach partnerships with science learning centers. Annual meeting of the Geological Society of America, Minneapolis, Minnesota.

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- *Boise State GK-12 Team. 2011. Reciprocal benefits of non-traditional GK-12 partnerships at Boise State University. 2010. Annual meeting of the National Science Foundation GK-12 program, Washington, DC.
- *Boise State GK-12 Team. 2010. Integrating Boise State University research into the K-12 STEM Curriculum through partnerships with informal science centers. Annual meeting of the National Science Foundation GK-12 program, Washington, DC.
- *Scholer, M.N., M. Leu, L.M. Nutt, and J.R. Belthoff. 2010. Using woodpecker occurrence to improve occupancy models for flammulated owls (*Otus flammeolus*): the role of biotic factors in modeling avian habitat. Joint Meeting of the American Ornithologists' Union and Cooper Ornithological Society, San Diego, California.
- *Scholer, M.N., M. Leu, L.M. Nutt, and J.R. Belthoff. 2010. Using woodpeckers to predict the occurrence of cavity nesting owls. Annual meeting of the Raptor Research Foundation. Colorado State University, Fort Collins, Colorado.
- *Welty, J., *K. McVey, *M. Stuber, and J. Belthoff. 2008. Costs and benefits of group living in owls. Annual meeting of the Idaho Wildlife Society. Boise, Idaho.
- *McVey, K., J. Belthoff, *M. Stuber, and *J. Welty. 2008. How does introduction of agriculture alter ecosystem dynamics?: Stable isotopes analysis of trophic relationships and food webs of burrowing owls. Annual Meeting of the Idaho Wildlife Society, Boise, Idaho.
- *Stuber, M.J., *K. McVey, *J. Welty, J. Belthoff, M. Hooper, and D. Russell. 2008. Ecotoxicological risk and exposure: A comparative assessment of burrowing owls in natural and agricultural habitats in southern Idaho. Annual Meeting of the Idaho Wildlife Society, Boise, Idaho.
- *Welty, J., *K. McVey, *M. Stuber, and J. Belthoff. 2008. Costs and benefits of group living in burrowing owls (*Athene cunicularia*). Annual Meeting of the Raptor Research Foundation, Missoula, Montana.
- *McVey, K., *M. Stuber, *J. Welty, and J. Belthoff. 2008. How does introduction of agriculture alter food web dynamics?: stable isotopes analysis of trophic relationships and food webs of burrowing owls (*Athene cunicularia*). Annual Meeting of the Raptor Research Foundation, Missoula, Montana.
- *Stuber, M.J., *K. McVey, *J. Welty, J. Belthoff, M. Hooper, and D. Russell. 2008. Ecotoxicological risk and exposure: A comparative assessment of burrowing owls in natural and agricultural habitats. Annual Meeting of the Raptor Research Foundation, Missoula, Montana.
- *McVey, K., J. Belthoff, *M. Stuber, and *J. Welty. 2008. How does introduction of agriculture alter ecosystem dynamics?: Stable isotopes analysis of trophic relationships and food webs of burrowing owls. Annual Meeting of the Wildlife Society, Miami, Florida.
- *Stuber, M.J., *K. McVey, *J. Welty, J. Belthoff, M. Hooper, and D. Russell. 2008. Ecotoxicological risk and exposure: A comparative assessment of burrowing owls in natural and agricultural habitats in southern Idaho. Annual Meeting of the Wildlife Society, Miami, Florida.
- Belthoff, J., *J. Welty, *K. McVey, and *M. Stuber. 2008. Understanding linkages between agricultural and natural systems: Trophic structure, pesticide exposure, and costs and benefits of group living. Annual Project Directors Meeting, USDA NRI CSREES, Managed Ecosystems Panel, Madison, Wisconsin.
- *Boves, T.J. and J.R. Belthoff. 2007. Ornamentation in North American barn owls: Does spottiness indicate quality in *Tyto alba patincola*? AAAS Pacific Division, Boise, Idaho.
- *Welty, J. and J.R. Belthoff. 2007. Costs and benefits of group living in owls. AAAS Pacific Division, Boise, Idaho.
- *Welty, J. and J.R. Belthoff. 2007. Costs and benefits of group living in burrowing owls. Annual meeting of the Animal Behavior Society, Burlington, Vermont.
- *Boves, T.J. and J.R. Belthoff. 2007. Roadway mortality of raptors in southern Idaho. Annual meeting of the Idaho Conservation League, Stanley, Idaho.

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- *Boves, T.J. and J.R. Belthoff. 2006. Roadway mortality of raptors in southern Idaho. Joint Annual Meeting of the Northwest Scientific Association and Idaho Chapter of the Wildlife Society. Boise, Idaho.
- *Riding, C. and J.R. Belthoff. 2006. Old nest material affects burrow reuse by burrowing owls. Joint Annual Meeting of the Northwest Scientific Association and Idaho Chapter of the Wildlife Society. Boise, Idaho.
- *Taylor, N.A. and J.R. Belthoff. 2005. Adult female body condition in Burrowing Owls (*Athene cunicularia*): examining effects on nestling sex ratios and management implications. Annual meeting of the Raptor Research Foundation, Green Bay, Wisconsin.
- *Boves, T.J. and J.R. Belthoff. 2005. Roadway mortality of raptors in southern Idaho. Annual meeting of the Raptor Research Foundation, Green Bay, Wisconsin.
- *Barnes, K.P. and J.R. Belthoff. 2005. Ecology of Flammulated Owls in Boise National Forest, Idaho. Annual meeting of the Raptor Research Foundation, Green Bay, Wisconsin.
- Belthoff, J.R., A.M. Dufty, Jr. and K.P. Able. 2005. Patterns of corticosterone secretion in house finches from sedentary and migratory ranges in North America. European Science Foundation Scientific Programme on Optimality in Bird Migration Final Conference: Migration in the life-history of birds. Wilhelmshaven, Germany.
- *Taylor, N.A. and J.R. Belthoff. 2004. Nestling sex ratio variation in burrowing owls (*Athene cunicularia*). Annual meeting of the Raptor Research Foundation, Bakersfield, California.
- *Riding, C. and J.R. Belthoff. 2004. Effects of nest sanitation on burrow reuse by burrowing owls (*Athene cunicularia*). Annual meeting of the Raptor Research Foundation, Bakersfield, California.

Recent Research-Related Service

Member, Boise State University Institutional Animal Care and Use Committee (IACUC)
Member, Boise State University Faculty Research Advisory Committee
Boise State University Foundation Scholar Award For Research Committee
Department of Biology Graduate Student Research Award Committee
Chair, Editorial Committee, Northwest Scientific Association
Chair, Local Organizing Committee, 2003 annual meeting of the Animal Behavior Society, Boise State University
Local Organizing Committee, 2002 annual meeting of the Northwest Scientific Association, Boise State University
Member, Raptors of the Northwest and 4th Burrowing Owl Symposium Scientific Advisory Committees
Associate Editor, Journal of Raptor Research
National Science Foundation Animal Behavior Panel

Referee For:

American Midland Naturalist, American Naturalist, Animal Behaviour, Animal Conservation, Auk, Behavioral Ecology, Condor, Evolution, Journal of Field Ornithology, Journal of Raptor Research, Journal of the Idaho Academy of Science, Journal of Wildlife Management, National Park Service Network Vital Signs Program, Journal of Arid Environments, National Science Foundation, Natural Sciences and Engineering Research Council of Canada, Oecologia, Ornis Fennica, Proceedings of The Royal Society of London, Southwestern Naturalist, U.S. Geological Survey, Wildlife Society Bulletin, Wilson Journal of Ornithology.

Recent Honors Awards:

Fellow, American Ornithologists' Union.
Certified Wildlife Biologist – professional certification by The Wildlife Society.
President's Research and Scholarship Award (presented by Dr. Bob Kustra, Boise State University President).

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College of Arts and Sciences Award for Outstanding Research (presented by Dr. Phil Eastman, Dean,
College of Arts and Sciences).

Service on Graduate Student Committees

Major Advisor for:

- Ethan Ellsworth (1993 - 1997) Raptor Biology
Postfledging behavior and dispersal of juvenile western screech-owls.
- R. Andrew King (1994 - 1996) Raptor Biology
Postfledging dispersal and behavioral ecology of burrowing owls in southwestern Idaho.
- Brian Herting (1995 - 2001) Raptor Biology
Seasonal effects of testosterone on aggression and vocalizations in western screech-owls.
- Brian Smith (1996 - 1999) Raptor Biology
Nest-site selection, ectoparasites, and mitigation techniques: studies of burrowing owls and artificial burrow systems.
- Kurt Zwolfer (1996 - 1999) Raptor Biology
Physiological ecology of roost site selection in wintering western screech-owls.
- Courtney Frost (1998 - 2000, Co-advisor with S. Novak) Biology
Examination of genetic population structure in an introduced bird, the house finch.
- Catherine Rideout (1999 - 2001) Biology
Effects of habitat fragmentation on shrub-steppe birds in southeastern Idaho.
- Colleen Moulton (2000 - 2003) Raptor Biology
The relationship between burrowing owls and agriculture: tests of hypotheses related to energetics and increased prey availability.
- Ryan Brady (2000 - 2004) Raptor Biology
Nest lining behavior, nest microclimate, and nest defense behavior of burrowing owls.
- Kelly Riley (2001 - 2005) Biology
Pedigree analysis in burrowing owls.
- Nicole Taylor (2002 - 2005) Raptor Biology
Burrowing owl offspring sex ratios: long-term trends and a test of the Trivers and Willard hypothesis.
- Corey Riding (2003 - 2010) Raptor Biology
Breeding dispersal in birds: the effects of ectoparasites and nest sanitation.
- Than Boves (2004 - 2007) Raptor Biology
Raptor mortality along Interstate Highways in s. Idaho: Assessment, analysis, and possible mitigation strategies.
- Keith Barnes (2004 - 2007) Raptor Biology
Post-fledging behavior and breeding ecology of flammulated owls in managed forests.
- Justin Welty (2005 - 2010) Raptor Biology
Burrowing owls and agroecosystems: costs and benefits of group living.
- Katie McVey (2006 - 2011) Raptor Biology
Trophic ecology of burrowing owls in natural and agricultural habitats and an analysis of predator communities using stable isotopes of carbon and nitrogen.
- Matt Stuber (2006 - present) Raptor Biology
Ecotoxicology risk and exposure for burrowing owls in agroecosystems.
- Micah Scholer (2008 - 2011) Raptor Biology
Land cover and topographic effects on cavity-nesting owl occurrence and the role of species interactions in structuring cavity-nesting owl communities.
- Tom Dixon (2012 - 2013) Raptor Biology
Examination of genetic mating system in burrowing owls using microsatellite analysis.

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Jamie Groves (2012 – 2014) Raptor Biology

Experimental effects of conspecific nest parasitism on behavior and parental investment in burrowing owls.

Chris Porterfield (2012 – present) Raptor Biology

Pheomelanin pigment as an indicator of condition in migratory raptors in Idaho.

Erin Pikilingis (2013 – present) Raptor Biology

Barn owl mortality along roadways: landscape ecology and feasibility of mitigation.

Tempe Regan (2013 – present) Raptor Biology

Occupancy and behavior of barn owls in a highway corridor in relation to roadway mortality.

Graduate Committee Member for:

Julie Heath, Raptor Biology (1993 - 1996)

Laura Valutis, Raptor Biology (1994 - 1997)

Chris Danilson, Raptor Biology (1993 - 1998)

Robert Prokop, Raptor Biology (1993 - 1998)

Shannon Livingston, Raptor Biology (1996 - 2000)

Kevin Warner, Biology (1997 - 2000)

Janice Engle, Biology (1997 - 2001)

Shanie Holman, Biology (1997 - 2000)

Steven Lewis, Raptor Biology (1998 - 2001)

Karl DeHart, Raptor Biology (1998 - 2003)

Allyson Turner, Biology (1998 - 2001)

Catherine Wightman, Raptor Biology (1998- 2001)

Steve Lysne, Biology (2001 - 2003)

Michael Butler, Raptor Biology (2003 - 2006)

Hollie Leavitt, Biology (2003 - 2007)

Will Keeley, Raptor Biology (2003 - 2009)

Matt Stutzman, Biology (2003 - present)

Wyatt Williams, Biology (2004 - 2008)

Vittoria Marzot, Biology (2004 - 2008)

Scott Graham, Raptor Biology (2006 - 2011)

Dana Owens, Raptor Biology (2008 – present)

Chris Porterfield, Raptor Biology (2010 - 2012)

Kevin Glueckert, Biology (2010 - 2014)

James Tate Mason (2011 - present)

Graham Frye, Biology (2011 - 2013)

Jessie Bunkley, Biology (2011 - 2013)

Erin Wonder, Raptor Biology (2011 - 2013)

Marcella Fremgen, Biology (2013 – present)

Shawn Smith, Raptor Biology (2013 – present)

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CURRICULUM VITAE - MARIE-ANNE DE GRAAFF

Department of Biological Sciences
Boise State University
Boise ID, 83725
Phone: (208) 426-1256
E-mail: marie-annedegraaff@boisestate.edu

Education

- Ph.D. - Environmental Science, Wageningen University, the Netherlands (2007)
- M.Sc. - Nature Conservation and Development, Wageningen University, the Netherlands (2003)
- B.Sc. - Forestry and Nature Management, Wageningen University, the Netherlands (2001)

Positions held

- Assistant Professor - Department of Biological Sciences, Boise State University (2010-present)
- Postdoctoral Research Associate – Biosciences Division, Molecular Microbial Ecology Group, Oak Ridge National Laboratory (2008-2010)
- Professional Researcher – Department of Plant Sciences, University of California, Davis (2003-2007)
- Professional Researcher – Department of Agronomy and Range Science, University of California, Davis (2002-2003)

Teaching

- Instructor 'Introduction to Biology – Diversity of Life', Boise State University (2011, 2013, 2015)
- Instructor 'General Ecology', Boise State University (2012, 2013, 2014, 2015)
- Instructor 'Conservation Biology', Boise State University (2011, 2013)
- Instructor 'Ecosystem Ecology', Boise State University (2010, 2012, 2015)
- Instructor – 'Global Climate Change and Food Security: Feast or Famine?' Boise State University (2011)
- Instructor 'Plant-Soil Relations and Ecosystem Processes under Climate Change' Boise State University (2011)
- Instructor 'Global Climate Change and Solutions: ecological, social and economic perspectives' Boise State University (2013)
- Instructor 'Agricultural Challenges in the 21st Century: How to Feed 9 Billion People Without Destroying the Earth?' Boise State University (2014)

Graduate students mentored

- Andrew Austreng (2010-2012) – committee member (MS, Geosciences, BSU)
- Janina Dierks (2012 – 2014) – main advisor (MS, Biology, BSU)
- Xochi Campos (2011- present) – main advisor (MS, Biology, BSU)
- Xavier Gagne (2013 – present) – committee member (MS, Geosciences, BSU)

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- Peggy Martinez (2014 – present) – main advisor (MS, Biology, BSU)
- Hasini Delvine (2014 – present) – main advisor (MS, Biology, BSU)
- Ryan Will (2015 – present) – committee member (MS, Geosciences, BSU)
- Hamid Dashti (2015 – present) – committee member (PhD, Geosciences, BSU)

Undergraduate students mentored

Kelly Rula (2010); Nathan Whitley (2011); Jamie Hicks (NSF REU - 2011); Aislinn Johns (NSF REU – 2011); Jessica van der Veen (NSF REU - 2011); Jacklynn Donahue (2011); Zach Hoefer (2011); Jaron Adkins (Boise State Student Research Program Fellowships, and Student Research Program Travel Award - 2011-2015); Ian Duvall (2011-2013); Michael Anderson (2012-2014); Ariane Shannon (NSF REU - 2013-2014); Mac Jones (Boise Cascade Corporation Environmental Research Fellowship - 2012-2014); Mary Finnel (2013-2014); Kimberly Tate (2013-2014); Trevor Thornton (2014-2015); Leslie Nichols (2013-present); Billy Bringman (2014-present); Micki Keiser (2015-present); Elise Thiel (2015-present); Riley Jones (2015-present); Ashlee Webb (2015-present).

Refereed Publications

(19 refereed publications, 9 since starting at Boise State, with two more in review)

*Denotes graduate student author; ** Denotes undergraduate student author

- Austreng A*, **de Graaff M-A**, Pellant M, Pierce J, Benner S (*in revision*) Large Soil Carbon Losses Follow Cheatgrass Invasion of Sagebrush.
- Morris GP, Hu Z, Grabowski PP, Borevitz JO, **de Graaff M-A**, Miller RM, Jastrow JD (2015) Genotypic diversity effects on biomass production in native perennial bioenergy cropping systems. *Global Change Biology Bioenergy* (in press).
- Adkins J**, Jastrow JD, Morris G, Six J, **de Graaff M-A** (2015) Effects of switchgrass cultivars and intraspecific differences in root morphology on soil carbon stabilization. *Geoderma* – (in press).
- **de Graaff M-A**, Adkins J**, Kardol P, Throop HL (2015) A meta-analysis of soil biodiversity impacts on the carbon cycle. *Soil* 1, 257-271.
- **de Graaff M-A**, Throop HL, Verburg PSJ, Arnone JA, Campos X* (2014) A synthesis of climate change and vegetation cover effects on biogeochemical cycling in shrub dominated drylands. *Ecosystems* 5, 931-945.
- Smith AP*, Marin-Spiotta E, **de Graaff M-A**, Balser TC (2014) Microbial community structure varies across soil organic matter aggregate pools during tropical land cover change. *Soil Biology & Biochemistry* 77, 292-303.
- **de Graaff M-A**, Jastrow JD, Gillette S, Johns A**, Wulschleger SD (2014) Differential priming of soil carbon driven by soil depth and root impacts on carbon availability. *Soil Biology & Biochemistry* 69, 147-156.
- **de Graaff M-A**, Jastrow JD, Six J, Wulschleger S (2013) Variation in root architecture among switchgrass cultivars impacts root decomposition rates. *Soil Biology & Biochemistry*, 58, 198-206

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- **de Graaff M-A**, Schadt CW, Six J, Schweitzer JS, Rula K**, Classen AT (2011) Elevated CO₂ and plant species diversity interact to slow root decomposition. *Soil Biology & Biochemistry* 43, 2347-2354.
- **de Graaff M-A**, Castro H, Classen AT, Garten CT, Schadt CW (2010) Root exudates mediate plant residue decomposition rates by regulating the microbial community structure. *New Phytologist* 188,1055-1064.
- **de Graaff M-A**, Six J, van Kessel C (2009) Rhizodeposition-induced decomposition increases N availability to wild and cultivated wheat genotypes. *Soil Biology & Biochemistry*, 41, 1094-1103.
- **de Graaff M-A**, Six J, van Kessel C (2008) The impact of long-term elevated CO₂ on C and N retention in stable SOM pools. *Plant and Soil* 303, 311-321.
- **de Graaff M-A.**, van Groenigen KJ, Six J, Hungate B, van Kessel C (2006) Interactions between plant growth and soil nutrient cycling under elevated CO₂: a Meta-Analysis. *Global Change Biology* 12, 1-15.
- Hungate BA, van Groenigen KJ, Six J, Jastrow JD, Luo Y, **de Graaff M-A**, van Kessel C, Osenberg CW (2009) Assessing the effect of elevated CO₂ on soil carbon: a comparison of four meta-analyses. *Global Change Biology* 15, 2020-2034.
- **de Graaff M-A**, Six J, van Kessel C (2007) Elevated CO₂ increases rhizodeposition and microbial immobilization of root-derived nitrogen. *New Phytologist* 173, 778–786.
- Van Groenigen KJ, **de Graaff MA**, Six J, Harris D, Kuikman P, van Kessel C (2006) The impact of elevated CO₂ on soil C and N dynamics: a meta-analysis. In: *Managed Ecosystems and CO₂: Case Studies, Processes, and Perspectives*. (Eds: Nösberger J, Long SP, Norby RJ, Stitt M, Hendrey GR, Blum H). Springer-Verlag, Berlin, Heidelberg, Germany.
- Van Kessel C, Boots B, **de Graaff M-A**, Six J (2006) Soil C and N sequestration in a grassland following 10 years of Free Air CO₂ Enrichment. *Global Change Biology* 12, 1-13.
- Van Groenigen KJ, Six J, Hungate B, **de Graaff M-A**, van Breemen N, van Kessel C (2006) Element interactions limit soil carbon storage. *Proceedings of the National Academy of Sciences* 103, 6571-6574.
- **de Graaff M-A**, Six J, van Kessel C (2006) Prolonged elevated atmospheric CO₂ does not affect decomposition of plant material. *Soil Biology & Biochemistry* 38, 187-190.
- **de Graaff M-A**, Six J, Harris D, van Kessel C (2004) Decomposition of soil and plant carbon from pasture systems after 9 years of exposure to elevated CO₂: impact on C cycling and modeling. *Global Change Biology* 10, 1922-1935.

Presentations with published abstracts (last 5years)

(25 presentations with published abstracts, seven invited talks in organized symposia and workshops at international meetings since 2010)

*Denotes graduate student author; ** Denotes undergraduate student author

- **de Graaff M-A**, Jastrow J, Six J, Wullschlegel S (2015) Fine root morphology as a driver of root and soil organic carbon decay rate. Ecological Society of America Annual Meeting, Baltimore, MD. *Invited*.

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- Campos X*, **de Graaff M-A** (2015) Precipitation impacts on litter decomposition 57th Annual Symposium of the Idaho Academy of Science and Engineering, Boise, ID. (Best Graduate Student Oral Presentation Award)
- Adkins J**, **de Graaff M-A** (2015) A meta-analysis of soil biodiversity impacts on the carbon cycle. 57th Annual Symposium of the Idaho Academy of Science and Engineering, Boise, ID.
- Bringman B**, Johns A**, **de Graaff M-A** (2015) The impact of fuel reduction treatments on soil microbial processes and forb performance in a degraded semi-arid ecosystem. Great Basin Consortium Conference, Boise, ID.
- **de Graaff M-A** (2014) Root controls on soil organic matter stabilization and destabilization. The Sixth International Workshop on Soil and Sedimentary Organic Matter Stabilization and Destabilization, Kiawah Island, SC.
- Johns A**, **de Graaff M-A** (2014) Herbicide impacts on forb performance in degraded sagebrush steppe ecosystems. Society for Ecological Restoration, Redmond, OR.
- Dierks J*, **de Graaff M-A** (2014) The impact of a shifting arbuscular mycorrhizal fungal community on native plant performance and carbon cycling. Soil's Role in Restoring Ecosystem Services, Soil Science Society of America, Sacramento, CA.
- **de Graaff M-A** (2014) At the root of sustainable bioenergy: using genetic variation in root traits to maximize soil carbon sequestration and biomass yields. USDA-NIFA AFRI Sustainable Bioenergy Annual Project Director (PD) Meeting, Arlington, VA. *Invited*.
- **de Graaff M-A** (2014) Root controls on soil organic carbon dynamics. Ecological Society of America Annual Meeting, Sacramento, CA. *Invited*
- Smith P*, Marin-Spiotta E, **de Graaff M-A**, Balser TC (2014) Testing the significance of microbial ecology for soil carbon stabilization with tropical land cover change. Ecological Society of America Annual Meeting, Sacramento, CA.
- **de Graaff M-A** (2013) Root controls on soil organic carbon dynamics. Annual Meeting of the Ecological Society of Germany, Switzerland and Austria, Potsdam, Germany. *Invited*
- **de Graaff M-A**, Morris G, Jastrow J, Six J (2013) At the root of sustainable bioenergy production: using genetic variation in root traits to maximize soil carbon restoration and biomass yields. AAIC 25th Annual Meeting "New Crops: Bioenergy, Biomaterials, and Sustainability" Washington D.C., 2013. *Invited*
- **de Graaff M-A**, Six JW, Jastrow JD, Wulfschleger S (2012) Differential priming of soil carbon driven by soil depth and root impacts on carbon lability. American Geophysical Union Fall Meeting, San Francisco, CA. *Invited*
- Adkins J**, **de Graaff M-A**, Jastrow J. D., Wulfschleger S (2012) Switchgrass cultivars differentially affect soil carbon stabilization. American Geophysical Union Fall Meeting, San Francisco, CA.
- Joy S**, Huber DP*, Lohse KA, Germino MJ, **de Graaff M-A**, Feris K (2012) Shifts in timing and magnitude of precipitation modulate soil carbon pools in semi-arid ecosystems. American Geophysical Union Fall Meeting, San Francisco, CA.
- **de Graaff M-A**, Six JW, Jastrow J. D., Wulfschleger S (2012) Differential priming of soil carbon driven by soil depth and root impacts on carbon lability. Ecological Society of America Annual Meeting, Portland, OR.

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- Smith P*, Marin-Spiotta E, **de Graaff M-A**, Balser TC (2012) Microbial community and soil carbon dynamics vary with season and forest age along a tropical successional chronosequence. Ecological Society of America Annual Meeting, Portland, OR.
- **de Graaff M-A**, van der Veen J**, Germino MJ, Hicks J** (2012) Changes in soil aggregate dynamics following 18 years of experimentally increased precipitation in a cold desert ecosystem. North West Science Association meeting, Boise, ID. *Invited*.
- **de Graaff M-A**, van der Veen J**, Germino MJ, Hicks J** (2012) Changes in soil aggregate dynamics following 18 years of experimentally increased precipitation in a cold desert ecosystem. AAAS meeting, Boise, ID.
- Huber K*, Lohse K, Germino MJ, Feris K, Reinhardt K, **de Graaff M-A**, (2012) Effects of climate shifts and plant community on carbon and nitrogen cycling in semi arid rangelands. AAAS meeting, Boise, ID.
- Feris K, Jilek C**, Huber K*, Reinhardt K, **de Graaff M-A**, Lohse K, Germino MJ (2012) Influence of precipitation regime on microbial decomposition patterns and community structure in semi arid ecosystems: altered roles of bacteria and fungi. AAAS meeting, Boise, ID.
- Austreng AC*, Olin PH, Hummer A, Pierce JL, **de Graaff M-A**, Benner S (2011) Carbon sequestration in semi-arid ecosystems: potential benefits of sagebrush restoration. American Geophysical Union Fall Meeting, San Francisco, CA.
- Jilek C**, Lalor S, Huber D, Reinhardt K, **de Graaff MA**, Lohse K, Germino MJ, Feris K (2011) Influence of precipitation regime on microbial decomposition patterns in semi-arid ecosystems. American Geophysical Union Fall Meeting, San Francisco, California.
- **de Graaff M-A**, Schadt CW, Six JW, Jastrow JD, Garten CT, Randolph-Phillips J, Wulfschleger S (2010) Root architecture controls over root decomposition rates in Switchgrass. American Geophysical Union Fall Meeting, San Francisco, California.
- **de Graaff M-A**, Classen AT, Castro HF, Garten CT, Schadt CW (2010) Root exudates mediate plant residue decomposition rates by regulating the microbial community structure. ESA annual meeting, Pittsburgh, PA.

Invited seminars

(10 invited seminars given at Agencies (USGS, BLM, USDA), National Labs, and Universities in Europe and the US)

- Linking plant-soil relations to ecosystem processes in a changing climate. University of New Hampshire – Durham, NH. (2014)
- Biotic and abiotic controls on belowground ecosystem processes in a changing world. Idaho State University. (2011)
- Biotic and abiotic controls on belowground ecosystem processes in a changing world. Boise State University, Dept. of Geosciences. (2011)
- At the root of soil carbon and nutrient cycling. USDA – ARS, Boise, ID (2011)
- Linking plant-soil relations to ecosystem processes in a changing climate. University of Wisconsin – Madison, WI (2011)
- At the root of soil carbon and nutrient cycling. Wageningen University, the Netherlands (2011)

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- Biotic and abiotic controls on belowground ecosystem processes in a changing world. Boise State University, Boise, ID (2010)
- Linking root exudation to microbial community dynamics. Deutsche Forschungszentrum, Jülich, Germany (2009)
- At the root of soil nutrient cycling. The University of Tennessee, Knoxville, TN (2008)
- Interactions between plants and soil nutrient cycling under elevated CO₂: implications for soil C sequestration. Oak Ridge National Laboratory, Oak Ridge, TN (2007)

Funding

(\$3,349,863 in total funding; \$1,460,932 directly to Boise State)

- Collaborative Research: RUI: Litter decomposition in drylands: Linking high-resolution temporal and spatial variability in abiotic drivers with ecosystem models. **De Graaff M-A** (PI) *NSF* Pending: \$298,402– to Boise State (2015 – 2019).
- Reynolds Creek Carbon Critical Zone Observatory. **De Graaff M-A** (Co-investigator). *NSF*. Funded: \$2,500,000. \$611,069 – to Boise State (2013 – 2018).
- At the root of sustainable bioenergy: using genetic variation in root traits to maximize soil carbon sequestration and biomass yields. **de Graaff M-A** (PI) *USDA-NIFA*. Funded: \$493,210 (2012 – 2015).
- Mycorrhizal fungi in sage steppe ecosystems and their applicability for restoration. **de Graaff M-A**. (PI) *ID National Guard*. Funded: \$42,065 (2012-2014).
- Impacts of fuel reduction treatments on plant-soil feedbacks in cheatgrass dominated ecosystems of the Intermountain West. **de Graaff M-A** (PI) *Bureau of Land Management & US Forest Service*. Funded: \$16,000 (2012-2015).
- Impact of precipitation shifts on soil carbon and nutrient dynamics in semi-arid grasslands. **de Graaff M-A** (PI) *NSF-EPSCoR*. Funded: \$51,214 (2011-2013)
- Carbon and nutrient dynamics in semi arid ecosystems: responses to climate change from mechanisms to landscape processes. **de Graaff M-A** (PI) *NSF-EPSCoR – Innovative Working Group*. Funded: \$8,384 (2011)
- Impact of precipitation shifts on soil carbon dynamics in semi-arid grasslands. **de Graaff M-A** (PI) *NSF-EPSCoR REU*. Funded: \$10,000 (2011)
- Impacts of fuel reduction treatments on plant-soil feedbacks in cheatgrass dominated ecosystems of the Intermountain West. **de Graaff M-A** (PI) *USGS*. \$9000 (2011-2014)
- Root and soil depth controls on microbial utilization of labile soil C inputs. **de Graaff M-A** (PI) *DOE*. Funded: \$219,990 (2010-2013)

Professional Affiliations

- American Geophysical Union (AGU) (2004-present)
- Ecological Society of America (ESA) (2007-present)

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Professional Service

(Manuscript reviewer for 17 journals, chair of three organized symposia, organizer of two workshops, invited expert contributor to three international workshops, NSF panelist (2X), and USDA-NIFA panelist)

- *Manuscript reviewer:* Science, Global Change Biology, Geoderma, New Phytologist, Journal of Applied Ecology, Soil Science, Ecosystems, Soil Biology & Biochemistry, Plant and soil, Biogeochemistry, Agriculture, Ecosystems and Environment, Environmental and Experimental Botany, Ecosphere, Ecology Letters, Plos-one, Journal of Ecology.
- *Invited Workshop:* ARPA-E Expert Workshop: Phytosequestration, Chicago, IL, 2015.
- *Organized symposium/ session chair:* Global Challenges to Ecosystems. 57th Annual Symposium of the Idaho Academy of Science and Engineering, Boise, ID, 2015.
- *Invited Workshop:* DOE Expert Workshop: Improved Representation of Roots in Models. Oak Ridge National Laboratory, Oak Ridge, TN, 2014.
- *Participation in proposal review panel:* NSF, 2014.
- *Organized symposium/ session chair:* Responses of Sagebrush-Steppe Ecosystems to a Changing Climate. Proceedings of the American Association for the Advancement of Science, Boise, ID, 2012.
- *Participation in proposal review panel:* USDA-NIFA, 2012.
- *Organizer of workshop:* Carbon and nutrient dynamics in semi-arid ecosystems: responses to climate change from mechanisms to landscape processes. 2011 (Jemez Springs, NM), 2012 (Boise, ID).
- *Participation in proposal review panel:* NSF-DDIG, 2011.
- *Invited International workshop:* German Science Foundation Expert Workshop: Estimating the amount and fate of plant-derived belowground nitrogen, Hohenheim, Germany, 2011.
- *Organized symposium/ session chair:* Carbon and Nitrogen Dynamics in Semi-Arid Ecosystems: Responses to Climate Change from Mechanisms to Landscape Processes. The 3rd annual EPSCoR Tri-State Western Consortium Meeting. Santa Ana Pueblo, New Mexico, 2011.

University Service

- *Committee member:* Search committee for a shop engineer, 2013.
- *Committee chair:* Top 10 scholar's selection committee, 2012.
- *Committee member:* Committee for curriculum revision of the Environmental Studies Program at BSU, 2011.

Departmental Service

- *Committee member:* Undergraduate curriculum revision committee – working to reform the undergraduate curriculum of the department and incorporate novel teaching methods into core classes, 2013- present.
- *Committee member:* EEB PhD program development committee, 2013-2014.

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- *Committee member:* Michael Buttler Ecological Research Award selection committee, 2012, 2014.
- *Committee member:* Transitional working group – working to transition organizational structure of the department, 2013.
- *Committee member:* Search committee for a science education faculty member, 2013; 2014.
- *Committee member:* Research Committee – Biology Department, 2010-2011.
- *Hosted departmental speakers:* Aimee Classen (2011); Johan Six (2012); Alain Plante (2014); Terry Henkel (2014).

Community Service

- *Ecovillage Project:* Urban farming project in Boise in which I integrate research, teaching and outreach. My aim is to establish a community outreach project that informs the local community about the importance of soil health for sustainable food production in a changing world, and promote healthy eating habits.
- *Juvenile Diabetes Research Foundation – board member of UT/ ID chapter:* Tasks include: educating the local community about type 1 diabetes, supporting the local community of type 1 diabetics, coordinating fund raising events, attending and/or coordinating advocacy events, attending monthly meetings of the Idaho Leadership Committee of JDRF, and coordinating internships for Boise State students with JDRF, 2013- present.
- *STEM education:* Expose children from the Boise State Children's Center (pre-school) and K-12 students to STEM education and research by giving presentations at summer camps and providing tours through my lab.

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Curriculum Vitae: Kevin Feris

Microbial Ecologist
Department of Biology
Boise State University
1910 University Dr.
Boise ID 83725

Phone: 208-426-5498

email: kevinferis@boisestate.edu

Education and Training

University of California at Davis
Postdoctoral Research Associate
2003 – 2005

University of Montana
Ph.D Microbial Ecology, 2003

University of Alaska Anchorage
B.S. Biology, 1995
Minor in Chemistry

Professional Positions

2015 - current Professor, Department of Biology, Boise State University, Boise, ID

2014 - current Department Chair, Department of Biology, Boise State University, Boise, ID

2010 - 2015 Associate Professor, Department of Biology, Boise State University, Boise, ID

2005 - 2010 Assistant Professor, Department of Biology, Boise State University, Boise, ID

2003 - 2005 Postdoctoral research associate, Soil Microbial Ecology Lab, The University of California at Davis, Davis, CA.

Student Training/Advising:

Graduate Students (for which I was, or am, the PI):

- *Angelo Sanfilippo*, M.S. Biological Sciences. Expected graduation date: Fall 2017. Thesis title “Elucidating microbial, geochemical, and DOC quality/quantity controls on respiration and carbon export from the hyporheic zone.”
- *Tiffany Farrell*, M.S. Hydrologic Sciences. Expected graduation date: Fall 2014. Thesis title: “Do the distribution of denitrifying functional genes control the production of N₂O in the hyporheic zone?”
- *Patrick Thomas*, M.S. Biological Sciences. Expected graduation date: Fall 2015. Thesis title “Effects of algal diversity on carbon sequestration, nutrient capture, grazing resistance, and productivity in dairy wastewater”
- *Jeric Harper*, M.S. Biological Sciences. Expected graduation date: Fall 2015. Thesis title “Integration of Effluent Produced from the Pre-treatment of Dairy Manure for a Semi-continuous Algal Growth Platform”

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- *Annika Quick, PhD Geosciences.* Expected graduation date Fall 2015. Thesis title “Modeling hyporheic flow paths to quantify geochemical, microbial, and hydraulic controls on nitrous oxide production in stream sediments”
- *Maxine Prior. Graduated Summer 2013.* Development of third generation biofuels from anerobic digester effluent. Maxine is a graduate of the MS in Agricultural and Biological Engineering program at the University of Idaho. I was her direct research advisor and she is performing her thesis research in my lab at Boise State. Current status: Laboratory technician, Boise City Wastewater Treatment Plant, Boise ID. Soon to return to the Feris lab as a Research Technician to continue work on Algal production from agricultural wastewaters.
- *Daniel Stanaway. Graduated Summer 2012.* Daniel joined the lab in the Spring of 2009. Project: Determining the effects of chronic heavy metal stress on whole system metabolism in the Clark Fork River. Current status: Hydologic sciences consultant Brown and Caldwell, Boise ID.
- *Patrick Sorensen. Graduated Spring 2011.* Patrick joined the lab in the Spring of 2009. Project: Assessing the responses of terrestrial microbial communities global change induced alterations in the hydrologic properties of a semi-arid ecosystem. Current status: Ph.D. candidate Boston University. Recently received a NSF Doctoral dissertation improvement grant: Spring 2014.
- *Brian Deis. Defended Fall 2011,* official graduation date Spring 2012. Use of whole cell encapsulation strategies for the development of a novel consolidated bioreactor for cellulosic ethanol production from regional lignocellulosic feedstocks. Current status: Senior Microbiologist, Idaho Bureau of Laboratories.
- *Pamela Hess. Graduated with M.A. Fall 2013.* Pam joined my lab and the Biology graduate program during Fall 2006 with a B.S. in Geological Sciences. Current status: Environmental Scientist, U.S. Army National Guard. Boise, ID.

In addition, am currently or have recently completed my duties a thesis committee member for the following Biology and Hydrology graduate students:

- Ian Penn (current, M.S. Hydrologic Sciences, thesis title: Investigation of the relationship between nutrients and algae growth in the Lower Boise River)
- Hasini Delvinne (current, M.S. Biology, thesis title: Soil organic carbon and its temperature sensitivity along an elevation gradient in a semi-arid ecosystem)
- Aislin Johnns (current, M.S. Biology, thesis title: The impact of diversity on nitrogen cycling efficiency in switchgrass.)
- Peggy Martinez (current, M.S. Biology, thesis title: Plant response to above-ground vertebrate browsing: A systemic feedback?)
- Xochi Campos (graduated Fall 2015, M.S. Biology)
- Janina Dierks (graduated Spring 2014, MS Biology)
- Matt Weaver (graduated Spring 2012, M.S. Hydrology)
- Emma Wilson (graduated Spring 2013, M.S. Biology)
- Panagiota Louka (graduated Fall 2012, M.S. Biology)
- Janet Layne (M.S. Biology, graduated Spring 2011)
- Cory Hanley (M.S. Biology, graduated Summer 2009)

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- Jason Besecker (M.S. Biology, graduated Summer 2008)

Graduate Teaching experience:

- Biology 498/598 Special Topics: Global Climate Change and Solutions: ecological and socio-economic perspectives. In this seminar we explore the major impacts of climate change on ecological and human systems and discuss a variety of solutions aimed at mitigating climate change. These solutions include biological carbon sequestration in terrestrial ecosystems, and the use of biofuels to reduce greenhouse gas emissions. We approach these solutions from ecological, social and economic perspectives, and ultimately aim to gain a better understanding of the ecological and socio-economic opportunities and problems associated with efforts to mitigate the adverse effects of climate change on society.
- Biology 497/597, Microbial Ecology 3 credits. Students acquire a fundamental knowledge of microbial ecology by comparing and contrasting ecological interactions in microbial communities to those observed in macrobial communities.
- Biology 598/498 Special Topics: Central Metabolic Theory of Ecology and it's application in Microbial Ecology. Graduate seminar.
- Biology 415/515 Microbial Physiology, 4 credits. New Spring 2014. A study of the physiology of microorganisms focusing on anabolic and catabolic processes. Course material is often presented in the context of applications of microbial physiology in a variety of contexts including biofuels, wastewater treatment, nutrient cycles, and fermented foods.
- Biology 415/415G Applied and Environmental Microbiology, 4 credits. An examination of the unique aspects of microbial metabolism and their utility in applied and environmental settings. Strong emphasis is placed on energetics of metabolism, community interactions, ecosystem services/properties and applications in industrial settings.
- Subsurface Microbiology Block Inland Northwest Research Alliance Subsurface Science Graduate Program Core Course. An examination of the communities, processes, metabolisms, and mechanisms of contaminant transformation in the subsurface. Emphasis on the physical, chemical, and hydrological controls on community structure and function and process rates.
- Biology 598/498 Special Topics: Microbial Ecology of Fluvial Ecosystems. Graduate seminar discussing current microbial ecology literature with a focus on flowing water systems.

Current Funding:

- 2014-2017 NSF Hydrologic Science: "Collaborative Research: How do hydrology and biogeochemistry control carbon flux from headwater streams to the atmosphere?" PIs: Roy Haggerty (OSU), Kevin Feris (BSU). Co-PIs: Danielle Tonina (UI), Shawn Benner (BSU). Feris portion of the proposal: \$198,255, total award \$.
- 2012-2015 NSF Hydrologic Sciences: "Collaborative Research: Novel interdisciplinary flume experiments to investigate the role of the hyporheic zone in greenhouse gas generation" PI: Daniele Tonina (UI); PI: Kevin

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Feris, Co-PI: Shawn Benner (BSU). Total funding: \$497,496.

- 2012-2015 USDA NIFA Climate. PI: Feris, K. P.; Co-PIs: Coats, E. (UI), McDonald, A. (UI); Post-Guillen, D (INL), Hamilton, M. (CAES). Title: “Enhancing greenhouse gas mitigation and economic viability of manure management systems via production of value added carbon sequestration”. \$681,143.
- 2012-2015 Idaho National lab. PIs: Deborah Newby (INL), Feris, K. P. (BSU), Erik Coats (UI) “Integrated Approach to Algal Biofuel, Bio-power, and Agricultural Waste Management”. \$250,153.

Pending Proposals:

- 2015 July 2015, USDA BRDI. PIs: Erik Coats (UI), McDonald, A. (UI), Feris, K. P. (BSU), Newby, D. (INL). “Biobased Products from Waste Organic Matter - Diversifying the Product Portfolio to Increase Economic Feasibility of Biofuel Production.” Total funds requested: \$1,997,819
- 2015 September 2015, USDA SBIR. PIs: Kevin Feris (BSU), Maxine Passero (Cyanergy LLC.). “Algae Crop Protection: Broad Spectrum Invasive Species Strategy”. Total funds requested: \$100,000.

Recent completed funding:

- 2010-2013 April 2010, Center for Advanced Energy Studies: “Design and Operational Improvements, and LCA in Anaerobic Digestion of Fermented Dairy Manure Using a 2-Stage process.” PI: Erin Searcy (INL), Co-PIs: A Briones (UI), E Coats (UI), K Feris (BSU), D Keiser (UI), T Magnuson (ISU), A McDonald (UI), D Shrestha (UI). Total funding level: \$592,000; Feris share of funding: \$74,001.
- 2008-2011 NSF Epscor RII award. Whole project lead PI: Greg Bohach, Co-PI: Von Walden. Collaborator: Kevin Feris. Total funding level \$4,075,472, Feris share of funding: \$214,159 (6-1-08 to 5-31-11). Funding acquired for new hire in Boise State Biology department: \$189,150. Project title: Idaho EPSCoR RII: Water Resources in a Changing Climate.
- 2008-2011 NSF MRI: PI: Denise Winget, Co-PIs: Sara Heggland, Nixon Jamee, Kevin Feris, Alex Punnoose. Total funding level: \$503,775 (08-08-08 to 7-31-11), Project title: MRI: Acquisition of a FACS (Fluorescent Activated Cell Sorter) to Support Collaborative Research and Education in Biomolecular sciences and nanomaterials applications (DBI Proposal # 0821233).
- 2008-2011 Center for Advanced Energy Studies. Boise State PI: Kevin Feris, Co-PIs: Greg Bala (INL), Tim Magnusen (ISU), John Van Gerpen (UI). Total funding level \$450,000 Feris share of funding: \$81,000 (10-1-08 to 9-30-11). Project title: Development of Lignocellulosic Ethanol Production Potential in Idaho.
- 2010-2013 April 2010, INL LDRD: “Specific biological responses to nano metal oxides.” PI: James Hendrickson, Co-PIs: Kevin Feris, Robert Fox,

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- Yoshiko Fujita, Gregory Bala, Steven Aust. Total funding level: \$450,000; Feris share of funding: \$123,279.
- 2007-2010 NSF Division of Ecological Biology: Collaborative Research Grant
Project title: "Chronic Ecosystem Stress Project". PI: Kevin Feris.
Funding Level: \$128,759. (9-1-07 to 8-31-09). PIs for University of Montana portion of this collaborative project: Philip Ramsey, James Gannon
- 2009-2010 NSF REU Supplemental Funding: PI: Kevin Feris. Total funding level \$7,000 (June 1, 2009 to May 31, 2010), Project title: Year 2 REU Supplemental support for Collaborative Research: Chronic Stress in Ecosystems Project (DEB Proposal # 0717449)
- 2007-2010 National Science Foundation: MRI panel: PI: Alex Punnoose, Co-PI's: Tomoko Fujiwara, Kevin Feris, Jerry Harris, Darryl Butt. Total funding level: \$584,000 (9-1-07 to 8-31-10). Proposal title: MRI: Acquisition of an XPS system for Interdisciplinary Research and Education.
- 2008-2009 Inland Northwest Research Alliance: INRA Subsurface Biotechnology and Bioremediation Research Initiative. PI: Kevin Feris. Total funding level: \$15,665 (3-1-08 to 3-31-09). Proposal title: INRA supplemental funding for Collaborative Research: Chronic Stress in Ecosystems Project.
- 2008 Center for Advanced Energy Studies Collaborative Research Grant. PIs: Kevin Feris (BSU) and Joni Barnes (INL). Proposal title: "Consolidated Bioprocessing of Agricultural Wastewater Treatment and Bioenergy Production. Funding level: \$70,000 (4-27-07 to 8-31-08).
- 2006 INRA SSRI/SSGP Core Sequence Development and Instruction Summer 2006 and Academic Year 2006-07. PI: Kevin Feris. Funding level: \$14,553. Proposal Title: Feris Proposal for INRA SSRI/SSGP Core Sequence Development and Instruction Summer 2006 and Academic Year 2006-07.
- 2006 Center for Advanced Energy Studies Mini Grant. PIs: Kevin Feris (BSU) and Joni Barnes (INL). Funding level: \$26,000 (7-17-06 to 9-30-06). Proposal title: Development of a multi-species *Rhodopseudomonad* H₂ producing photosynthetic anaerobic microbial system.
- 2006 Boise State Faculty Research Grant. PI: Kevin Feris. Funding Level: \$5000 (7-1-06 to 6-30-07). Proposal title: Impacts of Ethanol on Anaerobic Production of Tert-Butyl Alcohol (TBA) from Methyl Tertiary Butyl Ether (MTBE) in Groundwater.
- 2006 University of California Water Resources Center Research Grant: "Does the release of ethanol amended gasoline into anaerobic freshwater aquifers accelerate the biological transformation of methyl-tert-butyl ether (MTBE) to tert-butyl alcohol (TBA)?" \$60,000 (7-1-05 to 6-30-07).
- 2005 NSF EPSCoR Equipment funds, 9-05 to 5-06. Funding level: \$21,500. PI(s): Kevin Feris, Greg Hampikian. An Applied Biosystems 310 Prism Genetic Analyzer is Necessary Research Infrastructure for the Department of Biology.

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2005 NSF EPSCoR Faculty Start Up Augmentation Program. \$10,350 (9-31-05 to 5-31-06)

Refereed Publications (* = publications with student authors):

1. *Smith, S.A., Hughes, E., Coats, E.R., Brinkman, C.K., McDonald, A., Harper, J.R. **Feris, K.P.**, Newby, D. N. (2015a). Toward sustainable dairy manure utilization: Upcycling algal biomass cultured on waste substrate to enhance VFA and biogas synthesis. *Journal of Chemical Technology & Biotechnology*.
2. *Passero, M., Cragin, B., Coats, E.R., McDonald, A.G. & **Feris, K.P.** (2015). Dairy wastewaters for algae cultivation, polyhydroxyalkanoate reactor effluent versus anaerobic digester effluent. *Bioenergy Research*. DOI: 10.1007/s12155-015-9619-9.
3. *Passero, M.L., Cragin, B., Hall, A.R., Staley, N., Coats, E.R., McDonald, A.G. *et al.* (2014). Ultraviolet radiation pre-treatment modifies dairy wastewater, improving its utility as a medium for algal cultivation. *Algal Research*, 6, Part A, 98-110.
4. *Wilson, E.R., Smalling, K.L., Reilly, T.J., Gray, E., Bond, L., Steele, L. *et al.* (2014). Assessing the Potential Effects of Fungicides on Nontarget Gut Fungi (Trichomycetes) and Their Associated Larval Black Fly Hosts. *JAWRA Journal of the American Water Resources Association*, 50, 420-433.
5. *Sorensen, P.O., Germino, M.J. & **Feris, K.P.** (2013). Microbial community responses to 17 years of altered precipitation are seasonally dependent and coupled to co-varying effects of water content on vegetation and soil C. *Soil Biology and Biochemistry*, 64, 155-163.
6. Coats, E.R., Searcy, E., **Feris, K. P.**, Shrestha, D., McDonald, A.G., Briones, A. *et al.* (2013). An integrated two- stage anaerobic digestion and biofuel production process to reduce life cycle GHG emissions from US dairies. *Biofuels, Bioproducts and Biorefining*, 7, 459-473.
7. *McTee, M.R., Gibbons, S.M., **Feris, K.P.**, Gordon, N.S., Gannon, J.E. & Ramsey, P.W. (2013). Heavy metal tolerance genes alter cellular thermodynamics in *Pseudomonas putida* and river *Pseudomonas* spp. and influence amoeba predation. *FEMS microbiology letters*, 347, 97-106.
8. *Rasa, E., Bekins, B.A., Mackay, D.M., Sieyes, N.R., Wilson, J.T., **Feris, K.P.** *et al.* (2013). Impacts of an ethanol- blended fuel release on groundwater and fate of produced methane: Simulation of field observations. *Water Resources Research*, 49, 4907-4926.
9. *Stanaway, D., Haggerty, R., Benner, S., Flores, A. & **Feris, K. P.** (2012). Persistent metal contamination limits lotic ecosystem heterotrophic metabolism after more than 100 years of exposure: A novel application of the resazurin resorufin smart tracer. *Environmental science & technology*, 46, 9862-9871.
10. *Ramsey, P.W., Gibbons, S.M., Rice, P., Mummey, D.L., **Feris, K.P.**, Moore, J.N. *et al.* (2012). Relative strengths of relationships between plant, microbial, and environmental parameters in heavy-metal contaminated floodplain soil. *Pedobiologia*, 55, 15-23.
11. *Gibbons, S.M., **Feris, K.P.**, McGuirl, M.A., Morales, S.E., Hynninen, A., Ramsey, P.W. *et al.* (2011). Use of microcalorimetry to determine the costs and benefits to *Pseudomonas putida* strain kt2440 of harboring cadmium efflux genes. *Applied and environmental microbiology*, 77, 108-113.
12. ***Feris, K.P.**, Otto, C., Tinker, J., Wingett, D., Punnoose, A., Thurber, A. *et al.* (2009a). Electrostatic interactions affect nanoparticle-mediated toxicity to gram-negative bacterium

- Pseudomonas aeruginosa* PAO1. *Langmuir*, 26, 4429-4436.
13. ***Feris, K.P.**, Ramsey, P.W., Gibbons, S.M., Frazar, C., Rillig, M.C., Moore, J.N. *et al.* (2009b). Hyporheic microbial community development is a sensitive indicator of metal contamination. *Environmental science & technology*, 43, 6158-6163.
 14. Wang, H., Wingett, D., Engelhard, M.H., **Feris, K.P.**, Reddy, K., Turner, P. *et al.* (2009). Fluorescent dye encapsulated ZnO particles with cell-specific toxicity for potential use in biomedical applications. *Journal of Materials Science: Materials in Medicine*, 20, 11-22.
 15. *Hanley, C., Layne, J., Punnoose, A., Reddy, K., Coombs, I., Coombs, A. *et al.* (2008). Preferential killing of cancer cells and activated human T cells using ZnO nanoparticles. *Nanotechnology*, 19, 295103.
 16. ***Feris, K. P.**, Mackay, D., Sieyes, N.d., Chakraborty, I., Einarson, M., Hristova, K. *et al.* (2008). Effect of ethanol on microbial community structure and function during natural attenuation of benzene, toluene, and o-xylene in a sulfate-reducing aquifer. *Environmental science & technology*, 42, 2289-2294.
 17. Drenovsky, R.E., **Feris, K.P.**, Batten, K.M. & Hristova, K. (2008). New and current microbiological tools for ecosystem ecologists: towards a goal of linking structure and function. *The American Midland Naturalist*, 160, 140-159.
 18. Mackay, D., de Sieyes, N., Einarson, M., **Feris, K.P.**, Pappas, A., Wood, I. *et al.* (2007). Impact of ethanol on the natural attenuation of MTBE in a normally sulfate-reducing aquifer. *Environmental science & technology*, 41, 2015-2021.
 19. *Reddy, K.M., **Feris, K.P.**, Bell, J., Wingett, D.G., Hanley, C. & Punnoose, A. (2007). Selective toxicity of zinc oxide nanoparticles to prokaryotic and eukaryotic systems. *Applied physics letters*, 90, 213902.
 20. Mackay, D.M., de Sieyes, N.R., Einarson, M.D., **Feris, K.P.**, Pappas, A.A., Wood, I.A. *et al.* (2006). Impact of ethanol on the natural attenuation of benzene, toluene, and o-xylene in a normally sulfate-reducing aquifer. *Environmental science & technology*, 40, 6123-6130.
 21. Noske, M.N., Jacobson, L., Einarson, M.D., **Feris, K.P.**, De Sieyes, N.R., MaCkay, D.M. *et al.* (2006). Impact of Ethanol on the Natural Attenuation of Benzene, Toluene, and o-Xylene in a Normally Sulfate-Reducing Aquifer. *Environmental science & technology*, 6123-6130.
 22. Ramsey, P.W., Rillig, M.C., **Feris, K.P.**, Holben, W.E. & Gannon, J.E. (2006). Choice of methods for soil microbial community analysis: PLFA maximizes power compared to CLPP and PCR-based approaches. *Pedobiologia*, 50, 275-280.
 23. Ramsey, P.W., Rillig, M.C., **Feris, K.P.**, Gordon, N.S., Moore, J.N., Holben, W.E. *et al.* (2005a). Relationship between communities and processes; new insights from a field study of a contaminated ecosystem. *Ecology letters*, 8, 1201-1210.
 24. Ramsey, P.W., Rillig, M.C., **Feris, K.P.**, Moore, J.N. & Gannon, J.E. (2005b). Mine waste contamination limits soil respiration rates: a case study using quantile regression. *Soil Biology and Biochemistry*, 37, 1177-1183.
 25. **Feris, K.P.**, Hristova, K., Gebreyesus, B., Mackay, D. & Scow, K. (2004a). A shallow BTEX and MTBE contaminated aquifer supports a diverse microbial community. *Microbial ecology*, 48, 589-600.
 26. **Feris, K.P.**, Ramsey, P.W., Frazar, C., Rillig, M., Moore, J.N., Gannon, J.E. *et al.* (2004b). Seasonal dynamics of shallow-hyporheic-zone microbial community structure along a heavy-metal contamination gradient. *Applied and environmental microbiology*, 70, 2323-2331.
 27. **Feris, K.P.**, Ramsey, P.W., Rillig, M., Moore, J.N., Gannon, J.E. & Holben, W.E. (2004c). Determining rates of change and evaluating group-level resiliency differences in hyporheic

microbial communities in response to fluvial heavy-metal deposition. *Applied and environmental microbiology*, 70, 4756-4765.

28. Ramsey, P.W., **Feris, K.P.**, Rillig, M., Gannon, J.E., Moore, J.N. & Holben, W.E. (2004). Determination Rates of Change and Evaluating Group-Level Resiliency Differences in Hyporheic Microbial Communities in Response to Fluvial Heavy-Metal Deposition. *Applied and Environmental Microbiology*, 70, 4756-4765.
29. Holben, W.E., **Feris, K.P.**, Kettunen, A. & Apajalahti, J.H. (2004). GC fractionation enhances microbial community diversity assessment and detection of minority populations of bacteria by denaturing gradient gel electrophoresis. *Applied and environmental microbiology*, 70, 2263-2270.

Conference Presentations:

Channel and Catchment Morphology, Spatial Intermittency, and Carbon Chemistry of a Headwater Stream., San Francisco, CA, Poster, Status: Accepted, **O'Donnell, C. (Presenter/Author)**, Wondzell, S. (Author), Feris, K. P. (Author), Tonina, D. (Author), Haggerty, R. (Author), December 18, 2015, Conference Name: American Geophysical Union Fall Meeting

Characterizing biogeochemical processes in the hyporheic zone using flume experiments and reactive transport modeling, San Francisco, CA, Poster, Status: Accepted, **Quick, A. (Presenter/Author)**, Farrell, T. (Author), Reeder, J. (Author), Tonina, D. (Author), **Feris, K. P.**, Benner, S. G., December 16, 2015, Conference Name: American Geophysical Union Fall Meeting

Statistical Modeling to Predict N₂O Production Within the Hyporheic Zone by Coupling Denitrifying Microbial Community Abundance to Geochemical and Hydrological Parameters, San Francisco, CA, Poster, **Farrell, T. (Presenter/Author)**, Quick, A. (Author), Reeder, J. (Author), Tonina, D. (Author), Benner, S. G., **Feris, K. P.**, December 15, 2015, Conference Name: American Geophysical Union Fall Meeting

Differences in the temperature sensitivity of soil organic carbon decomposition in a semi-arid ecosystem across an elevational gradient, San Francisco, CA, Poster, Status: Accepted, **Delvinne, H.**, Johns, A., **Feris, K. P.**, de Graaff, M.-A., December 14, 2015, Conference Name: American Geophysical Union Fall Meeting

Microbial ecology at the Reynolds Creek CZO, Argonne National Lab, Lecture, Status: Presented, **Feris, K. P. (Presenter/Author)**, November 16, 2015, Conference Name: Cross CZO Microbial Ecology Workshop, Sponsoring Organization: NSF

A trait-based predictive model of grazing resistance in algal polycultures, Washington, D.C., Poster, Status: Presented, **Thomas, P. (Presenter)**, Newby, D. N. (Author), **Feris, K. P. (Author)**, October 9, 2015, Conference Name: Algal Biomass Summit, Sponsoring Organization: DOE

Pilot Scale Algae Cultivation: UV Pre-Treatment Improves Integrity of *C. vulgaris* in Dairy Wastewater, San Diego, CA, Poster, Status: Presented, **Passero, M. (Presenter/Author)**, Hillsbury, R. (Author), MacDonald, A. (Author), Newby, D. T.

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(Author), Coats, E. (Author), **Feris, K. P. (Author)**, June 9, 2015, Conference Name: Algal Biomass, Biofuels, Bioproducts, Sponsoring Organization: Elsevier

Mixing anaerobic digester and polyhydroxyalkanoate reactor effluent to minimize nutrient input and water consumption of large scale algal growth operations, San Diego, CA, Poster, **Harper, J. (Presenter/Author)**, Coats, E. (Author), Newby, D. N. (Author), **Feris, K. P.**, June 8, 2015, Conference Name: Algal Biomass, Biofuels, Bioproducts, Sponsoring Organization: Elsevier

Species richness increases productivity of algae cultivated in dairy wastewater, San Diego, CA, Lecture, Status: Accepted, **Thomas, P. (Presenter/Author)**, Coats, E. (Author), **Feris, K. P. (Author)**, June 7, 2015, Conference Name: Algal Biomass, Biofuels, Bioproducts, Sponsoring Organization: Elsevier

Enhancing Greenhouse Gas Mitigation and Economic Viability of Anaerobic Digestion Systems: Optimizing Algal Biomass and Carbohydrate Production, System integration, Economic Modeling, and Education and Outreach, Washington, D.C., Poster, Status: Presented, **Feris, K. P. (Presenter/Author)**, Coats, E. (Author), MacDonald, A. (Author), Guileen, D. (Author), Thomas, P. (Author), Hillsbury, R. (Author), Stowe, E. (Author), Wei, L. (Author), Hartzell, D. (Author), Breuer, M. (Author), April 8, 2015, Conference Name: USDA NIFA Project Directors Meeting

Enhancing Greenhouse Gas Mitigation and Economic Viability of Anaerobic Digestion Systems: Optimizing Fermentation, PHA and AD reactors, and Enhancing Biomass Recovery for Commodity Production, Washington, D.C., Poster, Status: Presented, **Feris, K. P. (Presenter/Author)**, Coats, E. (Author), MacDonald, A. (Author), Guileen, D. P. (Author), Thomas, P. (Author), Hillsbury, R. (Author), Stowe, E. (Author), Wei, L. (Author), Hartzell, D. (Author), Breuer, M. (Author), April 8, 2015, Conference Name: USDA NIFA Project Directors Meeting

Upcycling Dairy Manure(Finding Alternative Uses of a High-value Substrate), Boise, ID, Lecture, Status: Presented, **Coats, E. (Presenter/Author)**, **Feris, K. P.**, Newby, D. T. (Author), MacDonald, A. (Author), February 25, 2015, Conference Name: Western Initiative for the Dairy Environment (WIDE)

Flume experiments elucidate relationships between microbial genetics, nitrogen species and hydraulics in controlling nitrous oxide production in the hyporheic zone, San Francisco, Poster, Status: Presented, Quick, A. (Presenter), Farrell, T. (Author), Reeder, W. (Author), **Feris, K. P.**, Tonina, D. (Author), Benner, S. (Author), December 12, 2014, Conference Name: American Geophysical Union

Enhancing Greenhouse Gas Mitigation and Economic Viability of Anaerobic Digestion Systems: Algal Carbon Sequestration and Bioplastics Production, Twin Falls, ID, Poster, Status: Presented, **Feris, K. P.**, Coats, E. (Author), McDonald, A., Post-Guillen, D., September 16, 2014, Conference Name: Sustainable Western Dairy and Related Industries Workshop

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Integrated Approach to Algal Biofuel, Biopower, and Agricultural Waste Management, Twin Falls, ID, Poster, Status: Presented, **Feris, K. P.**, Coats, E. (Author), McDonald, A. (Author), Newby, D., September 16, 2014, Conference Name: Sustainable Western Dairy and Related Industries Workshop

Enhancing Greenhouse Gas Mitigation and Economic Viability of Anaerobic Digestion Systems: Algal Carbon Sequestration and Bioplastics Production, Gainesville, FL, Poster, Status: Presented, **Feris, K. P. (Presenter/Author)**, Newby, D. (Author), Coats, E. (Author), McDonald, A. (Author), Post-Guillen, D. (Author), January 7, 2014, Conference Name: NIFA Climate Change Project Directors Meeting,

Soil organic carbon and its temperature sensitivity along an elevational gradient in a semi-arid ecosystem, Reynolds Creek, Poster, Status: Presented, Delvinne, H. (Presenter/Author), **Feris, K. P. (Author)**, Flores, A. (Author), Benner, S. (Author), deGraaff, M.-A. (Author), September 2014, Conference Name: Reynolds Creek CZO All Hands Meeting

Integrated Approach to Algal Biofuel, Biopower, and Agricultural Waste Management, Washington, D.C., Lecture, Status: Presented, Newby, D., **Feris, K. P.**, Coats, E., March 15, 2014, Conference Name: DOE Algal Biofuels Strategy Meeting,

Carbon availability and the distribution of denitrifying organisms influence N₂O production in the hyporheic zone. Farrell, T. B.; Quick, A. M.; Reeder, W. J.; Tonina, D.; Benner, S. G.; Feris, K. P. American Geophysical Union, Fall Meeting 2013,

Dissolved oxygen concentration profiles in the hyporheic zone through the use of a high density fiber optic measurement network. Reeder, W. J.; Quick, A. M.; Farrell, T. B.; Benner, S. G.; Feris, K. P.; Tonina, D. American Geophysical Union, Fall Meeting 2013

Modeling hyporheic flow paths to quantify nitrous oxide production in stream sediments. Quick, A. M.; Farrell, T. B.; Reeder, W. J.; Feris, K. P.; Tonina, D.; Benner, S. G. American Geophysical Union, Fall Meeting 2013

Nutrient Sequestration using Algae with AD Systems. Kevin Feris (BSU), Maxine Prior (UI), Erik R. Coats (UI), Erin Searcy (DOE), Donna Post Guillen (INL), Sam Alessi (INL). EPA Agstar Conference, Indianapolis, IN June 2013.

Integrated 2-stage Anaerobic digestion of Dairy Manure for Reducing Greenhouse Gas Emissions. Erik R. Coats, P.E., Ph.D. - Associate Professor of Civil Engineering, Kevin Feris (BSU), Maxine Prior (UI), Erin Searcy (INL). EPA Agstar Conference, Indianapolis, IN June 2013.

Reynolds Creeek Critical Zone Observatory. Kathleen A. Lohse , Mark Seyfried, Shawn Benner, Nancy Glenn, Alejandro Flores, Colden Baxter, Benjamin Crosby Marie-Anne de Graaf, Kevin Feris, Bruce Finney, Gerald Flerchinger, Sarah Godsey, James McNamara, Daniel Marks, Jennifer Pierce, Keith Reinhardt, AGU Chapman conference, December 2013.

Got Fuel? Integrated Approach to Algal Biofuel, Bio-power, and Agricultural Waste Management. Boise State Materials Science Program Seminar Series, Invited talk.

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October, 2013.

Problems into Solutions: Bioenergy, Biofuels, and Bioplastics from Agricultural Wastewater. Kevin Feris, Erik Coats, Deborah Newby Maxine Prior, Nathan Staley, Amy Hall. Biomolecular PhD program Open House, Boise ID. April, 2013.

Problems into Solutions: Bioenergy, Biofuels, and Bioplastics from Agricultural Wastewater. Kevin Feris, Erik Coats, Deborah Newby Maxine Prior, Nathan Staley, Amy Hall. Green Expo, Boise ID. April, 2013.

M. Prior, B. Cragin, A. Hall, N. Staley, E. Coats, K. Feris. Ultraviolet Radiation Pre-treatment Modifies Dairy Wastewater, Improving Its Utility as a Medium for Algal Cultivation. Algal Biomass, Biofuels, and Bioproducts. Toronto, Canada June 2013.

CAES BioEnergy Initiative External Review. Erik R. Coats, Kevin Feris, Center for Advanced Energy Studies, Idaho Falls, ID. January 2013.

Feris, K. P. (Presenter/Author), Jilek, C. (Author), Huber, D. (Author), Reinhardt, K. (Author), de Graaff, M.-A. (Author), Lohse, K. (Author), Germino, M. (Author), AAAS NW Meeting, "Influence of precipitation regime on microbial decomposition patterns and community structure in semi arid ecosystems: altered roles of bacteria and fungi.," AAAS, Boise.

Feris, K. P. (Author), Campos, X. (Presenter/Author), Germino, M. (Author), Forbey, J. S. (Author), de Graaff, M.-A., 2012 Idaho EPSCoR and Idaho NASA EPSCoR Annual Meeting, "Precipitation impacts on plant-derived soil C input and soil C dynamics," Idaho EPSCoR, Boise, ID. (Presented and/or Published: October 2, 2012).

Feris, K. P. (Presenter/Author), Jilek, C. (Author), Huber, D. (Author), Reinhardt, K. (Author), de Graaff, M.-A. (Author), Lohse, K. (Author), Germino, M. (Author), AAAS Pacific Division Annual Meeting, "Influence of Precipitation Regime on Microbial Decomposition Patterns and Community Structure in Semi-Arid Ecosystems: Altered Roles of Bacteria and Fungi," AAAS, Boise, ID. (Presented and/or Published: June 25, 2012).

Feris, K. P. (Other), de Graaff, M.-A. (Other), AAAS Pacific Division Annual Meeting, "Responses of sagebrush-steppe ecosystems to a changing climate," AAAS, Boise, ID. (Presented and/or Published: June 25, 2012).

Feris, K. P. (Author), Jilek, C. (Author), Huber, D. (Author), Reinhardt, K. (Author), de Graaff, M.-A. (Author), Lohse, K. (Author), Germino, M. (Author), Epsco Tri-State Meeting, "Effect of Precipitation Regime on Microbial Decomposition Patterns in Semi-Arid Ecosystems," Idaho EPSCoR, Sun Valley, ID. (Presented and/or Published: April 2, 2012).

Feris, K. P. (Presenter/Author), The Idaho Solid Waste Association Annual Meeting, "Anaerobic Digestion in Idaho: Potential for Waste Mitigation and Energy Production,"

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The Idaho Solid Waste Association, Boise, ID. (Presented and/or Published: March 13, 2012).

Feris, K. P. (Presenter/Author), Boise State Faculty Senate Faculty Panel on Renewable Energy, "Bioenergy and Biofuels," BSU Faculty Senate, Boise, ID. (Presented and/or Published: March 13, 2012).

Feris, K. P., Coats, E. (Presenter), Searcy, E. (Presenter), Idaho Research Symposium: Energy Connected, "Design and Operational Improvements, and LCA in Anaerobic Digestion of Fermented Dairy Manure Using a 2-Stage process," Center for Advanced Energy Studies, Idaho Falls, ID.

Feris, K. P. (Presenter/Author), Coats, E. (Author), Post-Guillen, D. (Author), Hamilton, M. (Author), McDonald, A. (Author), Idaho Research Symposium: Energy Connected, "Enhancing Greenhouse Gas Mitigation And Economic Viability Of Anaerobic Digestion Systems: Algal Carbon Sequestration And Bioplastics Production," Center for Advanced Energy Studies, Idaho Falls, ID.

Influence of Precipitation Regime on Microbial Decomposition Patterns in Semi-Arid Ecosystems. Carrie Jilek¹, David Huber², Keith Reinhardt², Marie-Anne de Graaff¹, Katherine Lohse², Matt Germino³ and Kevin Feris. American Geophysical Union Fall Meeting. San Francisco, CA. December 5th-9th, 2011.

Lotic ecosystem response to chronic metal contamination assessed by the Resazurin-Resorufin Smart Tracer with data assimilation by the Markov chain Monte Carlo method Daniel Stanaway, Roy Haggerty, Shawn Benner, Alejandro Flores, Kevin Feris. American Geophysical Union Fall Meeting. San Francisco, CA. December 5th-9th, 2011.

ASSESSING EFFECTS OF CHRONIC METAL STRESS ON LOTIC MICROBIAL ECOSYSTEMS USING A NOVEL SMART TRACER Daniel Stanaway*, Roy Haggerty, Alejandro Flores, Shawn Benner, Kevin Feris. AWRA 2011 ANNUAL WATER RESOURCES CONFERENCE Albuquerque, New Mexico November 7-10, 2011

MARKOV CHAIN MONTE CARLO OPTIMIZATION OF THE RAZ RRU ADVECTION DISPERSION EQUATION TO DETERMINE MICROBIAL ECOSYSTEM RESPONSE TO CONTAMINATION. Daniel Stanaway, Roy Haggerty, Shawn Benner, Alejandro Flores, Kevin Feris,

Quantifying effects of chronic heavy metal contamination to river ecosystems using a novel metabolically reactive smart tracer. Daniel Stanaway and Kevin Feris. 2011 EPA STAR Fellow Conference. Washington D.C. September, 2011.

Optimization of a Novel Two-Stage Lignocellulose Saccharification Reactor Design. Brian Deis & Kevin Feris, American Society for Microbiology General Meeting. May 21st-24th, New Orleans.

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Development of microbial transformation technologies and platforms for biofuels production from bench to pilot. Kevin Feris, Jon Van Gerpen, Tim Magnuson, Greg Bala, Melinda Hamilton. CAES professional exchange. Center for Advanced Energy Studies, Idaho Falls, ID. April 14th, 2011.

Bioenergy Research at Boise State University. Kevin Feris. CAES Idaho research panel. Center for Advanced Energy Studies, Idaho Falls, ID. February 1st-3rd.

Experimental manipulation of precipitation regime affects soil microbial community structure and carbon storage in the semi-arid sagebrush steppe. Kevin Feris and Patrick Sorensen. EPSCOR tri-state meeting April 5th-8th, New Mexico.

Influence of precipitation regime on microbial extracellular enzyme activity in semi-arid ecosystems. Carrie Jilek, Kevin Feris, Patrick Sorensen. EPSCOR tri-state meeting April 5th-8th, New Mexico.

Cellulosic Ethanol Production in Idaho. Kevin Feris and Brian Deis. Boise State University Day at the capitol. Jan 24th, 2011.

Center for Advanced Energy Studies Bioenergy initiative External review. August 16th, 2011, Center for Advanced Energy Studies, Idaho Falls, ID.

“Bioenergy Research Capacity of Boise State University”. Biofuel Panel. Idaho Research Symposium. Center for Advanced Energy Studies, Idaho Falls, ID. Feb 1st-2nd, 2011.

Optimization of a Novel Two-Stage Lignocellulose Saccharification Reactor Design. B. Deis, K. Feris. General Meeting American Society for Microbiology. May 21st, 24th, 2011, New Orleans, LA.

Day at the capitol. “Cellulosic Ethanol Production in Idaho”. Jan 24th, 2011.

Influence of Precipitation Regime on Microbial Decomposition Patterns in Semi-Arid Ecosystems. Carrie Jilek, David Huber, Keith Reinhardt, Marie-Anne deGraaff, Katherine Lohse, Matt Germino and Kevin Feris. American Geophysical Union Fall Meeting. December 6th-8th, 2011. San Francisco, CA.

Lotic ecosystem response to chronic metal contamination assessed by the resazurin-resorufin smart tracer with data assimilation by the Markov chain Monte Carlo method. Daniel Stanaway, Dr. Alejandro Flores, Dr. Roy Haggerty, Dr. Shawn Benner, Dr. Kevin Feris. American Geophysical Union Fall Meeting. December 6th-8th, 2011. San Francisco, CA.

Direct Quantification of Microbial Community Respiration along a Contamination Gradient using a novel Hydrologic “Smart” Tracer

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Daniel Stanaway¹, Roy Haggerty², Shawn Benner¹, Alejandro Flores¹, Kevin Feris.
American Geophysical Union Fall Meeting. December 13th-17th, 2010. San Francisco, CA.

Effect of Change in Precipitation on Soil Microbial Community Structure and Function in Semi-Arid Ecosystems. Patrick Sorensen, Matt Germino, and Kevin Feris. American Geophysical Union Fall Meeting. December 13th-17th, 2010. San Francisco, CA.

Sorensen P., Thompson D., Huttanus B., Lalor, S., Ingram L., Germino M., Feris K.
Experimental Manipulation of Soil Moisture Regime Impacts Soil Microbial Community Abundance, Diversity, and Function in a Semi-Arid Sagebrush Steppe. NSF-EPSCoR Idaho Annual Meeting, Boise, ID.

Sorensen P., Thompson D., Huttanus B., Lalor, S., Ingram L., Germino M., Feris K.
Experimental Manipulation of Soil Moisture Regime Impacts Soil Microbial Community Abundance, Diversity, and Function in a Semi-Arid Sagebrush Steppe. International Society for Microbial Ecology. Seattle, WA.

Sorensen P., Reinhardt K., Ingram L., Thompson D., Huttanus B., Germino M., Feris K.
Experimental Manipulation of Precipitation Structures Microbial Communities in the Sagebrush Steppe. NSF-EPSCoR Annual Tri-State Consortium Meeting. Incline Village, NV.

Sorensen P., Janzen B., Reinhardt K., Ingram L., Bachman S., Thompson D., Huttanus B., Germino M., Feris K. (October 2009) Understanding soil-atmosphere carbon exchange through soil microbial and plant community dynamics; opportunities for predicting ecosystem response to global climate change. NSF-EPSCoR Annual National Meeting, Washington DC.

Sorensen P., Thompson D., Huttanus B., Ingram L., Germino M., Feris K. (August 2009) Experimental manipulation of precipitation regime and vegetation type alter microbial community structure and function at the Protective Cap Barrier Experiment. NSF-EPSCoR Idaho Annual Meeting, Moscow, ID.

“Sequence Analysis of Putative ATPas Divalent Metal Cation efflux pumps from a suite of novel metal tolerant isolates recovered from the Clark Fork River, MT” Kevin P. Feris, Steve Lalor, Sean M. Gibbons, James E. Gannon, and Philip Ramsey. American Society for Microbiology, General Meeting. May 17th-21st, 2009. Philadelphia, PA.

“Ecosystem processes and microbial community structure along a heavy metal contamination gradient in river sediment” Philip Ramsey, Sean Gibbons, **Kevin Feris**, and James Gannon 12th International Symposium on Microbial Ecology - August 17-22, 2008, Cairns, Australia.

“Effects of Long-Term Heavy Metal Stress on Hyporheic Microbial Community Structure and Ecosystem Function: How the Cost of Metal Tolerance Shapes Community

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Composition”. **Kevin P. Feris**, Mariona Nadal Ribelles, Philip Ramsey, and James Gannon. 12th International Symposium on Microbial Ecology - August 17-22, 2008, Cairns, Australia.

“Effects of long-term heavy metal stress on hyporheic microbial community structure of the Clark Fork River, MT” Mariona Nadal-Ribelles and **Kevin Feris**, Boise State University, Department of Biology Boise, ID 83725. Undergraduate Research Symposium, April 14th, 2008, Boise, ID.

“Riparian Ecosystem Consequences -a microbial perspective. or predicting and quantifying natural resource damage in chronically stressed ecosystems” J. Gannon, P.R. Ramsey, **K. Feris**, J. Moore, W. Woessner and M. Rillig Students: Chris Frazer, Bruce Wielinga, O.S. Moynahan. NIEHS sponsored international symposium on Mine-tailing. June 4-6 University of Arizona

“Antimicrobial Effects and Mechanisms of Toxicity of Metal Oxide Nanoparticles”. Kevin Feris, Jason Bell, Madhu Kongara, Isaac Coombs, Hua Wang, Cory Hanley, Alex Punnoose, Denise Wingett. AAAS Regional Meeting Boise ID, June 17th-21st, 2007.

“Assessing Microbial Response to Nutrient Loading in Natural Stream Systems in the Dry Creek Experimental Watershed, Idaho”. Hess, Pam; Nadal, Mariona; Feris, Kevin. AAAS Regional Meeting Boise ID, June 17th-21st, 2007.

“Development of a *Rhodopseudomonad* H₂ Producing Microbial System Driven by Agricultural Wastewater” Kevin Feris, Dana Moracco, Joni Barnes, Cathy Rae. AAAS Regional Meeting Boise ID, June 17th-21st, 2007.

“Selective toxicity of zinc oxide nanoparticles to gram-positive and gram-negative bacterial systems.” K. Feris, K. M. Reddy, Jason Bell, Denise Wingett, and Alex Punnoose. ASM General Meeting, May 21-25th, 2007 Toronto CA.

“Evaluation of potential toxicity issues and nanomedicine based applications of ZnO nanoparticles”. D.G. Wingett, **K. Feris**, C. Hanley, K. Reddy, H. Wang, and A. Punnoose. Boise State University, Departments of Biology and Physics, Boise, ID 83725. Keystone Symposium, in Biomedicine.

“Linking Impacts of Ethanol on Subsurface Microbial Ecology and Anaerobic Transformations of BTEX”. Kevin Feris, *Boise State University, Boise, ID*. The 17th Annual AEHS Meeting & West Coast Conference on Soils, Sediments and Water March 19th - 22nd, 2007 Marriott Mission Valley, San Diego, California

Wee Seng Wong and **Kevin Feris**. “Detection and Characterization of the Microorganisms in a PCE Contaminated Groundwater Plume via Molecular Analyses.” 5th Annual INBRE research conference. North Idaho College in Coeur d'Alene, Idaho (August 6 - 8).

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Kevin P. Feris, Doug Mackay, Murray Einarson, Nick de Sieyes, Lisa Jacobsen, Mark Knoske, Larry Justice, Krassimira Hristova, and Kate M. Scow. "Impacts of Ethanol and BTX on Microbial Populations, Processes and Community Composition in a Sulfate-Reducing Contaminated Aquifer." Geological Society of America Annual Meeting, Salt Lake City, UT. October 16th-20th, 2005. Invited lecture in session on "Quantifying Controls on Microbial Reaction Rates in Subsurface Environments".

Kevin P. Feris, Doug Mackay, Murray Einarson, Nick de Sieyes, Lisa Jacobsen, Mark Knoske, Larry Justice, Krassimira Hristova, and Kate M. Scow. "Impact of a Controlled Ethanol Release on In Situ Biodegradation of BTX and MTBE and on Population Densities and Community Composition of Archaea and Bacteria". The Joint International Symposia for Subsurface Microbiology (ISSM 2005) and Environmental Biogeochemistry (ISEB XVII), Jackson Hole, WY, August 15-19, 2005.

Nick de Sieyes, Doug Mackay, Murray Einarson, Mark Knoske, Larry Justice, Lisa Jacobson, **Kevin Feris**, and Kate Scow. "Degradation rates of benzene, toluene and oxylene in a normally sulfate-reducing aquifer: Impact of ethanol in a controlled field experiment". NGWA August 18, 2005, Costa Mesa, CA.

Kevin P. Feris, Doug Mackay, Murray Einarson, Nick de Sieyes, Lisa Jacobsen, Mark Knoske, Larry Justice, Krassimira Hristova, and Kate M. Scow. "Increased Archaeal Cell Densities and Methane Production in Response to a Controlled Field Release of Ethanol and Benzene, Toluene, and Xylene at Vandenberg Air Force Base, CA: Implications for Using ETOH as a Fuel Oxygenate." General Meeting American Society for Microbiology, Atlanta, Georgia, June 6th – 9th, 2005.

Kevin P. Feris, Doug Mackay, Murray Einarson, Nick de Sieyes, Lisa Jacobsen, Mark Knoske, Larry Justice, Krassimira R. Hristova, and Kate M. Scow. "Presence and Abundance of Bacteria and Archaea During a Controlled Field Release of Ethanol and Benzene, Toluene, and Xylene at Vandenberg Air Force Base, California. **2005 NGWA Conference on MTBE and Perchlorate: Assessment, Remediation, and Public Policy**. May 26-27, 2005, San Francisco, CA.

Douglas Mackay, Murray Einarson, Nick de Sieyes, Mark Knoske, Larry Justice, Lisa Jacobson, Isaac Wood, **Kevin Feris**, and Kate Scow. "In Situ Production and Degradation of TBA in a MTBE-Contaminated, Normally Sulfate-Reducing Aquifer Impacted by an Experimental Ethanol Release". **2005 NGWA Conference on MTBE and Perchlorate: Assessment, Remediation, and Public Policy**. May 26-27, 2005, San Francisco, CA.

Scow, K. M.; Hristova, K.; **Feris, K. P.** "Dynamics and Composition of Microbial Communities in Contaminated Groundwater". **3rd annual Microbial Observatories Principal Investigators Workshop**. Bozeman MT, September 12-14, 2004.

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Feris, K. P.; Wood, I. A.; Hristova, K.; Gebreyesus, B.; Mackay, D.; Scow, K. M.;
“Rapid structural changes in, and reduced BTEX degradation rates by, aquifer microbial
communities in response to simultaneous exposure to ETOH and BTEX: Implications for
using ETOH as a fuel oxygenate.” **10th Annual Symposium for the International
Society for Microbial Ecology.** Cancun, Mexico, August 22 – 27, 2004.

Research Related Service

Journal Reviewer:

2007-current Science of the Total Environment
2007-current Hydrobiologia
2007-current Frontiers in Ecology and the Environment
2006-current Soil Science Society of America Journal
2006-current Water Research
2006-current Chemosphere
2006-current Geomicrobiology
2003 – current Applied and Environmental Microbiology
2003 – current Environmental Science and Technology
2003 – current Microbial Ecology
2003 – current Environmental Microbiology
2003 – current Biodegradation
2004 – current FEMS Microbial Ecology
2005 – current Journal of Environmental Management
2005 – current Journal of Contaminant Hydrology

Research related service (Boise State and Broader Scientific Community):

2014-current Department Chair: Biological Sciences Department, Boise State
University
2011-2014 Chair EEB PhD Development Committee
2012-2014 Boise State Faculty Senator, Graduate College.
2011 Chair: College of Arts and Sciences Tenure and Promotion Committee.
2011 Committee member: Biomedical and Biomolecular Science searches for
the Department of Biological Sciences Boise State University.
2010 Committee member: College of Arts and Sciences Tenure and Promotion
Committee.
2010 Chair: Ecosystem Ecologist Search Committee for Department of
Biological Sciences, Boise State University
2007-2008 Boise State University Focus the Nation 2008 steering committee member.
2007-2008 Director of Research Symposium for Focus the Nation event at Boise
State University Jan 30-31st, 2008.
2007 NSF Panel member: NSF Bio and Hydrogen Panel Directorate for
Engineering, Division of Chem., Bioeng., Environ., Transport Syst. May
29-May 31st, 2007.
2007 Proposal Reviewer for NSF Ecological Biology Program (proposal
submission date 7-9-2007).
2007 Technical Session Chair 2007 Environmental Sensing Symposium.
October 25-26, 2007 Boise State University, Boise, ID.

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2007 Biological sensors Session Chair, 2007 Environmental Sensing Symposium. October 25-26, 2007 Boise State University, Boise, ID.

2007 Science Fair Judge: Riverstone School. Riverstone Invention Convention. February 14, 2007.

2006-2009 Board member Northwest Science Association.

2006 Member of College of Arts and Sciences Tenure and Review Committee

2006 - current Member of BSU Biology Graduate Studies Committee

2005-2006 Member of BSU Biology Department Research committee

2006 Member of search committee for the Systematist search.

2005- Member of Graduate student research grant review committee

2005 - Member of Research Committee, Department of Biology, Boise State University

2002 Volunteer: Global Justice Action Summit

2001 – 2002 Biochemistry/Molecular-Microbiology Graduate student association representative to the campus wide Graduate Student Association, University of Montana,.

2000 -2001 Member of the Graduate Student Complaint Committee

1999 Science Fair Judge, The University of Montana Science Fair, April 12, 1999.

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**Curriculum Vitae
Jennifer Sorensen Forbey, Ph.D.**

Department of Biological Sciences
Boise State University
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Boise, ID 83725-1515
208-426-4426
jenniferforbey@boisestate.edu

PROFESSIONAL PREPARATION

INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
Mesa State College, Grand Junction, CO	B.S.	1997	Biology
University of Utah, Salt Lake City, UT	Ph.D.	2003	Biology
Australian National Univ, Univ. Tasmania, AUS	NSF, PostDoc	2003-04	Biology
Pharmacokinetics and Toxicokinetics for the Industrial Scientist Training		2006	Pharmacokinetics
Pharmacokinetics for Pharmaceutical Scientists Course		2007	Pharmacokinetics

APPOINTMENTS

2014-Pres.	Associate Professor, Dept of Biological Sciences, Boise State University, Boise, ID
2008-2014	Assistant Professor, Dept of Biological Sciences, Boise State University, Boise, ID
2007-2009	Pharmacokinetic Consultant, Rosa Pharmaceuticals, INC
2007	Instructor, Pharmacokinetics and Pharmacodynamics, Dept of Pharmacology and Toxicology, University of Utah, SLC, UT
2007-2008	Research Assistant Professor, Dept Pharmaceutics and Pharmaceutical Chemistry, University of Utah, SLC, UT
2007	Instructor, Global Crises in Natural Resources, Dept of Biology, University of Utah, SLC, UT
2005-2007	Scientist I, Pharmacokineticist, NPS Pharmaceuticals, SLC, UT
2003-2007	National Science Foundation International Research Postdoctoral Fellow (Australia and New Zealand)
2004-2005	Assistant Professor, Oregon State University, Dept of Fisheries and Wildlife, Cascade Campus, Bend, OR
2002-2003	Graduate Research Fellow, University of Utah, SLC, UT
2001-2002	University Teaching Assistantship Fellow, University of Utah, SLC, UT
1999-2001	Dept of Biology Teaching Assistant, University of Utah, SLC, UT

PUBLICATIONS

Summary: 34 peer-reviewed publications in journals and 1 book chapter have been published since 2001. Plus 1 response article in Science, 1 book review, 1 news article and 4 other publications are in review or under revision for resubmission (J.S. Sorensen/Forbey authorship in bold, graduate student authorship indicated with *, undergraduate authorship indicated with **, international collaborators underlined)

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Peer-reviewed research articles

38. Olsoy, P.J.* , T. Griggs, A. Ulappa, K. Gehlken, Lisa A. Shipley, Glenn E. Shewmaker, **J. S. Forbey**. *In Review* Journal of Arid Environments. Nutritional Analysis of Sagebrush by Near-infrared Reflectance Spectroscopy
37. Utz, J.*, L.A. Shipley, J. Rachlow, T.R. Johnson-Yellin, M.J. Camp*, **J.S. Forbey**. *In review* Wildlife Biology. Understanding tradeoffs between predation and food risks in a specialist mammalian herbivore.
36. Crowell, M.M.* , M.J. Camp*, L.A. Shipley, J.L. Rachlow, J.S. Forbey, and T.R. Johnson. *In review* Ecology and Evolution. Selection of Food Patches by Sympatric Herbivores in Response to Concealment and Distance from a Refuge.
35. Parikh, G.L.* **J.S. Forbey**, B. Robb**, R.O. Peterson, L.M. Vucetich, J.A. Vucetich. *In review* at Oikos. The influence of diet composition, plant defensive chemicals, and winter severity on the nutritional condition of a free-ranging, generalist herbivore.
34. Camp, M.J.* , L.A. Shipley, T.R. Johnson, M.M. Crowell*, J.S. Forbey, J.L. Rachlow. *In Press* Ecology. Modeling tradeoffs between the risk of starvation and toxicity: A framework for understanding habitat selection.
33. Kohl, K.D.* , E. Pitman**, B. Robb**, J.W. Connelly, M.D. Dearing, **J.S. Forbey**. 2015. Monoterpenes as inhibitors of digestive enzymes and counter-adaptations in a specialist avian herbivore. *Journal of Comparative Physiological Biology-B*. 185(4): 425-34.
32. Pu, X , L. Lam**, K. Gehlken**, A.C. Ulappa*, J.L. Rachlow, **J.S. Forbey**. 2015. Antioxidant capacity of Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*) varies spatially and is not related to the presence of a sagebrush dietary specialist. *Western North American Naturalist*. 75(1): 78-87.
31. Olsoy, P.J.* , **J.S. Forbey**, J.L. Rachlow, J.D. Nobler*, N.F. Glenn, L.A. Shipley. 2015. Fearscape: mapping functional cover of prey with terrestrial LiDAR. *BioScience*. 65(1): 74-80.
30. McArthur, C., P.B. Banks, R. Boonstra, **J.S. Forbey**. 2014. The dilemma of foraging herbivores: dealing with food and fear. *Oecologia*.176(3):677-689.
29. Ulappa, A.C.* , R.G. Kelsey, G.G Frye*, J.L. Rachlow, L.A. Shipley, L. Bond, X. Pu, **J.S. Forbey**. 2014. Plant protein and secondary metabolites influence diet selection in a mammalian specialist herbivore. *Journal of Mammalogy*. 95(4): 834-842.
28. Frye, G.G.* , J.W. Connelly, D.D. Musil, C. Cardinal, L. Cross, **J.S. Forbey**. 2014. Do necklace-style radiotransmitters influence flushing behavior of greater sage-grouse? *The Wildlife Society Bulletin*. 38(2):433-438. The Idaho Department of Fish and Game, Idaho Governor's Office for Species Conservation, Bureau of Land Management
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- ¹ The Working Group comprised of several contributors, including J.S. Forbey. However, TREE limits the number of authors to five.
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 11. **Sorensen, J.S.**, J. D. McLister and M.D. Dearing. 2005a. Plant secondary metabolites compromise the energy budgets of specialist and generalist mammalian herbivores. *Ecology*. 86: 125-139.
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 9. Dearing, M.D., J.D. McLister and **J.S. Sorensen**. 2005. Woodrat (*Neotoma*) herbivores maintain nitrogen balance on a low nitrogen, high phenolic forage, *Juniperus monosperma*. *Journal of Comparative Physiology B: Biochemical, Systematic, and Environmental Physiology*. 175(5): 349-355.
 8. **Sorensen, J.S.**, E. Heward**, and M.D. Dearing. 2005c. Plant secondary metabolites alter the feeding patterns of a mammalian herbivore (*Neotoma lepida*). *Oecologia*. 146:415-422.
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 5. Lamb, J. G., P. Chaterjie, P. Marick, **J. S. Sorensen**, S. Haley, and M. Denise Dearing. 2004. Liver biotransforming enzymes in woodrats *Neotoma stephensi* (Muridae).

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- Comparative Biochemistry and Physiology C. 138(2): 195-201.
4. **Sorensen, J.S.** and M.D. Dearing. 2004. Physiological limitations of dietary specialization in herbivorous woodrats (*Neotoma* spp.) *in* Animals and Environments: Proceedings of the Third International Congress of Comparative Physiology and Biochemistry ISC1275. Ed. S. Morris and A. Vosloo. Elsevier. Pp 313-320.
 3. **Sorensen, J.S.** and M.D. Dearing. 2003. Elimination of plant toxins: an explanation for dietary specialization in mammalian herbivores. *Oecologia*. 134: 88-94.
 2. Lamb, J.G., **J.S. Sorensen**, and M.D. Dearing. 2001. Comparison of detoxification enzyme mRNAs in woodrats (*Neotoma lepida*) and laboratory rats. *Journal of Chemical Ecology*. 27(4): 845-857.

Book Chapters

1. **Forbey, J.S.** and M.D. Hunter. 2012. The herbivore's prescription: A pharm-ecological perspective on host plant use by vertebrate and invertebrate herbivores. *In* The ecology of plant secondary metabolites: genes to global processes. Eds. GR Iason, M. Dicke and SE Hartley. Ecological Reviews. Cambridge University Press, Cambridge.
-

Other publications:

4. M.R. Fremgen. 2015. Diversity within a Species: Studying Sagebrush Morphotypes. Sage Notes 37
(1): 12-13. Idaho Native Plants Society. Available at:
<http://idahonativeplants.org/news/SageNotesMar2015.pdf>.
3. Moore, B.D., W.J. Foley, J.S. Forbey, J.L. DeGabriel. 2013. Response letter to "Self-medication in animals," J. C. de Roode *et al.*, Perspectives, 12 April, p. 150. *Science*. 340: 1041.
2. **Forbey, JS.** 2013. Evolutionary insight merges with toxicology, a review of Monosson, Emily. 2012. Evolution in a toxic world: how life responds to chemical threats. *Ecology*. 94(1): 257-264.
1. **Forbey, JS**, G.G. Frye, X. Pu and J.W. Connelly. 2011. Toxic Scat: A mechanism to prevent overdosing on plant chemicals by grouse. *Grouse News* 42:24-29.

FUNDING

Summary: My scholarly work at Boise State has received over \$2.4 million total funding since 2008, with over \$600,000 coming directly to Boise State from external federal and state agencies (National Science Foundation, Bureau of Land Management, Idaho Department of Fish and Game, Idaho Office of Species Conservation, Idaho Army National Guard) and the remainder supporting collaborative projects. Below are the sources and brief description of funding that is planned, pending, current and completed.

Pending support

NSF-DEB	1/15/16	-	1/14/21	8% effort
\$1,398,943				
Forbey (PI)				
Title: The Influence of Plant Secondary Metabolites on the Stability of Ecological Communities				

The overall objective of this research is to test the central hypothesis that adaptive browsing by vertebrate herbivores in response to PSMs can influence food chain dynamics relative to the influence of predation. The proposed research will scale up the effect of PSMs from individual herbivores to populations of free-ranging herbivores to the entire food chain.

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The overall purpose of this project is to understand the spatial and temporal distribution of Piute ground squirrels (*Urocitellus mollis*) and how personality interacts with habitat types and use by this important prey species. This data will provide information on Piute ground squirrel (PGS) populations across the Orchard Combat Training Center (OCTC) for management of vegetation, prey and predators.

NSF-IOS-1258217

2/1/13-2/1/16

5% effort

\$38,400 of \$470,000 award

Forbey (PI of subcontract)

Title: Courtship negotiation in a life-history context: interaction between on- and off-lek tactics in sage-grouse

The goal of this proposal is to investigate courtship negotiation by exploring how condition, foraging efficiency and off-lek movements affect the dynamics of courtship haggling for both males and females.

Murdock (M.J.) Charitable Trust

2/26/15 - 2/26/17

5% effort

\$15,000

Forbey (mentor to high school teacher Lockwood)

Title: Understanding the Role of Structural and Chemical Diversity in the Sagebrush Steppe

The overall objective of the research project is to discover and broaden the public and student perception of structural and chemical diversity and function in a local ecosystem in Idaho. We will rely on both field and laboratory research to test the hypotheses that 1) greater structural diversity of plants in habitats promotes greater habitat use by wildlife and that 2) chemical diversity of plants can be exploited for their anti-bacterial and insecticidal properties. These studies will contribute to better management of habitats and discovery of chemicals that can benefit humans

Idaho Office of Species Conservation and
Idaho Department of Fish and Game

12/21/10 - 8/30/16

5% effort

\$178,325

Forbey (PI)

Title: Assessing the Dietary Quality of Sagebrush in Sage-Grouse Winter and Breeding Habitats

The overall purpose of this project is to identify the nutritional importance of different sagebrush species in the sage-grouse diet and determine how diet quality influences reproductive success in sage-grouse at various sites in Idaho. The research will meet some of the population and habitat objectives outlined in the Idaho Sage-grouse Conservation Plan and will improve our understanding of sage-grouse distribution and population trends.

BLM-Challenge Cost Share LO9AC16253

02/01/10 - 9/30/15

5% effort

\$82,500

Forbey (PI)

Title: Nutritional and chemical quality of winter diets selected by pygmy rabbits

The purpose of this project is to gain an understanding of how the chemical and nutritional quality of sagebrush influences the diet selection and potential habitat use of pygmy rabbits in the sagebrush steppe.

Wyoming Game and Fish Department

02/01/14 - 9/30/15

5% effort

\$17,061

Forbey (Co-PI)

Title: *Effects of Mowing and Herbicide Treatments on the Nutritional Quality of Sagebrush in south-central, Wyoming*

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The purpose of this project is to identify how management treatments such as mowing and herbicide influence the dietary quality of sagebrush as a food for wildlife.

Completed funding (selected projects):

Idaho NSF EPSCoR REU program	12/10	-	9/15	5% effort
\$20,000				

Internal competition – Forbey as mentor
for undergraduates

Title: Assessing the Quality of Sagebrush in Response to Climate Change

Idaho NSF EPSCoR Infrastructure	5/13	-	9/13	0% effort
\$42,100				

Internal competition – Forbey as lead

Field research vehicles to expand the capacity for long-term monitoring of how climate and water influence natural ecosystems.

Idaho NIH INBRE	12/10	-	9/12	5% effort
\$10,000				

Internal competition – Forbey as mentor
for undergraduates

Title: Assessing the metabolic stability of natural products in animal microsomes

Boise State College of Arts and Sciences

Mini-Development Grant and Service	05/01/11	-	05/01/12	1% effort
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Learning Program

\$5,000

Forbey (PI)

Title: Student Educational Experience in Science (SEE Science) Program

The purpose of the Student Educational Experience in Science (SEE Science) Program is to provide opportunities for undergraduate students, graduate students and faculty at Boise State University who conduct research in local habitats to educate Idaho's children and public about the importance of these ecosystems. The first aim of the project is to train undergraduate and graduate students in the Department of Biological Sciences to share their scientific knowledge of local ecosystems with the general public. The second aim is to foster a working relationship between the public and the educators and students at Boise State.

BLM-CESU Award ID: LO9AC15385	06/01/09	-	06/01/11	10% effort
\$13,940				

Forbey (PI)

Title: Nutritional and chemical quality of winter diets selected by sage-grouse

This research will investigate both nutritional and chemical factors that drive selection of sagebrush for food by sage-grouse during the winter. The ultimate goal is to identify functional habitat use by sage-grouse and will provide land managers with insight based on nutritional ecology of sage-grouse that will compliment existing efforts to conserve and restore quality sagebrush habitat.

NSF Award ID: 0827239	9/15/08	-	8/31/2010	10% effort
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\$24,800 + \$2565 supplement

Forbey (PI)

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Symposium: PharmEcology Symposium: A Pharmacological Approach to Understanding Plant-Herbivore Interactions, to be held January 2-6, 2009 in Boston, MA.

This symposium provides an opportunity to define research at the interface of pharmacology and ecology, termed Pharm-Ecology. The new research areas will focus on: 1) mechanisms of absorption, distribution, metabolism and excretion (ADME) of plant secondary metabolites (PSMs) in herbivores; 2) mechanisms of action of PSMs in herbivores; and 3) genetic polymorphisms associated with these two components. The broader impacts of the symposium are to initiate international communication between leaders in ecology and pharmacology that will lead to novel funding opportunities, engage students to new research opportunities and promote diversity

PROFESSIONAL ACTIVITIES

Presentations, conferences and workshops – Summary: Since 2008, I have been invited to present 18 seminars or workshops. Of these, 4 were at international conferences and 6 were as an invited speaker in a symposium. I also organized, funded and hosted an international symposium and international workshop.

- 2016 Invited Symposium Speaker, Annual symposium at the Department of Ecology, Swedish University of Agricultural Sciences, SLU, Uppsala, Sweden, February 2016.
- 2015 Invited Seminar Speaker, Grimsö Wildlife Research Station, Department of Ecology, Swedish University of Agricultural Sciences, SLU, Riddarhyttan, Sweden
- 2015 Invited Seminar Speaker, University of Eastern Finland, Department of Biology, Joensuu, Finland
- 2015 Invited Workshop Organizer: "Workshop to Expand the Use of Emerging Technology to Understand the Ecology of Avian Herbivores in a Changing Climate" at the International Grouse Symposium, Reykjavik, Iceland, Sept 3, 2015. Supported by NSF-DEB-1540085, JS Forbey, PI
- 2015 Invited Seminar Speaker, Department of Ecology and Evolutionary Biology, University of Tennessee, Oct 2014.
- 2014 Invited IGNITE Session Speaker, The Wildlife Society Conference: "The Herbivore's Prescription: A Tale of Wildlife-Directed Bioprospecting", Oct 2014.
- 2014 Invited Seminar Speaker, Department of Ecology and Evolutionary Biology, University of Tennessee, Oct 2014.
- 2014 Invited Symposium Speaker for Evolutionary Ecology Symposium: "Molecular mechanisms and ecological consequences of plant chemical defenses in vertebrate herbivores", International Society for Chemical Ecology Meeting, University of Illinois at Urbana-Champaign, July, 2014.
- 2014 Speaker: 29th Sage & Columbian Sharp-tailed Grouse Workshop: "Detecting palatable plants for sage-grouse in the sagebrush sea". Elko, NV, Jun 2014.
- 2014 Invited Seminar Speaker, Department of Evolution and Ecology, University of California - Davis, Jan 2014.
- 2013 Invited Symposium Speaker: Owyhee Research and Restoration Roundup. "Sage-grouse's eye view of habitat quality" Marsing, ID, 23 Oct, 2013.
- 2013 Invited Symposium Speaker: AAAS Symposium - Mechanisms of Tumor Progression & Cancer Therapeutics. "A co-evolutionary strategy to discovery novel anticancer drugs", Las Vegas, USA, 18 June 2013.
- 2013 Invited Symposium Speaker: Plant Herbivore Interactions Gordon Conference. "Scaling up dose-response curves: Translation between lab and landscape", Ventura, USA, 24-28 February 2013.

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- 2013 Invited Conference Speaker for Great Basin Consortium Conference 2013: "A hungry sage-grouse's view on habitats and climate"
- 2011 Invited Seminar Speaker: Department of Biological Science, California State University Fullerton. "Nature's Chemical Arms Race: The defensive strategies of plants and herbivores"
- 2010 Invited Symposium Speaker: British Ecological Society Annual Symposium 2010: "The integrative role of plant secondary metabolites in ecological systems." University of Sussex, UK, 12 – 14 April, 2010. Invited by Dr. Glenn Iason (Macaulay Institute, Aberdeen, UK). "The herbivore's prescription: A pharmacological perspective on host plant use by herbivores"
- 2009 Conference Organizer: Society for Integrative and Comparative Physiology Symposium host: "PharmEcology: Integrating Ecological Systems and Pharmacology", Jan 3-7, 2009; <http://www.sicb.org/meetings/2009/index.php3>. Supported by NSF0827239, JS Forbey, PI
- 2008 Invited Seminar Speaker: Department of Natural Resource Sciences, Washington State University and Department of Fish & Wildlife Resources, University of Idaho, "Behavioral, physiological and biochemical offenses of mammalian herbivores against plant chemical defenses"

Collaborators and other affiliations – Summary: Since 2008, I have initiated collaborations with 10 new researchers from 8 different universities*. These new collaborations have resulted in published manuscripts, funded NSF grants (in 2011 and 2013) and an NIH grant (in 2014). I have also recruited an Australian Fulbright Scholar as a new collaborator.

Collaborators: J. Beck* (U Wyoming), J. Bryant* (University of Alaska); C. Dadabay* (College of Idaho), M.D. Dearing (University of Utah); J. Connelly* (ID Dept. Fish and Game); W.J. Foley (Australian National University); M Horn (California State University, Fullerton); K. Keilland* (University of Alaska, Fairbanks); J.G. Lamb (University of Utah); S. McLean (University of Tasmania); G. Patricelli*, (Univ California Davis). A. Poore (University of New South Wales); J. Rachlow* (University of Idaho); L. Shipley* (Washington State University), J. Vucetich* (Michigan Tech University), D. Xu* (Idaho State University)

Graduate and Postdoctoral Advisors: Ph.D. Advisor: M.D. Dearing (University of Utah); Postdoc Advisors: W.J. Foley (Australian National University); S. McLean (University of Tasmania); B. McLeod (AgResearch Invermay)

Postdoctoral Scholars Sponsored at Boise State (2 since 2008): Dr. Xinzhu Pu from China: Aug 2010-Oct 2011, Dr. Natasha Wiggins (University of Tasmania) as an Australian Fulbright Scholar: Feb 2012-Aug 2013.

TEACHING

Summary: Since 2008, I have developed and taught 9 different courses: 2 are part of the core curriculum*, 1 is a Disciplinary Lens (DL) introduction course, 1 is a Finishing Foundation (FF) course for seniors, 3 were graduate seminar courses. I have also provided 36 students with independent study opportunities to conduct research for 52 total credits.

- BIOL 191*: General Biology I* (Disciplinary Lens Course)
- BIOL 192*: General Biology II*
- BIOL 297: Scientific Immersion – undergraduate research development
- ZOOL 409/509: Comparative Animal Physiology (Finishing Foundation Course)
- BIOL 496: Independent study (every semester, 22 total undergraduates)
- BIOL 497/597: Physiological Ecology
- BIOL 497/597: Plant-Herbivore Interactions

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- BIOL 497/597, BIOL 498/598: Science and Society (previously Sagebrush Habitat Ecology)
- BIOL 598 - Graduate Seminar: Microbial Ecology
- BIOL 598: Graduate Seminar: Foraging Ecology
- BIOL 598: Graduate Seminar: Chemical Ecology

MENTORING

Summary: Since 2008, I have mentored and directly supervised 55 undergraduate students, 3 high school students and 7 K-12 teachers in my laboratory: 3 received funding from the NSF Idaho EPSCoR, 4 from the STEP program, 3 from the NSF LSAMP, 3 from NIH INBRE and one from the McNair Program. Of the 8 graduate students I have mentored, 6 have been supported from external funding for at least 1 semester and 5 received a student research grant for their research. I have graduated 5 graduate students, 2 are successfully pursuing PhDs and the others have full time positions in a Biology career. Since 2008, the graduate and undergraduate students in my lab collectively presented 56 research posters or presentations at regional or national meetings and received 6 awards for their presentations.

Supervising graduate students

Thesis Advisees (8 total since 2008, 5 have graduated):

Current major advisor (Chair):

Dan Melody, M.S. Biology, Teaching Assistantship funded by Department of Biological Sciences.

Zoe Tinkle, M.S. Biology, Research funded by Army National Guard, Teaching Assistantship funded by Department of Biological Sciences.

Jordan Nobler, M.S. Biology, Research Assistantship funded by NSF-DEB

Previous major advisor of graduated students:

Amy Ulappa, M.S. Biology awarded 2011, Research Assistantship funded by the Bureau of Land Management, Teaching Assistantship funded by Department of Biological Sciences and the NSF K-12 program. Currently PhD candidate at Washington State University

Jamie Utz, M.S. Raptor Biology awarded 2012, Research Assistantship funded by the Bureau of Land Management, Teaching Assistantship funded by Department of Biological Sciences. Currently employee for Idaho Department of Fish and Game.

Graham Frye, M.S. Biology awarded 2012, Research Assistantship funded by Idaho Department of Fish and Game. Currently PhD candidate at University of Alaska Fairbanks.

Jessie Sherburne, M.S. Raptor Biology, Teaching Assistantship funded by Department of Biological Sciences Raptor Program. Currently a full time lecturer in the Department of Biological Sciences at Boise State University.

Marcella Fremgen, M.S. Biology, Research Assistantship funded by Idaho Department of Fish and Game. Currently full time position with the Rocky Mountain Bird Observatory.

Current thesis committee member:

Juliette Rubin, M.S. Biology

Stephanie Coates, M.S. Biology

Peggy Martinez, M.S. Biology

Meghan Camp Ph.D. Biology, Washington State University

Previous thesis committee member of graduated students:

John O'keefe, M.S. Raptor Biology

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Robert Miller, M.S. Raptor Biology
Heidi Ware, M.S. Biology
Xochi Campos, M.S. Biology
Matt Schmasow, M.S. Biology
Martha Brabec, M.S. Biology

SERVICE –

Professional Service in Discipline

Provided a student mentor program for undergraduates, graduates and postdocs at the Society for Integrative and Comparative Physiology Symposium: "PharmEcology: Integrating Ecological Systems and Pharmacology"

Grant Reviewer

NSF - International Collaborations in Organismal Biology Between US and Israeli
Investigators (*ICOB*), ad hoc
NSF- Integrative Organismal Systems (OIS) full proposal panel, November 2013

Ad hoc Manuscript Reviewer

Ecology
Journal of Animal Behavior
Oecologia
Journal of Chemical Ecology
Journal of Veterinary Pharmacology and Therapeutics
Biochemical Systematics and Ecology
Journal of Experimental Zoology
Behavioral Ecology
Wildlife Biology

Membership to Professional Societies

Sigma Xi - The Scientific Research Society. My membership has allowed seven graduate and undergraduate students to submit grant application for support of their research to this society. Two have received funding.
The Idaho Chapter Wildlife Society. I have judged posters and presentations and am currently on the student research grant proposal review committee.
Society for Comparative and Integrative Biology. I have judged posters and presentations at their conferences and hosted a symposium at their conference.

Institutional Service

Departmental service:

Co-Chair Undergraduate Curriculum Reform Committee
Faculty search committee member for a Physiologist position for the Biomolecular PhD program in the Department of Biological Sciences.
Faculty search committee member for a Zoologist in the Department of Biological Sciences.
Committee member to develop the Workload Policy for our Department
Committee member for Graduate Student Admissions
Committee member for Research Development
Recruited 10 different national and international seminar speakers and provided opportunities for students, faculty and conservation agencies to meet and network with speakers
Developed a Science Honors Course (Scientific Immersion) that will help recruit and train undergraduates in research in our department:

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Description of Science Honors Course: This is a competitive honors course for students interested in gaining skills to become a successful researcher in the biological sciences. The course focuses on experiential learning for students through research in ecology, physiology, evolution and organismal biology. The program requires that students complete five different scientific immersion modules:

- *Module A: Safety, library skills, time management (10 hrs)*
- *Module B: Writing skills (14 hours)*
- *Module C: Seminar speaking skills (8 hours)*
- *Module D: Laboratory and/or field training (25 hrs)*
- Module E: Career Choices Electives (12 hrs): 1. Quantitative methods; 2. Conservation agencies; or 3. Teaching and learning*

College and University service:

Member of Institutional Animal Care and Use Committee
College of Arts and Sciences Tenure and Promotion review committee member
Faculty mentor, panel speaker and application reviewer for undergraduates involved in NSF STEP, NSF EPSCoR, NIH INBRE, NSF and LSAMP
Seminar on research opportunities for high school students at the 8th annual Capital Scholars program
Mentor for Idaho Science and Aerospace Scholars Mission to Mars: Biology and physiology of living on Mars

Public or Community Service - Summary: Since 2008, I have presented 10 public seminars to broaden the public's view on local wildlife issues.

Science education and outreach: We developed IdahoWatch to: (1) educate teachers and their students about local research and conservation, (2) identify resources for teachers in the field that can be used for research projects in the classroom, (3) provide opportunities for students to experience how the scientific method is used to solve real-world conservation problems in the field, and (4) promote communication of science.

<http://theidahowatch.wix.com/idahowatch>

Public seminars:

Sage-grouse state advisory committee (3)
BLM Boise District Resource Advisory Council (RAC)
Regional Sage-grouse Local Working Groups in Idaho (4)
Osher Lifelong Learning Institute at Boise State (2)

Media attention related to research

http://www.youtube.com/watch?v=_Nr5ezlfYM4

<http://news.boisestate.edu/update/2013/06/13/researchers-to-use-small-unmanned-plane-to-test-wildlife-habitat-quality-in-remote-areas/>

<http://www.mtexpress.com/index2.php?ID=2005137389>

<http://www.foxnews.com/us/2013/06/16/scientists-hunt-for-rabbit-habitat-with-military-style-drones/>

http://seattletimes.com/html/localnews/2021196039_apiddronehabitathunting.html

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http://www.oregonlive.com/pacific-northwest-news/index.ssf/2013/06/drone_to_study_rabbit_habitat.html

http://www.idahostatejournal.com/news/local/article_c9355fda-d7e2-11e2-99b6-001a4bcf887a.html

<http://www.columbian.com/news/2013/jun/18/drone-aircraft-to-study-rabbit-habitat/>

<http://www.saltlakecitysun.com/index.php/sid/215227163/scat/bcecd7f88c90b7a3>

<http://www.idahostatesman.com/news/local/environment/article41568135.html>

<http://www.ktvb.com/story/news/local/2015/06/19/drone-sagegrouse-pygmy-rabbits-forbey/28990919/>

<http://news.yahoo.com/scientists-fly-drones-map-sagebrush-wildfire-strategy-073642304.html>

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ERIC J. HAYDEN

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Boise State University
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EDUCATION

Postdoctoral Scholar, 2011-2013, Bioengineering, Stanford University, Stanford, CA.

Postdoctoral Scholar, 2008-2011, Institute of Evolutionary Biology, University of Zurich, Zurich, Switzerland.

Ph.D. Chemistry, 2008, Department of Biochemistry, Portland State University, Portland, OR
Dissertation: The original build-up of genetic information by RNA recombination

B.S. Chemistry, 2002, Linfield College, McMinnville, OR

RESEARCH INTERESTS

Ribozymes, Riboswitches, Directed Evolution, Systems Science of RNA populations, Synthetic Biology

PUBLICATIONS

First author

Hayden EJ, Bendixsen DP, Wagner A. (2015) Intramolecular phenotypic capacitance in a modular RNA molecule. *PNAS* 112, 12444–12449.

Hayden EJ, Bratulic S, Koenig I, Wagner A. (2014) The effects of stabilizing and directional selection on phenotypic and genotypic variation in a population of RNA enzymes. *J Mol Evol* 78:101–108. doi: 10.1007/s00239-013-9604-x.

Hayden EJ, Weikert C, Wagner A. (2012) Directional Selection Causes Decanalization in a Group I Ribozyme. *PLoS ONE* 7 e45351.

Hayden EJ, Wagner A (2012). Environmental change exposes beneficial epistatic interactions in a catalytic RNA. *Proceedings of the Royal Society B: Biological Sciences* 279(1742):3418-25.

Hayden EJ, Ferrada E, Wagner A (2011). Cryptic genetic variation promotes rapid evolutionary adaptation in an RNA enzyme. *Nature* 474: 92-95.

Hayden EJ, von Kiedrowski G, Lehman N (2008). Systems Chemistry on ribozyme self-construction: Evidence for autocatalysis in a recombination network. *Angewandte Chemie International Edition English* 47(44): 8424-8428.

Hayden EJ, Lehman N (2006). Self-assembly of a group I intron from inactive oligonucleotide fragments. *Chemistry & Biology* 13: 909-918.

Hayden EJ, Riley CA, Burton AS, Lehman N (2005). RNA-directed construction of structurally complex and active ligase ribozymes through recombination. *RNA* 11: 1678-1687.

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Co-author

Vaidya N, Manapat M, Chen I, Xulvi-Brunet R, **Hayden EJ**, Lehman N (2012). Spontaneous network formation among cooperative RNA replicators. *Nature* 491: 72–77.

Draper WE, **Hayden EJ**, Lehman N (2008). Mechanisms of covalent self-assembly of the Azoarcus ribozyme from four fragment oligonucleotides. *Nucleic Acids Research* 36:520-531.

Zenisek SM, **Hayden EJ**, Lehman N (2007). Genetic exchange leading to self-assembling RNA species upon encapsulation in artificial protocells. *Artificial Life* 13: 279-289.

Invited commentary

Lehman N, **Hayden EJ** (2011). Template-directed RNA Polymerization: The Taming of the Milieu. *ChemBioChem* doi:10.1002/cbic.201100611

NEWS & VIEWS

Draghi JA & Plotkin JB. Molecular evolution: Hidden diversity sparks adaptation. *Nature* **474**, 45-46 (2011).

Seelig, B. An autocatalytic network for ribozyme self-construction. *Nat Chem Biol* **4**, 654-655 (2008).

Keim, B. Cryptic mutations could be evolution's hidden fuel. [online] Available:
<http://www.wired.com/wiredscience/2011/06/cryptic-variation/>

AWARDS AND HONORS

Research Grant, National Science Foundation (Molecular and Cellular Biology) "An Empirical Examination of the Evolution of Innovation", 2014-2016.

Research Grant, Idaho INBRE "Exploration of Ribozyme landscapes", Summer 2014.

Outstanding Presentation, "Selecting for evolvable variants of a group I ribozyme", University of Zurich/ETH University Research Priority Program Systems Biology/Functional Genomics Retreat, 2010.

Research Grant, "Analysis of RNA evolution in vitro", University of Zurich and ETH Research Priority Program: Systems Biology/Functional Genomics, 2009-2012. This is a competitive intramural funding program between the ETH and University of Zurich.

Fellowship, NSF Central European Summer Research Institute (CESRI), 2007.

Outstanding Graduate Student Research, Gordon Research Conference: Origin of Life, 2008.

Graduate Student of the Year, Department of Chemistry Portland State University, 2007-2008 academic year.

PRESENTATIONS

"Intramolecular Phenotypic Capacitance in an RNA enzyme", oral presentation at The RiboClub Annual Meeting 2014, in conjunction with The Yale RNA Center, Magog, Quebec, Canada (2014).

"Cryptic variation promotes rapid adaptation in an RNA enzyme", oral presentation at the Swiss Institute of Bioinformatics annual meeting (2011).

"Selecting for evolvable variants of a group I ribozyme", poster presentation at the Systems Chemistry: Evolvability and Systems, ESF-COST High-level Research Conference, Balatonfüred, Hungary (2009).

"Autocatalysis in a self-organizing network of RNA", poster presentation at the Gordon Research Conference: Origins of Life, Ventura, CA (2008).

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"Self-assembly and autocatalytic self-replication of a group I intron", oral presentation at the Volcano Conference: Bioorganic Chemistry, Pack Forrest, WA (2007).

"Self-assembly and autocatalytic self-replication of a group I intron", poster presentation at The Annual Meeting of the RNA Society, Seattle WA, (2006).

"Construction of structurally-complex ligase ribozymes through RNA-directed recombination", poster presentation at the Volcano Conference in Bioorganic Chemistry, Pack Forrest, WA (2005).

TEACHING

BMOL 601 Biomolecules I: DNA and RNA, Fall 2013-present
BIOL 570 Biotechnology and Genetic Engineering, Spring 2014
BMOL 613 Molecular Genetics, Spring 2015

ADDITIONAL ACTIVITIES

Exhibit Volunteer – Darwin Year Celebration, 2009, Zurich Hauptbahnhof. We built a physical phylogenetic tree of life, out of actual logs. Each node contained information about that branch on the tree (flowering plants, fungi, marsupials, etc.). I curated the Origin of Life node, comprised of a slide show and actual stromatolites, and explained it (English version) to people passing through the train station.

Journal Reviewer – Nature Reviews Genetics, Journal of Molecular Evolution, Biochemistry, PLoS Computational Biology, Molecular Biology and Evolution

Grant Review Panel – NASA Exobiology

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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CURRICULUM VITAE

JULIE A. HEATH, PH.D.

Department of Biological Sciences
Raptor Research Center
Boise State University
1910 University Dr.
Boise, ID 83725-1515
Phone: (208) 426-3208
e-mail: julieheath@boisestate.edu

EDUCATION

- Ph.D. 2002 Wildlife Ecology and Conservation - University of Florida, Gainesville, FL
White Ibis (*Eudocimus albus*) reproductive physiology. P.C. Frederick (advisor)
- M.S. 1996 Raptor Biology - Boise State University, Boise, ID
Effect of body condition on the adrenal stress response, and the role of corticosterone in American Kestrel nest departure and post-fledging dispersal. A.M. Dufty, Jr. (advisor)
- B.S. 1993 Zoology - University of California, Davis, CA

APPOINTMENTS

- 2013-present Graduate Coordinator, Department of Biological Sciences, Boise State University, ID
- 2012-present Associate Professor, Department of Biological Sciences, Boise State University, ID
- 2007-2012 Assistant Professor, Department of Biological Sciences, Boise State University, ID
- 2003-2007 Assistant Professor, Department of Biology, Hofstra University, NY
- 2002-2003 Adjunct Professor, Saint Leo University, FL
- 1998-2002 Research Assistant, Department of Wildlife Ecology and Conservation, University of Florida, Gainesville, FL
- 2000-2001 Teaching Assistant, Department of Biological Sciences, University of Florida, FL

TEACHING

Boise State University

Biometry – graduate lecture
Conservation Biology – undergraduate & graduate lecture
Animal Behavior – undergraduate & graduate lecture and laboratory
Occupancy Modeling – graduate lecture
Applied Raptor Biology – graduate field course
Graduate Special Topics – Statistical programming in R, Data presentation in R, Communication and Science

Hofstra University

Human Anatomy and Physiology I & II – non-majors undergraduate lecture and laboratory
Ecology – undergraduate lecture
Ornithology – undergraduate & graduate lecture and laboratory
Human Biology – non-majors undergraduate laboratory
Ecology, Evolution and Behavior – undergraduate lecture and laboratory
Animal Migration – undergraduate & graduate lecture and laboratory
Graduate Special Topics – Experimental design and data analysis in SAS, Evolution of parental care

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GRANTS AND AWARDS

Pending

Department of the Interior Idaho Bureau of Land Management Challenge Cost Share Grant (\$68,872) PI. Adaptive management of wildfires: How effect are post-fire treatments at restoring wildlife communities in shrub-steppe ecosystems.

National Science Foundation (\$849,000, Coupled Human and Natural Systems) PI. Loved to Death? Coupled relationships between outdoor recreation and wildlife on public lands.

Awarded

2015 **Department of the Interior** U.S. Fish and Wildlife Service (\$60,000) PI. The ecology and conservation of golden eagles in the Northern Great Basin.

Osher Faculty Research Award (\$5,000) PI. The use of stable isotopes in claws to distinguish between migratory and non-migratory American kestrels.

Department of the Interior U.S. Fish and Wildlife Service (\$28,500) PI. The role of trichomoniasis and ectoparasites in golden eagle nesting ecology: prevalence, factors that affect infection risk, and population-level consequences.

2014 **Department of the Interior** U.S. Fish and Wildlife Service (\$52,040) Co-PI. Golden eagle dietary responses in relation to habitat alteration and climate change in the Morley Nelson Snake River Birds of Prey National Conservation Area.

Department of the Interior Idaho Bureau of Land Management (\$32,000) PI. Analysis and modeling of golden eagle diets in the Morley Nelson Snake River Birds of Prey National Conservation Area.

Boise State University College of Arts and Sciences travel grant (\$400).

2012 **National Science Foundation** (\$162,500, BIO-DEB-1145552, 2 REU supplements) PI. RUI: Climate change and birds: links among earlier nesting, migratory strategies, and warmer winters.

2011 **Department of the Interior** Idaho Bureau of Land Management Challenge Cost Share Grant (\$58,054) PI. A collaborative, adaptive management approach to study the effects of off-highway vehicle trail closures on golden eagle territory occupancy, behavior, and nest survival.

Department of the Interior U.S. Geological Survey (\$22,737) Co-PI. Graduate student support for current versus historical trends in habitat use by wintering raptors in the Morley Nelson Snake River Birds of Prey National Conservation Area.

Boise State University College of Arts and Sciences travel grant (\$400).

Corporation for National and Community Service and Washington Campus Compact (\$500) mini-grant for Service Learning in STEM disciplines

2010 **Department of the Interior** Idaho Bureau of Land Management Challenge Cost Share Grant (\$51,389) PI: Wintering raptor habitat use in the Morley Nelson Snake River Birds of Prey National Conservation Area.

Boise State University College of Arts and Sciences travel grant (\$400).

2009 **Idaho's Accomplished Under 40 Award** given by Idaho Business Review

2008 **Boise State University** College of Arts and Sciences travel grant (\$400).

2007 **Department of Defense** United States Army Engineer Research and Development Center (\$172,750) PI: How do coastal engineering and human disturbance affect the distribution of nesting snowy plovers in the Florida Panhandle?

Boise State University College of Arts and Sciences (\$500) mini-development grant for BIOL 605: Applied Raptor Biology

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- 2006 **New York State Biodiversity Research Institute** (\$22,769) PI. Effects of predator exclosures and predator visits on piping plover incubation behavior and hatching success.
Hofstra University Faculty Research and Development Grant (\$1,400)
- 2005 **Hofstra University** Faculty Research and Development Grant (\$1,500)
- 2004 **Hofstra University** Presidential Research Award (\$433).
Hofstra University Faculty Research and Development Grant (\$1,100)
- 2002 **Florida Keys Audubon Society Graduate Scholarship** (\$500)
- 2001 **University of Florida** Graduate Student Council Travel Award (\$200)
Florida Institute of Food and Agricultural Sciences Travel Grant (\$150)
- 1999 **University of Florida** Graduate Student Council Travel Award (\$200)
- 1996 **International Symposium of Avian Endocrinology** Travel Award (\$300)
- 1995 **Bergstrom Memorial Fund Research Grant** Student Research Award (\$500)
Outstanding Teaching Assistant Department of Biology, Boise State University

Internal or External Sub-Awards Supporting Undergraduate Research

- 2014-2015 **National Science Foundation Research Experience for Undergraduate (REU) site award in Raptor Research** Mentor for 3 undergraduate researchers.
- 2013-2015 **National Science Foundation, Idaho EPSCoR MURI program** Mentor for 4 undergraduate researchers.
- 2010, 2011 **National Institute of Health Idaho INBRE Program** (P20 RR016454 and P20 GM103408). Mentor for 2 undergraduate researchers.
- 2009, 2012 **National Science Foundation, Idaho EPSCoR Research Experience for Undergraduates** Mentor for 2 undergraduate researchers.
- 2009-2015 **Boise State University Provost's Office** Mentor for 6 undergraduate work study researchers.

PUBLICATIONS

(*graduate student, + undergraduate student. Beginning in 2015, papers from the Heath lab list Heath as the last author, in years prior to 2015 Heath was listed as second author.)

Peer-reviewed papers

- Harrison, J, M Kochert, B.P. Pauli and J.A. Heath. *In prep.* The use of trail cameras in studies of cliff-nesting raptors. *Journal of Raptor Research*.
- Spaul, R.J.* and **J.A. Heath**. *In review*. Flight initiation responses of Golden Eagles (*Aquila chrysaetos*) to motorized and non-motorized recreation. *Journal of Field Ornithology*.
- Pauli, B.P., Spaul, R.J.* and **J.A. Heath**. *In review*. Forecasting the effects of human disturbance on wildlife populations using an individual-based model: changes in wildlife tolerance are not enough to mitigate negative effects of increased recreation on wild lands. *Ecological Applications*.
- Spaul, R.J.* and **J.A. Heath**. *In review*. Effects of non-motorized and motorized recreation on the breeding biology of golden eagles (*Aquila chrysaetos*) in shrub-steppe habitats. *Ecological Applications*.
- Nolte, E.G.*, J. Bart, B.P. Pauli, G. Kaltenecker, and **J.A. Heath**. *In review*. Detectability of migrating raptors and its effect on bias and precision in trend estimates. *Avian Ecology and Conservation*
- Pauli, B.P., E.R. Sun, Z.K. Tinkle, J.S. Forbey, K.E. Demps, and **J.A. Heath**. *In review*. Human habitat selection: Using tools from landscape ecology to predict human use of natural

- landscapes. *Ecology and Society*.
- Anderson*, A.M., S.J. Novak, J.F. Smith, K. Steenhof, and **J.A. Heath**. *In press*. Nesting phenology, mate choice, and genetic divergence within a partially migratory population of American kestrels. *Auk: Ornithological Advances*.
- Sassani, E.C.⁺, C. Sevy⁺, E.H. Strasser*, A.M. Anderson*, and **J.A. Heath**. 2015. Plasma carotenoid concentrations of incubating American kestrels (*Falco sparverius*) show annual, seasonal, and individual variation and predict reproductive outcome. *Biological Journal of the Linnean Society*. DOI: 10.1111/bij.12653
- McClure, C.J.W., A.C. Korte*, **J.A. Heath**, and J.R. Barber. 2015. Pavement and riparian forest shape the bird community along an urban river corridor. *Global Ecology and Conservation* 4:291-310. DOI:10.1016/j.gecco.2015.07.004
- Paprocki, N.*, N. Glenn, E. Atkinson, K. Stirckler, C. Watson, and **J.A. Heath**. 2015. Changing habitat use associated with distributional shifts of wintering raptors. *Journal of Wildlife Management*. 79:402–412. DOI: 10.1002/jwmg.848
- Miller, R.A., J.D. Carlisle, N. Paprocki, G.S. Kaltenecker, and **J.A. Heath**. 2015. Annual variation in autumn migration phenology and energetic condition at a stopover site in the western United States. Pp. 177–191 in E. M. Wood and J. L. Kellermann (editors), *Phenological synchrony and bird migration: changing climate and seasonal resources in North America. Studies in Avian Biology* (no. 47), CRC Press, Boca Raton, FL.
- Paprocki, N.*, **J.A. Heath**, and S.J. Novak. 2014. Regional distribution shifts help explain local changes in wintering raptors: Implications for interpreting population trends. *PLoS One* e86814.
- Strasser, E.H.* and **J.A. Heath**. 2013. Reproductive failure of a human-tolerant species, the American kestrel, is associated with stress and human disturbance. *Journal of Applied Ecology* 50:912-919.
- Steenhof, K. and **J.A. Heath**. 2013. Local recruitment and natal dispersal distances in American kestrels. *The Condor* 115:584–592.
- Webber, A.F.*, **J.A. Heath**, and R.A. Fischer. 2013. Human disturbance and stage-specific habitat requirements influence snowy plover site occupancy during the breeding season. *Ecology and Evolution* 3:853-863 doi:10.1002/ece3.511.
- Heath, J.A.**, K. Steenhof, and M.A. Foster⁺. 2012. Shorter migration distances associated with warmer winter temperatures suggest a mechanism for advancing nesting phenology of American kestrels. *Journal of Avian Biology* 43:376-384.
- Heath, J.A.**, E.H. Strasser*, M.A. Foster⁺, L. Bardo, and D.M. Bird. 2011. Challenges in creating an American kestrel body condition index based on size-adjusted mass. *Journal of Raptor Research* 45:324-334.
- Strasser, E.H.* and **J.A. Heath**. 2011. Effects of developmental conditions on nestling American Kestrel (*Falco sparverius*) corticosterone concentrations. *General and Comparative Endocrinology* 173:164-170. doi:10.1016/j.ygcen.2011.05.010
- Doherty, P.J.* and **J.A. Heath**. 2011. Factors affecting piping plover hatching success on Long Island, New York. *Journal of Wildlife Management* 75:109-115.
- McIntyre, A.F.*, and **J.A. Heath**. 2011. Evaluating the effects of foraging habitat restoration on shorebird reproduction: the importance of performance criteria and comparative design. *Journal of Coastal Conservation* 15:151-157.
- Leonard, D.L., Jr. and **J.A. Heath**. 2010. Foraging strategies are related to skull morphology and life history traits of *Melanerpes* woodpeckers. *Journal of Ornithology* 151:771-777.
- McIntyre, A.F.*, **J.A. Heath**, and J. Janssen. 2010. Trends in piping plover reproduction at Jones Beach State Park, NY, 1995-2007. *Northeastern Naturalist* 17:493-504.

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- Steenhof, K. and **J.A. Heath**. 2009. American kestrel reproduction: evidence for the selection hypothesis and the role of dispersal. *Ibis* 151:493-501.
- Heath, J.A.**, and P.C. Frederick. 2006. White ibis integument color during the breeding season. *Journal of Field Ornithology* 77:141-150.
- Frederick, P.C., **J.A. Heath**, R.E. Bennetts, and H. Hafner. 2006. Estimating nests not present at the time of breeding surveys: an important consideration in assessing nesting populations. *Journal of Field Ornithology* 77:212-219.
- Heath, J.A.**, and P.C. Frederick. 2005. Relationships among mercury concentrations, hormones, and nesting effort of white ibises in the Florida Everglades. *Auk* 122:255-267.
- Frederick, P.C., B. Hylton, **J.A. Heath**, and M.G. Spalding. 2004. A historical record of mercury contamination in southern Florida (USA) as inferred from avian feather tissue. *Environmental Toxicology and Chemistry* 23:1474-1478.
- Lott, C.A., T.D. Meehan, and **J.A. Heath**. 2003. Estimating the latitudinal origins of migratory birds using hydrogen and sulfur isotopes in feathers: influence of marine prey base. *Oecologia* 134:505-510.
- Heath, J.A.**, P.C. Frederick, T. Edwards, and L.J. Guillette Jr. 2003. Reproductive physiology of free-living white ibises (*Eudocimus albus*) in the Florida Everglades. *General and Comparative Endocrinology* 133:118-131.
- Frederick, P.C., B. Hylton, **J.A. Heath**, and M. Ruane. 2003. Accuracy and variation in estimates of large numbers of nesting birds by individual observers: a controlled simulation. *Journal of Field Ornithology* 74:281-287.
- Heath, J.A.**, and P.C. Frederick. 2003. Trapping white ibises with rocket nets and mist nets in the Everglades. *Journal of Field Ornithology* 74:187-192.
- Epanchin, P.N., **J.A. Heath**, and P.C. Frederick. 2002. Effects of fires on foraging and breeding wading birds in the Everglades. *Wilson Bulletin* 114:139-141.
- Heath, J.A.**, and A.M. Dufty Jr. 1998. Body condition and the adrenal stress response in captive American kestrel juveniles. *Physiological Zoology* 71:67-73.
- Heath, J.** 1997. Corticosterone levels during nest departure of juvenile American kestrels. *Condor* 99:806-811.

Published data and models

- Heath, J.A.** 2015. Data from: Plasma carotenoid concentrations of incubating American kestrels (*Falco sparverius*) show annual, seasonal, and individual variation and explain reproductive outcome. Dryad Digital Repository. doi:10.5061/dryad.98c7s

Invited reviews and published abstracts

- Paprocki, N., E.G. Nolte, S.J. Novak, G. Kaltenecker, J.R. Bart, and **J.A. Heath**. 2014. How responses of raptors to climate change affects the reliability and interpretation of population trend estimates. *Northwestern Naturalist* 95:129-171.
- Anderson, A.M.*, **J.A. Heath**, J. Smith, S. Novak, E. Stolen, and K. Stennhof. 2014. Assortative mating as a mechanism for advancing nesting phenology in American kestrels (*Falco sparverius*). *Northwestern Naturalist* 95:129-171.
- Nolte, E.G.*, **J.A. Heath**, and G. Kaltenecker. 2011. Detectability of migrating raptors: project update. *Hawk Migration Studies*.
- Heath, J.A.** and E.G. Nolte*. 2009. Detectability of migrating raptors at Lucky Peak, Idaho. *Hawk Migration Studies* XXXIV:16-17.
- Heath, J.A.**, P.C. Frederick, J.A. Kushlan and K.L. Bildstein. 2009. White Ibis (*Eudocimus albus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology;

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Retrieved from the Birds of North America Online:

<http://bna.birds.cornell.edu/bna/species/009> doi:10.2173/bna.9

Heath, J.A. 2008. *Review of "Raptors of Western North America and Raptors of Eastern North America"* by B. Wheeler. *Journal of Field Ornithology*. 79:342-343.

PAPER AND POSTER PRESENTATIONS (*graduate student, + undergraduate student)

- 2015 Annual Meeting: Raptor Research Foundation. Sacramento, CA. Candidate for Anderson Award, Paper: Prevalence and risk factors for infection of *Trichomonas gallinae* in western golden eagle nestlings. Presented by (B. Dudek*)
- Annual Meeting: Raptor Research Foundation. Sacramento, CA. Symposium Paper: The benefits of staying: how warming winters, migration strategies, and seasonal declines in fecundity drive earlier nesting in a partial migrant (with A.M. Anderson*, M.T. Henderson⁺, B.P. Pauli)
- Annual Meeting: Raptor Research Foundation. Sacramento, CA. Paper: Golden eagle dietary responses to habitat alteration in the Morley Nelson Snake River Birds of Prey National Conservation Area, Idaho. Presented by: M.N. Kochert (with K. Steenhof)
- Annual Meeting: Raptor Research Foundation. Sacramento, CA. Paper: Demography of the American kestrel lends insight into potential causes of population declines and suggests future research needs. Presented by: C.J.W. McClure (with J.L. Brown, K. Steenhof)
- Annual Meeting: Raptor Research Foundation. Sacramento, CA. Symposium Paper: The implication of climate change on the diet of a key Arctic predator, the gyrfalcon. Presented by: B. Robinson* (with M. Bechard, D. Anderson)
- Annual Meeting: Raptor Research Foundation. Sacramento, CA. Symposium Paper: Is earlier nesting by American kestrels (*Falco sparverius*) driven by changes in the timing of spring? Presented by S.H. Smith* (with C.J.W. McClure, K. Steenhof)
- Annual Meeting: Raptor Research Foundation. Sacramento, CA. Candidate for Anderson Award, Paper: Recreation disturbance to golden eagles (*Aquila chrysaetos*): Biological consequences, behavioral mechanisms, and management implications. Presented by R. Spaul*
- Annual Meeting: Raptor Research Foundation. Sacramento, CA. Poster: Evaluating the use of trail cameras to study diet, behavior, and productivity in cliff nesting golden eagles (*Aquila chrysaetos*). Presented by: J. Harrison (with M.N. Kochert)
- Annual Meeting: Raptor Research Foundation. Sacramento, CA. Poster: The use of hydrogen stable isotopes in claws to distinguish between migratory and resident birds in a partial migrant population of American kestrels (*Falco sparverius*). Presented by: C.M. Hartmann⁺ (with S.L. Evans, M.J. Kohn)
- Annual Meeting: Raptor Research Foundation. Sacramento, CA. Poster: Effects of hematophagous parasites on golden eagle nestling physiology and stress. Presented by M.T. Henderson⁺ (with B. Dudek)
- Annual Meeting: Raptor Research Foundation. Sacramento, CA. Poster: Consequences of timing: How does synchronization between brood rearing and prey abundance affect American kestrel (*Falco sparverius*) reproduction? Presented by S.K. Rosebrook⁺ (with S.H. Smith*)
- Annual Meeting: Raptor Research Foundation. Sacramento, CA. Poster: Human disturbance and golden eagle populations: Investigating the effects of recreation and eagle tolerance using individual-based models. Presented by R. Spaul* (with B.P. Pauli)

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- Boise State University's Summer Undergraduate Research Conference. Boise, ID. Poster: Consequences of timing: How does synchronization between brood rearing and prey availability affect American kestrel (*Falco sparverius*) reproduction? Presented by S.K. Rosebrook⁺ (with S.H. Smith^{*})
- Boise State University's Summer Undergraduate Research Conference. Boise, ID. Poster: Stressed: Physiological effect of hematophagous parasites on Golden Eagle nestlings in the Snake River Canyon. Presented by M.T. Henderson⁺ (with B. Dudek^{*})
- Boise State University's Summer Undergraduate Research Conference. Boise, ID. Poster: Distinguishing migratory and resident American kestrel (*Falco sparverius*) populations using hydrogen stable isotopes in claws. Presented by C.M. Hartmann⁺ (with S.L. Evans, M.J. Kohn)
- Annual meeting: American Ornithologists' Union, and Cooper Ornithological Society. Tulsa, OK. Paper: Demography of the American Kestrel lends insight into potential causes of population declines and suggests future research needs. Presented by C.J.W. McClure (with J.L. Brown, K. Steenhof).
- Boise State University's Spring Undergraduate Research Conference. Boise, ID. Poster: Habitat features predict the distribution of recreational shooters in the Morley Nelson Snake River Birds of Prey National Conservation Area. Presented by E. R. Sun⁺ (with B. P. Pauli, Z. Tinkle, R. Mukuna, D. Wolfe, J. S. Forbey)
- Boise State University's Spring Undergraduate Research Conference. Boise, ID. Poster: Does personality affect the probability that Piute ground squirrels will be shot by recreational hunters? Presented by D. Wolfe⁺ (with Z. Tinkle, B.P. Pauli, E.R. Sun, R. Mukuna, J.S. Forbey, B. Leavell)
- Boise State University's Spring Undergraduate Research Conference. Boise, ID. Poster: Determining the density and fate of Piute ground squirrel carcasses in the Snake River Birds of Prey National Conservation Area. Presented by R. Mukuna⁺ (with B.P. Pauli, Z.K. Tinkle, E.R. Sun, D. Wolfe, J.S. Forbey)
- Distinguished Speaker. Idaho State University, Pocatello, ID. Invited paper: Avian survival and reproduction in human-dominated landscapes.
- Emerging Researchers National (ERN) Conference in STEM. Washington DC. Poster: Differences in prey items within sagebrush and agricultural hunting territories of American kestrels. Presented by L. Kruger⁺ (with S.H. Smith, M. Henderson).
- 2014 Semi-Annual meeting: The Idaho Bird Conservation Partnership. Boise, ID. Paper: Golden eagle research in Idaho's shrub-steppe. (with R. Spaul, M. Kochert, B. Pauli).
- Annual meeting: The Wildlife Society. Pittsburgh, PA. Poster: Mitigating adverse effects of human disturbance on golden eagles (*Aquila chrysaetos*) using an individual-based modeling approach. Presented by L. D'Acunto (with R. Spaul, P. Zollner)
- North American Ornithology Conference. Estes Park, CO. Poster: The effect of climate change on available resources for American kestrels (*Falco sparverius*) in southwestern Idaho. Presented by S.H. Smith^{*} (with E.H. Urban)
- North American Ornithology Conference. Estes Park, CO. Poster: Do resident American kestrels (*Falco sparverius*) maintain territories and pair-bonds year-round in southwestern Idaho? Presented by M. Henderson⁺ (with A.M. Anderson, E.H. Urban)
- North American Ornithology Conference. Estes Park, CO. Paper: Do carry-over effects on nest initiation and mate choice facilitate population response to climate change in a partial migrant, the American kestrel? Presented by A. Anderson^{*} (with S.J. Novak, J. Smith, K. Steenhof)

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- North American Ornithology Conference. Estes Park, CO. Poster: The effects of off-highway recreation on the breeding ecology of a shrub-steppe raptor. Presented by R. Spaul*.
- North American Ornithology Conference. Estes Park, CO. Symposium Paper: Beyond migration banding: understanding factors affecting stopover success in autumn landbird migrants. Presented by J. Carlisle (with R.A. Miller, H.E. Ware, C. J.W. McClure, J.R. Barber, N. Paprocki, , G.S. Kaltenecker).
- Annual meeting. Idaho NSF EPSCoR. Boise, ID. Poster: Provide, poison, or compete? How does recreational shooting of ground squirrels affect wildlife valued by bird watchers? Presented by B. Pauli (with Z. Tinkle*, J. Forbey).
- Annual meeting. Idaho NSF EPSCoR. Boise, ID. Poster: Environmental impacts as perceived by different recreation groups. Presented by H. Brown⁺ and K. Araki⁺ (with R. Spaul*, M. Hubbard, K. Demps).
- Undergraduate Research Conference. Boise State University, Boise, ID. Poster: Differences in prey items within sagebrush and agricultural hunting territories of American Kestrels. Presented by L. Kruger⁺ (with S.H. Smith, M. Henderson).
- Undergraduate Research Conference. Boise State University, Boise, ID. Poster: Environmental impacts as perceived by different recreation groups. Presented by H. Brown⁺ and K. Araki⁺ (with R. Spaul*, M. Hubbard, K. Demps).
- Undergraduate Research Conference. Boise State University, Boise, ID. Poster: Do resident American kestrels (*Falco sparverius*) maintain territories and pair-bonds year-round in southwestern Idaho? Presented by M. Henderson⁺ (with A.M. Anderson, E.H. Urban).
- Annual meeting: Raptor Research Foundation. Corpus Cristi, TX. Symposium paper: Different patterns of nest survival in American Kestrels breeding in temperate and subtropical latitudes. Presented by J. Brown (with K. Steenhof).
- National Science Foundation BIO-REU Principal Investigators Conference/Workshop, Arlington, VA. Poster: Hawks, Owls, Falcons, and Eagles: A new REU Site in Raptor Research. Presented by J. Belthoff (with J. Barber, J. Smith, M. Bechard, J. Carlisle, G. Kaltenecker, R. Miller, D. Anderson, C. McClure, R. Watson, R. Thorstrom, D. Perkins).
- Symposium: Raptors of the Northwest. Pasco, WA. Invited Paper: How responses of raptors to climate change affects the reliability and interpretation of population trend estimates. Presented by N. Paprocki* (with E.G. Nolte*, S.J. Novak, G. Kalentecker, and J. Bart).
- Symposium: Raptors of the Northwest. Pasco, WA. Poster: Assortative mating as a mechanism for advancing nesting phenology in American kestrels (*Falco sparverius*). Presented by A. Anderson* (with S.J. Novak, J. Smith. K. Steenhof, E. Stolen). Awarded Best Student Poster.
- Semi-Annual meeting: The Idaho Bird Conservation Partnership. Boise, ID. Paper: Regional distribution shifts help explain local changes in wintering raptor abundance: Implications for interpreting population trends. Presented by N. Paprocki* (with S.J. Novak, and M. Kochert).
- Annual meeting: The Wildlife Society Idaho Chapter. Boise, ID. Paper: The effects of off-highway recreation on the breeding behavior of a shrub-steppe raptor. Presented by R. Spaul*.
- Annual meeting: The Wildlife Society Idaho Chapter. Boise, ID. Paper: Assortative mating as a mechanism for advancing nesting phenology in American kestrels (*Falco sparverius*). Presented by A. Anderson* (with S.J. Novak, J. Smith, K. Steenhof).

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

- Annual meeting: The Wildlife Society Idaho Chapter. Boise, ID. Poster: The effect of climate change on available resources for American Kestrels (*Falco sparverius*) in southwestern Idaho: Is a predator driven mismatch occurring or will there be one in the future? Presented by S. Smith*.
- 2013 Annual meeting: Idaho NSF EPSCoR, McCall, ID. Invited Paper: Avian ecology and conservation in a time of global change.
- Joint meeting: American Ornithologists' Union, and Cooper Ornithological Society, Chicago, IL. Paper: The effects of handling on the corticosterone stress response and fledging success in American Kestrel nestlings. Presented by E.L. Wonder*
- Florida Panhandle Shorebird Working Group. Panama City, FL. Paper: Human disturbance and Snowy Plovers. Presented by A.F. Webber* (with R. Fischer)
- Undergraduate Research Conference. Boise State University, Boise, ID. Poster: The impact of diet diversity and prey delivery rates on American Kestrel nestling survival in a drought year. Presented by A. Parrish⁺ (with E. Urban)
- Undergraduate Research Conference. Boise State University, Boise, ID. Poster: Intra-annual patterns in rainfall, NDVI, and small mammal availability for southwestern Idaho. Presented by M.L. Courchane⁺ (with S. Smith*, T.L. Gleeson*)
- Undergraduate Research Conference. Boise State University, Boise, ID. Poster: Heritability of tail coloration in male American kestrels. Presented by E. Tyrrell⁺ (with J. Braun⁺)
- Undergraduate Research Conference. Boise State University, Boise, ID. Poster: Genetic variation of a local American kestrel population. Presented by J.T. Weeks⁺ (with A.M. Anderson*, J.F. Smith, S.J. Novak)
- 2012 North American Ornithology Conference. Vancouver, BC. Paper: Changes in American Kestrel migration and wintering are associated with warmer winter temperatures in western North America. (with K. Steenhof and M. Foster⁺)
- North American Ornithology Conference. Vancouver, BC. Paper: Raptors present, yet unobserved: detectability at a western migration watch-site and its effect on trend analysis. Presented by E. Nolte* (with G. Kaltenecker)
- North American Ornithology Conference. Vancouver, BC. Invited Paper: Exploring climate impacts on migration timing and energetic condition of autumn migrant raptors and passerines in southwestern Idaho. Presented by J. Carlisle (with R. Miller*, N. Paprocki*, G. Kaltenecker)
- North American Ornithology Conference. Vancouver, BC. Poster: Population response to climate change: does assortative mating facilitate earlier nesting? Presented by A.M. Anderson*
- North American Ornithology Conference. Vancouver, BC. Poster: Regional management implications from a 20-year historical comparison of wintering raptors in southwest Idaho. Presented by N. Paprocki*
- Undergraduate Research Conference. Boise State University, Boise, ID. Poster: Comparing the relative effects of year, seasonality, territory, and individual on American Kestrel carotenoid concentrations. Presented by E.C. Sassani⁺ (with A.M. Anderson*, T.L. Gleeson*)
- Northwest Scientific Association. Boise, ID. Invited Paper: The use of Christmas Bird Counts and citizen science to monitor wintering raptor populations in Idaho and beyond. Presented by N. Paprocki*
- The Wildlife Society Idaho Chapter. Boise, ID. Paper: What effect does detectability have on statistical power in analysis of raptor migration counts? Presented by N. Paprocki*.

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- 2011 Raptor Research Foundation. Duluth, MN. Paper: What effect does detectability have on statistical power in analysis of raptor migration counts? Presented by E. G. Nolte* (with G. Kaltenecker)
- Raptor Research Foundation. Duluth, MN. Poster: Detectability of migrating raptors. Presented by E.G. Nolte* (with G. Kaltenecker)
- Raptor Research Foundation. Duluth, MN. Poster: How landscape and climate change affect occupancy of wintering raptors in the Morley Nelson Snake River Birds of Prey National Conservation Area. Presented by N.A Paprocki*
- Raptor Research Foundation. Duluth, MN. Poster: Challenges in creating an American Kestrel body condition index based on size-adjusted mass. Presented by E.H. Strasser*
- Graduate Research Symposium. Boise State University, Boise, ID. Poster: Detection of Wintering Raptors. Presented by N.A. Paprocki*
- Idaho IDeA Network of Biomedical Research Excellence. Moscow, ID. Poster: Heat shock protein concentrations in migratory and resident American Kestrels. Presented by M.A. Foster⁺
- 2010 Raptor Research Foundation, Fort Collins, CO. Paper: Recruitment of local, second year American Kestrels into the breeding population: who comes back and why? (with K. Steenhof)
- Idaho IDeA Network of Biomedical Research Excellence. Moscow, ID. Poster: Seasonal carotenoid variation in American Kestrels. Presented by C.H. Sevy⁺
- Joint meeting: American Ornithologists' Union, Cooper Ornithological Society, and the Society of Canadian Ornithologists. San Diego, CA. Paper: Corticosterone and reproductive success in American Kestrels nesting along a human disturbance gradient. Presented by E.H. Strasser*
- Joint meeting: American Ornithologists' Union, Cooper Ornithological Society, and the Society of Canadian Ornithologists. San Diego, CA. Paper: Quantifying detectability of migrating raptors: a practical double observer method. Presented by E.G. Nolte* (with G. Kaltenecker)
- Joint meeting: American Ornithologists' Union, Cooper Ornithological Society, and the Society of Canadian Ornithologists. San Diego, CA. Paper: Snowy Plover (*Charadrius alexandrinus*) nesting habitat on the Florida Panhandle. Presented by A.F. Webber* (with R.A. Fischer)
- Joint meeting: American Ornithologists' Union, Cooper Ornithological Society, and the Society of Canadian Ornithologists. San Diego, CA. Poster: The effects of investigator disturbance on American Kestrels: a study of incubation behavior and nest success. Presented by D.J. Owen.*
- 2009 Raptor Research Foundation. Pitlochry, Scotland. Paper: Demography of an American Kestrel population. Presented by K. Steenhof.
- Western Field Ornithologists. Boise, ID. Paper: A proposed method to index size and body condition in American Kestrels. Presented by E.H. Strasser* (with L. Bardo, D. Bird)
- Western Field Ornithologists. Boise, ID. Paper: The effects of investigator disturbance on American Kestrels: a study of incubation behavior and nest success. Presented by D.J. Owen*
- Undergraduate Research Conference. Boise State University, Boise, ID. Poster: Heat-shock proteins as a tool for measuring stress in American kestrels (*Falco sparverius*) nesting along a human disturbance gradient. Presented by C. Hayes⁺ (with E.H. Strasser*)
- 2008 Florida Panhandle Shorebird Working Group. Panama City, FL. Paper: Breeding habitat of

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FEBRUARY 18, 2016**

- Snowy Plovers in the Florida Panhandle. Presented by A.F. Webber*
- Raptor Research Foundation. Missoula, MT. Paper: Reproductive success in American kestrels: the roles of individual quality and human disturbance. Presented by E.H. Strasser*
- Joint meeting: American Ornithologists' Union, Cooper Ornithological Society, and the Society of Canadian Ornithologists. Portland, OR. Paper: How does foraging habitat restoration affect Piping Plover reproduction? (with A.F. McIntyre*)
- Joint meeting: American Ornithologists' Union, Cooper Ornithological Society, and the Society of Canadian Ornithologists, Portland, OR. Poster: American Kestrel reproduction: evidence for the selection hypothesis and the role of natal origin? Presented by K. Steenhof.
- 2007 American Ornithologists' Union, Laramie, WY. Paper: Factors affecting Piping Plover hatching success on Long Island, NY. Presented by P.J. Doherty*
- 2006 Atlantic Coast Piping Plover and Least Tern Working Group. National Conservation Training Center, WV. Poster: Proposal to study factors that affect Piping Plover nest abandonment. Presented by P.J. Doherty*
- 2005 Science Research Symposium. Hofstra University, Hempstead, NY. Paper: Why birds fly the coop.
- 2004 Science Research Symposium. Hofstra University, Hempstead, NY. Poster: Using stable isotope ratios in feathers to study bird movements.
- 2002 Joint meeting: Association of Field Ornithologists and Wilson's Ornithological Society. Fort Myers, FL. Paper: White Ibis integument color changes during the breeding season: hormonal correlates and use in breeding stage classification model. (with P.C. Frederick)
- Wildlife Ecology and Conservation Department. University of Florida, Gainesville, FL. Paper: Reproductive physiology of White Ibises in the Florida Everglades. (with P.C. Frederick)
- 2001 Waterbird Society, Niagara Falls, Canada. Paper: Trapping White Ibises: evaluation of two techniques and factors that affect success. (with P.C. Frederick)
- 2000 7th International Symposium on Avian Endocrinology, Varanassi, India. Poster: Reproductive physiology of White Ibises (*Eudocimus albus*): towards conservation of a nomadic species. (with P.C. Frederick)
- 1998 Zoology Department, Gainesville, FL. Paper: Corticosterone and the biology of American Kestrels.
- 1997 Pacific Seabird Group. Monterey. CA. Poster: Twenty-five years of breeding success in Pelagic Cormorants at the OIMB colony, Oregon. Presented by J. Hodder
- 1996 6th International Symposium on Avian Endocrinology. Lake Louise, Canada. Poster: Relationship between body condition and adrenal stress response in captive American Kestrel juveniles.
- 1995 Raptor Research Foundation. Duluth, MN. Paper: Physiological correlates of nest departure in American Kestrels.
- 1994 Raptor Research Foundation. Flagstaff, AZ. Paper: Activity and corticosterone levels in food restricted post-fledging American Kestrels.

ACADEMIC AND SCHOLARSHIP SERVICE

- 2015-present Member: Human Environmental System Initiative at Boise State
- 2015-present Campus Security Authority (CSA)
- 2014-present Coordinator for PhD in Ecology, Evolution, and Behavior proposal for DBS.

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- 2013-present Pre-tenure review panel for Dr. Kathryn Demps, Anthropology Dept.
- 2008- present Member: Society for Integrative and Comparative Biology, The Wildlife Society
- 2007- present Member: Raptor Research Foundation
- 2000- present Member: Association of Field Ornithologists, Cooper Ornithological Society.
- 2011-2015 Elected Board of Directors: Golden Eagle Audubon Society
- 2007- 2013 Committee Member: Department of Biological Science's Graduate Committee
- 2010- 2012 Mentor: INBRE fellows
- 2009- 2012 Alternate Committee Member: Boise State University's Institutional Animal Care and Use Committee
- 2009-2012 Elected Board of Directors: Northwest Scientific Association
- 2011-2012 Chair: Local Committee to host 2012 Northwest Science Association's annual meeting.
- 2009-2011 Member: Boise State University's Faculty Grievance Committee
- 2009-2010 Committee Member: Department of Biological Science's Faculty Search
- 2007-2008 Local Committee Co-Chair: Annual meeting of the Western Bird Banding Association.
- 2015 Member: Hamid Dashti Preliminary Exam Committee (Geosciences)
- 2015 Panelist: Careers in science, Purdue University, West Lafayette, IN.
- 2014 Reviewer: *NSF (ad-hoc), Journal of Raptor Research (2), Behavioral Ecology and Sociobiology*
- 2013 Co-Chair: Department of Biological Science's Transition Working Group
- 2013 Panel Reviewer: National Science Foundation, Biology Division
- 2013 Reviewer: *NSF (ad-hoc), Journal of Raptor Research, PLoS One, General and Comparative Endocrinology*
- 2012 Reviewer: *Waterbirds, Environmental Management, The Condor, NSF (ad-hoc)*
- 2011 Organizer: Boise State Graduate Student Research Symposium
- 2011 Reviewer: *Environmental Management, The Auk, Diversity and Distributions*
- 2010 Reviewer: State of Florida's Biological Status Review for White Ibises
- 2010 Reviewer: *Environmental Management, The Condor, Florida Field Naturalist*
- 2009 Reviewer: *Journal of Raptor Research, The Auk,*
- 2008 Reviewer: *Journal of Field Ornithology, Journal of Raptor Research, The Condor, The Auk, Waterbirds*
- 2007 Reviewer: *Journal of Field Ornithology*
- 2006 Reviewer: *Southeastern Naturalist, Biological Conservation, The Auk*
- 2006 Organizer: Poster session at Atlantic Coast Piping Plover and Least Tern Workshop, National Conservation Training Center, WV.
- 2005 Reviewer: *Herpetological Review*
- 2005 Reviewer: Port of Oakland's Biological Assessment of Maintenance Dredging on Least Terns.
- 2004 Panelist: Science and the Bush Administration: A Day of Dialogue, Hofstra University.
- 2004 Reviewer: *National Fish and Wildlife Foundation*
- 2003 Reviewer: *Journal of Avian Biology*
- 2002 Reviewer: *The Wilson Bulletin*
- 2001 Organizer: Wildlife Graduate Student Discussion Group, University of Florida, FL.
- 1998 Co-organized: Scientific Program at Annual Waterbird Society meeting, Miami, FL.
- 1996 Reviewer: *Journal of Raptor Research*

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GRADUATE AND POST-DOCTORAL MENTORSHIP

Post-Doctoral Advisor

DR. BENJAMIN PAULI. Quantitative Ecologist. Projects: Individual-based models of global change ecology and birds of prey. CURRENT

Graduate Student Committee Chair

BENJAMIN DUDEK (MS Student) Project: Investigating prevalence and mechanisms that affect infection risk of two factors that influence golden eagle nestling mortality: *Trichomonas gallinae* and hematophagous ectoparasites. CURRENT

SHAWN SMITH (MS Student) Project: The effect of climate change on predator and prey synchrony: do changes in American kestrel nesting phenology create a mismatch with seasonal prey cycles in southwestern Idaho? CURRENT

ROBERT SPAUL (MS Student) Project: Recreation disturbance to a shrub-steppe raptor: behavioral mechanisms and management implications. GRADUATED 2015. Current position: Research Associate at Boise State University

ALEXANDRA ANDERSON (MS Student) Project: Population response to climate change: does assortative mating facilitate earlier nesting? GRADUATED 2014. Earned Boise State University's Distinguished Thesis Award. Current position: PhD student at Trent University.

NEIL PAPROCKI (MS Student) Project: Wintering raptors in the Morley Nelson Snake River Birds of Prey National Conservation Area. GRADUATED 2013. Current position: Conservation Biologist at Hawkwatch International.

ERIN WONDER (MS Student) Project: Handling stress and the development of the hypothalamic-pituitary-adrenal axis. GRADUATED 2013. Current position: Scientist at Jackson Laboratory

ERIC NOLTE (MS Student) Project: Detectability of migrating hawks at watchsites. GRADUATED 2012. Current position: Adjunct Instructor at Boise State University.

ALYSON WEBBER (MS Student) Project: Snowy plover breeding habitat selection in the Florida Panhandle. GRADUATED 2011. Current position: Research Technician at Auburn University.

ERIN STRASSER (MS Student) Project: The effects of human disturbance on American kestrel (*Falco sparverius*) corticosterone concentrations, body condition, and reproductive success. GRADUATED 2010. Current position: Biologist at Rocky Mountain Bird Observatory

PAUL DOHERTY (MS Student) *Hofstra University*. Project: Factors that affect piping plover parental care and hatching success. GRADUATED 2007. Current position: Vice President, GIS Market Development at Antrix, University of Redlands.

ANNIE MCINTYRE (MS Student) *Hofstra University* Project: Does habitat restoration affect piping plover reproduction? GRADUATED 2007. Current position: Biologist for New York State Parks.

Graduate Student Committee member

MITCHELL LEVENHAGEN

ERIC FREY

ZOE TINKLE

TEMPE REGAN

BRYCE ROBINSON

MICHELLE JEFFERIES

HEIDI WARE (Graduated 2014)

JENNIER CROSSMAN

PATRICK KOLAR (Graduated 2013)

JESSICA SHERBURNE (Graduated 2013)

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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DENNIS DAW (Graduated 2015)
MATTHEW SCHMASOW (Graduated 2014)
ALLISON KORTE (Graduated 2013)
ALEX URQUHART (Graduated 2013)
MICAH SCHOLAR (Graduated 2011)
AMY ULAPPA (Graduated 2011)
BETH MCGUIRE (Graduated 2007, *Hofstra University*)

UNDERGRADUATE STUDENT MENTORSHIP

SCHELBY ROSEBROOK (BS Student, Raptor Research REU) Project: Consequences of mismatch: how does changing nesting phenology affect American kestrel growth rates.
CHRISTINA HARTMANN (BS Student, NSF REU) Project: Using stable isotopes to determine migratory strategies of American kestrels.
HANNAH BROWN (BS Student, MURI program) Project: Recreationists' perspectives on wildlife and trail management.
KRISTIN ARAKI (BS Student, MURI program) Project: Recreationists' perspectives on wildlife and trail management.
LAUREN KRUGER (BS Student, Raptor Research REU) Project: Dietary studies of American kestrels.
MICHAEL HENDERSON (BS Student, MURI program and Raptor Research REU) Project: Do resident kestrels maintain year-round territories? *and* How do ectoparasites affect nestling golden eagle health?
ALIA PARRISH (BS Student, NSF REU) Project: Dietary studies of American kestrels.
MARGARET LISA COURCHANE (BS Student, MURI program) Project: Inter- and intra- annual variation in rainfall, growing seasons, and mammal abundance in SW Idaho.
EMMY TYRRELL (BS Student) Project: Heredity in tail plumage of male American kestrels.
ELIZABETH (BETH) SASSANI (BS Student, ID EPSCoR REU) Project: Comparing the relative effects of year, seasonality, territory, and individual on American kestrel carotenoid concentrations
JADE WEEKS (BS Student) Project: Genetic variation in a partial migrant, the American Kestrel
MARK FOSTER (BS Student, INBRE) Project: How does migration strategy affect heat shock proteins of American kestrels?
CHRISTEENA SEVY (BS Student, INBRE) Project: Seasonal variation in carotenoid levels in American kestrels.
TRINA PATEL (BS Student, ID EPSCoR REU) Project: Incubation behavior and mate quality in American Kestrels.
CHRISTINE HAYES (BS Student, Dan Montgomery Award) Project: Use of heat shock proteins in evaluating human disturbance to nesting birds.
KYLE MCCORMICK, JAMES EDGEMON, JONI CLAPSDALE, ABBY WATERS, JOSIE BRAUN, REBECCA WAGNER, AND LYNELLE PERRY-KOLSKY have completed internships in the Heath lab.

Hofstra University

ALINA WANG (BS Student) Project: Reevaluating the relationship between testosterone, social rank and badge size in male house sparrows.
BRUGISHA PATEL (BS Student) Project: Do nest site characteristics affect piping plover nesting success?
ASHLEY CLARK (BS Student) Project: Piping plover incubation behavior on Long Island, NY.
CHRISTINA GALLO (BS Student) Project: Do birds forage optimally?

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POPULAR PRESS

The Arbiter, November 2015
Radio Boise, November 2015
PodKast, WildLens, September 2015
Idaho Science Journal, Idaho Public Television, May 2015
Golden Eagle Audubon Newsletter, January 2015
BBC Shared Planet, August 2014
KTVB News, February 2014
Boise State Radio, February 2014
Northwest (NW) NPR, May 2013
Hill and Dale show, June 2013
Science Friday, September 2012
Hofstra Horizons, May 2006

WORKSHOP ATTENDANCE

Agent based modeling 2013
Occupancy modeling 2009

Curriculum Vita

Peter Koetsier III

Department of Biological Sciences
Boise State University
1910 University Dr.
Boise, Idaho 83725-1515
Voice: (208) 426-3817
FAX: (208) 426-4267
E-mail: pkoet@boisestate.edu

Interests

Community/ecosystem ecology related to the structure & function of flowing waters

- Fish / Macroinvertebrate / Algal & Macrophyte Ecology
- Riparian Ecology
- Disturbance theory as it applies to stream recovery and restoration
 - ✓ Effects of wildfire on food webs
 - ✓ Community metabolism (primary production & respiration)
 - ✓ Invasive / endangered species
 - ✓ Urban stream ecology
- Predator-Prey relationships
- Macroinvertebrate drift & colonization dynamics
- Ecology of extreme aquatic environments (temporary streams, sink holes, vernal pools)

Education

Ph.D. 1993. Idaho State University, Pocatello, Idaho
Major: Aquatic Biology
Minor: Natural Resource Economics
Advisor: G. Wayne Minshall, Ph.D.

M.S. 1986. Louisiana State University, Baton Rouge, Louisiana
Major: Fisheries Management
Minor: Statistics
Advisor: C. Frederick Bryan, Ph.D.

B.S. 1982. Michigan State University, East Lansing, Michigan
Major: Fisheries Science
Minor: Zoology
Advisor: William Taylor, Ph.D.

A.A.S. 1979. Grand Rapids Community College, Grand Rapids, Michigan
Major: Sciences
Advisor: Anne Miller, Ph.D.

Professional Experience

- Chair, Dept Biological Sciences, Boise State Univ. 2011 - 2014
- Assoc. Chair, Dept Biological Sciences, Boise State Univ. 2009 - 2011
- Full Professor of Biology, Boise State Univ. 2009 to present
- Associate Professor of Biology, Boise State Univ., 2000 to 2008.
- Assistant Professor of Biology, Boise State Univ., 1995 - 2000.
- Ass't. Research Ecologist (Post-doctoral), Univ. Georgia, SREL, 1993 - 1995.
- Ph.D. candidate, Idaho State University, 1987 - 1993.
- Research Assistant, Idaho State Univ., 1986 - 1993.
- Macroinvertebrate Taxonomist, Idaho State Univ., 1986-1993.
- Teaching Assistant, Idaho State Univ., 1987-1990.
- Research Fellow, Louisiana State Univ., 1983-1986.
- Macroinvertebrate Taxonomist, Louisiana State Univ., 1983-1986.
- Research Associate, Louisiana Coop. Fish. Wildl. Res. Unit, USGS, 1983-1986.
- Biology Internship, Greenwood Nature Center, Avoca, MI, 1985.
- Aquaculture Research Assistant, Michigan St. Univ., 1982.
- Histology Research Assistant, Grand Rapids Jr. Coll., 1978-1979.

Teaching Experience

- **Boise State University**, Dept. of Biology, (1995 - present)
 - Concepts of Biology* (BIOL-100: lower division): organized and taught lecture and laboratories. This biology class was geared for non-majors and was a core requirement of the university [4 credits / 6-9 contact hrs per week].
 - General Zoology* (ZOOL-230: lower division): organized and taught lecture and laboratories. This was a rigorous 5-credit class and core requirement for the major in biology [5 credits / 7 – 11 contact hrs per week].
 - General Ecology* (BIOL-232: upper division): organized and taught lectures and laboratories. Developed lab manual. Core requirement for the major in biology [4 credits / 9- 12 contact hrs per week].
 - Stream Ecology* (BIOL-427/527: upper division/graduate): developed and organized this course (and lab) which studied the relationship abiotic and biotic components have on freshwater lotic communities and ecosystems [4 credits / 7 contact hrs per week].
 - Aquatic Entomology* (ZOOL-425/525: upper division/graduate): developed and organized this course (and lab). This course covers the taxonomy and ecology of the insects most commonly encountered in freshwater environments. Course emphasis is equally divided between identification/biology of individual taxa and aquatic insect ecology (including environmental pollution, and natural resource management) [4 credits / 6 contact hrs per week].
 - Fisheries Biology* (ZOOL-497/597: upper division/graduate): developed and taught lecture and laboratory. This course covers the ecology, biology, and management of economically important fish stocks [4 credits / 6 contact hrs per week].

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Teaching Experience cont.

Advanced Topics in Aquatic Biology (BIOL-561: graduate level): topics varied each semester depending on student interest. Topics ranged from readings on tri-trophic interactions to learning methods for assessing water pollution levels in streams.
[2-3 credits / 3 contact hrs per week].

Biology Graduate Seminars (BIOL-598: graduate level): seminar course and core requirement for graduate degrees in the department. Taught periodically, with topics varied each time depending on student need/interest
[1 credit / 1-2 contact hrs per week].

- **Idaho State University**, Dept. of Biological Sciences, (1987-1990)

Introductory Zoology (lower division): taught lecture (25-30 students) one semester, and three laboratories over a 4 year period. Course introduced students to the fundamentals of zoology.

Man and His Environment (lower division): taught laboratories for 3 years. Course was for non-biology majors and emphasized genetics/bioethics, population/ reproduction, and ecology.

General Ecology (upper division): taught course laboratories (25 students) for 2 years. Course was an introduction to basic ecology theory.

Invertebrate Zoology (upper division): taught 2 laboratories for a two-year period. Sabbatical replacement (taught both lectures & labs) for 1 semester. Course emphasize the phylogeny, diversity, and comparative anatomy of major invertebrate phyla.

Undergraduate Students / Graduate Student Advising

Undergraduate Students

Harding, Rex	Undergraduate Intern
Filkins, Susan	Paid technician, independent study
Finke, Starla	Paid technician, independent study
Krause, Teresa	Paid technician, fellowship
McFall, Jeanne	Independent study (Univ. of Idaho)
Sadow, Cory	Paid technician, independent study
Taylor, Larry	Paid technician, independent study
Valdivia, Cindy	Paid technician, fellowship, independent study
White, Joshua	Paid technician, fellowship
Ziolkowski, Emanuel	Paid technician

Graduate Students

- *Major Advisor:*

Evans, Johnna	MS Biology	Salow, Tammy	MS Biology
Fonner, Amber	MS Biology	Tuckett, Quenton	MS Biology
Hostettler, Lauri	MS Biology	Urquhart, Alex	MS Biology
Lysne, Steve	MS Biology	Wood, Jeri	MS Biology
McCauley, Luana	MA Biology	Daw, Dennis	MS Biology
Restall, Christopher	MS Biology	Kirkendall, Sam	MS Biology

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• *Advising committee member:*

Adams, Jason,	MS Biology
Bean, Barry	MS Biology
Bench, Molly	MS Biology
Billings, Stephine	MS Biology
Brill, Nicole	MS Biology - Univ. of Nevada
Eisenbarth, Stephie	MS Environ. Engineering
Engle, Janice	MS Biology
Flatter, Brian	MS-IDS Program
Hemingway, Angela	MS Biology
Hess, Pam	MS Biology
Howard, Amy	MS Biology
Krause, Teresa	MS Biology
Levin, Victoria	MS Biology
Lingo, Hallie	MS Biology
McVey, Kathryn	MS Biology
Medick, Ryan	MS Biology
Newell-Van Bussum, Monica,	MS Geology
Rose, Sarah,	MS Biology
Stiefel, Carl	MS Biology
Stuber, Matthew	MS Biology
Stutzman, Matt	MA Biology
Triepke, Jack	MS Biology
White, Joshua	MS Biology

Grants Funded

2010

Fish and Wildlife Federation (grant: \$15,000), Washington, DC. "Life history and environmental raits of the invasive Oriental Weatherfish in Idaho".

National Park Service (research contract: \$15,000), Moscow, ID. "Cestone faunal/floral surveys at Craters of the Moon National Monument."

Idaho Department of Fish and Game (research contract: \$10,000), Boise, ID.
"Ecological impacts of the invasive Dojo Weatherfish in southwestern Idaho."

2005 Dan Montgomery Foundation (research grant: \$8,000). "Fish diet and production in burned and unburned stream ecosystems of the Boise River basin".

2004 Dan Montgomery Foundation (research grant: \$4,000). "Leaf pack decomposition in burned and unburned streams."

2003 US Dept. of Agriculture - National Research Initiative Competitive Grants Program (research grant: \$100,000). "Effects of wildfire on trophic structure and food web dynamics in stream ecosystems."

Dan Montgomery Foundation (research grant: \$5,000), Boise, ID. "Does the intermediate disturbance hypothesis apply to stream macroinvertebrate communities?"

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- 2002** Idaho Department of Environmental Quality (research contract: \$35,000), Boise, ID. "Development of biotic metrics to distinguish between pristine and degraded rheocrene (springbrook) systems in southwest Idaho."
- 2001** US Bureau of Reclamation (research contract: \$52,600), Boise, ID. "The effect of environmental factors on native Bull Trout (Salvelinus confluentus) migration patterns in Arrowrock Reservoir and in the upper Boise River."
- 2000** US Fish & Wildlife Service and US Bureau of Reclamation (research contract: \$100,000). Ecological life history of two endangered Snake River gastropods.
- 1998** Faculty Research Grant, Boise State Univ. (\$5,000). "Downstream effects of impoundments on aquatic insect and algal community dynamics."
- 1997** Idaho Department of Environmental Quality (research contract: \$35,000), Boise, ID. Metrics development for algal bioassessment criteria in all eight ecoregions found in Idaho.
- US Department of Justice, Natural Resource and Environment Division (research contract: \$35,000), Washington, DC "Faunal build-up and community development in polluted and non-polluted streams."
- Faculty Research Grant, Boise State Univ. (\$5,000). "Organic decomposition as a measure of river ecosystem recovery."
- 1996** BSU Foundation Grant, Boise State Univ. (\$5,000). Money to develop a seminar series titled "Innovative Research In Biology." Seminar series exposed student and community to speakers involved in novel or state-of-the-art biological research.
- 1992** Graduate Student Research Grant, Idaho State Univ. (\$2,500). "The effects of fish and insect predation on macroinvertebrate community structure and periphyton biomass in an Idaho stream."
- Environmental Protection Agency Environmental Educational Grant, Idaho State Univ. (\$10,000) (co-principal investigator, R.S. Inouye). "Water quality measurements and its relation to riparian habitat use: module for high school use."
- 1991** Graduate Student Research Grant, Idaho State Univ. (\$2,500). "Diel size-differential drift of three invertebrate species in the lower Mississippi River, Louisiana (USA)."
- 1990** Graduate Student Research Grant, Idaho State Univ. (\$2,500). "Stream insect community structure: the effects of stream order on β -diversity."
- Faculty Research Grant, Idaho State Univ. (\$5,000) (co-principal investigator, G.W. Minshall). "The effects of two predator guilds on insect and algal structure in an Idaho stream."
- 1989** Graduate Student Research Grant, Idaho State Univ. (\$2,500). "The effects of fish predation and algal biomass on insect community structure in an Idaho stream."
- 1988** Sigma Xi Grants-in-aid of research. (\$1,000). "Effects of fish and insect predators on insect and diatom community structure in lotic systems."

1987 Graduate Student Research Grant, Idaho State Univ. (\$2,500). "Predator-prey associations in freshwater streams."

Publications (peer-reviewed)

- Koetsier**, P., and L.M. McCauley. 2014. Density-dependent relationship between stream benthos and drift. *Western North American Naturalist*: submitted.
- Tuckett, Q., and P. **Koetsier**. 2014. The effects of wildfire and debris flows on stream ecosystem metabolism in central Idaho stream. *Freshwater Sciences*: submitted.
- Urquhart, A. N., and P. **Koetsier**. 2014. Diet of a cryptic but widespread invader, the oriental weatherfish (*Misgurnus anguillicaudatus*) in Idaho, USA. *Western North American Naturalist* 74: 92-98.
- Urquhart, A. N., and P. **Koetsier**. 2014. Low-temperature tolerance and critical thermal minimum of the invasive Oriental Weatherfish, *Misgurnus anguillicaudatus*, in Idaho, USA. *Transactions of the American Fisheries Society* 143: 68-76.
- Koetsier**, P., and A. N. Urquhart. 2012. Desiccation tolerance in a wild population of the invasive Oriental Weatherfish (Cobitidae: *Misgurnus anguillicaudatus*, Cantor) in Idaho, USA. *Transactions of the American Fisheries Society* 141: 365-369.
- Urquhart, A. N., and P. **Koetsier**. 2011. Pectoral fin morphology as a reliable field sexing characteristic in populations of the invasive Oriental Weatherfish (*Misgurnus anguillicaudatus*). *Copeia* 2011: 296-300.
- Koetsier**, P., T.R.B. Krause, and Q.M. Tuckett. 2010. Present effects of past wildfires on leaf litter breakdown in stream ecosystems. *Western North American Naturalist* 70 (2): 164-174.
- Lysne, S., and P. **Koetsier**. 2008. Comparison of desert Valvata snail growth at three densities of the invasive New Zealand Mudsail. *Western North American Naturalist* 68:103-106.
- Monnot, L., J.B. Dunham, T. Hoem, and P. **Koetsier**. 2008. Influences of body size and environmental factors on autumn downstream migration of bull trout in the Boise River, Idaho. *North American Journal of Fisheries Management* 28:231-240.
- Koetsier**, P., Q. Tuckett, and J. White. 2007. Current effects of a past wildfire on stream fish diet. *Western North American Naturalist* 67 (3): 429-438.
- Lysne, S., and P. **Koetsier**. 2006. Experimental studies on habitat preference and tolerances of three species of snails from the Snake River of southern Idaho, USA. *American Malacological Bulletin* 21: 77-85.
- Lysne, S., and P. **Koetsier**. 2006. Growth rate and thermal tolerance of two endangered Snake River snails. *Western North American Naturalist* 66: 230-238.
- Lysne, S., and P. **Koetsier**. 2006. The life history of the Utah (desert) valvata, *Valvata utahensis*, in the Snake River, Idaho. *Journal of Freshwater Ecology* 21: 285-291.

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Publications cont.

- Koetsier**, P. 2005. The effects of disturbance time interval on algal biomass in a small Idaho stream. *Northwest Science* 79: 211-217.
- Koetsier**, P. 2005. Response of a stream diatom community to top predator manipulations. *Aquatic Sciences* 67: 517-527.
- Koetsier**, P. 2002. Short-term benthic colonization dynamics in agricultural streams, recovering from slaughterhouse effluents. *Journal of the American Water Resources Association* 38 (5): 1409-1422.
- Koetsier**, P. and J V. McArthur. 2000. Organic matter retention by macrophyte beds in 2 southeastern, USA, low-gradient, headwater streams. *Journal of the North American Benthological Society* 19: 633-647.
- Koetsier**, P., J V. McArthur, and L.G. Leff. 1997. Spatial and temporal response of stream bacteria to sources of dissolved organic carbon in a blackwater stream. *Freshwater Biology* 37: 79-89.
- Koetsier**, P. and J V. McArthur. 1997. New concepts in stream ecology: an integrative approach. *Journal of the North American Benthological Society* 16: 303-304.
- Koetsier**, P. and C.F. Bryan. 1996. Is invertebrate drift a density-dependent mechanism of the benthos? *Journal of Freshwater Ecology* 11: 1-10.
- Koetsier**, P., C.T. Robinson, and G.W. Minshall. 1996. Benthos and macroinvertebrate drift in six streams differing in alkalinity. *Hydrobiologia* 317: 41-49.
- Koetsier**, P. and C.F. Bryan. 1995. Effects of abiotic factors on macroinvertebrate drift in the lower Mississippi River, Louisiana (USA). *American Midland Naturalist* 134: 63-74.
- Koetsier**, P. 1993. Direct and indirect effects of predator type on the structure and function of a lotic benthic community. Unpubl. Ph.D. Dissertation. Idaho State University, Pocatello, Idaho.
- Koetsier**, P. and C.F. Bryan. 1992. Diel, size-differential drift patterns of three macroinvertebrate species in the lower Mississippi River, Louisiana (USA). *Hydrobiologia* 228: 225-230.
- Koetsier**, P., P.D. Dey, G. Mladenka, and J.W. Check. 1990. Rejecting equilibrium theory: a cautionary note. *Bulletin of the Ecological Society of America* 71: 229-230.
- Koetsier**, P. 1989. The effects of fish predation and algal biomass on insect community structure in an Idaho stream. *Journal of Freshwater Ecology* 5: 187-196.
- Koetsier**, P. and C.F. Bryan. 1989. Winter and spring macroinvertebrate drift in an outpocketing of the lower Mississippi River, Louisiana (USA). *Hydrobiologia* 185: 205-209.

Reports and Presentations

- 2008** Koetsier, P. The effects of wildfire and fire-induced debris flows on stream food web and trophic structure: stable isotope analyses 14 years after the fires. 56th Annual Meeting of the North American Benthological Society. Salt Lake City, UT. May 26-30, 2008.

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Koetsier, P. The effects of wildfire and fire-induced debris flows on stream food web and trophic structure: stable isotope analyses 14 years after the fires. 18th Annual Nonpoint Source Water Quality Monitoring Results Workshop. Boise, Idaho. January 3-5, 2008.

- 2007** Koetsier, P. Stream ecosystem recovery from wildfires: the role of riparian vegetation. 56th Annual Meeting of the American Water Resources Association. Albuquerque, New Mexico. November 12-15, 2007.

Sandown, J.S., and P. Koetsier. Differentiating impacted and least impacted springbrooks in southern Idaho. 88th Annual Meeting of the American Association for the Advancement of Science (Pacific Northwest Region). Boise, Idaho. June 17-20, 2007.

Sandown, J.S., and P. Koetsier. Using algae and bacteria to distinguish between impacted and least impacted springbrooks from southern Idaho. 17th Annual Nonpoint Source Water Quality Monitoring Results Workshop. Boise, Idaho. January 2-4, 2007.

Tuckett, Q., and P. Koetsier. Differential recovery of amphibians and fish to wildfire impacted stream ecosystems. 17th Annual Nonpoint Source Water Quality Monitoring Results Workshop. Boise, Idaho. January 2-4, 2007.

- 2006** Koetsier, P., and L. McCauley. Effect of scouring on scraper-algae interactions in a small Idaho stream. 16th Annual Nonpoint Source Water Quality Monitoring Results Workshop. Boise, Idaho. January 3-5, 2006.

McCauley, L., and P. Koetsier. Effect of periodic substate scouring on scraper-algae interactions in a small Idaho stream. Annual Meeting of the Northwest Science Association. Boise, ID. March 6-8, 2006.

Tuckett, Q., and P. Koetsier. Wildfire effects on stream ecosystem properties following debris flows, 12 years post fire. Annual Meeting of the Northwest Science Association. Boise, ID. March 6-8, 2006.

White, J., Q. Tuckett, and P. Koetsier. Effects of the 1994 Rabbit Creek fire on stream fish diets: 11 years later. Annual Meeting of the Northwest Science Association. Boise, ID. March 6-8, 2006.

White, J., C. Valdivia, Q. Tuckett, and P. Koetsier. Effects of the 1994 Rabbit Creek fire on stream fish diets: 11 years later. Undergraduate Research and Scholarship Conference. Boise, ID. April 17, 2006.

Koetsier, P., Q. M. Tuckett, and J. White. Effects of wildfire on stream fish diet: 14 years after the fire. 54th Annual meeting of the North American Benthological Society. Anchorage, Alaska. June 4-9, 2006.

Tuckett, Q.M., and P. Koetsier. Wildfire effects on stream ecosystem properties following debris flows, 10 years post-fire. 54th Annual meeting of the North American Benthological Society. Anchorage, Alaska. June 4-9, 2006.

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Sadow, J.L., and P. Koetsier. A pilot study for the development of bioassessment tools for desert springbrook ecosystems in southwestern Idaho. 54th Annual meeting of the North American Benthological Society. Anchorage, Alaska. June 4-9, 2006.

- 2005** Evans, J., and P. Koetsier. Development of biotic metrics to distinguish between least impacted and impacted desert springbrooks in southwest Idaho. 15th Annual Nonpoint Source Water Quality Monitoring Results Workshop, Boise, Idaho. January 4-6, 2005.

Koetsier, P., and L. M. McCauley. Effect of periodic substrate scouring on scraper-algae interactions in a small Idaho stream. 53rd Annual Meeting of the North American Benthological Society. New Orleans, LA. May 23-27, 2005.

- 2004** Evans, J., and P. Koetsier. Development of biotic metrics to distinguish between least impacted and impacted desert springbrooks in southwest Idaho. Annual meeting of the North American Benthological Society, Vancouver, British Columbia, Canada. June 7-11, 2004.

Koetsier, P. Potential effects of wildfire on benthic trophic dynamics in pristine streams of the Boise National Forest. USFS Boise National Forest Research Symposium. Boise, Idaho. May 20, 2004.

Hostettler, L., and P. Koetsier. Fall migration of juvenile Bull Trout in the north fork of the Boise River: the effects of impoundments. Annual meeting of the Northwest Region of the American Fisheries Society. Seattle, Washington. April 19-23, 2004.

Finke, S.D., & P. Koetsier. The effect of disturbance frequency on algal biomass in a small Idaho Stream. 1st Annual undergraduate research and professional practice conference. Boise, Idaho. April 19, 2004.

Hostettler, L., and P. Koetsier. Environmental influences on fall migration of juvenile Bull Trout in the north fork of the Boise River. Annual meeting of the Idaho chapter of the American Fisheries Society. McCall, Idaho. February 26-28, 2004.

- 2003** Hostettler, L., P. Koetsier, & J. B. Dunham. Environmental influences on fall migration of juvenile Bull Trout in the North Fork Boise River. 17th Annual meeting of the Idaho Chapter of the American Fisheries Society, Moscow, Idaho. February 2003.

Lysne, S., and P. Koetsier. The effects of temperature and flow on two endangered gastropod species in the Snake River, Idaho. 17th Annual meeting of the Idaho chapter of the American Fisheries Society, Moscow, Idaho. February 2003.

- 2002** Hostettler, L., and P. Koetsier. Radio transmitter implantation in juvenile Bull Trout. 27th Annual meeting of the Oregon Chapter of the American Fisheries Society, Oregon State University, Corvallis, Oregon. February 19-22, 2002.

Hostettler, L., and P. Koetsier. Radio transmitter implantation in juvenile Bull Trout. 75th Annual meeting of the Northwest Scientific Association, Boise State University, Boise, Idaho. March 27-30, 2002.

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Lysne, S., and P. Koetsier. Experimental studies on the temperature tolerance of two gastropods endemic to the middle Snake River, Idaho USA. 16th Annual meeting of the Idaho chapter of the American Fisheries Society, Idaho Falls, Idaho. February 20-23, 2002.

Lysne, S., and P. Koetsier. Preliminary studies of predation by crayfish on two endemic Snake River gastropods. 75th Annual meeting of the Northwest Scientific Association, Boise State University, Boise, Idaho. March 27-30, 2002.

Lysne, S. and P. Koetsier. Experimental studies on the substrate preference of two gastropods endemic to the middle Snake River, Idaho, USA. 36th annual meeting of the American Malacological Society, Charleston, SC. August 3-7, 2002.

- 1999** Koetsier, P. Development of an algal biotic index (ABI) for stream assessment in 3 ecoregions of southwest Idaho. North American Benthological Society (47th annual meeting), Duluth, Minnesota.

Koetsier, P. The direct and indirect effects of predator type on stream community structure and function in a small Idaho stream. South Dakota State University, Wildlife and Fisheries Department, Brookings, SD. (Invited presentation).

- 1998** Koetsier, P. The effects of Sparganium americanum beds on organic matter retention and storage in two southeastern, blackwater streams (South Carolina). North American Benthological Society (46th annual meeting), Prince Edward Island, Canada.

Koetsier, P. The effects of fish predation on aquatic insect and algal community structure in a small mountain stream. USFS Northcentral Experimental Research Station, Grand Rapids, Minnesota.

- 1997** Koetsier, P. Development of the Algal Biotic Index for 3 ecoregions in the state of Idaho. Under contract by the Division of Environmental Quality, Dept. of Health and Welfare, Idaho.

- 1996** Koetsier, P. The effects of Sparganium americanum beds on organic matter retention and storage in two southeastern, blackwater streams (South Carolina). North American Benthological Society (44th annual meeting), Kalispell, Montana.

Koetsier, P., and J V. McArthur. The effects of Sparganium americanum beds on organic matter retention and storage in two southeastern, blackwater streams (South Carolina). Ecological Society of America (81st annual meeting), Providence, Rhode Island.

- 1995** Koetsier, P. The effects of predator type on the structure of the benthic community in an Idaho stream. Boise State University, Boise, Idaho (invited presentation).

Koetsier, P. Comparisons of invertebrate assembly patterns in blackwater stream, river, and riverine floodplain habitats. North American Benthological Society (43rd annual meeting), Keystone, Colorado.

Koetsier, P., and J V. McArthur. Organized and hosted international symposium titled "*New concepts in stream ecology: an integrative approach*". University of Georgia's Savannah River Ecology Laboratory, Aiken, South Carolina, Oct. 16-19, 1995

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- 1994** Koetsier, P. Macroinvertebrate benthic and drift patterns from six streams differing in chemical richness. North American Benthological Society (42nd annual meeting), Orlando, Florida.
- 1993** Koetsier, P. Indirect impacts of predators on periphyton community parameters in an Idaho stream. North American Benthological Society (41st annual meeting). Calgary, Alberta.
- Koetsier, P. Direct and indirect effects of fish and stonefly predation on stream communities. Illinois Natural History Survey, Champaign, Illinois (invited presentation).
- Koetsier, P. Trophic cascades initiated by fish and invertebrate predation in lotic ecosystems. University of Georgia, Savannah River Ecology Laboratory, Aiken, South Carolina (invited presentation).
- 1993** Koetsier, P. Fish and invertebrate predation and their effects on invertebrate and algal community structure. Maryland Dept. Natural Resources, Chesapeake Bay Research and Monitoring Division, Annapolis, Maryland (invited presentation).
- 1992** Koetsier, P. Effects of fire on wilderness stream ecosystems in the Frank Church-River of No Return Wilderness: report of 1991 studies (with GW Minshall, PD Dey, CT Robinson). Payette National Forest, Boise, Idaho.
- Koetsier, P. The effects of fish and insect predation on the macroinvertebrate community and periphyton biomass in an Idaho stream. North American Benthological Society (40th annual meeting). Louisville, Kentucky.
- 1991** Koetsier, P. Diel size-differential drift of three invertebrates species in the lower Mississippi River, Louisiana (USA). North American Benthological Society (39th annual meeting), Santa Fe, New Mexico.
- 1989** Koetsier, P. Effects of fish predation and algal biomass on insect community structure in an Idaho stream. Ecological Society of America (1989 annual meeting), Snowbird, Utah.
- 1988** Koetsier, P. Invertebrate drift from predator-prey relationships in stream ecosystems. Dept. Biological Sciences-Ecolunch seminar. Idaho State University, Pocatello, Idaho.
- 1987** Koetsier, P. Direct and indirect effects of predators in lotic ecosystems: three-tiered effects. Dept. Biological Sciences seminar, Idaho State University, Pocatello, Idaho.
- 1986** Koetsier, P. Spring and summer invertebrate drift from a cove in the lower Mississippi River, Louisiana. Dept. Forest, Fisheries, and Wildlife. Louisiana State University. Baton Rouge, Louisiana.

Service / Administrative Experience

- **Non-University**

Aquatic Nuisance Species Taskforce (2007- present): Member of taskforce that serves as a technical advisory group to advise and consult with the Idaho Invasive Species Council, the governor, and state (ID Dept of Agriculture, Dept of Environmental Quality, ID Fish and Game) and federal (US Bureau Land Management, US Fish and Wildlife Service, etc.) agencies.

Board of Trustees member, Northwest Science Association (2003-2006): Member of the governing board of the NSA. Responsibilities including awarding research grants and annual meeting awards; reviewing qualifications and interviewing potential editors for the journal *Northwest Science* and replacement Board members; and reviewing association's finances and revising the Association's charter.

Associate Editor for the journal *Northwest Science* (2000 to 2005): Responsible for reviewing and sending manuscripts out for peer review. Coordinate of selection and acceptance of submitted manuscripts between peer-reviewers and the editor.

Snake River Snail Conservation and Restoration Team member (1999 to present): Committee with representatives from US Bureau of Reclamation, US Fish and Wildlife Service, Idaho Power Company, Idaho Dept. of Environmental Quality, and Idaho Fish and Game. The team is charged with developing and implementing a conservation plan and habitat restoration for 5 federally listed, endangered gastropods of the Snake River, Idaho.

Bull Trout Research Planning Team for the Boise River Basin member (1997 to 2007): Committee with representatives from US Bureau of Reclamation, US Fish and Wildlife Service, US Forest Service, US Geological Service, Idaho Fish & Game, and the Idaho Division of Environmental Quality charged with directing research efforts in the recovery of Bull Trout in the Boise River Basin.

Technical Advisor to Ada County Highway Department, Idaho (2003): Advised highway commission on aquatic ecosystem and life history as it pertained to potential insect vectors of West Nile Virus. I worked with engineers in the design of temporary overflow storm water retention ponds (Federal Way, Flying Wye projects).

Technical Advisor to Idaho's Department of Environmental Quality (1995 to present): One member of committee made up of representatives from private, state, and federal biologists. The committee's task is to design and critique the biomonitoring protocol for surface water designation and use in the state of Idaho.

Technical Advisor to Wastewater engineers of the cities of Nampa, Eagle, Meridian, Idaho (1997-2004): One member of a committee charged with the responsibility to design methods of wastewater treatment/elimination that complies with EPA regulations, yet are within the cost structure available to municipalities with populations under 40,000 people.

Headstart Science Education Advisor (Families, Children, and Friends, Region 10: 2001 to 2004): Worked with a team of elementary and special education professionals in developing, testing, and implementing science modules for Region 10 Headstart programs (3- to 5- year olds).

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Service cont.

Member of the selection committee advising the US Forest Service Rocky Mountain Research Station in the hiring of a Research Fishery Biologist (1999). Reviewed application materials of the top 9 candidates for the position, and ranked the candidates based on academic and professional qualifications, commenting on the strengths and weakness of each candidate.

Research Manager (Univ. Georgia- Savannah River Ecology Lab., 1994-1995): Directed development of Integrative Management of Stream Ecosystems research program. Responsibilities included: supervising and directing undergraduate and graduate research; directing current and initiating new research studies; supervising technicians and instituting QA/QC procedures; soliciting funds from and supervising joint research projects with state and federal government agencies; and representing program at faculty meetings; co-editor of a symposium proceedings titled "*New concepts in stream ecology: an integrative approach*".

Peer-reviewer for manuscripts submitted to the following journals:

- American Midland Naturalist
- Aquatic Sciences
- BioInvasions Records
- Canadian Journal of Fisheries and Aquatic Sciences
- Environmental Entomology
- Freshwater Biology
- Fundamental and Applied Limnology
- Hydrobiologia
- Idaho Academy of Sciences
- Journal of the American Water Resources Association
- Journal of Fish Biology
- Journal of Freshwater Ecology
- Journal of the North American Benthological Society
- Northwest Science
- Southwest Naturalist
- Western North American Naturalist

Conducted workshops or presentations at:

- Nampa Christian Elementary School (3rd & 4th grades): "The Invertebrates"
- Cole Valley Christian Elementary School (5th grade): "The Invertebrates"
- Ponderosa Elementary School, Meridian (4th grade): "Insects"
- Trout Unlimited (Valley County chapter): "The Living Stream"
- Boise State University Anthropology Dept Workshop: Fish resources & habitats of the Mid-Snake River (1999-2001). "Stream invertebrates: the link between terrestrial ecosystems and fish communities."

• **University Related Service (Boise St. Univ.):**

Interim Chair, Dept. of Biological Sciences (Dept service, 2011-2014)

Associate Chair, Dept. of Biological Sciences (Dept service, 2009-2011)

Graduate Student Advisor/Committee Member (Dept service, 1995 to present): Major advisor of 12 MS graduate students, committee member for 20 MS/MA graduate students.

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Service cont.

Biology Internship Coordinator (Dept. service, 2006 to present): Develops, promotes, and administers the internship program for the Biology Department (average: 13 interns/semester). Instructs potential interns and employers regarding legal policies; entrance requirements, intern – employer rights and responsibilities; evaluates bi-monthly intern reports and final intern products, assigns intern grades; and acts as liaison to the University internship program.

Biology Department Tenure & Promotion Committee (Dept. service, 2005 to present): Responsible for evaluating the teaching of adjunct and tenure-track faculty each semester; submits year-end evaluation & recommendations to the Chair regarding tenure-track faculty; and reviews packets of faculty members seeking tenure or promotion.

Biology Department Undergraduate Committee (Dept. service, 2006 to present): Member of a committee responsible for the managing the undergraduate curricula in the Biology Department. This includes the development of a new major, evaluating the teaching of adjunct faculty, UG advising, etc...

Biology Department Library Liaison (Dept. service, 1998 to present): Promotes and relays department needs/concerns regarding books, journal subscriptions, and acts as a conduit for information between University's Albertson Library and the Biology Department.

Biology Department Research Committee (Dept. service, 2004 to 2006): Member of a committee responsible for developing and promoting research opportunities in the Biology Department. This includes managing the department seminars, facilitating research collaborations, and seeking research opportunities.

Faculty Search Committees (Dept. service, 2000 thru 2006): Developed qualification list, advertisement, and selection of "short-list" candidates for 3 vacant faculty positions: Entomologist, Developmental Biologist, Raptor Biologist. Reviewed applicant's material, participated in phone and personal interviews, evaluated seminars and involved in candidate selection.

N.E.O.N. (National Ecological Observatory Network) & ***I.R.O.N.*** (Intermountain region observatory Network) participant (Dept. service, 2004-2006): Promoted the research strengths of Biology Department faculty and lobbied the National Science Foundation to include the northeastern Owyees in the IRON program. This would allow department faculty to have access to and take advantage of equipment, grants, and collaborations with other scientists on a national level.

Biology Proposed Ph.D. Program Committee member (Dept. service, 2000 to 2003): Committee charged with preliminary development of a Ph.D. in Biology program. Need, feasibility, current departmental strengths and weaknesses, community & state support, and program requirements were addressed.

Graduate Coordinator for the Biology Department (Dept. service, 1999 - 2000): responsible for the initial contact, correspondence, and acceptance/rejection of MS and MA graduate students in Biology. I chair the Graduate Oversight Committee which is responsible for allocation of departmental teaching assistantships, sets policy, and checks the annual progress of all graduate students in the department's program.

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College of Arts and Sciences Tenure / Promotion Committee (Univ. service, 2004): Evaluated Teaching/Research/Service packets and advised the college dean regarding the award of tenure or promotion to COAS faculty.

Albertson Library Board member (Univ. service, 1999-2002): Committee addressed library concerns between the university, students and faculty; developed proposals for increasing library holdings (one-time and continuous purchases); and lobbied for library needs to the university's upper administration and to members of the State Board of Education.

University Graduate Council Chair (Univ. service, 1998 - 2000): university committee responsible for approval of new graduate programs, graduate curricula, and graduate faculty for Boise State University. Members are appointed by the Dean of Graduate Research.

Faculty Research Association Program (Univ. service, 2000 to 2001): One year sabbatical replacement for Dr. A. Dufty. Read and awarded research grants to University-sponsored grant program.

Institutional Animal Care and Use Committee (Univ. service, 2000 to 2001): One year sabbatical replacement for Dr. A. Dufty. Designed, developed and approved protocols for all university-wide research using animals.

• **University Related Service (other universities):**

Faculty Tenure Committee (Economics Dept., Idaho St. Univ., 1992): Out-of-department university member on the tenure hearing of Dr. Robert Tokle (Dept. of Economics, ISU). Responsibilities included review of candidate's academic record, peer-reviewed publications, teaching history, and community service; interviews with colleagues and former students; and meetings with Dean and Vice-president of Academic Affairs on tenure decision.

Research Coordinating Council (Biology Dept. representative, Idaho St. Univ., 1990-1992): Developed university policy regarding patent rights, research-derived royalties, freedom to publish under government contracts and response to academic fraud. Worked with representatives from all major university departments. Appointed by Dean of Graduate Studies and Research.

Faculty Search Committee (graduate representative, Idaho St. Univ., 1989): Developed qualification list and advertisement for plant ecologist position. Reviewed applicant's materials, participated in phone and personal interviews, evaluated seminars and involved in candidate selection.

Research & Field Supervisor (US Fish. & Wildl. Ser., Louisiana St. Univ., 1981-1983): Supervised 3 graduate students and 4 technicians. Maintained research timetable and schedule; responsible for writing of quarterly and annual reports to funding agencies; developed and conducted QA/QC laboratory procedures.

Professional Affiliations

- American Fisheries Society
- Ecological Society of America
- North American Benthological Society
- Northwest Science Association
- Sigma Xi, the scientific research society

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CURRICULUM VITAE

Stephen J. Novak

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EDUCATION:

1985-1990 Washington State University, Pullman, WA 99164, Ph.D. Botany
1978-1981 University of Massachusetts, Amherst, MA 01003, M.S. Plant Pathology
1976-1978 Johnson State College, Johnson, VT 05656, B.S. Environmental Science

PROFESSIONAL EXPERIENCE:

2013 (Fall) Professional Leave (Sabbatical), European Biological Control Laboratory,
USDA-ARS, Montferrier-sur-Lez, France
2009-present Professor, Department of Biological Sciences, Boise State University
2007 (Spring) Professional Leave (Sabbatical), CSIRO European Laboratory,
Montferrier-sur-Lez, France
2004 (Spring) Visiting U.S. Professor, University Studies Abroad Consortium (USAC)
Program, Universite de Pau, France
1999-2000 Professional Leave (Sabbatical), CSIRO European Laboratory,
Montferrier-sur-Lez, France
1998-2009 Associate Professor, Department of Biology, Boise State University
1993-1998 Assistant Professor, Department of Biology, Boise State University
1993 (Summer) Instructor, Department of Biology, Washington State University
1993 (Spring) Instructor, Department of Botany, Washington State University
1990-1992 Post-doctoral Research Associate, Department of Botany, Washington
State University
1985-1990 Graduate Teaching Assistant, Departments of Biology and Botany,
Washington State University
1978 & 1980 Graduate Teaching Assistant, Department of Plant Pathology, University
of Massachusetts

COURSES TAUGHT:

BIOL 100	Concepts of Biology
BIOL 191	General Biology I
BIOL 323	General Ecology

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BIOL 343	Genetics Lecture
BIOL 400/500	Organic Evolution
BIOL 409/509	Molecular Ecology
BIOL 422/522	Conservation Biology
BOT 130	General Botany
BOT 424/524	Plant Community Ecology

TEACHING AWARDS AND RECOGNITION:

2008	Foundation Scholar Award for Teaching, Boise State University
2006	Finalist, College of Arts and Sciences Teaching Award, Boise State University
2004	Finalist, College of Arts and Sciences Teaching Award, Boise State University
2002	Finalist, College of Arts and Sciences Teaching Award, Boise State University

RESEARCH AWARDS AND GRANTS:

2015	Specific Cooperative Agreement, European Biological Control Laboratory, United States Department of Agriculture, Agriculture Research Services (ARS) and Boise State University, \$85,640
2014	Specific Cooperative Agreement, European Biological Control Laboratory, United States Department of Agriculture, Agriculture Research Services (ARS) and Boise State University, \$40,000
2014	United States Department of Agriculture, Agriculture Research Services (ARS) Area-wide Pest Management Program, \$300,300 (with Rene Sforza and Massimo Cristofaro, \$149,500 to Boise State University)
2012	Boise State University, College of Arts and Sciences, Faculty Travel Grant, \$600
2011	BLM, Challenge Cost-share, CESU, \$14, 625
2010	Boise State University, College of Arts and Sciences, Faculty Travel Grant, \$600
2009	United States Department of Agriculture, Agriculture and Food Research Initiative, \$199,704 (<i>Bromus</i> REEnet, Matthew Germino, Jeanne Chambers, and 25 others)
2009	LI-COR Environmental Education Foundation, \$40,000 (with Marcelo Serpe, with mating funds of \$41,000 provided by BSU)
2008	United States Department of Agriculture, Agriculture and Food Research Initiative, National Institute of Food and Agriculture, \$99,929
2008	Boise State University, College of Arts and Sciences, Faculty Travel Grant, \$600
2007	United States Department of Agriculture-Agricultural Research Services, European Biological Control Laboratory, \$5000
2007	Commonwealth Scientific and Industrial Research Organization, Division of Entomology, Visiting Scientist Research Grant, \$7500
2006	Boise State University, College of Arts and Sciences, Faculty Travel Grant, \$600
2005	National Geographic Society, Committee for Research and Exploration (Collaborator with C. Lynn Kinter, Nancy Shaw, Ann Hild, George Markin, Mario Vigna, Ricardo Lopez, John Gaskin), \$20,000

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2005	State of Idaho, Military Division, Idaho Army National Guard (with Ian Robertson), \$30,864
2004	Merck/American Association for the Advancement of Science (AAAS) Undergraduate Science Research Program (with Martin Schimpf, Julia Oxford, Marcelo Serpe, Susan Shadle, and Ken Cornell), \$20,000
2004	University Studies Abroad Consortium (USAC) Program, \$7000
2003	Merck/American Association for the Advancement of Science (AAAS) Undergraduate Science Research Program (with Martin Schimpf, Julia Oxford, Marcelo Serpe, Henry Charlier, and Robert Ellis), \$20,000
2002	Idaho Department of Fish and Game, State Wildlife Grant Program (with James C. Munger), \$22,300
2002	Boise State University, Faculty Research Program, \$5000
2002	Merck/American Association for the Advancement of Science (AAAS) Undergraduate Science Research Program (with Martin Schimpf, Julia Oxford, Marcelo Serpe, Henry Charlier, and Robert Ellis), \$20,000
2001	Boise State University, Faculty Research Program, \$4994
2000	European Biological Control Laboratory, United States Department of Agriculture, Agricultural Research Services (with John L. Scott), \$13,000
1999	United States Forest Service, Fortine Ranger District, Kootenai National Forest, Montana, \$2000
1999	American Institute of Biological Sciences (AIBS), Travel Grant, \$1200
1999	Boise State University, Faculty Research Program, \$5000
1997	Research Corporation and the M.J. Murdock Charitable Trust, \$14,000
1997	Boise State University, Faculty Research Program, \$4990
1997	Boise State University, Faculty Travel Grant, \$1400
1996	National Science Foundation-Idaho EPSCoR Program (with James R. Belthoff), \$6000
1996	Boise State University, Faculty Research Program, \$4958
1995	Boise State University Foundation (with James F. Smith), \$5000
1995	Boise State University, Faculty Travel Grant, \$466
1994	Boise State University, Faculty Research Program, \$4500
1994	Boise State University, Faculty Travel Grant, \$1031
1992	United States Forest Service, Kootenai National Forest, Libby, MT, \$2500
1989	Washington State University, Graduate Student Travel Grant, \$436
1988	Washington State University, Graduate Research Assistantship, \$2000
1987-1989	Washington State University, Department of Botany, Hannah Aase Departmental Fellowship, \$2000

PROFESSIONAL SOCIETIES:

Botanical Society of America
Ecological Society of America
Idaho Academy of Science
Society for Conservation Biology
Society for the Study of Evolution

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PROFESSIONAL SERVICES:

Associate Editor: *Weed Research*, 2009 - present

Manuscript Reviewed For: *Evolution, Conservation Biology, American Midland Naturalist, American Journal of Botany, Molecular Ecology, New Phytologist, Plant Biology, Systematic Botany, Oecologia, Great Plains Research, Canadian Journal of Botany, Northwest Science, Applied Ecology, Journal of the Torrey Botanical Society, Biological Invasions, International Journal of Plant Sciences, Heredity, Weed Research, Proceedings of the National Academy of Science USA, Plant Ecology, Invasive Plant Science and Management, Diversity and Distributions, Australian Journal of Botany, Aquatic Botany, Trends in Ecology and Evolution (TREE), Evolutionary Ecology, Western North American Naturalist, Current Opinion in Environmental Sustainability, NeoBiota, Weed Science, Biology and Environment: Proceedings of the Royal Irish Academy, Frontiers in Ecology and the Environment, Ecology Letters, BioScience, Journal of Applied Ecology, Journal of Ecology, Journal of Arid Land, Journal of Arid Environments, PLOS ONE, Journal of the American Water Resources Association*

Proposal Reviewed For: United States National Science Foundation, Israel Science Foundation, United States Department of Agriculture, Utah State University--Biotechnology Center Grant Program, Utah State University--Community-University Research Initiative (CURI) Grant Program

Co-Organizer of a Conservation Biology Seminar Series at Boise State University (with James F. Smith), 1995-1996

Session Chair, Genetics Section, Botanical Society of America Annual Meeting: 1996, 1997 & 2001

Secretary-Treasurer/Vice-Chair/Program Organizer, Genetics Section, Botanical Society of America: 1997 - 2002

Chair, Genetics Section, Botanical Society of America: 2003 - 2005

Executive Council Member, Botanical Society of America: 2002, 2003 & 2005

Boise State University Trustee, Idaho Academy of Science: 2005 to 2010

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Session Chair, Northwest Scientific Association Annual Meeting: 2006

Boise State University Technical Representative to the Great Basin Cooperative
Ecosystem Study Unit, 2007

Faculty Advisor, Undergraduate Biology Club, 2007 - present

Treasurer, Idaho Academy of Science, 2010 – 2013

Panel Discussion Participant, Idaho Academy of Science Annual Symposium: 2011

Session Chair, Intermountain Native Plant Summit IV: 2011

Northern Rockies Invasive Plant Council Board: 2014 - present

UNIVERSITY AND COLLEGE SERVICES:

University Prior Learning Committee: 1995, 1996 & 1997

University Faculty Research Grant Program, Proposal Review Committee: 1995 & 1998

College of Arts and Sciences, Mini-Development Grant Selection Committee: 2001 -
2007

College of Arts and Sciences, Awards Committee: 2008

University Foundation Scholar Award for Teaching Committee: 2008-2009

MAJOR RESEARCH INTERESTS:

Biological and ecological consequences of the introduction of alien plants; Plant
ecological genetics and evolutionary biology; Investigations of the factors that influence
the level and structure of genetic variation: introduction events, founder effects, gene
flow, and mating systems; Polyploid speciation: genetic and ecological consequences of
polyploidy

INVITED SEMINARS/SYMPOSIA/PANEL DISCUSSIONS:

Nevada Weed Management Association Conference, 2015

Nevada Medusahead Symposium, 2015

College of Idaho, Department of Biology, 2014

Regional Botanist Special Lecture, Botany 2014 Meeting, Boise, ID, 2014

Washington State University, School of Biological Sciences, 2013

Washington State University, School of Biological Sciences, 2013

USDA-ARS, European Biological Control Laboratory, Montferrier-sur-Lez,

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France, 2012

International Symposium on Invasive Plants and Global Change, Xinjiang Institute of Ecology and Geography, Urumqi, China, 2012
Brigham Young University, Department of Plant and Wildlife Sciences, 2012
Idaho Academy of Science Annual Meeting, College of Idaho, 2011
Chicago Map Society, Newberry Library, Chicago, IL, 2011
Idaho State University, Department of Biological Sciences, 2010
Boise State University, Center for Teaching and Learning, 2009
Boise State University, Department of Biological Sciences, 2009
Washington State University, School of Biological Science, 2009
Boise State University, Department of Biological Sciences, 2008
CSIRO European Laboratory, Montferrier-sur-Lez, France, 2007
USDA-ARS, European Biological Control Laboratory, Montferrier-sur-Lez, France, 2007
Idaho Rare Plant Conference, Invasive Species, Boise, ID, 2006
Invasive Plants in Native and Managed Systems: Linking Science and Management and 7th International Conference on Ecology and Management of Alien Plant Invasions (IPINAMS-EMAPi7) Meeting, Ft. Lauderdale, FL, 2003
Idaho Rare Plant Conference, Palouse Prairie: Past, Present and Future, Boise, 2002
Brigham Young University, Department of Botany and Range Science, 2001
Virginia Commonwealth University, Department of Biology, 2001
Owyhee-Bruneau Canyonlands Symposium, Boise, ID, 2000
Universite de Rennes I, Botanique: Biosystematique et Genetique des Population Vegetales, Rennes, France, 2000
Centre d'Ecologie Fonctionnelle et Evolutive, Centre National de la Recherche Scientifique, Montpellier, France, 2000
CSIRO European Laboratory, Montferrier-sur-Lez, France, 2000
International Botanical Congress, St. Louis, MO, 1999
Ohio University, Department of Environmental and Plant Biology, 1997
Idaho Rare Plant Conference, Boise, ID, 1995
United States Forest Service Workshop, Boise, ID, 1995
University of Utah, Department of Biology, 1994
University of Arkansas, Department of Biology, 1994
Boise State University, Interdisciplinary Humanities Program, 1994
Idaho Native Plant Society, Boise, ID, 1994
Boise State University, Department of Biology, 1993
Herbicide Resistance Workshop, Western States, Weed Science Society of America, Elk River, ID 1992
Ecology, Management and Restoration of Intermountain Annual Rangelands Symposium, Boise, ID, 1992
Boise State University, Department of Biology, 1992
Utah State University, Department of Biology, 1991
University of Florida, Department of Botany, 1991
Weber State College, Department of Botany, 1990

PEER-REVIEWED PUBLICATIONS (* = Invited Paper):

- Rohde, A.T., D.S. Pilliod, and S.J. Novak. 2015. Wildfire and post-fire restoration seeding alter insect communities in sagebrush habitats. *In Revision*.
- Anderson, A.M., S.J. Novak, J.F. Smith, K. Steenhof, and J.A. Heath. 2015. Winter carry-over effects on nest initiation and mate choice in a partial migrant, the American kestrel (*Falco sparverius*): a climate change response? *The Auk: Ornithological Advances*, *In Press*.
- Schulte, L.J., J.L. Clark, S.J. Novak, S.K. JeffriesM, and J.F. Smith. 2015. Speciation within *Columnea* Section *Angustiflorae* (Gesneriaceae): islands, hummingbirds and climate. *Molecular Phylogenetics and Evolution*, 84: 125-144.
- Pawlak, A.R., R.N. Mack, Jeremiah W. Busch, and S.J. Novak. 2015. Invasion of *Bromus tectorum* (L.) into California and the American Southwest: rapid, multi-directional and genetically diverse. *Biological Invasions*, 17: 287- 306.
- Tretter, E.D., E.M. Johnson, G.L. Benny, R.W. Lichtwardt, Y. Wang, P. Kandel, S.J. Novak, J.F. Smith, and M.M. White. 2014. An eight-gene molecular phylogeny of the Kickxellomycotina, including the first phylogenetic placement of Asellariales. *Mycologia*, 106: 912-935.
- Wang, Y., E.D. Tretter, E.M. Johnson, P. Kandel, R.W. Lichtwardt, S.J. Novak, J.F. Smith, and M.M. White. 2014. Using a five-gene phylogeny to test morphology-based hypotheses of *Smittium* and allies, endosymbiotic gut fungi (Harpellales) associated with arthropods. *Molecular Phylogenetics and Evolution* 79: 23-41.
- Schulte, L.J., J.L. Clark, S.J. Novak, M. T.-Y. Ooi, and J.F. Smith. 2014. Paraphyly of Section *Stygnanthe* (*Columnea*, Gesneriaceae), a New Section Inferred from ITS and Chloroplast DNA Data, and a Revision of the Species of Section *Angustiflorae*. *Systematic Botany* 39: 613-636.
- Wilson, E.R., K.L. Smalling, T.J. Reilly, E. Gray, L. Bond, L. Steele, P. Kandel, A. Chamberlain, J. Gause, N. Reynolds, I. Robertson, S.J. Novak, K. Feris, and M.M. White. 2014. Assessing the potential effects of fungicides on nontarget gut fungi (Trichomyctees) and their associated larval black fly hosts. *American Water Resources Association* 50: 420-433.
- Paprocki, N., J.A. Heath, and S.J. Novak. 2014. Regional distribution shifts help explain changes in wintering raptor abundance: implications for interpreting population trends. *PLoS ONE* 9(1): e86814. doi:10.1371/journal.pone.0086814.
- Gaskin, J.F., M. Schwarzlander, C.L. Kinter, J.F. Smith, and S.J. Novak. 2013. Propagule

- pressure, population structure, and geographic origins of *Chondrilla juncea* (Asteraceae): an apomictic invader of three continents. *American Journal of Botany* 100: 1871-1882.
- Lohr, K., E. Yensen, J.C. Munger, and S.J. Novak. 2013. Relationship between habitat characteristics and densities of southern Idaho ground squirrels. *Journal of Wildlife Management* 77: 983-993.
- Clay, D.L., S.J. Novak, M.D. Serpe, D.C. Tank, and J.F. Smith. 2012. Homoploid hybrid speciation in a rare endemic *Castilleja* from Idaho (*Castilleja christii*, Orobanchaceae). *American Journal of Botany* 99: 1976-1990.
- Huttanus, T.D., R.N. Mack, and S.J. Novak. 2011. Propagule pressure and introduction pathways of *Bromus tectorum* (cheatgrass; Poaceae) in the central United States. *International Journal of Plant Sciences* 172: 783-794.
- Davis, M.C., S.J. Novak, and G. Hampikian. 2011. Mitochondrial DNA analysis of an immigrant Basque population: loss of diversity due to founder effects. *American Journal of Physical Anthropology* 144: 516-525.
- Hardegree, S.P., C.A. Moffet, B.A. Roundy, T.A. Jones, S.J. Novak, P.E. Clark, F.B. Pierson, and G.N. Flerchinger. 2010. A comparison of cumulative-germination response of cheatgrass (*Bromus tectorum* L.) and five perennial bunchgrass species to simulated field-temperature regimes. *Environmental and Experimental Botany* 69: 320-327.
- Xu, C-Y., M.H. Julien, M. Fatemi, C. Girod, R.D. Van Klinken, C.L. Gross, and S.J. Novak. 2010. Phenotypic divergence during the invasion of *Phyla canescens* in Australia and France: evidence for selection-driven evolution. *Ecology Letters* 13: 32-44.
- Smith, J.F., A.J. Stillman, S.R. Larson, C.M. Culumber, I.C. Robertson, and S.J. Novak. 2009. Phylogenetic relationships among *Lepidium papilliferum* (L. Henderson) A. Nels. & J.F. Macbr., *L. montanum* Nutt., and *L. davisii* Rollins (Brassicaceae). *Journal of the Torrey Botanical Society* 136: 149-163.
- Novak, S.J. and J.H. Rausch. 2009. Use of field surveys, distributional data and genetic analyses to monitor alien species: *Taeniatherum caput-medusae* as an example of the approach. *Neobiota* 8: 169-182.
- Schachner, L.J., R.N. Mack, and S.J. Novak. 2008. *Bromus tectorum* (Poaceae) in mid-continent United States: population genetic analysis of an ongoing invasion. *American Journal of Botany* 95: 1584-1595.
- Novak, S.J., and R. Sforza. 2008. Genetic analysis of native and introduced populations of *Taeniatherum caput-medusae* (Poaceae): implications for biological control. Pp. 422-428. *Proceedings of the XIIth International Symposium on Biological Control of Weeds*, CAB International, Wallingford, UK.

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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- Anderson, K.E., S.J. Novak, and J.F. Smith. 2008. Populations composed entirely of hybrid colonies: bidirectional hybridization and polyandry in harvester ants. *Biological Journal of the Linnean Society* 95: 320-336.
- Triepke, J.F., C.K. Brewer, D.M. Leavell, and S.J. Novak. 2008. Mapping of forest alliances and associations using fuzzy systems and nearest neighbor classifiers. *Remote Sensing of Environment* 112: 1037-1050.
- *Novak, S.J. 2007. The role of evolution in the invasion process. *Proceedings of the National Academy of Sciences USA* 104: 3671-3672.
- Valliant, M.T., R.N. Mack, and S.J. Novak. 2007. Introduction history and population genetics of the invasive grass *Bromus tectorum* (Poaceae) in Canada. *American Journal of Botany* 94: 1156-1169.
- Novak, S.J. 2004. Genetic analysis of Downy Brome (*Bromus tectorum*) and Medusahead (*Taeniatherum caput-medusae*): management implications. *Weed Technology* 18: 1417-1421.
- Anderson, D.L., D.A. Wiedenfeld, M.J. Bechard, and S.J. Novak. 2004. Avian Diversity in the Moskita Region of Honduras. *Ornitologia Neotropical* 15: 447-482.
- *Sagers, C.L., S. Nigemann, and S.J. Novak. 2002. Ecological risk assessment for the release of transgenic rice in southeastern Arkansas. Pp. 94-105. *Proceedings: Ecological and Agronomic Consequences of Gene Flow from Transgenic Crops to Wild Relatives*, Ohio State University, Columbus, OH.
- Bartlett, E., S.J. Novak, and R.N. Mack. 2002. Genetic variation in *Bromus tectorum* (Poaceae): differentiation in eastern United States. *American Journal of Botany* 89: 602-612.
- *Novak, S.J., and R.N. Mack. 2001. Tracing plant introduction and spread: genetic evidence from *Bromus tectorum* (cheatgrass). *Bioscience* 51: 114-122.
- Novak, S.J., and R.N. Mack. 2000. Clonal diversity within and among introduced populations of the apomictic vine *Bryonia alba* (Cucurbitaceae). *Canadian Journal of Botany* 78: 1469-1481.
- Martin, E., and S.J. Novak. 1999. Composition and cover of epiphytic lichens on *Pseudotsuga menziesii* and *Populus tremuloides* in Southwestern Idaho. *Evansia* 16: 105-111.
- Novak, S.J., and A.Y. Welfley. 1997. Genetic diversity in the introduced clonal grass *Poa bulbosa* (bulbous bluegrass). *Northwest Science* 71: 271-280.

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FEBRUARY 18, 2016**

- Soltis, P.S., and S.J. Novak. 1997. Polyphyly of the tuberous Lomatiums: cpDNA evidence for morphological convergence. *Systematic Botany* 22: 99-112.
- Soltis, P.S., G.M. Plunkett, S.J. Novak, and D.E. Soltis. 1995. Genetic variation in *Tragopogon* species: additional origins of the allotetraploids *T. mirus* and *T. miscellus* (Compositae). *American Journal of Botany* 82: 1329-1341.
- Novak, S.J., and R.N. Mack. 1995. Allozyme diversity in the apomictic vine *Bryonia alba* (Cucurbitaceae): potential consequences of multiple introductions. *American Journal of Botany* 82: 1153-1162.
- Novak, S.J. 1994. Quantitative variation within and among cheatgrass (*Bromus tectorum* L.) populations: the role of multiple introductions. Pp. 103-108. *Proceedings: Ecology and Management of Annual Rangelands*, Intermountain Research Station, General Technical Report INT-GTR-313.
- *Pyke, D.A., and S.J. Novak. 1994. Cheatgrass (*Bromus tectorum* L.) demography – establishment attributes, recruitment, ecotypes, and genetic variability. Pp. 12-21. *Proceedings: Ecology and Management of Annual Rangelands*, Intermountain Research Station, General Technical Report INT-GTR-313.
- Novak, S.J., R.N. Mack, and P.S. Soltis. 1993. Genetic variation in *Bromus tectorum* (Poaceae): introduction dynamics in North America. *Canadian Journal of Botany* 71: 1441-1448.
- Novak, S.J., and R.N. Mack. 1993. Genetic variation in *Bromus tectorum* (Poaceae): a comparison between native and introduced populations. *Heredity* 71: 167-176.
- *Novak, S.J., D.E. Soltis, and P.S. Soltis. 1991. Ownbey's *Tragopogons*: forty years later. *American Journal of Botany* 78: 1586-1600.
- Novak, S.J., R.N. Mack, and D.E. Soltis. 1991. Genetic variation in *Bromus tectorum* (Poaceae): population differentiation in its North American range. *American Journal of Botany* 78: 1150-1161.

PEER-REVIEWED BOOK CHAPTERS:

- Novak, S.J., and R.N. Mack. 2014. Mating system, introduction and genetic diversity of *Bromus tectorum* in North America, the most notorious product of evolution within *Bromus* section *Genea*. In: Exotic Brome grasses in arid and semi-arid ecosystems of the western United States: causes, consequences, and management implications, Springer, *In Press*.
- Novak, S.J. 2011. Geographic Origins and Introduction Dynamics. Pp. 273-280. In: *Encyclopedia of Biological Invasions*, University of California Press, Berkeley, CA.
- Novak, S.J., and R.N. Mack. 2005. Genetic bottlenecks in alien plant species: influence of

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mating systems and introduction dynamics. Pp. 201-228. In: *Species Invasions: Insight into Ecology, Evolution and Biogeography*, Sinauer Associates, Sunderland, MA.

Soltis, P.S., D.E. Soltis, S.J. Novak, J.L. Schultz, and R.K. Kuzoff. 1995. Fossil DNA: its potential for biosystematics. Pp. 1-13. In: *Experimental and Molecular Approaches to Plant Biosystematics*, Missouri Botanical Garden, St. Louis, MO.

OTHER:

Pawlak, A.R., R.N. Mack, Jeremiah W. Busch, and S.J. Novak. 2015. Erratum to: Invasion of *Bromus tectorum* (L.) into California and the American Southwest: rapid, multi-directional and genetically diverse. *Biological Invasions*, 17:307.

Simberloff, D., and 140 Co-signatories. 2011. Non-natives: 141 scientist object. (Correspondence) *Nature* 475:36.

UNDERGRADUATE PUBLICATIONS:

Lefler, R.L., S.J. Novak, and Robert W. Ellis. 2003. Plant colonization and growth at an abandoned mine site in southwestern Idaho: influence of heavy metal contamination. *Proceedings of the National Conference on Undergraduate Research (NCUR)*, Pp. 1-8.

Hansen, K.T., S.J. Novak, and R.W. Ellis. 2003. Allozyme diversity in the invasive grass *Taeniatherum caput-medusae* (Poaceae): analysis of native range populations. *Proceedings of the National Conference on Undergraduate Research (NCUR)*, Pp. 1-6.

POPULAR PRESS:

*Novak, S.J. 1997. *Bryonia*: A potent medicinal cucurbit of temperate climes. *The Cucurbit Network News* 4: 1-3.

TECHNICAL REPORTS

Novak, S.J. 2015. Genetic analysis of medusahead (*Taeniatherum caput-medusae*) populations from Oregon and the native range. Final Report, Bureau of Land Management, Burns, Oregon.

Novak, S.J. 2013. Genetic analysis of medusahead (*Taeniatherum caput-medusae*) populations from Oregon, Yakima, WA, and the native range. Progress Report, Bureau of Land Management, Burns, Oregon.

Sforza, R., A. Lagopodi, S.J. Novak, and M. Cristofaro. 2013. Prospects for a biocontrol programme on medusahead. Progress Report, Bureau of Land Management, Burns, Oregon.

Novak, S.J. 2012. Analysis of native and introduced populations of an invasive plant:

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FEBRUARY 18, 2016**

- management of medusahead (*Taeniatherum caput-medusae*) in western United States. Final Report, USDA, AFRI.
- Serpe, M., and S.J. Novak. 2011. Development of procedures to break dormancy in *Lomatium dissectum* seeds. Pp. 37-43. In: Great Basin Native Plant Selection and Increase Project, 2010 Annual Report.
- Novak, S.J. 2009. Analysis of native and introduced populations of an invasive plant: management of medusahead (*Taeniatherum caput-medusae*) in western United States. Annual Report, United States Department of Agriculture (USDA), Agriculture and Food Research Initiative (AFRI).
- Kinter, C. Lynn, J. Gaskin, A. Hild, R. López, G. Markin, S.J. Novak, N. Shaw, M. Vigna, M. Schwarzländer, and J.F. Smith. 2007. Tracing global invasions of *Chondrilla juncea* L. (rush skeletonweed, yuyo esqueleto) to their Eurasian sources. Final Report, National Geographic Committee for Research and Exploration.
- Robertson, I., S.J. Novak, H. Leavitt, and A. Stillman. 2005. *Lepidium papilliferum*: analysis of pollination, herbivory, and genetic structure of populations. State of Idaho, Military Division, Idaho Army National Guard.
- Robertson, I., S.J. Novak, H. Leavitt, and A. Stillman. 2004. Insect-mediated pollination of *Lepidium papilliferum*: 2004. State of Idaho, Military Division, Idaho Army National Guard.
- Novak, S.J., and D.R. Marsh. 1999. Assessment of genetic variation in medusahead rye (*Taeniatherum caput-medusae*). Final Report, Partners in Science Program, M.J. Murdock Charitable Trust.
- Munger, J.C., S.J. Novak, B.R. Barnett, and A.A. Ames. 1999. Impacts of Off-Highway Motorized Vehicle Trails on the Communities of the Owyhee Front. Cost-share Agreement Between the Bureau of Land Management and Boise State University.
- Novak, S.J., and D.E. Soltis. 1992. Allozyme variation in Montana populations of the fern *Thelypteris phegopteris* (Polypodiaceae). USDA, Forest Service, Kootenai National Forest, Libby, MT.

PAPERS/POSTERS PRESENTED AT MEETINGS:

- Novak, S.J., M. Cristofaro, D.Y. Maguire, and R.F.H. Sforza. 2015. The invasive grass ventenata (*Ventenata dubia*): a new threat for Nevada. Nevada Weed Management Association Conference, Sparks, NV
- Novak, S.J., M.L. Peters, S.K. Skaar, J.F. Smith, M.D. Serpe, and R.F.H. Sforza. 2015. Medusahead (*Taeniatherum caput-medusae*) distribution and genetics: morphological and genetic differentiation among subspecies. Nevada Medusahead Symposium, Sparks, NV

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- Maguire, D.Y., S.J. Novak, F.A. Brummer, M. Cristofaro, and R.F.H. Sforza. 2015. How historical information helps trace the invasion of a weed: a case study with *ventenata*. Western Society of Weed Science Meeting, Portland, OR
- Brummer, F.A., S.J. Novak, M. Cristofaro, D.Y. Maguire, and R.F.H. Sforza. 2015. A comprehensive approach for control of the annual grass *ventenata*: an analysis of native and invasive populations. Western Society of Weed Science Meeting, Portland, OR
- Novak, S.J., M. Cristofaro, F.A. Brummer, D.Y. Maguire, and R.F.H. Sforza. 2014. Assessing the potential of using biological control in the management of *Ventenata dubia*. W3185 Annual Meeting, Kauai, HI
- Novak, S.J. 2014. The sagebrush-steppe sea: beautiful and imperiled ecosystems of the Intermountain West. Regional Botanist Special Lecture. Botany 2014 Meeting, Boise, ID
- Prior, C., J.H. Rausch, R. Sforza, J.F. Smith, and S.J. Novak. 2014. Mating system analysis of medusahead (*Taeniatherum caput-medusae*): evidence for preadaptation during biological invasion. Botany 2014 Meeting, Boise, ID
- Novak, S.J., C. Prior, J.H. Rausch, J.F. Smith, and R.F.H. Sforza. 2014. Mating system analysis of native and invasive populations of medusahead (*Taeniatherum caput-medusae*): evidence for preadaptation during biological invasion. 4th International Symposium on Environmental Weeds and Invasive Plants, Montpellier, France
- Peters, M.L., S. Skaar, R. Sforza, J.F. Smith, M.D. Serpe, and S.J. Novak. 2014. Invasion of medusahead (*Taeniatherum caput-medusae*) in the western United States: geographic origins, multiple introductions and founder effects. 3rd Conference on Invasive Species in Natural Areas, Northern Rockies Invasive Plant Council, Airway Heights, WA
- Peters, M.L., R. Sforza, J.F. Smith, M.D. Serpe, and S.J. Novak. 2014. Morphological and genetic differentiation among subspecies of medusahead (*Taeniatherum caput-medusae*): understanding taxonomic complexity in the native range. 3rd Conference on Invasive Species in Natural Areas, Northern Rockies Invasive Plant Council, Airway Heights, WA
- Prior, C., J.H. Rausch, R. Sforza, J.F. Smith, and S.J. Novak. 2014. Mating system analysis of medusahead (*Taeniatherum caput-medusae*): evidence for preadaptation during biological invasion. 3rd Conference on Invasive Species in Natural Areas, Northern Rockies Invasive Plant Council, Airway Heights, WA
- Peters, M.L., R. Sforza, J.F. Smith, M.D. Serpe, and S.J. Novak. 2013. Comparison of native and invasive populations of medusahead (*Taeniatherum caput-medusae*): geographic origins, multiple introductions and founder effects. W3185 Annual Meeting, Jackson, WY

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- Peters, M.L., R. Sforza, and S.J. Novak. 2012. Genetic diversity in native and invasive populations of *Taeniatherum caput-medusae* ssp. *asperum* (medusahead): geographic origins, multiple introductions and founder effects. Neobiota, 7th European Conference on Biological Invasions, Pontevedra, Spain
- Xu, C-Y., M.C. Julien, M. Fatemi, C. Girod, R.D. Van Klinken, and S.J. Novak. 2012. Divergent phenotypic evolution during the invasion of *Phyla canescens* in France and Australia: the role of selection. Symposium: Rapid Evolution during Biological Invasions, University of Fribourg, Switzerland
- Almquist, T.L., R.N. Mack, and S.J. Novak. 2012. Variation in freezing tolerance in *Bromus tectorum*: Comparison between Intermountain West and Great Plains populations. 97th Annual Ecological Society of America Meeting. Portland, OR
- Kelly, L.J., R.N. Mack, and S.J. Novak. 2012. Genetic variation in *Bromus tectorum* (Poaceae) from the Mediterranean region: biogeographical history of native populations. 97th Annual Ecological Society of America Meeting. Portland, OR
- Rohde, A., D. Pilliod, and S.J. Novak. 2012. Insect community responses to intra- and inter-annual variation in weather: implications for climate change in sagebrush steppe. AAAS Pacific Division Meeting, Boise, ID
- Almquist, T.L., R.N. Mack, and S.J. Novak. 2012. Freezing tolerance variation among *Bromus tectorum* populations may increase invasion potential. School of Biological Sciences Graduate Student Research Symposium. Washington State University, Pullman, WA.
- Novak, S.J. 2012. Biological invasions through preadaptation and post-immigration evolution: role of propagule pressure. International Symposium on Invasive Plants and Global Change, Urumqi, China
- Peters, M.L., R. Sforza, and S.J. Novak. 2012. Comparison of native and invasive populations of *Taeniatherum caput-medusae*: geographic origins, multiple introductions and founder effects. 52nd Weed Science Society of America Meeting, Waikoloa, HI
- Peters, M.L., R. Sforza, and S.J. Novak. 2012. Understanding taxonomic complexity in the native range: morphological and genetic differentiation among subspecies of *Taeniatherum caput-medusae*. 52nd Weed Science Society of America Meeting, Waikoloa, HI
- Sforza, R., A. Lagopodi, S.J. Novak, and M. Cristofaro. 2012. Fighting medusahead: biocontrol as the last option before giving up? 52nd Weeds Science Society of America Meeting, Waikoloa, HI

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FEBRUARY 18, 2016**

- Novak, S.J., E.H. Roalson, and R.N. Mack. 2011. Biogeography of the invasive grass *Bromus tectorum* in its native range: stochastic range expansion influences genetic diversity and genetic structure. 3rd International Symposium on Environmental Weeds and Invasive Plants, Monte Verita, Ascona, Switzerland
- Peters, M.L., R. Sforza, and S.J. Novak. 2011. Genetic diversity of native and invasive populations of *Taeniatherum caput-medusae* (medusahead): evidence for multiple introductions, source populations and founder effects. 3th International Symposium on Environmental Weeds and Invasive Plants, Monte Verita, Ascona, Switzerland
- Peters, M.L., R. Sforza, and S.J. Novak. 2011. Comparison of native and invasive populations of *Taeniatherum caput-medusae* (medusahead): evidence for multiple introductions, source populations and founder effects. 13th International Symposium on Biological Control of Weeds, Waikoloa, HI
- Peters, M.L., R. Sforza, and S.J. Novak. 2011. Morphological and genetic differentiation among subspecies of *Taeniatherum caput-medusae*: disentangling taxonomic complexity in the native range. 13th International Symposium on Biological Control of Weeds, Waikoloa, HI
- Gaskin, J.F., C.L. Kinter, M. Schwarzlaender, G.P. Markin, S.J. Novak and J.F. Smith. 2011. Origin and diversity of rush skeletonweed (*Chondrilla juncea*) from three continents. 13th International Symposium on Biological Control of Weeds, Waikoloa, HI
- Meyer, S.E., K.R. Merrill, S.J. Novak, E.A. Leger, and C.E. Coleman. 2011. Population genetic structure of *Bromus tectorum* and the invasion of novel habitats. 96th Annual Ecological Society of America Meeting, Austin, TX
- Clay, D., M. Serpe, S. Novak, D. Tank, and J. Smith. 2011. Homoploid hybrid speciation in a rare *Castilleja* from Idaho. Botany 2011 Meeting, St. Louis, MO
- Kelly, L.J., R.N. Mack, and S.J. Novak. 2011. Biogeographical history of native populations of *Bromus tectorum* (Poaceae) from the Mediterranean region. School of Biological Sciences Graduate Student Research Symposium. Washington State University, Pullman, WA.
- Davis, M.C., S.J. Novak, and G. Hampikian. 2010. Ancient and recent demographic events influence mitochondrial DNA diversity in an immigrant Basque population. 60th American Society of Human Genetics Annual Meeting, Washington, D.C.
- Novak, S.J., M. Peters, and R. Sforza. 2010. Comparison of native and invasive populations of medusahead (*Taeniatherum caput-medusae*): evidence for multiple introductions and

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FEBRUARY 18, 2016**

regional range expansion. 2nd Conference on Invasive Species in Natural Areas, Northern Rockies Invasive Plant Council, Coeur d'Alene, ID

Gaskin, J.F., M. Schwarzlaender, G.P. Markin, C.L. Kinter, J.F. Smith, and S.J. Novak. 2010. Distribution of invasive genotypes of rush skeletonweed in North America. 2nd Conference on Invasive Species in Natural Areas, Northern Rockies Invasive Plant Council, Coeur d'Alene, ID

Novak, S.J., E.H. Roalson, and R.N. Mack. 2010. Genetic structure without geographic structure: stochastic range expansion of *Bromus tectorum* in its native range influences genetic diversity of invasive populations. Neobiota, 6th European Conference on Biological Invasions, Copenhagen, Denmark

Novak, S.J. 2010. Allozyme diversity of native and invasive populations of cheatgrass (*Bromus tectorum*): evidence for multiple introductions and widespread range expansion in North America. *Bromus* REEnet Meeting, Salt Lake City, UT

Novak, S.J. and R. Sforza. 2010. Comparison of native and invasive populations of medusahead (*Taeniatherum caput-medusae*): insights into introduction dynamics across western landscapes. Weed Science Society of America and Society for Range Management Joint Annual Meeting (USDA Project Directors Meeting), Denver, CO

Sforza, R., S.J. Novak, and B.R. Blank. 2010. Invasion of medusahead: from ecology to biological control. Weed Science Society of America and Society for Range Management Joint Annual Meeting, Denver, CO

Novak, S.J., M. Peters, and R. Sforza. 2009. Allozyme diversity in native and invasive populations of medusahead (*Taeniatherum caput-medusae*). EMAPi 10 Meeting, Stellenbosch, South Africa

Novak, S.J. and J.H. Rausch. 2008. Use of plant surveys, distributional data, and genetic analyses to monitor invasive populations: *Taeniatherum caput-medusae* (Poaceae) as an example of the approach. Neobiota, 5th European Conference on Biological Invasions, Prague, Czech Republic

Novak, S.J., J.H. Rausch, and R. Sforza. 2008. Molecular and quantitative genetic diversity in *Taeniatherum caput-medusae* (Poaceae): evidence for multiple introductions with local range expansion. 5th International Weed Science Congress, Vancouver, Canada

Xu, C-Y., M.C. Julien, M. Fatemi, C. Girod, and S.J. Novak. 2008. Multiple introductions and post-immigration evolution in *Phyla canescens*: phenotypic differentiation under divergent selection pressures in invading populations with high genetic diversity. 5th International Weed Science Congress, Vancouver, Canada

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FEBRUARY 18, 2016**

- Davis, M.C., J. Goswami, S.J. Novak, and G. Hampikian. 2008. Using DNA to characterize human migration patterns: the Basques of the American Northwest. Promega 19th International Symposium on Human Identification, Hollywood, CA
- Davis, M.C., S.J. Novak, and G. Hampikian. 2008. The use of forensic DNA techniques in population studies: the Basques of the Northwest. Northwest Association of Forensic Scientist Annual Conference, Boise, ID
- Alsup, S.E., M.N. Kochert, M.J. Bechard, and S.J. Novak. 2008. Productivity and habitat features of Swainson's Hawks (*Buteo swansonii*) nesting in suburban and agricultural environments in Southwest Idaho. Raptor Research Foundation Annual Meeting, Missoula, MT
- Alsup, S.E., M.N. Kochert, M.J. Bechard, and S.J. Novak. 2008. Productivity and habitat features of Swainson's Hawks (*Buteo swansonii*) nesting in suburban and agricultural environments in Southwest Idaho. The Wildlife Society 15th Annual Conference, Miami, FL
- Davis, M., J. Goswami, S.J. Novak, and G. Hampikian. 2007. STR variability in the immigrant Basque population of southwestern Idaho. Promega 18th International Symposium on Human Identification, Hollywood, CA
- Smith, J.F., A.J. Stillman, S.R. Larson, C.M. Culumber, I.C. Robertson, and S.J. Novak. 2007. A phylogenetic analysis of *Lepidium papilliferum* and *L. davisii* (Brassicaceae) reveal the relations of these rare endemic species. Botany and Plant Biology Joint Congress, Chicago, IL
- Stillman, A.J., I.C. Robertson, J.F. Smith, and S.J. Novak. 2007. Assessing allozyme diversity and polyploidy in the southwest Idaho endemic, *Lepidium papilliferum*. Botany and Plant Biology Joint Congress, Chicago, IL
- Smith, J.F., A.J. Stillman, S.R. Larson, C.M. Culumber, I.C. Robertson, and S.J. Novak. 2007. A phylogenetic analysis of *Lepidium papilliferum* and *L. davisii* (Brassicaceae) reveal the relations of these rare endemic species. American Association for the Advancement of Science (AAAS) Northwest Regional Meeting, Boise, ID
- Stillman, A.J., S.J. Novak, I.C. Robertson, and J.F. Smith. 2007. Population genetics of the rare polyploid, *Lepidium papilliferum* (Brassicaceae), a southwest Idaho endemic. American Association for the Advancement of Science (AAAS) Northwest Regional Meeting, Boise, ID
- Novak, S.J. and R. Sforza. 2007. Genetic variation in native and introduced populations of *Taeniatherum caput-medusae* (Poaceae). XII International Symposium on Biological Control of Weeds. La Grande Motte, France

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FEBRUARY 18, 2016**

- Novak, S.J., and R.N. Mack. 2006. Factors influencing genetic bottlenecks in invasive plants: mating systems and introduction dynamics. Symposium: An Evolutionary Perspective of Biological Invasions, University of Fribourg, Switzerland
- Novak, S.J., and R.N. Mack. 2006. Multiple introductions matter: the entry and spread of *Bromus tectorum* (cheatgrass) into North America. Neobiota, 4th European Conference on Biological Invasions, Vienna, Austria
- Stillman, A.J., I.C. Robertson, J.F. Smith, and S.J. Novak. 2006. Genetic diversity in *Lepidium papilliferum* (Brassicaceae), a southwest Idaho endemic. 79th Annual Northwest Scientific Association Meeting, Boise, ID
- Novak, S.J., K.T. Hansen, M. Score, and R. Sforza. 2005. Genetic variation in *Taeniatherum caput-medusae* (Poaceae): analysis of native range populations. Botany 2005 Meeting, Austin, TX
- Rausch, J.H., and S.J. Novak. 2005. Hierarchical analysis of quantitative genetic variation in *Taeniatherum caput-medusae*: life-history and morphometric trait variation among introduced populations. Botany 2005 Meeting, Austin, TX
- Stillman, A.J., I. Robertson, J.F. Smith, and S.J. Novak. 2005. Allozyme diversity in *Lepidium papilliferum* (Brassicaceae), a southwest Idaho endemic. Botany 2005 Meeting, Austin, TX
- Schachner, L.J., S.J. Novak, and R.N. Mack. 2005. Genetic variation in *Bromus tectorum*: differentiation among populations in the mid-continent United States. 90th Annual Ecological Society of America Meeting, Montreal, Canada
- Valliant, M.T., R.N. Mack, and S.J. Novak. 2005. Genetic variation in *Bromus tectorum*: separate introductions into eastern and western Canada. 90th Annual Ecological Society of America Meeting Meeting, Montreal, Canada
- Novak, S.J. 2003. Genetic analysis of *Bromus tectorum* and *Taeniatherum caput-medusae*: Insights into introduction and spread. IPINAMS-EMAPi 7 Joint Meeting, Ft. Lauderdale, FL
- Novak, S.J., D.R. Marsh, L. Deines, and J.H. Rausch. 2003. Genetic variation in *Taeniatherum caput-medusae* (Poaceae): amount and distribution of variability. Botany 2003 Meeting, Mobile, AL
- Rausch, J.H., J.F. Smith, and S.J. Novak. 2003. Genetic variation in the invasive grass *Taeniatherum caput-medusae* (Poaceae): random amplified polymorphic DNA (RAPD) analysis. Botany 2003 Meeting, Mobile, AL

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FEBRUARY 18, 2016**

- Lefler, R.L., S.J. Novak, and R.W. Ellis. 2003. Influence of heavy metal contamination on plant colonization and growth at an abandoned mine site in southwestern Idaho. 45th Annual Idaho Academy of Science Meeting, Lewiston, ID
- Hansen, K.T., S.J. Novak, and R.W. Ellis. 2003. Allozyme diversity in native range populations of the invasive grass *Taeniatherum caput-medusae* (Poaceae). 45th Annual Idaho Academy of Science Meeting, Lewiston, ID
- Rausch, J.H., J.F. Smith, and S.J. Novak. 2003. Random amplified polymorphic DNA (RAPD) analysis of the invasive grass *Taeniatherum caput-medusae* (Poaceae). 45th Annual Idaho Academy of Science Meeting, Lewiston, ID
- Lefler, R.L., S.J. Novak, and R.W. Ellis. 2003. Plant colonization and growth at an abandoned mine site in southwestern Idaho: influence of heavy metal contamination. 76th Annual Northwest Scientific Association Meeting, Forks, WA
- Hansen, K.T., S.J. Novak, and R.W. Ellis. 2003. Allozyme diversity in the invasive grass *Taeniatherum caput-medusae* (Poaceae): analysis of native range populations. 76th Annual Northwest Scientific Association Meeting, Forks, WA
- Rausch, J.H., J.F. Smith, and S.J. Novak. 2003. Random amplified polymorphic DNA (RAPD) analysis of *Taeniatherum caput-medusae* (Poaceae): level of variation and introduction dynamics. 76th Annual Northwest Scientific Association Meeting, Forks, WA
- Lefler, R.L., S.J. Novak, and Robert W. Ellis. 2003. Plant colonization and growth at an abandoned mine site in southwestern Idaho. National Conference on Undergraduate Research (NCUR) Annual Meeting, Salt Lake City, UT
- Hansen, K.T., S.J. Novak, S. Frederiksen, and R.W. Ellis. 2003. Allozyme diversity in the invasive grass *Taeniatherum caput-medusae* (Poaceae): analysis of native range populations. National Conference on Undergraduate Research (NCUR) Annual Meeting, Salt Lake City, UT
- Lefler, R.L., S.J. Novak, and R.W. Ellis. 2003. Plant colonization and growth at an abandoned mine site in southwestern Idaho: influence of heavy metal contamination. American Association for the Advancement of Science (AAAS) Annual Meeting, Denver, CO
- Novak, S.J., D.R. Marsh, L. Deines, and J.H. Rausch. 2002. Genetic variation in *Taeniatherum caput-medusae* (Poaceae): evidence for multiple introductions. Botany 2002 Meeting, Madison, WI
- Rausch, J.H., S.J. Novak, and J.F. Smith. 2002. Genetic variation in *Taeniatherum caput-medusae* (Poaceae): analysis of mating system. Botany 2002 Meeting, Madison, WI

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- Moore, R.L., J.F. Smith, and S.J. Novak. 2002. Environmental heterogeneity and mode of recruitment in *Populus tremuloides* (Salicaceae). Botany 2002 Meeting, Madison, WI
- Novak, S.J., D.R. Marsh, L. Deines, and J.H. Rausch. 2002. Allozyme diversity in the invasive grass *Taeniatherum caput-medusae* (Poaceae): evidence for multiple introductions. 44th Annual Idaho Academy of Science Meeting, Rexburg, ID
- Novak, S.J., D.R. Marsh, L. Deines, and J.H. Rausch. 2002. Allozyme diversity in the invasive grass *Taeniatherum caput-medusae* (Poaceae): amount and distribution of variation. 44th Annual Idaho Academy of Science Meeting, Rexburg, ID
- Rausch, J.H., S.J. Novak, and J.F. Smith. 2002. Allozyme diversity in the invasive grass *Taeniatherum caput-medusae* (Poaceae): analysis of mating system. 44th Annual Idaho Academy of Science Meeting, Rexburg, ID
- Moore, R.L., J.F. Smith, and S.J. Novak. 2002. Clonal diversity and mode of recruitment in *Populus tremuloides* (Salicaceae). 44th Annual Idaho Academy of Science Meeting, Rexburg, ID
- Novak, S.J., J.K. Scott, P.C. Quimby. 2002. Genetic variation in populations of *Lepidium latifolium* (Brassicaceae) from southern France: insights into population dynamics. 44th Annual Idaho Academy of Science Meeting, Rexburg, ID
- Novak, S.J., D.R. Marsh, L. Deines, and J.H. Rausch. 2002. Genetic variation in the invasive grass *Taeniatherum caput-medusae* (Poaceae): evidence for multiple introductions. 75th Annual Northwest Scientific Association Meeting, Boise, ID
- Rausch, J.H., S.J. Novak, and J.F. Smith. 2002. Genetic variation in the invasive grass *Taeniatherum caput-medusae* (Poaceae): analysis of mating system. 75th Annual Northwest Scientific Association Meeting, Boise, ID
- Moore, R.L., J.F. Smith, and S.J. Novak. 2002. Association of mode of recruitment with landscape variability in *Populus tremuloides* (Salicaceae). 75th Annual Northwest Scientific Association Meeting, Boise, ID
- Novak, S.J., J.K. Scott, P.C. Quimby. 2002. Clonal diversity in populations of *Lepidium latifolium* (Brassicaceae) from southern France. 75th Annual Northwest Scientific Association Meeting, Boise, ID
- Novak, S.J., and A.Y. Welfley. 2002. Genetic variation within and among populations of the introduced plant *Poa bulbosa* (Poaceae). 75th Annual Northwest Scientific Association Meeting, Boise, ID

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FEBRUARY 18, 2016**

- Novak, S.J., J.K. Scott, P.C. Quimby. 2001. Genetic diversity is low in naturalized populations of *Lepidium latifolium* (Brassicaceae) from southern France. Botany 2001 Meeting, Albuquerque, NM
- Novak, S.J., and A.Y. Welfley. 2001. Allozyme variation within and among populations of the introduced plant *Poa bulbosa* (Poaceae). Botany 2001 Meeting, Albuquerque, NM
- Campbell, K.K., S.J. Novak, and S.P. Hardegree. 2000. *Bromus tectorum* seed germination characteristics: differentiation among populations. Joint Fall Meeting, Utah and Idaho Sections, Society for Range Management, Ogden, UT
- Novak S.J., and R.N. Mack. 1999. Introduction of an alien plant into its naturalized ranges: *Bromus tectorum* (cheatgrass). XVI International Botanical Congress, St. Louis, MO
- Campbell, K.K., S.P. Hardegree, and S.J. Novak. 1999. Seed germination characteristics of *Bromus tectorum*: differentiation among populations. 84th Annual ESA Meeting, Spokane, WA
- Novak S.J., J.M. Ott, and L. Deines. 1999. Allozyme data support a progenitor-derivative relationship between *Allium simillimum* (Alliaceae) and *A. aaseae*. 41st Annual Idaho Academy of Science Meeting, Coeur D'Alene, ID
- Campbell, K.K., S.P. Hardegree, and S.J. Novak. 1999. Comparison of seed germination characteristics of *Bromus tectorum*: genetic and environmental determinants. 41st Annual Idaho Academy of Science Meeting, Coeur D'Alene, ID
- Marsh, D.R., and S.J. Novak. 1999. Evaluation of genetic variation in medusahead rye (*Taeniatherum caput-medusae*). 10th Annual Partners in Science Conference, Tucson, AZ
- Campbell, K.K., S.P. Hardegree, and S.J. Novak. 1998. Germination rates of *Elymus elymoides* and *Bromus tectorum* at constant temperatures. 83rd Annual ESA Meeting, Baltimore, MD
- Marsh, D.R., and S.J. Novak. 1998. Assessment of genetic variation in medusahead rye (*Taeniatherum caput-medusae*). 9th Annual Partners in Science Conference, Tucson, AZ
- Novak, S.J., and J.M. Ott. 1997. Allozyme diversity in *Allium simillimum* (Alliaceae): evidence for a progenitor derivative relationship with *A. aaseae*. 48th Annual AIBS Meeting, Montreal, Canada
- Welfley, A.Y., and S.J. Novak. 1997. Allelic variation in the introduced clonal grass *Poa bulbosa* (Poaceae). 39th Annual Idaho Academy of Science Meeting, Idaho Falls, ID

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FEBRUARY 18, 2016**

- Ott, J.M., S.J. Novak, D.A. Murphey, and J.F. Smith. 1997. Assessment of genetic diversity in the narrow Idaho endemic *Allium aaseae* (Alliaceae) using enzyme electrophoresis and RAPD data. 39th Annual Idaho Academy of Science Meeting, Idaho Falls, ID
- Novak, S.J., J.M. Ott, and D.A. Murphey. 1997. Genetic analysis of *Bromus tectorum* from eastern Washington and British Columbia: insights into colonization dynamics. 39th Annual Idaho Academy of Science Meeting, Idaho Falls, ID
- Novak, S.J., D.A. Murphey, J. Ott, and J.F. Smith. 1996. Allozyme diversity in the narrow endemic *Allium aaseae* (Alliaceae): comparison with RAPD data. 47th Annual AIBS Meeting, Seattle, WA
- James, K.M., S.J. Novak, and R.N. Mack. 1996. Genetic variation and colonization dynamics of *Bromus tectorum* (Poaceae): a global perspective. 47th Annual AIBS Meeting, Seattle, WA
- Novak, S.J., and D.A. Murphey. 1996. Genetic variation and colonization dynamics of *Bromus tectorum* (Poaceae): an analysis of populations from Washington and British Columbia. 47th Annual AIBS Meeting, Seattle, WA
- James, K.M., S.J. Novak, and R.N. Mack. 1996. Genetic analysis of *Bromus tectorum* from its introduced range: insights into colonization dynamics. 38th Annual Idaho Academy of Science Meeting, Moscow, ID
- Novak, S.J., and G. Rademaker. 1995. Quantitative genetic variation within and among populations of the alien grass *Bromus tectorum* (Poaceae). 46th Annual AIBS Meeting, San Diego, CA
- Soltis, P.S., S.J. Novak, T.M. Hardig, and D.E. Soltis. 1995. Phylogenetic relationships and rapid radiation in *Lomatium* (Apiaceae). 46th Annual AIBS Meeting, San Diego, CA
- Novak, S.J., and R.N. Mack. 1994. Clonal diversity in the recently introduced vine *Bryonia alba* (Cucurbitaceae). 45th Annual AIBS Meeting, Knoxville, TN
- Novak, S.J., and R.N. Mack. 1992. Genetic variation of *Bromus tectorum* in Europe: using electrophoresis to search for the source(s) of its introduced populations in North America. 43rd Annual AIBS Meeting, Honolulu, HI
- Novak, S.J., and P.S. Soltis. 1992. Phylogenetic relationships among Tuberous *Lomatium* species: chloroplast DNA evidence. 43rd Annual AIBS Meeting, Honolulu, HI
- Pyke, D.A., and S.J. Novak. 1992. Cheatgrass (*Bromus tectorum*) demography - establishment attributes, recruitment, ecotypes, and genetic variability. Ecology, Management and Restoration of Intermountain Annual Rangelands Symposium, Boise, ID

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- Novak, S.J. 1992. Quantitative genetics of *Bromus tectorum* in North America: the role of multiple introductions. Ecology, Management and Restoration of Intermountain Annual Rangelands Symposium, Boise, ID
- Novak, S.J., and P.S. Soltis. 1991. Intraspecific cpDNA variation in four species of *Lomatium* (Umbelliferae). 42nd Annual AIBS Meeting, San Antonio, TX
- Novak, S.J., D. E. Soltis, and P.S. Soltis. 1991. Geographical distribution and abundance of allotetraploid *Tragopogon* species: the history of range expansion. 42nd Annual AIBS Meeting, San Antonio, TX
- Plunkett, G.M., S.J. Novak, P.S. Soltis, and D.E. Soltis. 1991. Molecular evidence of multiple origins in the allotetraploids *Tragopogon miscellus* and *T. mirus* (Asteraceae). 42nd Annual AIBS Meeting, San Antonio, TX
- Novak, S.J., and R.N. Mack. 1990. Genetic variation and population differentiation in the recently introduced vine *Bryonia alba* L. 75th Annual ESA Meeting, Snowbird, UT
- Novak, S.J., and R.N. Mack. 1989. Electrophoretic variation in native range populations of *Bromus tectorum* L. (cheatgrass): evidence for genetic bottlenecks following introduction. 40th Annual AIBS Meeting, Toronto, Canada
- Novak, S.J., and R.N. Mack. 1989. Electrophoretic variability in Washington and British Columbia populations of cheatgrass: evidence for multiple introductions. 62nd Annual Meeting, Northwest Science Association, Richland, WA
- Novak, S.J., and R.N. Mack. 1988. Genetic diversity in North American populations of the introduced grass *Bromus tectorum* L. 73rd Annual Ecological Society of America (ESA) Meeting, Davis, CA
- Novak, S.J., S.J., and M.I. Cousens. 1985. Limitations to the persistence of *Dicranopteris flexuosa* in North America. 9th Annual Southeast Fern Conference, George Mason University, Fairfax, VA
- Novak, S.J., and M.I. Cousens. 1985. *Dicranopteris flexuosa* (Schrad.) Underwood in north Florida: Investigations of a disjunct population. 36th Annual American Institute of Biological Sciences (AIBS) Meeting, Gainesville, FL

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Dr. Ian Robertson

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ACADEMIC POSITIONS

Professor

Department of Biological Sciences, Boise State University, Boise, ID 83725 (2012-present)

Associate Professor

Department of Biological Sciences, Boise State University, Boise, ID 83725 (2005-2011)

Assistant Professor

Department of Biological Sciences, Boise State University, Boise, ID 83725 (2000-2005)

POSTDOCTORAL POSITIONS

NSERC Postdoctoral Fellow

Department of Biology, University of Alberta, Edmonton, AB, Canada (1998-2000)

DEGREES

Ph.D. (Biology) – 1998, Simon Fraser University, Burnaby, BC, Canada

M.Sc. (Zoology) – 1992, University of Toronto, Mississauga, ON, Canada

B.Sc. (Honors Biology) – 1989, Carleton University, Ottawa, ON, Canada

PROFESSIONAL INVOLVEMENT

Professional Society Affiliations

Entomological Society of America (1996 to present)

Entomological Society of Canada (1993 to present)

Professional Activities (outside university)

2009 - Invited by USFWS to review and comment on new information and analyses about population processes in *Lepidium papilliferum*. Report submitted March 23, 2009.

2006 - Served as invited expert on scientific panel to discuss extinction risk to slickspot peppergrass, *Lepidium papilliferum*. Meeting was held in Boise, ID, May 1-3, 2006.

2003 - Served as invited expert on scientific panel to discuss extinction risk to slickspot peppergrass, *Lepidium papilliferum*. Meeting was held at the USFWS office in Portland OR, Nov 5-6, 2003.

2000 to present – reviewed 31 scientific manuscripts for peer-reviewed journals.

Journals (#): Annals of the Entomological Society of America (1), Australian Journal of Entomology (5), Behavioral Ecology & Sociobiology (2), Biological Conservation (1), Botany (1), Ecological Entomology (3), Environmental Entomology (5), Guyana Botanica (1), Journal of Ethology (2), Journal of the Idaho Academy of Sciences (2), Natural Areas Journal (1), Northeastern Entomologist (1), Oikos (1), Physiological Entomology (2), Proceedings of the Royal Society of London, B (2), Western North American Naturalist (1)

TEACHING EXPERIENCE (current rotation)

BIOL 192 – General Biology II

BIOL 426/526 – Insect Ecology

ZOOL 305/305G – Entomology

BIOL 496 – Independent Study

BIOL 598 – Graduate Seminar (topics include: pollination biology; evolution of flight; evolution of insect societies; insect mating systems; foraging ecology)

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GRADUATE STUDENT THESES (as major advisor)

- Jeffries, Michelle. Current MS Biology candidate studying the consequences of harvester ant foraging on the seed bank of slickspot peppergrass.
- Brown, Jennifer. Current MS Biology candidate studying the consequences of harvester ant foraging on the seed bank of slickspot peppergrass.
- Schmasow, Matthew. MS Biology 2015. "Diet selection by the Owyhee harvester ant (*Pogonomyrmex salinus*) in southwestern Idaho."
- White, Joshua. MS Biology 2009. "Seed predation on slickspot peppergrass by the Owyhee harvester ant." Recipient of the 2009 "Distinguished Masters Thesis Award" at Boise State University.
- Williams, Wyatt. MS Biology 2007. "Host selection in the Douglas-fir beetle following extended periods of flight: the effect of depleted fat reserves on pioneer behavior."
- Billinge, Stephanie. MS Biology 2006. "Reproductive performance as a function of outcrossing distance in *Lepidium papilliferum* (Brassicaceae), a rare plant endemic to southwest Idaho."
- Stillman, Amy. MS Biology 2006. "Population genetics and mating system of the rare polyploid, *Lepidium papilliferum* (Brassicaceae), a southwestern Idaho endemic."
- Leavitt, Hollie. MS Biology 2006. "Pollination and florivory by insects visiting *Lepidium papilliferum* (Brassicaceae) flowers"

GRANT FUNDING (last 10 years)

Year	Project Title	Agency†	Amount
2015	Herbivory by harvester ants and rodents on slickspot peppergrass	USFWS	\$25,050
2014	Continuation of a monitoring program for harvester ant colonies located within <i>Lepidium papilliferum</i> populations: Year 5	USFWS	\$26,392
2014	Seed predation and pollination by insects visiting introduced slickspot peppergrass.	IDARNG	\$24,929
2013	Continuation of a monitoring program for harvester ant colonies located within <i>Lepidium papilliferum</i> populations: Year 4	USFWS	\$20,107
2013	Seed predation and pollination by insects visiting slickspot peppergrass	IDARNG	\$24,000
2012	Continuation of a monitoring program for harvester ant colonies located within <i>Lepidium papilliferum</i> populations: Year 3	USFWS	\$19,451
2012	Seed predation and pollination by insects visiting slickspot peppergrass	IDARNG	\$20,983
2011	Continuation of a monitoring program for harvester ant colonies located within <i>Lepidium papilliferum</i> populations: Year 2	USFWS	\$19,981
2011	Seed predation and pollination by insects visiting slickspot peppergrass	IDARNG	\$18,094
2010	A monitoring program for harvester ant colonies located within <i>Lepidium papilliferum</i> populations	USFWS	\$13,551
2010	Seed predation and pollination by insects visiting slickspot peppergrass	IDARNG	\$17,995
2010	Assessing habitat suitability for the insects that pollinate <i>Lepidium papilliferum</i>	BLM	\$14,566
2009	Seed predation and pollination by insects visiting slickspot peppergrass	IDARNG	\$17,380
2008	Insect-mediated pollination and harvester ant seed predation in slickspot peppergrass	IDARNG	\$17,530
2007	Insect-mediated pollination and seed predation in slickspot peppergrass: implications for population viability	IDARNG	\$16,930
2006	Importance of insect-mediated pollination and outcrossing on the reproductive performance of slickspot peppergrass, <i>Lepidium papilliferum</i>	BLM	\$12,082
2006	Insect-mediated pollination and herbivory of slickspot peppergrass	IDARNG	\$14,496

† - BLM = Bureau of Land Management; IDARNG = Idaho Army National Guard; USFWS = United States Fish & Wildlife Service

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SCIENTIFIC PRESENTATIONS (while at Boise State University)

Invited Speaker

- Robertson, IC. "At home on the range: Loss of sagebrush may open new habitat for harvester ants, and imperil a threatened mustard endemic to southwest Idaho." American Academy for the Advancement of Science Meeting, Boise ID, June 25-27, 2012.
- Robertson IC & JP White. "Seed predation by Owyhee harvester ants threatens the survival of slickspot peppergrass, a rare Idaho endemic". Intermountain Native Plant Summit 2009, Boise, ID, March 24-26, 2009
- Robertson IC & JP White. "Harvester Ants: Implications for *Lepidium papilliferum*". Idaho Rare Plant Conference, Boise ID, Feb 10-12, 2009
- Robertson IC. "Insect-mediated pollination in *Lepidium papilliferum*". BLM workshop on pollinators and conservation. Boise, ID, Feb 21, 2008.
- Robertson IC, Ulappa AC & S Billinge. Insect-mediated pollination and spatial structuring in *Lepidium papilliferum* populations. Invited symposium presentation at the 88th Annual Meeting of the American Association for the Advancement of Science Pacific Division, Boise ID, June 17-21 2007.
- Stillman A, Novak SJ, Robertson IC & JF Smith. Population genetics of a rare polyploidy, *Lepidium papilliferum* (Brassicaceae), a Southwest Idaho endemic. Invited symposium presentation at the 88th Annual Meeting of the American Association for the Advancement of Science Pacific Division, Boise ID, June 17-21 2007.
- Smith JF, Stillman AJ, Larson SR, Culumber CM, Robertson IC & SJ Novak. A phylogenetic analysis of *Lepidium papilliferum* and *L. davisii* (Brassicaceae) reveals the relations of these rare endemic species. Invited symposium presentation at the 88th Annual Meeting of the American Association for the Advancement of Science Pacific Division, Boise ID, June 17-21 2007.
- Robertson IC. "Visitation versus Pollination: Measuring the relative contributions of insects to the pollination of slickspot peppergrass". Idaho Rare Plant Conference, Boise, ID, Feb 2004

Selected Conference Presentations

- Howell BD & IC Robertson. "Foraging behavior in *Pogonomyrmex salinus* when colonies overlap in their foraging ranges" McNair Scholars Research Conference, Baltimore MD, Sept 20, 2014
- Howell BD & IC Robertson. "Understanding the foraging ranges of *Pogonomyrmex salinus* when neighboring colonies compete for resources." Boise State University Undergraduate Research Conference, Boise ID, April 21, 2014
- Schmasow M & IC Robertson. "Diet selection by Owyhee harvester ants (*Pogonomyrmex salinus*) and its consequences for slickspot peppergrass (*Lepidium papilliferum*).". Northwest Science Annual Meeting, Boise ID, March 28-30, 2012.
- White JP & IC Robertson. "Seed predation on slickspot peppergrass, *Lepidium papilliferum* (Brassicaceae), by the Owyhee harvester ant, *Pogonomyrmex salinus* (Hymenoptera: Formicidae)". Society for Integrative and Comparative Biology Annual Meeting, Boston MA, Jan 3-7, 2009
- White JP & IC Robertson. "Seed predation on slickspot peppergrass, *Lepidium papilliferum*, (Brassicaceae), by the Owyhee harvester ant, *Pogonomyrmex salinus* (Hymenoptera: Formicidae). Entomological Society of Canada Annual Meeting, Ottawa, ON, Oct 19-22, 2008.
- Williams WI & IC Robertson. "Using rotary flight mills to quantify fat use by Douglas-fir beetles, *Dendroctonus pseudotsugae*. 58th Annual Western Forest Insects Work Conference, Boise ID, March 5-9, 2007.
- Stillman A, Robertson IC, Smith JF & SJ Novak. Assessing allozyme diversity and polyploidy in the rare southwestern Idaho endemic, *Lepidium papilliferum*. Botanical Society of America Annual Meeting, Chicago IL, July 7-11, 2007.

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- Billinge S & IC Robertson. Reproductive success as a function of outcrossing distance in *Lepidium papilliferum*. Northwest Science Annual Meeting, Boise ID, March 6-8 2006
- Leavitt H & IC Robertson. Petal herbivory by chrysomelid beetles (*Phyllotreta sp.*) is detrimental to pollination and seed production in *Lepidium papilliferum* (Brassicaceae). Northwest Science Annual Meeting, Boise ID, March 6-8 2006
- Stillman A, Robertson I, Smith JF, & SJ Novak. Allozyme diversity in *Lepidium papilliferum* (Brassicaceae), a southwest Idaho endemic. Northwest Science Annual Meeting, Boise ID, March 6-8 2006
- Williams WI & IC Robertson. "Using rotary flight mills to quantify fat use by Douglas-fir beetles, *Dendroctonus pseudotsugae*. Northwest Science Annual Meeting, Boise ID, March 6-8 2006
- Stillman A, Robertson I, Smith JF, & SJ Novak. Allozyme diversity in *Lepidium papilliferum* (Brassicaceae), a southwest Idaho endemic. Botanical Society of America Annual Meeting, Austin, TX, Aug 13-17, 2005
- Williams WI & IC Robertson. "Emergence day and body condition correlate with amount of fat in Douglas-fir beetles (*Dendroctonus pseudotsugae*)" at the Entomological Society of Canada annual meeting in Canmore, AB, Nov 2-5, 2005 [
- Leavitt H & IC Robertson. "Measuring the relative importance of insect visitors to the pollination of slickspot peppergrass, *Lepidium papilliferum*". Annual meeting of the Entomological Society of America, Cincinnati, OH, 26-29 October, 2003.

PUBLICATIONS (while at Boise State University)

Refereed Articles

- Robertson IC**, Robertson WG, & JP White. Habitat associations and colony dynamics of Owyhee harvester ants (Hymenoptera: Formicidae). (in preparation for Environmental Entomology)
- Robertson IC** & MS Schmasow. Searching for greener pastures: harvester ants extend their foraging range and modify diet in response to seed availability. (in preparation for Psyche)
- Schmasow MS & **IC Robertson**. Selective foraging by Owyhee harvester ants in semiarid grassland: implications for a rare plant. (submitted to Oecologia, June 2015)
- Howell BD, & **IC Robertson**. 2015. Reclaiming lost territory: the response of Owyhee harvester ants to forager intrusions by neighboring colonies. Journal of Insect Behavior, *in press*.
- Wilson ER, Smalling KL, Reilly TJ, Gray E, Bond L, Steele L, Kandel P, Chamberlin A, Gause J, Reynolds N, **Robertson I**, Novak S, Feris K, & MM White. 2014. Assessing the potential effects of fungicides on nontarget gut fungi (Trichomycetes) and their associated larval blackfly hosts. Journal of the American Water Resources Association, 50(2): 420-433.
- Robertson IC** & H Leavitt. 2011. Relative contributions to seed production by floral visitors of slickspot peppergrass, *Lepidium papilliferum* (Brassicaceae). Arthropod-Plant Interactions, 5: 379-389. DOI1007/s11829-011-09142-7
- White JP & **IC Robertson**. 2009. Intense seed predation by harvester ants on a rare mustard. Écoscience, 16(4): 508-513.
- White JP & **IC Robertson**. 2009. An unusual life history strategy in *Lepidium papilliferum* (Brassicaceae), a rare mustard endemic to southwestern Idaho. Northwest Science, 83(3): 287-290.
- Smith JF, Stillman AJ, Larson SR, Culumber CM, **Robertson IC**, & SJ Novak. 2009. Phylogenetic Relationships among *Lepidium papilliferum* (L. Henderson) A. Nels. & J. F. Macbr., *L. montanum* Nutt., and *L. davisii* Rollins (Brassicaceae). Journal of the Torrey Botanical Society, 136(2):149-163.
- Billinge S & **IC Robertson**. 2008. Spatial structure and inbreeding depression in slickspot peppergrass, *Lepidium papilliferum* (Brassicaceae). Botany, 86: 1002-1008.

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- Williams WI & **IC Robertson**. 2008. Using automated flight mills to manipulate fat reserves in Douglas-fir Beetles, *Dendroctonus pseudotsugae* (Hopkins) (Coleoptera: Curculionidae). Environmental Entomology, 37: 850-856.
- Leavitt H & **IC Robertson**. 2006. Petal herbivory by chrysomelid beetles (*Phyllotreta* sp.) is detrimental to pollination and seed production in *Lepidium papilliferum* (Brassicaceae). Ecological Entomology, 31: 657-660.
- Robertson IC** & D Klemash-Maguire. 2005. Crab spiders deter insect visitations to slickspot peppergrass flowers. Oikos, 109: 577-582.
- Robertson IC** & AC Ulappa. 2004. Distance between pollen donor and recipient influences fruiting success in slickspot peppergrass, *Lepidium papilliferum*. Canadian Journal of Botany, 82: 1705-1710.
- Robertson IC**. 2004. Importance of outcrossing for fruit production in slickspot peppergrass, *Lepidium papilliferum* L. (Brassicaceae). Western North American Naturalist, 64: 265-268.
- Robertson IC** & D. Klemash. 2003. Insect-mediated pollination in slickspot peppergrass, *Lepidium papilliferum* L. (Brassicaceae), and its implications for population viability. Western North American Naturalist, 63: 333-342.

Technical Reports

- Robertson IC. 2014. Habitat associations and dynamics of Owyhee harvester ant colonies location within slickspot peppergrass populations. Unpublished report on file at: United States Fish and Wildlife Service. Idaho Fish and Wildlife Office, Boise, ID.
- Robertson IC & J Crossman. 2013. Insect-mediated pollination and harvester ant seed predation in slickspot peppergrass: 2013 report. Unpublished report on file at: State of Idaho Military Division, Army National Guard, Boise, ID.
- Robertson IC. 2013. Monitoring harvester ant colonies located within slickspot peppergrass habitat: 2013 update (year 4). Unpublished report on file at: United States Fish and Wildlife Service. Idaho Fish and Wildlife Office, Boise, ID.
- Robertson IC & J Crossman. 2012. Insect-mediated pollination and harvester ant seed predation in slickspot peppergrass: 2012 report. Unpublished report on file at: State of Idaho Military Division, Army National Guard, Boise, ID.
- Robertson IC. 2012. Monitoring harvester ant colonies located within slickspot peppergrass habitat: 2012 update (year 3). Unpublished report on file at: United States Fish and Wildlife Service. Idaho Fish and Wildlife Office, Boise, ID.
- Robertson IC. 2011. Monitoring harvester ant colonies located within slickspot peppergrass habitat. Unpublished report on file at: United States Fish and Wildlife Service. Idaho Fish and Wildlife Office, Boise, ID.
- Robertson IC & MS Schmasow. 2011. Insect-mediated pollination and harvester ant seed predation in slickspot peppergrass: 2011 report. Unpublished report on file at: State of Idaho Military Division, Army National Guard, Boise, ID.
- Robertson IC. 2010. Assessing habitat suitability for the insects that pollinate *Lepidium papilliferum*. Unpublished report on file at: Bureau of Land Management, Boise, ID.
- Robertson IC. 2010. Monitoring harvester ant colonies located within slickspot peppergrass habitat. Unpublished report on file at: United States Fish and Wildlife Service. Idaho Fish and Wildlife Office, Boise, ID.
- Robertson IC & MS Schmasow. 2010. Insect-mediated pollination and harvester ant seed predation in slickspot peppergrass: 2010 report. Unpublished report on file at: State of Idaho Military Division, Army National Guard, Boise, ID.
- Robertson IC & M Schmasow. 2009. Insect-mediated pollination and harvester ant seed predation in slickspot peppergrass: 2009 report. Unpublished report on file at: State of Idaho Military Division, Army National Guard, Boise, ID.

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- Robertson IC & JP White. 2008. Insect-mediated pollination and harvester ant seed predation in slickspot peppergrass: 2008 report. Unpublished report on file at: State of Idaho Military Division, Army National Guard, Boise, ID.
- Robertson IC & JP White. 2007. Insect-mediated pollination and seed predation in slickspot peppergrass, *Lepidium papilliferum*. Unpublished report on file at: State of Idaho Military Division, Army National Guard, Boise, ID.
- Robertson IC, Novak S, Leavitt H, Stillman A, & JP White. 2006. Analyses of seed predation, pollination, and population genetics in *Lepidium papilliferum*. Unpublished report on file at: State of Idaho Military Division, Army National Guard, Boise, ID.
- Robertson IC, Leavitt H, & S Billinge. 2006. Importance of insect-mediated pollination and outcrossing on the reproductive performance of slickspot peppergrass, *Lepidium papilliferum*: Report for 2006. Unpublished report on file with Bureau of Land Management, Boise, ID.
- Robertson IC, Novak S, Leavitt H, & A Stillman. 2005. *Lepidium papilliferum*: Analysis of pollination, herbivory, and genetic structure of populations. Unpublished report on file at: State of Idaho Military Division, Army National Guard, Boise, ID.
- Robertson IC, Leavitt H, & S Billinge. 2005. Importance of insect-mediated pollination and outcrossing on the reproductive performance of slickspot peppergrass, *Lepidium papilliferum*. Unpublished report on file with Bureau of Land Management, Boise, ID.
- Robertson IC, Novak S, Leavitt H, & A Stillman. 2004. Insect-mediated pollination of *Lepidium papilliferum*: 2004. Unpublished report on file at: State of Idaho Military Division, Army National Guard, Boise, ID.
- Robertson IC, Leavitt H, & S Billinge. 2004. Insect-mediated pollination in slickspot peppergrass, and the impact of competition for pollinators on reproductive success. Unpublished report on file with Bureau of Land Management, Boise, ID.
- Robertson IC. 2003. Insect-mediated pollination of *Lepidium papilliferum*: 2003. Unpublished report on file at: State of Idaho Military Division, Army National Guard, Boise, ID.
- Robertson IC. 2003. Insect pollinator communities of slickspot peppergrass, *Lepidium papilliferum*: implications for population viability: 2003. Unpublished report on file with Bureau of Land Management, Boise, ID.
- Robertson IC & L Hannon. 2003. Insect pollinator communities of slickspot peppergrass, *Lepidium papilliferum*: implications for population viability. Unpublished report on file with Bureau of Land Management, Boise, ID.
- Robertson IC. 2002. Insect-mediated pollination of *Lepidium papilliferum*. Unpublished report on file at: State of Idaho Military Division, Army National Guard, Boise, ID.
- Robertson IC. 2001. Insect-mediated pollination of slickspot peppergrass, *Lepidium papilliferum*: implications for population viability. Unpublished report on file with Bureau of Land Management, Boise, ID.

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Biographical Sketch

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Present Position: Professor

Academic Degrees, Postdoctoral Work, and Previous Positions:

Associate Professor, Boise State University, 2002-2010
Assistant Professor, Boise State University, 1998-2002
Assistant Professor, Cayey University College, University of Puerto Rico, 1995-98
Postdoctoral research associate, Plant Cell Biochemistry, University of California, Riverside, 1991-95.
Ph.D., Plant Physiology, University of California, Davis, 1991.
M.S., Plant Science, California State University, Fresno, 1983.
Ingeniero Agronomo, Facultad de Agronomia, Universidad de Buenos Aires, 1981.

Teaching Experience:

General Biology (lecture and laboratory) (Boise State University)
Plant Physiology (lecture and laboratory) (Boise State University)
Plant Anatomy and Microtechnique (lecture and laboratory) (Boise State University)
Molecular and Cellular Biology of Plants (lecture and laboratory) (Boise State University)
Plants and Society (lecture and laboratory) (Boise State University)
Graduate Seminars in Control of Seed Germination and Plant Physiological Ecology (Boise State University)
General Botany (lecture and laboratory) (Cayey University College/Boise State University)
General Biology (lecture and laboratory) (Cayey University College)

Publications:

Zhuang W, **Serpe M**, Zhang Y (2015) The effect of lichen-dominated biological soil crusts on growth and physiological characteristics of three plant species in a temperate desert, northwestern China. *Plant Biology Journal* doi:10.1111/plb.12359
Carter KA*, Smith JF, White MM, **Serpe MD** (2014) Assessing the diversity of arbuscular mycorrhizal fungi in semiarid shrublands dominated by *Artemisia tridentata* ssp. *wyomingensis*. *Mycorrhiza* 24: 301-314
Shellie K, Cragin J*, **Serpe M** (2014) Performance of Alternative European Wine Grape Cultivars in Southwestern Idaho: Cold Hardiness, Berry Maturity, and Yield. *HortTechnology* 24: 138-147
Chao WS, **Serpe M**, Suttle JC, Jia Y (2013) Increase in ACC oxidase levels and activities during paradormancy release of leafy spurge (*Euphorbia esula*) buds. *Planta* 238: 205-215
Serpe MD, Roberts E**, Eldridge DJ, Rosentreter R (2013) *Bromus tectorum* litter alters photosynthetic characteristics of biological soil crusts from a semiarid shrubland. *Soil Biology and Biochemistry* 60:220-230
Clay DL, Novak SJ, **Serpe MD**, Tank DC, Smith JF (2012) Homoploid hybrid speciation in a rare endemic *Castilleja* from Idaho (*Castilleja christii*, Orobanchaceae). *American Journal of Botany* 99: 1976-1990
Zhou X, ZhangY, Ji X, Downing A, **Serpe M** (2011) Combined effects of nitrogen deposition and water stress on growth and physiological responses of two annual desert plants in northwestern China. *Environmental and Experimental Botany* 74:1-8
Chao WS, **Serpe MD** (2010) Changes in the expression of carbohydrate metabolism genes relating to three phases of bud dormancy in leafy spurge. *Plant Molecular Biology* 73: 227-239

- Scholten M*, Donahue J**, Shaw NL, **Serpe MD** (2009) Environmental regulation of dormancy loss in *Lomatium dissectum* (Apiaceae) seeds. *Annals of Botany* 103: 1091-1101
- Serpe MD**, Zimmerman SJ**, Deines L*, Rosentreter R. (2008) Seed water status and root tip characteristics of two annual grasses on lichen-dominated biological soil crusts. *Plant Soil* 303: 191-205
- Deines L*, Rosentreter R, Eldridge DJ, **Serpe MD** (2007) Germination and seedling establishment of two annual grasses on lichen-dominated biological soil crusts. *Plant Soil* 295: 23-35
- Chao WS, **Serpe MD**, Jia Y, Shelver WL, Anderson JV, Umeda M (2007) Potential roles for autophosphorylation, kinase activity, and abundance of a CDK-activating kinase (Ee;CDKF;1) during growth in leafy spurge. *Plant Molecular Biology* 63: 365-379
- Serpe MD**, Orm JM*, Barks TR**, Rosentreter R (2006) Germination and seed water status of four grasses on moss dominated biological soil crusts from arid lands. *Plant Ecology* 185: 163-178
- Chao WS, **Serpe MD**, Anderson JV, Gesch RW, Horvath DP (2006) Sugars, hormones, and environment affect the dormancy status in underground adventitious buds of leafy spurge (*Euphorbia esula*). *Weed Science* 54: 59-68
- Serpe MD**, Muir AJ**, Andème-Onzighi C, Driouich A (2004) Differential expression of callose and a β -1,4 galactan epitope in the laticiferous plant *Euphorbia heterophylla* L. *International Journal of Plant Sciences* 165: 571-585
- Wicklow-Howard M, **Serpe MD**, Orm J**, Stokes J, Rosentreter R (2003) Effect of biological soil crusts on seed germination and seedling growth of *Bromus tectorum*. *Proceedings of the VIIth International Rangelands Congress* 1276-1278
- Serpe MD**, Muir AJ**, Driouich A (2002) Immunolocalization of β -D-glucans, pectins, and arabinogalactan-proteins during intrusive growth and elongation of nonarticulated laticifers in *Asclepias speciosa* Torr. *Planta* 215: 357-370
- Serpe MD**, Muir AJ**, Keidel AM** (2001) Localization of cell wall polysaccharides in non-articulated laticifers of *Asclepias speciosa*. *Protoplasma* 216: 215-226
- Serpe MD**, Matthews MA (2000) Turgor and cell wall yielding in dicot leaf growth in response to changes in relative humidity. *Australian Journal of Plant Physiology* 27: 1131-1140
- Serpe MD**, Nothnagel EA (1999) Arabinogalactan-proteins in the Multiple Domains of the Plant Cell Surface. *Advances in Botanical Research* 30: 207-289
- Serpe MD**, Nothnagel EA (1996) Heterogeneity of arabinogalactan-proteins on the plasma membrane of rose cells. *Plant Physiology* 112: 1261-1271
- Serpe MD**, Nothnagel EA (1996) Lipid lateral mobility in the plasma membrane of whole plant cells. *Pflügers Archives-European Journal of Physiology*. 43: 253-254
- Serpe MD**, Nothnagel EA (1995) Purification and biochemical characterization of arabinogalactan-proteins from the cell wall of rose cells. *Plant Physiology* 109: 1007-1016
- Serpe MD**, Nothnagel EA (1994) Effects of Yariv phenylglycosides on *Rosa* cell suspensions: Evidence for the involvement of arabinogalactan-proteins in cell proliferation. *Planta* 193: 542-550
- Serpe MD**, Matthews MA (1994) Growth, pressure, and wall stress in epidermal cells of *Begonia* leaves during development. *International Journal of Plant Sciences* 155: 291-301
- Serpe MD**, Matthews MA (1994) Changes in cell wall yielding and stored growth in *Begonia argenteo-guttata* L. leaves during the development of water deficits. *Plant Cell Physiology* 35: 619-626
- Serpe MD**, Matthews MA (1992) Rapid changes in cell wall yielding of elongating *Begonia argenteo-guttata* L. leaves in response to changes in plant water status. *Plant Physiology* 100: 1852-1857
- Emershad RL, Ramming DW, **Serpe MD** (1989). In ovulo embryo development and plant formation from stenospermic genotypes of *Vitis vinifera*. *American Journal of Botany* 76: 397-402

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Submitted manuscripts

- Zhang Y, Aradottir AL, **Serpe MD**, Boeken B Interactions of biological soil crusts with vascular plants. Chapter for Book entitled: *Biological Soil Crusts: An Organizing Principle in Drylands* edited by Jayne Belnap
- Davidson BE, Novak SJ, **Serpe MD** Consequences of pre-inoculation with native arbuscular mycorrhizae on root colonization and survival of *Artemisia tridentata* ssp. *wyomingensis* seedlings after transplanting

Technical reports during the last five years

- Serpe MD, Davidson BE* Community structure of arbuscular mycorrhizal fungi colonizing Wyoming big sagebrush seedlings. In Great Basin Native Plant Project Annual Report 2014 (in press)
- Serpe MD, Davidson BE* Pre-inoculation of Wyoming big sagebrush seedlings with native arbuscular mycorrhizae: effects on mycorrhizal colonization and seedling survival after transplanting. In Great Basin Native Plant Project Annual Report 2013 (pp. 61-67)
- Serpe MD, Davidson BE* Pre-inoculation of Wyoming big sagebrush seedlings with native arbuscular mycorrhizae: Effects on mycorrhizal colonization and community composition after transplanting. In Great Basin Native Plant Project Annual Report 2012 (pp. 62-68)
- Serpe M Diversity of Mycorrhizal Fungi Associated with *Artemisia tridentata* ssp. *wyomingensis*. In Great Basin Native Plant Selection and Increase Project Annual Report 2011 (pp. 50-57)
- Serpe M Novak S Genetic variation among populations of *Lomatium dissectum*. In Great Basin Native Plant Selection and Increase Project Annual Report 2010 (pp. 37-42).
- Serpe M Diversity of Mycorrhizal Fungi Associated with *Artemisia tridentata* ssp. *wyomingensis*. In Great Basin Native Plant Selection and Increase Project Annual Report 2010 (pp. 52-54)

Presentations during the last five years

- Velasco J**, Smith JF, Serpe MD (2015) Drought Effects on Colonization of *Artemisia tridentata* seedlings by Arbuscular Mycorrhizal Fungi. Annual meeting of the Botanical Society of America
- Davidson BE*, Smith JF, Serpe MD (2015) Community Structure of Arbuscular Mycorrhizal Fungi Colonizing *Artemisia tridentata* Seedlings Following Inoculation and Transplanting. Annual meeting of the Botanical Society of America
- Serpe MD, Davidson BE* (2015) Improvement in colonization and seedling survival of Wyoming big sagebrush seedlings following inoculation with native arbuscular mycorrhizae. National Native Seed Conference
- Davidson BE*, Serpe MD (2015) Community structure of arbuscular mycorrhizal fungi colonizing Wyoming big sagebrush seedlings transplanted to the Snake River Birds of Prey, NCA. Great Basin Consortium Conference
- Serpe MD, Davidson BE* (2014) Inoculation of Wyoming big sagebrush seedlings with native arbuscular mycorrhizae: impacts on root colonization, mycorrhizal community composition, and seedling survival after transplanting. Society for Ecological Restoration Northwest-Great Basin regional conference
- Cragin J*, Shellie K, Serpe MD (2014) Endodormancy release in grapevine buds: chilling requirements and changes in cold hardiness. Annual meeting of the Botanical Society of America
- Davidson BE*, Smith JF, Serpe MD (2014) Inoculation of *Artemisia tridentata* ssp. *wyomingensis* with arbuscular mycorrhizae: impacts on colonization and mycorrhizal composition of roots after transplanting. Annual meeting of the Botanical Society of

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America

- Carter KA*, Serpe MD, Smith JF (2013) Assessing the diversity of mycorrhizal communities in sagebrush steppes of southwestern Idaho. Annual meeting of the Botanical Society of America
- Roberts E**, Serpe M, Rosentreter R (2013) *Bromus tectorum* litter alters photosynthetic characteristics of biological soil crusts from sagebrush steppes. Annual Meeting of Northwest Science
- Davidson BE*, Serpe MD (2013) Colonization of *Artemisia tridentata* ssp wyomingensis by native arbuscular mycorrhizae: persistence and consequence of inoculation. Great Basin Consortium Conference
- Davidson B*, Serpe MD (2012) Improvement in colonization and seedling survival of Wyoming big sagebrush following inoculation with native arbuscular mycorrhizal fungi. Annual meeting of the Mycological Society of America
- Cragin J*, Keller M, Serpe MD, Shellie K (2012) Fighting of the Cold: Effects of Temperature, Dormancy, and Deacclimation on Cold-Hardiness in Grapevines. Annual meeting of the American Society of Enology and Viticulture
- Holten R**, Roberts E**, Serpe MD (2012) Survival of native arbuscular mycorrhizal inoculum following transplanting of Wyoming big sagebrush. National Conference of Undergraduate Research
- Chao WS, Serpe M, Suttle JC, Jia Y (2011) Dynamics of ACC oxidase and ethylene during growth of leafy spurge buds. Annual meeting of the American Society of Plant Biologists
- Carter K*, White M, Serpe M (2011) Identification of mycorrhizal species associated with *Artemisia tridentata* ssp. wyomingensis in southwestern Idaho. Annual meeting of the Mycological Society of America
- Davidson D*, Cragin J**, Serpe M (2011) Seasonal changes in gas exchange and chlorophyll fluorescence parameters in *Artemisia tridentata* ssp. wyomingensis. Annual meeting of the Great Basin native plant selection and increase project
- Osgood T**, Rosentreter R., Serpe MD (2010) Influence of *Bromus tectorum* litter on the photosynthetic capacity of a moss dominated biological soil crust. Annual Meeting of Northwest Science
- Scholten M*, Zimmerman S**, Shaw N, Serpe MD (2010) Environmental regulation of dormancy loss in *Lomatium dissectum* seeds. National Native Seed Conference
- Carter K*, Davidson B*, White M, Shaw N, Serpe M (2010) Identification of mycorrhizae associated with *Artemisia tridentata* ssp. *Wyomingensis* in Southwestern Idaho. National Native Seed Conference

*Graduate student in my lab, ** undergraduate student in my lab

Grants during the last five years:

- USDA Forest Service (\$39,923) Drought tolerance of big Wyoming sagebrush seedlings inoculated with arbuscular mycorrhizae (March 15-Jul 18) (PI: M.Serpe)
- USDA Forest Service (\$5,000) Analysis of arbuscular mycorrhizal taxa in seedlings of Wyoming big sagebrush following transplanting (Dec 13-Jul 16) (PI: M. Serpe)
- Idaho State Department of Agriculture (\$22,994) Preparing Idaho Viticulture for Future Extreme Temperature Events: Wine Grapes Need for and Tolerance to Cold (Feb 12-Dec 14) (PI: M.Serpe, CoPI J. Cragin)
- USDA AFRI (\$149,451) Functional diversity of native mycorrhizae during early development of Big Sagebrush: a step(pe) towards Restoring Sagebrush Ecosystems (Jan 10-Dec 13) (PI: M.

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Serpe, Co-PI M. White)
USDA Forest Service (\$9,400) Diversity of mycorrhizal species that colonize *Artemisia tridentata* in southwestern Idaho (Jan 10-May 13) (PI: M. Serpe)
Bureau of Land Management (\$39,946): Influence of litter and a moss-dominated biological soil crust on *Bromus tectorum* establishment under natural environmental conditions (May 08-Oct 12) (PI: M. Serpe)

Pending grants:

USDA AFRI (\$149,976) Developing deep roots: Improving establishment of *Artemisia tridentata* seedlings via associations with soil microorganisms (Jan 16-Dec 18) (PI: M. Serpe)
Bureau of Land Management (\$15,945) Generation and multiplication of monospecific cultures of native arbuscular mycorrhizae (Jan 16-Sept 17) (PI: M. Serpe)

Graduate students in my lab during the last five years:

Keith A. Carter
Bill E. Davidson (graduated Spring 15)
Jacob Cragin (thesis submitted, expected completion Fall 15)
Craig Carpenter

Undergraduate Students working in my lab during the last five years:

Eric Roberts, Russell Holten, Ryan LaJoie, Rachael Barron, Rachael Bergey, Tyler Osgood, Jae Martini, Joel Velasco, Carly Prior, Brian Husler, Jacki Weber, Craig Carpenter, Jessica Andrews

Service during the last five years:

Professional:

- Reviewer for the following journals: Weed Research, Ecological Research, Rangeland Ecology and Management, Plant and Soil, Biodiversity and Conservation, PLOS ONE, Journal of Hydrology, Plant Species Biology, Arid Land Research and Management, Environmental Science and Technology, Agricultural Sciences, HortScience, Pedosphere
- Reviewer for the following agencies: USDA-AFRI (panelist in 2014 and 2105) , USGS, Idaho State Department of Agriculture, USDA-ARS

University:

- Biology representative on the Teacher Education Coordinating Council (2010 to 2012)
- Biological Sciences Undergraduate Committee (2010 to present)
- Biological Science Promotion and Tenure Committee (2010 to 2013)
- Programming of computers and supervision of equipment maintenance in the research greenhouse (2010 to present)
- College Curriculum Committee (2010 to present, chair since spring 2015)
- Biology representative to the IDo Teach program (Fall 2015)

Professional Societies:

American Society of Plant Biologists
Botanical Society of America
Society for Ecological Restoration

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Curriculum vitae

James F. Smith
Department of Biological Sciences
1910 University Drive
Boise, ID, 83725-1515

Education

- | | |
|-----------|---|
| 1982-1986 | Cornell University, Division of Biological Sciences:
B.A. cum laude biological sciences and distinction |
| 1986-1991 | University of Wisconsin-Madison, Botany Department: Ph.D.
under Kenneth J. Sytsma, Dissertation Title: The Evolution and
Systematics of <u>Columnea</u> (Gesneriaceae). |

Professional Experience

- | | |
|-----------|---|
| 2001- | Full Professor, Biology Department, Boise State University,
Herbarium Director (SRP) |
| 1997-2001 | Associate Professor, Biology Department, Boise State University,
Herbarium Director (SRP) |
| 2000-2001 | Harvard University Herbaria Associate. |
| 1992-1997 | Assistant Professor, Biology Department, Boise State University,
Herbarium Director (SRP) |
| 1991-1992 | Post-Doctorate position with Drs. W. John Kress and Elizabeth A. Zimmer
on cladistic relationships of the Zingiberales |
| 1992 | Instructor for Biolat Workshop on Biodiversity, Cuzco, Perú |

Courses Taught

- Plants and Society – An introductory level non-biology major's course teaching the principles of biology and botany through plants that are used by people in societies around the globe.
- General Botany – An introductory level biology major's course aimed at teaching the basic principles of biology (ecology, evolution, genetics) and basics of botany.
- Plant Systematics – An intermediate level biology major's course to teach the principles of modern systematics methods (DNA, phylogenetics) as well as a basic knowledge of plant family and genera identification.
- Organic Evolution – An upper level biology major's course covering the basics of evolution and modern research in the field.

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Plant Physiology – An upper level biology major’s course teaching the principles of whole plant physiology, included a section on modern molecular methods.

Bioinformatics – An upper level and graduate biology major’s course. I was responsible for teaching homology, alignment and phylogenetics.

Species and Speciation – A graduate level course covering original papers on species concepts and current original papers on aspects of speciation as a process.

Automated Sequencing – A graduate level practical course on using automated sequencing equipment for research.

Population Genetics – A graduate level course, co-taught with another faculty member on a need basis.

Molecular Ecology, Evolution, Phylogenetics and Phylogeography (MEEPP) – A weekly journal club discussion of recent papers related to molecular population and phylogenetic research, open to undergraduate and graduate students.

Grants Awarded

2015	Marjorie Moore Davidson Foundation (donation made to BSU Foundation \$8000 for research)
2015	Bureau of Land Management (\$10,000)
2014	Marjorie Moore Davidson Foundation (donation made to BSU Foundation \$7000 for research, \$20,000 for herbarium)
2013	Marjorie Moore Davidson Foundation (donation made to BSU Foundation \$5000)
2013	US Fish and Wildlife Service: Taxonomic status of Packard's milkvetch in southwestern Idaho (\$15, 657)
2012	Marjorie Moore Davidson Foundation (donation made to BSU Foundation \$5000)
2012	BLM Boise District: Lichen Curation (\$40,000)
2012	NSF grant DEB1110283: REU supplement (\$7500)
2011	Marjorie Moore Davidson Foundation (donation made to BSU Foundation \$5000)
2011	NSF grant DBI1052719: RUI: SWITCH: SouthWest Idaho: The Comprehensive Herbaria. An on-line database resource for botanical research and education, \$365,815 (co-PI with Don Mansfield at College of Idaho).

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2011	NSF grant DEB1110283: REU supplement (\$7500)
2010	NSF grant DEB 1038069: Primarily Undergraduate Institutions: An important Resource for Systematics Research (\$52,823)
2010	Marjorie Moore Davidson Foundation (donation made to BSU Foundation \$5000)
2010	US Fish and Wildlife Service (\$9000 – with Danielle Clay)
2009	NSF grant DEB0949270: Collaborative Research: REVSYS:RUI:A revision of the sectional classification of <i>Columnea</i> (Gesneriaceae) and the species of section <i>Ortholoma</i> (with the University of Alabama-Tuscaloosa \$306,876 to BSU)
2009	Marjorie Moore Davidson Foundation (donation made to BSU Foundation \$5000)
2008	Marjorie Moore Davidson Foundation (donation made to BSU Foundation \$10,000)
	Chris Davidson and Sharon Christoph (donation made to BSU Department of Biological Sciences \$5,000)
2007	Marjorie Moore Davidson Foundation (donation made to BSU Foundation \$5,000)
2006	The DNA Safeguard Project: co-PI (Hampikian as PI: Department of Defense, \$850,000)
2006	U. S. Fish and Wildlife Service (\$5200)
2006	Marjorie Moore Davidson Foundation (donation made to BSU Foundation \$10,000)
2005	U. S. Fish and Wildlife Service (\$1800)
2004	NSF supplement for Research Education for Undergraduates (\$6,000)
	Boise State University Faculty Research Grant (\$5000)
2003	NSF supplement for Research Education for Undergraduates (\$12,000)
2002	NSF supplement for Research Education for Undergraduates (\$12,000)
2001	Boise State University Faculty Research Grant (\$5000)
	NSF grant DEB-0107763 (\$271, 492)

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	BSU-EPSCoR travel grant (\$1500)
	BSU-EPSCoR graduate student support to Lisa Hahn (\$4000)
	BSU College of Arts and Sciences Mini-development Grant for “Systematics as an Active Science: Display for Passive Education” (\$600)
2000	NSF ROA Grant (\$24,930) with Dr. David Baum, Harvard University as P. I.
2000	Li-Cor automated sequencer (\$30,000) A private donation from Dr. Chris Davidson.
2000	Boise State University Faculty Research Grant (\$5000)
1999	Faculty Research Associates Fellowship (\$4200)
1998	National Geographic Society (\$11,000)
1998	Boise State University Faculty Research Grant (\$5000)
1997	Boise State University Faculty Research Grant (\$5000)
1996	NSF REU Supplement Grant (\$5000)
1995	Boise State University Foundation (\$5000) to fund a seminar series on Conservation Biology (with Dr. Steven Novak)
1995	Boise State University Faculty Research Associates Program (\$3900)
1995	Boise State University Faculty Research Grant (\$4841)
1994	NSF Research at Undergraduate Institutions Grant (\$167, 304)
1994	BLM Challenge Cost Share Grant (\$9,000)
1993	Idaho State Board of Education Grant (\$26, 581)
1993	Faculty Research Grant, Boise State University (\$5000, funding returned due to receipt of State Board Grant in the same year)
1993	American Gloxinia and Gesneriad Society (\$1000)
1989	American Gloxinia and Gesneriad Society (\$1000)
1988-1990	NSF Dissertation Improvement Grant under supervision of Dr. Kenneth J. Sytsma (\$15,225)

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1987	Jessie Smith Noyes Fund, Organization for Tropical Studies, Costa Rica (\$206)
1987	Nave Foundation, University of Wisconsin-Madison (\$500)
1987	O.N. and E.K. Allen grant, University of Wisconsin-Madison (\$1000)
1987	Davis Fund, Department of Botany, University of Wisconsin-Madison (\$678)

Honors and Awards

1998	Boise State University College of Arts and Sciences award for distinguished research in Math and Science
2005	2005 Top Ten Scholar Honored Faculty Member. In recognition for inspiring and mentoring Boise State students
2010-2012	Visiting Professorship for Senior International Scientists, Chinese Academy of Sciences
2014	Keynote speaker at Rainbow Graduation, Boise State University

Publications

- Qiu, Z.-J., Y.-X. Lu, C.-Q. Li, Y. Dong, J. F. Smith, and Y.-Z. Wang. 2015. Origin and evolution of *Petrocosmea* (Gesneriaceae) inferred from both DNA sequence and novel findings in morphology with a test of morphology-based hypotheses. *BMC Plant Biology* 15: 167.
- Schulte, L. J., J. L. Clark, S. J. Novak, S. K. Jeffries, and J. F. Smith. 2015. Speciation within *Columnea* section *Angustiflorae* (Gesneriaceae): Islands, pollinators and climate. submitted to *Molecular Phylogenetics and Evolution* 84: 125-144.
- George, E. E., D. H. Mansfield, J. F. Smith, R. L. Hartman, S. L. Downie, and C. E. Hinchliff. 2014. Phylogenetic Analysis Reveals Multiple Cases of Morphological Parallelism and Taxonomic Polyphyly in *Lomatium* (Apiaceae). *Systematic Botany* 39: 662-675.
- Schulte, L. J., J. L. Clark, S. J. Novak, M. T.-Y. Ooi, and J. F. Smith. 2014. Paraphyly of Section *Stygnanthe* (*Columnea*, Gesneriaceae), a New Section Inferred from ITS and Chloroplast DNA Data, and a Revision of the Species of Section *Angustiflorae* *Systematic Botany* 39: 613-636.
- Bornstein, A. J., J. F. Smith and E. J. Tepe. 2014. Two new species of *Piper* from the Greater Antilles. *Systematic Botany* 39: 10-16.
- Amaya-Marquez, M. and J. F. Smith. 2013. *Columnea corralesii*, a new species of Gesneriaceae from Colombia. *Rev. Acad. Colomb. Cienc.* 37(144): 307-310.

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- J. F. Smith, M. Amaya-Marquez, O. H. Marin-Gomez, and J. L. Clark. 2013. Four new species of *Columnea* (Gesneriaceae) with primary distributions in Colombia. *Journal of the Botanical Research Institute of Texas*. 7: 667-679.
- Carter, K. A., J. F. Smith, M. M. White, and M. D. Serpe. 2013. Assessing the diversity of arbuscular mycorrhizal fungi in semiarid shrublands dominated by *Artemisia tridentata* ssp. *wyomingensis*. *Mycorrhiza*
- Smith, J. F., M. T. Ooi, L. Schulte, M. Amaya-Marquez, and J. L. Clark. 2013. Searching for monophyly in the subgeneric classification systems of *Columnea* (Gesneriaceae). *Selbyana* 31: 126-142.
- Ning, Z.-L., J. Wang, J. F. Smith, and M. Kang. 2013. *Primulina qingyuanensis* sp. nov. (Gesneriaceae) from limestone areas in Guangdong, China. *Phytotaxa* 137: 48-52.
- Gaskin, J. F., M. Schwarzländer, C. L. Kinter, J. F. Smith and S. J. Novak. 2013. Propagule pressure, genetic structure and geographic origins of *Chondrilla juncea* (Asteraceae): An invader on three continents. *American Journal of Botany* 100: 1871-1882.
- J. F. Smith and J. L. Clark. 2013. Molecular phylogenetic analyses reveal undiscovered monospecific genera in Episcieae (Gesneriaceae). *Systematic Botany* 38: 451-463.
- Ning, Z.-L., G.-F. Li, J. Wang, J. F. Smith, H. Rasolonjatove, and M. Kang. 2013. *Primulina huaijiensis* (Gesneriaceae) a new species from Guangdong, China. *Acta Botanica Fennici* 50: 119-122.
- Clay, D. L., D. C. Tank, S. J. Novak, M. D. Serpe, and J. F. Smith. 2012. Homoploid hybrid speciation in a rare endemic *Castilleja* from Idaho (*Castilleja christii*, Orobanchaceae). *American Journal of Botany* 99: 1976-1990.
- Amaya M., M. and J. F. Smith. 2012. *Columnea paraguensis* (Gesneriaceae) a remarkable and rare new species from Colombia. *Rev. Acad. Colomb. Cienc.* 36: 137-140
- Clark, J. L., M. M. Funke, A. M. Duffy, and J. F. Smith. 2012. Phylogeny of a Neotropical clade in the Gesneriaceae: More tales of convergent evolution *International Journal of Plant Sciences*. 173: 894-916. Featured on cover.
- Schubert, H. K., A. J. Bornstein, M. S. Taylor, and J. F. Smith. 2012. A Systematic Revision of the Genus *Manekia* (Piperaceae). *Systematic Botany* 37: 587-598. Featured on cover.
- Carlson, K. M., D. H. Mansfield, and J. F. Smith. 2011. A new variety of *Lomatium ravenii* (Apiaceae) from the northern Great Basin and adjacent Owyhee region. *Aliso* 29(2):105-114.
- Symmank, L., M.-S. Samain, J. F. Smith, G. Pino, A. Stoll, P. Goetghebur, C. Neinhuis, and S. Wanke. 2011. The extraordinary journey of *Peperomia* subgenus *Tildenia* (Piperaceae): insights into diversification and colonization patterns from its cradle in Peru to the Tans-Mexican volcanic belt. *Journal of Biogeography*. 38: 2337-2349.

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- Clark, J. L. and J. F. Smith. 2011. *Columnea pygmaea*, a new small-flowered species from Ecuador. *Journal of the Botanical Research Institute of Texas* 5: 87-95.
- Carlson, K. M, D. H. Mansfield, and J. F. Smith. 2011. A New Species in the *Lomatium foeniculaceum* (Apiaceae) Clade Revealed Through Combined Morphometric and Phylogenetic Analyses. *Systematic Botany* 36: 495-507. Featured on cover.
- Woo, V. L., Smith, J. F., M. M. Funke, P. J. Lockhart, and P. J. Garnock-Jones. 2011. Phylogenetic relationships in Coronanthereae (Gesneriaceae) reveal multiple introductions from South America into the Pacific. *International Journal of Plant Sciences* 172: 434-457.
- Wang, Y.-Z., R.-B. Mao, Y. Li, J.-M. Li, Y. Dong, Z.-Y. Li, and J. F. Smith. 2011. Phylogenetic reconstruction of *Chirita* and allies (Gesneriaceae) with taxonomic treatments. *Journal of Systematics and Evolution* 49: 50-64.
- Smith, J. F., D. N. Perkins, C. Bjork, and G. Glenne. 2010. AFLP analyses reveal species boundaries within *Pyrrocoma* (Asteraceae). *Madroño*. 57: 95-105.
- Smith, J. F. , A. J. Stillman, S. R. Larson. C. M. Culumber, I. C. Robertson , and S. J. Novak. 2009. Phylogenetic relationships among *Lepidium papilliferum* (L. Henderson) A. Nels & J. F. Macbr., *L. montanum* Nutt., and *L. davisii* Rollins (Brassicaceae). *Journal of the Torrey Botanical Club* 136: 149-163.
- Xia, Z., Y.-Z. Wang, and J. F. Smith. 2009. Familial placement and relations of *Rehmannia* and *Triaenophora* (Scrophulariaceae s. l.) inferred from five gene regions. *American Journal of Botany* 96: 519-530.
- Givnish, T. J., K. J. Milliam, A. Mast, T. B. Patterson, T. J. Theim, A. Hipp, J. M. Henss, J. F. Smith, K. Woods, and K. J. Sytsma. 2009. Origin, adaptive radiation, and diversification of the Hawaiian lobeliads (Asterales: Campanulaceae). *Proceedings of the Royal Society of London Series B* 276: 407-416.
- Anderson, K. E., S. J. Novak, and J. F. Smith. 2008. Populations composed entirely of hybrid colonies: bidirectional hybridization and polyandry in harvester ants. *Biological Journal of the Linnean Society* 95: 320-326.
- Barkworth, M. E., M. O Arriaga, J. F. Smith, S. W. L. Jacobs, J. V. Reyna, and B. S. Bushman. 2008. Molecules and morphology in South American Stipeae (Poaceae). *Systematic Botany* 33: 719-731.
- Jaramillo, M. A., R. Callejas, C. Davidson, J. F. Smith, A. C. Stevens, and E. Tepe. 2008. A phylogeny of the tropical genus *Piper* (Piperaceae) using ITS and the chloroplast intron *psbJ-petA*. *Systematic Botany* 33: 647-660.
- Smith, J. F., A. C. Stevens, E. J. Tepe, and C. Davidson. 2008. Placing the origin of two species-rich genera in the late Cretaceous with later species divergence in the Tertiary: A phylogenetic, biogeographic and molecular dating analysis. *Plant Systematics and*

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Evolution 275: 9-30.

- Zhou, X-R., Y-Z. Wang, J. F. Smith and R. Chen. 2008. Altered expression patterns of TCP and MYB gene relating to the floral development transition from initial zygomorphy to actinomorphy in *Bournea* (Gesneriaceae). *New Phytologist* 178: 532-543.
- L. Leppert, T. V. Zadorozhny, J. R. Belthoff, A. M. Dufty, Jr., S. Hamilton, G. Kaltenecker, and J. F. Smith. 2007. DNA Sexing of Owls: A Comparison of Three Methods. *Journal of Raptor Research* 40: 291-294.
- Smith, J. F., M. M. Funke, and V. L. Woo. 2006. A Duplication of *gcyc* Predates Divergence within tribe Coronanthereae (Gesneriaceae): Phylogenetic Analysis and Evolution. *Plant Systematics and Evolution* 261: 245-256.
- Cronk, Q. C. B., M. Kiehn, W. L. Wagner, and J. F. Smith. 2005. Evolution of *Cyrtandra* (Gesneriaceae) in the Pacific Ocean: the origin of a supertramp clade *American Journal of Botany* 92: 1017-1024.
- Smith, J. F., S. B. Draper, L. C. Hileman, and D. A. Baum. 2004. A phylogenetic analysis within tribes Gloxinieae and Gesnerieae (Gesneriaceae: Gesnerioideae). *Systematic Botany* 29: 947-958.
- Smith, J. F., L. C. Hileman, M. P. Powell, and D. A. Baum. 2004. Evolution of *GCYC*, a Gesneriaceae homolog of *CYCLOIDEA*, within Gesnerioideae (Gesneriaceae). *Molecular Phylogenetics and Evolution* 31: 765-779.
- Smith, J. F. and T. A. Bateman. 2002. Genetic differentiation of rare and common varieties of *Eriogonum shockleyi* (Polygonaceae) in Idaho using ISSR variability. *Western North American Naturalist* 62: 316-326.
- Smith, J. F. 2001. The phylogenetic relationships of *Lembocarpus* and *Goyazia* (Gesneriaceae): based on *ndhF* sequences. *Ann. Missouri Bot. Gard.* 88: 135-143.
- Smith, J. F. 2001. High Species Diversity in Fleshy-Fruited Tropical Understory Plants. *The American Naturalist* 157: 646-653.
- Amaya M., M., L. E. Skog, C. E. Gonzalez and J. F. Smith. 2000. Una nueva especie de *Columnea* (Gesneriaceae) del Norte de los Andes Colombianos. *Caldasia* 22: 185-189
- Smith, J. F. 2000. A phylogenetic analysis of tribes Beslerieae and Napeantheae (Gesneriaceae): parsimony and maximum-likelihood analyses of *ndhF* sequences. *Systematic Botany* 25: 71-80.
- Smith, J. F. 2000. Phylogenetic signal common to three data sets: combining data which initially appear heterogeneous. *Plant Systematics and Evolution* 221: 179-198.
- Smith, J. F. 2000. Phylogenetic resolution within the tribe Episcieae (Gesneriaceae): congruence of ITS and *ndhF* sequences from parsimony and maximum-likelihood analyses. *Amer. J. Bot.* 87: 883-897.

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- Smith, J. F. 1999. *Alloplectus martinianus*, a new species of Gesneriaceae from Ecuador. *Novon* 9: 419-421.
- Smith, J. F., M. Kresge, M. Møller, and Q. C. Cronk. 1998. The African violets (*Saintpaulia*) are members of *Streptocarpus* subgenus *Streptocarpella* (Gesneriaceae): Combined evidence from chloroplast and nuclear ribosomal genes. *Edinburgh Journal of Botany* 55: 1-11.
- Smith, J. F. and S. Atkinson. 1998. Phylogenetic analysis of the tribes Gloxinieae and Gesnerieae (Gesneriaceae): Data from *ndhF* Sequences. *Selbyana* 19: 122-131.
- Smith, J. F. and C. L. Carroll. 1997. Phylogenetic relationships of the Episcieae (Gesneriaceae) based on *ndhF* sequences. *Systematic Botany* 22: 713-724.
- Smith, J. F., J. C. Wolfram, K. D. Brown, C. L. Carroll, and D. S. Denton. 1997. Tribal relationships in the Gesneriaceae: Evidence from DNA sequences of the chloroplast gene *ndhF*. *Annals of the Missouri Botanical Garden*. 84: 50-66.
- Smith, J. F., K. D. Brown, C. L. Carroll, and D. S. Denton. 1997. Familial Placement of *Cyrtandromoea*, *Titanotrichum*, and *Sanango*: Three Problematic Genera of the Lamiales. *Taxon* 40: 65-74.
- Smith, J. F. 1996. Tribal relationships within the Gesneriaceae: a cladistic analysis of morphological data. *Systematic Botany*. 21: 497-514.
- Smith, J. F., C. C. Burke, and W. L. Wagner. 1996. Interspecific Hybridization in Natural Populations of *Cyrtandra* (Gesneriaceae) on the Hawaiian Islands: Evidence from RAPD markers. *Plant Systematics and Evolution* 200: 61-77.
- Smith, J. F., and T. Vuong Pham. 1996. Genetic diversity in natural populations of the rare Idaho endemic *Allium aaseae* and its relatedness and potential introgression with *Allium simillimum* using RAPD markers. *American Journal of Botany* 83: 717-726.
- Smith, J. F., and J. J. Doyle. 1995. A Cladistic Analysis of chloroplast DNA restriction site variation and morphology for the genera of the Juglandaceae. *Amer. J. Bot.* 82: 1163-1172.
- Smith, J. F., and K. J. Sytsma. 1994. Molecules and morphology: Congruence of data in *Columnea* (Gesneriaceae). *Plant Systematics and Evolution*. 193: 37-52.
- Smith, J.F. 1994. Systematics of *Columnea* sections *Pentadenia* and *Stygnanthe* (Gesneriaceae). *Systematic Botany Monographs* Volume 44.
- Smith, J. F., and K. J. Sytsma. 1994. Evolution in the Andean epiphytic genus *Columnea* (Gesneriaceae). Part I. Morphology. *Syst. Bot.* 19: 220-235.
- Smith, J. F., and K. J. Sytsma. 1994. Evolution in the Andean epiphytic genus *Columnea* (Gesneriaceae). Part II. Chloroplast DNA restriction site variation. *Syst. Bot.* 19(2): 317-

336.

- Givnish, T. J., K. J. Sytsma, J. F. Smith, and W. J. Hahn. 1994. Thorn-like prickles and heterophylly in *Cyanea*: Adaptations to extinct avian browsers on Hawai'i? Proc. Nat. Acad. Sci., USA. 91: 2810-2814.
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Sytsma, K.J., T. J. Givnish, J.F. Smith, and W. J. Hahn. 1993. Obtaining and storing land plant samples for macromolecular comparisons. In *Molecular Evolution: Producing the Biochemical Data: Methods in Enzymology*, eds. E. A. Zimmer, T. J. White, R. L. Cann, and A. C. Wilson.

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Manuscripts In Press/Review

Salomo, K. J. F. Smith, M.-S. Samain, L. Bond, C. Davidson, J. Zimmers, T. S. Feild, C. Neinhuis, and S. Wanke. Improved ages of the earliest angiosperms using a comparative cross validation of fossils and extant lineages.

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Manuscripts in Preparation

Perkins, D. N., M. Bechard, S. J. Novak and J. F. Smith. Population genetics of bald eagles (*Haliaeetus leucocephalus*) in southern Idaho: interactions of life history with reductions in population size. to be submitted to Conservation Genetics.

Smith, J. F., J. L. Clark, L. E. Skog, M. Amaya-Marquez. A revision of *Columnea* sections *Ortholoma* and *Bucinellina* (Gesneriaceae).

Ooi, M. T., J. L. Clark, and J. F. Smith. Species boundaries in the *Columnea strigosa* complex.

Stillman, A. J. I. C. Robertson, J. F. Smith, and S. J. Novak. Assessing allozyme diversity and polyploidy in the rare southwestern Idaho endemic, *Lepidium papilliferum*

Published Abstracts Of Papers Presented At Meetings

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Tepe, E. J., A. J. Bornstein, M. Carvalho-Silva, P. M. Anary, M. A. Jaramillo, and J. F. Smith. 2015. Creating order out of chaos: A phylogeny of the *Radula* clade of *Piper*. Presented at Botany 2015, Edmonton.

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- Smith, James F. and Terry A. Bateman. 2000. Genetic differentiation of rare and common varieties of *Eriogonum shockleyi* (Polygonaceae) in Idaho using ISSR variability. Amer. J. Bot. 87 (6): 158.
- Smith, J. F., Q. C. B. Cronk, M. Kiehn, and W. L. Wagner. 1999. Adaptive radiation and phylogeny of Pacific *Cyrtandra* (Gesneriaceae) based on molecular and morphological data. XVI International Botanical Congress, St. Louis, USA.
- Smith, J. F. 1998. Phylogenetic resolution within the tribe Episcieae (Gesneriaceae): ITS and *ndhF* sequences. Amer. J. Bot. 85 (6): 156-157. (AIBS: Baltimore)
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Malesiana Symposium, Kuala Lumpur, Malaysia.

- Smith, J. F. and S. Atkinson. 1997. Phylogenetic analysis of the tribes Gloxinieae and Gesnerieae (Gesneriaceae): data from ndhF sequences. Amer. J. Bot. 84 (6): 232. (AIBS: Montreal)
- Novak, S. J., D. A. Murphey, J. M. Ott, and J. F. Smith. 1996. Allozyme diversity in the narrow endemic Allium aaseae (Alliaceae): comparisons with RAPD data. Amer. J. Bot. 83: 182-183. (AIBS: Seattle)
- Smith, J. F., K. D. Brown, C. L. Carroll, and D. S. Denton. 1996. Tribal relationships within the Gesneriaceae: an assessment of three data sets. Amer. J. Bot. 83: 192. (AIBS: Seattle)
- Smith, J. F., and J. C. Wolfram. 1995. Morphological and molecular cladistic relationships in the Gesneriaceae: Comparison and congruence. Amer. J. Bot. 82: 162. (AIBS: San Diego)
- Smith, J. F., C. C. Burke, and W. L. Wagner. 1995. Interspecific hybridization in natural populations of Cyrtandra (Gesneriaceae) on the Hawaiian islands: evidence from RAPD markers. American Journal of Botany 82: 162. (AIBS: San Diego)
- Smith, J. F., and J. J. Doyle. 1994. Cladistic analysis of morphology and chloroplast DNA restriction site data within the Juglandaceae. Amer. J. Bot. 81: 186. (AIBS: Knoxville)
- Smith, J. F. 1993. Cladistic analysis of rbcL sequences and chloroplast DNA inverted repeat restriction site data from the Zingiberales. Amer. J. Bot. 80: 176. (AIBS: Ames)
- Sytsma, K. J., W. J. Hahn, J. F. Smith, and W. L. Wagner. 1993. Characterization and phylogenetic utility of a large inversion in the chloroplast genome of some species in Oenothera (Onagraceae). Amer. J. Bot. 80: 79. (AIBS: Ames)
- Givnish, T. J., K. J. Sytsma, J. F. Smith, and W. J. Hahn. 1992. Molecular evolution, phylogeny, and geography in the Pitcairnoideae (Bromeliaceae). Amer. J. Bot. 79: 145. (AIBS: Honolulu)
- Givnish, T. J., K. J. Sytsma, J. F. Smith, and W. J. Hahn. 1992. Molecular evolution, adaptive radiation and geographic speciation in the endemic Hawaiian lobeliad genus Cyanea. Amer. J. Bot. 79: 127. (AIBS: Honolulu)
- Smith, J. F., and K. J. Sytsma. 1991. Molecular and morphological variation indicates recent and rapid speciation in Columnea sect. Stygnanthe (Gesneriaceae). Amer. J. Bot. 78: 217. (AIBS: San Antonio)
- Sytsma, K. J., J. F. Smith, and L. D. Gottlieb. 1991. Re-examination of catastrophic speciation in Clarkia (Onagraceae). Amer. J. Bot. 78:221-222. (AIBS: San Antonio)
- Sytsma, K. J., J. F. Smith, and P. C. Hoch. 1991. A chloroplast DNA analysis of tribal and generic relationships within Onagraceae. Amer. J. Bot. 78: 222.(AIBS: San Antonio)
- Sytsma, K. J., J. F. Smith, and L. D. Gottlieb. 1991. Preliminary evidence for a mosaic chloroplast genome in an allotetraploid species of Clarkia (Onagraceae). Amer. J. Bot.

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78: 100-101. (AIBS: San Antonio)

Smith, J. F., and K. J. Sytsma. 1990. Morphological and molecular evolution in Columnea (Gesneriaceae). Amer. J. Bot. 77: 155. (AIBS: Richmond)

Givnish, T. J., K. J. Sytsma, and J. F. Smith. 1990. Adaptive radiation, plant-animal interactions, and molecular evolution in the bromeliad genus Brocchinia. Amer. J. Bot. 77: 174-175.

Givnish, T. J., K. J. Sytsma, and J. F. Smith. 1990. A re-examination of phylogenetic relationships among bromeliad subfamilies using cpDNA restriction site variation. Amer. J. Bot. 77: 133. (AIBS: Richmond)

Sytsma, K. J., J. F. Smith, and P. Berry. 1989. Biogeography and evolution of morphology, breeding systems, and flavonoids in the Old World Fuchsia sect. Skinnera: evidence from chloroplast DNA. Amer. J. Bot. 76: 274. (AIBS: Toronto)

Spooner, D. M., K. J. Sytsma, J. F. Smith, J. Staub, and L. Kneer. 1988. A reexamination of diploid hybrid speciation in Solanum sect. Petota. Amer. J. Bot. 75: 208. (AIBS: Davis)

Smith, J. F., and J. J. Doyle. 1986. Chloroplast DNA variation and evolution in the Juglandaceae. Amer. J. Bot. 73: 730. (AIBS: Amherst)

Graduate Students:

Kirk A. Anderson: M. S. 2002, Interspecific hybridization in the seed-harvester ant *Pogonomyrmex* (Hymenoptera: Formicidae).

Danielle Clay M. S. 2011: Diploid hybrid speciation in the rare endemic *Castilleja christii*

Lars Symmank Ph. D. 2011. Phylogenetics and evolution of *Peperomia* section *Tildenia* (Piperaceae). Technische-Universitat Dresden.

Rubing Mao M. S. 2011. A preliminary study on the phylogenetic relationships of *Briggsia* and related genera (Gesneriaceae). Institute of Botany, Chinese Academy of Sciences.

Wei Lai Ph.D. 2011. Systematics research on the tribe Ruteae (Rutaceae) and its related taxa. Institute of Botany, Chinese Academy of Sciences.

Zhi-Jing Qiu Ph.D. 2011. Molecular phylogeny of *Petrocosmea* (Gesneriaceae) and evo-devo study of zygomorphic flower in *Petrocosmea*. Institute of Botany, Chinese Academy of Sciences.

Andrew Nadeau M. S. 2012: Population genetics of bald eagles in the Pacific Northwest.

Lacie Schulte M. S. 2012: Phylogenetics of a clade within *Columnea*.

Rylene Moore (current): Variation in clonal and sexual reproduction in aspen.

Jay Zimmers (current): Species and subspecies boundaries in *Astragalus cusickii* (Fabaceae).

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Michele Laskowski (current): Parasites in raptors.

Karsten Salomo (Ph. D. student Technische Universität Dresden, Germany, current, co-supervisor). Using fossils to calibrate molecular clocks: a statistical measure of efficient and effective sampling using the basal angiosperms.

Professional Service

2013-	Editor-in-Chief for <i>Systematic Botany</i> (journal of the American Society of Plant Taxonomists)
2008-2012	Managing Editor for <i>Systematic Botany</i> (journal of the American Society of Plant Taxonomists)
2011	Panelist for National Science Foundation Doctoral Dissertation Improvement Grants review
2000-2008	Associate Editor for <i>Systematic Botany</i> (journal of the American Society of Plant Taxonomists)
2003	Panelist for National Science Foundation Doctoral Dissertation Improvement Grants review
2002	Panelist for National Science Foundation Doctoral Dissertation Improvement Grants review
1998	Panelist for National Science Foundation Post-Doctoral Grants review

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EDUCATION, PROFESSIONAL PREPARATION

Saint Mary's University	Biology (Honors)	B.Sc. 1991
Dalhousie University	Science - Biology	B.Ed. 1995
Dalhousie University	Biology	M.Sc. 1997
University of Kansas	Botany (Mycology)	Ph.D. 2002

PROFESSIONAL EXPERIENCE / APPOINTMENTS

Associate Professor, Boise State University	Aug. 22, 2012 – Present
Assistant Professor, Boise State University	Dec. 31, 2006 – Aug. 21, 2012
Adjunct Research Associate, U. of Kansas, Dept Ecol & Evol. Biology	Jan. 3, 2007– Present
Research Associate & PI, U. of Kansas, Dept Ecol & Evol. Biology	April 2004 – Dec. 2006
Fellow (post doctoral researcher), U. of Kansas	June 2002 – Mar. 2004

PRIOR APPOINTMENTS

University of Kansas, Dept. Ecology & Evolutionary Biology, Lawrence, Kansas, USA	
Graduate Research Assistant	May, 1997 – May 2002
Graduate Teaching Assistant	January - May, 1998
Graduate Research Assistant	August, 1996 - January, 1997

Dalhousie University, Department of Biology, Halifax, Nova Scotia, Canada	
Graduate Fellowship	May 1995 - August 1996
High School Teaching Experience	6 weeks, Spring, 1995
Junior High School Teaching Experience	2 weeks, Fall, 1994
Graduate Fellowship	May, 1994 - September, 1994
Graduate Teaching Assistant	September, 1993 - May, 1994
Research Assistant	May, 1991 - August, 1993

Saint Mary's University, Department of Biology, Halifax, Nova Scotia, Canada	
Laboratory Demonstrator	1988-1991
Summer Research Positions	1988-1991

THESES COMPLETED

Ph.D. Taxonomic and molecular systematic studies of the Harpellales (Trichomycetes) toward understanding the diversity, evolution and dispersal of gut fungi. Degree awarded May, 2002.

M.Sc. Assessment of copepod development in relation to genome size and 18S rDNA copy number. Degree awarded May, 1997.

B.Sc. (Honors). A study of the infection of *Salvelinus fontinalis* eggs by *Saprolegnia diclina*. Degree awarded May, 1991.

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Graduate Level TEACHING EXPERIENCE at Boise State University

(Some Co-listed as Undergraduate/Graduate Level courses)

BOT 330/330G. Mycology Lecture & Laboratory,

Fall Semesters 2007—2012, 2014; 19/1 enrolled 2007; 13 in 2008, 15/4 (2009); 21/1 (2010); 17/3 (2011); 21/0 in 2012 and 18/0 in 2014.

BIOL 497/597. Adv Topics – Symbiosis (= 2 credits) in Spr. 2009 (8/3 enrolled), (= 3 credits) in Spr. 2011 (11/6) and Spr. 2013 (20/3).

BIOL 497/597. Adv Topics – Advanced Mycology (= 2 credits) in Spr. 2012; 2014 (11/3; 6/0 enrolled).

BIOL 498/598. Graduate Seminar “Rivers & Microbes: the microbial ecology of anthropogenically influenced fluvial systems” – team taught with Dr. K. Feris (Fall 2008, 2/3 enrolled), team taught with Drs. Feris and Forbey (Spr. 2009, 0/4 enrolled).

BIOL 593-019. Thesis Research (ongoing enrollment)

BIOL 696. Directed Research (Graduate Level), Fall 2008 (1 enrolled)

GRANTS AND AWARDS

National Science Foundation Biological Research Collections Award from DBI-1052719

Project Title: RUI: SWITCH: Southwest Idaho: The Comprehensive Herbaria. An on-line database resource for botanical research and education.

D. Mansfield (PI, College of Idaho),

James Smith, Barbara Ertter, **MM White (Co-PIs, Boise State University)**

Requested and Funded amount: \$365,815 with \$88,571 subaward to Boise State

Duration/Dates: 3 years; 7-15-2011 till 7-14-2014

National Science Foundation Revisionary Syntheses in Systematics Award DEB-0918182

Project Title: Collaborative Research: REVSYS: RUI: Phylogenetic and Revisionary Systematics of early-diverging, ecologically unique clades of fungi, Harpellales and Asellariales.

MM White (PI) at Boise State University

Requested: \$469,374, Funded: \$410,000

Duration/Dates: 3 years, 9-1-2009 till 8-31-2012.

Note: This award to Boise State University is linked to another NSF Award to RW Lichtwardt at University of Kansas. There are separate projects and efforts at each institution, and with separate budgets, but we will work collaboratively to achieve the overarching goals of our collaboration(s).

USDA Agriculture and Food Research Initiative (AFRI) Competitive Grants Program Award Project Title:

Functional biodiversity of native mycorrhizae during early development of Big Sagebrush: A Step(pe) towards restoring sagebrush ecosystems.

M Serpe (BSU) (PI), **MM White (Co-PI)**

Requested and Funded Amount: \$149,451

Duration/Dates: 2 years, 1-1-2010 till 12-31-2011.

National Science Foundation Biotic Surveys & Inventories Award DEB-0344722

Project Title: Biodiversity of cryptic fungal symbionts, Harpellales, living within the guts of aquatic insects in North America.

MM White (PI) and RW Lichtwardt (Co-PI) at University of Kansas.

Requested: \$487,536.00, July 10, 2003; Funded: \$400,000.00 (for three years)

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Duration/Dates: 3 years, 1-29-2004 till 1-28-2007.

PUBLICATIONS (in refereed journals)

(Noting: At various sections below, for publications or manuscripts, Boise State University **undergraduates (*) or graduates (φ)** are so designated, as my mentorees; I encourage my students to publish and lead-author their research whenever possible and appropriate)

2014. φWilson ER, Smalling KL Reilly TJ, Gray E, Bond L, Steele L, *Kandel P, *Chamberlin A, *Gause J, *Reynolds N, Robertson I, Novak S, Feris K, **White MM**. Assessing the potential effects of fungicides on nontarget Gut Fungi (Trichomycetes) and their associated larval black fly hosts. *Journal of the American Water Resources Association (JAWRA)* **50:420-433**.

2014. φCarter KA, Smith JF, **White MM**, Serpe MD. Assessing the diversity of arbuscular mycorrhizal fungi in semiarid shrublands dominated by *Artemesia tridentata* ssp. *wyomingensis*. *Mycorrhiza* **24:301-314**

2013. φTretter ED, *Johnson EM, φWang Y, *Kandel P, **White MM**. Examining new phylogenetic markers to uncover the evolutionary history of early-diverging fungi: comparing MCM7, TSR1, and rRNA genes for single- and multi-gene analyses of the Kickxellomycotina. *Persoonia* **30:106-125**.

2013. φWang Y, φTretter E, Lichtwardt RW, **White MM**. Overview of 75 years *Smittium* research, establishing a new genus for *Smittium culisetae* and prospects for future revisions of the “Smittium” clade. *Mycologia* **105: 90-111**.

2012. **White MM**, Strongman DB. New species of *Smittium* and *Stachylina* and other trichomycetes in larval Diptera from streams in Nova Scotia, Canada. *Botany* **90: 1204-1219**.

2012. **White MM**, Strongman DB. New species of *Spartiella* and *Legeriosimilis* from mayflies and other arthropod-associated trichomycetes from Nova Scotia, Canada. *Botany* **90: 1195-1203**.

2012. Schoch, CL. et al. (with over 100 authors for the Fungal Barcoding Consortium and including φTretter E, φWang Y, *Johnson E, and **White MM**). The internal transcribed spacer (ITS) as a universal DNA barcode marker for fungi. *Proceedings of the National Academy of Sciences of the United States of America* (PNAS) **109: 6241-6246**.

2012. *Kandel P, **White MM**. A new species of *Ephemerellomyces* from North America highlights its morphological plasticity and possible intergeneric similarities with other Harpellales. *Fungal Biology* **116: 171-184**.

2012. *Oman SJ, **White MM**. Extended studies of *Baltomyces styrax* in Idaho and expanded distribution of this isopod gut fungus in the USA. *Mycologia* **104: 313-320**.

2012. φBench ME, **White, MM**. New species and first records of trichomycetes from immature aquatic insects in Idaho. *Mycologia* **104: 295-312**.

2011. Lichtwardt RW, **White MM**. Typification of *Smittium*, an important genus in the taxonomy of Harpellales. *Mycologia* **103: 918-920**.

2011. Lichtwardt RW, Williams MC, **White MM**. *Klastostachys*, a new genus of Harpellales in Chironomidae larvae. *Mycologia* **103: 915-917**.

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2011. Valle LG, **White MM**, Cafaro MJ. Dipteran-associated Harpellales from lowland and submontane tropical rain forests of Veracruz (Mexico). *Mycologia* **103**: 656-673.

2011. Strongman DB, **White MM**. *Trifoliellum bioblitzii*, a new genus of trichomycete from mayfly nymphs in Nova Scotia, Canada. *Mycologia* **103**: 219-225.

2009. Hapsari MP, **White MM**, Chukeatirote E, Hyde KD. Seasonality of *Harpella melusinae* Leger and Duboscq (Harpellales) in black fly larvae in Northern Thailand. *Cryptogamie Mycologie* **30**: 191-198.

2009. Hapsari MP, **White MM**, Hyde KD. Freshwater trichomycetes from northern Thailand. *Cryptogamie Mycologie* **30**: 405-425.

2008. Strongman DB, **White MM**. Trichomycetes from lentic and lotic aquatic habitats in Ontario, Canada. *Botany* **86**: 1449-1466.

2008. Valle LG, **White MM**, Cafaro MJ. Harpellales in the digestive tracts of Ephemeroptera and Plecoptera nymphs from Veracruz, Mexico. *Mycologia* **100**: 149-162.

2007. A higher-level phylogenetic classification of the *Fungi*. Hibbett DS, Binder M, Bischoff JF, Blackwell M, Cannon PF, Eriksson O, Huhndorf S, James T, Kirk PM, Lücking R, Lumbsch T, Lutzoni F, Matheny PB, McLaughlin DJ, Powell MJ, Redhead S, Schoch CL, Spatafora JW, Stalpers JA, Vilgalys R, Aime MC, Aptroot A, Bauer R, Begerow D, Benny GL, Castlebury LA, Crous PW, Dai Y-C, Gams W, Geiser DM, Griffith GW, Gueidan C, Hawksworth DL, Hestmark G, Hosaka K, Humber RA, Hyde K, Kõljalg U, Kurtzman CP, Larsson K-H, Lichtwardt R, Longcore J, Miądlikowska J, Miller A, Moncalvo J-M, Mozley-Standridge S, Oberwinkler F, Parmasto E, Reeb V, Rogers JD, Roux C, Ryvarden L, Sampaio JP, Schuessler A, Sugiyama J, Thorn RG, Tibell L, Untereiner WA, Walker C, Wang Z, Weir A, Weiss M, **White MM**, Winka K, Yao Y-J, Zhang N. Last 20 authors are listed alphabetically. *Mycological Research* **122**: 509-547.

2006. **White MM**, James T, O'Donnell K, Cafaro MJ, Tanabe Y, Sugiyama J. Phylogeny of the Zygomycota based on nuclear ribosomal sequence data. *Mycologia* **98**: 872-884.

2006. **White MM**, Colbo MH, Lichtwardt RW. Confirmation and identification of parasitic stages of obligate endobionts (Harpellales) in blackflies (Simuliidae) by means of rRNA sequence data. *Mycological Research* **110**: 1070-1079.

2006. **White MM**. Evolutionary implications of a rRNA based phylogeny of the Harpellales. *Mycological Research* **110**: 1011-1024.

2006. Strongman DB, **White MM**. New species of *Lancisporomyces*, *Orphella*, and *Paramoebidium*, endosymbionts of stonefly nymphs from streams in Nova Scotia, Canada. *Canadian Journal of Botany* **84(6)**: 1417-1495.

2006. **White MM**, Siri A, Lichtwardt RW. Fungal insect symbionts (Trichomycetes) in the Great Smoky Mountains National Park and vicinity. *Mycologia* **98**: 333-352.

2006. James TY, Kauff F, Schoch CL, Matheny PB, Hofstetter V, Cox C, Celio G, Gueidan C, Fraker E, Miadlikowska J, Lumbsch HT, Rauhut A, Reeb V, Arnold EA, Amtoft A, Stajich JE, Hosaka K, Sung G-H, Johnson D, O'Rourke B, Crockett M, Binder M, Curtis JM, Slot JC, Wang Z, Wilson AW, Schüssler A, Longcore JE, O'Donnell K, Mozley-Standridge S, Porter D, Letcher PM, Powell MJ, Taylor JW, **White MM**, Griffith GW, Davies DR, Humber RA, Morton J, Sugiyama J, Rossman AY, Rogers JD, Pfister DH, Hewitt D, Hansen K, Hambleton S, Shoemaker RA, Kohlmeyer J, Volkmann-Kohlmeyer B, Spotts RA, Serdani M, Crous PW, Hughes KW, Matsuura K, Langer E, Langer G, Untereiner WA, Lücking R, Büdel B, Geiser DM, Aptroot A, Diederich P, Schmitt I, Schultz M, Yahr R, Hibbett DS, Lutzoni F, McLaughlin D,

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Spatafora J, Vilgalys R. Reconstructing the early evolution of the fungi using a six gene phylogeny. *Nature* **443**: 818-822.

2004. **White MM**, Lichtwardt RW. Fungal symbionts (Harpellales) in Norwegian aquatic insect larvae. *Mycologia* **96**: 891-910.

2004. Suh S-O, **White MM**, Nguyen NH, Blackwell M. The status and characterization of *Enteroramus dimorphus*: a xylose-fermenting yeast attached to the gut of beetles. *Mycologia* **96**: 756-760.

Manuscripts in press, accepted or under review:

2014. [†]Tretter ED, *Johnson EM, Benny GL, Lichtwardt RW, [†]Wang Y, *Kandel P, Novak SJ, Smith JF, **White MM**. An eight-gene molecular phylogeny of the Kickxellomycotina, including the first phylogenetic placement of Asellariales. *Mycologia* 2014 Jun 2. pii: 13-253. [Epub ahead of print] PMID: 24891422

2014. [†]Wang Y, [†]Tretter ED, *Johnson EM, *Kandel P, Lichtwardt RW, Novak SJ, Smith JF, **White MM**. Using a five-gene phylogeny to test morphology-based hypotheses of *Smittium* and allies, endosymbiotic gut fungi (Harpellales) associated with arthropods. *MPE* 2014 Jun 14; 79C:23-41. doi:10.1016/j.ympev.2014.05.008. [Epub ahead of print] PMID: 24933275.

Other works:

2013. Lichtwardt RW and MM White. Living in Harmony. Published in the June issue with the cover title “Planet In Flux”, this article is an interview-style format of responses from both M.M. White and collaborator R.W. Lichtwardt showcasing the REVSYS project and offering thoughts, comments and opinions of their research on this symbiotic system. *International Innovation*: Pages 102-104. Also available on the web <http://www.research-europe.com/magazine/REGIONAL/NA13/index.html>

**PRESENTATIONS AT NATIONAL AND §INTERNATIONAL MEETINGS
(* are undergraduates)**

2014. **White MM**. Recent advances in and current opportunities for gut fungi research with reflections on the Trichomycetes. Presented June 10, 2014 at the Mycological Society of America (MSA) Meeting, East Lansing, Michigan. Oral presentation, by White.

2013. Reynolds N, Tretter E, Heeney D, Kandel P, Gause J, Cafaro MJ, **White MM**. Resolving relationships at the animal-fungal divergence: toward a multigene phylogeny of the protist trichomycete orders Eccrinales and Amoebidiales. Presented August 1, 2013 at the the International Congress of Protistology XIV, Vancouver, British Columbia. Poster presentation by Reynolds.

2012. Wang Y, Tretter ED, Johnson EM, Kandel P, Lichtwardt RW, **White MM**. Ribosomal RNA gene-based and multi-gene phylogenies of *Smittium* (Harpellales) and allies-toward unraveling relationships among early-diverging fungi. Presented **July 17**, 2012 at the Mycological Society of America (MSA) Meeting, New Haven, Connecticut. Oral presentation, by Wang.

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2012. Tretter ED, Johnson EM, Wang Y, Kandel P, **White MM**. Utilizing new genes (MCM7 and TSR1) for the phylogenetic analysis of early-diverging fungi. Presented July 17, 2012 at the Mycological Society of America (MSA) Meeting, New Haven, Connecticut. Oral presentation, by Tretter.

2012. *Johnson EM, Tretter ED, *Kandel P, **White MM**. Molecular-based phylogenetic placement of the Asellariales, an enigmatic order of arthropod gut endosymbionts. Presented Jul 17, 2012 at the Mycological Society of America (MSA) Meeting, New Haven, Connecticut. Oral presentation, by Johnson.

2012. *Reynolds NK, Wilson ER, *Kandel P, Laramie M, Pilliod D, **White MM**. Extending knowledge of Trichomycetes by fixing on preserved immature aquatic insects in Idaho. Presented Jul 16, 2012 at the Mycological Society of America (MSA) Meeting, New Haven, Connecticut. Poster presentation, by Reynolds.

2012. *Gause JW, **White MM**. Entangled and nearly deceived in a web of gut fungi: two intermingled, dimorphic *Smittium* species from Idaho. Presented Jul 16, 2012 at the Mycological Society of America (MSA) Meeting, New Haven, Connecticut. Poster presentation, by Gause.

2012. Wang Y, Tretter ED, Johnson EM, Kandel P, Lichtwardt RW, White MM. Testing monophyly and phylogenetic relationships of *Smittium* (Harpellales) using a five-gene molecular phylogenetic analysis 93rd Annual Meeting of the AAAS, Pacific Division Boise Idaho June 24-27, 2012 , Oral Presentation, by Yan Wang. Note: Yan Wang won 1st prize for the talk in the Ecology, Organismal Biology and Environmental Sciences section and was also awarded the Geraldine K. Lindsay Award for its contributions to the Natural Sciences.

2012. Wilson ER, Smalling KL, Reilly TJ, Gray EW, Gause JW, **White MM**. Using microcosms to infer fungicide impact on black fly associated gut fungi. American Water Resources Association (AWRA) Summer Specialty Conference, Contaminants of Emerging Concern II, June 25-27, Denver, Colorado. Invited Poster Presentation. Note: Emma Wilson won *1st prize for her Poster!*
<http://awramedia.org/mainblog/2012/08/13/2012-awra-summer-conference-student-presenter-winners/>

2012. Wilson ER, Smalling KL, Reilly TJ, Steele L, Kandel P, Chamberlin AB, **White MM**. Field studies of the effects of fungicides on non-target gut fungi and pesticide accumulation in their black fly hosts. American Water Resources Association (AWRA) Summer Specialty Conference, Contaminants of Emerging Concern II, June 25-27, Denver, Colorado. Invited Oral Presentation. Note: Emma Wilson won *1st prize for her Talk!*

2012. Wilson ER, Smalling KL, Reilly TJ, Steele L, Kandel P, Chamberlin, AB, Gause JW, **White MM**. From field to fridge: first glimpses of fungicide-exposed gut fungi. March 28-31 at the 83rd Annual Meeting of the Northwest Scientific Association, in Boise, Idaho. Poster Presentation, by Wilson. Note: Emma Wilson received *2nd prize for the poster*.

2012. Wilson ER, Smalling KL, Reilly TJ, Steele L, Kandel P, Chamberlin AB, Gause JW, **White MM**. Non-target effects of fungicides on black fly associated gut fungi and accumulation of pesticides in larval tissue. 10th Annual Meeting North American Black Fly Association (NABFA) Archbold Biological Field Station, Lake Placid, Florida. Feb 8-10. Oral Presentation, by Wilson.

2012. Reynolds NK, Wilson ER, Kandel P, Laramie M and **White MM**. Expanded surveys and new species of black fly gut fungi in Southern Idaho. 10th Annual Meeting North American Black Fly Association (NABFA) Archbold Biological Field Station, Lake Placid, Florida. Feb 8-10. Oral Presentation, by Reynolds.

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§2011. **White MM**, Tretter ED, Wang Y, *Johnson EM, Guardia Valle L, Strongman D, Kurihara Y, Degawa Y. Phylogeny and systematics of trichomycetes and early-diverging fungi. Presented Sept 9, 2011 at the International Union of Microbiological Societies (IUMS) 2011 Congress at the Sapporo Convention Center (Sapporo, Japan). Oral presentation by **White MM (in English)**.

Symposium Title: Recent research progress on early diverging fungi - their evolution, systematics, and diversity. **My Role:** Convener and Speaker. This symposium on Early-Diverging fungi was **co-organized with Satoshi Sekimoto**. We will discuss recent progress on early-diverging fungal research, including evolution, systematics, ecology, and genetics. *Our goal* was for speakers from multiple countries and continents. **I represented the USA** and Sekimoto, Canada. Another speaker is from Germany and two others from Asia.

2011. Wang Y, Tretter ED, Lichtwardt RW, **White MM**. Teasing apart the polyphyletic “Smittium” clade of Gut Fungi (Harpellales): merging multi-gene molecular and morphological margins. Presented August 2, 2011 at the Mycological Society of America (MSA) Meeting, Fairbanks, Alaska. Oral presentation, by Wang.

2011. Tretter, ED, *Johnson, EM, Wang, Y, Strongman D, Guardia Valle, L, **White MM**. An Expanded Phylogeny of the Trichomycete Fungi. Presented August 2, 2011 at the Mycological Society of America (MSA) Meeting, Fairbanks, Alaska. Oral presentation, by Tretter.

2011. Wilson ER, Smalling KL, Reilly TJ, *Steele L, *Kandel P, *Chamberlin AB, **White MM**. Beyond gut feelings: how are trichomycetes affected by fungicides in aquatic systems? Presented August 3, 2011 at the Mycological Society of America (MSA) Meeting, Fairbanks, Alaska. Oral presentation, by Wilson.

2011. Carter K, Serpe M, **White MM**. Identification of mycorrhizal species associated with *Artemisia tridentata* ssp. *wyomingensis* in Southwestern Idaho. Presented August 3, 2011 at the Mycological Society of America (MSA) Meeting, Fairbanks, Alaska. Poster presentation, by White.

2011. Carter K, **White MM**, Serpe M. Molecular identification of mycorrhizal fungi in seedlings of *Artemisia tridentata* ssp. *wyomingensis* from southern Idaho. Seminar for USDA Managed Ecosystems Project Director’s Meeting Washington, D.C. Delivered by Marcelo Serpe.

2010. Tretter ED, Strongman DB, Guardia Valle L, **White MM**. A preliminary multigene phylogeny of the clade *Orphella*. Presented June 28, 2010 at the Mycological Society of America (MSA) Meeting, Lexington, Kentucky. Poster presentation, by Tretter.

2010. Wang Y, Tretter ED, **White MM**. Toward a multi-gene phylogeny of the “Smittium” clade of gut fungi. Presented June 28, 2010 at the Mycological Society of America (MSA) Meeting, Lexington, Kentucky. Poster presentation, by Wang.

2010. Wilson ER, Steele L, Reilly T, Smalling K, *Oman S, **White MM**. Potential utility of trichomycetes as bioindicators of fungicide-impacted waterways. Presented June 30, 2010 at the Mycological Society of America (MSA) Meeting, Lexington, Kentucky. Poster presentation, by Wilson.

2010. Carter K, Davidson B, **White MM**, Shaw N, Serpe M. Identification of mycorrhizae associated with *Artemisia tridentata* spp *wyomingensis* in Southwestern Idaho. Presented May 17-21, 2010 at the National Native Seed Conference on Native Plant Materials Development, Production & Use in Habitat Restoration. Poster presentation, by Shaw.

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2010. Reilly TJ, Smalling KL, **White MM**, Orlando JL, Kuivila KM, Battaglin WA, Meyer MT, Sandstrom MW. Design and Implementation of a study to determine the occurrence and fate of fungicides in aquatic systems. Presented at the NWQMC meeting in Denver. Poster presentation, by Reilly.

2009. **White MM**. Trichomycetes - habitat, isolation and culture. Invited symposium presentation for Symposium entitled "Teaching with basal fungal lineages; chaired by Dr. Martha Powell, U. of Alabama. Approximate 30 min. oral presentation July 29, 2009 at the Mycological Society of America (MSA) Meeting, Snowbird, Utah.

2009. Bench ME, **White MM**. New species and first records of trichomycetes from immature aquatic insects in Idaho. Presented July 27, 2009 at the Mycological Society of America (MSA) Meeting, Snowbird, Utah. Poster presentation, by White.

2009. *Oman SJ, **White MM**. *Baltomyces*, a rare and unusual gut fungus newly discovered in Idaho isopods: 1st report since the original genus description. Presented July 28, 2009 at the Mycological Society of America (MSA) Meeting, Snowbird, Utah. Poster presentation, by Oman.

2008. Bench ME, **White MM**. Biodiversity and seasonality of gut fungi associated with arthropods in Cottonwood Creek, Boise, Idaho. Presented November 19, 2008 at the Entomological Society of America Meeting, Reno-Sparks Convention Center, Reno, Nevada. Poster presentation, by Bench.

2008. Bench ME, **White MM**. Biodiversity and seasonality of gut fungi in an ephemeral aquatic system and urban setting. Presented August 11, 2008 at the Mycological Society of America (MSA) Meeting, Penn State University, State College, Pennsylvania. Poster presentation, by White.

2007. **White MM**, Siri A, Ferrington LC, Strongman DB. New records of *Austrosmittium* in North and South America. Presented August 6-9, 2007 at the MSA meeting, Louisiana State University, Baton Rouge, Louisiana. Poster presentation.

§2006. **White MM**, Lichtwardt RW. Trichomycetes: major taxonomic revisions based on molecular phylogenies. Invited oral presentation delivered (by Lichtwardt) August 21, 2006 at IMC8 (8th International Mycological Congress), Cairns, Australia as part of the Symposium entitled: Phylogenetic biology of fungal and fungal-like phyla [chairs: Rytas Vilgalys (Duke University) and Joseph W. Spatafora (Oregon State University)].

2005. **White MM**, Lichtwardt RW. Phylogeny of insect-associated gut fungi with emphasis on the Harpellales. Presented August 4, 2005 at the MSA meeting, Hilo, Hawaii. Oral Paper.

2004. **White MM**. Reflections of Trichomycetology by a PEET trainee. Invited Commentary (15 mins.) presented July 20, 2004 at the MSA meeting, Asheville, North Carolina.

GRADUATE PRESENTATIONS WITHIN INSTITUTIONS (* are undergraduates)

2011. Wang Y. Multigene testing of the phylogenetic stability of *Smittium*. Oral presentation at the BSU First Annual Graduate Student Research Symposium, Boise, Idaho. March 18, 2011. (**White, MM, Advisor**)

2011. Wilson E. Exploring the implications of fungicides for non-target aquatic fungi. Oral presentation at the BSU First Annual Graduate Student Research Symposium, Boise, Idaho. March 18, 2011. (**White, MM, Advisor**)

2011. Tretter E. Specialized primers for the amplification of unknown fungal sequences from mixed

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genomics. Poster presented at the BSU First Annual Graduate Student Research Symposium, Boise, Idaho. March 18, 2011. **(White, MM, Advisor)**

2011. Carter K, Identification of Mycorrhizal Species Associated with *Artemisia tridentata* spp. *wyomingensis* in Southwestern Idaho. Poster presented at the BSU First Annual Graduate Student Research Symposium, Boise, Idaho. March 18, 2011. **(White, MM, Co-Advisor)**

2011. Wilson E, Smalling KL, Reilly TJ, *Steele L, *Kandel P, *Chamberlin A, *Oman S, **White MM**. Assessing the effects of fungicides on non-target aquatic fungi in Southern Idaho. Presented at the 21st Annual Water Quality Workshop: Monitoring, Assessment, and Management, Boise, Idaho February 9, 2011.

RESEARCH RELATED SERVICE

2012. **Jan. 12, 2012 Served on a USDA (NP 303 Panel 4) Panel with review of Systematics Proposals. Conducted via phone conference with other reviewers from across the country.**

2011. **Co-organized and conducted a workshop with Dr. Satoshi Sekimoto** Sept 9, 2011 at the International Union of Microbiological Societies (IUMS) 2011 Congress at the Sapporo Convention Center (Sapporo, Japan). **Symposium Title:** Recent research progress on early diverging fungi - their evolution, systematics, and diversity. **My Role:** Convener and Speaker. This symposium on Early-Diverging fungi discussed recent progress on early-diverging fungal research, including evolution, systematics, ecology, and genetics. *Our goal* was for speakers from multiple countries and continents. **I represented the USA** and Sekimoto, Canada. Another speaker was from Germany and two others from Asia.

2007-2011, 2014. Participated in annual Mycological **Forays** (mostly macrofungi), with Mycological Society of America members.

2004-2014. Worked with trichomycetologists from other countries on collaborative projects, particularly biodiversity and description of new taxa, **and training students** (see Thailand paper). Others have used **online videos tutorials** at my laboratory webpage.

2009. Participated, as an invited speaker, in a symposium entitled “**Teaching with basal fungal lineages**” (Chaired by Dr. Martha Powell, U. of Alabama) at the Mycological Society of America (MSA) Meeting, Snowbird, Utah. The goal was to demonstrate and explain how understudied fungal groups could be used in the classes etc. of the participants. I also discussed how to utilize the gut fungi and how, as endosymbionts, they could be used from a number of possible angles in teaching various courses.

2009. Participated in the 2nd annual **Bioblitz**, Halifax, Nova Scotia, June 5-6, 2009. **Opportunity to engage children and general public** on gut fungi and aquatic insects. Web Link: www.smu.ca/bioblitz/home.html

2007, 2008. **Member of judging team for student posters and/or oral presentations** at the annual Mycological Society of America meetings.

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2005. **Workshop/Symposium on Phylogenetic Studies of Trichomycetes** [with RW Lichtwardt (USA) & Hiroki Sato (Japan)] at the Mycological Society of America (MSA) meeting, Hilo, Hawaii.

1997-present. Periodically, have introduced **undergraduate laboratory classes and grade school children to field collection of invertebrates from freshwater aquatic streams, emphasizing their internal symbionts and overall ecological role.** Example at: www.urbanecologycenter.org/newsletter/2008/novdec.pdf (see page 4) and the a summary of the 2nd annual Bioblitz, Halifax, Nova Scotia (June 5-6, 2009) at www.smu.ca/bioblitz/home.html

Graduate Students (all are within the M.Sc. Biology Program)

Current: **Nicole Reynolds** (Fall 2012 – present)

Additionally, Keith Carter (Fall 2009 – present),
listed as his **Co-Advisor**, but with Dr. M. Serpe as the clear lead.

Completed:

Molly Bench, M.Sc. (Aug 2007– Spring 2009)
Yan Wang, M.Sc. (Fall 2009 – Spring 2012)
Emma Wilson (Spring 2010 – Spring 2013)
Eric Tretter (Spring 2010 – Spring 2013)

MS Theses:

Wilson, Emma R., "Evaluating the Effects of Fungicides and other Pesticides on Non-Target Gut Fungi and their Aquatic Insect Hosts" (2013). *Boise State University Theses and Dissertations*.
<http://scholarworks.boisestate.edu/td/596>

Tretter, Eric Dennis, "A Multi-Gene Molecular Systematic Study of the Kickxellomycotina, Including the Examination of Two New Genes (MCM7 and TSR1) for Phylogenetic Inference" (2013). *Boise State University Theses and Dissertations*. <http://scholarworks.boisestate.edu/td/591>

Wang, Yan, "Ribosomal RNA Gene-Based and Multigene Phylogenies of Smittium (Harpellales) and Allies—Toward Unraveling Relationships Among Early-Diverging Fungi" (2012). *Boise State University Theses and Dissertations*. <http://scholarworks.boisestate.edu/td/340>

Bench, Molly Elizabeth, "New Species and Expanded Geographic Ranges of Gut Fungi and their Symbiotic Relationship with Insect Hosts" (2009). *Boise State University Theses and Dissertations*. <http://scholarworks.boisestate.edu/td/41>

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PROFESSIONAL AFFILIATIONS AND SOCIETAL MEMBERSHIPS

Asociación Latinoamericana de Micología
Ecological Society of America
International Symbiosis Society
Kaw Valley Mycological Society
Mycological Society of America
North American Benthological Society
North American Mycological Association
Sigma Xi
Southern Idaho Mycological Association
Xerces Society

COLLABORATORS AND OTHER AFFILIATIONS

Collaborators (abbreviated list):

Gerald Benny	Dept. of Plant Pathology, University of Florida, Gainesville, Florida.
Matías Cafaro	Dept. of Biology, University of Puerto Rico, Mayaguez, Puerto Rico.
Leonard C. Ferrington, Jr.	Dept. of Entomology, University of Minnesota, St. Paul, Minnesota.
Tim James	Dept. of Ecology & Evol. Biol., U. of Michigan, Ann Arbor, Michigan.
Robert Lichtwardt	Dept. Ecol. & Evol. Biol., University of Kansas, Lawrence, Kansas.
J.K. Misra	Sri J.N.P.G. College, Lucknow, India.
Kerry O'Donnell	NCAUR, USDA, Peoria, Illinois.
Doug Strongman	Dept. of Biology, Saint Mary's University, Halifax, Nova Scotia, Canada.
Junta Sugiyama	Tokyo Office, TechnoSurago Co., Ltd. Chiyoda-ku, Japan.
Y. Tanabe	Laboratory of Intellectual Fundamentals for Environmental Studies, Japan.
Laia Guardia Valle	Facultat de Ciències, UAB, Barcelona, Spain.

Graduate advisors:

Ian A. McLaren (M.Sc.) Dept. of Biology, Dalhousie University, Halifax, NS, Canada.
Robert W. Lichtwardt (Ph.D.) Dept. Ecol. and Evol. Biol., U. Kansas, Lawrence, Kansas.
Robert W. Lichtwardt (Postdoctoral advisor) Dept. Ecol. and Evol. Biol., U. Kansas, Lawrence, Kansas.

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EXAMPLES OF SERVICE

A. Professional service

- a. Professional committees and organizational involvement
 - i. Member of the Mycological Society of America (MSA) Graduate Awards Committee. Reviewed 12 applications and came to mutual decision on awards (via email) with other committee members. Spring 2007.
 - ii. Judge (with other MSA society members) for student poster awards at the annual Mycological Society of America Meeting. Discussed posters with students and met with committee members to render decision and presentation of Award. Summer 2007 & 2008, Mycological Society of America Meeting.
- b. Editorial services
 - i. As **Associate Editor for *Mycologia***, I completed paperwork, correspondence and improvements for numerous manuscripts from 2007–2012.
 - ii. Have been a **peer reviewer** for the following journals (with # of reviews /year).
 - 1. Evolutionary Bioinformatics (1/2007)
 - 2. Fungal Diversity (1/2008)
 - 3. Journal of Invertebrate Pathology (1/2009)
 - 4. Mycologia (2/2007; 1/2008)
 - 5. Mycological Research (1/2008)
 - 6. Mycotaxon (1/2010)
- c. Proposal review
 - i. I have completed as many as one or two reviews of NSF proposals each year
- d. Collections Based Contributions
 - i. Deposited several pure slant cultures of fungi from the Fall 2007 Mycology class to the USDA collection in Peoria, IL. Cultures were sent March 10, 2008 to Dr. Stephen Peterson who was to accession them in the collection, which has few isolates from Idaho. These resources are available for teaching/research purposes.

B. Institutional service

- a. Committees
 - i. Member of BSU Biology Research Committee (2007-present). Tasks have included everything from advancing research in our department to design and printing of the 1st Departmental Newsletter (see below also).

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- ii. Member of Faculty Search Committee (2010) for Ecosystems Ecologist Position.
 - iii. Member Dept. Biol. Sci. Tenure and Promotion committee, Spr 2014-present.
- b. University-related projects
 - i. Organized and led a 1-day Fungal Foray (field trip) for Mycology students (BOT 330 & BOT 330G) each fall from 2007-2012 and 2014; sites have included Grimes Creek, Herrick Reservoir or Sage Hen Reservoir, ID.
- c. Assigned institutional responsibilities
 - i. Advised numerous students each year (2007-2014)
 - ii. Participated in the Commencement Ceremonies.
- d. Other service activities that benefit the University
 - i. Serve on Advisory Board for Canadian Studies; 1st meeting was October 28, 2010.
 - ii. Have written many letters of reference for former/current students at BSU.
 - iii. Also nominated two students for a Wallace Kay writing competition, Jan 2010.

C. Community Service

- a. Led a **local foray** (in Veterans Park, Boise) for Myxomycetes with world expert Dr. Harold Keller, June 13, 2010. Accompanied by some of my graduate and undergraduate students. Later published a brief article summarizing the event in *Inoculum*, the Newsletter of the Mycological Society of America. Online: [http://msafungi.org/wp-content/uploads/Inoculum/61\(4\).pdf](http://msafungi.org/wp-content/uploads/Inoculum/61(4).pdf) (see p. 31)
- b. Attended 2nd annual BIOBLITZ, June 5-6, 2009 in Halifax, Nova Scotia. Used fungal taxonomic expertise, especially identifying gut fungi from larval aquatic insects. Interacted with general public, great outreach opportunity. Ultimately, we also prepared a paper on a new fungal species we discovered there.
- c. Met with Teacher from Montpelier, ID, and her (~12) students to answer Evolutionary Biology questions in advance of their “Academic Decathlon Event” in Boise, ID. I answered a series of questions from them (was truly impressed by them really) and assured them that they were ready for the competition! I did try to provide some explanation on a couple more complex concepts, but it was a most impressive sense that I was left with, regarding the potential of these young scholars. March 12, 2009.
- d. I created an instructional DVD called “How to Collect and Dissect Gut Fungi” Version 1 that was demonstrated and distributed at the Mycological Society of America (MSA) Meeting in August 2007. Several copies of the DVD were given to

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mycologists for peer review and for use in their Mycology courses/workshops with positive feedback received. These were since placed online at my laboratory homepage. (see supplement to this section.)

- e. Volunteer at Idaho Native Plants Society Annual Sale, Boise ID, April 21, 2007.
- f. Mushroom/Fungi related questions taken from the public (in Idaho). A few examples since 2007.
 - i. By phone: Mushroom IDs and advice (a stinkhorn).
 - ii. Returned call to Meridian, ID vet, gave advice on possible fungal poisoning of a dogs/pets.
 - iii. By Phone: Advised a Kuna vet on the wet season and how it may be impacting mushroom occurrences in the area, especially with pets consuming them. June 19, 2008.
 - iv. Answered query by Caldwell, ID resident on strange aquatic organisms – id's as Nostoc and symbiotic midge and sent him original paper from 1960's. (by email) Sept. 17, 2008.
 - v. In person: Sat with concerned local Boise resident who brought in a variety of dried wild mushrooms found in son's bedroom. (1.5 hours) Oct. 7, 2008.

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JODI BRANDT

Human Environment Systems Initiative
College of Innovation and Design
Boise State University
Boise, Idaho 83725

Email: jodibrandt@boisestate.edu; Tel: (208) 426-2935; Office: ERB 2159

Education

2012	Ph.D. University of Wisconsin, Forest and Wildlife Ecology Thesis: Landscape change and biodiversity conservation in the Chinese Himalayans
2004	M.S. University of Maryland, Ecology and Environmental Science Thesis: Landscape change and water resources in the Bolivian Andes
1996	B.A. Yale University, Geology & Geophysics, Earth, Environment and Resources Thesis: Land use impacts on water quantity/quality in the Susquehanna Basin

Appointments and Professional Training

2015	Assistant Professor , Boise State University, Human Environment Systems
2014	Postdoctoral Research Fellow , Dartmouth College, Hanover NH
2013	Postdoctoral Research Fellow , University of Michigan, Ann Arbor, MI
2007 - 2012	NSF IGERT Trainee
2005 - 2006	Fulbright Fellow , Bolivia, South America
2000 - 2002	US Peace Corps Volunteer , Guatemala, Central America
1996 - 2000	Hydrogeologist , Waterborne Environmental, Inc., Leesburg, VA

Grants and Awards

Pending	NASA New Investigator Program . “Ecotourism Impacts in the Himalaya” (PI) (\$320,000)
Pending	NASA SERVIR Applied Science Team . “Forest change, policies, and ecosystem services in the Himalaya” (PI) (\$480,000)
Pending	NASA Land-Cover Land Use Change Program . “Land use, market integration, and sustainable development in the Eastern Himalaya (PI) (\$580,000)
Pending	Michigan Invasive Species Program “Innovative Control of Frogbait in the northern Great Lakes” (Co-PI) (\$320,000)
2015	NASA-MSU Professional Enhancement Award . (PI) (\$800)
2015	Dartmouth Neukom CompX . “Developing novel computational approaches in support of indigenous-led Earth Stewardship of Great Lakes coastal wetlands” (PI) (\$25,000)
2014 - 2015	U.S. Fish and Wildlife Service (in collaboration with Sault Chippewa Tribe). “Bulrush restoration in culturally-important wetlands” (\$100,000) (Co-PI)
2010 - 2012	NSF Doctoral Dissertation Enhancement Program (DDEP) grant. “Tibetan culture and bird conservation in southwest China” (\$15,000) (PI)

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2009 - 2012	NASA Earth and Space Science Graduate Fellowship. “Landscape change and impacts on biodiversity in southwest China” (\$90,000) (PI)
2010 - 2012	NSF-IGERT Collaboration Grant with Ellen Barte, Linguist. “Birds of Shangrila”. Connections between culture and nature in Tibetan China. (\$5000) (PI)
2010 - 2011	NSF-IGERT Collaboration Grant with Michelle Haynes, Ethnobotanist. “Alpine change impacts on ecosystem services in the Chinese Himalaya” (\$3000) (PI)
2010 - 2011	NSF-IGERT Collaboration Grant with Teri Allendorf, Human Ecologist. “Local Governance of Tibetan Sacred forests” (\$5000) (Co-PI)
2007 - 2009	NSF IGERT Fellowship. “Interdisciplinary Trainee for the UW China-IGERT, Biodiversity Conservation in SW China” (\$80,000)
2007 - 2008	NSF-IGERT Data Grant, with Jamon Van den Hoek, Geographer. “Building a Landsat database for the UW-IGERT program” (\$8000) (PI)
2003 - 2004	TNC – Bolivia Country Program, Field Research Grant, Land cover change and water resources in the arid Bolivian Andes (\$7000) (PI)
2002 - 2003	University of Maryland Appalachian Lab Fellowship “Landscape change and water resources in the Bolivian Andes” (\$40,000) (PI)

Publications

Peer-reviewed

Brandt, JS, Nolte, C, and Agrawal, A. (in review). Deforestation and timber production in Congo after implementation of sustainable forest management. *Land Use Policy*

Brandt, JS, Butsic, VB, Schwab, B, Kuemmerle, T, and Radeloff, VC. (2014). Relative effectiveness of a logging ban, protected areas, and sacred areas to protect old-growth forests in southwest China. *Biological Conservation*

Haynes, M., Kung, K., **Brandt, J.,** Yongping, Y., Waller, D. (2014) Accelerated climate change and its potential impact on Yak herding livelihoods in the eastern Tibetan plateau. *Climatic Change* 1-14.

Brandt, J.S., Nolte, C., Steinberg, J., Agrawal, A. (2014) Foreign capital, forest change and regulatory compliance in Congo Basin forests. *Environmental Research Letters* 9, 044007.

Wood, E., **Brandt, J.,** Pidgeon, A., Radeloff, V. (2014) Habitat–occupancy associations and tree-species use patterns by breeding birds in community-managed Tibetan sacred forests. *Biodiversity and Conservation*, 1-20.

Allendorf, T.D., **Brandt, J.S.,** Yang, J.M., (2014) Local perceptions of Tibetan village sacred forests in northwest Yunnan. *Biological Conservation* 169, 303-310.

Brandt, J.S., M.A. Haynes, T. Kuemmerle, Fang Zhendong, D. Waller, and V. Radeloff (2013) Regime shift on the roof of the world: Alpine meadows convert to shrublands in the southern Himalayas. *Biological Conservation* 158:116-127.

Brandt, J.S., Han L., Fang Z, Wood E.M. and V. Radeloff (2013) Sacred forests are keystone structures for bird conservation in southwest China’s Himalayans. *Biological Conservation* 166(0):34-42.

Brandt, J. S., T. Kuemmerle, H. Li, G. Ren, J. Zhu, and V. C. Radeloff (2012) Using Landsat imagery to map forest change in southwest China in response to the national logging ban and ecotourism development. *Remote Sensing of Environment* 121:358-369

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Brandt J.S. and Townsend P.A. (2006) Land cover conversion, regeneration, and degradation in the high-elevation Bolivian Andes. *Landscape Ecology* 21: 607-623

Book

Brandt, JS, and E. Bartee. (2012). “The Birds of Shangrila”. Yunnan Minorities Publishing. 266 pp. Interactive pdf: https://www.researchgate.net/publication/263271811_Birds_of_Shangrila
Website: <http://birdsofshangrila.forest.wisc.edu/>

Technical Reports

Brandt, J.S., 2009: “Mapping Wild Rice in culturally-important lakes in Northern Wisconsin”. Final Report for Circle of Flight project with the Lac Courte Oreilles Ojibwa Community College

Klein, D., **Brandt J,** Cook C., Graham, R., Postle, J., Rheineck, B. 2008. Agricultural Chemicals in Wisconsin Groundwater. Wisconsin DATCP ARM Publication 180.

Brandt, J.S. 2006. “Evaluation of the Biological Health of the Rivers of the Central Valley of Tarija, Bolivia” (in Spanish, for TNC-Bolivia Country Program).

Presentations

Invited

International Association of Landscape Ecology (IALE), Portland, Oregon, July 2015

- Avoiding imminent regime shifts in the northern Great Lakes

Dartmouth Environmental Studies Program Departmental Seminar, February 2014

- Land systems change and socio-ecological trajectories: The Good, the Bad, and the Unexpected.

Dartmouth Ecology and Evolutionary Biology Seminar, January 2014

- Consequences of land systems change in a biodiversity hotspot

University of Michigan, Postdoctoral Fellow Job Talk, August 2012, Ann Arbor, MI

- Coupled socioecological systems in southwest China

Boston University, Postdoctoral Fellow Job Talk, August 2012, Boston, MA

- Land use systems in forest and alpine zones of the Himalayan mountains

University of Missouri, Postdoctoral Fellow Job Talk, August 2012, Columbia, MO

- Threatened bird conservation in a rapidly changing Tibetan landscape

NASA 2011 Carbon Cycle and Ecosystems (CC&E) Joint Science Workshop, October 3-7, 2011

- Land systems change in southwest China’s Himalayas

NASA 2011 Land Cover Land Use Change (LCLUC) Annual Team Meeting, March 28-30 2011

- Ecotourism accelerates logging in old-growth forests in southwest China

Contributed

Natural Capital Annual Meeting, March 2014, Stanford University

- An Ecosystem Services framework for tribal stewardship of Great Lakes coastal ecosystems

American Ornithological Union (AOU), August 2013, Chicago, IL

- Sacred forests and bird conservation in the Himalaya.

International Congress for Conservation Biology (ICCB), 2011, Auckland, New Zealand

- Old-growth forest conservation in southwest China

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Association for Nepal and Himalayan Studies (ANHS) Conference, 2011, St. Paul, MN

- Sacred sites are refugia for Himalayan forest birds.

US-International Association of Landscape Ecology (IALE), Madison, Wisconsin, April 2008

- Land cover conversion, regeneration, and degradation in the Bolivian Andes.

Peer Reviewer

Ecosphere, Remote Sensing of Environment, Environmental Research Letters, Biological Conservation, Regional Environmental Change, Remote Sensing, Biodiversity and Conservation

Field Experience

2014	Lake Superior coastal wetlands, Upper Peninsula of Michigan (6 weeks)
2013	Tropical forests, Southeastern Cameroon, Central Africa (1 month)
2008 - 2011	Himalayan Forest and Alpine systems, Northwest Yunnan Province, China (1.5 years)
2005	Andean streams and rivers, Fulbright fellowship, Tarija, Bolivia (1 year)
2003	Andean arid rangelands and croplands, M.S. Research, Tarija, Bolivia (2 months)
2000 - 2002	Guatemalan highlands (US Peace Corps) (2 years)
1996 - 2000	Agricultural areas throughout the US (frequent trips)
1995	Susquehanna River tributaries, Pennsylvania Appalachians (summer field tech for USGS)

Media and outreach

2014	ScienceDaily, 12 November 2014. "China's old-growth forests vanishing despite government policies." < www.sciencedaily.com/releases/2014/11/141112132113.htm >.
2014	Environmental Research Web (interview and media coverage about deforestation in Congo)
2013	China Dialogue Net (interview and media coverage about alpine change in Himalaya)
2013	Conservation Magazine.org (media coverage about Himalayan birds in sacred forests)
2012	Birds of Shangrila Book and Website
2006	"Tarija, Today" Local Daytime Talk Show (invited guest, in Spanish)

Skills

Software skills: ArcGIS, ERDAS Imagine, ENVI, ImageSVM, eCognition, R, SAS, S-Plus – Statistical analysis packages, Primer, PC-Ord, CART, EstimateS, DISTANCE, BASINS, HSPF, Clue-S

Languages: English – native tongue, Spanish – fluent, Mandarin – operational

Teaching Experience and Training

2015	Co-instructor , Bay Mills-Chippewa Community College, Bay Mills, MI <i>Encountering Wetlands: Plants and People in Lake Superior Coastal Zones</i>
2014	Faculty Mentor , Dartmouth Women in Science Program <i>Studying Human-Environment Interactions using GIS and Remote Sensing</i>
2014	Guest Lecturer , Dartmouth College <i>Env St 80 Science and Policy of Rapid Environmental Change</i>

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2013	Teacher Training: University of Michigan <i>Postdoctoral Short-Course: Innovative Undergraduate Science Teaching,</i>
2013	Guest Lecturer, Eastern Michigan University <i>Geography 110 World Regions</i>
2011	Guest Lecturer, University of Wisconsin-Madison <i>Env St 401 Introduction to Environmental Remote Sensing</i>
2003 - 2004	Teaching Assistant, University of Maryland <i>MEES 661 Landscape Ecology</i>
2003 - 2004	Teaching Assistant, University of Maryland <i>MEES 508 Land Margins Interactions</i>
2000 - 2002	Environmental Educator, US Peace Corps, Guatemala
2000	Teacher Training: U.S. Peace Corps, Guatemala <i>Informal and Active Learning Techniques for Environmental Education in Communities</i>

Advising

Braden Elliot, PhD student (American), Dartmouth College
Dissertation Topic: Human-environment linkages in tribal lands of the Pacific Coast Range

GyeongEun Yi, undergraduate (South Korean), Dartmouth College
Research project: Biodiversity conservation and conflict resolution in the Korean DMZ

Chelsea Suydam, undergraduate student (Native American), Dartmouth College
Responsibilities: GIS analysis of islands and shorelines in the St. Mary's River, Michigan

Michael Perles, undergraduate student (American), University of Michigan
Undergraduate Thesis Topic: Forestry violations and deforestation in Republic of Congo

Zhenyue Duan & Yi Wang, MS Students (Chinese), University of Michigan
Research topic: Forests, land tenure and poverty: a GIS analysis

Naparat Suttidate, PhD Student (Thai), University of Wisconsin
Dissertation topic: Protected areas and land cover change in Thailand.

Song Wen Yu, MS Student (Chinese), Southwest Forestry Institute, Yunnan, China
Research topic: Landscape analysis of purple mud-hen in Dali Wetlands

Kong-xi Kang, Field Assistant (Chinese), Yunnan, China
Responsibilities: Translation and Field Guide for field trips in Tibetan hinterlands

Maria Bolivar Romero, Field Assistant (Bolivian), Tarija, Bolivia
Responsibilities: Field and lab work associated with water resources research.

Synergistic Activities

I participate in the National Socio-Environmental Synthesis Center (SESYNC) Venture project: "Synthesizing social-ecological systems change using cultural evolution theory". The 4-year project holds annual interdisciplinary workshops with the overarching goal of increasing knowledge about sustainable systems. As a quantitative environmental scientist with experience working with remote sensing data and biological data, my role is to ensure that the ecological aspects of the research are strong, and to contribute insights on how to integrate social and ecological data.

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At the University of Michigan, I was a post-doctoral research fellow for an NSF Coupled-Human and Natural Systems (CNH) grant investigating governance and forest outcomes in the Congo. I co-organized our capstone conference, held in Paris, France, which aggregated 50+ scholars from Europe, the US and Africa active in studying sustainability in tropical forests in Central Africa.

With colleagues, I wrote “*The Birds of Shangrila*”, a 266-page, tri-lingual ecological and cultural guide to the birds of my PhD study area. The book was developed and published in collaboration with a Tibetan linguist, a Chinese medicine doctor, and a vocational school teacher. Three thousand copies were printed and sold out within months. In addition, I procured additional funding to produce an interactive pdf, an e-book, and a website for even broader dissemination.

During my PhD, I was a member of the NSF IGERT (*Integrative Graduate Education and Research Traineeship*) program at the University of Wisconsin. IGERT is the National Science Foundation’s flagship interdisciplinary training program. I participated in IGERT throughout my PhD, including attending and leading interdisciplinary seminars and retreats, and co-developing research proposals.

During my Fulbright fellowship, in collaboration with local NGO *PROMETA*, I developed a biologically-based stream monitoring system, which is still in use. The “rankings” derived from this monitoring system stimulated press and interest about the water resource in the city and surrounding villages, and we were invited to several events, including the local daily talk show, to discuss the monitoring system and the health of local watersheds.

Neil Henderson Carter

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personal website: www.neilhcarter.com

Assistant Professor

Human-Environment Systems Research Center
College of Innovation and Design
Boise State University
1295 University Dr.
Boise, ID, 83725

RESEARCH INTERESTS

- wildlife ecology and conservation, wildlife management and policy, landscape ecology, human dimensions of wildlife conservation, complexity of coupled human and natural systems, and sustainability science

PROFESSIONAL PREPARATION

National Socio-Environmental Synthesis Center, Annapolis, MD

Postdoctoral Fellow (advisor: Dr. Simon Levin at Princeton University)

2013 –2015

Complexity of improving human well-being and conserving biodiversity

Michigan State Univ., Lansing, MI

Ph.D. from Department of Fisheries and Wildlife (advisor: Dr. Jianguo Liu)

2013

Dissertation: "Coupled Human and Natural System Approach to Tiger Conservation in Chitwan National Park, Nepal and Beyond"

Univ. of Michigan, Ann Arbor, MI

M.S. in Terrestrial Ecology from School of Natural Resources and Environment (advisor: Dr. Daniel Brown)

2007

Thesis: "Predicting the Ecological and Social Suitability of Black Bear Habitat in Michigan's Lower Peninsula"

Univ. of California San Diego, San Diego, CA

B.S. in Ecology, Behavior, and Evolution

2003

Peking Univ., Beijing, China

Undergraduate junior year travel abroad

2002

Full time student for 13 months studying Chinese language, history, and culture

JOURNAL ARTICLES (PEER-REVIEWED)

- Carter, N.H., J.V. López-Bao, J.T. Bruskotter, M. Gore, G. Chapron, A. Johnson, M. Shrestha, J. Frank, O. Ohrens, and A. Treves. 2015. Social-ecological systems and wildlife poaching. Submitted.
- Bruskotter, J.T., G.R. Karns, K. Ard, C. Wolf, J. Vucetich, S.D. Gehrt, N.H. Carter, and W.J. Ripple. 2015. Modernization, human risk and the conservation of the world's largest carnivores. In review.
- Inskip, C., N.H. Carter, S.J. Riley, Z. Fahad, T. Roberts, and D. MacMillan. 2015. Towards human-carnivore coexistence: understanding tolerance for tigers in Bangladesh. In review.
- Carter, N.H., J.D.C. Linnell, M. Gore, A. Dickman, J. Baird Callicott, V. Athreya, and N. Lescureux. 2015. Realizing coexistence between people and large carnivores in shared landscapes. In review.
- Carter, N.H., S. Levin, A. Barlow, and V. Grimm. 2015. Modeling tiger population and territory dynamics using an agent-based approach. Ecological Modelling 312: 347-362.

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- Carter, N.H., M. Jasny, B. Gurung, and J. Liu. 2015. Impacts of people and tigers on leopard spatiotemporal activity patterns in a global biodiversity hotspot. *Global Ecology and Conservation*. <http://dx.doi.org/10.1016/j.gecco.2014.11.013>
- Carter, N.H., A. Viña, V. Hull, W. McConnell, W. Axinn, D. Ghimire, and J. Liu. 2014. Coupled human and natural systems approach to wildlife research and conservation. *Ecology and Society* 19(3):43.
- Carter, N.H., S.J. Riley, A. Shortridge, B. Shrestha, and J. Liu. 2014. Spatial assessment of attitudes toward tigers in Nepal. *AMBIO* 43: 125-137. (March cover issue)
- Carter, N.H., B. Gurung, A. Viña, H. Campa III, J. Liu, and J. Karki. 2013. Assessing spatiotemporal changes in tiger habitat across different land management regimes. *Ecosphere* [4:art124](#).
- Carter, N.H., B. Shrestha, J. Karki, N. Pradhan, and J. Liu. 2013. Reply to Goswami et al., Karanth et al., and Harihar et al.: Fine-scale interactions between tigers and people. *PNAS*. doi:10.1073/pnas.1217414110.
- Carter, N.H., B. Shrestha, J. Karki, N. Pradhan, and J. Liu. 2012. Coexistence between wildlife and humans at fine spatial scales. *PNAS* 109: 15360-15365. (Highlight in *Nature* 489:181 and recommended by [Faculty of 1000](#)).
- Carter, N.H., S.J. Riley, J. Liu. 2012. Utility of a psychological framework for carnivore conservation. *Oryx* 46: 525-535.
- Carter, N.H., Brown, D.G., Etter, D.R., and L.G. Visser. 2010. American black bear habitat selection in northern Lower Peninsula, Michigan, USA, using discrete-choice modeling. *URSUS* 21: 57-71.

OTHER PUBLICATIONS AND REPORTS

- Carter, N.H. 2012. Small Numbers – Large Impacts: Conserving Tigers in Nepal. Box 13.1, page 178 in *Human Dimensions of Wildlife Management*. Decker, D. J., Riley, S. J., & Siemer, W. F. (Eds.). Johns Hopkins Univ. Press.
- Carter, N.H. 2012. Coupled human and natural systems approach to tiger conservation in Chitwan National Park, Nepal and beyond. Final report for NASA Earth and Space Science Fellowship Program project No. NNX09AO34H.
- Carter, N.H., J. Liu. 2012. Coupled human and natural systems approach to tiger conservation in Chitwan National Park, Nepal and beyond. Final report for USFWS Rhinoceros and Tiger Conservation Fund project No. F10AP00320.
- Carter, N.H. 2011. Tiger Tales: Evaluating wildlife acceptance capacity in Nepal. *MSU Fisheries and Wildlife SPOTLIGHT*. Issue 7. Pages 17 – 19.

CONFERENCE PRESENTATIONS AND POSTERS

- Carter, N.H. 2015. Realizing coexistence between people and large carnivores in shared landscapes (poster). International Congress on Conservation Biology (Montpellier, France).
- Carter, N.H. 2014. The keys to coexistence: realizing the potential for integrating large carnivores into multi-use landscapes. North American Congress for Conservation Biology (Missoula, MT, USA).
- Carter, N.H., A. Viña, H. Campa III, and J. Karki. 2013. Effects of different land management regimes on wildlife habitat: the case of tigers in Nepal (poster). International Association of Landscape Ecology annual meeting (Austin, TX, USA).
- Carter, N.H., B. Shrestha, J. Karki, N. Pradhan, and J. Liu. 2012. Adaptation of tigers in space and time to high human densities in Nepal: implications for conservation across the tiger's range. The Wildlife Society annual meeting (Portland, OR, USA).
- Carter, N.H., A. Shortridge, S.J. Riley, and B. Shrestha, J. Liu. 2012. Evaluating the spatial distribution of local intolerance to tigers. Pathways to Success: Integrating Human Dimensions into Fisheries and Wildlife Management (Breckenridge, CO, USA).
- Carter, N.H., A. Shortridge, S.J. Riley, and B. Shrestha. 2012. Evaluating the spatial distribution of attitudes, beliefs, and perceptions towards tigers: implications for conservation in human-dominated regions. Association for Nepal and Himalayan Studies (Kalamazoo, MI, USA).

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- Carter, N.H., A. Shortridge, S.J. Riley. 2012. Using geospatial models to map local attitudes, beliefs, and perceptions towards a conflict-prone predator. American Association for Geographers (New York, NY, USA).
- Carter, N.H., J. Liu, and H. Campa. 2011. Impacts of community-based natural resource management on large vertebrate habitat with implications on landscape scale conservation in Nepal. International Congress for Conservation Biology (Auckland, New Zealand).
- Carter, N.H. 2011. Acceptance capacity for tigers in Nepal: Implications for conservation of predators in human-dominated landscapes. Association for Nepal and Himalayan Studies (St. Paul, MN, USA).
- Carter, N.H., J. Liu, S.J. Riley, H. Campa, and A. Shortridge. 2011. Integrating natural and human dimensions to advance tiger conservation. Ecological Society of America (Austin, TX, USA).
- Carter, N.H., A. Viña, J. Liu, D. Dangol, B. Shrestha. 2011. Impacts of decentralized natural resource management on wildlife habitat around a protected area in Nepal. International Symposium on Society and Resource Management (Madison, WI, USA).
- Carter, N.H., J. Liu, S.J. Riley, H. Campa, and A. Shortridge. 2011. Coupled human and natural systems approach to tiger conservation (poster). American Association for the Advancement of Science Annual Meeting (Washington, DC, USA).
- Carter, N.H., S.J. Riley, and J. Liu. 2010. Local Acceptance Capacity towards Tigers. Midwest Fish and Wildlife Conference (Minneapolis, MN, USA).
- Carter, N.H., A. Viña, J. Liu, D. Dangol, and B. Shrestha. 2010. Evaluating the Impacts of Community Forests on Vegetation at Chitwan National Park, Nepal. Global Land Project Open Science Meeting (Tempe, AZ, USA).
- Carter, N.H., S.J. Riley, and J. Liu. 2010. Evaluating and Modeling Local Acceptance Capacity towards Tigers in Chitwan National Park, Nepal. Pathways to Success: Integrating Human Dimensions into Fisheries and Wildlife Management (Estes Park, CO, USA).
- Carter, N.H. 2010. Coupled Human and Natural System Approach to Tiger Conservation in Chitwan National Park, Nepal and Beyond. Annual meeting on the status of endangered species in Nepal (Kathmandu, Nepal).
- Carter, N.H., Brown, D.G., Etter, D.R., and L.G. Visser. 2009. Predicting Black Bear Habitat Suitability in Michigan's Lower Peninsula. American Association of Geographers (Las Vegas, NV, USA).
- Carter, N.H., Brown, D.G., Etter, D.R., and L.G. Visser. 2008. Predicting the Ecological Suitability of Black Bear Habitat in Michigan's Lower Peninsula. Midwest Fish and Wildlife Conference (Columbus, OH, USA).

ORGANIZED SYMPOSIUMS AND INVITED PRESENTATIONS

- Carter, N.H. 2015. Approaching carnivore poaching with a global framework. USC Conference on Conservation, Computation, and Criminology (Washington, DC, USA).
- Carter, N.H. 2014. Understanding human-tiger conflict. World Wildlife Fund human-tiger conflict working group meeting in Chitwan, Nepal.
- Carter, N.H. and M. Lute (co-organizers). 2014. Symposium: "Human-Carnivore Coexistence? Integrating Science, Ethics, and Practice to Address a Major Conservation Challenge" for North American Congress on Conservation Biology (Missoula, MT, USA).
- Carter, N.H. 2014. Synthesizing social and environmental data and theories to advance tiger conservation. Helmholtz Centre for Environmental Research – UFZ (Leipzig, Germany).
- Carter, N.H. 2013. Integrating social and ecological sciences for coexistence. Carnivore Coexistence Lab, Nelson Institute for Environmental Studies, Univ. of Wisconsin (Madison, WI, USA).
- Carter, N.H. 2012. Bridging human and natural sciences to advance tiger conservation in Nepal and beyond. Wildlife Conservation Society headquarters (Bronx, NY, USA).

TEACHING EXPERIENCE

National Socio-Environmental Synthesis Center, Annapolis, MD, USA
Co-teacher – "Teaching Socio-Environmental Synthesis with Case Studies"

2014

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS

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Discussed use of quantitative complex models to teach students about socio-environmental systems with a group of advanced graduate students, postdocs, and professors. Developed hands-on exercise and agent-based model along with lecture materials.

Fisheries and Wildlife, Michigan State Univ., East Lansing, USA

Guest Lecturer – “FW 434, Human Dimensions of Fisheries and Wildlife Management”

2011, 2012

Discussed the application of human dimensions research in Nepal

Institute for Social and Environmental Research, Chitwan, Nepal

Lecturer – “Introduction to Geographic Information Systems”

2010

Developed and taught 2-day training course to staff from wildlife conservation agencies and local Univ. students in environmental science.

School of Natural Resources, Univ. of Michigan, Ann Arbor, USA

Graduate Student Instructor – “Biology 390, Evolution”

2006

Organized and led weekly discussions on lecture topics, held office hours, and administered grades.

School of Natural Resources, Univ. of Michigan, Ann Arbor, USA

Graduate Student Instructor – “NRE 531, Principles of Geographic Information Systems”

2006

Organized and led weekly laboratory sessions, held office hours, and administered grades.

TRAINING AND CERTIFICATIONS

- 2011 – 2012. Awarded one of 20 competitive positions in Emerging Wildlife Conservation Leaders ([EWCL](#)) training and mentoring initiative.

EWCL provides intense training in conservation campaign development. My EWCL team and I developed a lion conservation and awareness campaign in Northern Kenya called [LION WATCH](#).

- 2008. Chemical immobilization of wildlife from Safe Capture International, Cleveland, OH
- 2008. Chemical immobilization of big cats from Henry Doorly Zoo, Omaha, NE
- 2005. Received GIS certification from San Diego Mesa Community College, San Diego, CA

MENTORSHIP

- Alex Killion – Starting PhD with me in January 2016
- Micah Jasny – Undergraduate at College of William and Mary. Mentored from May – August 2013
- Randall Malcolm – Undergraduate at Michigan State Univ. Mentored from May – Sept. 2010

JOURNAL AND BOOK CHAPTER REVIEWS

- Regional Environmental Change, Journal of Mammalogy, Conservation Biology, Biological Conservation, Conservation and Society, Landscape Ecology, Biodiversity and Conservation, Ecology and Society, Conservation Letters, Journal of Wildlife Management, Human Dimensions of Wildlife, Oryx, Ecosphere, Canadian Journal of Zoology, URSUS, Land, Michigan Journal of Sustainability, Serengeti IV: Sustaining biodiversity in a coupled human-natural system (Book)

AWARDS, FELLOWSHIPS, AND GRANTS

- SESYNC Venture (\$100,000): PI on “New tools to predict and prevent human-wildlife conflicts” **2014 – 2016**
- The Biodiversity Foundation: Small Grants for Science and Conservation (\$6,942): Co-PI on “Building the foundations for conservation action:” **2014**

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FEBRUARY 18, 2016

- assessing human-tiger conflict research and management needs in the Terai, Nepal”.
- NASA-MSU Professional Enhancement Award (\$600). Award provides travel support to the 2013 US-IALE annual meeting and networking opportunities. **2013**
 - Travel support (\$1,600) to International Congress for Conservation Biology from Michigan State Univ. **2011**
 - CHANS-Net: International Network of Research on Coupled Human and Natural Systems fellowship. Fellowship included travel support to 2011 AAAS annual meeting (\$1,000) and networking opportunities. **2011**
 - 2010 Global Land Project (GLP) travel support from GLP (funding through NSF and NASA) **2010**
 - U.S. Fish and Wildlife Service, Rhinoceros and Tiger Conservation Fund Grant – 2 year duration (\$42,859) **2010 – 2012**
 - NASA Earth and Space Science Graduate Fellowship – 3 year duration (\$150,000) **2009 – 2012**
 - Michigan State Univ. Pre-dissertation Travel Award (\$3,000) **2008**
 - Michigan State Univ. Distinguished Fellowship – 2 year duration (\$100,000) **2007 – 2008**
 - School of Natural Resources and Environment faculty elected Howard M. Wight Memorial Award for the Outstanding Wildlife Graduate Student **2007**
 - Michigan Department of Natural Resources and Environment Research Grant (\$10,000) **2007**
 - Joseph G. Schotthoefer Memorial Student Award from Safari Club International (\$1,000) **2006**
 - Univ. of Michigan Rackham Graduate School Discretionary Fund (\$1,500) **2006**

RELEVANT EMPLOYMENT

- World Bank, Sustainable Development Department, Washington, DC
Consultant **2014**
 I assisted in a research project examining the bioeconomic potential of the Ruaha-Rungwa region in Tanzania. My research entailed the development and coupling of models pertaining to African lion-prey dynamics and household economics and land-use decisions.
- Environmental Spatial Analysis Lab, Univ. of Michigan, Ann Arbor, MI
Geographic Information Systems Research Assistant **2005**
 I assisted in a project, financed by NASA, which analyzed the feedback between human settlement and land-cover/land-use change around the Poyang Lake region in China. I also worked on a project that examined the relationship between obesity and landscape characteristics at 5 major cities.
- City of San Diego Information Technology Department, San Diego, CA
Geographic Information Systems Intern **2004 - 2005**
 My duties included developing and maintaining geographic databases, testing software, map production for various departments using ESRI's ArcGIS desktop software, coordinating application development with City Departments, and business meeting support.
- Center for Biological Diversity, San Diego, CA
Researcher **2004**
 I assisted project staff in research of conservation status of endangered species, project compliance with conservation laws and other duties. I helped write and publish two petitions to put local butterflies on the Endangered Species List.

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RELATED ACTIVITIES

- 2007. Volunteered with Montana Cooperative Wildlife Research Unit to track and record the presence of wolves and wolf rendezvous sites in Idaho.
- 2006. Volunteered with United States National Park Service in the Upper Peninsula, Michigan, capturing black bears to obtain bear population information in the region.

PROFESSIONAL AFFILIATIONS AND MEMBERSHIPS (PAST AND PRESENT)

- American Association for the Advancement of Science, Society for Conservation Biology, Association of American Geographers, Ecological Society of America, The Wildlife Society, International Association for Society and Natural Resources ,and Coupled Human and Natural Systems Network (CHANS-Net.org)

OUTREACH AND MEDIA

- 2014. Presentation at Café Scientifique (49 West Coffee Shop) on "Integrating science, ethics, and practice to advance carnivore conservation in a human-dominated world".
- 2013. Research highlighted in [Yale e360](#)
- 2013. Presentation at Annapolis High School on "Tigers and Biodiversity Conservation"
- 2013. SESYNC Blog: [Protecting Predators, Protecting People](#)
- 2013. Research highlighted in [Conservation Magazine](#)
- 2012. Discussed research in interviews with [Science Update](#) and [Voice of America](#).
- 2012. Research highlighted in [BBC](#), [New York Times](#), Discovery Channel, AAAS, [Scientific American](#), NSF, Nature and Science magazines, [Conservation Magazine](#), and as comic called [Night Growl](#).
- 2011. Spartan Saga. ["Understanding the human-nature dance"](#).
- 2011. MSUToday show (No 26). ["Living with Tigers"](#).

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Samantha Heidi Blatt

Boise State University
Department of Anthropology
1910 University Drive
Boise, Idaho 83725
Tel: (208) 573-2721
Email: samanthablatt@boisestate.edu
Skype ID: Samantha.H.Blatt

Education

The Ohio State University, Columbus, OH

2013 Ph.D. Anthropology

Dissertation Title: *From the Mouths of Babes: Using Incremental Enamel Microstructures to Evaluate the Applicability of the Moorrees Method of Dental Formation to the Estimation of Age of Prehistoric Native American Children*

The Ohio State University, Columbus, OH

2007 M.A. Anthropology

Thesis Title: *Biocultural Implications of Human Dental Calculus from Two Late Prehistoric Ohio Populations*

Rutgers, The State University of New Jersey, New Brunswick, NJ

2004 B.S. Evolutionary Anthropology, Highest Honors

Thesis Title: *Prehistoric Cannibalism in the Cook Islands: Burning Modification of Human Skeletal Remains from Ana Manuku (MAN-84), Mangaia*

Research Interests

Bioarchaeology, Osteology, Biocultural Adaptations, Growth and Development, Stature and Body Mass, Health and Diet, Dental Anthropology, Human Variation, Paleopathology, Paleoepidemiology, Forensic Anthropology, Scanning Electron Microscopy, Eastern Woodland Amerindians

Professional Appointments

2013-present	Visiting Assistant Professor, Department of Anthropology, Boise State University
2007-2012	Graduate Teaching Associate/Instructor of Record, Department of Anthropology, The Ohio State University
2012	Adjunct Instructor, Department of Sociology/Anthropology, Ohio Wesleyan University
2007-2009	Teaching Assistant, PAST Foundation, Forensics in the Classroom
2006	Intern, Department of Archaeology, Cleveland Museum of Natural History
2005-2008	Research Associate, Department of Anthropology, The Ohio State University
2003	National Science Foundation Research Experience for Undergraduates Participant (NSF-REU), Körös Regional Archaeological Project, Hungary
2002-2004	Research Assistant, Department of Geological Sciences, Rutgers University

Grants and Awards

2015	PI for grant Dan Montgomery Research Grant awarded to Kathy Petersen for MA thesis (\$3500)
2015	PI for grant Dan Montgomery Research Grant awarded to Emily Moes for MA thesis (\$400)
2014	Student Poster Award for Melissa Kidd, 2 nd place, Western Bioarchaeology Group conference (\$50)
2013	Human Behavior and Evolution Society support for Northwest Ecological and Evolutionary Human Behavior Symposium (\$1795)
2013	Wenner-Gren Foundation for Anthropological Research, Engaged Anthropology Grant (\$4100) <i>Toward a Collaborative Indigenous Bioarchaeology: Engaging Communities in the Relevance, Shared Knowledge, and Interpretation of Prehistoric North America</i>

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- 2013 HBES Conference Support Award for NWHEEB2 Symposium at Boise State University (\$1661)
- 2013 Histology micrograph selected for Buchler Microstructure 2014 Calendar (\$200)
- 2012 Preparing Future Faculty Fellow (\$300)
- 2011 Wenner-Gren Foundation for Anthropological Research, Dissertation Fieldwork Grant, Gr. 8390 (\$17,243)
- 2011 Edward J. Ray Travel Award for Scholarship and Service, Council of Graduate Students, The Ohio State University (\$750)
- 2011 Larsen Research and Travel Grant, Department of Anthropology, The Ohio State University (\$1000)
- 2010 Alumni Grant for Graduate Research and Scholarship, The Ohio State University (\$2000)
- 2009 Grant-In-Aid-of-Research, Sigma Xi, The Ohio State University Chapter (\$500)
- 2008 Edward F. Hayes Graduate Research Forum, The Ohio State University- 3rd place poster (\$75)
- 2006 Archaeology Institute of America Intern, Department of Archaeology, Cleveland Museum of Natural History, Danbury site excavations, OH (fees, room and board, + \$2400 stipend)
- 2003 National Science Foundation, REU-Sites Grant, Körös Regional Archaeological Project, Veszto site excavations, Hungary (travel, fees, room and board, + \$1800 stipend)
- 2003 Bigel Endowment, Department of Anthropology, Rutgers University (\$500)
- 2003 Henry Rutgers Research Grant, Rutgers College, Rutgers, The State University of New Jersey (\$750)
- 2003 Rutgers College Travel Grant, Rutgers College, Rutgers, The State University of New Jersey (\$350)

Teaching Experience

2013-present **Visiting Assistant Professor, Boise State University, Department of Anthropology**

- ANTH 101- Biological Anthropology
- ANTH 101L- Biological Anthropology Lab
- ANTH 325- Human Variation
- ANTH 330- Osteology
- ANTH 444- Forensic Anthropology
- ANTH 401- Human Evolution and Paleoanthropology
- ANTH 496- Independent Study/ Internship
 - STEM Promotion and Public Outreach Development
 - Paleopathology
 - Osteological Curation
- ANTH 502- Human Evolutionary History and Development (Graduate)
- ANTH 580- Selected Topics in Anthropology- Bioarchaeology (Graduate)
- ANTH 593- Thesis Research (Graduate)
- ANTH 596- Paleopathology (Graduate)
- ANTH 686- Masters Preliminary Exam (Graduate)

2012 **Adjunct Professor, Ohio Wesleyan University, Department of Sociology and Anthropology**

- SOAN 111- Cultural Anthropology

2007-2012 **Graduate Teaching Associate (Instructor of Record), The Ohio State University, Department of Anthropology**

- ANTH 200 and 2200 (with lab)- Introduction to Physical Anthropology
- ANTH 201- World Prehistory: An Anthropological Perspective
- ANTH 202- Peoples and Cultures: An Introduction to Cultural Anthropology
- ANTH 597.01- Cultural Conflict in Developing Nations
- ANTH 597.02- Women, Culture, and Development
- ANTH 603.01- Human Osteology
- ANTH 686- Forensic Anthropology Field School

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Publications in Referred Journals

- 2015 **Blatt, S.H.** To swaddle, or not to swaddle: paleoepidemiology of developmental dysplasia of the hip and the swaddling dilemma among the indigenous populations of North America. *American Journal of Human Biology* 27(1): 116-128.
(Impact Factor- 1.928; ISI Ranking in Anthropology- 11/81; ISI Ranking in Biology- 25/83)
- 2015 Nolan, K.C., Sciulli, P.W., **Blatt, S.H.**, Thompson, C.K. A Late Woodland Red Ochre burial cache from Madison County, Ohio. *North American Archaeologist* 36(3): 197-236.
- 2013 Robbins-Schug, G., Gupta, S., Cowgill, P., Sciulli, P., and **Blatt, S.H.** Panel regression formulas for stature and body mass estimation in immature human skeletons. *Journal of Archaeological Science*, 40(7): 3076-3086.
(5-Year Impact Factor - 2.245)
- 2011 **Blatt, S.H.**, Redmond, B.G., Cassman, V. and Sciulli, P.W. Dirty teeth and ancient trade: evidence of cotton fibers in human dental calculus from Late Woodland, Ohio. *International Journal of Osteoarchaeology* 21(6): 669-678.
(Impact Factor- 1.085; ISI Ranking in Anthropology- 29/83)
- 2010 Robbins, G., Sciulli, P.W., **Blatt, S.H.** Estimating body mass in subadult human skeletons. *American Journal of Physical Anthropology* 143:146-150.
(Impact Factor- 2.481; ISI Ranking in Anthropology- 7/83)
- 2009 Sciulli, P.W., **Blatt, S.H.**, Tatarek, N.E. Analysis of skeletal remains from the Old Town (33HS02) site, a Late Archaic cemetery in Harrison County, Ohio. *Pennsylvania Archaeologist* 79(2): 33-41.
- 2008 Sciulli, P.W. and **Blatt, S.H.** Evaluation of juvenile stature and body mass prediction. *American Journal of Physical Anthropology* 136:378-393.
(Impact Factor- 2.481; ISI Ranking in Anthropology- 7/83)
- 2004 Ashley, G.M., Matima Mworira, J., Muasya, A.M., Owen, R.B., Driese, S.G., Hover, V.C., Renaut, R.W., Goman, M.F., Mathai, S., and **Blatt, S.H.** Sedimentation and evolution of a freshwater wetland in a semi-arid environment, Lobo Swamp, Kenya, East Africa. *Sedimentology* 51(6):1301-1321.
(Impact Factor- 2.611; ISI Ranking in Geology- 6/47)

Publications in Edited Volumes

- 2012 da Gloria, P, **Blatt, SH**, and Kyle-McIlvaine, B. 2012. "Laboratory Exercise 10: Evolution of Bipedalism," In Stewart MC, Sadvari JW, editors. Anthropology 2200: Introduction to physical anthropology Laboratory course packet. Columbus, OH: McGraw-Hill.
- 2012 **Blatt, SH**, da Gloria, P, and Kyle-McIlvaine, B. 2012. "Laboratory Exercise 11: Introducing the Proto- and Early Hominids," In Stewart MC, Sadvari JW, editors. Anthropology 2200: Introduction to physical anthropology Laboratory course packet. Columbus, OH: McGraw-Hill.
- 2012 Kyle-McIlvaine, B, **Blatt, SH**, and da Gloria, P. 2012. "Laboratory Exercise 12: The Genus *Homo*," In Stewart MC, Sadvari JW, editors. Anthropology 2200: Introduction to physical anthropology Laboratory course packet. Columbus, OH: McGraw-Hill.

Work Under Consideration or In Preparation

- In Review **Blatt, S.H.** Paleo-otology: childhood cholesteatoma, otitis media, and intracranial complications. Submitted to *Journal of Laryngology and Otology*.
- In Review **Blatt, S.H.** Who Cares?: applying a bioarchaeology of care model to a 15th case of osteochondroma. Submitted to *International Journal of Paleopathology*.
- In Review **Blatt, S.H.** and Casado, A. Let's talk about sex: principal component analysis of sexually dimorphic traits in the human pelvis. Submitted to *International Journal of Forensic Science*.
- In Prep. **Blatt, S.H.** Crown formation times and developmental sequences in archaeological children from Ohio. To be submitted to the *American Journal of Physical Anthropology*.
- In Prep. **Blatt, S.H.** From the mouths of babes: Is the Moorrees method applicable to prehistoric Native American children? To be submitted to *American Journal of Physical Anthropology*.

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Abstracts for Posters and Presentations at Conferences

- Submitted **Blatt, S.H.**, Moes, E., and Petersen, K. Heavy-handed: Can handedness be detected from bilateral degeneration of the medial end of the clavicle? American Association of Physical Anthropologists 2016.
- Submitted Bradbury, C., **Blatt, S.H.**, and Yu, P. Classroom optional: Service learning and community engagement in anthropology. American Association of Physical Anthropologists 2016.
- 2015 Watkins, J. Alanko, G.A., **Blatt, S.H.**, Bradbury, C.A., Kohn, M.J., Lytle, M., Lacrois, D., Taylor, J., Dudgeon, J., Hazard, R.E., O'Leary-Lepsen, E., Butt, D. P. A transdisciplinary approach to determining the provenience of a distorted, Pre-Columbian skull recovered in rural Idaho. College of Engineering Poster Presentations, Paper 5.
- 2015 **Blatt, S.H.** From the mouths of babes: is Moorrees the method appropriate for age estimation of Prehistoric Native American Children. *American Journal of Physical Anthropology*: 88
- 2014 Kidd, M., Rogers, A., Inglerherti, N. Jumonville, B., and **Blatt, S.H.** In from the cold: Western Bioarchaeology Group. Las Vegas, NV. (2nd place for Student Poster Award)
- 2013 Kidd, M., Rogers, A., Inglerherti, N. Jumonville, B., and **Blatt, S.H.** In from the cold: A case study of human remains demonstrating the importance of context. Undergraduate Research Forum, Boise State University.
- 2013 **Blatt, S.H.** The Right Method in the Right Context: Is the Application of a European-Derived Dental Formation Reference Appropriate for Age Estimation of Prehistoric Native American Children? Western Bioarchaeology Group. Berkeley, CA.
- 2013 **Blatt, S.H.** An unusual case of a solitary osteochondroma on the mandibular symphysis. Submitted to *American Journal of Physical Anthropology* (S56):83.
- 2012 **Blatt, S.H.** Epidemiology of developmental dysplasia of the hip in Amerindians: Cases from the Late Prehistoric Buffalo Site, West Virginia. *American Journal of Physical Anthropology*. 147 (S54):101.
- 2011 **Blatt, S.H.** and Casado, A.M. 2011. Let's talk about sex: principal components analysis of sexually dimorphic traits in the human pelvis. *American Journal of Physical Anthropology* 141 (S52):91-92.
- 2010 **Blatt, S.H.** and Sciulli, P.W. 2010. Deformed or not deformed, that is the question: quantifying artificial cranial deformation. *American Journal of Physical Anthropology* 141 (S50):69.
- 2009 G.J. Jakubowska and **Blatt, S.H.** 2009. Growth and estimated skeletal height of Mochica juveniles, Peru (A.D. 900- 1750). *American Journal of Physical Anthropology* 138 (S48): 157.
- 2008 **Blatt, S.H.** 2008. Biocultural implications from scanning electron microscopy of prehistoric human dental calculus, *American Journal of Physical Anthropology* 135 (S46):70. Columbus, Oh.
- 2008 **Blatt, S.H.** 2008. Biocultural implications from scanning electron microscopy of prehistoric human dental calculus. Edward F. Hayes Graduate Research Forum, The Ohio State University.
- 2006 **Blatt, S.H.** 2006. Internship report: excavations at the Danbury Site (33OT16), Ohio: a bioarchaeological perspective. Archaeological Institute of America, Cleveland Archaeological Society, CMNH. (Presentation).
- 2004 **Blatt, S.H.** 2004. Functional hypotheses of eastern European copper age enclosures, Vèszttö -20, Hungary. Society for American Archaeology Annual Meetings, Montréal, CA.
- 2003 Ashley, G.M., Matima Mworia, J., Muasya, A.M., Owen, R.B., Driese, S.G., Hover, V.C., Renaut, R.W., Goman, M.F., Mathai, S., and **Blatt, S.H.** 2003. Hydrology, biology, and sedimentology of a freshwater wetland in a semi-arid environment, Lobo Swamp, Kenya. XVI INQUA Congress, Reno, Nevada, The Geological Society of America.

Technical Reports (Forensic and Archaeological)

- 2015 **Blatt, S.H.** N15-45468. Nampa PD and Ada County Coroner, ID (human infant remains)
- 2015 **Blatt, S.H.** F82615. Caldwell PD, ID (faunal remains)
- 2015 **Blatt, S.H.**, Moes, E., Taylor, K., Petersen, K. F101608: Walters Ferry. SHPO, ID.
- 2015 **Blatt, S.H.**, Moes, E., Schrier, M., Taylor, K. 10MO85: Rexberg Man. SHPO, ID.
- 2015 **Blatt, S.H.** C14-19707: Human Remains Report. Canyon County Sheriff, ID.
- 2014 **Blatt, S.H.** F101015. Ada County, ID. (faunal remains)
- 2014 **Blatt, S.H.** C14-19707. Canyon County Sheriff, ID. (human remains-archaeological)

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- 2014 **Blatt, S.H.** F112413: Red Skull. SHPO, ID. (human remains- archaeological)
- 2014 **Blatt, S.H.** 10IH82: Human Remains Report. SHPO, ID.
- 2012 **Blatt, S.H.** and Kidd, M. F120611a and F120611b: "Blue Suitcase Man". ID (human remains- archaeological)
- 2008 Sciulli P.W and **Blatt, S.H.** The Danbury Site 2007: Human Skeletal Remains Inventory. CMNH.
- 2007 Sciulli, P.W. and **Blatt, S.H.** The Danbury Site 2006: Human Skeletal Remains Inventory. CMNH.
- 2007 Sciulli, P.W. and **Blatt, S.H.** Lakeview Heights Human Skeletal Remains.
- 2006 **Blatt, S.H.** The Danbury site 2006: Internship Report. AIA, CMNH, Nov. 2006.
- 2006 **Blatt, S.H.** Late Prehistoric Mortuary Practices at the Norma Grantham Site, Ohio. CMNH.
- 2004 **Blatt, S.H.** Baffling Palisades: Functions of Eastern European Chalcolithic Enclosures. Koros Regional Archaeological Project, Veszto, Hungary.

Forensic Search and Recovery

- 2011 Windsor, Ashtabula County, OH- homicide/ missing persons case, warrant excavation and survey (July 19-21) (CPD Case Number: 11186518CPD)
- 2010 Westerville, Franklin County, OH- homicide/ missing persons case, warrant excavation and survey (May-November) (NCIC Number: M-946495830)
- 2009 Lawrence County Sheriff, OH. Bone identification (no number- 5/15/09)
- 2007 Marion County Coroner, OH (no number-9/28/07), Bone identification
- 2006 Franklin County Coroner, OH (06-14120) Bone identification
- 2005 Marion County Coroner, OH (no number- 12/9/05) Bone identification

Field Experience

- In prep Mississippi historic family cemetery
- 2015- present Cholera Cemetery Survey, Franklin County, Ohio
- 2008- present Peters site, Ohio (Late Archaic), The Ohio State University
- 2008-2012 Forensic Anthropology Case Team (FACT), The Ohio State University
- 2006-2008 Danbury Site (33OT16), Ohio (Late Archaic-Late Prehistoric), Cleveland Museum of Natural History
- 2004-2005 Western New York Archaeological Survey, SUNY at Buffalo
- 2003 Körös Regional Archaeological Project, Veszto, Hungary (Chalcolithic)
- 1994 Maresha, Israel, Archaeological Institute of America

Laboratory and Collections Experience

- 2013-present Wet Lab Supervisor and PI (Chemical Hygiene Officer), Department of Anthropology, Boise State University
- 2008- 2012 Laboratory Manager/Chemical Hygiene Officer, Osteology Lab of Dr. P.W. Sciulli, Dept. of Anthropology, The Ohio State University
- 2012 Grave Creek Mound Archaeological Complex and Delf Norona Museum, Moundesville, WV
- 2009 SunWatch Indian Village and Archaeological Park and Boonshoft Museum, Dayton, OH
- 2011 Campus Microscopy and Imaging Facility, The Ohio State University
- 2010 SHC Dental Cast Collection, The Ohio State University
- 2010, 2015 Hamann-Todd Human Skeletal Collection, Cleveland Museum of Natural History
- 2005-2008 Research Assistant, Osteology Lab of Dr. P.W. Sciulli, Dept. of Anthropology, Ohio State University
- 2006 Microscopy and Chemical Analysis Research Center, Dept. of Geology, The Ohio State University
- 2006 Intern, Department of Archaeology, Cleveland Museum of Natural History
- 2004 Zooarchaeology Lab of Dr. R.B. Blumenschein, Dept. of Anthropology, Rutgers University

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2004 Osteology Lab of Dr. S.C. Anton, Dept. of Anthropology, New York University
 2002-2003 Research Assistant, Quaternary Studies Lab of Dr. G.M. Ashley, Dept. of Geological Sciences, Rutgers University

Community Outreach and Civic Engagement

2016 Lecturer, “Bones, Stones, and Genomes: Current Insights into Human Origins,” Osher Lifelong Learning Institute
 2015 Senior Project Mentor, Nyssa High School, Oregon (Selene Ortega)
 2014-2015 E-girlsWorkshop (for 7th-11th grade girls interested in science), Boise State University
 2015 STEM Day (Anthropology teaching demonstrations for the general public), Boise State University
 2013-2014 “Zombies, Vampires, and Werewolves: Anthropology of the Undead,” presented to the Anthropology Club, Boise State University
 2013 Forensic Archaeology Training Workshop (for law enforcement), Boise State University
 2013 Wenner-Gren Foundation for Anthropological Research, Engaged Anthropology Grant, *Toward a Collaborative Indigenous Bioarchaeology: Engaging Communities in the Relevance, Shared Knowledge, and Interpretation of Prehistoric North America*
 2013 Organizing committee, Idaho Archaeology and Historic Preservation Month (for May, 2014)
 2013 Invited speaker, Science Café, Discovery Center of Idaho
 2008-2011 Ohio Archaeology Month- COSI museum display and public demonstration
 2008, 2011 “Girls Explore...Archaeology!” workshop coordinator and speaker
 2009 Volunteer, Museum of Classical Archaeology, Department of History, The Ohio State University.
 2007-2009 PAST Foundation “Forensics in the Classroom”
 2006 Invited lecturer for the American Institute of Archaeology, Cleveland Chapter

Media Coverage

2015 Tuck, K. Mining Data from the Mouths of Babes. Boise State News.
 2013 Chan, K. *Anthropomotron 1.5*. Mobile application for iOS, Android, or web browser which gathers and simplifies calculations to estimate the stature and body mass of an individual based on input of measurements. (www.keithcchan.com/anthropomotron/).
 2012 Meyers, K. Bone Don't Lie: The Unknown Benefits of Dental Plaque. (<http://bonesdontlie.wordpress.com/2012/01/11/the-unknown-benefits-of-dental-plaque/>).
 2010 Lepper, BT. Archaeology: Materials Dispute Woodland Decline. *The Columbus Dispatch* (Sunday Science Section, October 24, 2010, p. G10). (<http://www.dispatch.com/content/stories/science/2010/10/24/materials-dispute-woodland-decline.html>).
 2007 Ohlson, K. A Picture of Ancient Life and Death. *American Archaeology: A quarterly publication of the Archaeological Conservancy*, Winter, 11 (4): 28-33.

Department and University Service

2014-present Undergraduate and Graduate Advisor for biological anthropology
 2013-present Field and Lab Consultant, Ada County Coroner's Office, Boise, Idaho (cases throughout Idaho and western Montana)
 2013-present Consultant, State Historic Preservation Office, Idaho State Historical Society
 2013-2014 Organizing Committee, Northwest Evolution, Ecology, and Human Behavior Symposium (NWEHBB), Boise State University
 2013-present Consultant, Center for Applied Archaeological Science (CAAS), Department of Anthropology, Boise State University
 2013-present Wet Lab Supervisor and PI (Chemical Hygiene Officer), Department of Anthropology, Boise State University

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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2013-2014	Graduate Committee for qualifying exams
2010-2012	Founder and Chair, Undergraduate Anthropology Mentorship Program, The Ohio State University
2011-2012	Undergraduate Anthropology Club Representative, Graduate Student Anthropology Association (GSAA), The Ohio State University
2010-2011	Judge and volunteer, Richard J. and Martha D. Denman Undergraduate Research Forum, The Ohio State University
2008-2012	Forensic Anthropology Cold Case Team (FACCT), The Ohio State University
2008	Volunteer, American Association of Physical Anthropologists Annual Meeting, Columbus, Ohio

Professional Development

2013-present	Certified Training in EHS Laboratory and Research Safety and SOP, Office of Environmental Health and Safety, Boise State University
2011-2012	Preparing Future Faculty, Fellow
2012	Certified Training in Veterans On Campus: Issues and Services, University Center for the Advancement of Teaching and Counseling and Consultation Services, The Ohio State University
2011	Certified Training in EHS Laboratory and Research Safety and SOP, Office of Environmental Health and Safety, The Ohio State University
2010	Certified Training in Identifying and Assisting At-Risk Students, University Center for the Advancement of Teaching and Counseling and Consultation Services, The Ohio State University

Mentoring and Thesis Advising

2014-present	MA thesis advisor/chair, Emily Moes and Kathy Petersen
2015	MA thesis committee member, Shawn Roberts
2010-2012	Founder and Chair, Undergraduate Anthropology Mentorship Program, The Ohio State University

Referee for Manuscript Review

2010-present	International Journal of Osteoarchaeology
2007-present	Journal of Archaeological Science
2007-present	Wadsworth Cengage Learning

Professional Affiliations

2008-present	Sigma Xi (National and OSU Chapter)
2008-present	Paleopathology Association
2005-present	American Association of Physical Anthropologists
2011-present	International Association for Paleodontology

References

Paul W. Sciulli, Ph.D.
Professor Emeritus
Department of Anthropology
The Ohio State University
4020 Smith Laboratory
174 West 19th Avenue
Columbus, OH 43210
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Fax: (614) 292-4155

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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Email: sciulli.1@osu.edu

Affiliation: Advisor and committee chair

Clark S. Larsen, Ph.D.

Distinguished Professor, Chair

Department of Anthropology

The Ohio State University

4034 Smith Laboratory

174 W. 18th Ave.

Columbus, OH 43210

Tel: (614) 292-4149

Fax: (614) 292-4155

Email: larsen.53@osu.edu

Affiliation: Committee member

Debbie Guatelli-Steinberg, Ph.D.

Associate Professor

Department of Anthropology

The Ohio State University

4006 Smith Laboratory

174 W. 18th Ave.

Columbus, OH 43210

Tel: (614) 292-9768

Fax: (614) 292-4155

Email: guatelli-steinbe.1@osu.edu

Affiliation: Committee member

Gwen Robbins-Schug, Ph.D.

Associate Professor

Department of Anthropology

Appalachian State University

401 Sanford Hall

Boone, NC 28608

Tel: 828-262-7505

Email: Robbinsgm@appstate.edu

Affiliation: Co-author/researcher

Brian G. Redmond, Ph.D.

Museum Director of Science, Curator and Head of Archaeology

Cleveland Museum of Natural History

1 Wade Oval Drive

University Circle

Cleveland, OH 44106-1767

Tel: (216) 231-4600, ext. 3301

Email: bredmond@cmnh.org

Affiliation: CMNH collections and field supervisor

KATHRYN DEMPS

EDUCATION

UNIVERSITY OF CALIFORNIA, DAVIS

PhD, Anthropology 2012

MA, Anthropology 2006

UNIVERSITY OF CALIFORNIA, LOS ANGELES

BSc, Anthropology 2005

AREAS OF EXPERTISE

Behavioral and evolutionary ecology, cultural evolution, local ecological knowledge, small-scale societies

PUBLICATIONS

Pauli, B., Sun, E., Tinkle, Z., Forbey, J., **Demps, K.**, Heath, J. (*submitted*) Human habitat selection: Using tools from landscape ecology to predict human use of natural landscapes. *Ecology and Society*.

Reyes-Garcia, V., Gallois, S., **Demps, K.** (*in press*) A multi-stage learning model for cultural transmission: Evidence from three indigenous societies. In Terashima, H., Hewlett, B. (eds.), *Social Learning and Innovation in contemporary Hunter-Gatherers: Evolutionary and Ethnographic Perspectives*. Springer.

Richerson, P., Baldini, R., Bell, A., **Demps, K.**, Frost, K., Hillis, V., Mathew, S., Naar, N., Newton, E., Ross, C., Smaldino, P., Waring, T., Zimmerman, M. (*in press*) Cultural group selection plays an essential role in explaining human cooperation: A sketch of the evidence. *Behavior and Brain Sciences*.

Zorondo-Rodríguez, F., Grau-Satorras, M., Jenukalla, M. G., **Demps, K.**, Gómez-Baggethun, E., García, C., Reyes-García, V. (*in press*) The role of natural and economic capital on subjective well-being: Empirical evidence from a small-scale society in Kodagu (Karnataka), India. *Social Indicators Research*.

Hooper, P., **Demps, K.**, Gerkey, D., Gurven, M., Kaplan, H. (2015) Skills, division of labor and economies of scale among foragers: Participation and productivity of Amazonian hunters and South Indian honey collectors. *Philosophical Transactions B*.

Demps, K., Dougherty, J., Zorondo-Rodríguez, F., Reyes-Garcia, V., Garcia, C. (2015) Schooling and local ecological knowledge: How students trade-off multifaceted educations. *Culture, Agriculture, Food and Environment*.

Demps, K., Richerson, P. (2014) Group Selection. In: *Discoveries in Modern Science: Exploration, Invention, and Technology*. Cengage Learning, Michigan.

Demps, K., Klemetti, S. (2014) Ephemeral Work Group Formation of Jenu Kuruba Honey Collectors and Late 19th Century Colorado Silver Prospectors. *Behavior*, 151: 1413-1432.

Zorondo-Rodríguez, F., Gomez, E., **Demps, K.**, Ariza-Montobbio, Garcia, C., Reyes-Garcia, V. (2014) What defines quality of life? The gap between public policies and locally defined indicators among residents of Kodagu, Karnataka (India). *Social Indicators Research*, 115 (1): 441-456.

Kightley, E.P., V. Reyes-García, K. **Demps**, R.V. Magtanong, V. Ramenzoni, G. Thampy, J.R. Stepp. (2013) An empirical comparison of knowledge and skill in the context of traditional ecological knowledge. *Journal of Ethnobiology and Ethnomedicine*, 9: 71.

Demps, K., Zorondo, F., Garcia, C., Reyes-Garcia, V. (2012) Social learning across the lifecycle: Cultural knowledge acquisition for honey collection among the Jenu Kuruba, India. *Evolution and Human Behavior*, 33(5): 460-470.

Demps, K., Zorondo, F., Garcia, C., Reyes-Garcia, V. (2012) The selective persistence of local ecological knowledge: Honey collecting with the Jenu Kuruba. *Human Ecology*, 40(3): 427-434.

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS

FEBRUARY 18, 2016

Macura, B., Garcia, C., **Demps, K.**, Zorondo, F., Reyes-Garcia, V. (2011). Local Community Attitudes toward Forests Outside Protected Areas in India. Impact of Legal Awareness, Trust, and Participation. *Ecology and Society*, 16 (3):10.

Reyes-García, V., Kightley, E., Ruiz-Mallén, I., Fuentes-Pelaez, N., **Demps, K.**, Huanca, T., Martinez- Rodríguez, M. R. (2010) Schooling and local environmental knowledge: Do they complement or substitute each other? *International Journal of Educational Development*. 30: 305-313.

MANUSCRIPTS IN PREPARATION

Demps, K., Winterhalder, B. (*in prep*) Behavioral Ecology, Missing Markets and the Evolutionary Influences on Barter and Trade in Non-Separable Household Economies

ORAL PRESENTATIONS

Demps, K., Winterhalder, B. (2014) Central Place Marketing and Resource Extraction. Small-scale societies and environmental transformations: Co-evolutionary dynamics. Barcelona, Spain.

Demps, K. (2014) Cultural transmission, life history, and local ecological knowledge in South India. Arizona State University Adaptation, Behavior, Culture, and Society lecture series. **Invited**

Demps, K., Winterhalder, B. (2014) Central Place Marketing: Models of household production for consumption and exchange. Human Behavior and Evolution Society, Natal, Brazil.

Demps, K., Glover Klemetti, S. (2014) Optimal foraging and ephemeral group formation in humans. Universided Federal Rio Grande do Norte, Natal, Brazil. **Invited**

Demps, K., Glover Klemetti, S. (2013) Optimal foraging and ephemeral group formation of Jenu Kuruba honey collectors and late 19th C. Colorado silver prospectors. American Anthropological Association, Chicago.

Demps, K. (2012) The ecology of behavioral transmission: Learning to collect wild honey in South India. Colloquium for Dartmouth Dept. of Anthropology, Asian and Middle-Eastern Studies Program and the Dickey Center for National Understanding. **Invited**

Demps, K. (2012) Dynamics of Social Learning: Socialization into a honey-collecting tribe and the ecology of cultural knowledge transmission. UC Davis Dept. of Anthropology Spring Colloquium.

Demps, K., Zorondo, F., Garcia, C., Reyes-Garcia, V. (2011) The selective resilience of local ecological knowledge: Honey collecting with the Jenu Kuruba. Human Behavior and Evolution Society, France.

Demps, K., Reyes-Garcia, V. (2010) The selection of social learning strategies: differential knowledge acquisition for honey hunting in south India. American Anthropological Association, New Orleans.

Demps, K., Reyes-Garcia, V., Zorondo, F., Garcia, C. (2010) Social Learning across the lifecycle: Honey Hunting with the Jenu Kuruba. Human Behavior and Evolution Society, Eugene, OR.

Demps, K., Reyes-Garcia, V., Zorondo, F., Garcia, C. (2010) Social Learning across the lifecycle: Honey Hunting with the Jenu Kuruba. California Workshop on Evolutionary Perspectives of Human Behavior, San Luis Obispo, California.

Demps, K., Reyes-Garcia, V., Garcia, C. (2009) Factors affecting the loss of traditional knowledge for the Jenu Kuruba, a forest-dwelling tribe in Kodagu, south India. International Union of Anthropological and Ethnological Sciences, Kunming, China.

Demps, K. (2009) Transmission of Ecological Knowledge in the Western Ghats. Colloquium for the French Institute of Pondicherry, Pondicherry, India.

Demps, K. (2007) Dynamics of parent-child cultural transmission. Society for Human Ecology, Brazil

Demps, K., Fessler, D., Snyder, J. (2004). Exploring the origins of sex differences in disgust sensitivity: A test of the male signaling hypothesis. Human Behavior and Evolution Society, Berlin, Germany.

POSTER PRESENTATIONS

Demps, K., Glover Klemetti, S. (2015) Optimal foraging and ephemeral group formation of two societies on the boundary of theory. American Association of Physical Anthropologists, St. Louis, MO.

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Demps, K., Glover Klemetti, S. (2014) Optimal foraging and ephemeral group formation of Jenu Kuruba honey collectors and late 19th C. Colorado silver prospectors. Northwest Evolution, Ecology, and Human Behavior Symposium. Boise, Idaho.

Demps, K., Winterhalder, B. (2013) A central place model of marketing behavior. Northwest Evolution, Ecology, and Human Behavior Symposium. Boise, Idaho.

Demps, K., Dougherty, J., Zorondo-Rodriguez, F., Garcia, C., Reyes-Garcia, V. (2012) Does time in the classroom take away from learning about the forest? A study examining the connections between schooling and traditional ecological knowledge. California Workshop on Evolutionary Perspectives of Human Behavior, San Luis Obispo, California.

Burns, G., Cook, S., Demps, K., Eerkens, J., Bartelink, E. (2012) Isotopic evidence for changing residence patterns through the middle to late holocene in Central California. Society for California Archaeology, San Diego, California.

Demps, K. (2007) Dynamics of parent-child cultural transmission. Human Behavior and Evolution Society, Williamsburg, Virginia.

STUDENT POSTER PRESENTATIONS

Letourneau, D., Demps, K., Brown, H., Spaul, R., Heath, J., Hubbard, M. (2015) Characterizing recreationists in the Owyhees. Great Basin Consortium & NWEH, Boise.

Johnson, J., Demps, K., Dahal, K. (2015) Constraining the Landscape: Using demographic change to anticipate future development needs and predict water usage along the Ada County and Canyon County border. Great Basin Consortium, Boise.

Araki, K., Brown, H., Spaul, R., Hubbard, M., Demps, K., Heath, J. (2015) Environmental impacts as perceived by different recreation groups. Great Basin Consortium, Boise.

Ramirez, E., Haskell, N., Demps, K. (2014) Law abiding angles of the Treasure Valley? Managing Idaho's Landscapes for Ecosystem Services (MILES) annual meeting, Boise.

Haskell, N., Ramirez, E., Demps, K. (2014) Beliefs and behaviors of Treasure Valley anglers: Love of fishing more important than time and travel costs. Managing Idaho's Landscapes for Ecosystem Services (MILES) annual meeting, Boise.

RESEARCH PROJECTS

Managing Idaho's Wildlands For Multiple Resource Streams: Understanding Interactions Between Wildlife And Recreationists PRESENT

Examining interactions between recreationists and golden eagle populations in the Owyhees using models of human decision-making. Data will be incorporated into an agent-based model containing data on golden eagles and humans.

Theoretical & Agent-Based Modeling 2010 - PRESENT

Theoretical models examining resource extraction and participation in local markets based on central place foraging theory. Agent-based models examining the evolution of social learning in a dual- inheritance system.

Dissertation Research 2009

Social learning among honey collectors in south India. One year of quantitative and qualitative data collection among an indigenous Scheduled Tribe population examining transmission and evolution of culture, focusing on local ecological knowledge.

NSF Field Training In Methods Of Data Collection In Cultural Anthropology 2008 Quantitative and qualitative anthropological methods course in project design, data collection, and analysis; 5-weeks in the Bolivian Amazon with the Tsimane.

Pilot Study 2007

Patterns of religious conversion to Mormonism and social networks among the Chamorro and Carolinians on Saipan, Micronesia. Five weeks of preliminary field research to understand how social connections fuel conversion patterns.

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TEACHING EXPERIENCE

ASSISTANT PROFESSOR, BOISE STATE UNIVERSITY 2012-PRESENT

Courses taught: Research Design in Anthropology
Adaptation and Human Behavior
Environmental Anthropology
Introduction to Cultural Anthropology
Quantitative Field Methods
Introduction to Physical Anthropology
Evolution of the Human Life Cycle

ADJUNCT ASSISTANT PROFESSOR, COSUMNES RIVER COLLEGE 2011

Courses taught: Introduction to Physical Anthropology
Physical Anthropology Laboratory

ASSOCIATE INSTRUCTOR, UC DAVIS 2010-2011

Courses taught: Behavior and Evolutionary Biology of the Human Lifecycle
Kinship and Social Organization
Evolution of Human Nature

GRADUATE STUDENTS

Mark Biel - MA, Spring 2015
Eric Frey - Spring 2016
Michelle Kinney - Spring 2016

MURI STUDENTS (MILES UNDERGRADUATE RESEARCH AND INTERNSHIPS PROGRAM)

Jadie King, Summer 2015
Denell Letourneau, Spring 2015
Nychele Haskell, Summer 2014
Erika Ramirez, Summer 2014

ACADEMIC SERVICE

Organizer - Northwest Evolution, Ecology, and Human Behavior Symposium, Boise, ID (2012 - present)
Faculty advisor - Boise State Sustainability Club
Reviewer - Evolution and Human Behavior, Human Ecology, Current Anthropology, Journal of Ethnobiology and Ethnomedicine, PLOS One, Journal of Society and Natural Resources, Ecology and Society, Economic Botany, Field Methods, Decision and Risk Management (NSF)
Chaired Session - Behavior, ecology, and cognition: the multiple avenues of adaptation. American Anthropological Association, New Orleans (2010)
Chaired Session - Temporal and Spatial Cross-scale Approaches in Human Ecology: Implications for Resource Use. Society for Human Ecology, Rio de Janeiro, Brazil (2007)
Guest Lectures: Environmental Anthropology, Introduction to Evolutionary Psychology, Ethnographic Methods, Introduction to Cultural Evolution, Research Methods for Quantitative Anthropology
Lead Organizer - Inaugural 3UC California Workshop on Evolutionary Perspectives of Human Behavior (2007)

PROFESSIONAL MEMBERSHIPS

American Anthropological Association (EAS)
Human Behavior and Evolution Society

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CHRISTOPHER L. HILL

Boise State University
307 Riverfront Hall, 1910 University Drive, 83725-1110
chill2@boisestate.edu, 208-426-2625

EDUCATION

- 1992 Ph.D., Anthropology (Archaeology Program), Institute for the Study of Earth and Man, Southern Methodist University, Dallas, Texas. Dissertation: *Archaeological and Pleistocene Geology of Acheulian and Middle Paleolithic Sites in the Bir Tarfawi Region of the Southern Egyptian Sahara*. Chair: Fred Wendorf.
- 1989 M.A., Anthropology (Archaeology Program), Institute for the Study of Earth and Man, Southern Methodist University, Dallas, Texas.
- 1982 B.A., Interdisciplinary Studies: Geology, Archaeology and Anthropology, University of Minnesota, Duluth, Minnesota. Senior Thesis: *Paleoecology of the Cloquet River Basin: Geomorphology and Environmental Change in Northeastern Minnesota*. Advisor: George Rapp.

EMPLOYMENT/POSITIONS

- Boise State University
2013-2015 *Full Professor with Tenure*
2012-2015 *Associate Dean*, Graduate College
2007-2012 *Coordinator/Director*, Environmental Studies Program
2007-2012 *Associate Professor with Tenure*
2002-2007 *Assistant Professor*
- Combined Prehistoric Expedition Field School, Egypt
2000 *Senior Faculty Archaeologist and Geomorphologist*
- Montana State University
1997-2002 *Director*, Ice Age Research Program
1995-2002 *Adjunct Assistant Professor of Geology*, Department of Earth Sciences
1994-2002 *Associate Curator of Geology and Biology*, Museum of the Rockies
- Tulane University
1993 *Visiting Assistant Professor*, Tulane University (Winter/Spring).
- Southern Methodist University
1992-1993 *Fellow*, Institute for the Study of Earth and Man
1986 *Teaching Assistant*, Anthropology Department
1982-1992 *Graduate Research Assistant*, Wendorf Laboratory and Radiocarbon Laboratory
- Archaeological Research Services
1980 *Field Assistant*, Superior National Forest, Minnesota.
- University of Wisconsin
1980 *Participant with Stipend*, Student Originated Studies-National Science Foundation Grant.
- Archaeometry Laboratory and Environmental Geology-Geochemistry-Ecology Working Group, University of Minnesota.
1992-1994 *Research Associate*
1982-1992 *Research Fellow*
1977-1982 *Lab Attendant-Lab Technician-Senior Lab Technician*

RESEARCH SPECIALIZATIONS

- Topics:* Interdisciplinary Environmental Science, Paleontology and Geoarchaeology, Stratigraphy, Geomorphology, Geochemistry, Geochronology, Paleoenvironments, Historical Ecology, Conservation Paleoecology.
- Field Experience:* North America (Great Lakes, Great Plains, Rocky Mountains, Snake River-Columbia Basin, Great Basin), North Africa and the Middle East (Egypt, Israel, Turkey), Northern Europe (Norway), and Central Asia (Siberia).

INTERNAL UNIVERSITY FUNDING (GRANTS)

- 2011-2012 Research Fellow, College of Social Science and Public Affairs, Boise State University, *Environmental Variability and Landscape Dynamics in Saharan North Africa and the Northern Rocky Mountains*.
- 2010 Center for Teaching and Learning Travel Award, Boise State University, travel to Teaching Climate Change from the Geologic Record Workshop, University of Wyoming, Laramie.
- 2007 Faculty Research Award, College of Social Science and Public Affairs, Boise State University, *Interdisciplinary Applications of Isotope Geochemistry: Dating Climate Change and Paleobiotic Evolution*.
- 2007 Faculty Research Award, College of Social Science and Public Affairs, Boise State University, *Climate Change and Hominid Evolution*.
- 2006 Funds to Support Professional Travel, College of Social Science and Public Affairs, Boise State University, Developing International Geoarchaeology – Second Conference.
- 2005 Faculty Research Award, College of Social Science and Public Affairs, Boise State University, *Global Climate Change and Landscape Evolution*.

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- of the Western Snake River Plain.*
- 2003 Faculty Research Award, College of Social Science and Public Affairs, Boise State University, *Quaternary Stratigraphy and Landscape Evolution in the Upper Missouri Basin, North America.*
- 2002 Faculty Service to Profession Award, College of Social Science and Public Affairs, Boise State University, funded travel to chair professional meeting.
- 1999 International Research and Program Development Fund, Montana State University, *Prehistory of the Nile Valley and Saharan Desert of Egypt.*
- 1987 Analytical Facilities Directorate, Institute for the Study of Earth and Man, Southern Methodist University, *Stable Isotope Analysis of North African Pleistocene Deposits.*
- 1986 Institute for the Study of Earth and Man, Southern Methodist University, *Pleistocene Paleoenvironments Associated with Middle Paleolithic Sites at Bir Tarfawi: Stable Isotope and Sedimentological Studies.*
- 1985 Graduate Student Assembly, Southern Methodist University, *Archaeological Geology and Quaternary Paleoenvironments in the Eastern Sahara Desert, Southern Egypt.*

EXTERNAL FUNDING (GRANTS, PI or Co-PI)

- 2015 National Science Foundation, *Graduate Research Fellowship Program (GRFP)* (Principal Investigator).
- 2012 Bureau of Land Management, National Landscape Conservation System, *Bruneau River Capacity Analysis* (Co-principal Investigator; Lowe, S., Principal Investigator).
- 2006 National Science Foundation, research in Siberia (Russia), Award No. ARC-06319700 (Co-principal Investigator; Ziker, J., Principal Investigator).
- 1998 National Science Foundation, symposium and exhibit planning on Cenozoic geocology, Award No. DRL-9801327 (Co-principal Investigator, Lead Scientist; Sawyer, B., Principle Investigator).
- 1996-2002 Kokopelli Research Fund, *Ice Age Research Program (Director).*
- 1995 National Science Foundation, MONTS-Experimental Program to Stimulate Competitive Research, *Ice Age Paleoenvironments, Paleoclimates of the Northern Rocky Mountains: Pleistocene Stratigraphy and Geochronology of Blacktail Cave and the Centennial Valley, Montana.*
- 1993 Minnesota Department of Natural Resources, *Identification of Geomorphic Features as a Predictive Model for Archaeological Sites* (Co-recipient with Phillips, B.).
- 1987 Sigma Xi, the Scientific Research Society, *Archaeological Geology of Middle Paleolithic Sites in Southwest Egypt.*

HONORS, SCHOLARSHIPS

- 2010 Provost's Excellence in Advising Award, Boise State University.
- 2008 Elected Fellow, Geological Society of America.
- 2006 Promoted to Full Member, Sigma Xi, the Scientific Research Society.
- 2004 Annual Faculty Award: Research, Teaching, and Service, College of Social Science and Public Affairs, Boise State University.
- 1991 Claude C. Albritton, Jr. Award (accomplishment in interdisciplinary research), Institute for the Study of Earth and Man, Southern Methodist University.
- 1989 Elected Associate Member, Sigma Xi, the Scientific Research Society.
- 1989 Weber Graduate Fellowship, Southern Methodist University.
- 1986 Scholarship, Institute for the Study of Earth and Man, Southern Methodist University.
- 1982-1985 Scholarships, Southern Methodist University.
- 1980 Elected Member, Phi Alpha Theta, History Honor Society.

BOOKS

- 2006 *Geoarchaeology: The Earth Science Approach to Archaeological Interpretation.* Second Edition. Yale University Press, New Haven (co-author with Rapp, G.). (5)
- 2005 *The Merrell Locality (24BE1659) and Centennial Valley, Southwest Montana: Pleistocene Geology, Paleontology, and Prehistoric Archaeology.* Bureau of Land Management Cultural Resource Series No. 4, Billings, Montana (first editor with Davis, L.B.). (4)
- 2001 *Mesozoic and Cenozoic Vertebrate Paleontology in the Western Plains and Rocky Mountains.* Occasional Paper No. 3, Museum of the Rockies, Bozeman (editor). (3)
- 1998 *Geoarchaeology: The Earth Science Approach to Archaeological Interpretation.* Yale University Press, New Haven (co-author with Rapp, G.) (three printings). (2)
- 1995 *The Paleo-Indian of Southern St. Louis County, Minnesota: The Reservoir Lakes Complex.* Interdisciplinary Archaeological Studies University of Minnesota Monograph Series, Number 4. Kendall/Hunt Publishing Company (co-author with Harrison, C., Redepinning, E., Aschenbrenner, S., Rapp, G., Jr., Huber, J., and Muholland, S.). (1)

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CHAPTERS IN BOOKS, ENCYCLOPEDIA ENTRIES

- Accepted "Glacial Settings," *Encyclopedia of Geoarchaeology*. Springer, Heidelberg (invited). (34)
- Accepted "History of Geoarchaeology," *Encyclopedia of Geoarchaeology*. Springer, Heidelberg (invited). (33)
- Accepted "Eastern Sahara: Combined Prehistoric Expedition," *Encyclopedia of Geoarchaeology*. Springer, Heidelberg (invited). (32)
- 2014 "Rivers: Environmental Archaeology," *Encyclopedia of Global Archaeology*. Springer, Heidelberg, pp. 6,343-6,351 (invited). (31)
- 2014 "Geoarchaeology," *Encyclopedia of Global Archaeology*. Springer, Heidelberg, pp. 3,008-3,017 (first author with Rapp, G.) (invited). (30)
- 2011 "Alluvial Stratigraphy and Geoarchaeology in the Big Fork River Valley, Minnesota: Human Response to Late Holocene Environmental Change," in L. Wilson (ed.), *Human Interaction with the Geosphere: The Geoarchaeological Perspective*, Geological Society of London Special Publication Volume 352, pp. 109-124 (first author with Rapp, G., and Jing, Z.). (29)
- 2008 "Late Glacial Environments and Paleoecology at Blackwater Draw, Near Clovis, New Mexico, U.S.A.," in *Man-Millennia-Environment*, Sulgostowska, Z., and Tomaszewski, A., eds., Institute of Archaeology and Ethnology, Polish Academy of Sciences, Warszawa, Poland, pp. 79-86 (first author with Wendorf, F., Sears, P.B. and Papazian, E.) (invited). (28)
- 2007 "Surficial Processes and Pleistocene Archaeology: Context, Landscape Evolution and Climate Change," in *Reconstructing Human-Landscape Interactions*, Wilson, L., Dickinson, P., and Jeandron, J., eds., Cambridge Scholars Publishing, Newcastle, pp. 6-36. (27)
- 2006 "Geologic Framework and Glaciation of the Eastern Area," in *Handbook of North American Indians*, Ubelaker, D.H., ed., Smithsonian Institution, Washington D.C., pp. 47-60 (invited). (26)
- 2006 "Geologic Framework and Glaciation of the Central Area," in *Handbook of North American Indians*, Ubelaker, D.H., ed., Smithsonian Institution, Washington D.C., pp. 67-80 (invited). (25)
- 2006 "Geologic Framework and Glaciation of the Western Area," in *Handbook of North American Indians*, Ubelaker, D.H., ed., Smithsonian Institution, Washington D.C., pp. 81-98 (invited). (24)
- 2006 "Late Tertiary to Quaternary Geology and Landscape Evolution along the Western Snake River Plain, Southwestern Idaho," in *A Report of Archaeological Excavations at 10-CN-6, Middle Snake River, Idaho*, Boise State University, Monographs in Archaeology No. 3, pp. 120-139. (23)
- 2005 "Geochronology of Merrell Locality Strata and Regional Paleoenvironmental Contexts," in *The Merrell Locality (24BE1659) and Centennial Valley, Southwest Montana: Pleistocene Geology, Paleontology, and Prehistoric Archaeology*, Hill, C.L. and Davis, L.B., eds., Bureau of Land Management Cultural Resource Series No. 4, pp. 71-77. (22)
- 2005 "Spatial Distribution of Pleistocene and Holocene Faunal Remains, South Block Excavations," in *The Merrell Locality (24BE1659) and Centennial Valley, Southwest Montana: Pleistocene Geology, Paleontology, and Prehistoric Archaeology*, Hill, C.L. and Davis, L.B., eds., Bureau of Land Management Cultural Resource Series No. 4, pp. 23-37. (21)
- 2005 "Geology of Centennial Valley and Stratigraphy of Pleistocene Fossil-Bearing Sediments," in *The Merrell Locality (24BE1659) and Centennial Valley, Southwest Montana: Pleistocene Geology, Paleontology, and Prehistoric Archaeology*, Hill, C.L. and Davis, L.B., eds., Bureau of Land Management Cultural Resource Series No. 4, pp. 39-63. (20)
- 2005 "Prehistoric Archaeology: The Merrell Site Artifact Inventory," in *The Merrell Locality (24BE1659) and Centennial Valley, Southwest Montana: Pleistocene Geology, Paleontology, and Prehistoric Archaeology*, Hill, C.L. and Davis, L.B., eds., Bureau of Land Management Cultural Resource Series No. 4, pp. 103-105 (first author with Herbolt, D.P.). (19)
- 2005 "Geoarchaeology," in *Handbook of Archaeological Methods*, Maschner, H. and Chippindale, C., eds., Altamira Press, Lanham, pp. 1002-1033 (invited). (18)
- 2004 "Deglaciation History and Geomorphological Character of the Region Between the Agassiz and Superior Basins, Associated with the 'Interlakes Composite' of Minnesota and Ontario," in *The Late Paleo-Indian Great Lakes, Geological and Archaeological Investigations of Late Pleistocene and Early Holocene Environments*, Jackson, L. and Hinshelwood, A., eds., Mercury Series Archaeology Paper 165, Canadian Museum of Civilization, pp. 275-301 (co-author with Phillips, B.A.M.). (17)
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- 1981 *An Interdisciplinary Study of a Multi-component Archaeological Site in Western Wisconsin*. Technical Report prepared for the National Science Foundation-Student Originated Studies Grant No. SPI-8004017 (co-author with Fassler, H., Mills, M., Morrow, T., Motivans, K., Neff, S., Weeth, T., and Withrow, T.). (1)

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- 2014 Book Review of "Hunter-Gatherer Behavior: Human Response during the Younger Dryas." *Siberica: Interdisciplinary Journal of Siberian Studies*, v.13, n. 1, pp. 92-96. (10)
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- 2007 Book Review of "Grewingk's Geology of Alaska and the Northwest Coast of America: Contributions Toward Knowledge of the Orographic and Geognostic Condition of the Northwest Coast of America, with the Adjacent Islands." *Siberica: Interdisciplinary Journal of Siberian Studies*, v. 6, n. 1, pp. 114-116. (5)
- 2006 "Pleistocene Ecology and Public Policy." Book Review of "Twilight of the Mammoths: Ice Age Extinctions and the Rewilding of America." *Geotimes*, v. 51, n. 6, p. 48. (4)
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- 2000 Book Review of "Wadi Teshuinat, Paleoenvironment and Prehistory South-Western Fessan (Libyan Sahara)." *Geoarchaeology: An International Journal* v. 15, n. 1, pp. 7-9. (2)
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PUBLISHED ABSTRACTS

- 2015 "Accuracy and Precision of Radiocarbon Dates: Geochemistry and Chronologic Interpretation of Measurements on Pleistocene Vertebrates," *Geological Society of America Abstracts with Program*, v. 47, n. 7., p. 516. (84)
- 2015 "Approaches to Interdisciplinary Graduate Education: Training in the Historical Sciences," *Geological Society of America Abstracts with Program*, v. 47, n. 6, p. 2 (first author with Rapp, G.). (83)
- 2015 "Archaeological Geology of the Sheep Rock Spring Site, Late Pleistocene to Holocene, Missouri River Headwaters Region, Southwest Montana," *Geological Society of America Abstracts with Program*, v. 47, n. 6, p. 2 (co-author with Wilson, M., Rennie, P., and Batten, D.). (82)
- 2014 "Long-term Patterns of Environmental and Climate Change Inferred from Lithostratigraphic and Biostratigraphic Records," *Geological Society of America Abstracts with Program*, v. 46, n. 6, 95. (81)
- 2014 "Application of Geomorphology and Quaternary Vertebrate Paleontology to Infer Long-term Patterns of Landscape Dynamics and Biodiversity," *American Quaternary Association Abstracts*, 23rd Biennial Meeting, Seattle, Washington, p. 62-63. (80)
- 2014 "Multi-scalar Geological and Paleoenvironmental Analysis of the Lindsay Mammoth, Yellowstone Basin, Montana," *American Quaternary Association Abstracts*, 23rd Biennial Meeting, Seattle, Washington, p. 64-65 (first author with Davis, L.). (79)
- 2014 "The Montana Experiment: A Geocological Model for Exploration and Discovery," *Abstracts of the Society for American Archaeology 79th Annual Meeting, Austin, Texas*, pp. 336-7 (first author with Davis, L.). (78)
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- 2012 "Landscape Context of the Lindsay Mammoth, Eastern Montana: Stratigraphy, Geomorphology, and Geochronology," *Geological Society of America Abstracts with Program*, v. 44, n. 7, p. 568 (first author with Davis, L.B.). (76)
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- 2011 "Late Quaternary Environments in the Northern Rocky Mountains: Evidence from Geoarchaeology, Paleontology and Historical Ecology," *Geological Society of America Abstracts with Programs*, v. 43, n. 5, p. 245. (70)
- 2011 "Middle Paleolithic Hominin Lake Environments in Saharan North Africa," *Geological Society of America Abstracts with Programs*, v. 43, n. 5, p. 618 (co-author with Bradbury, C., Kohn, M., Evans, S.). (69)
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- 2011 "Stratigraphy of Quaternary Vertebrate Fossil Localities in the Northern Rocky Mountains," *Geological Society of America Abstracts with Programs*, v. 43, n. 4, p. 9. (67)
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- 2008 "Late-Glacial (Allerod-Younger Dryas) Environments in the Northern Rockies and Great Plains," *American Quaternary Association Program and Abstracts of the 20th Biennial Meeting*, Pennsylvania State University, University Park, Pennsylvania, pp.151-152. (57)
- 2008 "Landscape Evolution on the Northern Great Plains, Montana," *American Quaternary Association Program and Abstracts of the 20th Biennial Meeting*, Pennsylvania State University, University Park, Pennsylvania, pp.49-150. (56)
- 2008 "Variability in a Pleistocene Climate Sequence from Bir Tarfawi, Egypt," *Journal of the Idaho Academy of Science*, v. 44, n. 1, p. 75 (co-author with Bradbury, C.). (55)
- 2007 "Geoarchaeology and Landscape Evolution in Arid Environments," *34th Annual Conference Abstracts, Idaho Archaeological Society*, Boise State University, Boise, Idaho. (54)
- 2007 "Quaternary Environments in North Africa and Global Climate Change," *Abstracts of the Symposium on the Prehistory of Northeast Africa, International Commission of the Later Prehistory of North Eastern Africa*, Poznan, Poland. (53)
- 2007 "Stratigraphy and Sedimentology of Acheulian and Middle Paleolithic Localities at Bir Sahara, Southern Egypt," *Developing International Geoarchaeology, Second Conference*, Cambridge, England. (52)
- 2006 "Late Pleistocene (Rancholabrean) Fauna in the Greater Yellowstone Ecosystem: Geology and Paleobiology," *American Quaternary Association, Program and Abstracts*, 19th Biennial Meeting, Bozeman, Montana, pp. 95-96. (51)

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

- 2006 "Pleistocene Fossil Vertebrates from the Doeden Local Fauna, Miles City, Montana," *American Quaternary Association, Program and Abstracts*, 19th Biennial Meeting, Bozeman, Montana, pp. 170-171 (co-author with Wilson, M. and McDonald, G.). (50)
- 2006 "Glacial Lake Great Falls: Stratigraphic Context and Landscape Ecology of a Pleistocene Lake along the Southwest Margin of the Laurentide Ice Sheet," *Tenth International Paleolimnology Symposium: Past Ecosystem Processes and Human-Environment Interactions*, Duluth, Minnesota, p. 18. (49)
- 2005 "Landscape Evolution and Pleistocene Human Adaptation," *Developing International Geoarchaeology Conference, Programme and Abstracts*, University of New Brunswick, p. 18. (48)
- 2005 "Archaeological Geology in the Northern Rocky Mountains and Great Plains: Allerod-Younger Dryas Stratigraphy and Geomorphology," *Seventh Biennial Rocky Mountain Anthropological Conference, Program and Abstracts*, pp. 30-31. (47)
- 2005 "Chronology and Extent of Glaciation in Western North America and Late Pleistocene Paleoeology," *Ice Age Dynamics and Climate, Earth System Processes 2, Geological Society of America Abstracts with Programs*, No. 1, p. 33. (46)
- 2004 "Pleistocene Paleoenvironments and Archaeological Geology of Egypt," *Geological Society of America Abstracts with Programs*, v. 36, n. 5, p.121. (45)
- 2004 "Mammoth (*Mammuthus*) Fossils in Middle Wisconsin Interstadial (Pre-Last Glacial Maximum) Contexts from the Upper Missouri Basin, U.S.A.," *American Quaternary Association, Program and Abstracts of the 18th Biennial Meeting*, Lawrence, Kansas, p.143. (44)
- 2004 "Late Quaternary Stratigraphy, Geomorphology and Radiocarbon Chronology in the Fort Mandan Region, North Dakota: Landscape Context Linked to the 1804 Winter Camp of Lewis and Clark," *Society for American Archaeology Abstracts with Programs*, 69th Annual Meeting, Montreal, Quebec, p.161 (first author with Karsmizki, K.). (43)
- 2004 "Quaternary Stratigraphic and Geomorphic Contexts in the Northern Rocky Mountains and Upper Missouri Basin," *Geological Society of America Abstracts with Programs*, v. 36, n. 4, p. 12. (42)
- 2004 "Quaternary Stratigraphy and Archaeological Geology along the Missouri River and Geomorphic Contexts Associated with the Lewis and Clark Expedition," *Geological Society of America Abstracts with Programs*, v. 36, n. 4, p. 81. (41)
- 2003 "Pleistocene Stratigraphy and Chronology of the Lower Yellowstone Basin, U.S.A.," *XVI International Quaternary Association Congress, Stratigraphy and Geochronology Session*, Reno, Nevada, *Stratigraphy and Geochronology Session*, Reno, Nevada, p. 228. (40)
- 2003 "Luminescence Dating of Glacial Lake Great Falls, Montana, U.S.A.," *XVI International Quaternary Association Congress, Stratigraphy and Geochronology Session*, Reno, Nevada, *Stratigraphy and Geochronology Session*, Reno, Nevada, p. 228 (co-author with Feathers, J.). (39)
- 2003 "Mammoth (*Mammuthus*) within the Upper Missouri and Yellowstone Basins, North America: Chronology, Stratigraphy, and Paleoeology," *Third International Mammoth Conference. Occasional Papers in Earth Sciences No. 5*, Paleontology Program, Government of the Yukon, p. 46. (38)
- 2003 "Late Quaternary Landscape Evolution at Lower Portage, Montana: Geomorphology, Stratigraphy, and the Field Notes of William Clark," *Society for American Archaeology Abstracts with Programs*, 68th Annual Meeting, Milwaukee, Wisconsin, p. 124. (37)
- 2003 "Geoarchaeology and Paleoclimate Chronology of the Lower and Middle Pleistocene of the Western Desert of Egypt," *Workshop on Anthropology Abstracts*, National Research Centre, Cairo, Egypt. (36)
- 2003 "Hominid Behavior and the Lower Paleolithic (Acheulian)-Middle Paleolithic Transition in the Western Desert of Egypt," *Workshop on Anthropology Abstracts*, National Research Centre, Cairo, Egypt. (35)
- 2003 "Quaternary Geoarchaeology of the Mediterranean Coast, Egypt," *Workshop on Anthropology Abstracts*, National Research Centre, Cairo, Egypt. (34)
- 2002 "Archaeological Geology and the Abbasianian, Saharan, and Nabtan Pluvials: Chronologic Status of Quaternary Climato-Stratigraphic Units in Egypt," *Geological Society of America Abstracts with Programs*, v. 34, n. 6, p. 183. (33)
- 2002 "Radiocarbon Geochronology and Stratigraphic/Taphonomic Contexts for *Mammuthus* (Mammoth) in the Upper Missouri and Yellowstone River Basins, North America," *Journal of Vertebrate Paleontology*, v. 22, n. 3, p. 65A. (32)
- 2002 "The Last Full Glacial to Interglacial Transition in the Lower Yellowstone Valley, Northern Great Plains," *American Quaternary Association, Program and Abstracts*, 17th Biennial Meeting, Anchorage, Alaska, p. 67. (31)
- 2002 "Late Quaternary Stratigraphy and Radiocarbon Chronology from the Lower Marias River Valley, Northern Montana," *American Quaternary Association, Program and Abstracts*, 17th Biennial Meeting, Anchorage, Alaska, p. 68. (30)
- 2001 "Pleistocene Stratigraphy, Chronology, and Taphonomy of a Typical Mousterian (Middle Paleolithic) Site in Saharan North Africa," *Geological Society of America Abstracts with Programs*, v. 33, n. 6, p. A294. (29)

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

- 2001 "Dating Middle and Late Wisconsin Episode Stratigraphic Sequences in the Rockies and Missouri Plateau: Luminescence and Radiocarbon Chronologies," *Geological Society of America Abstracts with Programs*, v. 33, n. 6, p. A287 (co-author with Feathers, J.). (28)
- 2000 "Middle and Late Wisconsin Paleoenvironments in the Rocky Mountains Based on the Lithostratigraphy and Geochronology of Cave Deposits," *American Quaternary Association Program and Abstracts*, 16th Biennial Meeting, Fayetteville, Arkansas, p. 67. (27)
- 2000 "Stratigraphy of Pleistocene Deposits along the Southwestern Margin of the Laurentide Ice Sheet," *American Quaternary Association Program and Abstracts*, 16th Biennial Meeting, Fayetteville, Arkansas, p. 68. (26)
- 2000 "Upper Pleistocene Stratigraphy and AMS Radiocarbon Chronology of Fossil-Bearing Cave Deposits, Dearborn Drainage, Montana," *Geological Society of America Abstracts with Programs*, v. 32, n. 5., p. A11. (25)
- 1999 "Lithostratigraphy and Stable Isotopes in a Pleistocene Basin: Sedimentary and Geochemical Responses to Climate Change," *American Association of Petroleum Geology, Rocky Mountain Section Meeting Abstracts*, p. A5-A6. (24)
- 1999 "Pleistocene Paleoenvironments in the Rocky Mountains: Glacial and Lacustrine Stratigraphic and Geomorphic Contexts in Centennial Valley," *Geological Society of America Abstracts*, v. 31, n. 4, p. A-16. (23)
- 1999 "Geologic Context of the Acheulian and Middle Paleolithic in the Nile Valley," *Geoarchaeology Symposium, Society for American Archaeology Abstracts*, Annual Meeting, Chicago, Illinois, p. 139 (first author with Wendorf, F.). (22)
- 1998 "Geomorphic, Stratigraphic, and Taphonomic Contexts of Mammoth Fossils within the Upper Missouri and Yellowstone Drainages, Rocky Mountains and Great Plains," *Geological Society of America Abstracts*, v. 30, n. 7, p. A-386. (21)
- 1998 "American Mastodon (*Mammot americanum*) from the Doeden Gravels, No. 2 Terrace, Lower Yellowstone River." *American Quaternary Association Abstracts*, 15th Biennial Meeting, Puerto Vallarta, Mexico, p. 180. (20)
- 1998 "Late Pleistocene Pluvial Environments near Clovis, New Mexico; Geoecologic Inferences based on Lithostratigraphic, Paleobiotic, and Radiocarbon Evidence." *American Quaternary Association Abstracts*, 15th Biennial Meeting, Puerto Vallarta, Mexico, p. 181 (first author with Wendorf, F.). (19)
- 1998 "Geoecologic Perspective for Late Pleistocene Human Presence within the Rocky Mountain-Glacial Lake Great Falls Corridor, Montana," *Late Pleistocene-Early Holocene Population Movements in the Americas: The Peopling of a Continent Symposium, 63rd Annual Meeting of the Society of American Archaeology Abstracts*, Seattle, Washington, p. 143. (18)
- 1998 "Blacktail Cave Stratigraphy, Paleontology, and Archaeology: First Montanans Research in the South Dearborn Drainage, Montana." *Abstracts of the 51st Annual Northwest Anthropological Conference*, University of Montana, Missoula, p. 23 (co-author with Davis, L.B.). (17)
- 1997 "Geomorphic Response to Late Cenozoic Tectonic and Climate Change within the Cehyan River Drainage, Southeast Turkey," *Geological Society of America Abstracts with Programs*, v. 29, n. 6, pp. A-345. (first author with Eissenstat, C.). (16)
- 1997 "Middle Pleistocene Hominid Adaptations and Paleoclimate Chronologies in the Sahara," *Journal of Human Evolution*, v. 32, n. 4, p. A9 (first author with Wendorf, F.). (15)
- 1996 "Stratigraphy and Geochronology of Blacktail Cave: Pleistocene Environments in the Rocky Mountains Near the Laurentide Ice Margin," *Geological Society of America Abstracts with Programs*, v. 28, n. 7, p. 206. (14)
- 1996 "Lithostratigraphy and Geochronology of Deposits Containing Pleistocene Fossils, Centennial Valley, Montana," *American Quaternary Association Abstracts*, 14th Biennial Meeting, Northern Arizona University, Flagstaff, Arizona, p. 167 (first author with Albanese, J.P.). (13)
- 1995 "Geologic Context for Upper Pleistocene Artifact-bearing Deposits, Northwestern Plains, Montana," *Current Geoarchaeological Research in the Plains Symposium, Program and Abstracts of the 53rd Annual Plains Conference*, Laramie, Wyoming, pp. 83-84. (12)
- 1995 "Stratigraphic and Climatic Context of Upper Pleistocene Faunas from the Centennial Valley, Southwest Montana," *Geological Society of America Abstracts*, v. 27, n. 4, p. 14 (first author with Davis, L.B. and Albanese, J.P.). (11)
- 1995 "Quaternary Stratigraphy and Geomorphic Context for Paleoindian Occurrences in Northeastern Minnesota," *Archaeology, Geomorphology, and Paleoenvironment: Paleoindian Occupations in the Western Great Lakes Symposium, 60th Annual Meeting of the Society for American Archaeology Abstracts*, Minneapolis, Minnesota, p. 94. (10)
- 1994 "Implications of Abandoned Shoreline Features Above Glacial Lake Duluth Levels Along the North Shore of the Superior Basin in the Vicinity of the Brule River," *American Quaternary Association Program and Abstracts of the 13th Biennial Meeting*, University of Minnesota, Minneapolis, p. 148. (9)
- 1994 "Taxonomic Character of Lower Paleolithic (Acheulian) Artifact Sets from Bir Tarfawi in Saharan Africa," *American Quaternary Association Program and Abstracts of the 13th Biennial Meeting*, University of Minnesota, Minneapolis, p. 218. (8)
- 1993 "Geologic Context of Acheulian Artifacts in Saharan Egypt," *Society for American Archaeology 58th Annual Meeting Program and Abstracts*, St. Louis, Missouri, p. 64. (7)

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

- 1993 "Archaeological and Pleistocene Geology of Acheulian and Middle Paleolithic Sites in the Bir Tarfawi Region of the Southern Egyptian Sahara," *Dissertation Abstracts International*, v. 54, n. 2. (6)
- 1992 "An Analysis of Temperature Variation During the Late Holocene," *American Quaternary Association Abstracts*, University of California, Davis, p. 43 (co-author with Hietala, H.J.). (5)
- 1991 "Paleoclimatic Dynamics in the Eastern Sahara (North Africa) Based on Late Quaternary Sediments Containing Acheulian and Middle Paleolithic Artifacts," *Geological Society of America Abstracts with Programs*, v. 23, n. 5, p. 356 (first author with Wendorf, F.). (4)
- 1986 "Late Quaternary Lithostratigraphy and Geochronology of the Mustang Springs Archaeological Site," *Geological Society of America Abstracts with Programs*, v. 18, p. 637 (first author with Meltzer, D.J.). (3)
- 1985 "Coastal Change at Tel Michal, Israel," *Geological Society of America Abstracts with Programs*, v. 17, p. 694 (co-author with Rapp, G., Jr. and Gifford, J.). (2)
- 1985 "Final Pleistocene and Holocene Pollen Stratigraphic Sequence from the Cloquet River Area, St. Louis County, Northeastern Minnesota," *Geological Society of America Abstracts with Programs*, v. 17, p. 610 (first author with Rapp, G., Jr. and Huber, J.). (1)

COURSES TAUGHT

Boise State University

Introduction to Environmental Studies (undergraduate)
Quaternary Paleontology (undergraduate)
Introduction to World Prehistory (undergraduate)
Environmental Anthropology (undergraduate)
Quantitative Methods/Statistical Methods (graduate)
Quaternary Vertebrate Paleontology (undergraduate)
Human Evolution and Paleoanthropology (undergraduate)
Human Paleoecology (undergraduate)
African Prehistory (undergraduate)
European Prehistory (undergraduate)
Geoarchaeology (undergraduate)
Geoarchaeology and Paleoecology (undergraduate/graduate)
Quaternary Paleoenvironments (undergraduate/graduate)
North American Paleoenvironments (graduate)
Ice Age Mammals of North America (undergraduate/graduate)
Mammoths and the Great Ice Age (undergraduate/graduate)
Field Methods in Archaeology (undergraduate)
Old World Prehistory (undergraduate)
Prehistory of Egypt (undergraduate/graduate)
Mesoamerican Archaeology (undergraduate)
Archaeology of North America (undergraduate)
Prehistory of North America (undergraduate)
Senior Practicum-Portfolio (undergraduate)
Environmental Studies Senior Project I and II (undergraduate)
Introduction to Archaeology (undergraduate)

Montana State University

Quaternary Environments (graduate)
Paleobiology (graduate)

Tulane University

Human Origins (undergraduate)
Prehistory of North America (undergraduate/graduate)

Combined Prehistoric Expedition (directed by Wendorf, F.)

Techniques in Saharan Archaeology (archaeological field school, Nabta, Egypt)

Teaching Assistantships, Southern Methodist University

Geochronologic Methods: Archaeomagnetic Dating (taught by Eighmy, J., SMU at Taos)
Geochronologic Methods: Radiocarbon and Thermoluminescence (taught by Haynes, C.V., Jr., SMU at Taos)
Archaeology Field School (taught by Crown, P., SMU at Taos)

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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PROFESSIONAL ASSOCIATIONS AND AFFILIATIONS, SERVICE

Fellow, *Geological Society of America (GSA)*, joined 1984

Divisions

Archaeological Geology

Environmental and Engineering Geology

Quaternary Geology and Geomorphology

Archaeological Geology Division Service

Chair, 2001-2002

First vice chair, 2000-2001

Second vice chair, 1999-2000

Management board, 1999-2003, 2011-2015

Division section liaison, 2007-2015

Secretary-treasurer, 2011-2015

Richard Hay Award selection committee, 2013

Joint Technical Program Representative, 2002/3-2003/4

Pardee Review Panel, 2004

Member, *American Quaternary Association (AMQUA)*

Executive Committee, Board of Directors, Treasurer (2014-2015)

Member, *Society for American Archaeology (SAA)*, since 1982

Co-organizer (chair), Geoarchaeology Interest Group (GIG), 2003-2005

Committee member, Douglas C. Kellogg Fund for Geoarchaeological Research, 2003-2006

Chair, Douglas C. Kellogg Fund for Geoarchaeological Research, 2005-2008

Organizer and chair, 2003 Fryxell Symposium

Registered Professional Archaeologist (RPA)

Lifetime Member, *Society for Archaeological Science (SAS)*

Member, *Ecological Society of America (ESA)*

Sections: Paleocology, Biogeosciences, Natural History

Member, *Society of Vertebrate Paleontology (SVP)*

2001 Host Committee national meeting; Co-leader of 2001 Cenozoic field conference

Member, Geochemical Society

Member, International Association of Geochemistry

Member, Paleoanthropology Society

Past Global Changes (PAGES)

Geoarchaeology Working Group, International Association of Geomorphologists

OTHER SELECTED PROFESSIONAL OR COMMUNITY SERVICE

Host Committee, *American Society for Environmental History* 2008 annual meeting

Trustee, Kokopelli Archaeological Research Fund (1998-2002)

Member, Scientific Committee, Mountain Resources and their Response to Global Change,

Mountain Research Initiative, 2012 Conference, Ankara University, Turkey (2012)

Member, external review team, Department of Earth and Environmental Systems, Indiana State University (2013)

Board of Directors, Mores Creek Water District, Boise County, Idaho

Member (2006-2009), Secretary-treasurer (2007-2008), Chair (2008-2009)

EDITORIAL BOARD/EDITORIAL ADVISORY BOARD

Scientific American Discovering Archaeology (1999-2001)

Idaho Archaeologist (2003-2014)

Geology

PEER REVIEWER/REFEREE

Geoarchaeology

Radiocarbon

Quaternary International

Archaeometry

Archaeological and Anthropological Sciences

Journal of Archaeological Method and Theory

Geomorphology

Quaternary Science Reviews

Canadian Journal of Earth Sciences

Journal of Paleolimnology

Environmental Engineering and Management Journal

Idaho Archaeologist

Research Council of Canada

National Science Foundation (Reviewer and Panelist)

European Science Foundation

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS

FEBRUARY 18, 2016

EXTERNAL INSTITUTES/WORKSHOPS

- Participant*, Summer Workshop and New Deans Institute, Council of Graduate Schools, Portland, Oregon (12-16 July, 2014).
- Presenter*, Long-Term Biodiversity and Landscape Evolution: Conservation Paleoecology, Contemporary Issues in Environmental Science, Workshop for High School Environmental Studies Teachers, Boise State University (25 May, 2013)
- Presenter*, Environmental Change: Climate and Human Activity, Osher Lifelong Learning Institute, Boise State University (10 and 17 September, 2013)
- Presenter*, Environments, Evolution and Extinction, Osher Lifelong Learning Institute, Boise State University (9 September, 2012)
- Participant*, Summer Workshop and New Deans Institute, Council of Graduate Schools, Boston, Massachusetts (7-11 July, 2012).
- Participant and Team Leader*, Science Education for New Civic Engagements and Responsibilities (SENCER) 2011 Institute, National Center for Science and Civic Engagement, Butler University, Indianapolis, Indiana (21-25 July, 2011).
- Participant*, Teaching Climate Change from the Geologic Record, University of Wyoming (10-12 August, 2010).
- Presenter and Participant*, Teaching Paleontology in the 21st Century, Cornell University and the Paleontological Research Institute (30 July-6 August, 2009).
- Participant*, Weather, Sea Level Rise and Climate Change Workshop, College of Exploration (3-23 November, 2008).
- Presenter*, Long-Term Ecology: Lewis and Clark Expedition and Natural History, Osher Lifelong Learning Institute, Boise State University (9 September, 2008).
- Participant*, Science Education for New Civic Engagements and Responsibilities (SENCER) 2008 Institute, National Center for Science and Civic Engagement, Santa Clara University (8-11 August, 2008).
- Participant*, Teaching Climate Change with Ice Core Data (Teaching Climate Change: Lessons from the Past), Pennsylvania State University (2-3 June, 2008).
- Participant*, Earth Science Literacy Initiative Workshop, College of Exploration (12-23 May, 2008).
- Presenter and Participant*, Egypt-U.S. Workshop on Anthropology, Cairo, Egypt 2008 (25-28 August, 2003).

SELECTED BOISE STATE UNIVERSITY INSTITUTES, CONFERENCES OR WORKSHOPS

- Panelist*, Idaho Conference on Graduate Education (31 July, 2014).
- Participant*, (Successfully!) Teaching Our Middle Eastern Student Population (31 January, 2014).
- Participant*, Visualizing Data through the Creation of Infographics Workshop (8 November, 2013).
- Panelist*, Summer Mobile Learning Institute (23 May, 2013).
- Presenter*, Pacific Northwest LSAMP Conference (1 March, 2013).
- Key Note Panelist*, B Mobile Day (26 September, 2012).
- Presenter*, Summer Institute, Teaching and Learning in a Mobile Environment (21-25 May, 2012).
- Participant*, STEM Service Learning: How Service-Learning Can Address NSF Broader Impacts (9 February, 2012).
- Participant*, Assessment Think Tank for Foundational Studies (22 February, 2012).
- Participant*, Digital Resources for Enhancing Instruction and Engaging Students (12 February, 2012).
- Participant*, Great Ideas for Teaching and Learning Symposium - Mobile Learning Table Topics: Drop in Event (10 January, 2012).
- Participant*, Great Ideas for Teaching and Learning Symposium Concurrent Session 2: Going Mobile: What's different About Teaching and Learning with Mobile Devices? (10 January, 2012).
- Participant*, An Introduction to Team Based Learning (19 December, 2011).
- Participant*, STEM Service Learning: Cultivating Public Partners for Outreach Projects (17 December, 2011).
- Participant*, Service-Learning in Large Classes (5 October, 2011).
- Participant*, Introduction to Service-Learning (8 September, 2011).
- Participant*, Disciplinary Lens Course Design Institute (May 7, 2011).
- Participant*, Great Ideas for Teaching and Learning Symposium: Food for Thought Presentation (10 January, 2011).
- Participant*, Foundations Program Implementation Retreat (1 January, 2011).
- Participant*, Level 4: Grade Center in Blackboard 9 (7 July, 2010).
- Participant*, Level 3: Assessments in Blackboard 9 (6 July, 2010).
- Participant*, Service-Learning and Sustainability (17 March, 2010).

MUSEUM EXHIBITS, MONTANA STATE UNIVERSITY

- Science Advisor, "Landforms/Lifeforms"
- Curator, "Mammoths and the Great Ice Age"
- Chief Scientist for Planning, "Mammals and Mountains"

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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SELECTED PUBLIC PRESENTATIONS, PANELS AND POSTERS

- 2015 "The Great Ice Age Extinction Experiment," *Climate and Society* Plenary Lecture, Boise State University (October 12)
- 2014 "How Fossils Changed the World," *The Idea of Nature*, Boise State University (October 9).
- 2013 "Evidence for Pre-Clovis Human Activity Associated with a Mammoth in Late Pleistocene Eastern Montana," Santa Fe, New Mexico (second author with L.B. Davis and K. Krasinski) (October 17).
- 2013 "Long Term Evolution of Ecosystems: Climate, Human Activity, and Environmental Change," *Northwest Evolution, Ecology, and Human Behavior Symposium*, Boise State University (April 20).
- 2012 "Ice Age Co-Stars: Horses, Camels, and Cheetahs," *Science Friday, National Public Radio* (September 28).
- 2012 "The Darwinian Revolution: The Nature of Science and the Science of Nature," *Interdisciplinary Explorations: The Idea of Nature*, Boise State University (April 26).
- 2011 "Environmental Change in the Rocky Mountains of North America: Landscape Evolution and Historical Ecology," *People and Nature in Mountains: Changing Land Use and Landscape Dynamics*, Museum of Natural History and Archaeology, Norwegian University of Science and Technology, Trondheim, Norway (September 21).
- 2010 "Quaternary Faunal Environments and Biogeography," *On the Cutting Edge Workshop, Teaching Climate Change from the Geologic Record*, University of Wyoming, Laramie (August 12).
- 2010 "Climate and Paleobotany—200,000 Years of Environmental Change Using Pollen Analysis," *On the Cutting Edge Workshop, Teaching Climate Change from the Geologic Record*, University of Wyoming, Laramie (August 12).
- 2008 "Extinctions and Environmental Response to Global Warming in Western North America," *Focus the Nation Research Symposium: The Science Behind Climate Change*, Boise State University, Boise, Idaho (January 30).
- 2008 "Landscape Change in North Africa and the Middle East: Past Climates and Human Adaptations," *Focus the Nation Research Symposium: The Science Behind Climate Change*, Boise State University, Boise, Idaho (January 30).
- 2008 "Global Change in Siberia: Past and Present Human-Caribou/Reindeer Interaction," *Focus the Nation Research Symposium: The Science Behind Climate Change*, Boise State University, Boise, Idaho (co-author with Ziker, J.) (January 30).
- 2007 "Global Climate Change: The Science, the Impact, and the Effort to Educate—from an Anthropological Perspective," Earth Week at Boise State University, Boise, Idaho (April 26).
- 2005 "The Great Ice Age: Prehistoric Archaeology and Environments," 17th Annual Idaho Archaeology and Historic Preservation Month (May 4).
- 2002 "Mammoths," Dialogue for Kids, Idaho Public Television (Nov. 18).
- 2003 "Prehistoric Life and the Great ice Age in Western North America," 15th Annual Idaho Archaeology and Historic Preservation Month (May 1).
- 1998 "Prehistoric Life in the Great Ice Age: Blacktail Cave and Other Discoveries," Stone Age Fair, Loveland, Colorado (September 26).
- 1997 "Late Cenozoic Paleobiology, Geoecology, and Environmental Change," West Texas A&M University, Canyon, Texas.
- 1996 "Glacial Dynamics, Proglacial Lakes and Geoecology along the Southern Margin of the Laurentide Ice Sheet," *Second Annual Conference of Ecology and Evolution*, Montana State University, Bozeman, Montana.
- 1996 "Ice Age Environments of the American Mammoth Steppe," Institute for the Study of Earth and Man, Southern Methodist University, Dallas, Texas (April 25).
- 1992 "Ice Age Lakes of the Sahara," Geology Seminar, University of Minnesota, Duluth, Minnesota (December 17).

SELECTED UNIVERSITY SERVICE AND ASSOCIATIONS AT BOISE STATE UNIVERSITY

Co-Chair, Graduate Student Research Symposium Committee, 2014

Member, Fellowship Selection Committee, Student Research Initiative Program, 2012-2015

Member, Advisory Committee, Student Research Initiative Program, 2012-2015

Chair, Distinguished Thesis Committee, 2012-2015

Team Member, Extend Mobile Learning Initiative; Project Lead, mProgram, 2012-2013

Faculty Advisor, Fall Mobile Learning Symposium Planning Committee, 2012

Science Friday Planning Committee, 2012

Advisor, Graduate Residential Studies Program Club, 2012-2015

Interdisciplinary Studies Program Committee, 2012-2015

Faculty Senate, Spring 2012

M-Learning Scholar (Mobile Learning Scholar), 2011-2012

Service Learning Courses, 2011-2012

Curriculum Committee, College of Social Science and Public Affairs (Environmental Studies/Anthropology), 2010-2012

Environment and Society Research Cluster, Arts and Humanities Institute, 2010-2014

Faculty Liaison, Concurrent Enrollment Program, 2010-2012

Graduate Faculty Representative, Ph.D. and Master's Committees, 2010, 2012-15

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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Co-Coordinator, Geoarchaeology Major, 2007-2012
Organizing and Planning Committee, Focus the Nation, 2007-2008
Promotion and Tenure Committee, College of Social Science and Public Affairs, 2005-2006, 2007-2008, 2009-2010
Associate Coordinator, Center for Applied Archaeological Science, 2006-2013
Dean Search Committee, College of Social Science and Public Affairs, 2006-2007
Research-Service-Teaching Awards Committee, College of Social Science and Public Affairs, 2006
Internship Coordinator, Environmental Studies Program, 2005-2012
Student Union Board of Governors, 2004-2006
Faculty Sponsor, Undergraduate Research and Professional Practice Conference, 2004, 2006, 2008, 2009, 2011
Faculty Affiliate/Advisor, Environmental Studies Program Committee (Interdisciplinary Degree), 2003-2015
Advisor, Archaeological Students Association, 2002-2012
Canadian Studies Advisory Board, 2002-2012
Dean Evaluation Committee, College of Social Science and Public Affairs, 2005
Environmental Science and Public Policy Research Institute, 2004-2005
Research Awards Committee, College of Social Science and Public Affairs, 2004, 2005
Teaching Awards Committee, College of Social Science and Public Affairs, 2003-2004
Graduate Faculty (Interdisciplinary Studies and Anthropology Master's, Geoscience Ph.D Supervisory Committees, Member or Chair

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

MARK G. PLEW

CURRICULUM VITAE

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Boise State University
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3389 Crosspoint Avenue
Boise, Idaho 83706
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EDUCATION:

- 1985 Ph.D., Indiana University, Degree in Anthropology with Archaeological emphasis and minors in Geography (Don C. Bennett) and Museology. Dissertation: "A Prehistoric Settlement Pattern for the Owyhee Uplands, Idaho." Wesley R. Hurt, Chair
- 1974 M.A., Indiana University, Archaeology. Master's Thesis: "The Fremont Culture: A Re-Evaluation." Wesley R. Hurt, Advisor
- 1972 B.A., Indiana University, Bloomington Indiana, Major in Anthropology, minor in Latin American Studies. James H. Kellar, Advisor

PROFESSIONAL DEVELOPMENT:

- 2007-present Director, Archaeological Field School Program, Denis Williams School of Archaeology, University of Guyana
- 2006-present Graduate Coordinator, Department of Anthropology, Boise State University
- 2002-present Research Affiliate, Iwokrama, International Centre for Rainforest Conservation and Development
- 2002-2012 Chair, Department of Anthropology, Boise State University
- 1995-present Director, Center for Applied Archaeological Science (CAAS), Boise State University
- 1994-present Professor, Department of Anthropology, Boise State University
- 1996-present Co-Director, Desert Studies Institute, Boise State University
- 1997-present Member, Science Advisory Board, Walter Roth Museum of Anthropology, Ministry of Culture, Republic of Guyana
- 1987-present Research Affiliate, Amerindian Research Unit, University of Guyana
- 1982-present Research Associate, College of Southern Idaho Coordinator, Anthropological Research Facility (now Center for Applied Archaeological Science)
- 2002-2006 Director, Canadian Studies Program, Boise State University
- 1996-2000 Associate Chair, Department of Anthropology, Boise State University
- 1992-1996 Associate Professor of Anthropology
- 1990 Founding Chair, Department of Anthropology, Boise State University
- 1987 Associate Professor, Department of Sociology, Anthropology and CJA, Boise State University
- 1986 Assistant Professor, Department of Sociology, Anthropology and Criminal Justice Administration, Boise State University

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1985-1988	Vale District Archaeologist Consultancy, Bureau of Land Management, Vale, Oregon. Developed Cultural Resource Management Program for one of the largest BLM districts in the west. Assisted with Governor's Oregon Trail Protection Plan. Community outreach in Oregon and Idaho
1984-1985	Visiting Professor, Department of Sociology, Anthropology and Criminal Justice Administration, Boise State University
1982	Instructor in anthropology, Department of Sociology and Anthropology, Idaho
1981	Lecturer in anthropology, Idaho State University.
1980-1983	Special Lecturer in anthropology, Department of Sociology, Anthropology and Criminal Justice Administration, Boise State University
1977-1982	Research archaeologist, Idaho State Historical Society. Assisted the Idaho State Coordinator and field representative for various CRM activities. Researcher and writer with community service responsibilities
1977-1985	Partner/President, Idaho Archeological Consultants, Cultural Resource Management firm operating in Idaho, Wyoming, Nevada and Oregon. The firm performed work for a wide range of clients including federal, state and private companies such as the Idaho Power Company. In 1980 Idaho's largest private archaeological cultural resource firm.
1977-1979	Instructor in anthropology, Department of Societal and Urban Studies, Boise State University
1974	Instructor, general anthropology and museum methods, Indiana University Museum
1975-1976	Graduate Research Assistantship in archeology, Indiana University, Indiana University Museum

AREAS OF SPECIAL INTEREST:

Archaeology of Western North America, particularly the Great Basin and northern Southwest
South American archaeology, Northern Amazonia, Northeastern Brazil, Guyana
Theoretical and methodological interests include: Hunter-Gatherers, human ecology, ethnobiology, optimality theory, diversity/organizational studies, lithic and ceramic analysis

COURSES TAUGHT:

General Anthropology, History of Anthropology, Mesoamerican Archaeology, African Prehistory, North American Archeology, Geoarchaeology, Old World Prehistory, Museum Methods, Cultural Anthropology, Hunters and Gatherers, North American Indians, Physical Anthropology, Human Variation, Human Evolution, Idaho Archaeology, South American Archaeology, Introductory Archaeology, Indians of South America, Archaeological Field School, South American Culture History, History and Theory in Anthropology (graduate), Hunter-Gatherer Ethno-archaeology (graduate), Advanced Archaeological Field Methods (graduate)

LANGUAGES/TOOL SKILLS:

French/reading
Portuguese/Spanish reading
German reading, speaking
Computer Science and Statistical Applications

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PROFESSIONAL SOCIETIES:

Member, Society for American Archaeology
Member, Plains Conference
Member, Idaho Archaeological Society, Lifetime member
Member, Idaho Advisory Council of Professional Archaeologists
Member, American Association for the Advancement of Science
Elected Member, New York Academy of Science, 1980
Member, Idaho Academy of Science

LINGUISTIC FIELD EXPERIENCE:

1974 Southern Paiute, Mexican Hat, Utah (under the supervision of C.F. Voegelin)
1974 Shawnee, Bloomington, Indiana (under the supervision of C.F. Voegelin)

ETHNOGRAPHIC EXPERIENCE:

1995 Wapishana, Rupununi Savannahs, Guyana, study of native fishing strategies
1993 Macushi Informants, Cyril Potter College of Education, Guyana
1987 Pitjandjara Informants, South Australia, (under supervision of Norman Tindale)

HONORS, AWARDS and RECOGNITIONS:

2011 Finalist, University Distinguished Professorship
2005 Honored Professor, Phi Kappa Phi
2004 Honored Professor, Alumni Top Ten Scholars
2003 Honored Professor, Phi Kappa Phi
2001 University Foundation Scholar, Research, Boise State University
2000 Finalist, University Foundation Scholar Award, Research, Boise State University
2000 Elected, Phi Kappa Phi
1999 Honored Professor, Phi Kappa Phi
1999 Finalist, University Foundation Scholar Award, Research, Boise State University
1997 Honored Faculty Member, Honors Program
1997 Nominated for University Foundation Scholar Award, Research, Boise State University
1997 Nominated for University Foundation Scholar Award, Service, Boise State University
1997 Honored as Nominee for Outstanding Advisor to an Academic Club, Associated Students of Boise State University
1997 Honored Faculty Member, Top Ten Scholars Awards, Boise State University Alumni Association
1996 Nominated for University Foundation Scholar Award-Research
1996 Honored as Coach for a Game, Boise State University Athletic Department
1995 Honored Faculty Member, Honors Program
1994 Honored Faculty Member, Honors Program
1993 Finalist, Associate Vice President for Academic Affairs, Boise State University
1988 Listed as one of 20 experts in the United States in use-wear analysis, International Directory of Use-wear Analysts, Germany
1977 Academic Scholarship, Indiana University Graduate School
1976 Fellowship, Indiana University Graduate School
1974 Fellowship in Linguistics and Archaeology, Indiana University Graduate School Fellowship
1974 Assistantship in Archaeology, Museum of Northern Arizona

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1974 Grant-in-Aid for Doctoral Research, Indiana University Advanced Studies and Research Program

SELECTED CONSULTANCIES: FEDERAL, STATE, PRIVATE and ACADEMIC:

Federal (1975-present)

U.S. Bureau of Land Management, Vale District, OR	Payette National Forest
U.S. Bureau of Land Management, ID: Boise District	National Park Service
Shoshone District	Craters of the Moon National Monument
Idaho Falls District	Farmers Home Administration
State Office	U.S. Air Force, Clearfield, Utah
U.S. Bureau of Land Management, Wyoming State Office	U.S. Air Force, Mountain Home, ID
U.S. Army Corps of Engineers	Bureau of Indian Affairs
U.S. Forest Service: Idaho, Utah, Oregon, Indiana	U.S. Fish and Wildlife
Boise National Forest	Federal Highway Administration
	Ogden Regional Office
	Oregon Regional Office
	Wayne-Hoosier National Forest

State and Local Consultancies

Three Island Crossing State Park	Idaho State Historical Society Ralston and Associates, Boise, ID
Massacre Rocks State Park	Horseshoe Bend Hydroelectric Co. Idaho
Nez Perce State Park	Department of Law Enforcement Idaho
J-U-B Engineering, Boise, Twin Falls, ID	Forensics Laboratory
Mutual Energy Company, Sacramento, California	Idaho Department of Fish and Game
CH2M Hill, Boise and Corvallis Offices: Idaho and Oregon	Idaho Department of Corrections
Idaho Power Company	Lincoln County Sheriff's Department
Consulting Associates Inc., Boise, ID	Boise County Sheriff's Department
AGI Construction, Boise, ID	Office of the U.S. Attorney for Idaho
Idaho Army National Guard	Division of Highways
Church of Jesus Christ of Latter Day Saints	Lombard-Conrad Architects
Small Business Center, BSU	Malad State Park
	Celebration Park

Public/Private Sector and International Consultancies

Association for the Humanities of Idaho	Fallon Paiute Tribes
Educational Television, Channels 4, 20	Professional Analysts, Portland, OR
Bingham Engineering, Salt Lake City, UT	General Electric, Seattle
Envirosafe, Inc.	Powers Engineering, Inc.
Henningson, Durham and Richardson, Santa Barbara, CA	Turning Point, Nampa
Myers Engineering, Boise, ID	Simplot Company
Utah Power and Light, Salt Lake City	Micron Technology, Inc.
Wildish Construction, Portland, OR	Kinross Mining Company
Bonneville Power, Seattle, WA	Ecologistics, Inc., Ontario, Canada
Guysuco, Inc., Georgetown, Guyana	Professional Services Industries
Shoshone-Paiute Tribes	Ziontz, Chestnut, Varell, Berley and Slonim Attorneys at Law, Seattle
BSR Architects	ENVIRON International Corporation

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Academic Consultancies

College of Southern Idaho	University of New Mexico
University of Idaho	Museum of Northern Arizona
Idaho State University	South Australian Museum
Washington State University	University of Guyana
Utah State University	Universidad Federal de Bahia
Treasure Valley Community College	University of Colorado, Colorado Springs
Indiana University	Walter Roth Museum of Anthropology
University of California, Davis	

UNIVERSITY, COLLEGE AND DEPARTMENT SERVICE:

2015	Member, COAS, Faculty Awards Committee
2015	Member, SSPA P and T Committee
2013	Chair, Department P and T Committees
2012	Member, SSPA Promotion and Tenure Committee
2012	Member, Department Faculty Search Committee
2012	Member, Department P and T Committee
2011	Member, SSPA Associate Dean Search Committee
2010	Chair, SSPA Distinguished Professor SSPA sub-Committee
2009	Member, Adjunct Faculty Committee
2009	Member, International Programs Advisory Committee
2008	Member, Basque Studies Committee
2007	Member, Deans Search Committee
2007	Member, SSPA Charting the Course Committee
2007	Member, Senate Grievance Committee
2006	Member, Internationalization Task Force, sub-chair
2006	Member, Internationalization Advisory Committee
2005	Member, President's Water Initiative Project
2005	Member, International Programs Advisory Committee
2005	Member, Civic Engagement Committee
2004	Chair, Deans Evaluation Committee
2004	Member, SSPA Awards Committee
2004	Member, American Democracy (Civic Engagement) Project Steering Committee
2004	Member, Internationalization Committee
2004	Member, SSPA PT Task Force Committee
2003	Member, Associate Dean Search Committee, SSPA
2003	Member, Promotion and Tenure Task Force
2003	Chair, University Foundations Scholars Selection Committee, Research
2003	Member, International Business Advisory Committee
2000	Boise State University Representative, Wings and Roots Tribal Consultation Program, Idaho Army National Guard, United States Air Force
2000	Member, Undergraduate Research Initiative Advisory Board
2000	Member, Promotion and Tenure Committee, SSPA
2000	Member, Deans Evaluation Committee
2000	Member, Deans Search Committee, SSPA
1998	Faculty Representative, Alumni Affairs Strategic Planning Committee
1998	Boise State University Representative, Wings and Roots Tribal Consultation Program, Bureau of Land Management
1997	Faculty Sponsor, Athletic Department Mentoring Program
1997	Faculty Representative, Alumni Affairs Strategic Planning Committee
1997	Athletic Hall of Fame Selection Committee

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1997 Co-Director, Desert Studies Institute (summer studies program)
 1996 Member, SSPA Annual Report Committee
 1996 Member, Project Access Advisory Committee, College of Social Science and Faculty Senate Representative
 1996 Senator, Faculty Senate, Graduate School
 1996 Member, Graduate Council
 1995 Member, Graduate Faculty
 1994 Chair, College Tenure and Promotion Committee
 1994 Member, Cultural Diversity Committee
 1994 Member, Multi-Ethnic Committee
 1994 Member, Human Rights Committee with responsibility of Martin Luther King Week
 1994 Member, Editorial Board, *Idaho Issues*, College of Social Science and Public Affairs
 1993 Acting Senator, Faculty Senate, College of Social Sciences and Public Affairs
 1993 Member, President's Strategic Planning Committee
 1993 Chair, Faculty Senate Faculty Development Committee
 1993 Academic Orientation, Football Program
 1993 Editor, *Anthropology Newsletter*
 1993 Member, Dean's Search Committee
 1992 Academic Orientation, Football Program
 1992 Member, Faculty Senate Faculty Development Committee
 1992 Member, SSPA, Technology Committee
 1991 Chair, College Tenure and Promotion Committee
 1991 Faculty Representative, CSSPA, Discover BSU Day
 1991 Member, Frank Church Conference Planning Committee (Public Affairs)
 1991 Academic Orientation, Football Program
 1991 Member, CSSPA, Consulting/Training Activities Committee
 1990 Faculty Representative, SSPA, Discover BSU Day
 1990 Member, College Tenure and Promotion Committee
 1990 Member, Faculty Salary and Promotion Committee
 1990 Member, Dean's Evaluation Committee
 1990 Liaison, Idaho State University, Cooperative Anthropology Program
 1990 Founding Chair, Department of Anthropology
 1990 Co-Chair, Native American Policy Committee
 1998 College Representative, College of Social Science and Public Affairs, Faculty Research Advisory Committee, 1988-92
 1988 Member, Internship Committee
 1988 Faculty Luncheon Speaker
 1988 Coordinator, Anthropology, Department of Anthropology, Sociology and Criminal JA
 1988 Lecturer/Participant, Hemingway Scholars Program
 1988 Lecturer/Participant, Honors Program
 1987 Member, Hemingway Editorial Advisory Board, Western Studies Publications
 1987 Editor, *Cultural Resource Reports*
 1987 Special Activities Chair, WASA Conference
 1987 Editor, *Anthro BSU*
 1986 Member, SSPA, Publication Committee
 1985 Member, Indian Arts Committee
 1985 Editor, *Idaho Archaeologist*
 1985 Member, College Tenure and Promotion Committee
 1985 Member, Speakers Bureau
 1984 Coordinator, Anthropology, Department of Anthropology, Sociology and CJA
 1984 Member, Hemingway Western Studies Committee
 1985 Academic Advisor, Anthropology Club, 1985-89, 1996-2012

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PROFESSIONAL SERVICES ACTIVITIES:

Member, Idaho Advisory Council of Professional Archaeologists
Research Associate, Herrett Museum, College of Southern Idaho
Research Associate, Amerindian Research Unit, University of Guyana
Member, Science Advisory Board, Walter Roth Museum, Ministry of Culture, Guyana
Member, Board of Directors, Idaho Archaeological Society
Boise State University Representative, Idaho Archaeological Survey Advisory Board
Member, Advisory Council of the Washington Archaeological Research Center
Boise State University Representative, BLM Wings and Roots Consultation
Boise State University Representative, Idaho Army and Air National Guard and U.S. Air Force, MHAFB Wings and Roots Program
Representative, Pacific Northwest Canadian Studies Consortium Executive Committee
Founder and Chair, Idaho Archaeology Working Group
Affiliate, Iwokrama, International Centre for Rainforest Conservation and Development
Affiliate, Walter Roth Museum of Anthropology
Affiliate, Amerindian Research Unit, Faculty of Social Sciences, University Guyana

EDITORSHIPS:

Editor, *Idaho Archaeologist*
Editor, *Cultural Resource Reports*, Boise State University
Editor, *Cultural Resource Reports*, Center for Applied Archaeological Science
Co-editor, *Archaeology and Anthropology*, Journal of the Walter Roth Museum of Anthropology
Managing Editor, *Occasional Papers and Monographs in Cultural Anthropology and Linguistics*
Editorial Board, *Monographs in Archaeology*

REVIEWERSHIPS:

Reviewer, *American Antiquity*, *American Anthropologist*, *Plains Anthropologist*, and *Journal of Field Archaeology*, *Journal of Archaeological Science*
Reviewer, *Journal of the American West*
Reviewer, Kendall-Hunt Reviewer, Wadsworth
Publishing Reviewer/Essayist, Mayfield
Publishing Company Reviewer, Wenner Gren Foundation
Reviewer, National Science Foundation

SERVICE AS AN EXPERT WITNESS

2003- Expert Witness, Indian Child Well Fare Cases, Idaho Department of Health and 2001
2001 Expert Witness, Spirit Cave Mummy Repatriation Case, NAGPRA Board Harvard Law School, on behalf of the Fallon Paiute Tribe
1992 Expert Witness, Stoddard Property Case, Idaho State Supreme Court
1993 Expert Witness, Ted Bundy Idaho Investigation Case
1982 Expert Witness, Charbeneau Murder Trail

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COMMUNITY SERVICE:

Idaho Conservation League
High Desert Committee
Sierra Club
Association of Retarded Citizens
Easter Seal/Goodwill
Goodwill Industries
Vista Neighborhood Redevelopment Agency
Boise Paint-the-Town (BSU Co-Organizer 4 years)
The Nature Conservancy

SUMMARY OF FIELD RESEARCH:

2015 PI, Test Excavations at 10-EL-215, Boise State University Field School
2015 PI, Duck Valley Road Project, Shoshone-Paiute Tribe
2015 PI, DAGIR Survey, Idaho Army National Guard
2014 PI, Excavations at 10-EL-1367
2013 PI, Excavations at 10-EL-215
2012 PI, Archaeological Excavations at 10-EL-215
2011 PI, Monitoring of the Saylor Creek Training Range, Tallons, Inc.
2011 PI, Excavations of the Siriki Shell Mound, Northeastern Guyana
2010 PI, Survey of Bara Bara Shanale, MCYS
2010 PI, CRMP Project, Idaho Army National Guard
2010 PI, Boise National Forest Tests
2008 PI, 106 Criteria Project, Idaho Army National Guard
2007 PI, Test Excavations at 10-CN-5
2007 PI, M3 Eagle Project, M3 Company
2007 PI, M3 Eagle Project
2007 PI, Kabakaburi Project, University of Guyana
2007 PI, Danskin Landing, Forest Service
2007 PI, Cow Hollow Project, Oregon BLM
2007 PI, Cow Hollow Park Project, BLM
2007 PI, Cow Creek Project, BLM
2006 PI, Kuna Waster Water Project, Keller Associates
2006 PI, Cascade Wastewater Project, Keller Associates
2006 PI, Black Creek Development Project, Materials Surveying and Testing
2006 PI, Test Excavations at 10-CN-6, Canyon County Parks and Recreation
2006 PI, Services Contract, Idaho Army National Guard
2006 PI, Red Ridge Project, Secesh Engineering
2006 PI, Osprey Ridge Development Project, Materials Surveying and Testing
2006 PI, Nicholson Land Exchange, Bureau of Land Management
2006 PI, KV38 Power Line Extension—Duck Valley, Armstrong Engineering
2006 PI, Cow Creek Project, Oregon Bureau of Land Management, Vale
2006 PI, Blackhawk South Development Project, Secech Engineering
2006 PI, Sperry Wind Power Project, Carol Sperry
2006 PI, Nicholson Land Exchange Addendum, BLM

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2006 PI, Duck Valley Airport Extension Project
2005 PI, Sinker Creek Road Project, Canyon County
2005 PI, Simco Road Project, Synthetic Energy, Inc.
2005 PI, Falcon Crest Survey, Materials Testing and Inspection
2005 PI, Cascade Water Project, City of Cascade
2005 PI, Blackhawk Survey Project, McCall, Idaho, Secesh Engineering, Inc.
2005 PI, Archaeological Test Excavations at 10-VY-7, McCall, Idaho
2005 PI, Donnelly Wastewater Treatment Facility, Keller Associates, Meridian
2005 PI, Test Excavations at the North Fork Rockshelter, Vale District BLM
2005 PI, Site Monitoring, Saylor Creek, MHAFFB
2004 PI, Excavations at Little Owl Cave, Malheur County, Oregon, BLM
2004 PI, Grandview to Duck Valley Powerline Survey, Powers Engineering
2004 PI, EUA Site Monitoring, Saylor Creek Range, Prewitt and Associates (USAF)
2004 PI, Cascade Common Land Owners Boatdock Expansion, Common Land Owners
2003 PI, Jug-Mountain 2-5 Phase Survey, Secesh Engineering
2003 PI, Eagle-Pitcher Diatom Mine Survey, Southeast Oregon
2003 PI, Excavations at 10-CN-6
2003 PI, Camas Creek Archaeological Survey, Tallons Inc.
2003 PI, Bull Creek Rockshelter Evaluation, Southeastern Oregon, BLM
2003 PI, Antelope Overhang Project, Southeastern Oregon, BLM
2003 PI, OTA Engineering Training Area Project, IDARNG
2003 PI, Archaeological Survey of Aishalton Rock Sites, Guyana
2003 PI, OTA Screening Project, IDARNG
2003 PI, OTA Range 22 Assembly Project, IDARNG
2003 PI, Excavations at 10-CN-6
2002 PI, Excavations at 10-EL-216, Idaho Power Company
2002 PI, PSI Tower Projects
2002 PI, OTA Surveys, IDANG
2002 PI, Wallin Farms Project, Marsing
2002 PI, Survey and Excavations on the Essequibo River, Guyana
2002 PI, Testing of site 10-EL-438, Idaho Power Company
2002 PI, Archaeological Survey of Toka North Rupununi, Guyana
2002 PI, Survey of the Iwokrama Mountains, Guyana
2002 PI, Greenleaf Water Project, City of Greenleaf
2001 PI, Excavations at 10-CN-6, Southwest Idaho
2001 PI, Rain Gauge Project, OTA, IANG
2001 PI, Archaeological Survey of the Shulinab Area, South Rupununi
2001 PI, Collections Processing, Idaho Transportation Department
2000 PI, Test Excavations at 10-EL-1577, King Hill, Idaho
2000 PI, Tadpole Lake Experimental Fairy Shrimp Harvest Project
2000 PI, Smut Fence Project, Idaho Army National Guard
2000 PI, Simplot Right-of-Way Project, Simplot Company
2000 PI, Simco Land Exchange, LDS Church and BLM
2000 PI, Shiriri Mountain Project, Guyana, Walter Roth Museum
2000 PI, Kuna Communications Project, Professional Services Industries
2000 PI, Glens Ferry Communications Tower Project, PSI, Inc.
2000 PI, Envirosafe Land Exchange Survey, Envirosafe
2000 PI, BSU West Expansion, BSU Small Business Center
2000 PI, Simplot Water Line Projects, Simplot Company
2000 PI, Parole Visitors Center Project, Lombard-Conrad Company
2000 PI, Excavations at Wyva Creek, Government of Guyana,
1999 PI, Skeldon Estate Cultural Heritage Project, Guyana, Ecologistics
1999 PI, North Lake Project, Keller and Associates
1999 PI, Marsing-Rupert Project, Keller and Associates

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1999 Investigator, OTA Water Project, Idaho Army National Guard
1998 Project Director, Integrated Cultural Resource Management Plan, IANG
1998 Project Director, Star Postal Facility Project, U.S. Postal Service, Denver
1998 Project Director, ICRMP Planning Survey, Department of Defense, IANG
1998 PI, Orchard Training Area Survey, Idaho Army National Guard
1998 PI, Military Training Areas Survey Phase II, IANG
1998 Project Director, Silver City Historical Exhibit Project, Kinross Mining Company
1998 PI, Florida Mountain Monitoring Project, Kinross Mining
1998 PI, Excavations at 10-CN-5, South West Idaho
1997 PI, Simplot Road Expansion Project.
1997 PI, Florida Mountain Monitoring Project.
1997 PI, Excavations at 10-CN-5
1997 PI, Delamar Mines Projects
1996 Tait Aggregate Project, Mountain Home, Idaho
1996 PI, OTA Archaeological Survey, Ada County, Idaho
1996 PI, Military Lands Survey, Eastern Idaho
1996 PI, Intermountain Gas Line Project
1996 PI, Delamar Mine Wetlands Project
1996 PI, Delamar Mine Exploration Project
1996 PI, Delamar Line Project
1996 Co-Investigator, Excavations at 10-CN-1, Southwest, Idaho
1995 Shrub Rehab Project, BLM/Kinross Mining Company
1995 PI, Stephens Land Exchange Project, BLM
1995 PI, Simplot Right-a Way Project, Grandview Idaho
1995 PI, North Fork Payette Hydroelectric Project, Myers Engineering
1995 PI, Kuna, Horseshoe Bend and Glenns Ferry Water Projects, Ida-Ore
1995 PI, Delamar Mine Project, Kinross Mining Company
1995 PI, Cascade Water Line Project, Water District
1995 Co-Investigator, with Camille Sayer, Test Excavations at Hammett Site, Elmore County,
1995 Co-Investigator with Camille Sayer, Test Excavations at 10-AA-12, 10-AA-14, 10-AA-188, 10-AA-189, Bureau of Land Management
1995 Air Monitoring Site Project, Micron Technology, Inc.
1994 PI, Star Water District Project. Kellar Associates, Inc.
1994 PI, Placerville Timber Sale Project, Bureau of Land Management
1994 PI, Idaho National Guard BPNRA Survey
1994 PI, Idaho Falls FmHA Project
1994 PI, G and B Redi Mix Project, Middleton, Idaho
1994 PI, Donnelly Water Project Survey, Ida-Ore Planning and Development
1994 PI, Cold Springs Farm BLM-Right-A-Way Project
1994 PI, Cascade Revitalization Project, Ida-Ore Planning
1994 PI, Cable Upgrade Project, Geological Survey, Water Resources Division, Birds of Prey Area
1994 PI, Turning Point Project Survey, Nampa, Turning Point Inc.
1994 PI, Key Bank, Locust Grove Project Survey, BRS Architects
1994 PI, Archaeological Survey of the Randy Jones Farm Inventory, Bannock and Oneida Counties, FmHA
1994 Co-Investigator with Camille Sayer, Excavations at 10-EL-392
1994 Co-Investigator with Camille Sayer, Excavations at 10-AA-256
1993 Project Director, I-84 Plant Sites Survey at Milepost 107 near Hammett, Idaho. Wildish
1993 Project Director, Baker Borrow Dump Locations, Hammett, Idaho Wildish Land Co.
1993 Project Director, Wilson-Baker-Borrow Project. Wildish Land Company
1993 Project Director, Kanaka Rapids Transmission Line Survey, Myers Engineering, Boise
1993 Project Director, I-84 Water Line and Access Road Survey, Hammett, Idaho, Wildish
1993 PI, Test Excavations at 10-PE-22, Payette County, Idaho. Anderson Perry and Associates, La Grande, Oregon

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1993 PI, FHA Property Survey, Preston, Idaho
1993 PI, Ethnographic Research with Wapishana of Southern Guyana
1993 PI, Ethnographic Research in the Rupununi Savannah, Guyana
1993 Project Director, Neighbors-Brown Borrow Source Project, Hammett, Idaho
1993 PI, BLM 416 Fire Rehab Survey, Elmore County, Idaho
1993 PI, Boulder Rapids Transmission Line Survey, Myers Engineering
1992 Project Director, Wellfield Fire REHAB, Boise BLM
1992 Project Director, U-3 Hydro Project, Ida-West
1992 Project Director, Test Excavations at 10-TF-319, Myers Engineering
1992 Project Director, Smith Land Exchange Survey and Excavations, Elmore County, Idaho
1992 Project Director, Castle Creek CRI Survey, BLM, Boise
1992 Project Director, Black Ridge Fire REHAB, Shoshone BLM
1992 Project Director, AGI Construction Project
1992 PI, Horseshoe Bend Hydro Project, HSB Hydroelectric Company
1992 PI, Excavations at 10-GG-1, BSU
1991 Project Director, Three Creek Well Fire REHAB
1991 Project Director, Stanford Ranch Survey, FHA
1991 Project Director, Snow Creek Survey, U.S. Air Force
1991 Project Director, Shrub Fire REHAB, BLM
1991 Project Director, RRMP Fire REHAB, BLM
1991 Project Director, Kanaka and Empire Survey and Testing, Myers Engineering
1991 Project Director, Glanzman and McArthur Surveys, FHA
1991 Project Director, Dewitt-Feller Survey, FHA
1991 PI, U.S. Air Force Snow Creek Survey
1991 PI, Mile 28 Hydro Project, Jerome, Idaho, Powers Engineering
1991 PI, Idaho Power Prison Transmission Line Survey, Idaho Power
1991 PI, Bliss Dam Road Survey, Idaho Power
1991 PI, Bliss Archaeological Project
1991 PI, Auger Falls Hydro Project, J-U-B Engineers
1990 Project Survey, Carl Willie Property Survey, Malad, FHA
1990 Project Director, Malad High Drop Hydroelectric Project, Consulting Associates Inc.
1990 Project Director, Lazy CH Property Survey
1990 Project Director, GW Farm Survey, FHA
1990 Project Director, Fuller-Dewitt Survey, Montpelier, FHA
1990 Project Director, Faust Property Survey, FHA
1990 Project Director, Brownlee Campground Expansion, Idaho Power
1990 Project Director, Arco Area Farm Properties Survey, FHA
1989 Project Director, Moores Spring Investigation, Forest Service
1989 Project Director, Danskin Shelter Project, U.S. Forest Service
1989 Project Director, Brownlee Land Exchange Project, BLM
1989 Co-Researcher, BIA, Duck Valley Reservation Historical Overview, 1989-91
1988 Project Director/PI, Florida Mountain Project
1988 Project Director, Clover Creek Archaeological Project, (ISHPO, BLM)
1988 Director, Three Island Archaeological Project
1988 Director, Broken Wagon Fire REHAB Project, BLM
1988 Director, BLM Inventory Project
1988 Archaeologist, Magic Dam Project
1987 Project Director-PI, South Mountain Archaeological Project
1987 Project Director, Three Island Archaeological Project
1987 Project Director, Fire REHAB Surveys, Southwestern Idaho
1987 Project Director, Dike Hydroelectric Project
1987 Project Director, Clover Creek Project
1987 Archaeologist, Eagle Fish Hatchery Locality Project, Corps of Engineers
1987 Archaeologist, Dietrich Hydroelectric Project

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1986 Project Director, Three Island Crossing
 1986 Project Director, BLM Surveys in Oregon
 1986 PI, Baker Caves, BLM, Shoshone, Idaho
 1986 Library Collections Research, University of Guyana, Georgetown
 1986 BLM Project Director, Oregon and Idaho
 1985 PI, Surveys in SE Oregon for BLM, Vale, Oregon
 1984 PI, Test Excavations at Lowman, Idaho
 1984 PI, Cultural Resource Evaluations near Riggins, Idaho
 1984 Member, O Central Project, Northeastern Brazil. Wesley R. Hurt, Alan L. Bryan and Ruth Gruhn, Directors
 1984 Consultant, Surveys in SE Oregon for BLM, Vale District
 1983 PI, Test Excavations at 10-OE-1844, BLM
 1983 PI, Excavations at Rock Creek Hydroelectric Project
 1983 PI, Cultural Resource Evaluation at Goose Creek. J-U-B Engineer
 1982 Project Director, Archaeological Excavations at 10-TF-527, Twin Falls County, Idaho
 1982 Project Director, Archaeological Excavations at 10-OE-2488
 1982 Co-Investigator, with K.M. Ames, Excavations at 10-BNO-1, Banks, Idaho
 1982 Archaeological Survey of the Pershing II--Idaho Site Cultural Resource Survey. Corps of Engineers
 1981 Project Director, Archaeological Survey of the East and South Forks of the Owyhee
 1981 Archaeological Survey of the Seedsdakee Wildlife Refuge, Wyoming
 1980 Project Director, Archaeological Test Excavations at Bliss, Idaho
 1980 Project Director, Archaeological Survey at Southeastern Idaho
 1979 Project Director, Southcentral Owyhee County Archaeological Survey. Idaho State Historical Society
 1979 Project Director, Excavations of Nahas Cave, Idaho State Historical Society
 1979 Project Director, Excavation of the Confluence Site (10-OE-1973). Idaho State Historical Society
 1979 Consulting Archaeologist, Archaeological Survey of Idaho Power's 12.5 KV U.G. Cable Line from Bear to Cuprum, Idaho. U.S. Forest Service Contract.
 1978 Project Director, archaeological survey of Pole Creek, Owyhee County, Idaho. Idaho Historical Society Project.
 1978 PI, archaeological excavations at Camas and Pole Creeks, Owyhee County, Idaho. Bureau of Land Management and Idaho Historical Society
 1978 Field Archaeologist, archaeological reconnaissance of south central Owyhee County, Idaho. Idaho State Historical Society Project
 1978 Co-investigator, with Michael Ostrogorsky, cultural resource evaluations of the proposed Dike and Wiley Dam projects, Snake River Canyon near Bliss, Idaho. Edaw, Inc.
 1978 Archaeologist, test excavations at the V.A. ground extension site, Boise, Idaho. Idaho State Historic Society Project
 1978 Archaeologist, evaluation of the Twin Falls Municipal Airport extension. J-U-B Engineers
 1977 PI, archaeological test excavations of sites in the Boise National Forest
 1977 PI, archaeological survey and reconnaissance, Boise National Forest
 1977 Field Supervisor, Pacific Power and Light Line Survey, Southwestern Idaho
 1977 Field Director, archaeological test excavations at the Fargo Wasteway Site, Homedale, ID
 1977 Field Archaeologist, test excavations along the Clearwater River, Northern Idaho. Highway Archaeology Program
 1977 Field Archaeologist, supervising survey team from State Highway Archaeology Program
 1977 Field Archaeologist, archaeological survey in Pole Creek, Owyhee County, Idaho. Idaho State Historical Society
 1977 Co-investigator with Max G. Pavesic, archaeological survey of the proposed Council
 1976 Project Director, Land Exchange Survey, Boise National Forest, Boise, Idaho
 1976 Project Director, Archaeological Survey of the Field Group and Little Valley Desert Land Entries, for U.S. Bureau of Land Management
 1976 Field Director, archaeological test excavations, La Grande, Oregon
 1976 Field Director, archaeological test excavations at Johnson's Creek, Valley County, Idaho. U.S. Forest Service

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- 1976 Field Director, Archaeological Survey of the Payette Lake Sewer Line Project
- 1976 Field Director, archaeological survey of proposed geothermal sites near Vale, Oregon
- 1976 Field Archaeologist, cultural resource inventories of proposed land exchanges
- 1976 Acting State Highway Archaeologist
- 1975 Project Director, Archaeological Survey of the Camas Creek Drainage, Owyhee County, Idaho. Cooperative effort between Boise State University and the Indiana University Museum and Bureau of Land Management
- 1974 Field Archaeologist, U.S. Forest Service Survey, Wayne-Hoosier National Forest, Monroe County, Indiana. Indiana Historical Society Project
- 1974 Field Archaeologist, U.S. Forest Service Survey, Wayne-Hoosier National Forest, Perry County, Indiana. Indiana Historical Society Project
- 1974 Field Archaeologist, Cedar Mesa Project, Museum of Northern Arizona, University of British Columbia Project, Southeastern Utah
- 1972 Archaeologist, Tipi ring study near Williston, North Dakota
- 1972 Archaeologist, surveys in eastern and southern Utah. Masters research, re-survey of portions of James Gunnerson's 1957 survey of the Fremont area
- 1970 Visitation of archaeological sites in the United States, Canada, Europe, Mexico and Africa
- 1970 Part-time crew member, test excavations in the lower Illinois River Valley, Northwestern University
- 1970 Crew member, excavations at the Ingram Site, Monroe County, Indiana, IU Museum
- 1970 Archaeological Surveys in Monroe County, Indiana
- 1969 Student crew member, archaeological surveys and test excavations, Glenn A. Black Lab of Archaeology, Indiana University. Experience with Archaic, Woodland and Mississippian components in Indiana
- 1969 Archaeological Methods and Techniques, classroom, lab and field archaeology, Indiana
- 1967 Student at Indiana University Field School. Excavations at Yankeetown Site, Indiana

CONTRACTS AND GRANTS:

-
- 2016 OTC Expansion Project, Idaho Army National Guard, \$145,000
 - 2016 Collections Processing, Idaho Transportation Department, \$5,000.00
 - 2015 DAGIR Project, Idaho Army National Guard, \$33,000
 - 2015 Duck Valley Road Project, \$2500
 - 2014 Carbon Isotope Analysis of Faunal Remains from Shell Mounds in Northwestern Guyana. World Bank. US \$50,000
 - 2014 Archaeological Excavations at Warapana Shell Midden. Ministry of Culture, Youth and Sport, Republic of Guyana. \$3500
 - 2014 Archaeological Test Excavations at Tunnel Hill, Sawtooth National Forest. \$10,000
 - 2013 Archaeological Excavations at Karanambu, Status: Funded, Investigators: Plew, M. G. (Principal), Primary Sponsor: Republic of Guyana. \$3000
 - 2013 Hatwai Analysis, Idaho Department of Transportation, \$5000
 - 2013 Danskin Analysis, Boise National Forest, \$5000
 - 2012 Continuation of INCRMP Study, Idaho Army National Guard, \$5000
 - 2012 Analysis of Danskin Rockshelter, \$18,000
 - 2011 Excavations at Siriki Shell Mound, Government of Guyana, G\$398,000
 - 2010 Testing of site 10-EL-438, Idaho Power Company, \$6000
 - 2010 ICRMP Project, Idaho Army National Guard, \$47,000
 - 2011 Excavations at Wyva Creek, Government of Guyana, G\$300,000
 - 2010 Survey of Bara Bara Shanale, MCYS, G\$ 350,000
 - 2010 Boise National Forest Tests, BSN, \$10,000
 - 2010 Danskin Site Analysis, \$12,000
 - 2009 Excavations at 10-EL-216, Idaho Power Company, \$10,000
 - 2008 3 Eagle Project, M3 Company, \$3600
 - 2008 106 Criteria Project, Idaho Army National Guard, \$40,000

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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2007 Crossroads Museum Project (joint BSU/Canyon County project), U.S. Department of Transportation, \$450,000
2007 Danskin Landing Project, U.S. Forest Service, \$4500
2007 Cow Hollow Park Project, BLM, \$16,000
2007 Canyon Crossroads Project, \$45,000
2006 Kimberly Wind Power Project, \$750
2006 Kuna Wastewater Project, \$750
2006 Cascade Wastewater Project, 1200
2006 Duck Valley Airport Extension Project, \$2,000
2006 KV38 Power line Project-Duck Valley Extension, \$7300
2006 Blacks Creek Project, \$3500
2006 Osprey Ridge Development Project, \$3500
2006 Red Ridge Project, \$4000
2006 Nicholson Exchange, \$4000
2006 Nicholson Land Exchange Addendum, \$1700
2006 Blackhawk Development Project, \$1000.00
2006 Cow Creek Project, BLM, Oregon, \$7000
2005 Services Contract, Idaho Army National Guard, \$13,000
2005 Blackhawk Project, \$1200
2005 Stratton Project, \$1200
2005 Synthetic Energy Project, \$500
2005 Falcon Crest Project, \$1800
2005 Dry Creek Development Project, \$3500
2005 Cascade Water Project, \$750
2005 North Fork of Owyhee Test Excavations, \$10,000
2005 MHAFFB Monitoring, \$50,000
2004 Powers Power Line Survey, Powers Engineering, \$28,000
2004 North Fork Owyhee River Project, \$10,000
2004 10-VY-7 Excavations, \$9,000
2004 Consultation Services, USAF, MHAFFB, Prewitt Associates, \$9000
2004 Goodwin Boat Ramp Project, \$500
2003 Orchard Training Area Project/Monitoring, IDANG, \$15,000.00
2003 Archaeological Survey of the Iwokrama Mountains, Iwokrama/European Union, \$3,000
2003 Eagle-Pitcher Diatom Mining Survey, \$5000
2003 Jug Mountain Project, \$750
2003 Antelope Overhang Project, BLM, Oregon, \$10,000
2003 Bull Creek Rockshelter Project, BLM, Oregon. \$10,000
2003 Camas and BA Projects, Tallons Inc., \$2000
2003 Shoshoni-Paiute Field School, U.S. Air Force, \$167,000
2002 Greenleaf Water Project, \$500
2002 Wallin Farms Project, \$1000
2002 PSI Tower Projects, \$7500
2001 IDARNG, OTA, \$13,000
2001 IDARNG, ICRMP Project, \$17,000
2000 Undergraduate Research Initiative Grants, BSU, \$2200
2000 Envirosafe Land Exchange, \$1,000
2000 Communications Tower Projects, \$1200
2000 East Simco Survey, \$15,000
2000 OTA Monitoring Project, 13,000
2000 Simco Land Exchange, \$500
2000 Simplot Water and Land Exchange Projects, \$1500
2000 Lombard-Conrad Architects, \$500
1999 Military Training Area Phase III Project, \$15,000
1999 IANG OTA Contract, \$13,000

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1999 North Cascade Project, Keller and Associates, \$700
1999 Marsing-Rupert Project, Keller and Associates, \$1000
1999 Skeldon Estate Cultural Heritage Project, Ecologistics, Inc. \$5000
1998 IANG OTA Contract, \$15,000
1998 Silver City Exhibit Project, \$15,000
1998 Military Training Area Phase II Survey, \$20,000
1998 ICRMP Project, IANG, DOE, \$17,000
1998 Florida Mountain Monitoring Project, \$2500
1997 State of Idaho Military Division, State Lands Survey, \$50,000
1997 Intermountain Gas Contract, \$350
1997 Tait Aggregate Contract, \$350
1997 City of Riggins Water Project, Birdsall Associates, \$500
1997 Kinross Delamar Road Projects, Kinross Mining, \$1250
1997 IANG OTA Contract, \$13,000
1997 Roswell City Water Project, \$400
1997 Florida Mountain Monitoring Project, \$8000
1997 Simplot Road Project, \$150
1996 Idaho National Guard SBPNRA Project, \$13,000.00.
1996 BLM SRBPNA Project, \$6,000.00
1996 Delamar Projects, Kinross Mining Company, \$3,000.00.
1995 Faculty Research Grant "Fishing Strategies among the Wapishana of Southern Guyana," \$2500
1995 Birds of Prey Cooperative Program Grant, BLM, \$10,000
1995 National Trust for Historic Preservation, \$300
1995 Donnelly Water Line Project, \$1500
1995 Kuna Streets Improvement Project Survey, \$400
1995 BLM/Birds of Prey Cooperative Program, Field School \$5600
1995 Kinross Mining Company Contracts, Delamar, \$3000
1995 Ida-Ore Water Projects, Ida-Ore Inc., \$1500
1995 Micron Technology, Inc. Contract, \$400
1995 Idaho National Guard SBPNRA Project, \$13,000
1995 North Fork Payette Hydroelectric Project, Meyers Engineering, \$1200
1994 Cable Upgrade Project, Geological Survey, BLM, \$300
1994 Star Water Project, Kellar Associates, \$300
1994 Jones Property Project, FmHA, \$2500
1994 Cascade and Donnelly Water Projects, \$900
1994 Anderson and Port Wood Project, FmHA, \$500
1994 Colds Springs Project, BLM, \$300
1994 Placerville Timber Sale Project, Bureau of Land Management, \$5500
1994 G and B Redi Mix Project, \$250
1994 Key Bank Survey Project, BRS Architects, \$250
1994 Turning Point Cultural Resources Survey, \$250
1994 National Guard SBPNRA Project, \$13,000
1993 I-84 Plant Sites Project, Wildish, \$500
1993 I-84 Water Line/Road Access Project, Wildish, \$250
1993 Baker Borrow Dump Project, Wildish, \$250
1993 Nyssa Water Line Project, Anderson, Perry and Associates, \$6000
1993 Nuff Property Survey, FHA, \$2000
1993 416 CRI BLM Fire Rehab Survey, BLM, \$2500
1993 Boulder Rapids Project, Myers Engineering, \$250
1993 Kanaka Rapids Project, Myers Engineering, \$250
1993 Wilson-Baker Borrow Project, Wildish, \$250
1993 Neighbors-Brown Borrow Project, Wildish, \$500
1993 Lava Site Survey, Cloverdale Nursery, \$400
1992 Excavations at 10-GG-1, Faculty Research Grant, \$1900

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1992 Excavations at 10-TF-319, Myers Engineering, \$1200
 1992 Castle Creek CRI Survey, BLM, \$2000
 1992 Survey and Excavations of Smith Land Exchange, BLM, \$3500
 1992 AIG Construction Project, AIG, Boise, \$300
 1992 Black Ridge Survey, BLM, \$9600
 1992 Wellfield Fire REHAB Survey, BLM, \$9250
 1991 Archaeological Assemblage Diversity in the Late Archaic of Southern Idaho. Faculty Research Grant, \$1,950
 1991 Stanford Ranch Project, FHA, \$3500
 1991 Snow Creek Project, U.S. Air Force, \$750
 1991 Fuller Dewitt Project, FHA, \$1600
 1991 Three Creek REHAB Project, \$3400
 1991 Bliss Dam Project, Idaho Power, \$500
 1991 RRMP Fire REHAB Project, BLM, \$2100
 1991 Auger Falls Project, J-U-B Engineers, \$2000
 1991 Kanaka, Boulder and Empire Project, Myers Engineering, \$2750
 1991 Vale Transmission Survey, Idaho Power, \$500
 1991 Shrub Fire REHAB Project, BLM, \$1500
 1991 Excavations and Survey at Horseshoe Bend, Horseshoe Bend Hydroelectric Co., \$14,500
 1991 Duck Valley Project (3 years), 1991-92, \$127,000
 1990 Brownlee Archaeological Survey, BLM, \$16,000
 1990 Idaho Power Brownlee Campground project, \$500
 1990 CW Rim Ranch Investigation, \$350
 1990 Malad High Drop Hydroelectric Project, \$1000
 1990 Bear River Lazy CH Project, FHA, Montpelier, \$1650
 1990 Arco Farms Project, FHA, Arco, Idaho, \$3500
 1990 Robert Faust Property Investigation, Payette, \$350
 1989 Danskin Project, U.S. Forest Service, \$6000
 1989 Danskin Shelter, Historic Preservation Grant, \$ 2000
 1988 BLM Fire Rehab Surveys, \$2500
 1988 Faculty Research Grant, "Three Island Crossing," \$1800
 1988 Clover Creek, Historic Preservation Grant, \$2500
 1988 Florida Mountain Project, CH2M Hill, \$29,500
 1988 BLM Inventory Contract, \$1500
 1988 Three Island Crossing Project, Glenns Ferry, Idaho, Faculty Research Grant, \$1800
 1988 Dam Survey, Idaho Power, \$300
 1988 Magic Dam Project, Myers Engineering, \$700
 1988 Broken Wagon Fire Rehab Project, U.S. BLM, \$1800
 1988 Inventory Project, U.S. Bureau of Land Management, Boise, \$1600
 1987 Corps of Engineers Project, Eagle Hatchery, \$300
 1987 South Mountain Archaeological Project, \$7500
 1987 Dike Hydroelectric Project, \$2750
 1987 Faculty Research Grant, "Ethnoarchaeological Investigations in Southern Guyana," \$2000
 1986 SE Oregon Survey, Vale, BLM, \$7000
 1986 Three Island Crossing, \$5000
 1985 Archaeological Evaluations near Riggins, Idaho. General Electric, \$3,500
 1985 Faculty Research Grant "Archaeology of the Baker Caves," \$1200
 1984 Archaeological Excavations at 10-BO-1, Banks, ID. Federal Highway Commission, \$90,121
 1984 Archaeological Investigations at Goose Creek, J-U-B Engineers, \$1,000
 1984 Test Excavations near Lowman, Idaho, Federal Highway Administration, \$10,000
 1983 Pershing II-Idaho Site Cultural Resource Survey. Corps of Engineers, \$2000
 1983 Archaeological Test Excavations at Rock Creek Hydroelectric Project, J-U-B Engineers, \$2500
 1983 Archaeological Investigations at Auger Falls, Idaho, \$7000

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- 1983 Cultural Resource Survey of Seedskaadee Wildlife Refuge, Wyoming (with M. Ostrogorsky)
\$2500
- 1982 Owyhee River Overview, Research Grant, Idaho State Historical Society, \$15,000
- 1982 Consultant, Class I Inventory of Boise and Shoshone BLM Districts, Professional Analysts,
Portland, \$250
- 1981 Owyhee River Survey, Research Grant, Idaho State Historical Society, \$17,000
- 1981 Archaeological Test Excavations near Bliss, Idaho. Idaho Power Company (with M.
Ostrogorsky), \$127,000
- 1980 Fremont Investigations in Southeastern Idaho, Research Grant, Idaho State Historical Society,
\$9,000
- 1979 Southcentral Owyhee County Archaeological Project, Research Grant, Idaho State Historical
Society, 1979-80, \$9000
- 1978 Archaeological evaluation of the Twin Falls Airport extension, J-U-B Engineers contract, \$150
- 1978 Archaeological excavations at Camas and Pole Creeks, Owyhee County, Idaho. U.S. Bureau of
Land Management contract, \$2395
- 1978 Southcentral Owyhee County Archaeological Project, Research Grant, Idaho State Historical
Society, 1978-79, \$16,000
- 1978 Archaeological Survey of Transmission Line from Bear to Cuprum, Idaho, U.S. Forest Service,
\$1500
- 1978 Archaeological Survey of Wiley and Dike Dam Project, Edaw, Inc. contract, (with M.
Ostrogorsky), \$5000
- 1977 Archaeological clearance of land exchange parcels in the Boise National Forest, U.S. Forest
Service contract, \$1500
- 1977 Archaeological test excavations in the Boise National Forest, U.S. Forest Service contract, \$1300
- 1977 Overview: Prehistory of the Western Snake River Plain, HDR Engineers, Santa Barbara.
Contract, \$250
- 1977 Southcentral Owyhee County Archaeological Project, Research Grant, Idaho State Historical
Society, 1977-78, \$10,000
- 1976 Archaeological survey of the Field Group and Little Valley Desert Land Entries, Owyhee County,
Idaho. U.S. Bureau of Land Management contract, \$1200
- 1976 Archaeological clearance of land exchanges in the Boise National Forest, U.S. Forest Service
contract, \$250
- 1975 Grant-in-aid for Doctoral Research, Indiana University Advanced Studies and Research Program,
\$400
- 1975 Archaeological inventory survey of the Camas Creek Drainage, Owyhee County, Idaho. U.S.
Bureau of Land Management contract, \$8000
- 1974 Archaeological survey of proposed ORV trails in the Wayne-Hoosier National Forest—Monroe
and Perry Counties, Indiana. Indiana Historical Society Grant, \$800

LABORATORY AND COLLECTIONS EXPERIENCE:

- 2000-present, Walter Roth Museum of Anthropology
- 1999 Rupununi Weavers Museum
- 1995 Pitt Rivers Museum, Oxford University
- 1995 Museum of Mankind, Ethnography Division, British Museum
- 1995 Museum of Archaeology and Anthropology, Cambridge University
- 1988 South Australian Museum, Adelaide, Australia
- 1987 Caribbean Studies Library, Georgetown, Guyana
- 1986 Walter E. Roth Museum of Anthropology, Georgetown, Guyana
- 1975 Southwest Idaho Curatorial Center, Boise, Idaho
- 1974 University of Utah Anthropological Collections
- 1974 Museum of Northern Arizona
- 1974 Archeological Collections, Department of Anthropology, Washington State University

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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- 1974 Archaeological, Ethnological Collections, Indiana University Museum
1970 Glenn A. Black Laboratory of Archaeology, Indiana University, 1970-75.

MUSEUM EXPERIENCE:

Special skills include curation and administration, conservation of archaeological materials, computerization of archaeological, ethnological and historical collections.
Research Associate, Museum, College of Southern Idaho.

Ph.D. inside minor in Museology.

- 2000-present Consultant, Walter Roth Museum of Anthropology, Member, Scientific Advisory Board
1999- Consultant, Canyon County Parks and Recreation
1999- Collections and Exhibit Consultant, Walter Roth Museum
1998 Western Canadian Museums, Canadian Studies Grant, Canadian Government
1998 Project Director, "Silver City: A Legacy of Change," Kinross Mining Company
1995 Museum Research, Oxford, Cambridge, British Museum.
1988 Consultant, Masacare Rocks St. Park Exhibit
1987 Visited South Australian Museum for Collections Research.
1987 Visited Museums in Adelaide and Sydney, Australia, summer.
1987 Consultant, Baker Caves Exhibit, College of Southern Idaho and U.S.B.L.M.
1986 Consultant, "Idaho's Heritage," Exhibit and pamphlet, Association for the Humanities in Idaho
1986 Visited Museums in Trinidad and Guyana.
1979 Consultant, "People of the Snake River." Exhibit and monograph preparation supported by grant from the Association for the Humanities in Idaho, 1979-80.
1977 Visited museums in England, Greece and Egypt, 1977-78
1975 Visited museums in Austria, England, France, Germany and Italy, 1975-76.
1975 T.C. Steele State Memorial Museum, Brown County, Indiana.
1975 Indiana University Fine Arts Museum, Bloomington, Indiana.
1975 Graduate Assistantship, Indiana University Museum, 1975-76.
1974 Supervisor, Indiana University Project Team, Indiana. Statewide Ethnological and Historical Bicentennial inventory project, Indiana Museum Association, 1974-75.
1974 Museum of Northern Arizona, Flagstaff, Arizona.
1974 Indianapolis Children's Museum, Indianapolis, Indiana.
1974 Indiana State Museum, Indianapolis, Indiana.
1974 Attended seminar on the methods of ethnological collections inventory at Indianapolis,
1970 Indiana University Museum, Bloomington, Indiana, 1970-76

PROFESSIONAL MEETINGS AND CONFERENCES/INVITED LECTURES:

- 2013 Invited Lecturer, Ministry of Culture, Youth and Sport Annual Lecture, "Recent Archaeological Investigations in the Rupununi Savannahs."
2012 Chair, Idaho Archaeological Society Conference.
2012 Invited Presenter, 3rd International Amazonian Conference, Lima.
2012 Invited Participant, Portable Art Symposium, 79th Annual Meeting of the Society for American Archaeology.
2011 Invited Lecturer, Guyana United Nations Indigenous Peoples Day, "The Prehistory of Guyana's Indigenous Peoples, Ministry of Culture, and Youth Sport.
2011 Recent Discoveries of Pictographic Rock Art in the Rupununi Savannahs of Southern Guyana. Paper presented at the Annual Meeting of the American Rock Art Association.
2011 Chair, Idaho Archaeological Society Conference.

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- 2011 Invited Speaker, Walter Roth Museum of Anthropology “Recent Investigation of the Siriki Shell Mound.
- 2010 Invited Lecturer, Annual Ministry of Culture Lecture, “Recent Discoveries in the Prehistory of Guyana, Guyana National Museum.
- 2010 Invited Presenter, Amazonian Dark Soils Symposium, World Archeological Conference, London.
- 2009 Invited Lecture, “Recent Investigations in the South Rupununi Savannahs,” Walter Roth Museum of Anthropology Series, Georgetown, Guyana.
- 2008 Invited Lecture, “Comments on Prehistoric Guiana,” the Launching of Williams book *Prehistoric Guiana*, Ministry of Culture, Youth and Sport, Georgetown, Guyana.
- 2007 First Walter Roth Museum of Anthropology Lecture: “Recent Investigations in the Rupununi Savannahs, Guyana,” Ministry of Culture, Youth and Sport, Georgetown.
- 2002 Invited Presenter, Ministry of Culture. Republic of Guyana “Guyanese Archaeology,” University of Guyana.
- 2001 Invited Presenter, Workshop: “Archaeological Methods,” Walter Roth Museum and University of Guyana.
- 2000 Invited Presenter, Symposium: “Mobility in the Northeastern Great Basin” 27th Great Basin Anthropological Conference.
- 1999 Participant, Public Meetings Regarding Skeldon Estate Expansion, Skeldon, Guyana.
- 1998 Session Chair, “Historical Issues” and Great Basin Issues, Native American Studies Conference, Boise State University, February 26-28.
- 1998 Co-Chair, 25th Annual Conference of the Idaho Archaeological Society, Boise State University
- 1998 Invited Participant, Carib Studies Conference, Georgetown, Guyana.
- 1997 Session Chair, Historical Issues, Native American Studies Conference, Boise.
- 1995 Session Organizer, Southern Idaho Archaeology, Idaho Academy of Sciences 37th Annual Meeting, Northwest Nazarene College, Nampa.
- 1994 Invited Participant, “The Horse in the Intermountain West,” Boise, Idaho, Idaho Horse Board/ National Endowment for the Humanities.
- 1992 Invited Participant, Symposium: Christopher Columbus and the Conquest of the Americas, Idaho Social Science Teachers Annual Meeting, Boise, Idaho.
- 1991 Invited Participant, Symposium: The Natural and Cultural History of the Snake River Plain, 64th Annual Meeting of the Northwest Scientific Association, Boise State University.
- 1988 Discussant, 1st International Conference on Resource Management, Oregon State University.
- 1988 Chair, Symposium "Aboriginal Fishing in Western North America" 28th Annual Conference of the Western Association of Sociology and Anthropology, Boise.
- 1988 Invited Participant, Snake River Plain Symposium: Prehistory of the Snake River Plain, Idaho Academy of Sciences Meeting, Boise.
- 1988 Co-Chair, Symposium: Prehistory of Southern Idaho and the Snake River Plain. 41st Annual Meeting of the Northwest Anthropological Conference, Tacoma.
- 1988 Chair, Symposium: Snake River Plain Prehistory. Great Basin Anthropological Conference, Park City, Utah.
- 1988 Discussant, Second Western Point Typology Conference, Idaho State University.
- 1988 Co-Chair (with Thomas Green), 15th Annual Meeting of the Idaho Archaeological Society.
- 1987 Participant, First National Conference on Tourism, Georgetown, Guyana.
- 1986 Invited Participant, Second Great Basin/Intermountain Pottery Conference. Idaho State University.

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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TECHNICAL REPORTS:

- 2015 Report on Archaeological Evaluation of the New Meadows Wastewater Reuse System Improvement Project. Report on file, Cascade Engineering, McCall, Idaho.
- 2015 Report on Duck Valley Road Improvement Project. Report on File, Duck Valley Indian Reservation, Duck Valley, Nevada.
- 2014 (with Louisa Daggers) A Cultural Resource Assessment/Archaeological Survey of the Guyana Goldfield Inc. Mining Concession Immediate Impact Zones. Submitted to Guyana Goldfields, Inc., Toronto, Canada.
- 2014 Excavations at Indian Crossing, Near Hammett, Idaho, Report to Dale Hooley.
- 2013 Excavations at Three Island Crossing.
- 2013 Technical Report Identifying the Potential Range of Cultural Resources Within the Aurora Gold Mining Project, Guyana. ENVIRON International Corporation. New York, New York.
- 2012 Report on Archaeological Survey of the Proposed Tribal Headquarters, Duck Valley. Report to the Shoshoni Paiute Tribes.
- 2012 Executive Report on Excavations at Siriki Shell Mound, Report to Guyana EPA.
- 2012 Excavations at Wyva Creek Shell Mound, Northwest, Guyana, Report to MCYS, Guyana.
- 2011 Excavations at Three Island Crossing.
- 2010 Test Excavations near Warm Lake, Boise National Forest, Report to BNF.
- 2010 Test Excavations at Bara Bara Shanale, Northcentral Guyana, Report to Guyana EPA.
- 2010 Excavations at Kabakaburi Shell Mound, Guyana, University of Guyana.
- 2009 Excavations at 10-EL-216.
- 2009 Archaeological Excavations at Cow Hollow, Bureau of Land Management, Vale, Oregon.
- 2008 Evaluation of the Falcon Crest Development Project, Materials Survey and Testing, Boise.
- 2008 Test Excavations at Errol's Landing, Iwokrama Rainforest, Guyana. Report to MCYS.
- 2007 M3 Eagle Project, Report on file, M3 Company.
- 2007 Report on the Falcon Crest Survey, Materials Testing.
- 2007 Report on Dry Creek Development Survey, Materials Testing.
- 2006 Archaeological Excavations at Cow Creek, Cassia County, Idaho, Bureau of Land Management, Burley District.
- 2006 Archaeological Survey of the Blacks Creek Development, Materials Testing and Surveys, Boise.
- 2006 Archaeological Review of Waste Water Collection, West Side Cascade Lake, Keller Engineering.
- 2006 Nickolson Land Exchange, BLM.
- 2006 Nickolson Land Exchange Addendum, Bureau of Land Management.
- 2006 Blackhawk South Development Project, Secesh Engineering, McCall, Idaho.
- 2006 Red Ridge Development Project, Secesh Engineering, McCall, Idaho.
- 2006 Wind Power Generation Project, Twin Falls County, Carol Sperry.
- 2006 (with Chris Willson) A Cultural Resources Survey of the Owyhee Airfield Extension Project. Located on the Duck Valley Indian Reservation, Nevada, Armstrong Engineering, Grand Junction, Colorado.
- 2006 (with Chris Willson) A Cultural Resources Survey of the Duck KV38 Power Line Extension, Raft River Electric.
- 2006 Idaho Air National Guard ICRMP, IANG.
- 2006 Archaeological Survey along the Rupununi River between Karanambu and Yupukari, Southern Guyana. A Report to the Ministry of Culture, Youth and Sport and EPA, Republic of Guyana.
- 2006 Survey in the Vicinity of Aishalton, Government of Guyana.
- 2006 Report on Camas Creek Archaeological Survey, Tallons, Report on Archaeological Evaluation of Sites on the Mountain Home Training Range, U.S. Air Force.
- 2006 A Report on the Cultural Resources Evaluation of the Osprey Ridge Project, Materials Testing and Survey.
- 2005 Report on BA Site, Saylor Range, Tallons, Inc.

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- 2005 Report on Monitoring Sites on the Saylor Creek Range, MHAFB. Archaeological Survey of the Proposed 138Kv Transmission Line, Powers Engineering, Inc.
- 2005 Report on the Blackhawk Survey, Report on File, Secesh Engineering, Inc.
- 2005 A Report on the Survey of Shea Village, Report on File, EPA, Guyana.
- 2005 A Report on the Survey of the North Fork of the Owyhee River, Vale District BLM.
- 2005 A Report on the Survey of the Cascade Water Treatment Facility, City of Cascade.
- 2005 Kuna Wastewater Project, Keller Engineering, Meridian.
- 2004 Preliminary Report on Test Excavations at 10-VY-7, Robert Hunt and Associates.
- 2004 OTA Range 22 Assembly Project, IDANG
- 2003 Report on the Goodwin Boat Ramp Project, Marsing, Idaho.
- 2003 A Report on the Archaeological Evaluation of the Weiser Wetlands Project. Northwest Natural Resource Group
- 2003 Weapons Screening Line Project, Army National Guard
- 2003 OTA Engineering Training Area 2003, IDARNG
- 2003 Report on Women's Prison Facility Project, Lombard Associates
- 2003 Jug-Mountain 2 Survey Project, Valley County, Idaho, Secesh Engineering
- 2003 Archaeological Survey of Diatom Mines, Eastern Oregon, Eagle-Pitcher Mining Co.
- 2002 Report on the West Cascade Project, Kellar Associates
- 2002 Report on the Archeological Survey of the Proposed Mountain Home Water Project, Kellar Associates, Meridian
- 2002 Report on Archaeological Monitoring of Wetlands Modifications, West Rock Project. West Rock Corporation, Los Angeles.
- 2002 Report on Archaeological Survey of the Cinder Pit AA Area, OTA, IDANG
- 2002 Report on the Archaeological Survey of the Cascade Lake Boat Jetty Project. Cascade Property Owners Associations.
- 2002 Report on the Simplot Right-of-Way Project, Report on File, SHPO and Simplot Company
- 2001 Report on Becky Idaho Monopole Site, Report on File, SHPO, PSI
- 2001 Report on Black Canyon Monopole Project, Report on File, PSI Inc., Salt Lake City
- 2001 Report on the C-Line Monopole Site, Report on File, PSI, Inc., Salt Lake City
- 2001 Report on the Archaeological Survey of the Wallin Farm Project, Marsing, Idaho
- 2001 Report on the Chattim Hill Land Exchange, Report on File, Simplot Livestock Company
- 2000 Report on Kuna Communication Tower Project, Report on File, SHPO, PSI
- 2000 Report on Glens Ferry Communication Tower Project, Report on File, SHPO, PSI
- 1999 Report on OTA Water Guzzlers, BLM, IANG
- 1999 Report on North Lake Project, on file, Keller and Associates
- 1999 Report on Archaeological Survey of the Marsing and Rupert Projects, Report on file, Keller and Associates
- 1999 A Cultural Heritage Assessment of the Skeldon Estate Expansion, Guyana, Report on File, Ecologistics, Inc., Waterloo, Canada
- 1999 A Report on OTA Waterline Development, Report on File, IANG, Boise
- 2000 Report on the Archaeological Survey of the Proposed EnviroSAFE Land Exchange, Report on File, EnviroSAFE, Inc.
- 2000 Report on the Simco Land Exchange, Report on File, BLM
- 2000 Report on Archaeological Survey of the Visitors Center Project, Report on File, SHPO, Lombard-Conrad Architects
- 1998 (with Sharon Plager) U.S. Army National Guard Cultural Resources Planning Level Survey, Orchard Training Area, Idaho, Department of the Army
- 1998 (with Sharon Plager) A Report on Monitoring of Type I Cultural Resource Sites within the Stone Cabin Mine Area, Kinross Mining Company
- 1997 Report on the Survey of the Rosswell City Water Project, Report on File, Kellar Associates, Boise
- 1997 Report on Simplot Right-of-Way Project, Report on File, J.R. Simplot Company, Grandview, Idaho

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- 1997 Report on Kinross Borrow Excavations, Report on File, Kinross Mining Company, Jordan Valley, Oregon
- 1997 OTA Demolition Project Report, Report on File, Idaho Army National Guard, Boise
- 1996 Report on Evaluation of the Riggins Water Project, Report on File, Birdsall Associates
- 1996 Report on the Archaeological Survey of the Wetlands Road Right of Way Project
- 1996 Report on the Archaeological Survey of the Mayfield Ingress/Egress Project. Report on File, Bureau of Land Management, Boise
- 1996 Report on the Archaeological Survey of the Delamar Sediments Ponds, Report on File, Kinross Mining Company, Jordan Valley, Oregon
- 1996 Report on the Archaeological Survey of the Intermountain Gas Pipeline Project, Report on File, Intermountain Gas, Boise
- 1996 Report on the Evaluation of the Tait Aggregate Source, Report on File, Tait Aggregate Co. Mountain Home, Idaho
- 1996 Report on File, Kinross Mining Company, Jordan Valley Oregon
- 1995 Report on the Stevens Land Exchange Project, Report on File, BLM, Boise
- 1995 Report on the Donnelly Water Line Project, Report Submitted to Donnelly Water District, Cascade
- 1995 Report on the Kuna Water District Project, Ida-Ore, Report on File, Boise
- 1995 Report of the Archaeological Survey of the Glenns Ferry Senior Housing Project, Report on File, Ida-Ore, Boise
- 1995 Report of a Cultural Resources Survey of the Horseshoe Bend Water Treatment Facility Area, Report on File, Ida-Ore, Boise
- 1995 Report of the Archaeological Survey of the Simplot Right-of-Way Project, Grandview, Idaho. Report on File, Simplot Company, Grandview
- 1995 Report on the Archaeological Survey of the Shrub Reseeding Project, Report on File, Bureau of Land Management, Boise District Office
- 1995 Report on the Delamar Mining Project, Report on File, Kinross Mining, Jordan Valley, Oregon
- 1995 An Archaeological Report on the Proposed North Fork Payette Hydroelectric Project, Report on File, Myers Engineering, Boise
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- 1994 Report on the Cable Upgrade Project, Ada County. Report on File, BLM, Water Resources Division, Boise
- 1994 Report on the Jones Property Inventory, Bannock County Idaho, Report on File, FmHA, Boise
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- 1993 A Report on the Archaeological Survey of the Boulder Rapids Transmission Line Survey. Report on file, Myers Engineering, Boise
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- 1993 An Archaeological Report on the Wilson-Baker Borrow Project near Hammett, Idaho. Submitted to Wildish Land Company, Eugene, Oregon
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- 1993 A Report on the Nuff Property Survey, Farmers Home Administration
- 1993 A Report on the Archaeological Survey near Preston, Idaho Report Submitted to FHA, Boise State University
- 1993 A Report on the Archaeological Survey of the 416 CRI Fire Rehab, Elmore County, Idaho. Report Submitted to Boise District, BLM, Boise
- 1993 Report on the Archaeological Survey of the Lava Site. Report Prepared for Cloverdale Nursery, Boise
- 1992 An Archaeological Survey of the U-3 Hydroelectric Project. A Report submitted to Ida-West Energy Company, Boise
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- 1992 Final Summary Report of Archaeological Excavations at 10-GG-1, Southwest Idaho
- 1992 A Report on the Archaeological Survey of the Castle Creek CRI, Owyhee County, Idaho. Report submitted to the BLM, Boise District, Boise
- 1992 A Report on Test Excavations at 10-TF-319. Report on file, Myers Engineering, Boise
- 1991 A Report on the Survey of the Idaho Power Prison Transmission Line, Vale, Oregon. Submitted to Idaho Power Company, Boise
- 1991 A Report on the Cultural Resources Survey of the Shrub Fire REHAB. Report on file, Boise District BLM
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- 1991 A Report on the Cultural Resources Survey of the Three Creek Well, REHAB. Report on file, Boise District, Bureau of Land Management
- 1991 A Report on the Stanford Ranch Survey, Owyhee County, Idaho. Report submitted to FHA, Marsing
- 1991 A Report on the Dewitt-Feller Property. Report on file, FHA, Montpelier
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- 1990 (with James H. Hale) A Report on the Brownlee Land Exchange Survey. Report submitted to the Bureau of Land Management
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- 1990 A Report on the Archaeological Survey of the Lazy CH property, Bear Lake County. Report submitted to the FHA, Montpelier, Idaho
- 1990 A Report on the Survey of the Carl Willie Property. Malad, Idaho. A Report submitted to the FHA, Malad, Idaho
- 1990 A Report on the Survey of the Farm Properties in the Areas of Arco, Idaho. A Report submitted to the Farmers Home Administration, Arco, Idaho
- 1990 An Archaeological Survey of the Robert Faust Farm, Payette County, Idaho. Report submitted to the FHA Payette, Idaho
- 1990 A Report on the Archaeological Survey of the Proposed Malad High Drop Hydroelectric Project. Report submitted to Consulting Associates, Inc.
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- 1988 Report on the Magic Dam Survey. Report submitted to Myers Engineering, Boise. June
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- 1987 Report on the Dietrich Hydroelectric Project near Dietrich, Idaho. Report on file, Bingham Engineering, Salt Lake City
- 1987 (with Russell T. Gould) A Report on the Cultural Resource Inventory of the Pothole Reservoir Fire Rehab, Elmore and Owyhee Counties, Idaho Report on file, Boise District, BLM, Boise
- 1987 A Preliminary Report on Use-Wear Analysis of Stone Knives from the Western Desert, Australia. Report on file, South Australian Museum, Adelaide, Australia
- 1987 Report on the Dietrich Hydroelectric Transmission Corridor. Report on file, Bingham Engineering, Salt Lake City
- 1986 A Report on the Cultural Resource Survey of the AEC Well Fire REHAB, Stiff Tree Draw Quadrangle, Idaho. Report on file, Bureau of Land Management, Boise District, Boise
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- 1986 A Final Report on the Cultural Resource Survey of the Riddle Land Exchange. Report on file, Bureau of Land Management, Boise
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- 1985 (with Daniel S. Meatte) A Cultural Evaluation of the East Fork Ditch Hydroelectric Project. Report on File, Myers Engineering, Boise
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- 1985 Archaeological Test Excavations at Site V-256, Star Mountain Realty Exchange: Preliminary Report. Report on file, U.S. Bureau of Land Management, Vale District, Oregon
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- 1982 Management Options and Research Directions—Class I for Boise and Shoshone BLM. Report on file, professional analysts, Eugene
- 1982 A Report of Archaeological Test Excavations at the Prehistoric Sites in the Rock Creek Hydroelectric Project, Twin Falls County, Idaho. Report submitted to J-U-B Engineers, Boise
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- 1977 A Preliminary Report on the Archaeological Test Excavations at Sites 10-VY-95, 10-VY-96 and 10-VY-97, Valley County, Idaho. Report on file, Boise National Forest, Boise
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- 1977 Addendum to the Final Report on the Archaeological Evaluation of Land Exchanges in Boise and Valley Counties, Idaho. Report on file, Boise National Forest, Boise
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- 1976 (with Daniel S. Meatte) An Antiquities Assessment of Proposed Geothermal Drilling Sites, Malheur County, Oregon. Report on file, Vale District, BLM, Vale
- 1974 An Archaeological Survey of Proposed ORV Trails in the Wayne-Hoosier National Forest. Report on file, U.S. Forest Service Office, Bedford, Indiana
- 1972 Plains Beadwork. Unpublished ms. on file, Indiana University Museum, Bloomington

PRESENTED PAPERS:

- 2014 Incised Stones from Idaho. Paper Presented at the 79th Annual Meeting of the Society for American Archaeology, Austin, Texas.
- 2014 Preliminary Test Excavations at site 10-EL-215. Paper Presented at the 39th Annual Meeting of the Idaho Archaeological Society, Boise.
- 2013 The Prehistory of the Indigenous Cultures of Guyana. Guyana United Nations World Indigenous Peoples Day Lecture, Georgetown.
- 2013 Recent Archaeological Discoveries in the Rupununi Savannahs, Lecture, Accepted, July 11, 2013, Plew, M. G., Annual Cultural Lecture, Ministry of Culture, Republic of Guyana, Georgetown Guyana, International, Professional, Peer-reviewed/Refereed, Invited.
- 2012 Archaeological Excavations at site 10-EL-215, Southwest Idaho. Paper Presented at the 40th Annual Meeting of the Idaho Archaeological Society, Moscow.
- 2012 The Use of Contemporary Harvest Data for Thinking about Prehistoric Resource Depression. Idaho Academy of Sciences Meeting, Twin Falls.
- 2011 Archaeological Investigations at site 10-EL-216, Southwest Idaho. Idaho Archaeological Society Meeting.
- 2011 Contributions of Denis Williams to the Archaeology of Guyana. Faculty of Social Sciences, University of Guyana.
- 2010 The Archaeology of Guyana, Walter Roth Museum Lecture Series.
- 2010 Archaeology of Kabakaburi Mound, Kabakaburi Village Council.
- 2010 Recent Discoveries in the Prehistory of Guyana. Annual Science Lecture, Ministry of Culture, National Museum, Guyana.
- 2009 Recent Work in the Vicinity of Shea, Southern Guyana. Walter Roth Museum Lecture Series.
- 2009 Observations on Legal Protections of Archaeological Sites and Remains in Guyana Association for the Study of Law, Culture and Humanities, Georgetown Law Center.
- 2009 Revisiting the Fremont Question in Idaho. 38th Annual Conference of the Idaho Archaeological Society, Boise.
- 2008 Archaeology of Antelope Creek Rockshelter. 30th Annual Conference of the Idaho Archaeological Society, Boise, Idaho.

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- 2007 Report on Archaeological Test Excavations at Little Owl Cave, Oregon. Paper Presented at the 28th Annual Conference of the Idaho Archaeological Society (with Willson, T. Jacobs and S. Plager).
- 2000 (with Pam Huter and Kristen Mercer) Archaeological Test Excavations at 10-EL-1577, King Hill, Idaho, Paper Presented at the 27th Annual Conference of the Idaho Archaeological Society, McCall, Idaho.
- 2000 A History of Recent Archaeological Research in the Northeastern Great Basin. Paper presented at the 27th Conference of the Great Basin Anthropological Society, Ogden.
- 1999 (with Pamela Huter) Recent Investigations at 10-CN-5, Southwest Idaho. 26th Annual Meeting of the Idaho Archaeological Society, Moscow.
- 1998 The Prehistory of Guyana: Old Traditions and New Perspectives. Paper Presented to Carib Studies Conference, Georgetown, Guyana.
- 1998 (with Sharon Plager) Fish Remains from Three Sites in Southwestern Idaho. Paper Presented at the 25th Annual Conference of the Idaho Archaeological Society.
- 1997 Recent Evidence of Paleoindian Occupation in the Lower Amazon: Implication for the Prehistory of Guyana. Twenty Seventh Annual Idaho Archaeologist Conference, Caldwell, Idaho.
- 1996 (with Russell T. Gould) Site Structure at Three Island Crossing (10-EL-294), Southwestern Idaho. Paper Presented at the 25th Great Basin Anthropological Conference, Kings Beach, California.
- 1996 (with Sharon Plager and Camille Sayer) Recent Archaeological Investigations in Southwestern Idaho. Paper Presented at the 23rd Annual Conference of the Idaho Archaeological Society, Twin Falls, Idaho.
- 1995 (with Russell T. Gould) Optimal Foraging Approaches to Prehistoric Subsistence on the Middle Snake River: Ecological Dynamics of Trade- Offs and Strategic Responses. Paper Presented at the 37th Annual Meeting of the Idaho Academy of Sciences, Nampa, April 6, 1995.
- 1995 Defining Residential Structures: Insights from Hunter- Gatherer and Ethnoarchaeological Research. Paper Presented at the 22nd Annual Conference of the Idaho Archaeological Society Meeting, October 28, 1995. Boise.
- 1995 (with Beau Hanson) Field Flow Fractionation: Implications for Phytolith Fractionation and Sorting. Paper Presented at the 22nd Annual Conference of the Idaho Archaeological Society Meeting October 28, 1995. Boise.
- 1994 (with Russell T. Gould) Optimal Foraging Approaches to Prehistoric Salmon Fishing in the Northern Great Basin: The Ecological Dynamics of Trade-Offs and Strategic Responses. Paper Presented at the 59th Annual Meeting of the Society for American Archaeology, Anaheim, California, April 20-24, 1994.
- 1994 (with Russell T. Gould) Prehistoric Salmon Fishing in the Northern Great Basin Ecological Dynamics, Trade-Offs, and Foraging Strategies. Paper Presented at the 22nd Annual Meeting of the Idaho Archaeological Society, Twin Falls. October 22, 1994.
- 1992 A Reassessment of Aboriginal Fishing Strategies on the Middle Snake River. Paper presented at the Annual Meeting of the Pacific Division, American Association for the Advancement of Science, Missoula.
- 1991 (with Russell Gould) Archaeological Investigations of the 10-GG-1, near Bliss, Idaho. Paper Presented at the 18th Annual Meeting of the Idaho Archaeological Conference.
- 1990 (with James Hale) Excavations at Danskin Rockshelter. 16th Annual Meeting of the Idaho Archaeological Society, October.
- 1989 Excavations at Clover Creek. Paper Presented at the 17th Annual Conference of the Idaho Archaeological Society.
- 1988 A Review of the Archaeology of the Owyhee Uplands, Idaho. Paper presented at the 41st meeting of the Northwest Anthropological conference, Tacoma.
- 1988 (with Russell Gould) Archaeological Investigations at Three Island Crossing. Paper presented at the 41st Annual Meeting of the Northwest Anthropological Conference, Tacoma.
- 1988 (with S. Forbes and M. Bennick) A report in the Southwest Idaho Ceramic Project. Paper presented at the 41st Annual Conference of the Northwest Anthropological Conference, Tacoma.

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- 1988 Owyhee Country Archaeology. Museum Lecture Series, Idaho Museum of Natural History.
- 1988 Southwest Idaho Point Typology. Second Point Typology Conference, Idaho State University.
- 1987 Use-Wear Analysis of Stone Knives from the Western Desert, Australia. Paper Presented at the 14th Annual Conference of the Idaho Archaeological Society, Boise, Idaho.
- 1986 A Progress Report on the Baker Caves. Paper Presented at the 13th Annual Conference of the Idaho Archaeological Society, College of Southern Idaho, Twin Falls.
- 1986 (with Susan Neitzel, Kevin Meyer and Gary Bowyer) Archaeological Excavations at Three Island Crossing. Paper presented at the 13th Annual Conference of the Idaho Archaeological Society. College of Southern Idaho, Twin Falls.
- 1986 Archaeological Assemblage Variability in Fishing Locales of the Western Snake River Plain. Paper Presented at the 28th Annual Meeting of the Western Association of Sociology and Anthropology, Boise, Idaho. (Refereed paper)
- 1986 Problems in North and South American Prehistory. Paper presented to Amerindian Research Unit, University of Guyana.
- 1986 Lithic Analysis in South American Archaeology. Paper presented to Amerindian Research Unit, University of Guyana.
- 1986 Southern Idaho Pottery. Invited Lecture, Great Basin/Intermountain Pottery Conference, February 1986, Idaho State University.
- 1986 Discussant, Cultural Resource Management, 1st International Conference on Resource Management, Oregon State University.
- 1985 Archaeological Investigations at Baker Caves I and III: A Late Archaic Site in the East-Central Idaho. Paper presented at the 12th Annual conference of the Idaho Archaeological Society.
- 1983 Implications of the Nutritional Potential of Anadromous Fish Resources of the Western Snake River Plain. Paper Presented at the 37th Annual Northwest Anthropological Conference, Boise.
- 1983 Fremont Perspectives. Paper presented at the 11th Annual Meeting of the Idaho Archaeological Society, Boise.
- 1982 (with James C. Woods and Gene L. Titmus) Test Excavations at Lower Rock Creek, Twin Falls County, Idaho. 10th Annual Meeting of the Idaho Archaeological Society, Boise.
- 1981 Archaeological Investigations in the Owyhee River Country. Paper presented for the Ninth Annual Conference of the Idaho Archaeological Society, University of Idaho, Moscow.
- 1978 Archaeological Investigations in the Southcentral Owyhee Uplands. Paper presented to the Sixth Annual Conference of the Idaho Archaeological Society, Boise.
- 1977 Rock Alignment Systems in the Camas Creek Drainage, Southcentral Owyhee County, Idaho. Paper presented to the Fifth Annual Conference of the Idaho Archaeological Society, Boise.
- 1975 An Archaeological Survey of the Camas Creek Drainage--summer, 1975. Paper presented to the Third Annual Conference of the Idaho Archaeological Society, Boise.

PUBLICATIONS:

Books and Monographs:

- In press (with Susanne Osgood) *Archaeological Excavations at Danskin Rockshelter*.
- 2015 *The Archaeology of Guyana*. Oxford: Archaeopress. Electronic re-issue.
- 2014 (with William Nance and Shawn Roberts) *A Report on Archaeological Excavations at Jump Creek Cave #1 (10-OE-3686), Southwest Idaho*. Special Publication, Center for Applied Archaeological Science.
- 2013 (with Christopher Willson) Archaeological Excavations at the Caven Site (1-0EL-215): Middle and Late Archaic Occupations near Glenns Ferry, Idaho. *Monographs in Archaeology* No. 5. Boise State University.
- 2011 (with Christopher Willson and Louisa Daggers) Archaeological Excavations at Siriki Shell Mound, Northwest Guyana. *Monographs in Archaeology* No. 4, Walter Roth Museum of Anthropology.

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- 2009 (with Christopher Willson) Survey and Test Excavations at Wyva Creek Shell Mound, Northeastern Guyana. *Monographs in Archaeology* No. 3. University of Guyana.
- 2008 *The Archaeology of the Snake River Plain, Second Edition*. Boise State University.
- 2007a Archaeological Excavations at the King Hill Creek Site, Southwest Idaho (with Chris Willson) *Monographs in Archaeology* No. 4, Boise State University.
- 2007b Archaeological Survey near Yupukari, South Rupununi Savannahs, Guyana. *Journal of Anthropology and Archaeology* 15.
- 2007c Archaeological Excavations at Kabakaburi Shell Mound, Northwestern Guyana. *Monographs in Archaeology* No. 1, Denis Williams School of Anthropology, University of Guyana.
- 2007d (with Chris Willson) *Archaeological Investigations at Cow Hollow Park, Near Nyssa, Oregon*. Boise State University.
- 2007e Archaeological Investigations at Cow Creek, Cassia County, Idaho. Boise State University.
- 2006 A Report on Archaeological Excavations at 10-CN-6, Middle Snake River, Idaho. *Monographs in Archaeology* No. 3. Boise State University.
- 2005 *The Archaeology of Guyana*. British Archaeological Reports International Series 1400. Archaeopress: Oxford.
- 2004a (with Jake Fruhlinger) Summary Report on Monitoring of Archaeological Sites in the Orchard Training Area. *Technical Reports* No. 14. Boise State University.
- 2004b (with Christopher Willson) *Archaeological Test Excavations at Bull Creek Rockshelter (35-ML-148), Southeastern Oregon*. Report submitted to the Bureau of Land Management, Vale Oregon. Boise State University.
- 2003a (with Jake Fruhlinger) Summary Report on Monitoring Archaeological Sites in the Orchard Training Area. *Technical Reports* No. 13. Snake River Birds of Prey National Conservation Area Archaeological Project, Boise State University.
- 2003b (with Chris Willson and Sharon Plager) The Archaeology of Antelope Creek Overhang, Southeastern Oregon. *Monographs in Archaeology* No. 2. Boise State University.
- 2002a (with Chris Willson, Richard Benedict and Tedd Jacobs) *Archaeological Excavations at Little Owl Cave, Malheur County, Oregon*. Publication of the Department of Anthropology, Boise State University.
- 2002b A Summary Report of Archaeological Investigations in the Vicinity of Yupukari and Toka Villages, Rupununi Savannahs, Guyana, *Technical Reports* No. 4, Walter Roth Museum of Anthropology.
- 2001a (with James Cullum) A Report on the Archaeological Monitoring of the Orchard Training Area. *Technical Reports* No. 12. Snake River Birds of Prey National Conservation Area Archaeological Project, Boise State University.
- 2001b (with Gerard Pereira and Sarah Saras) Report on Archaeological Survey of the Shulinab Area, South Rupununi Savannah, Guyana. *Technical Reports* No. 3, Walter Roth Museum of Anthropology.
- 2001c *Integrated Cultural Resources Management Plan, Orchard Training Area, Environmental Assessment*, Department of Defense, Boise State University.
- 2000a *The Archaeology of the Snake River Plain*. Boise State University: Boise
- 2000b (with Russell Gould) *Archaeological Excavations at Three Island Crossing*, Boise State University: Boise.
- 2000c (with James Cullum) Report on Cultural Resource Evaluation of State of Idaho Military Training Areas: Phase IV Investigations. *Project Reports* No. 3, Cultural Resources State of Idaho
- 2000d (with James Cullum) Summary Report of Monitoring Archaeological Sites in the Orchard Training Area. *Technical Reports* No. 11, Snake River Birds of Prey National Conservation Area Archaeological Project, Boise State University.
- 2000e (with Pam Huter, John Kennedy, Sharon Plager and Trish Webb) Archaeological Test Excavations at 10-CN-5, Southwest Idaho. *Technical Reports* No. 10, Snake River Birds of Prey National Conservation Area Archaeological Project, Boise State University.

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- 1998a (with Janette Forte) *Bibliography of Guyana Anthropology*. Boise: Boise State University.
- 1998b *Explorations in American Archaeology: Essays in Honor of Wesley R. Hurt*, edited by Mark G. Plew, University Press of America: Lanham and Oxford.
- 1998c Report on Cultural Resources of Army Training Areas in Eastern Idaho. *Project Reports* No.2, Cultural Resources State of Idaho Military Training Area Project, Boise State University.
- 1997 (with Camille Sayer) Report on the Cultural Resource Survey of Three Federal Withdrawal Areas in Southeastern Idaho. *Project Reports* No. 1, Cultural Resources State of Idaho Military Division Survey, Boise State University.
- 1996a (with Camille Sayer) Archaeological Test Excavations at Sites 10-AA-12, 10-AA-14, 10-AA-188, 10-AA-189, Birds of Prey Natural Conservation Area. *Technical Reports* No. 4, Birds of Prey Natural Conservation Area Archaeological Project, Boise State University.
- 1996b *Prehistoric Hunter-Gatherer Fishing Strategies*, edited by Mark G. Plew, Boise: Boise State University.
- 1996c (with Camille Sayer and Sharon Plager) Archaeological Test Excavations at 10-CN-1, Southwest Idaho. *Technical Reports* No. 5. *Birds Of Prey National Conservation Area Archaeological Project*, Boise State University State University.
- 1995a Archaeological Excavations at 10-AA-256, Snake River Birds of Prey Natural Area. *Technical Reports No.1, Snake River Birds of Prey Archaeological Project*. Boise.
- 1995b Archaeological Excavations at 10-EL-392, Southwest Idaho. *Technical Reports* No.1, Snake River Birds of Prey Archaeological Project. Boise.
- 1992a An Archaeological Assessment of the Proposed Horseshoe Bend Hydro-electric Project, Boise County, Idaho. *Cultural Resource Reports* No. 1992-1. Boise State University.
- 1992b A Report on the Archaeological Survey and Test Excavations of the Smith Land Exchange. *Cultural Resource Reports* No. 1992-2. Boise State University.
- 1992c A Report on the Cultural Resources Survey of Shale Butte, Black Ridge Southcentral, Black Ridge Southwest, and Ravens Eye Fire REHAB Projects, Shoshone District, Bureau of Land Management. *Cultural Resource Reports* No. 1992-3. Boise State University.
- 1992d A Report on the Cultural Resource Survey of the Wellfield Fire REHAB. *Cultural Resource Reports* No. 1992-4. Boise State University.
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- 1992f (with Bret Guisto and Jennifer Mitchell) A Report on the Archaeological Survey and Test Excavations of the Smith Land Exchange. *Cultural Resource Reports* No. 1992-2. Boise State University.
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- 1992l A Report on the Cultural Resource Survey of the Wellfield Fire REHAB. *Cultural Resource Reports* No. 1992-4. Boise State University.
- 1991a (with Russell T. Gould) An Archaeological Evaluation of Kanaka, Empire and Boulder Rapids, Middle Snake River, Southcentral Idaho. *Cultural Resource Reports* No. 1991-1. Boise State University.
- 1991b An Archaeological Survey of the Proposed Realignment Areas in the Auger Falls Hydroelectric Project, Near Twin Falls, Idaho. *Cultural Resource Reports* No. 1991-2, Boise State University.

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- 1990 (with Wendy J. Nelson) A Report of Archaeological Investigation of the Moores Spring Site, 10-EL-658. *Cultural Resource Reports* No. 1990-1.
- 1987a A Report on the Archaeological Evaluation of the King Hill Site. *Cultural Resource Reports* No. 1987-1. Boise State University, Boise.
- 1987b An Archaeological Survey of State Lands in Bear and Franklin Counties, Idaho. *Cultural Resource Reports* No. 1987-2. Boise State University, Boise.
- 1987c (with Max G. Pavesic and Mary Anne Davis) Archaeological Investigations at Baker Caves I and III: A Late Archaic Component on the Eastern Snake River Plain. *Archaeological Reports* No. 15, Boise State University.
- 1987d (with Russell T. Gould) An Evaluation of Archaeological Resources in the Dike Project Area, Elmore County, Idaho. *Cultural Resource Reports* No. 1987-3. Boise State University, Boise.
- 1987e (with Peter Pengilly) An Archaeological Survey of the South Mountain Land Exchange, Owyhee County, Idaho. *Cultural Resource Reports* No. 1987-4. Boise State University, Boise.
- 1986a The Archaeology of Nahas Cave: Material culture and Chronology. *Archaeological Reports* No. 13. Boise State University, Boise.
- 1986b *An Introduction to the Archaeology of Southern Idaho*. Boise: Hemingway Western Studies Publications.
- 1985a Archaeological Text Excavations at 10-BO-6 and 10-BO-53, near Lowman, Idaho. *Cultural Resource Reports* No. 1985-1.
- 1985b (with James C. Woods and Max G. Pavesic, Editors) *Approaches to Stone Tool Analysis: Essays in Honor of Don E. Crabtree*. University of New Mexico Press.
- 1985c *Remnants of the Past: Idaho's Fragile Heritage*. Twin Falls: College of Southern Idaho Press.
- 1985d A Report on Cultural Resource Activities, 1985, in the Vale District Bureau of Land Management, Vale, Oregon. *Cultural Resource Reports* No. 1985-2. Boise State University, Boise.
- 1984a A Cultural Resource Evaluation of the Proposed Lake, Allison, Partridge, Elkhorn and French Creek Hydroelectric Projects near Riggins, Idaho. *Cultural Resource Reports* 1984-1. Boise State University.
- 1984b (with Kenneth M. Ames and Kristen K. Fuhrman) Archaeological Excavations at Silver Bridge (10-BO-1), Southwest Idaho. *Archaeological Reports* No. 12. Boise State University.
- 1981a Archaeological Test Excavations at Four Prehistoric Sites in the Western Snake River Canyon near Bliss, Idaho. *Archaeological Reports* No. 5, Idaho Archaeological Consultants, Boise.
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WORK UNDER REVIEW:

(with Jeremy Johnson) Nutritional Values of Freshwater Mussels on the Western Snake River. *Journal of Northwest Anthropology*.

WORK IN PREPARATION:

(with Russell T. Gould) Lithic Procurement and Prehistoric Mobility on the Middle Snake River. Paper in preparation for submission to the *Journal of California and Great Basin Anthropology*.

Functional Variability in the Archaic of Southern Idaho. In preparation for *North American Archaeologist*.

Nutritional Analysis of Fishes of the Middle Snake River: Habitat Variance and Harvest Techniques. In preparation for *Journal of Northwest Anthropology*.

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A Re-Assessment of the Shell Mounds of the Guiana Shield, In preparation for *Latin American Antiquity*

ONGOING RESEARCH PROJECTS:

“Use Wear Analysis of Lithic Debris from 10-CN-1”

“SRBPNCA Lithic Sourcing Project”

“Aboriginal Scavenging of Fish: Experimental and Ethnoarchaeological Observations”

“Archaeological Fish Remains Bibliography Project”

(with David J. Singh and Raymond Ramsaroop) “Nutritional Analysis of Guyanese Fishes: Implications for Optimal Selection Strategies of Amerindians”

“Archaeological Excavations at the Shell Mounds in the Pomeroon River Country, Guyana”

REFERENCES

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- 2011 **University of New Mexico**, Albuquerque, NM
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Department of Population Health

PUBLICATIONS

- 2015 **Snopkowski, K.** & H. Kaplan “Fertility Theory: Theory of Intergenerational Wealth Flows” In James D. Wright (Ed.), *International Encyclopedia of the Social and Behavioral Sciences Second Edition* (pp. 35-39). Amsterdam, Elsevier.
- 2015 **Snopkowski, K.** & R. Sear “Grandparental help in Indonesia is directed preferentially towards needier descendants: A potential confounder when exploring grandparental influences on child health” *Social Science & Medicine*, 128: 105-114. doi: 10.1016/j.socscimed.2015.01.012
- 2014 **Snopkowski, K.**, C. Moya, & R. Sear “A test of the intergenerational conflict model in Indonesia shows no evidence of earlier menopause in female-dispersing groups” *Proceedings of the Royal Society B: Biological Sciences*, 281(1788): 20140580. doi: 10.1098/rspb.2014.0580
- 2014 **Snopkowski, K.** & H. Kaplan “A Synthetic Biosocial Model of Fertility Transition: Testing the Relative Contribution of Embodied Capital Theory, Changing Cultural

Norms, and Women's Labor Force Participation." American Journal of Physical Anthropology, 154(3): 322-333. doi:10.1002/ajpa.22512

- 2014 Sheppard, P., **K. Snopkowski**, & R. Sear "Father absence and reproduction-related outcomes in a transitional fertility population." Human Nature, 25(2): 213-234. doi:10.1007/s12110-014-9195-2
- 2013 **Snopkowski, K.** & R. Sear "Kin influences on fertility in Thailand: Effects and mechanisms." Evolution and Human Behavior, 34: 130–138. doi:10.1016/j.evolhumbehav.2012.11.004

Manuscripts in Submission

Snopkowski, K. & R. Sear "Does Grandparental Help Mediate the Relationship between Kin Presence and Fertility?" Demographic Research

Snopkowski, K. "Serial monogamy as a female reproductive strategy in San Borja, Bolivia" Human Nature

Snopkowski, K., Towner, M., Shenk, M., & H. Colleran "Pathways from Education to Fertility Decline: A multi-site comparative study" Philosophical Transactions B

Moya, C., **Snopkowski, K.** & R. Sear "What Men Want: Can men really benefit from higher fertility than what is optimal for women?" Philosophical Transactions B

Snopkowski, K. & H. Kaplan "Demographic Transition" International Encyclopedia of Anthropology

GRANTS AND FELLOWSHIPS

- 2013 British Society for Population Studies International Travel Grant
- 2012 National Centre for Research Methods Training Bursary
- 2008 University of New Mexico Student Resource Allocation Committee Grant
- 2008 University of New Mexico Research, Projects and Travel Grant
- 2006- 2007 New Mexico Scholars 3% Tuition Scholarship
- 2005 University of New Mexico Student Resource Allocation Committee Grant

INVITED TALKS

- September 2015 "Reproductive Decision-Making in Transitional Contexts" University of California Los Angeles Center for Behavior, Evolution, and Culture Speaker Series; Los Angeles, CA, USA

- February 2013 "Family and Fertility in Developing Countries"
Oxford Institute of Population Ageing Seminar Series; Oxford, UK
- November 2012 "Kin Influences on Fertility in Thailand: Effects and Mechanisms"
Population Seminar Series at London School of Economics; London, UK
- November 2011 "Evaluating Theories of the Demographic Transition in San Borja, Bolivia"
University College London Anthropology Department Seminar Series; London, UK
- November 2011 "Evaluating Theories of the Demographic Transition in San Borja, Bolivia"
Newcastle University's Centre for Behaviour and Evolution & Institute of Neuroscience Seminar Series; Newcastle, UK

CONFERENCE PAPERS PRESENTED

- November 2015 **Snopkowski, K.** "Men's reproductive decision making in Indonesia"
American Anthropological Association, Denver, CO.
- April 2015 **Snopkowski, K. & R. Sear** "Does Grandparental Help Mediate the Relationship between Kin Presence and Fertility?" Northwest Evolutionary, Ecology, and Human Behavior Annual Symposium, Boise, ID.
- December 2014 **Snopkowski, K.** "Women's number of partners influences reproductive success and child outcomes in San Borja, Bolivia". Annual Meeting of the American Anthropological Association, Washington DC.
- February 2014 **Snopkowski, K., C. Moya & R. Sear** "Intergenerational Conflict: Does ethnic-group postnuptial residence predict age at menopause?" Cooperation and Conflict in the Family Conference. Sydney, Australia.
- January 2014 **Snopkowski, K. & R. Sear** "Is the Helping Behavior of Grandparents Predicted by Need? Evidence from Indonesia" IUSSP Cyberseminar. Family Demography: Advancing knowledge about intergenerational relationships and exchanges in low and middle-income countries. University of Southampton, UK.
- November 2013 **Snopkowski, K.** "A Synthetic Biosocial Model of Fertility Transition: Testing the Relative Contribution of Embodied Capital Theory, Changing Cultural Norms, and Women's Labor Force Participation." Annual Meeting of the London Evolutionary Research Network. London, UK.

- July 2013 **Snopkowski, K.,** C. Moya, & R. Sear “The interplay of individual- and community-level postnuptial residence on fertility outcomes: Do community norms or individual decisions matter more?” Annual Meeting of the Human Behavior and Evolution Society. Miami, FL.
- April 2013 **Snopkowski, K.** & R. Sear “Kin and Fertility in Indonesia: How do different measures of parental availability affect the results?” Annual Meeting of the Population Association of America. New Orleans, LA.
- March 2013 **Snopkowski, K.** & R. Sear “Kin and Fertility in Indonesia: How do different measures of parental availability affect the results?” Annual Meeting of the European Human Behavior and Evolution Association. Amsterdam, Netherlands.
- March 2013 **Snopkowski, K.** & R. Sear “Kin Influences on Fertility in Thailand: Effects and Mechanisms” Annual Meeting of the Southeast Asian Studies Symposium. Oxford, UK
- November 2012 **Snopkowski, K.** & R. Sear “Kin and Fertility” Annual Meeting of the American Anthropological Association Meeting. San Francisco, CA
- June 2012 **Snopkowski, K.** & R. Sear “Kin Influences on Fertility in Thailand: Effects and Mechanisms” Annual Meeting of the Human Behavior and Evolution Society. Albuquerque, NM
- May 2012 **Snopkowski, K.** “Testing Hypotheses of the Demographic Transition in San Borja, Bolivia” Annual Meeting of the Population Association of America. San Francisco, CA
- March 2012 **Snopkowski, K.** “Testing Hypotheses of the Demographic Transition in San Borja, Bolivia” Annual Meeting of the European Human Behaviour and Evolution Association. Durham, UK
- January 2012 **Snopkowski, K.** “The effect of familial mortality rates on the timing of first reproduction” Annual Meeting of Centre for Behaviour and Evolution. Newcastle, UK

TEACHING EXPERIENCE

Boise State University

Biological Anthropology
Human Evolutionary History and Development
Human Behavioral Ecology

Statistical Methods in Anthropology

University of New Mexico

Sex, Reproduction and the Demographic Transition
Computer Laboratory in Human Evolutionary Ecology
Computing for Business Students

RESEARCH EXPERIENCE

- 2011 – 2014 Post-doctoral Research Fellow on *Family Matters: Intergenerational Influences on Fertility* Project. Funded by European Research Council. PI: Rebecca Sear
- 2008 Dissertation Research: Interviewed over 500 women about reproductive decision making to test differing hypotheses of the Demographic Transition in San Borja, Bolivia
- 2005 Pilot Dissertation Study: Interviewed over 50 women to determine feasibility of Demographic Transition study in San Borja, Bolivia

STUDENT MENTORING

Paula Sheppard, PhD 2014 - 2nd Supervisor
Susan Schaffnit, PhD 2014 - 2nd Supervisor

PEER REVIEWER

Evolution and Human Behavior
Human Nature
PLOS ONE
Demographic Research

COMMUNITY OUTREACH

- 2013 Blog contributor to OpenPop.org
- 2009 Science Fair Judge for Social Science Projects; Albuquerque Public Schools

PROFESSIONAL MEMBERSHIPS

European Human Behaviour and Evolution Association
Population Association of America
Human Behavior and Evolution Society
British Society for Population Studies
Evolutionary Demography Society

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Curriculum Vitae
PEI-LIN YU

Anthropology Department
Boise State University
1910 University Dr, Boise, ID 83725
(208)- 426-3059
email: pei-linyu@boisestate.edu
CITIZENSHIP: United States

EDUCATION

2006 Doctor of Philosophy, Anthropology, Southern Methodist University, 3225 Daniel St., Dallas TX 75205.
Dissertation: *Pit Cooking and Intensification in the American Southwest and Pacific Northwest*.
1999 Master of Arts, Archaeology, Southern Methodist University, 3225 Daniel St., Dallas TX 75205
1989 Bachelor of Science in Anthropology, University of New Mexico, Albuquerque, New Mexico, 87131

SELECTED PROFESSIONAL EXPERIENCE (all supervisors may be contacted)

July 2014 – Present

Assistant Professor of Anthropology, Boise State University. Duties: Conduct research on high altitude landscape scale archaeology and traditional ecological knowledge; also on archaeology, ethnoarchaeology, and human behavioral ecology in SE China and eastern Taiwan. Teach undergraduate and graduate courses in Archaeology and Anthropology. Advise graduate students. Service as facilitator for federal Cooperative Ecosystem Studies Units membership. Salary: available on request. Supervisor: Department Chair John Ziker, 208-426-2121.

March 2014 – July 2014

Research Coordinator, Rocky Mountain Cooperative Ecosystem Studies Unit (RM-CESU). Duties: sole management of a national science network of federal and university partners to conduct scientific research, technical assistance, and education for 15 Rocky Mountains parks. Technical and peer review, and management assistance, for scientific and cultural projects in parks. Data management for hundreds of active projects. Analysis and interpretation of resources-related policy documents for Regional Office, and recommendations for policy improvement and implementation. Salary: GS-14 Step 1. Supervisor: Patrick Malone, Assistant Regional Director. National Park Service Intermountain Region, 12795 W. Alameda Parkway, Denver CO 80225. Ph. (303) 969-2314.

November 2009 – May 2014

Cultural Specialist, Rocky Mountain Cooperative Ecosystem Studies Unit. Duties: Co-manage a national science network of federal and university partners to conduct scientific research, technical assistance, and education for 15 Rocky Mountains parks. Technical and peer review, and management assistance, for scientific and cultural projects in parks. Data management for hundreds of active projects. Analysis and interpretation of resources-related policy documents for Regional Office, and recommendations for policy improvement and implementation.

Drafting of summaries and analyses of highly complex issues, briefing IMR Resources and park leadership on sensitive policy issues, preparation of materials for meetings with state and tribal government officials, and speaking to varied audiences. Specialization: recruitment of tribal colleges into the research network; facilitation of Native American student education and training opportunities; facilitation of cultural heritage projects using Native American expertise for parks and programs.

Served as Vice Chair of the Intermountain Region Resources Stewardship Advisory Team, Chair of RSAT Policy Committee. Cultural Resources representative to the Intermountain Region's Wilderness Executive Committee. Team member, NPS Climate Change and Cultural Resources Adaptation Group. Author regional and

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national reports on the RM-CESU and the National Network of CESUs including the Annual Report to Congress 2009-11. Committee Chair, NPS Cotter Award for Excellence in Archaeology. Cultural Resources Representative, Regional Wilderness Executive Committee. Coordinate regional and national teleconferences and meetings.

Peer review and writing assistance on park proposals for national competitive grants and technical reports. Panelist for competitive research proposals at student and professional levels including NPS Servicewide Comprehensive Call. Co-author on successful park grants including Ice Patch Archaeology Project funded at \$625,000 for Glacier National Park. Technical assistance to parks and programs for archaeology, applied anthropology, historic preservation, and cultural conservation including interpretation and implementation of federal laws, policies, directives, and guidelines. Member, five MA committees, four PhD committees at University of Montana. Salary: GS-13 Step 4. Supervisor: Thomas Lincoln, Assistant Regional Director. National Park Service Intermountain Region, 12795 W. Alameda Parkway, Denver CO 80225. Ph. (303) 987-6611.

August 2007-October 2009

Assistant Professor *and* Program Director for Native American Graves Protection and Repatriation Act (NAGPRA) and Archaeological Collections, California State University Sacramento. Director of NAGPRA and Legacy Collections Program Duties: Initiated program from scratch through procurement of funding, staffing, and curation space through external partner contracts and grants and advocacy within the Cal State University system. Analyzed policy options and made recommendations to University president and provost, drafted summaries and analyses of complex repatriation issues, and briefed university officials on sensitive policy matters. Implemented compliance with NAGPRA; including inventory, cataloging, database development and management, legal research, tribal consultation, determinations of cultural affiliation, publication of Notices of Inventory Completion, negotiation of tribal agreements, and repatriation procedures. Scoped new Repository Building on campus. Successfully competed for >\$300,000 in grants and contracts for cultural affiliation and archaeological research associated with NAGPRA implementation. Worked closely with nine California tribes, bands, and rancherias.

Supervised two full-time staff and five-ten student volunteers and work-study employees. Professor Duties: Taught Anthropology courses (see below) to undergraduate and graduate students. Published articles and edited volumes covering diverse anthropological methods and theories. Research emphasis: Ethnoarchaeology; Cultural Heritage Laws, Policies, Values, Stewardship. Classes taught (undergraduate): Hunter-Gatherers in Global Perspective; Cultural Resources Management in Theory and Practice; Pacific Northwest Archaeology. Member, three University NAGPRA committees; Chair, Department Collections Committee. Salary: \$52,000 per annum. Supervisor: Dr. David Zeanah, Chair. 6000 J Street, Sacramento CA 95819. Ph (916)-278-5683.

September 2001-August 2007

Power Office Archaeologist, Bureau of Reclamation's Pacific Northwest Region. Duties: Coordinated Section 106 compliance for the Grand Coulee Dam and Lake Roosevelt, WA and Hungry Horse Dam and Reservoir, MT. Responsible for Section 106 of the Nat'l Historic Preservation Act compliance, Archaeological Resources Protection Act (ARPA) investigations of cultural site looting and damage as well as permitted excavations; and NAGPRA for recovery and repatriation of Native American burials. Close coordination with law enforcement. Consultation with five Northwest Interior tribes, three SHPOs, four federal agencies affected by Federal Columbia Power System operations. Analyzed and interpreted cultural resources policy documents, drafted briefing statements and memos for Reclamation leadership and policymakers, prepared materials for meetings with a wide variety of government officials, and spoke with to varied audiences. Application of federal cultural resources laws and policies to further program priorities and resource allocation. Developed region's first GIS database for heritage resources.

Developed Agreements (Cooperative; Programmatic; MOAs; MOUs) with State Historic Preservation Offices, Native American Tribes, four other federal agencies, and the Advisory Council for Historic Preservation for large-scale undertakings. Museum property management for extensive collections. Contracting Officer's Representative for projects in archaeological research, museum curation, NAGPRA compliance, and Historic American Engineering Record documentation of two major hydroelectric dam/powerplants. Ending Salary: GS-

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12 Step 4. Supervisor: Monte McClendon (ret.), Supervisory Environmental Specialist, Pacific Northwest Regional Office, 1150 N. Curtis Rd., Boise ID 83706. Ph (208)-378-5036. Lynne MacDonald at USBR's Denver Office, lmacdonald@usbr.gov, can address inquiries.

January 2000-September 2001

Park Archaeologist, Great Smoky Mountains National Park, Gatlinburg, TN. Duties: Developed park's first archaeological program. Section 106 and 110 compliance for all park undertakings included archaeological survey, testing, and evaluation of prehistoric Cherokee and historic farming, logging, and CCC properties for the National Register. Site mapping; artifact description, analysis and illustration; supervision of two to four seasonal paid crew, and up to ten volunteer field crew. Analyzed and interpreted cultural resources policy for complex undertakings including the Road to Nowhere the Cherokee Land Exchange projects, and recommendations to park leadership. Managed department budget and equipment, implemented Cooperative Agreement with University of Tennessee. ARPA compliance and reporting of cultural site looting and damage as well as permitted excavations. Close coordination with law enforcement. Supervised field crew, volunteer crew, and museum collections staff. Contracting Officer's Representative for cultural resources contracts, grants and cooperative agreements. Consulted with the TN and NC State Historic Preservation Offices, three Native American tribes, and the Advisory Council for Historic Preservation. Ending Salary: GS-11 Step 2. Supervisor: David L. Chapman, Park Historian (ret.), Great Smoky Mountains National Park, 107 Park Headquarters Rd., Gatlinburg TN 37738. Ph. (865)-430-0339.

June 1998-August 1999

Crew Member, Folsom Archaeological Project/QUEST Fund, Southern Methodist University. Duties: Excavation, mapping, documentation, field preparation of samples and recovered bone and artifacts, field cataloging and packaging, at Paleoindian age bison-bonebed. Specialized bone illustration and mapping. Field data-cleaning. \$12.00/hourly pay. Supervisor: David Meltzer, Professor, Southern Methodist University Department of Anthropology, P.O. Box 750336, Dallas, TX 75275-0336. Ph. (214) 768-2826.

June 1995-August 1997

Crew Member (1995) and Unit Supervisor (1996-7), Hudson-Meng Bison Bonebed Archaeological Project/Colorado State University and US Forest Service. Duties: Excavation, mapping, documentation, field preparation of samples and recovered bone and artifacts, field cataloging and packaging, at Paleoindian age bison-bonebed. Specialized bone illustration and mapping. Field data-cleaning. \$10.00/ hourly pay. Supervision of 4-6 crew. Supervisor: Larry Todd, Professor (Ret.), Colorado State University Department of Anthropology. B-219 Andrew G. Clark Building, Colorado State University, Fort Collins, CO 80523-1787, Ph. (970) 491-5447.

September 1991-October 1993

Field assistant, Pumé Ethnoarchaeological Research Project, Apure, Venezuela. Duties: Collection of quantified subsistence time allocation data including mobile individual focal follows, household scans, hourly camp scans, and manufacturing event sampling in a tropical hunter-gatherer community. Lived as traditional hunter-gatherer embedded in the community. Salary: expenses plus \$2,000 stipend. Supervisor: Russell D. Greaves, PhD Candidate, Department of Anthropology, University of Utah, 270 S. 1400 East Room 102, William Stewart Building. Salt Lake City, UT 84112-0060 Ph. 801-581-6251.

May 1988-September 1991

District Archaeologist, Winema National Forest. Duties: Inventory, analysis and curation of prehistoric Klamath sites and historic logging, ranching and pioneering sites on the Klamath Ranger District, Klamath Falls, Oregon. Survey, site mapping, artifact description, analysis, and illustration. Planning, organization and implementation of all cultural resource management activities for the district. Rapid inventory and management of sites in wildfire situations. Management of cultural resource equipment and budget. Section 106 compliance and appropriate documentation to the State Historic Preservation Office. Oral history interviewing. Supervised and trained field crew and historic visitor center staff. Ending salary: GS-9 Step 2. Supervisor: Frank Erickson,

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District Ranger (Ret.), Klamath Ranger District. 1936 California Ave, Klamath Falls, OR 97601. Ph. (503)-885-3400.

SELECTED JOB-RELATED TRAINING and QUALIFICATIONS

2015	NSF WIDER-PERSIST Revision of Anthropology Department Curricula with emphasis on ANTH 103, Introduction to Archaeology
2015	Course Design Institute, Boise State University Center for Teaching and Learning
2014-present	Ten Before Tenure Program, Boise State Univ.
2010-14	Federal Agreements Technical Representative
2001-7	Federal Contracting Officer's Representative
1989, 2005	Archaeological Site Damage/Looting Data Collection/Law Enforcement support. Beginning, Intermediate, Advanced.
2004	NPS Workshop on Museum Collections Management, Tucson, AZ
2003	NPS Workshop on Remote Sensing Techniques in Archaeology, Collinsville IL.
2002	Archaeological Resources Protection Act Training, Albuquerque, NM.
2001	Cultural Resources Protection and Fire Management Training, Tucson AZ.
1988-2001	Red-card, Type II Wildland Firefighter (FFT2).

UNIVERSITY COURSES TAUGHT *indicates one-credit workshops

- ❖ North American Prehistory
- ❖ Ethnoarchaeology in Theory and Practice
- ❖ Introduction to Archaeology
- ❖ Introduction to Human Evolution
- ❖ Human Evolution Lab
- ❖ Hunter Gatherers in Global Perspective
- ❖ Cultural Resources Management in Theory and Practice
- ❖ Archaeology of the Pacific Northwest
- ❖ The Human Diet in Evolutionary Perspective*
- ❖ Introduction to the Archaeology of China*
- ❖ Living Ethnoarchaeology*
- ❖ Gender in Archaeology*
- ❖ Archaeology of Climate Change*

PUBLICATIONS, by date (also please see http://works.bepress.com/pei-lin_yu/)

In press

A. Williams, K. Barnett, M. Schmader, and A. M. Prentiss: "Spatial Analysis of Fur Trade Era Floor and Roof at Housepit 54." *In The Last House at Bridge River: The Archaeology of An Aboriginal Household in British Columbia During the Fur Trade Period*, A. M. Prentiss, ed. University of Utah Press, Salt Lake City.

In Press

Yu, P. L.

Forager intensification and development of agriculture in the Amazon Basin: an hypothesis from an ethnoarchaeological perspective. *In Examining Amazonia's past, present and future from a biocultural perspective: Engaging perspectives of health, environment and nutrition*, L. Forline and C. Perez-Hilton, eds. Springer Environmental Science, Dordrecht Netherlands.

In Preparation

Yu, P. L.

A cross-cultural analysis of archaeological site damage assessment procedures and recommendations for their improvement: U.S. National Park Service and City of QuFu, Shandong Province, China.

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In Preparation

Chen, S. Q., and P. Yu: "Origins of Agriculture in China: Bifurcated Evolutions."

In Preparation, contract signed

Yu, P., G. Smith, and S. Chen

Relevancy and Application of Heritage in Contemporary Society. Left Coast Press, Walnut Creek CA.

In Review

Chen, S. Q., and P. L. Yu: "The Upper Paleolithic Adaptations of North China." *Archaeological Research in Asia*.

2015 Yu, P. L. and M. Schmader, guest editors

Special Issue of the *Journal of Anthropological Archaeology* Vol. 38, June 2015. "Archaeology IS Anthropology: Lewis Binford's Dynamic Contributions to Archaeology Theory and Practice.

2015 Yu, P. L., M. Schmader, and J. Enloe

"I'm the oldest New Archaeologist in Town": The intellectual evolution of Lewis R. Binford. *Journ. Anth. Arche.* 38:2-7.

2015 Yu, P. L.

Ethnoarchaeology of foraging and the case of the vanishing agriculturalists in the Amazon Basin. *Journ. Anth. Arche.* 38:59-66.

2015 Yu, P. L., ed.

Rivers, Fish, and the People: Tradition, Science, and Historical Ecology of River Fisheries in the American West. University of Utah Press, Salt Lake City.

2015 Yu, P. L.

Introduction. *In Rivers, Fish, and the People: Tradition, Science, and Historical Ecology of River Fisheries in the American West.* P. Yu, ed. Pp. 1-11. University of Utah Press, Salt Lake City.

2015 Yu, P. L., and J. M. Cook

Scale and organization in traditional salmon fishing: insights from ancient technology of the Upper Columbia River. *In Rivers, Fish, and the People: Tradition, Science, and Historical Ecology of River Fisheries in the American West.* P. Yu, ed. Pp. 70-95. University of Utah Press, Salt Lake City.

2014 MacDonald, D., W. Andrefsky, and P. Yu, eds.

Lithics in the West. University of Montana Press, Missoula.

2014 Yu, P. L.

Ethnoarchaeology as a strategy for building frames of reference for research problems. *In Hunter Gatherer & Mid-Range Societies* section of the *Encyclopedia of Global Archaeology*, A. Prentiss, ed. Springer Publishing, New York.

2014 Yu, P. L.

Volunteer Profile. *SAA Archaeological Record* 14(2):6-7.

2014 Yu, P. L., and J. M. Cook

Implications of Upper Columbia River Lithic Technology for Prehistoric Fishing in the Rockies. *In Lithics in the West*, W. Andrefsky, D. MacDonald, and P. Yu, eds. Pp. 16-34. University of Montana Press, Missoula.

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- 2014 Lee, C., R. L. Kelly, R. Reckin, I. Matt, P. L. Yu
Ice Patch Archaeology in Western North America. *SAA Archaeological Record* 14(2):15-19.
- 2013 Yu, P. L.
Cultural Resources in Wilderness, Cultural Resources for Wilderness. NPS Intermountain Region "Wild Matters" on-line publication series. Denver, CO.
- 2012 Yu, P. L.
Foreword. *In Teaching My Spirit to Fly*, M. Bagshaw, author. Little Standing Spruce Pub., Santa Fe NM.
- 2012 Yu, P. L.
Heritage Values and Stewardship of Ancestral Remains (in Mandarin). *Journal of Oriental Archaeology* 8:35-43. Shandong University, Jinan, China.
- 2012 Yu, P. L., H. Fang, C. Shen, and G. Smith
The International Conference "Cultural Heritage Values in China: Identifying, Evaluating, and Treating Impacts to Cultural Relics," Shandong University, Jinan, and Qufu Town, Shandong Province, China, October 26-28, 2010. *Journal of Heritage and Society. Heritage and Society* 4 (2):261-264
- 2011 MacDonald, D., E. S. Hale, P. L. Yu, M. Hektner, and D. S. Dick
Prehistoric/historic ecology and land restoration within the Gardiner Basin, Yellowstone National Park, Montana. *Questioning Greater Yellowstone's Future Climate, Land Use, and Invasive Species. Proceedings of the 10th Biennial Scientific Conference on the Greater Yellowstone Ecosystem*, October 11-13, 2010. C. Andersen, ed. Pp. 137-145. National Park Service, Mammoth Hot Springs MT.
- 2010 Meyer, L., P. L. Yu, R. Skeirik, and V. Salazar-Halfmoon
Grappling with Climate Change: Impacts to Heritage Resources. *National Park Service, Vanishing Treasures Year-End Report: A Climate of Change, Climate Change Issue*. National Park Service, U.S. Department of the Interior, Vanishing Treasures Program, pp. 22-25.
- 2009 Yu, P. L.
Heritage Values among the Pumé of Venezuela. *In Heritage Values in Contemporary Society*, G. S. Smith, P. Messenger, and H. Soderland, eds. Pp. 199-208. Left Coast Press, Walnut Creek CA.
- 2009 Yu, P. L.
Ancient Pit Cooking in the American Southwest and Pacific Northwest: A Study in Foraging Intensification. Verlag Dr Muller Publishing, Saarbruecken, Germany.
- 2008 Yu, P. L.
Whose family? Negotiating ownership of the ancestors. *In Kennewick Man: Perspectives on the Ancient One*, H. Burke, C. Smith, D. Lippert, J. Watkins, and L. Zimmerman, eds. Pp. 144-145. Left Coast Press, Walnut Creek CA.
- 2006 Yu, P. L., F. Sellet, and R. D. Greaves, eds.
Archaeology and Ethnoarchaeology of Mobility. University of Florida Press, Gainesville.
- 2006 Yu, P. L.
From Atlatl to Bow and Arrow: Implicating Projectile Technology in Changing Systems of Hunter-gatherer Mobility. *In Archaeology and Ethnoarchaeology of Mobility*, F. Sellet, R. Greaves, and P. Yu, eds. Pp. 201-220. University Press of Florida, Gainesville.

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2006 Yu, P. L., B. Mills, and A. Neuzil

What skills do I need to get and keep a job in archaeology? *The SAA Archaeological Record* 6(3):9-13

1999 Yu, P. L., and R. Greaves

Into the life of the nation: land use and self-determination among traditional Pumé hunter-gatherers in Venezuela. *Cultural Survival Quarterly* 23(4): 78-79.

1997 Yu, P. L.

Hungry Lightning: Field Notes of a Woman Anthropologist. University of New Mexico Press, Albuquerque.

SELECTED PRESENTATIONS (presented papers unless otherwise noted)

2015 A Frame of Reference for First Encounters: Paleolithic Foragers and Neolithic Farmers in Taiwan. 11th Conference on Hunting and Gathering Societies, Austria, Vienna.

2015 Plenary invited lecture: A Climate of Change for China's Mountain Heritage. Taishan Mountain Satellite Symposium of the 22nd International Congress of Historical Sciences, Taishan, China.

2015 Archaic Women Hunting in the High Country? Ethnoarchaeological and Evolutionary Perspectives. 80th Annual Society for American Archaeology Meeting, San Francisco, CA.

2015 When Neolithic Met Paleolithic: Evolutionary Implications of the Transition in Taiwan. Poster presented at the 3rd Annual Northwest Evolution, Ecology, and Human Behavior Conference, Boise ID.

2014 "Hot, Dry, Flooded, and Burned: Archaeology and Climate Change in the National Park Service. 79th Annual Society for American Archaeology Meeting, Austin TX.

2014 "Emerging Research in Natural Resource Management Through a Consortium of Regional Universities and Federal Agencies." Northwest Science Conference, Missoula MT.

2013 Invited Paper: "Children as Formational Agents in the Archaeological Record: Some Ethnoarchaeological Observations." Symposium: Archaeology of the Under-represented. 78th Annual Society for American Archaeology Meeting, Honolulu, HI.

Webinar: "Cultural Resources in Wilderness: Symbiotic Management." National webinar presented by the Arthur Carhart Center for Wilderness Training, Missoula MT.

2012 Invited Paper: "Science and Compliance: A Mutualistic Relationship in Cultural Resources." Symposium: What We Value, from the Past and Present. 11th Biennial Scientific Conference on the Greater Yellowstone Ecosystem Greater Yellowstone in Transition: Linking Science and Decision Making, Mammoth Hot Springs, WY.

Invited Paper: "Forager intensification and the development of agriculture in the Amazon Basin." Symposium: Processual Archaeology Beyond Binford: Current and Future Directions. 77th Annual Society for American Archaeology Meeting, Memphis, TN.

2011 Rocky Mountains CESU projects in cultural science, scholarship, and stewardship: the first ten years. 10th Rocky Mountain Anthropological Conference, Missoula, MT

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2011 Scale and organization in traditional salmon butchering: insights from traditional technology of the Upper Columbia River. Society for the 76th Annual Society for American Archaeology Meeting, Sacramento, CA.

2011 A Snapshot of Climate Change-related Activity in the National Park Service's Archaeology Program: 2011. Society for the 76th Annual Society for American Archaeology Meeting, Sacramento, CA.

2010 Invited Paper: Heritage Values and Stewardship of Ancestral Remains in China and America. Presented at the symposium entitled Cultural Heritage Values in China: Identifying, Evaluating, and Treating Impacts to Cultural Relics, in Jinan, Shandong Province, China.

Additional papers presented from 1996-2008 available on request

SELECTED SYMPOSIA AND WORKSHOPS

2015/16 Co-chair, "Households and Evolutionary Process" session of the 4th Annual Northwest Evolution, Ecology, and Human Behavior Conference, Boise ID.

2011 Co-chair, Federal Lands Heritage and Cultural Resources Research in the Rocky Mountains: A Showcase of Cooperative Ecosystem Studies Unit (CESU) System Projects. 10th Rocky Mountain Anthropological Conference, Missoula, MT.

2010 Co-chair, Heritage Values and Stewardship of Ancestral Remains in China and America. Presented at the symposium entitled Cultural Heritage Values in China: Identifying, Evaluating, and Treating Impacts to Cultural Relics, in Jinan, Shandong Province, China.

2010 Co-chair, Archaeology IS Anthropology: Celebrating 50 Years with Lewis Binford, 75th Annual Society for American Archaeology Meeting, St. Louis, MO.

2009 Co-chair, Toward a New Curriculum: the Future of Applied Archaeology in Higher Education, 74th Annual Society for American Archaeology Meeting, Atlanta, GA.

2008 Discussant, Heritage Values: The Past in Contemporary Society.

Discussant, Archaeological Field School Working Group. Both in the 73rd Annual Society for American Archaeology Meeting, Vancouver, BC.

CONFERENCES ORGANIZED

2016 Co-Organizer, Royal Ontario Museum's Relevancy and Application of Heritage in Contemporary Society. Ontario, Canada. Funded by Wenner-Gren Foundation.

2010, 2012 Co-organizer, Rocky Mountains Wilderness Stewardship Workshop (2010, 2012), Lubrecht Experimental Forest, Potomac, MT.

2011 Organizing Sponsor, 10th Rocky Mountain Anthropological Conference, Missoula, MT.

2005 The Technology of Archaeology, for the Idaho Archaeology Society Conference, Boise, ID

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AWARDS

ACADEMIC

2015 Boise State University College of Arts and Sciences Faculty Fellow
2008-2009 Faculty Research Fellow, Institute for Social Research, Sacramento State University
1998 First Place, SMU Anthropology Graduate Student Paper Competition
1997 First Place, SMU/Sigma Xi Graduate Student Research Poster Competition
1989 Graduation with Distinction; Phi Beta Kappa; National Dean's List; Who's Who in American Colleges and Universities; University of New Mexico Dean's List

SELECTED PROFESSIONAL

2013, 2012 Exceptional Performance, National Park Service Intermountain Region
2012 U. S. Secretary of the Interior's Partnerships in Conservation Award for the Glacier National Park Ice Patch Archeology and Paleoecology Project
2011, 2013 Leader in Wilderness Stewardship, National Park Service's Intermountain Region
2008-2009 Faculty Research Fellow, Institute for Social Research, Sacramento State University
2003, 2004, 2006 S.T.A.R. (Special Thanks for Achieving Results) Award, Bureau of Reclamation
2000 S.T.A.R. (Special Thanks for Achieving Results) Award, National Park Service.
1998 Godbey Author's Award, Southern Methodist University
1990, 1991 Certificate of Merit for Superior Performance, U.S. Forest Service

SELECTED PROFESSIONAL MEMBERSHIPS, DUTIES, AFFILIATIONS

2015-ongoing: Representative for Boise State University to the Rocky Mountains Cooperative Ecosystem Studies Unit
2015: Member, Curriculum Committee, Boise State College of Arts and Sciences
2014-present: Cultural Resources Advisor, Great Northern Landscape Conservation Cooperative (US Fish and Wildlife Service)
2014-present: Board Member, American Antiquity
2014: Member, Promotion and Tenure Committee, Boise State College of Social Sciences and Public Affairs
2012-2014: Cultural Resources Representative and Vice Chair, NPS Intermountain Region, Wilderness Executive Committee
2010-present: Chair, John L. Cotter Award for Excellence in NPS Archeology.
2010-12: Chair, National Park Service Intermountain Region, Resources Stewardship Advisory Team's Policy Committee.
2010-12: Vice Chair, Intermountain Region Resources Stewardship Advisory Team.
2007-2009 Chair, Sacramento State University Collections Committee
2007-2009 Member, Sacramento State University Tribal NAGPRA Committee

SCHOLARSHIPS, CONTRACTS, GRANTS AWARDED or IN REVIEW (listing of non-awarded proposals avail. on request)

2015, Fulbright Fellowship Submission, "Neolithic Crops of Taiwan: Adaptation, Resiliency, and Heritage." Under review.
2015, Chiang Ching-Kuo Foundation for International Scholarly Exchange Grant proposal, "Neolithic Crops of Taiwan: Adaptation, Resiliency, and Heritage." Under review.
2015, full partnership for Boise State University in the Rocky Mountains Cooperative Ecosystem Studies Unit (assembled and presented application)

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2015, Pre-proposal approved for Cultural Science Plan for the Great Northern Landscape Conservation Cooperative (full proposal in development)
2015, assisted with successful NSF WIDER-PERSIST Grant Proposal for Anthropology Dept., \$19,985
2015, Workshop Grant from Wenner-Gren Foundation for Workshop “Relevancy and Application of Heritage in Contemporary Society,” \$20,000.
2014 Co-recipient, Seed Grant from Boise State Office of Sponsored Projects for “Promoting Community Resilience to Critical Events through Implementation of a Community-based, Interdisciplinary Education Module,” \$4,300
2012 Co-recipient, Secretary of the Interior’s Partners in Conservation Award for Ice Patch Archaeology Partnership at Glacier National Park
2011 Co-authored grant proposal, National Park Service Climate Change Response Grant (Vanishing Treasures historic and prehistoric structures vulnerability assessments and risk analysis project), \$718,432.
2010 Co-authored grant proposal, National Park Service Climate Change Response Grant (Ice Patch Archaeology at Glacier National Park in partnership with Blackfeet, Salish/Kootenai Tribes, Universities of Wyoming and Colorado), \$651,000
2009 National NAGPRA Grant (federal compliance with NAGPRA for looted sites) \$84,116
2008-2009 California Department of Transportation Contracts (federal compliance with NAGPRA for highway construction collections) \$227,000 total
2008, 2009 President’s Research Grants, Sacramento State University \$6,000 total
2007 Faculty Fellow Research Grant, Institute for Social Research, Sacramento State University \$1,000.

SCIENTIFIC REVIEW PANELS

2009-14, Jerry O’Neal National Park Service Research Fellowship
2010-14, George Melendez Wright Climate Change Fellowships Proposal Review Panelist
2012 National Park Service Servicewide Comprehensive Call Guidance Team Member, IMR Cultural Resource funding including Cultural Cyclic.
2012 Interagency Joint Fire Sciences Proposal Review Panelist, Cultural Resources and Fire

GRADUATE STUDENT ADVISING

Audrey Rogers and Kaitlyn Mansfield, Masters of Applied Archaeology projects (in process)

Committee Member: Shawn Roberts, MAA, “Re-assessing mobility on the Snake River Plain with Kelly’s Mobility Index” (Boise State University, 2014).

Committee Member: Mark Beil, MA, Local Ecological Knowledge and Chronic Disease in the Forth McDermitt Paiute-Shoshone Tribe” (Boise State University, 2015).

Committee Member: Bryon Schroeder, PhD, “Barrier or backbone? Middle Rocky Mountain Research from a Northern Wind River Range perspective. (U. of Montana, 2015)

Committee Member: Elizabeth Agosto, MA, “Investigation of Craniofacial Morphological Variation at Sully (39SL4).” (U. of Montana, 2013)

Committee Member: Emily Eide, MA, “Cultural Landscapes in Conflict: Balancing National Park Service, Tribal, and Public Interests in National Parklands” (U. of Montana, 2013)

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Committee Member: Heidi Johnson, MA, "A Preliminary Analysis of Cut Mark Degeneration in Bone Due to the Application of Hydrated Calcium Oxide." (U. of Montana, 2013)

Committee Member: Helen Keremedjiev, PhD, "Ethnography of Cultural Heritage Interpretation and Commemoration Practices at Bear Paw, Big Hole, Little Bighorn, and Rosebud Battlefields." (U. of Montana, 2013)

Committee Member: Kelly French, MA, "Lithic Technology and Risk: Winter Households at Bridge River Village." (U. of Montana, 2014)

Committee Member: Nikki Manning, MA "What Lies Beneath: The Missoula Historic Underground Project Urban Ecosystem Transformation, Adaptive Re-Use and Preservation." (U. of Montana, 2014)

Committee Member: Matthew Mattes, MA, "Lithic Technology and Residential Considerations of the S7istkin Site." (U. of Montana, 2014)

Committee Member: Jaclyn Schmidt, MA, "Right of Possession: A Comparative Legal Analysis of NAGPRA." (U. of Montana, 2014)

JOB-RELATED SKILLS

Research experience and instruction at university level: archaeology, anthropology, ethnoarchaeology, heritage values, historic preservation, and anthropological techniques and data. Managing regional science partnership program. Analyzing, interpreting, and applying historic preservation and other public heritage/cultural resources policies, guidelines, and administrative procedures, and implementing them through wide variety of partnerships. Native American Graves Protection/Repatriation Act and cultural heritage program management. Certified in Federal contracting and agreement administration. Professional repository management to federal standards. Skill in communicating technical and non-technical materials to a variety of audiences in multiple formats; extensive public speaking experience. Technical and non-technical publications and assistance with website design. Microsoft and Apple operating systems; SPSS, MS Access, Past Perfect, MS Excel, and Arc GIS. Type II Wildland Firefighter 1988-'89, 2000-'02. Type 65 wpm. Languages: Spanish, French, Mandarin, Pumé Indian, Latin.

RESEARCH INTERESTS

Ethnoarchaeology; Human Behavioral Ecology; Taiwan and China Upper Paleolithic to Neolithic transitions; human behavioral and management response to climate change; traditional ecological knowledge; Protected Areas and Cultural Heritage law and policy in the U.S., South America, and Asia; hunting and gathering peoples; gender and technology; heritage values and repatriation practices; indigenous archaeology.

OTHER SKILLS

Certified group exercise instructor for boxing, kickboxing, Zumba, PiYo, and strength conditioning; CPR/AED certified.

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REFERENCES

Robert L. Kelly, Full Professor
Department of Anthropology
1000 E. University Ave Dept 3431
University of Wyoming
Laramie, WY 82071
RLKELLY@uwyo.edu
307-766-3135 (office)
307-399-0423 (cell)

Stan Bond
Chief Archeologist
Department of Interior
National Park Service
1201 "Eye" Street N.W.
Washington, DC 20005
202-354-2123
Stanley_c_bond@nps.gov

Anna M. Prentiss, Full Professor
Department of Anthropology
32 Campus Dr.
University of Montana
Missoula, MT 59801
anna.prentiss@mso.umt.edu
406-243-6152

David Zeanah, Full Professor
Sacramento State University Anthropology Department
6000 J Street
Sacramento, CA 95819
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zeanah@csus.edu

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FEBRUARY 18, 2016**

Curriculum Vitae
John Peter Ziker, Ph.D.

Office Address

Department of Anthropology
Boise State University
1910 University Drive
Boise, ID 83725-1950
208-426-2121
208-426-4329(fax)
e-mail: jziker@boisestate.edu

Professional Preparation

1998 Ph.D. in Anthropology, UC Santa Barbara
1992 M.A. in Anthropology, University of California, Santa Barbara
1988 B.A. in Anthropology, *summa cum laude*, Honor's College, Arizona State University

Professional Experience

Chair, 2012 (August) – Present, Department of Anthropology, Boise State University
Professor, 2011 (August) – Present, Department of Anthropology, Boise State University

Editor, 2012 (November) – Present, Sibirica: Interdisciplinary Journal of Siberian Studies, Berghahn Books.

Reviews Editor, 2005 (April) – Present, Sibirica: Interdisciplinary Journal of Siberian Studies, Berghahn Books.

Associate Professor, 2008 (August) – 2011, Department of Anthropology, Boise State University

Contributing Editor (Evolutionary Anthropology Section), 2008 – 2011,
Anthropology News

Fulbright Visiting Chair in North American Studies at the University of Calgary, 2009-2010

Assistant Professor, 2003 (August) – 2008 (July), Department of Anthropology, Boise State University

Research Fellow, 2001-2003, Max Planck Institute for Social Anthropology, Halle/S., Germany

Term Assistant Professor, 2000-2001, Department of Anthropology, University of Alaska Fairbanks

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Visiting Assistant Professor, Spring 1999 and Spring 2000, Department of Anthropology,
Indiana University of Pennsylvania

Postdoctoral Fellow, Fall 2000, Kennan Institute for Advanced Russian Studies,
Woodrow Wilson Center

Professional Interests

Human Behavioral Ecology

Cooperation

Environmental Anthropology

Kinship and Social Organization

Circumpolar Peoples

Former Soviet Union/Peoples of Siberia

Peer Review Activity

Verified Reviewer for 8 journals: <https://publons.com/author/586600/john-ziker#profile>

Books

2014. John P. Ziker (ed.). Histories from the North: Environments, Movements, and Narratives (2nd Edition). Dubuque, IA: Kendall Hunt Publishers.

2011. John P. Ziker and Florian Stammler (eds.) Histories from the North: Environments, Movements, and Narratives. Boise State University/University of Lapland: Boise/Rovaniemi.

2010. Konstantin B. Klovov and John P. Ziker (eds.) Pripoliarnaia Perepis' 1926/27 gg. v Evropeiskom Severe (Arkhangel'sk Gubernia i Avtonomnaia Oblast' Komi. [The 1926/27 Polar Census in the European North (Arkhangel'sk Gubernia and Komi Autonomous Oblast')]. MPSS: St. Petersburg.

2002. John P. Ziker Peoples of the Tundra: Native Siberians in the Post Communist Transition. Prospect Heights, Ill.: Waveland Press, Inc.

Journal, Special Issue

2010. John P. Ziker and David G. Anderson (eds.) "Special Issue on Siberian Demography." Sibirica: Interdisciplinary Journal of Siberian Studies Volume 9, Issue 3.

Papers and Book Chapters in Production

In Press. John P. Ziker. "Diets of Hunter-Gatherers in the Arctic and Sub-Arctic." In Julia Lee-Thorp and M. Anne Katzenberg (eds.), The Oxford Handbook of the Archaeology of Diet. Oxford University Press: Oxford.

In Press. Stepan N. Katyginskii and John P. Ziker. "Dolgan National Games." Sibirica: Interdisciplinary Journal of Siberian Studies.

Accepted for Publication. John P. Ziker, David A. Nolin and Joellie Rasmussen. "The Effects of Wealth on Male Reproduction among Monogamous Hunter-Fisher-Trappers in Northern Siberia." Current Anthropology.

Submitted. David. A. Nolin and John P. Ziker. Reproductive responses to economic

uncertainty: fertility decline in post-Soviet Ust'-Avam, Siberia. Human Nature.

In Prep. David. A. Nolin and John P. Ziker. Wealth and Cohort Effects on Fertility Decline in an Indigenous Siberian Community in Response to Rapid Economic Change.

Published Papers and Book Chapters

2015. John P. Ziker, Joellie Rasmussen, and David A. Nolin. "Indigenous Siberians solve collective-action problems through stable food sharing strategies and traditional knowledge." Sustainability Science. DOI: 10.1007/s11625-015-0293-9.

2015. John P. Ziker. "Linking Disparate Approaches to the Study of Social Norms: An Example from Northern Siberia." Sibirica: Interdisciplinary Journal of Siberian Studies 14 (1): 68-101.

2015. John P. Ziker. "Stress, Alcohol, and Demographic Change in Northern Siberia." Pp. 128-133 in McElroy, Ann and Patricia K. Townsend (eds.), Medical Anthropology in Ecological Perspective, Sixth Edition. Westview Press.

2014. John P. Ziker. "The Long, Lonely Road of Homo Academicus: Focusing the research lens on the professor's own schedule." The Blue Review 3/31/2014. <http://theblureview.org/faculty-time-allocation/> (accessed June 16, 2014).

2014. John P. Ziker. "Subsistence and Sharing in Northern Siberia: Experimental Economics with the Dolgan and the Nganasan." Pp. 337-356 in Ensminger, J. and J. Henrich (eds.) Experimenting with Social Norms: Fairness and Punishment in Cross-Cultural Perspective. Russell Sage Foundation Publications.

2013. John P. Ziker. "The Fire is our Grandfather: Virtuous Practice and Narrative in Northern Siberia." Pp. 249-261 in David G. Anderson, Robert P. Wishart, and Virginie Vaté, (eds.), About the Hearth: Perspectives on the Home, Hearth and Household in the Circumpolar North. New York/Oxford: Berghahn.

2012. John P. Ziker. "Resilience of Domestic Groups and Communities on the lower Enisei River throughout the Twentieth Century." Sibirica: Interdisciplinary Journal of Siberian Studies 11(1): 1-42.

2011. John P. Ziker and Florian Stammler. "Introduction." Pp. 1- 6 in John P. Ziker and Florian Stammler (eds.) Histories from the North: Environments, Movements, and Narratives. Boise State University/University of Lapland: Boise/Rovaniemi.

2011. John P. Ziker. "Toward an Integrated Theory of Social Norms. Pp. 30-36 in John P. Ziker and Florian Stammler (eds.) Histories from the North: Environments, Movements, and Narratives. Boise State University/University of Lapland: Boise/Rovaniemi.

2011. John P. Ziker. "Ethnodemographics and Identity of Indigenous People in the Central Taimyr Lowlands." Pp. 219-237 in Per Axelsson & Peter Sköld (eds.) Indigenous

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Peoples and Demography. The Complex Relation between Identity and Statistics.
Berghahn Books: New York.

2011. Per Axelsson, Peter Sköld, David Anderson and John Ziker. "Epilogue: From Indigenous Demographics to an Indigenous Demography?" Pp. 295-308 in Per Axelsson & Peter Sköld (eds.) Indigenous Peoples and Demography. The Complex Relation between Identity and Statistics. Berghahn Books: New York.

2011. John P. Ziker. "Subsistence and Residence in the Putoran Uplands and Taimyr Lowlands in the 1920s." Pp. 244-267 in David G. Anderson (ed.), The 1926/27 Soviet Polar Census Expedition. Berghahn Books: New York.

2011. David G. Anderson, Evgenii Ineshin and John Ziker. "The Spatial Demography of the 'Outer Taiga' of the Zhuia River Valley, Eastern Siberia." Pp. 199-225 in David G. Anderson (ed.), The 1926/27 Soviet Polar Census Expedition. Berghahn Books: New York.

2010. Joseph Henrich, Jean Ensminger, Richard McElreath, Abigail Barr, Clark Barrett, Alexander Bolyanatz, Juan Camilo Cardenas, Michael Gurven, Edwina Gwako, Natalie Henrich, Carolyn Lesorogol, Frank Marlowe, David Tracer and John Ziker. "Markets, Religion, Community Size and the Evolution of Fairness and Punishment." Science 327 (5972): 1480-1484.

2010. John P. Ziker and David G. Anderson. "Introduction to the Special Issue on Siberian Demography." Sibirica 9(3): 1-8.

2010. John P. Ziker. "Changing Gender Roles and Economies in Taimyr." Anthropology of East Europe Review, Special Issue: "Gender Shift in the North of Russia" 28(2): 102-119.

2010. John P. Ziker and Tayana B. Arakchaa. [In Russian]. "The 'Fire-Tent' Nenetses on the western side of Enesei River: Subsistence economy, way of life, and social organization. Pp. 348-378 in K.B. Klovov and J.P. Ziker (eds.) The Polar Census of 1926/27 in the European North (Arkangel'sk Guberniia and Komi Autonomous Oblast). Saint Petersburg: MPSS.

2009. David Anderson, Evgeny Ineshin and John P. Ziker. [in Russian]. "Spatial Demography of the 'Far Taiga' in the Zhuia River Valley in Eastern Siberia." Reports of the Laboratory of Ancient Technology, Issue 7. Pp. 224-246. Irkutsk: Irkutsk State Technical University Press.

2009. Lou Schmitt, Sephan Larsson, Jan Burdukiewicz, John Ziker, Krister Svedhage, Jeannette Zamon, and Holger Steffen. "Chronological insights, cultural change, and resource exploitation on the west coast of Sweden during the Late Palaeolithic/early Mesolithic transition." Oxford Journal of Archaeology 28(1): 1-27.

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FEBRUARY 18, 2016**

2009. John Ziker. "Stress, Alcohol, and Demographic Change in Northern Siberia." Pp. 298-303 in Patricia Townsend and Ann McElroy (eds.) Medical Anthropology in Ecological Perspective: Fifth Edition. Boulder, CO: Westview Press.
2007. John P. Ziker. "Subsistence and Food Sharing in Northern Siberia: Social and Nutritional Ecology of the Dolgan and the Nganasan." Ecology of Food and Nutrition 46: 445-467.
2007. John P. Ziker. "Flexibility in Indigenous Exchange Practices in Northern Russia." Pp. 155-167 in Leo Paul Dana and Robert B. Anderson (eds.) International Handbook of Research on Indigenous Entrepreneurship. Cheltenham: Edward Elgar Publishing, Ltd.
2006. John P. Ziker. "The Social Movement of Meat in Taimyr, Northern Russia." Nomadic Peoples 10(2): 105-133.
2006. Henrich J, McElreath R, Barr A, Ensminger J, Barrett C, Bolyanatz A, Cardenas JC, Gurven M, Gwako E, Henrich N, Lesorogol C, Marlowe F, Tracer D, and Ziker J. "Costly Punishment across Human Societies." Science 312 (5781): 1767-1770.
2005. John P. Ziker. [in Russian] "The Central Taimyr Lowlands in 1926/27: Identity and Settlement Pattern of the Native Peoples." Pp. 79-87 in David G. Anderson (ed.) Turukhanskaia Ekspeditsia Pripoliarnoi Perepisi: Etnografiia i Demografiia Malochislennykh Narodov Severe. Krasnoyarsk: Krasnoyarsk Regional Studies Museum.
2005. John P Ziker. "Siberia," "Russia and Evolution," "Evolutionary Humanism," and "Work and Skills." Encyclopedia of Anthropology. H. James Birx (ed.). Thousand Oaks, CA: Sage Publications.
2005. John Ziker and Michael Schnegg. "Food Sharing at Meals: Kinship, Reciprocity, and Clustering in the Taimyr Autonomous Region, Northern Russia." Human Nature 16(2): 178-210.
2005. John P. Ziker. "Property, Hunting, and Food Sharing in the Taimyr Autonomous Region (North-Central Siberia)." Pp 98-101 in Chris Hann (ed.) Property Relations: the Halle Focus Group 2000- 2005. Halle, Germany: Max Planck Institute for Social Anthropology.
2004. John P. Ziker. "Anthropology of Eurasia, Postsocialism and Beyond." Reviews in Anthropology 33(2): 163-175.
2003. John P. Ziker. "Assigned Territories, Family/Clan/Communal Holdings, and Common-Pool Resources in the Taimyr Autonomous Region, Northern Russia." Human Ecology 31(3): 331-368.
2003. John P. Ziker. "'Horseradish Is No Sweeter than Turnips' Entitlements and Sustainability in the Taimyr Autonomous Region, Northern Russia." Pp. 363-390 in C.

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Hann and the "Property Relations" Group (eds.), The Post-Socialist Agrarian Question, Halle Studies in the Anthropology of Eurasia, Volume 1, LIT-Verlag: Münster, Hamburg, London.

2003. John P. Ziker. "Kinship and Friendship in the Taimyr Autonomous Region, Northern Russia." Sozialer Sinn 2003/1: 59-80.

2002. John P. Ziker. "Raw and Cooked in Arctic Siberia: Seasonality, Gender and Diet among the Dolgan and Nganasan Hunter Gatherers." Nutritional Anthropology 25(2): 20-33.

2002. John P. Ziker. "Land Use and Economic Change among the Dolgan and the Nganasan." Pp. 191-208 in E. Kasten (ed.) People and the Land: Pathways to Reform in Post-Soviet Siberia, Vol. 1, Dietrich Reimer Verlag.

2001. John P. Ziker. "*Traditsionnaia Pishcha i Pitanie Dolgan i Nganasan*" ["Traditional Food and Nutrition of the Dolgan and Nganasan."] Pp. 152-156 in David G. Anderson (ed.) Sel's koe Z dravoo khranenie u Malochisl en nykh Narodov Severa Kanady i Rossii, Chast' 2, Narodnaya Meditsina. [Village Health Care among the Small-Numbering Peoples of the Canadian and Russian North, Part 2, Folk Medicine.] Novosibirsk: Sibprint Agency.

2001. John P. Ziker. "Land Use and Social Change among the Dolgan and Nganasan of Northern Siberia." Pp. 47-66 in David G. Anderson and Kazunobo Ikeya (eds.) Parks, Property, Power: Managing Hunting Practice and Identity within State Policy Regimes. Senri Ethnological Studies No. 59. Osaka: National Museum of Ethnology.

1999. John P. Ziker. "Survival Economy and Core-Periphery Dynamics in the Taimyr Autonomous Region, Russia." Anthropology of Eastern Europe Review 17(2): 59-65.

1998. John P. Ziker. "Land Tenure and Economic Collapse in Northern Siberia." Arctic Research in the U.S. Volume 12, pp. 73-80. Arlington, VA: National Science Foundation, Interagency Arctic Research Policy Committee.

1998. John P. Ziker. "Kinship and Exchange Among the Dolgan and Nganasan of Northern Siberia." Pp. 191-238 in Barry Isaac (ed.) Research in Economic Anthropology, Volume 19. Greenwich, Conn.: JAI Press.

1996. John P. Ziker. "Problems of the North," Pp: 59-75 in Kathryn Lyon, Laada Bilaniuk, and Ben Fitzhugh (eds.) Michigan Discussions in Anthropology, Vol. 12: Post-Soviet Eurasia: Anthropological Perspectives on a World in Transition.

1996. John P. Ziker. "*Robinzony i Pyatnitsy, Odnako*" ["Robinsons and Fridays, You Don't Say"]. With Ivan Shmetterling. Ekspert 48: 82-85.

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1988. John P. Ziker. Caste in India: Marriage, Kinship, and Religion. Honors Thesis, Arizona State University.

Awards and Honors

Research Grants

- Pending. Fulbright U.S. Scholar Program. “Childhood Trauma and Addiction and Mental Health Outcomes in the NLSCY: Direct epigenetic effects or behavioral responses to compromised phenotypes?” \$35,000.
- 2009-2011 National Science Foundation. “Environments, Movements, Narratives in the Circumpolar North: Final BOREAS Conference.” Award 0946278, \$236,355.
- 2009-2010 Fulbright Visiting Chair in North American Studies at the University of Calgary, \$25,000.
- 2006-2011 National Science Foundation, Continuing Grant: “Home, Hearth, and Household in the Siberian and Northern Canada,” Award 0631970, \$375,365
- 2000-2001 L.S.B. Leakey Foundation, Standard Grant: “The Behavioral Ecology of Food Sharing among North Siberian Foragers.”
- 2000-2001 American Council of Teachers of Russian, Regional Exchange Scholar Program: “Distribution of Food Products among Indigenous Hunters of Arctic Siberia.”
- 2000-2001 Wenner-Gren Foundation for Anthropological Research (Richard Carley Hunt Fellowship): “Tiajono-Nya—Peoples of the Tundra in the Post-Communist Transition.
- July 1 – December 31, 1999, Research Scholar, Kennan Institute for Advanced Russian Studies, Woodrow Wilson International Center for Scholars
- 1996/1997 International Research and Exchanges Board, Individual Advanced Research Opportunities Fellowship
- 1996 National Science Foundation Dissertation Improvement Grant, Arctic Social Sciences, Award 9528936 (P.I. Professor Napoleon A. Chagnon)
- American Council of Teachers of Russia/U.S. Department of State, Program for Research & Training on Eastern Europe and the Independent States of the Former Soviet Union, 1996 Combined Research and Training Fellowship
- 1995/1996 Humanities/Social Science Research Grant, University of California, Santa Barbara

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- American Council of Teachers of Russian/U.S. Information Agency, 1993/1994 Research Scholar Fellowship at Moscow State University, Russia

Other Awards

- Fulbright Canada, 2011 Eco-Leadership Fellowship for “Sustainable Space and Community Garden at Boise State University,” \$3500, January 2011.
- Associated Students of BSU, Golden Apple Award, February, 2009
- Boise State University, Albertson’s Library, Library Assessment Collections Grant (with Memo Cordova) for Anthropology, \$3000, June 2008
- College of SSPA, Service to the Profession Grant, Fall 2007
- Fellow (peer-nomination), Society for Applied Anthropology, 2007-present
- College of SSPA, Annual Faculty Award for Tenure-Track Research, 2006
- Associated Students of Boise State University, Certificate of Excellence for Outstanding Service as College of SSPA Faculty, December 6, 2006
- Boise State University, Office of Research, Faculty Research Associate Fellowship 2006-2007
- Boise State University, Albertson’s Library, Library Assessment Collections Grant (with Beverly Miller) for Anthropology, \$3000, June 2006
- Boise State University, College of SSPA, Research Award, Fall, 2006
- International Canadian Studies Institute, BC and Yukon, Consulate General of Canada, Seattle, July 2006
- Boise State University, College of SSPA, Teaching Award, Fall 2005
- Boise State University, College of SSPA, Research Award, Spring 2004, Spring 2005, and Spring 2006
- Boise State University, College of SSPA, Undergraduate Research Initiative, Fall 2003 and Spring 2004
- 1998/1999 UCSB Graduate Division Travel Grant: CHAGS 8, Osaka, Japan
- Dissertation Fellowship, Spring 1998, Fall 1998, Graduate Division, UC Santa Barbara

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- Elman Service Fellowships, 1995/1996, 1996/1997, 1997/1998, Anthropology Department, UC Santa Barbara
- Regents' and Tuition Fellowship, 1991-1992, University of California, Santa Barbara
- Cynthia Lakin Award, 1988, Anthropology Department, Arizona State University
- Phi Beta Kappa, Beta Branch, 1987, Arizona State University

Short Publications

2015. John P. Ziker. "Modalities of Cooperation, Ecological Context, and Proximate Strategies." Comment on Who Helps and Why?: Cooperative Networks in Mpimbwe by Claudia Kasper and Monique Borgerhoff Mulder Current Anthropology 56(5): 725.

2013. John P. Ziker. Comment on Drew Gerkey's "Cooperation in Context Public Goods Games and Post-Soviet Collectives in Kamchatka, Russia." Current Anthropology 54(2): 169-170.

2013. A.V. Kharinskii and John Ziker. "Pastbishchnaia Territoria Domashnego Olenia i ee Iskusstvennye i Estestvennye Markery: Na Primere Obshchiny "Uluki" (Severobaikal'skii Raion Buriatii)" [Pasture Territory of Domestic Reindeer and its Manmade and Natural Markers: The Example of the Obshchina 'Uluki' (North Baikal District, Buriat Republic)]. Pp 277-280 in N.A. Tomilov, D.G. Anderson, M.A. Korusenko, S.S. Tikhonov, and A.V Kharinskii (eds.) Proceedings of the 20th International Scientific Symposium "The Integration of Archaeological and Ethnographic Research" in two volumes. Irkutsk: Irkutsk State Technical University Press.

2012. John P. Ziker. "Issleduia Problemy Traditsionnogo Sotsiuma." Pp. 77-79 in L.A. Churilova (otv. red.), Pervaia Taimyrskaiia Muzeinaia Internet-Conferentsia. Sbornik Trudov. Dudinka: Taimyrskaiia Kraevedcheskii Muzei.

2012. John P. Ziker. "Environmental Change and the Sustainability of Subsistence Practices among Northern Indigenous Peoples." Pp. 1-8 in Environmental Change and Subsistence of Northern Peoples: Adaptation to the Changes of the Terrestrial Ecosystem. Proceedings of the 26th International Abashiri Symposium. Abashiri, Japan: Association for the Promotion of Northern Cultures.

2012. Joseph Henrich, Robert Boyd, Richard McElreath, Michael Gurven, Peter J. Richerson, Jean Ensminger, Michael Alvard, Abigail Barr, Clark Barrett, Alexander Bolyanatz, Colin F. Camerer, Juan-Camilo Cardenas, Ernst Fehr, Herbert M. Gintis, Francisco Gil-White, Edwins Laban Gwako, Natalie Henrich, Kim Hill, Carolyn Lesorogol, John Q. Patton, Frank W. Marlowe, David P. Tracer, and John Ziker. "Culture Does Account for Variation in Game Behavior." Proceedings of the National Academy of Sciences. 109 (2): E32-E33.

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2010. Joseph Henrich, Jean Ensminger, Richard McElreath, Abigail Barr, Clark Barrett, Alexander Bolyanatz, Juan Camilo Cardenas, Michael Gurven, Edwina Gwako, Natalie Henrich, Carolyn Lesorogol, Frank Marlowe, David Tracer and John Ziker. "Evolution of Fairness: Rereading the Data Response." Science: 329(5990): 389-390

2010. "Final BOREAS Conference: Environments, Movements, Narratives in the Circumpolar North." Witness the Arctic 14(1): 19-20.

2010. Review of Mikhail G. Turov "Evenki Economy in the Central Siberian Taiga at the Turn of the 20th Century: Principles of Land Use" (Northern Hunter-Gatherers Research Series, Volume 5, Edmonton: Canadian Circumpolar Institute Press, 2010). Sibirica 9(2): 86-88.

2010. John Ziker, Per Axelsson, Peter Sköld and David Anderson. "Indigenous Peoples and Demography." Anthropology News 51(5): 10-12.

2008. John P Ziker. "Home, Hearth and Household: A Collaborative Project in the Circumpolar North." Anthropology News. 49(9): 7-8.

2008. Review of Susan Crate "Cows, Kin, and Globalization: An Ethnography of Sustainability" (AltaMira Press, 2006). Sibirica 8(1): Fall, 2008: 86-87.

2007. Review of Igor Krupnik, Rachel Mason, and Tonia W. Horton "Northern Ethnographic Landscapes: Perspectives From Circumpolar Nations" (Contributions to Circumpolar Anthropology, 6) (Smithsonian Institution/UAF Press, 2005). Sibirica, 6(1): 127-129.

2006. Review of Alexei Yurchak "Everything Was Forever Until It Was No More: The Last Soviet Generation" (Princeton, 2005). American Anthropologist. Dec 2006, Vol. 108, No. 4: 927-928.

2006. Review of Robert McGhee "The Last Imaginary Place: A Human History of the Arctic World" (Key Porter Books, 2004). Journal of the Royal Anthropological Institute (N.S.): 12: 678-679.

2004. "Non-Market Cooperation in the Indigenous Food Economy of Taimyr, Arctic Russia: Evidence for Control and Benefit." Comment on Michael Gurven "To Give or Not to Give: The Behavioral Ecology of Human Food Transfers." Behavior and Brain Sciences 27(4): 571.

2003. Comment on Dwight W. Read and Steven A. LeBlanc "Population Growth, Carrying Capacity, and Conflict." Current Anthropology 44(1): 79-80.

1996. "Obsuzhdeniye Proekta Zakona Rossiiskoi Federatsii 'Osnovy Pravovogo Statusa Korennykh Narodov Severa.'" ["Comments on the Draft Law of the Russian Federation on Fundamentals of Legal Status for the Native Peoples of the North."] Etnograficheskoe Obozrenie 2: 141-143.

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Working Papers

2011. Exploring Public Participation in the Treasure Valley: Preliminary Research Findings. Brian Wampler, John Ziker, Susan G. Mason, John McClellan, Roman Lewis, and Joe Hackman.

(http://sspa.boisestate.edu/planning/files/2011/10/TVTransportation_White_Paper_Final.pdf)

2009. Barr A, Wallace C, Ensminger J, Henrich J, Barrett C, Bolyanatz A, Cardenas JC, Gurven M, Gwako E, Lesorogol C, Marlowe F, McElreath R, Tracer D, and Ziker J. "Homo Æqualis: A Cross-Society Experimental Analysis of Three Bargaining Games." Oxford, Department of Economics Working Paper, Paper No. 422.

(<http://www.economics.ox.ac.uk/research/WP/pdf/paper422.pdf>)

2002. John P. Ziker. "Assigned Territories, Family/Clan Holdings, and Common-Pool Resources in the Taimyr Autonomous Region, Northern Russia." Max Planck Institute for Social Anthropology Working Paper No. 32. (<http://eth.mpg.de/pubs/pubs.html>)

Evolutionary Anthropology Society Section News Columns

(Authored by John Ziker unless otherwise noted)

2012. "Master's Program in Anthropology at Boise State" and "Montreal 2011." 53(1): 28-29.

2011. "Indigenous Peoples and Environmental Change." Anthropology News 52(9): 32.

2011. "Advocacy in Evolutionary Anthropology: The Aché of Paraguay by Mason Ireland and John P. Ziker." Anthropology News 52(8): 36-37.

2011. "The Gift of Maps by Gwilym Lucas Eades." Anthropology News 52(7): 40-41.

2011. "Why Holism Matters By John J. Crandall." Anthropology News 52(5): 33.

2011. "Winners at New Orleans." Anthropology News 52(4): 32.

2011. "Advocacy and Science in Evolutionary Anthropology." Anthropology News 52(3): 33.

2011. "Long-Range Plan Is a Big Mistake." Anthropology News 52(2): 40-41.

2010. "EAS Sessions at the 2010 AAA Annual Meeting." Anthropology News 51(8): 45.

2010 "Human Behavior and Evolution Society Meeting" Anthropology News, 51, 7 (October): 51.

2010. "EAS Members Featured in AAAS Journal Science," Anthropology News, 51, 5 (May): 44

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2010. "Human Nature," Anthropology News, 51, 4 (April): 40.
2010. "Anthropological Models of Forager Mobility," Anthropology News, 51, 3 (March): 42-43.
2010. "Chagnon and Neel Vindicated, Yet Again," Anthropology News, 51, 2 (February) 40.
2010. "Benefits of Joining EAS," Anthropology News, 51, 1 (January): 40
2009. "Culture and the Mind by Brooke Scelza," Anthropology News, 50, 9 (December): 41-42.
2009. "EAS Sessions and the 108th AAA Meeting by Betsy Venard and John P. Ziker," Anthropology News, 50, 8 (November): 46-7.
2009. "Costly Signaling and Consensus Analysis by Jeremy Koster," Anthropology News, 50, 7 (October): 54
2009. "Evolution of Aggression by William Knowlden and John P. Ziker," Anthropology News, 50, 5 (May): 50
2009. "2009 AAA Meeting: Awards, Sessions, Papers and Registration by John Patton," Anthropology News, 50, 4 (April) 42.
2009. "2008 Annual Report: Status, Activities, and Future Plans by Patricia Draper," Anthropology News, 50, 3 (March): 45
2009. "Nuclear Family Conflict by Jonathan Stieglitz," Anthropology News, 50, 2 (February): 45.
2009. "Altruism and Anthropology," Anthropology News, 50, 1 (January): 42
2008. "Evolutionary Anthropology in Europe," Anthropology News, 49, 9 (December): 46.
2008. "Call for Service to the Society, Upcoming Conference on Human Aggression, EAS Sessions at the 107th AAA Meeting," Anthropology News, 49, 8 (November): 53.
2008. "Evolution and Politics," Anthropology News, Vol. 49, 7 (October): 52-53.
2008. "Evolutionary Anthropology and Religion," Anthropology News, 49, 5 (May): 57.
2008. "Evolutionary Anthropology and the Environment," Anthropology News, 49, 4 (April): 52-53.
2008. "2007 Annual Report by Eric Alden Smith," Anthropology News, 49, 3 (March): 49.
2008. "Untitled (Ziker's EAS Column Manifesto)," Anthropology News, 49, 2 (February): 44-45.

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Conference Presentations (Sole Authored by John P. Ziker)

2015. "Sharing and the Distribution of Skill and Knowledge." Paper presented to the Polygyny Paradox Project Group, Santa Fe Institute, Santa Fe, NM, February 1.

2014. "Kin Provisioning, Risk Minimization, and Generosity in Indigenous Food Sharing Networks in the Siberian Arctic." Paper presented to ICASS VIII, Prince George, BC, May 25.

2013. "The logic of traditional worldviews and promotion of social norms." Paper Presented to the 20th International Scientific Symposium "The Integration of Archaeological and Ethnographic Research, Irkutsk, May 28-30.

2010. "Sharing, Cooperation, and Food Security: Is Circulation of Resources by Hunter-Fisher-Trappers in North Central Siberia a Response to Economic Risk?" Paper presented at the 109th Annual Meeting of the American Anthropological Association, New Orleans, Louisiana, November 19.

2010. "If sharing is not a form of exchange, then what is it?" Paper presented at the Human Behavior and Evolution Society Conference, June 17, Eugene, OR.

2010. "Contextualizing the caribou skin lodge in the circumpolar North." Paper presented to the 43rd Annual Meeting of the Canadian Archaeological Association, Calgary, April 30.

2010. "Reconstructing Settlement and Subsistence in Siberia." Paper presented to the 43rd Annual Meeting of the Canadian Archaeological Association, Calgary, April 30.

2010. "Reconstruction of Past Movements." Paper presented to the Workshop "What Would a Good Anthropological Model of Mobility Look Like?" University of Cologne, January 14.

2009. "The Fire is Our Grandfather: Social Relations and Inferences of the Home-Hearth in Northern Siberia." Paper presented to the 42nd Annual Chacmool Conference: Identity Crisis: Archaeology and Problems of Social Identity, University of Calgary, November 14.

2009. "Toward an Integrated Theory of Social Norms, Part 1." Paper presented to the BOREAS Final Conference: Environments, Movements and Narratives in the Circumpolar North, Arctic Centre, Rovaniemi, Finland, October 28.

2009. "Subsistence and Residence in the Putoran Uplands-Taimyr Lowlands in the 1920s - 1960s." Paper presented to the Workshop: The Role of the State in Population Movements: The Circumpolar North and Other Periphery Regions. Arctic Centre, Rovaniemi, Finland, October 26.

2009. "Violent Death in Northern Siberia: Application of Evolutionary Hypotheses." Poster presentation for Evolution of Human Aggression: Lessons for Today's Conflicts,

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The Barbara L. and Norman C. Tanner Center for Nonviolent Human Rights Advocacy, University of Utah, Salt Lake City, February 25-27.

2008. "Kinship and Gender in Taimyr, Russia." Workshop Gender Shift in Northern Communities of Russia, Sponsored by the Max Planck Institute for Social Anthropology and the Wenner-Gren Foundation, Cesvaine, Latvia, May 4.

2007. "Food Distribution among Hunter-Gatherers in Northern Siberia: Tests of Evolutionary Hypotheses." Annual Meeting of the American Anthropological Association, Invited Session: New Research in the Evolutionary Ecology of Food Transfer, Washington, DC, December 2.

2007. "Homes, Hearths, and Households in the Lena Goldfields and Taimyr Lowlands, Russia, and Rae-Edzo, Canada." Paper presented to the 15th Arctic Conference Pocatello, ID, Nov. 2.

2007. "Resource Distribution by Dolgan and Nganasan Hunters and their Families in Taimyr, Northern Russia." The Ethnohistory and Archaeology of Northern Eurasia: Theory, Methods, and Practice, Irkutsk, Russia, May 19-25.

2006. "Ethnodemographics and Identity of Indigenous People in the Central Taimyr Lowlands." International Workshop: Indigenous Identity in Demographical Sources, Umeå University, Umeå, Sweden, September 29–30.

2006. "Food Distribution in Northern Siberia and the Evolution of Cooperation." Paper presented to Human Behavior and Evolution Society annual meeting, University of Pennsylvania and Drexel University, Philadelphia, June 7-11.

2005. "Darwinian evolutionary theory and social behavior: Analysis of cooperative networks among indigenous Siberian minorities in the Taimyr Autonomous Okrug, Russia." Paper presented to the annual meeting of the Association of Politics and Life Sciences, Washington DC, August 31-September 4.

2005. "An Evolutionary Analysis of Indigenous Siberian Food-Sharing Networks." Paper presented to the annual meeting of the Human Behavior and Evolution Society, Austin, Texas, June 1-5.

2005. "The Social Context of Fairness and Rational Choice in Siberia." Paper presented to the Roots of Human Sociality Conference. Pasadena, California, April 15-17.

2005. "Land Tenure and Game-Management Strategies Among the Dolgan of Northern Siberia: Points for Comparison." Paper presented to the 41st Annual Meeting of the Idaho Chapter of the Wildlife Society, Boise, Idaho, March 10.

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2004. "Rational Choice and Limits on Agency in Siberia." Workshop: Rational Choice and the Limits of Individual Agency, Max Planck Institute for Social Anthropology, Halle (Saale) Germany, September 16-18.

2004. "Hunter Status and Reproductive Success in Northern Siberia." Paper presented to the annual meeting of the Human Behavior and Evolution Society. Berlin, Germany, July 21-25.

2004. "The Social Movement of Meat in Taimyr, Northern Russia." Paper presented to the 5th International Congress of Arctic Social Sciences. Fairbanks, Alaska, May 19-23.

2003. "Tradition and the Conflict between Generations in Taimyr: The Logic of Conformity and Dialectic of Learning." Siberian Studies Center Workshop: Everything is Still Before You: Being Young in Siberia Today, Max Planck Institute for Social Anthropology, Halle (Saale) Germany, November 15-17.

2003. "Sharing in Siberia: Social Networks and Explanatory Hypotheses." The Human Behavioral Ecology Workshop: Future Questions, Approaches, and Applications for a Second Generation, Cooperation and Competition, University of Maine, Department Anthropology and Climate Change Institute, May 8-11.

2002. "The Food Sharing Debate: A Case Study From Siberia." Paper presented to the 9th International Conference on Hunting and Gathering Societies, Edinburgh, Scotland, September 9.

2002. "Socio-Ecological Contexts of Livestock Theft." Collective and Multiple Forms of Property in Land and Animals, Max Planck Institute for Social Anthropology, Halle (Saale) Germany, August 21.

2002. "Theoretical Approaches in the United States." Who Owns Siberian Ethnography? An International Workshop on Methods and Approaches to Ethnography in the Russian North, Max Planck Institute for Social Anthropology, Halle (Saale) Germany, March 7.

2002. "Kinship, Friendship, and Public Goods in Native Siberian Food Sharing." Tagung: Verwandtschaft und Freundschaft. Zur Unterscheidung und Relevanz zweier Beziehungssysteme. Bielefeld, Germany, February 10.

2001. "The Raw and the Cooked in Arctic Siberia: Seasonality, Gender and Diet among the Dolgan and Nganasan Hunter Gatherers." Paper presented to the 100th Annual Meeting of the American Anthropological Association, Washington, DC, November 28.

2001. "The Dolgan of Northern Russia: Native Language in School and Community." Paper presented to the Annual Meeting of the Alaskan Anthropological Association, Fairbanks, AK, March 23.

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2001. "Clan Holdings, Assigned Territories, and Common Pool Resources: Land Tenure Developments in the Taimyr Autonomous Region, Northern Russia." Paper presented to the 40th Annual Meeting of the Western Regional Science Association, Palm Springs, CA, February 28.

2000. "Land Tenure and Economic Change among the Dolgan and Nganasan." Paper presented to the "Postsocialisms in the Russian North" workshop at the Max Planck Institute for Social Anthropology, Halle (Saale), Germany, November 9.

2000. "Food Sharing among Indigenous Hunters of the Russian Arctic: Models and Preliminary Evidence." Paper presented to the 12th Annual Meeting of the Human Behavioral and Evolution Society, Amherst, Massachusetts, June 11.

2000. "The Socio-Demography of a Native Siberian Village." Paper presented to the Arctic Forum, Washington, DC, May 18.

2000. "Challenges to Self-Determination Among the Siberian Dolgan and Nganasan." Association for the Study of Nationalities Conference, Columbia, New York, April 14.

1999. "Survival Economy and Core-Periphery Dynamics in the Taimyr Autonomous Region." Paper presented to Soyuz-99, Bloomington, Indiana, April 10.

1998. "Land Use and Social Change among the Dolgan and Nganasan of Northern Siberia." Paper presented to the 8th International Conference on Hunting and Gathering Societies, Osaka, Japan, October 29.

1998. "Land Tenure and Kinship in Northern Siberia." Paper presented to the 10th Annual Meeting of the Human Behavioral and Evolution Society, Davis, California, July 10.

1997. "Kinship, Economy, and Ethnicity Among the Dolgan of Northern Siberia." Paper presented to the 96th Annual Meeting of the American Anthropological Association, November 23.

1997. [In Russian] "*Rodstvo, Obmen, i Etnos v Taimyrskoi Tundre: Rezultaty Issledovaniy (1995-1997)*." ["Kinship, Exchange, and Ethnicity in the Taimyr Tundra: Results of Investigations (1995-1997)."] Paper presented to the 60th Anniversary Conference of the Taimyr Regional Territorial Studies Museum, Dudinka, Krasnoyarskii Territory, October 17.

1995. "Ethnocentrism and Detection of Ethnicity." 7th Annual Meeting of the Human Behavior and Evolution Society, Santa Barbara, California, June 28-July 1.

Co-Authored Conference Papers

2015. Glass, Delaney, Shane Scaggs, Haley Myers, Lisa Greer, and John P. Ziker. "Four Pathways to Generosity: Evolutionary Mechanisms Differentially Affect Charitable

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Donations.” Paper presented at the 114th meeting of the American Anthropological Association, Denver, November 21.

2015. Ziker, John P., and David A. Nolin. “Wealth and Cohort Effects on Fertility Decline in an Indigenous Siberian Community in Response to Rapid Economic Change.” Paper presented at the 114th meeting of the American Anthropological Association, Denver, November 19.

2015. Ziker, John P., and David A. Nolin. “Reproductive Decision Making in Ust'-Avam, Siberia: Fertility Decline as a Response to Economic Uncertainty.” Paper presented at the 27th Annual Conference of the Human Behavior & Evolution Society. Columbia, MO. May 27.

2014. Ziker, John P., David A. Nolin, Joellie Rasmussen. “Skill and Wealth-Based Determinants of Men’s Reproductive Success among Monogamous Hunter-Fisher-Trappers in Northern Siberia.” Paper presented at the 113th Annual Meeting of the American Anthropological Association, Washington, DC, December 2.

2013. Ziker, John and Joellie Rasmussen. “Food Sharing Networks and Variation in Capital in Siberia: Implications for the Evolution of Cooperation.” Paper presented at the 112th meeting of the American Anthropological Association, Chicago, November 23, 2013.

2012. Mertens, Karl and John Ziker. “Pastoral and Foraging Economy of the Evenki: Understanding the Role of Movement In a Taiga Environment.” Paper presented to the 111th meeting of the American Anthropological Association, San Francisco, November 17, 2012.

2011. Ziker, John and Artur Kharinsky. “Mobility and Revival of Reindeer Herding Among Evenk Hunters in Eastern Siberia, Russia.” Paper presented to the 110th Annual Meeting of the American Anthropological Association, Montreal, November 17.

2009. Ziker, J., A. Blake, and B. Venard. “Spousal Violence in Northern Siberia: Testing Hypotheses of Male Sexual Proprietariness.” Poster presented to the 108th Annual Meeting of the American Anthropological Association, Philadelphia, December 4.

2009. Ziker, J., P. Nietfeld, T. Andrews and J.B. Zoe. “A Knowledge Repatriation Project on Caribou-Skin Dwellings with Tlicho First Nation.” The Society for Applied Anthropology 69th Annual Meeting, Santa Fe Convention Center, Santa Fe, March 17-21.

2008. Ziker, J. and C. Hill. “Global Change in Siberia: Past and Present Human-Caribou/Reindeer Interaction.” Poster presented to the BSU Focus the Nation Research Symposium, Boise, ID, January 31.

2007. Gorrell, N., Arakchaa T., and J. Ziker. “The History and Economy of the Taimyr Lowlands.” Paper presented to the 15th Arctic Conference Pocatello, ID, November. 2.

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2007. Harter, K., and J. Ziker. "Latter-Day Saints Childcare Networks in Boise, Idaho." Poster presented to Human Behavior and Evolution Society annual meeting, College of William and Mary, Williamsburg, Virginia. June 29.

2006. Ziker, J., Harter, K., Kennedy, E.C., and S. Sweat. "Trust, Reciprocity, and Resources: Using Experimental Games to Understand Perspectives of College Students." Poster presented to Human Behavior and Evolution Society annual meeting, University of Pennsylvania and Drexel University, Philadelphia, June 7-11.

2005. Ziker, J. and Wadley, K. "Demographic Health and the Community Well-Being in the Taimyr Lowlands, Northern Russia." Paper presented to the Annual Meeting of the Society for Applied Anthropology, Santa Fe, New Mexico, April 9.

2002. Ziker, J. and A. Venstel. "Reindeer Herding and Hunting Among the Dolgan: A Comparative Study of Property Relations in the Russian Far North." European Association for Social Anthropology, 7th Biennial Conference, Copenhagen, August 14-17.

1997. Chagnon, N.A., Ziker, J., Thompson, B., Price, M. & Eerkens, J. "The Density of Kinship in Tribal and Peasant Communities." Paper presented to the 9th Annual Meeting of the Human Behavior and Evolution Society, June 5.

Invited Lectures

2015. "Sharing Meat and Norms of Sharing: Pathways to Cooperation among Contemporary North Siberian Hunter-Gatherers." Lecture presented at the University College, London, Anthropology Departmental Seminar, December 2.

2015. "Village Life in Siberia: Economic Inequalities, Reproductive Dynamics, Fairness, and Sharing in an Indigenous Community." Lecture presented at the Asia Center, University of Utah, April 23.

2011. "Environmental Change and the Sustainability of Subsistence Practices among Northern Indigenous Peoples." Lecture presented at 26th International Abashiri Symposium, Abashiri City, Hokkaido, Japan, October 1.

2010. "Sustainable Indigenous Economies in the Siberian Arctic." Public Lecture presented at the Prince of Wales Northern Heritage Centre, Yellowknife, Canada, April 13.

2005. "Property, Hunting, and Food Sharing among the Dolgan and the Nganasan in the Russian Far North". Department of Anthropology, University of California at Davis, January 31.

1999. "Surviving the Transition: Indigenous Communities in the Russian Far North." Public Lecture for the Yale Center for International and Area Studies and the Council on European Studies, Yale University, November 15.

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1999. "Social Change and Indigenous Communities in Siberia." Presentation to the Russia/Eurasia Area Studies Course, Foreign Services Institute, U.S. State Department, August 16.

1997. [In Russian] "*Rodstvennye Svyazi, Obmen, i Etnos v Taimyrskoi Tundre.*" ["Kinship Relations, Exchange and Ethnicity in the Taimyr Tundra."] Field Report, Northern Sector, Institute of Ethnology and Anthropology, Russian Academy of Sciences, November 11.

BSU Campus Lectures

2007. With Christopher Hill. "Environments, Histories, and Migrations in Siberia from 10,000 y.b.p. to the Present." Anthropology Club Colloquium, October 25.

2006. "First Nations, the Treaty Process, and Environmental Rights in British Columbia, Canada." International Connections Brown Bag Luncheon Seminar, April 24, 2006.

2006. "Comparing Canadian First Nations and Small Numbering Peoples in Siberia: Land and Resource Issues." Canada Week Lecture. April 3, 2006.

2006. With Lisa Brady. "Natural Rights: Human Rights and Environmental Change". Presented at Martin Luther King Jr./Human Rights Celebration, January 19, 2006.

2005. With Lisa Brady. "Environment and Human Rights: A global responsibility" Presented at the Point of View conference on Environment and Human Rights, November 9, 2005.

Media

2010. "Puteshestvie v proshloe." ["Trip to the past"]. NTV News. August 10, 2010.
<http://www.ntv.ru/novosti/201847/>

2006. "BSU Professor Profile" Idaho Local by Buffy Naillon, Boise State Radio, August 8.

http://www.publicbroadcasting.net/idaho/news.newsmain?action=article&ARTICLE_ID=952446

2006. "John P. Ziker" Special Guest on *Peoples and Cultures* by Michael Alvard, KAMU, College Station, TX, July 11.

2004. "Conversations with John Ziker." Special guest on *Conversations* by Peter Lutze, TVTV Channel 11, February 26.

2000. "The Return to Subsistence Among the Dolgan and Nganasan"—*Alaska Edition*, KUAC Public Radio, November 30 and December 1.

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2000. "Speaking Dolgan." *Dialogue*—from the Woodrow Wilson International Center for Scholars, Public Radio International, Broadcast # 529, April 24-30.

Field Research and Language Experience

July 1010, Severobaikal'skii Raion of the Republic of Buryatia, Russia: Ethno-archaeological survey of reindeer herding families in the north Baikal uplands. Research supported by the National Science Foundation under Grant No. 0631970.

May 2008, Kyzyl and Bai-Taiginskii Raion of the Republic of Tuva, Russia: Ethnographic survey of nomadic households; public lectures at Tuvan State University; meetings with ethnographer and other faculty. Research supported by the National Science Foundation under Grant No. 0631970.

June-August 2007, Bodaibinskii Raion of Irkutsk Region and Taimyr (Dolgano-Nenetskii) Municipal District (renamed in 2007). I spent three weeks with partners from Irkutsk State University, Chita State University, and Boise State University conducting ethno-archaeological and ethnographic surveys of reindeer herding communities on the Zhuya River in Irkutsk Region. I spent three weeks in the Central Taimyr Lowlands conducting research on the vernacular architecture of Dolgan and Nganasan mobile dwellings, as well as renewing community census information. Research supported by the National Science Foundation under Grant No. 0631970, and a 2007 Faculty Research Associates Fellowship from BSU.

January-March 2003, Taimyr Autonomous Region: I spent two and one half months in my main study community conducting fieldwork on hunting, food sharing, hunter status, demographics, and ultimatum/dictator games. Fieldwork was supported by the Max Planck Institute for Social Anthropology.

May-November 2001, St. Petersburg and Taimyr Autonomous Region: I spent six months in Russia working on publications and conducting ethnographic field work on two projects (funded by grants from the Leakey Foundation and the Wenner Gren Foundation). The scientific-technical exchange was supported by a grant from the American Council of Teachers of Russian.

March-November 1997, Russia, Northern Siberia: I conducted dissertation improvement research as a 1996/1997 IREX Individual Advanced Research Opportunities scholar with further support from NSF Award # 9528936.

November-June 1995-1996 and September-November 1996, Russia, Northern Siberia: I conducted dissertation research with support from the US Department of State, Program for Research & Training on Eastern Europe and the Independent States of the Former Soviet Union (Title VIII) Combined Research and Training Fellowship, administered by the ACTR/ACCELS Research Scholar Program, as well as with support from NSF Award # 9528936, and a UCSB Humanities/Social Science Research Grant.

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September-June 1993-1994, Russia, Northern Siberia: As a U.S. Information Agency Research Scholar in the Ethnography Department, History Faculty, Moscow State University, I spent two months in the proposed dissertation focal community and received approval for my research. I also conducted research at the Institute of Scientific Information for the Social Sciences and at the library of the Institute of Ethnology and Anthropology.

July-September 1992, Russia, Northern Siberia: I made a one month trip to the Taimyr Region of northern Krasnoyarskii Krai to study the feasibility of dissertation research.

March 1989-June 1991, Russia, Armenia, Kazakstan: I made five trips to the Soviet Union during my employment as project manager for Kiser Research Inc., Washington, DC.

February-May 1988, Russia, Uzbekistan: I completed a three month intensive Russian language course at the Moscow Energy Institute, a program administered by the American Council of Teachers of Russian.

Summer 1986, Norwich University: I completed an intensive course in Russian language.

Membership in Professional Societies

American Anthropological Association
Human Behavior and Evolution Society
International Arctic Social Scientists Association
Society for Applied Anthropology, Fellow

Graduate Students

Karl Mertens, M.A. 2015, "Mobility and Economy among the Evenkis in Eastern Siberia."

Joellie Rasmussen, M.A. 2014, "Explaining Variance in Reproductive Success and Food Sharing in Ust'-Avam."

Corrina Smith, M.A.A. 2011, "Anthropology As Science: Rationale for Teaching Biological Anthropology as a High School Science Elective and Pilot Semester Curriculum."

Tayana Arakchaa, M.A. 2009, "Household and Property Relations in Tuva."

Nikki Gorrell, M.A.A. 2008, "An Educational Program for the Basque Museum: A Series of Recommendations."

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Current Graduate Students

Elizabeth Kringen

Valerie Hayes

Shawn G. Benner

*Department of Geosciences
Boise State University
Boise ID 83725
(208) 850-9033
email: sgbenner@gmail.com*

EDUCATION

Ph.D., Department of Earth Sciences, University of Waterloo, 2000
Hydrogeology, Geochemistry and Microbiology of a Reactive Barrier for Acid Mine Drainage
M.Sc., Department of Geology, University of Montana, 1994
Fate of Heavy Metals During Surface-groundwater Interaction
B.A., Geology Department, Colorado College, 1988
Evolution of a Complex Stratovolcano

PROFESSIONAL EXPERIENCE

Associate Professor <i>Geosciences, Boise State University</i>	2009-present
Boise State NSF-EPSCoR Director <i>Office of Research, Boise State University</i>	2013-Present
Visiting Scholar <i>Geological and Environmental Sciences, Stanford University</i>	2002-Present
Assistant Professor <i>Geosciences, Boise State University</i>	2004-2009
Assistant Research Professor <i>Desert Research Institute, University of Nevada</i>	2002-2004
Graduate Faculty <i>Hydrological Sciences Program, University of Nevada, Reno</i>	2003-2004
Post Doctoral Fellow <i>Geological and Environmental Sciences, Stanford University</i>	2000-2002
Lecturer <i>Department of Earth Sciences, University of Waterloo</i>	1998-2000
Lecturer <i>Geology Department, Colorado College</i>	1997

RESEARCH INTERESTS

My research interests are in biogeochemistry and hydrology with an emphasis on how biogeochemical and hydrologic processes influence transformations in soils, surface waters and groundwater. I am interested in examining scientific problems from the molecular to the field scale and my research approach often integrates microscopic techniques with fieldwork and laboratory experimentation and involves collaborative team efforts. My research often focuses on environmental contamination as well as biogeochemical changes related to climate change. I am also interested in problems requiring integration of society and environmental systems.

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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GRANTS AND CONTRACTS

Current

NSF Idaho EPSCoR Research Infrastructure Improvement Grant Managing Idaho's Landscapes for Ecosystem Services 09/01/2011-078/31/2013 \$20,000,000, Co-PI.
NSF-Critical Zone Observatory: Reynolds Creek Critical Zone Observatory. \$2,500,000, Co-PI.
NSF-Hydrologic Sciences Collaborative Research: Novel interdisciplinary flume experiments to investigate the role of the hyporheic zone in greenhouse gas generation. \$250,000, Co-PI.
Fire and Erosion in Western Rangelands: Evaluation of Post-fire Treatments, Idaho Federal Appropriations 06/01/08-05/30/12, \$1,500,000, Co-PI.
Supplemental to: Fire and Erosion in Western Rangelands: Evaluation of Post-fire Treatments, Idaho Federal Appropriations 06/01/08-05/30/12, \$120,000, Co-PI.

Past

Idaho Water Resources Research Institute: Characterizing Boise River watershed water quality using Basins. 3/15/12-03/14/13 \$15,000, PI
Inductively Coupled Plasma Mass Spectrometry (ICP-MS) Capability for Trace Element Analyses in the Center for Geochemical Characterization, Murdock Charitable Trust 06/01/08-12/30/12, \$314,000, PI
NSF Idaho EPSCoR Research Infrastructure Improvement Grant 09/01/2011-078/31/2013 \$400,000, Institutional Liaison PI.
Evaluation the Source and Release Mechanism of Elevated Uranium Concentrations in the Shallow Treasure Valley Aquifer: Year I. Idaho Department of Environmental Quality 06/01/08-05/30/09, \$50,000.00, PI
Elucidating Bioreductive Transformations within Physically Complex Media: Impact on the Fate and Transport of Uranium and Chromium. DOE Natural and Accelerated Bioremediation Research (NABIR) Program. 9/15/03-9/30/07, \$83,000, Co-PI
Increasing Carbon Storage within Soils through Controlled Microbial Respiration Processes GCEP. 06/01/07-05/30/08, \$35,000/yr, PI
Life Cycle Plan: Cesium Signature Detection. DOE NA-22. 06/01/06-05/30/09 \$50,000/yr, Co-PI
Reconnaissance Study of Arsenic Distribution in the Shallow Aquifer of the Treasure Valley, Idaho Water Resources Research Institute. 3/15/04-09/30/07 \$26,750, PI
Nutrient Cycling in a Tropical Watershed, Thailand. 06/01/06-05/30/07 \$15,000/yr, PI
Idaho Space Grant Fellowship: Katrina Ladd, Idaho NASA Space Grant Program Project 9/15/05-6/30/07 \$30,000, Advisor
Influence of Grade Control Structures on Nutrients, United States Army Corp of Engineers Amount: \$74,000 9/01/03-3/31/04 PI.
Nutrient Attenuation Associated with Stream Restoration Nevada Department of Environmental Protection, the United States Army Corp of Engineers, and the Cities of Reno/Sparks. \$400,000/yr, 3/15/02-2/14/03, PI.
Modeling for the Underground Testing Area, Climax Department of Energy NNSA/NSO \$1,200,000 7/1/03-6/30/06, Co-PI.

PUBLICATIONS

Publication Impact Metrics

Web of Science: Total Citations: 1795; Citations per item: 45; h-index: 20

Google Scholar: Total Citations: 2694; h-index 20; i10-index: 26

Refereed Journal Articles

- Stuckey, J.W.; Schaefer, M.V.; Kocar, B.D.; Dittmar, J.; Pacheco, J.L.; **Benner, S.G.**; Fendorf, S. 2014. Arsenian pyrite formation Concentrates arsenic within peat deposits of Mekong Delta sediments. *Geochimica Cosmochimica Acta*. *In Review*.
- Benner, S.G.**; Tantasarin, C.; Kunkel, M.L.; Ziegler, A.D. 2014. Turbidity-based estimates of carbon-nitrogen flux dynamics in a headwater catchment in northern Thailand, *Hydrologic Processes* *In Review*
- Kocar, B.; **Benner, S.G.**; Fendorf, S. 2014. Deciphering and predicting spatial and temporal concentrations of arsenic within the Mekong Delta aquifer. *Environmental Chemistry*. Accepted.
- Eiriksson, D.; Whitson, M.; Luce, C.H. Marshall, H.P.; Bradford, J.; **Benner, S.G.**; Black, T. Hetrick, H.; McNamara, J.P. 2013. An evaluation of the hydrologic relevance of lateral flow in snow at hillslope and catchment scales. *Hydrologic Processes* 27, 640–654.
- Stanaway, D.; Haggerty, R.; **Benner, S.G.**; Flores, A.; Feris, K.P. 2012. Persistent metal contamination limits lotic ecosystem heterotrophic metabolism after more than 100 years of exposure: a novel application of the Resazurin Resorufin Smart Tracer. *Environmental Science and Technology*, 46 (18) 9862-9871.
- Poulos, M.J.; Pierce, J.L.; Flores, A.N.; and **Benner, S.G.** 2012. Hillslope Asymmetry Maps Reveal Widespread, Multi-Scale Organization. *Geophysical Research Letters*, 39L06406.
- Sankey, J. B., Germino, M. J., **Benner, S. G.**, Glenn, N. F., & Hoover, A. N. 2012. Transport of biologically important nutrients by wind in an eroding cold desert. *Aeolian Research*. doi: 10.1016/j.aeolia.2012.01.003
- Yuen, J.Q., Olin, P.H., Lim, H.S., **Benner, S.G.**, Sutherland, R.A., Ziegler, A.D. 2012. Accumulation of Potentially Toxic Elements in Road Deposited Sediments in Residential and Light Industrial Neighborhoods of Singapore. *Journal of Environmental Management* 101, 151-163. doi:10.1016/j.jenvman.2011.11.017.
- Smith, T.J.; McNamara, J.P.; Flores, A.N.; Gribb, M.M.; Aishlin P.S., **Benner, S.G.** (2011) Small soil storage capacity limits benefit of winter snowpack to upland vegetation. *Hydrologic Processes* 25 (25) 3858-3865. doi: 10.1002/hyp.8340
- Geroy, I.J., Gribb, M.M., Marshall, H.P., Chandler, D.G., **Benner, S.G.**, and McNamara, J.P. (2011) Aspect influences on soil water retention and storage. *Hydrologic Processes* 25 (25) 3836-3842. doi: 10.1002/hyp.8281.
- Thoma, M.J., McNamara, J.P., Gribb, M.M., **Benner, S.G.** (2011) Seasonal recharge components in an urban/agricultural mountain front aquifer system using noble gas thermometry *Journal of Hydrology* 409 (1-2) 118-127. doi:10.1016/j.jhydrol.2011.08.003
- Kunkel Melvin L.; Flores Alejandro N.; Smith Toni J.; McNamara, J.P.; **Benner, S.G.** 2011 A simplified approach for estimating soil carbon and nitrogen stocks in semi-arid complex terrain *Geoderma* 165 (1) 1-11 DOI: 10.1016/j.geoderma.2011.06.011
- Benner, S.G.**, Fendorf, S. (2010) Arsenic in South Asia Groundwater *Geography Compass* 4 (10) 1532-1552.
- Benner, S.G.** 2010 Anthropogenic Arsenic, News and Views, *Nature Geoscience* 3, 5-6.

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- Tufano, K.J., **Benner, S.G.** Mayer, K.U., Marcus, M.A. Nico, P.S., Fendorf S. 2009 Aggregate-Scale Heterogeneity in Iron (Hydr)oxide Reductive Transformations. *Vadose Zone Journal* 8, 1004-1012.
- Busbee, M.W., Kocar, B.D., **Benner, S.G.** 2009 Irrigation produces elevated arsenic in the underlying groundwater of a semi-arid basin in Southwestern Idaho. *Applied Geochemistry* 24, 843-859
- Polizzotto, M., Kocar, B. **Benner, S.G.**, Sampson, M., Fendorf, S. (2008) Contributions of Near-Surface Arsenic Release to History's Largest Mass Poisoning. *Nature*, 453 505-508.
- Benner, S.G.**, Polizzotto, M., Fendorf, S., Sampson, M. (2008) Hydrologic Constraints on Arsenic Release from Flood Plain Sediments in Cambodia, *Applied Geochemistry* 23, 3072-3087.
- Kocar, B., Fendorf, S., **Benner, S.G.**, Polizzotto, M., Sampson, M. (2008) Shallow Biogeochemical Dynamics leading to Arsenic Release, Submitted, *Applied Geochemistry* 23, 3059-3071.
- Mayer, K.U., **Benner, S.G.**, and Blowes, D.W. 2006 Application of the reactive transport model MIN3P to a reactive barrier treating acid mine drainage. *Contaminant Hydrogeology*, 85, 3-4, 195-211.
- Hansel, C. M., **Benner, S. G.** et al. 2005 Factors influencing competing Fe(II)-induced mineralization pathways of ferrihydrite. *Environmental Science and Technology* 38, 18, 7147-7153.
- Young, M.H., McDonald, E.V., Caldwell, T.C., **Benner, S.G.**, and Meadows, D. 2004. Hydraulic properties of desert pavements, Mojave desert, California, USA. *Vadose Zone Journal* 3, 956-963.
- Hansel C. M., **Benner, S. G.** Nico, P. Fendorf, S. 2004. Structural constraints of ferric (hydr)oxides on dissimilatory iron reduction and the fate of Fe(II) *Geochimica et Cosmochimica Acta* , 68, 15 3217-3229
- Hansel, C. M., **Benner, S. G.**, Neiss, J., Dohnalkova, A., Kukkadapu, R.K., Fendorf, S.E. 2003. Secondary mineralization pathways induced by dissimilatory iron reduction of ferrihydrite under advective flow. *Geochimica et Cosmochimica Acta* 67,16 2977-2992.
- Benner, S. G.**, Hansel, C. M., Wielinga, B. W., Barber, T. Fendorf, S.E. 2002. Reductive dissolution and biomineralization of iron oxides under dynamic flow conditions. *Environmental Science and Technology* 36, 8 1705-1711
- McGregor, R., **Benner, S.G.**, Blowes, D.W. Ludwig, R., 2002. Sulfate Reduction Reactive Barriers to Treat Acidity and Heavy Metals: Two Case Studies. In: Handbook of ground water remediation of metals, radionuclides, and nutrients with permeable reactive barriers, edited by D.L. Naftz, S.J. Morrison, C.A. Fuller, and J.A. Davis.
- Ludwig, R., McGregor, R., Blowes, D.W., **Benner, S.**, Mountjoy, K. 2002. Geochemistry of an organic-based permeable reactive barrier for treatment of heavy metals. *Ground Water* 40, 1, 59-66.
- Benner, S.G.**, Blowes, D.W., Ptacek, C.J., and Mayer, K.U. 2002. Rates of sulfate reduction and metal sulfide precipitation in a permeable reactive barrier. *Applied Geochemistry* 17,3, 301-320.
- Mayer, K.U., **Benner, S.G.**, Frind, E.O., Thornton, S.F., Learner, D.L. 2001. Reactive transport modeling of processes controlling the distribution and natural attenuation of phenolic compounds in a deep sandstone aquifer. *Journal of Contaminant Hydrology*. 53 341-368.
- Benner, S.G.**, Blowes, D.W., Molson, J.W.H. 2001. Modeling preferential flow in permeable reactive barriers: Implications for performance and design. *Ground Water* 39, 3, 371-379.
- Blowes, D.W., Ptacek, C.J., **Benner, S.G.**, McRae, C.W.T. and Puls, R. W. 2000. Treatment of dissolved metals and nutrients using permeable reactive barriers. *Journal of Contaminant Hydrology* (45) 1-2, 123-137.

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- Benner, S.G.**, Gould, D., and Blowes, D.W., 2000. Microbial populations associated with the generation and treatment of acid mine drainage. *Chemical Geology* **169**, 435-448.
- Herbert Jr., R.B., **Benner, S.G.**, and Blowes, D.W., 2000. Solid Phase iron-sulfur geochemistry of a reactive barrier for treatment of mine drainage. *Applied Geochemistry* **15**, 1331-1343.
- Benner, S.G.**, Herbert Jr., R.B., Blowes, D.W., Ptacek, C.J., Gould, D. 1999. Geochemistry and microbiology of a permeable reactive barrier for acid mine drainage. *Environmental Science and Technology*. **33** 2793-2799.
- Blowes, D.W., Ptacek, C.J., **Benner, S.G.**, Waybrant, K.R., and Bain, J.G. 1998. Porous reactive walls for the prevention of acid mine drainage: a review. *Mineral Processing and Extractive Metallurgy Review* **19** 25-17.
- Herbert Jr., R.B., **Benner, S.G.**, Pratt, A.R., and Blowes, D.W. 1998. Surface chemistry and morphology of poorly crystalline iron sulfides precipitated in media containing sulfate-reducing bacteria. *Chemical Geology* **144**, 87-97.
- Benner, S.G.**, Blowes, D.W., and Ptacek, C.J. 1997. Full-scale porous reactive wall for the prevention of acid mine drainage. *Groundwater Monitoring and Remediation*, **17**, 4 Fall 1997.
- Kempter, K.A., Benner, S.G., Williams, S.N. 1996. Rincon de la Vieja Volcano, Guanacaste Province, Costa Rica: geology of the southwestern flank and hazards implications. *Journal of Volcanology and Geothermal Research*, **71**, 109-127.
- Benner, S.G.**, Smart, E.W., and Moore, J.N. 1995. Metal behavior during surface-groundwater interaction, Silver Bow Creek, Montana. *Environmental Science and Technology*, **29**, 1789-1795.

Refereed Papers in Conference Proceedings

- Mayer, K. U., Benner, S. G. Frind, E. O. Thornton, S. F., and Lerner D. L. Multicomponent reactive transport modeling of natural attenuation at the Four Ashes Research Site, UK GQ2001, June 18th-21st 2001 at the University of Sheffield.
- Benner, S.G., Blowes, D.W., and Ptacek, C.J. 2000. Long Term Performance of the Nickel Rim Reactive Barrier, A Summary. **In:** Proceedings of the Fifth International conference on acid rock drainage: ICARD 2000. May 21-24 Denver Colorado. Society for Mining Metallurgy and Exploration, Littleton Colorado.
- Mayer, U., Benner, S.G., Blowes, D.W. 1999 The Reactive Transport Model MIN3P: Application to acid mine drainage generation and treatment- Nickel Rim Mine Site. **In:** Proceedings of the Sudbury 99: Mining and the Environment II Conference, Sudbury Ontario, Canada. September 12-16, 1999.
- Benner, S.G., Blowes, D.W., Gould, W.D. 1998. Generation and treatment of acid mine drainage: Correlating bacterial populations with water chemistry, **In:** Proceedings of The Eighth Annual V.M. Goldschmidt Conference Toulouse, France Aug 30 – Sept 3. p 147-148.
- Blowes, D.W., Ptacek, C.J., Benner, S.G., McRae, C.W.T. 1998. Treatment of dissolved metals using permeable reactive barriers. **In:** IAHS Publication no. 250, Groundwater Quality: Remediation and Protection, Proceedings of the GQ '98 Conference, Tubingen, Germany, September 21-25, pp. 483-490.
- Herbert Jr, R.B., Benner, S.G., and Blowes, D.W. 1998. Reactive barrier treatment of groundwater contaminated by acid mine drainage: Sulfur accumulation and sulfide formation. IAHS Publication no. 250, Groundwater Quality: Remediation and Protection, Proceedings of the GQ '98 Conference, Tubingen, Germany, September 21-25.
- Benner, S.G., Blowes, D.W., and Ptacek, C.J. 1997. Porous reactive wall for prevention of acid mine drainage: results of a full-scale field demonstration. **In:** 1997 International Containment Technology Conference and Exhibition, St. Petersburg, Florida, U.S.A., February 9-12, 1997, pp. 835-843.

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Waybrant, K.R., Benner, S.G., Blowes, D.W., and Ptacek, C.J. 1997. A geochemical and mineralogical investigation of porous reactive walls for the prevention of acid mine drainage. **In:** Fourth International Conference on Acid Rock Drainage, Vancouver, B.C. Canada, May 30- June 6, 1997. pp. 14.

Non-refereed Papers in Conference Proceedings

Blowes, D.W., Ptacek, C.J., Benner, S.G., Waybrant, K.R., Bain, J.G., 1998. Permeable reactive barriers for the treatment of mine tailings drainage water. **In:** Proceedings of the Uranium Mining and Hydrogeology II, International Conference and Workshop, Germany, September 15-17, 1998, Vol. II-Supplements, pp. 113-120.

Benner, S.G., Blowes, D.W., and Ptacek, C.J. 1997. Porous reactive wall for the prevention of acid mine drainage: a full-scale field trial. **In:** Thirteenth BIOMINET General Annual Meeting, Ottawa, Canada, January 20, 1997. pp. 61-72.

Benner, S.G., Blowes, D.W., and Ptacek, C.J. 1997. Sulfate reduction in a permeable reactive wall for the prevention of acid mine drainage. **In:** 213th ACS National Meeting, San Francisco CA, April 13-17, 1997. Vol. 37 (1)., pp. 140-141 (extended abstract).

Wielinga, B., Benner, S., Brick, C., Moore, J., and Gannon, J. 1994. Geomicrobial profile through the hyporheic zone of a historic mining flood plain. **In:** International Conference on Groundwater Ecology, Atlanta GA, March 27-30, 1994.

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EDUCATION

- Ph. D.** **Massachusetts Institute of Technology (MIT), Cambridge, MA**
Hydrology (Dept. Civil and Environmental Engineering), February 2009
- M.S.** **Colorado State University, Fort Collins, CO**
Civil Engineering, December 2003
- B.S.** **Colorado State University, Fort Collins, CO**
Civil Engineering, May 2001

PROFESSIONAL APPOINTMENTS

- Associate Professor, Department of Geosciences, Boise State University**
Boise, ID July 2015 to present
- Assistant Professor, Department of Geosciences, Boise State University**
Boise, ID July 2009 to June 2014
- Assistant Research Professor, Department of Geosciences, Boise State University**
Boise, ID January 2009 to July 2009
- Postdoctoral Researcher, Department of Civil and Environmental Engineering, MIT**
Cambridge, MA November 2008 to January 2009
- Graduate Research Assistant, Department of Civil and Environmental Engineering, MIT**
Cambridge, MA September 2003 to November 2008
- Graduate Research Assistant, Civil Engineering Department, Colorado State University**
Fort Collins, CO May 2001 to August 2003

OTHER AFFILIATIONS

- Visiting Assistant Professor, School of Civil and Env. Engineering, Georgia Tech**
Atlanta, GA April 2013 to present

RESEARCH

PUBLICATIONS IN REFEREED JOURNALS

* denotes student author, authors highlighted in **bold text** indicate Flores group members

1. *Kormos, P. R., J. P. McNamara, M. S. Seyfried, H. P. Marshall, D. Marks, and A. N. Flores (2015), Bedrock infiltration estimates from a catchment water storage-based modeling approach in the rain snow transition zone, *J. Hydrology*, 525, 231-248, doi:10.1016/j.jhydrol.2015.03.032.
2. *Lin, L.-F., A. M. Ebtehaj, R. L. Bras, **A. N. Flores**, and J. Wang (2014), Dynamical downscaling of GPM precipitation observations for hydrologic applications via WRF 4D-Var assimilation of precipitation, *J. Hydrometeor.*, doi:10.1175/JHM-D-14-0042.1.
3. ***Walters, R. D., K. A. Watson**, H.-P. Marshall, J. P. McNamara, and A. N. Flores (2014), A physiographic approach to downscaling fractional snow cover data in mountainous regions, *Remote Sensing Env.*, 152, 413-425, doi: 10.1016/j.rse.2014.07.001.
4. *Kormos, P. R., D. Marks, J. P. McNamara, H.-P. Marshall, A. Winstral, and **A. N. Flores** (2014), Snow distribution, melt and surface water inputs to the soil in the mountain rain-snow transition zone, *J. Hydrol.*, 519(A), 190-204, doi:10.1016/j.jhydrol.2014.06.051.
5. *Anderson, B. T., J. P. McNamara, H.-P. Marshall, and **A. N. Flores** (2014), Insights into the physical processes controlling correlations between snow distribution and terrain properties, *Water Resour. Res.*, 50, doi:10.1002/2013WR013714.
6. **Flores, A. N.**, D. Entekhabi, and R. L. Bras (2014), Application of a hillslope-scale soil moisture data assimilation system to military trafficability assessment, *J. Terramechanics*, 51, 53-66, doi: 10.1016/j.jterra.2013.11.004.

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7. *Johnson, B., B. Malama, W. Barrash, and **A. N. Flores** (2013), Recognizing and modeling variable drawdown due to evapotranspiration in a semiarid riparian zone considering local differences in vegetation and distance from a river source, *Water Resources Research*, 49, doi:10.1002/wrcr.20122.
8. *Stanaway, D., R. Haggerty, S. G. Benner **A. N. Flores**, and K. Feris (2012), Persistent metal contamination limits lotic ecosystem heterotrophic metabolism after more than 100 years of exposure: a novel application of the Resazurin Resorufin Smart Tracer, *Environmental Science & Technology (ES&T)*, 46 (18), pp 9862–9871, doi: 10.1021/es3015666.
9. **Flores, A. N.**, R. L. Bras and D. Entekhabi (2012), Hydrologic data assimilation with a hillslope-scale resolving model and L-band radar observations: Synthetic experiments with the ensemble Kalman filter, *Water Resources Research*, 48, W08509, doi:10.1029/2011WR011500.
10. ***Poulos, M. J.**, J. L. Pierce, **A. N. Flores**, and S. G. Benner (2012), Hillslope asymmetry maps reveal widespread, multi-scale organization, *Geophysical Research Letters*, doi:10.1029/2012GL051283.
11. *Smith, T. J., J. P. McNamara, **A. N. Flores**, M. M. Gribb, P. S. Aishlin, and S. G. Benner (2011), Small soil storage capacity limits benefit of winter snowpack to upland vegetation, *Hydrological Processes*, 25(25), 3858-3865, doi:10.1002/hyp.8340.
12. ***Kunkel, M. L.**, A. N. Flores, *T. J. Smith, J. P. McNamara, and S. G. Benner (2011), Spatial distribution of organic carbon in a semi-arid complex terrain, *Geoderma*, 165(1), 1-11, doi:10.1016/j.geoderma.2011.06.011.
13. **Flores, A. N.**, D. Entekhabi, and R. L. Bras (2010), Reproducibility of soil moisture ensembles when representing soil parameter uncertainty and correlation using a Latin Hypercube-based approach, *Water Resources Research*, 46, W04506, doi:10.1029/2009WR008155.
14. **Flores, A. N.**, V. Y. Ivanov, D. Entekhabi, and R. L. Bras (2009), Impacts of hillslope-scale organization in topography, soil moisture, soil temperature, and vegetation on modeling surface microwave radiation emission, *IEEE Transactions on Geoscience and Remote Sensing*, 47(8), 2557-2571.
15. **Flores, A. N.**, B. P. Bledsoe, C. O. Cuhaciyan, and E. E. Wohl (2006), Channel-reach morphology dependence on energy, scale, and hydroclimatic processes with implications for prediction using geospatial data, *Water Resources Research*, 42, W06412, doi:10.1029/2005WR004226.

Manuscripts in review:

1. ***Tappa, D. J.**, **A. N. Flores**, S. G. Benner, M. J. Kohn, J. P. McNamara, S. Evans, Isotopic composition of precipitation in a topographically complex, seasonally snow-dominated watershed: hydrometeorological controls and variations from the global meteoric water line

PUBLICATIONS (NOT PEER REVIEWED)

1. **Flores, A. N.**, M. Durand, S. Steele-Dunne, and B. F. Zaitchik (2011), Platforms for change: The increasing importance of sustained satellite observation for global hydrologic change monitoring, AGU Hydrology Section Newsletter, July 2011, 29-32.
2. **Flores, A. N.**, D. Entekhabi, and R. L. Bras (2010), A data assimilation approach for the prediction of soil moisture at tactical scales fusing multiple scale data sources and models, OP-010, Proceedings of the 27th Army Science Conference, 29 November-2 December 2010, Orlando, FL.
3. **Flores, A. N.**, V. Y. Ivanov, D. Entekhabi, and R. L. Bras (2008), Hillslope-scale controls on remote sensing of soil moisture with microwave radiometry, Geoscience and Remote Sensing Symposium, 2008. IGARSS 2008. IEEE International, vol.2, no., pp. II-695-II-698, 7-11 July 2008, doi: 10.1109/IGARSS.2008.4779088.
4. **Flores A. N.**, E. Istanbuluoglu, R.L. Bras, and D. Entekhabi (2004). A framework for the prediction of soil moisture, Proceedings of the 24th Army Science Conference, 29 November -2 December 2004, Orlando FL.

INVITED PRESENTATIONS AND SEMINARS

1. Hydrology in the era of Big Data: models, remote sensing, and data fusion and assimilation to translate information to knowledge, University of Idaho, Electrical and Computer Engineering, 18 April 2013.
2. What do hillslopes reveal about snow, vegetation, and landscape evolution? Goddard Space Flight Center, Terrestrial Water Cycle Group seminar, 27 March 2013.

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3. What do hillslopes reveal about snow, vegetation, and landscape evolution? Duke University, Department of Civil and Environmental Engineering, 19 March 2013.
4. What do hillslopes reveal about snow, vegetation, and landscape evolution? Georgia Institute of Technology, Department of Civil and Environmental Engineering Environmental Fluid Mechanics Seminar, 21 February 2013.
5. An Inherently Spatiotemporally Variable Science: Advancing Research and Teaching to Support Data-rich Hydrologic Science, Colorado School of Mines, Department of Civil and Environmental Engineering, 28 March 2012.
6. From numbers to knowledge: Fusing data and models to improve decision-making under uncertainty across spatial scales, Idaho Power, Boise, ID, 14 February 2012.
7. Prospects of active microwave observations for hillslope-scale soil moisture estimation through data assimilation, University of Montana, Missoula, March 1, 2010
8. Improving soil moisture knowledge at hillslope scales in a semiarid watershed: A data assimilation approach, Boise State University, October 12, 2009
9. Assimilation of remotely sensed soil moisture data: challenges and opportunities, Boise State University, March 31, 2008.
10. Assimilation of remotely sensed soil moisture data: challenges and opportunities, University of Wyoming, March 11, 2008.
11. The role of topography, vegetation and soils in predictability of high-resolution soil moisture and implications for data assimilation, ARO Terrestrial Sciences Soil Moisture/Arid Lands Research Review Meeting, Fort Carson, CO, 5-6 March 2007.
12. A framework to combine models and observations to predict soil moisture at fine spatial scales, Ralph Parsons Laboratory, Massachusetts Institute of Technology, April 26, 2005.
13. The dependence of channel morphology on scale, energy and hydroclimatology and some implications for prediction of reach-scale channel morphology with geospatial data, Ralph Parsons Laboratory, Massachusetts Institute of Technology, December 4, 2003.

PRESENTATIONS AT NATIONAL/INTERNATIONAL CONFERENCES

1. **Watson, K. A.**, H.-P. Marshall, J. P. McNamara, and **A. N. Flores**, Dynamical downscaling of winter precipitation events to generate forcing for hydrologic models, 94th AMS Annual Meeting, Atlanta, GA, 2-6 February 2014.
2. Srestha, R., N. F. Glenn, and **A. N. Flores**, Modeling dynamics of western juniper under climate change in a semiarid ecosystem, AGU Fall Meeting, San Francisco, CA, 9-13 December 2013.
3. **Watson, K. A.**, H.-P. Marshall, J. P. McNamara, and **A. N. Flores**, Influence of high-resolution land-surface initialization on near surface hydrometeorological variables in a coupled land-atmosphere model, AGU Fall Meeting, San Francisco, CA, 9-13 December 2013.
4. **Murray, E. M.**, K. Cobourn, **A. N. Flores**, J. L. Pierce, and **M. L. Kunkel**, The impact of changing snowmelt timing on non-irrigated crop yield in Idaho, AGU Fall Meeting, San Francisco, CA, 9-13 December 2013.
5. **Dawson, B.**, **A. N. Flores**, K. Cobourn, and J. L. Pierce, Monitoring agriculture in the Snake River Plain from space, AGU Fall Meeting, San Francisco, CA, 9-13 December 2013.
6. **Lin, L.-F.**, J. Wang, **A. N. Flores**, and R. L. Bras, Dynamical downscaling of GPM precipitation observations through 4DVAR data assimilation, AGU Fall Meeting, San Francisco, CA, 9-13 December 2013.
7. Poulos, M. J., J. L. Pierce, J. P. McNamara, A. N. Flores, and S. G. Benner, A multi-scale assessment of how topoclimate-driven ecohydrologic feedbacks impact drainage erosion, incision and expansion, AGU Fall Meeting, San Francisco, CA, 9-13 December 2013.
8. **Lin, L.-F.**, R. L. Bras, **A. N. Flores**, and J. Wang, Dynamic downscaling of GPM-like precipitation data – A case study of 4DVAR data assimilation of rain rates, PMM Science Meeting, Annapolis, MD, 18-21 March 2013.
9. **Walters, R. D.**, **K. A. Watson**, **A. N. Flores**, A physiographic approach to downscaling remotely sensed fractional snow cover data, AGU Fall Meeting, San Francisco, CA, 3-7 December 2012.
10. **Tappa, D. J.**, **A. N. Flores**, S. G. Benner, M. J. Kohn, J. P. McNamara, S. Evans, Isotopic composition of precipitation in a topographically complex, seasonally snow-dominated watershed:

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- hydrometeorological controls and variations from the global meteoric water line, AGU Fall Meeting, San Francisco, CA, 3-7 December 2012.
11. McCutcheon, R., S. G. Benner, M. J. Kohn, **A. N. Flores**, J. P. McNamara, Stable isotopes of water used to trace relationships between vegetation and streamflow in a semi-arid catchment, AGU Fall Meeting, San Francisco, CA, 3-7 December 2012.
 12. Poulos, M. J., J. L. Pierce, S. G. Benner, J. P. McNamara, **A. N. Flores**, Differences in drainage network incision and expansion associated with aspect-related variability in soil water storage and vegetation, AGU Fall Meeting, San Francisco, CA, 3-7 December 2012.
 13. Kormos, P. R., J. P. McNamara, M. S. Seyfried, D. G. Marks, **A. N. Flores**, H.P. Marshall, C. J. Williams, Critical zone soil properties effects on soil water storage and flux, AGU Fall Meeting, San Francisco, CA, 3-7 December 2012.
 14. **Kunkel, M. L.** and **A. N. Flores**, Interactions between long- and short-period teleconnections associated with distinct seasonal streamflow volume typologies, EPSCoR Western Tri-State Consortium Annual Meeting, Sun Valley, ID, 2-5 April 2012. ***Recipient Outstanding Student Paper Award.***
 15. **Walters, R. D.**, J. P. McNamara, H.-P. Marshall, and **A. N. Flores**, A physiographic approach to downscaling climate model snow outputs for hydrologic impacts assessment, EPSCoR Western Tri-State Consortium Annual Meeting, Sun Valley, ID, 2-5 April 2012.
 16. **Walters, R. D.**, J. P. McNamara, H. P. Marshall, and **A. N. Flores**, A physically-based approach to downscale coarse snow model output for hydrologic modeling at hillslope scales, *AGU Fall Meeting*, San Francisco, CA, 5-9 December, 2011.
 17. Stanaway, D.J., **A.N. Flores**, R. Haggerty, S.G. Benner, and K.P. Feris, Lotic ecosystem response to chronic metal contamination assessed by the resazurin-resorufin smart tracer with data assimilation by the Markov chain Monte Carlo method, *AGU Fall Meeting*, San Francisco, CA, 5-9 December, 2011.
 18. **Loughridge, R. E.**, and **A.N. Flores**, Quantifying topographic controls on the distribution and abundance of terrestrial vegetation in a semiarid mountain watershed, Idaho, USA, *AGU Fall Meeting*, San Francisco, CA, 5-9 December, 2011.
 19. **Tappa, D. J.**, J. P. McNamara, S. G. Benner, M. J. Kohn, and **A. N. Flores**, Stable isotope compositions of precipitation in a semi-arid climate: variations from the global meteoric water line, *AGU Fall Meeting*, San Francisco, CA, 5-9 December, 2011.
 20. **Beebe, G.**, **A. N. Flores**, K. Coburn, How will Idaho's Agricultural Producers Adapt to Changing Precipitation Patterns? Evidence from an Integrated Hydrologic-Economic Model with Bayesian Updating, *AGU Fall Meeting*, San Francisco, CA, 5-9 December, 2011.
 21. **Poulos, M. J.**, J. L. Pierce, **A. N. Flores**, S. G. Benner, J. P. McNamara, Valley asymmetry and topoclimate-driven feedbacks among hillslope hydrology, soil development, vegetation, and erosion, *AGU Fall Meeting*, San Francisco, CA, 5-9 December, 2011.
 22. **Kunkel, M.L.**, D.A. Raff, L.D. Brekke, and **A.N. Flores**, Non-stationarity in atmospheric and oceanic teleconnections: historical affects on streamflow and statistical models for forecasting streamflows, *AGU Fall Meeting*, San Francisco, CA, 5-9 December, 2011.
 23. **Hopkins, A.**, A. Heilig, H. P. Marshall, **A. N. Flores**, Potential application of NASA SMAP radar data to detect the aerial extent of snowpack melt, *AGU Fall Meeting*, San Francisco, CA, 5-9 December, 2011.
 24. **Flores, A. N.**, P. LaPorte, K. Smith, Developing a regional retrospective ensemble precipitation dataset for watershed hydrology modeling, Idaho, USA, *AGU Fall Meeting*, San Francisco, CA, 5-9 December, 2011.
 25. **Lin, L.-F.**, **A. N. Flores**, G. Bisht, U. Narayan, J. Wang, and R. L. Bras, Dynamic downscaling of GPM precipitation and SMAP soil moisture using WRF-ptRIBS-VEGGIE model – a preliminary test, *2011 Precipitation Measurement Missions Science Team Meeting*, Denver, CO, 7-10 November 2011.
 26. Johnson, B. A., B. Malama, W. Barrash, and **A. N. Flores**, Characterization of evapotranspiration in the riparian zone of the Lower Boise River, with implications for groundwater flow, *AGU Fall Meeting*, San Francisco, CA, 13-17 December 2010.

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27. Shallcross, A. T., J. P. McNamara, **A. N. Flores**, H. P. Marshall, D. G. Marks, and N. F. Glenn, Estimating basin snow volume using aerial LiDAR and binary regression trees, *AGU Fall Meeting*, San Francisco, CA, 13-17 December, 2010 (**invited**).
28. Burnop, A. C., V. R. Sridhar, J. P. McNamara, and **A. N. Flores**, The impact of accurate parameterization of snow storage in operational hydrology models, *AGU Fall Meeting*, San Francisco, CA, 13-17 December 2010.
29. **Flores, A. N.**, D. Entekhabi, and R. L. Bras, A Data Assimilation Approach for the Prediction of Soil Moisture At Tactical Scales Fusing Multiple Scale Data Sources and Models, *27th Army Science Conference*, Orlando, FL, 29 November – 2 December, 2010.
30. **Flores, A. N.**, D. Entekhabi, and R. L. Bras, Data assimilation as a paradigm for improving hydrological applications at hillslope scales: an example using synthetic SMAP observations, *Remote Sensing and Hydrology Symposium 2010*, Jackson, WY, 28-30 September 2010 (**invited**).
31. **Flores, A. N.**, D. Entekhabi, and R. L. Bras, Data assimilation can improve hydrological applications at hillslope scales: an example using synthetic SMAP observations, 2010 CUAHSI Biennial Science Meeting, Boulder, CO, 19-21 July, 2010.
32. Poulos, M. J., J. L. Pierce, **A. N. Flores**, S. G. Benner, Microclimate Influences on Slope Angles in the Western U.S., Goldschmidt Conference, Knoxville Tennessee, 13-18 June, 2010.
33. **Flores, A. N.**, C. Pathak, S. U. S. Senarath, and R. L. Bras, A new way to view design of hydrologic monitoring networks: optimization to improve predictability of hydrologic systems in a data assimilation system in South Florida, U.S.A., *EWRI of ASCE World Environmental and Water Resources Congress 2010*, Providence, RI, 16-20 May 2010.
34. **Flores, A. N.**, C. Pathak, S. U. S. Senarath, and R. L. Bras, Designing hydrologic monitoring networks to improve the predictability of hydrologic models in South Florida, USA: A data assimilation approach, *EWRI of ASCE India 2010*, Chennai, India, 5-7 January 2010.
35. **Kunkel, M.** and **A. N. Flores**, A teleconnection-based forecasting model for natural streamflow in Idaho, USA, *90th Annual Meeting of the American Meteorological Society*, Atlanta, GA, 17-21 January 2010.
36. Poulos, M.J., J.L. Pierce, **A.N. Flores**, S. G. Benner, T. J. Smith, J. P. McNamara, Aspect-driven changes in slope stability due to ecohydrologic feedbacks, *AGU Fall Meeting*, San Francisco, CA, 14-18 December 2009.
37. **Flores, A. N.**, C. Pathak, S. U. S. Senarath, and R. L. Bras, Designing hydrologic monitoring networks to maximize predictability of hydrologic conditions in a data assimilation system: A case study from South Florida, USA, *AGU Fall Meeting*, San Francisco, CA, 14-18 December 2009.
38. Poulos, M.J., J.L. Pierce, T. Smith, S. Benner, **A.N. Flores**, J. McNamara, and M. Gribb, Microclimate controls on slope angles in the Idaho Batholith, *AGU Chapman Conference on Examining Ecohydrological Feedbacks of Landscape Change Along Elevation Gradients in Semiarid Regions*, Boise and Sun Valley, ID, 4-8 October 2009.
39. **Flores, A.N.**, D. Entekhabi, and R.L. Bras, Assimilation of anticipated L-band microwave observations for hillslope-scale soil moisture estimation in semiarid landscapes: the importance of topography and soils, *AGU Chapman Conference on Examining Ecohydrological Feedbacks of Landscape Change Along Elevation Gradients in Semiarid Regions*, Boise and Sun Valley, ID, 4-8 October 2009.
40. **Flores, A.N.**, D. Entekhabi, and R. L. Bras, Synthetic experiments to estimate hillslope-scale soil moisture through assimilation of anticipated remotely sensed microwave products, *23rd Conference on Hydrology*, *89th Annual Meeting of the American Meteorological Society*, Phoenix, AZ, 11-15 January 2009.
41. **Flores, A.N.**, D. Entekhabi, and R. L. Bras, Hillslope-scale soil moisture estimation with the ensemble Kalman Filter and a process ecohydrology model: Evaluation of anticipated microwave observations, *AGU Fall Meeting*, San Francisco, CA, 15-19 December 2008
42. **Flores, A.N.**, D. Entekhabi, and R. L. Bras, Soil moisture active-passive (SMAP) mission data for hillslope-scale soil moisture estimation with a spatially distributed ecohydrology model and data assimilation, *International Workshop on Microwave Remote Sensing for Land Hydrology*, Oxnard, CA, 20-22 October 2008.

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43. **Flores, A. N.**, V. Y. Ivanov, D. Entekhabi, and R. L. Bras, Hillslope-scale controls on remote sensing of soil moisture with microwave radiometry, *IEEE Geoscience and Remote Sensing Symposium (IGARSS) '08*, Boston, MA, 6-11 July 2008.
44. **Flores, A. N.**, V. Y. Ivanov, D. Entekhabi, and R. L. Bras, Assessing the role of hillslope-scale heterogeneity in soil moisture remote sensing and data assimilation using microwave radiometry, *22nd Conference on Hydrology, 88th Annual Meeting of the American Meteorological Society*, New Orleans, LA, 20-24 January 2008.
45. **Flores, A. N.**, D. Entekhabi, and R. L. Bras, Modeling uncertainty and correlation in soil properties using restricted pairing and implications for ensemble-based hillslope-scale soil moisture and temperature estimation, *AGU Fall Meeting*, San Francisco, CA, 10-14 December 2007. **Recipient Outstanding Student Paper Award.**
46. **Flores, A. N.**, R. L. Bras, and D. Entekhabi, Predicting soil moisture with models and observations through an ensemble quasi steady-state filter, *GSA Annual Meeting and Exposition*, Philadelphia, PA, October 22-25, 2006.
47. **Flores, A. N.**, R. L. Bras, and D. Entekhabi, Downscaling remotely sensed soil moisture observations to hillslope scales with physically based distributed models through data assimilation, *AGU Hydrology Days*, Fort Collins, CO, March 20-22, 2006.
48. Istanbuluoglu, E., R. L. Bras, and **A. N. Flores**, On the dynamics of soil moisture, vegetation, and erosion: Implications of stochastic climate forcing, *AGU Fall Meeting*, San Francisco, CA, December 13-17, 2004.
49. **Flores, A. N.**, E. Istanbuluoglu, R. L. Bras, and D. Entekhabi, A Framework for the Prediction of Soil Moisture, *Proceedings of the 24th Army Science Conference*, Orlando, FL, November 29-December 2, 2004.
50. Bledsoe, B. P., **A. N. Flores**, S. C. Sanborn, and C. O. Cuhaciyen, Multi-scale factors influencing stream substrate size within and among watersheds, *AGU Fall Meeting*, San Francisco, CA, December 8-12, 2003.
51. Bledsoe, B. P., **A. N. Flores**, N. L. Poff and C. O. Cuhaciyen. Prediction of local stream habitat attributes with spatial analysis of watershed-scale data, *North American Benthocological Society (NABS) Annual Meeting*, Athens, GA, May 27-June 1, 2003.
52. Poff, N. L., B. P. Bledsoe, J. D. Olden and **A. N. Flores**, Functional organization of benthic invertebrate communities along multiscale environmental gradients, *NABS Annual Meeting*, Athens, GA, May 27-June 1, 2003.
53. **Flores, A. N.** and B. P. Bledsoe. Factors affecting predictions of stream reach morphology using remotely sensed data: implications for restoration and habitat evaluation, *AGU Hydrology Days*, Fort Collins, CO, March 31-April 2, 2003.
54. **Flores, A. N.** and B. P. Bledsoe. Depicting channel reaches at sub-link scales using digital elevation models, *AGU Hydrology Days*, Fort Collins, CO, March 31-April 2, 2003.
55. Bledsoe, B. P., E. E. Wohl, D. V. Pizzi, K. Sable, **A. N. Flores**, C. O. Cuhaciyen, S. C. Sanborn, Hydrogeomorphic classification of western streams for ecological assessment, *AGU Fall Meeting*, San Francisco, CA, December 6-10 2002.
56. **Flores, A. N.** and B. P. Bledsoe. Investigating spatial variability in slope and flow energy within and between watersheds, *AGU Fall Meeting*, San Francisco, CA, December 10-14, 2002.
57. **Flores, A. N.** and B. P. Bledsoe. Watershed-scale implications of Hack's slope-drainage area relationship and application to the prediction of in-channel features of ecological interest. *GSA Annual Meeting and Exposition*, Denver, CO, October 27-30, 2002.
58. **Flores, A. N.** and B. P. Bledsoe. Application of Hack's law to predict in channel features of ecological interest with coarse scale watershed variables. *AGU Hydrology Days*, Fort Collins, CO, April 1-4, 2002.
59. Bledsoe, B. P., R. J. Anderson, B. McCaig, **A. N. Flores**, and C. C. Watson. Modeling Package for Assessing the Potential Effects of Land Use Change on Stream Form and Integrity, *ASCE Wetlands Engineering and River Restoration Conference*, Reno, NV, August 27-31, 2001.

TECHNICAL REPORTS

1. Flores, A. N. 2011. Hydrologic Monitoring Network Optimization – Development of a Regional

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Scale Monitoring Plan. Submitted to South Florida Water Management District, West Palm Beach, Florida.

2. Flores, A. N. 2009. Hydrologic Monitoring Network Optimization – A Pilot Study. Final report. Submitted to South Florida Water Management District, West Palm Beach, Florida.
3. Bras, R.L., D. Entekhabi, A.N. Flores. 2008. A framework for the prediction of soil moisture fusing multiple scale data sources and modeling. Final report. Submitted to U.S. Army Research Office, Research Triangle Park, North Carolina.
4. Bledsoe, B.P., D.A. Raff, A.N. Flores. 2004. GeoTool User's Manual. Final Report Submitted to U.S. Army Corps of Engineers, Engineering Research and Development Center Vicksburg, Mississippi, 88 pp. + app.

CURRENT SUPPORT

CAREER: Citizens, Conservation, and Climate: Research and Education for Climate Literacy in Managed Landscapes. Alejandro Flores (sole PI); Source of funding: NSF, Performance period: 2014/04/01-2019/05/31; Total budget: \$457,205

Scalable vegetation structure for ecosystem modeling in the western US. Nancy Glenn (PI), Alejandro Flores (Co-I), Susan Ustin (Co-I); Source of funding: NASA Terrestrial Ecology Program; Performance Period: 2014/01/01-2016/12/31; Total budget: \$748,916

Multiple frequency active microwave remote sensing for snow water equivalent retrieval from space: a data assimilation approach. Alejandro Flores (PI), Hans-Peter Marshall (Co-I), Kelly Elder (Co-I); Source of funding: NASA Terrestrial Hydrology Program; Performance period: 2015/07/01-2018/06/30; Total budget: \$295,577

Reynolds Creek Carbon Critical Zone Observatory. Kathleen Lohse (PI), Shawn Benner (Co-PI), Alejandro Flores (Co-PI), Nancy Glenn (Co-PI), Mark Seyfried (Co-PI); Source of funding: National Science Foundation; Performance period: 2014/01/01-2018/12/31; Total budget: \$2,500,000

Intermediate-range Climate Forecasting to Support Water Supply and Flood Control with a Regionally Focused Mesoscale Model. Alejandro Flores (PI); Source of funding: US Bureau of Reclamation Science and Technology Program; Performance period: 2015/03/01-2017/08/30; Total budget: \$148,604

A Web-Enabled Site Suitability and Visualization Tool to Support Idaho's Growing Wine Industry. Alejandro Flores (PI), Nancy Glenn (Co-PI); Source of funding: Idaho State Department of Agriculture Specialty Crop Block Grant; Performance period: 2015/10/01-2017/09/30; Total budget: \$139,487

Modeling long-term effects of fuel treatments on fuel loads and fire regimes in the Great Basin. Nancy Glenn (PI), Alejandro Flores (Co-PI); Source of funding: Joint Fire Science Program; Performance period: 2015/10/01-2018/09/30; Total budget: \$357,278

EPSCoR RII Track 2: Collaborative Research: The Western Consortium for Watershed Analysis, Visualization, and Exploration (WC-WAVE). Idaho leads: Peter Goodwin (PI), Alejandro Flores (Co-PI), Donna Delparte (Co-PI), Luke Sheneman (Co-PI); Source of funding: National Science Foundation; Performance period: 2013/09/01-2016/08/31; Total budget: \$2,000,000 (state-wide)

EPSCoR RII Track 1: Managing Idaho's Landscapes for Ecosystem Services; Role: Science lead, integrated modeling; Source of funding: National Science Foundation; Performance period: 2013/06/14-2018/06/13; Total Budget: \$20,000,000 (state-wide)

Water Institutions and Agricultural Land-Use in the Western US; Kelly Cobourn (PI), Alejandro Flores (Co-I); Source of Funding: NASA Land-Cover/Land-Use Change for Early Career Scientists; Performance period: 2013/01/01-2015/12/31; Total budget: \$239,666

Combining Remotely Sensed Vegetation Data and Ecohydrologic Process Models to Improve Estimation of Root Zone Moisture at Spatial Scales Relevant to the Army. Alejandro Flores (PI); Source of funding: U.S. Army Research Office (Young Investigator Program); Performance period: 2011/08/01-2015/07/31. Total budget: \$150,000

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COMPLETED PROJECTS

Improved retrieval of vegetation water content in a semiarid mountain watershed using NASA remote sensing products. Alejandro Flores (sole PI); Source of funding: NASA via Idaho Space Grant Consortium Research Seed Grant; Performance period: 2011/06/25-2013/06/24; Total budget: \$99,810 (includes cost share)

Idaho ESPCoR: Remote Sensing of the Cryosphere: Calibration and Validation. Aaron Thomas (Administrative PI), Hans-Peter Marshall (Science PI), Alejandro Flores (Co-I), and others; Source of funding: NASA EPSCoR; Performance period: 2011/01/01-2014/12/31; Total budget: \$1.4 Million (includes cost share)

Multiple Teleconnection Index Based Prediction of Natural Flow. Alejandro Flores (sole PI); Source of funding: U.S. Bureau of Reclamation; Total budget: \$75,000

Evaluating the Effect of Improved Snow and Soil Representation in Physically Based, Distributed Hydrologic Models. Jim McNamara (PI), Alejandro Flores (Co-I), and others; Source of funding: National Oceanic and Atmospheric Administration; Total budget: \$360,146

Measuring and Modeling Hydrologic Fluxes and States from Aquifer to Atmosphere at Multiple Scales. Warren Barrash (PI), Alejandro Flores (Co-PI), and others; Source of funding: U.S. Army Research Office (EPSCoR); Total budget: \$665,880.

RAPID: An Unusual Opportunity to Track Snow Ablation Using Stable Isotope Evolution of the 2011-2012 Snowpack Near Boise, Idaho; Samantha Evans (PI), Alejandro Flores (Co-PI), Matt Kohn (Co-PI) HP Marshall (Co-PI); Source of funding: National Science Foundation; Total budget: \$24,777

Assessing Impacts of Geolocation Errors on Soil Moisture Data Assimilation. Alejandro Flores (sole PI); Source of funding: Idaho Space Grant Consortium travel grant; Total budget: \$4000

Constructing a Local Meteoric Water Line for the Treasure Valley, Idaho. Alejandro Flores (sole PI); Source of funding: U.S. Geological Survey via Idaho Water Resources Research Institute; Total budget: \$45,576 (includes cost share)

A Framework to Assess Land-Atmosphere Coupling in the Snake River basin Area, Idaho Using Coupled Models and Observations. Alejandro Flores (sole PI); Source of funding: NASA EPSCoR via Idaho Space Grant Consortium Research Initiation Grant; Total budget: \$29,988

Hydrologic Monitoring Network Optimization – Development of a Regional Scale Monitoring Plan. Alejandro Flores (sole PI); Source of Funding: South Florida Water Management District; Total Budget: \$32,500

TEACHING

COURSES TAUGHT AND SCHEDULED

Fall 2015:

GEOS/BIOL 497/597: Scientific Programming for Earth and Ecological Discovery

Summer 2015:

GEOS 697: Interdisciplinary Modeling Class (associated with Western Consortium of EPSCoR states; Boise State lead instructor)

Spring 2015:

GEOS 518: Applied hydrologic modeling

Spring 2014:

GEOS 518: Applied hydrologic modeling

Fall 2013:

GEOS 697 (Special topics): Global Hydrologic Change

Spring 2013:

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GEOS 620: Fundamentals of Simulation Modeling in Hydrologic Science

GEOS 697 (Special topics): Land-atmosphere modeling: Practicum

Fall 2012:

GEOS 411/511: Hydrology: Land Atmosphere Interaction

GEOS 697 (Special topics): Advances in coupled land-atmosphere modeling

Spring 2012:

GEOS 620: Fundamentals of Simulation Modeling in Hydrologic Science

GEOS 505: Introduction to Numerical Methods in the Geosciences

Fall 2011:

GEOS 212 (co-taught): Water in the West

GEOS 411/511: Hydrology: Land Atmosphere Interaction

Spring 2011:

GEOS 497/597, CE 597 (Special topics): Introduction to Numerical Methods for Geoscientists

GEOS 697 (Special topics): Applications of Hydrologic Modeling

Fall 2010:

GEOS 212 (co-taught): Water in the West

GEOS 697 (special topics): Fundamentals of Hydrologic Modeling

Spring 2010:

GEOS 597 (Special topics): Review of the state of the art in climate downscaling

GEOS 697 (Special topics): A MATLAB Primer for Hydrologic and Environmental Sciences

Fall 2009:

GEOS 212 (co-taught): Water in the West

GEOS 697 (Special topics): A MATLAB Primer for Hydrologic and Environmental Sciences

ADVISING ACTIVITIES

Postdoctoral advising:

Bangshuai Han	Geosciences	Co-Advisor
Qingtao Zhou	Geosciences	Advisor
Matt Masarik	Geosciences	Advisor

Graduate advising:

Miguel Aguayo	PhD	Geosciences	Advisor	full time
Melvin Kunkel	PhD	Geosciences	Advisor	part time
Katelyn Watson	PhD	Geosciences	Advisor	full time
Reggie Walters	PhD	Geosciences	Advisor	full time
Hamid Dashti	PhD	Geosciences	Co-Advisor	full time
Liaofan Lin	PhD	Civ. Env. Eng. – Georgia Tech	Co-Advisor	full time
Lucy Gelb	MS	Hydrologic Sciences	Advisor	full time
Andrea Leonard	MS	Hydrologic Sciences	Advisor	full time
Amy Steinke	MS	Hydrologic Sciences	Advisor	full time
Mike Poulos	PhD	Geosciences	Committee Member	full time
Hank Hetrick	PhD	Geophysics	Committee Member	full time
Blaine Dawson	MS	Hydrologic Sciences	Advisor	completed
Ricci Loughridge	MS	Hydrologic Sciences	Advisor	completed
Erin Murray	MS	Hydrologic Sciences	Co-Advisor	completed
Daniel Tappa	MS	Hydrologic Sciences	Advisor	completed
Reggie Walters	MS	Hydrologic Sciences	Advisor	completed
Gretchen Beebe	MS	Mathematics	Co-Advisor	completed
Mike Poulos	MS	Hydrologic Sciences	Co-Advisor	completed
Brian Anderson	MS	Hydrologic Sciences	Committee Member	completed

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Esther Babcock	PhD	Geophysics	Committee Member	completed
Erik Boe	MS	Hydrologic Sciences	Committee Member	completed
Alex Boehm (ISU)	MS	Geo. Info. Science – Idaho State Univ.	Committee Member	completed
Alison Burnop	MS	Hydrologic Sciences	Committee Member	completed
Alex Frye	MS	Hydrologic Sciences	Committee Member	completed
Scott Havens	PhD	Geophysics	Committee Member	completed
Andrew Hedrick	MS	Geophysics	Committee Member	completed
Brady Johnson	MS	Hydrologic Sciences	Committee Member	completed
Patrick Kormos	PhD	Geosciences	Committee Member	completed
Joseph Lohmeier	MS	Mathematics	Committee Member	completed
Ryan McCutcheon	MS	Hydrologic Sciences	Committee Member	completed
Alden Shallcross	MS	Hydrologic Sciences	Committee Member	completed
Toni Smith	MS	Hydrologic Sciences	Committee Member	completed
Dan Stanaway	MS	Hydrologic Sciences	Committee Member	completed
Brian Yelen	MS	Hydrologic Sciences	Committee Member	completed

Undergraduate research advising:

Martika Flores-				
Ramos	BS	Civil Engineering	Terrestrial Laser Scanning of sage-steppe	
Esther Contreras	BS	Civil Engineering	Hydrologic model mesh generation	
Austin Hopkins	BS	Geosciences	Snowmelt detection with SMAP radar	
Paige LaPorte	BS	Geosciences	Topographic trends in vegetation	
Kimberly Smith	BS	Geosciences	Measurement of stable isotopes	

SERVICE AND OUTREACH

PROFESSIONAL SERVICE

International:

Reviewer, Development of Decision Support Tool for the Terrestrial Biodiversity of Kuwait, Kuwait Foundation for the Advancement of Sciences

National:

Member, Socio-Environmental Synthesis Center (SESynC) Scientific Review Panel, (2015-present)
 Co-chair, Critical Zone Observatory Focus Research Group, Community Surface Dynamics Modeling System (CSDMS) Executive Committee (2014-present)
 Representative to the Consortium of Universities for the Advancement of Hydrologic Science, Incorporated (CUAHSI), Boise State University
 Chair, AGU Hydrology Section Remote Sensing Technical Subcommittee (2014-present)
 Appointed Member, AGU Hydrology Section Remote Sensing Technical Subcommittee (2010-2012)
 Member, NASA Soil Moisture Active Passive (SMAP) Satellite Algorithms Working Group
 Member, NASA SMAP Calibration/Validation Working Group
 Member, NASA SMAP Applications Working Group
 Member, EWRI Uncertainty Analysis Approaches of Hydrologic Models Task Committee
 Panelist, Science of Terra and Aqua Missions 2013
 Reviewer, ASCE Journal of Hydrologic Engineering
 Reviewer, Geophysical Research Letters
 Reviewer, Journal of Hydrology
 Reviewer, Advances in Water Resources
 Reviewer, Journal of Hydrometeorology
 Reviewer, Water Resources Research
 Reviewer, IEEE Geoscience and Remote Sensing Letters
 Reviewer, IEEE Transactions on Geoscience and Remote Sensing (TGRS)
 Reviewer, IEEE Journal of Selected Topics in Applied Remote Sensing (JSTARS)
 Reviewer, Army Research Office

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Reviewer, National Science Foundation

Co-Convener, AGU Fall Meeting 2012, 2013 Session “ Hydrologic Data Assimilation”

Co-Convener, AGU Fall Meeting 2012 Session “Modeling and Observation of the Terrestrial Hydrological Cycle to Capture Multiscale Complexity of Land-Atmosphere Interactions”

Co-Convener, AGU Fall Meeting 2011 Session “Recent advances in data assimilation and remote sensing for land surface hydrology”

Co-Convener, AGU Fall 2010 Session "Advances in hydrologic data assimilation and uncertainty analysis"

State:

Member, Idaho Higher Education Cyberinfrastructure Advisory Committee (CIAC)

Member, EPSCoR RII Track 1 and RII Track 2 Science Writing Teams

University:

Member, Division of Research and Economic Development Cyberinfrastructure Working Group

Member, Department of Research Computing Steering Committee

Panelist, New faculty orientation “Building a successful research program.” 19 August 2013.

Member, Boise State University Center for Teaching and Learning Advisory Board

Member, Boise State University STEM Education Research Scholars Group

Faculty Advisor, Idaho Science and Aerospace Scholars Summer 2010

College:

Member, College of Arts and Sciences Mini Development Grant Award Committee

Department:

Geophysics Faculty Search Committee, AY 2013

Graduate Program Committee, AY 2013-present

Chair and organizer, Geoscience Department Seminar, AY 2011

Coordinator, Geoscience Department Webpage Update (Spring 2010-present)

SYNERGISTIC ACTIVITIES AND OUTREACH

Guest Teacher, Idaho Science and Aerospace Scholars, Boise, ID, 12 July 2013

- Developed and delivered an afternoon-long course on water resource and remote sensing for ISAS high schools students. The course focused on how adequate water supplies could be developed for a mission to Mars.

Guest Speaker, Pacific Northwest Louis Stokes Alliance for Minority Participation (LSAMP) Alliance Annual Conference, Boise ID, 2 March 2013

- Presented the importance, benefits, and process of graduate education for STEM majors.

Guest Speaker, Boise State University Louis Stokes Alliance for Minority Participation (LSAMP), Boise, ID, February, April 2010; June 2011

- Presented the importance, benefits, and process of graduate education for STEM majors. June 2011 lecture is available at <http://www.youtube.com/watch?v=bx eoSmd0QrA>
- Panel discussion on student involvement and professional networking for STEM majors.

Guest Speaker, Boise State University eDay engineering outreach, Boise, ID, April 2011

- “Hydrology and water resources” presentation for Treasure Valley area 7th-8th grade students from underrepresented groups

Hydrology Expert, starHydro Hydrology and Geomorphology Education Software, MIT, Cambridge, MA, 2006-present

- Communicated hydrology and fluvial geomorphology concepts to software developers programming a Java-based application for undergraduate and graduate students in hydrology and geomorphology.
- Application encourages students to: (1) develop intuitive understanding of hydrology and geomorphology concepts through interaction with digital elevation models, and (2) become familiar with concepts underlying distributed modeling.

MIT IDEAS Competition, Judge, 2011, 2006, 2007

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- Evaluated proposals for small grants from groups comprised of MIT students
- Assessed the innovation, feasibility, sustainability, and potential impact on the target community of proposed solutions
- Provided written responses to proponents and summarized proposals to judging panel

PROFESSIONAL MEMBERSHIPS AND REGISTRATIONS

Engineering Intern (Colorado)
American Geophysical Union
American Meteorological Society
Association for Computing Machinery
American Association for the Advancement of Science
IEEE Geoscience and Remote Sensing Society
Sigma Xi
Tau Beta Pi
Chi Epsilon

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Nancy F. Glenn, Ph.D., P.E.

Professor, Department of Geosciences,

Boise State University, 1910 University Dr., Boise, Idaho 83725

nancyglenn@boisestate.edu; <http://bcal.boisestate.edu>; 208.426.2933

EDUCATION

University of Nevada, Reno, Geo-Engineering, Ph.D., 2000

University of California, Berkeley, Civil Engineering, M.S., 1996

University of Nevada, Reno, Geological Engineering, B.S., 1994

Licensed Professor Engineer, #14023, Idaho

PROFESSIONAL EXPERIENCE

Leadership Roles:

2014-Present, Chair, Cluster hire search and Lead for Human-Environment Systems, Boise State University

2011-Present, Joint appointment, DOE Idaho National Laboratory (INL)

2012-2013, Lead Scientist, Idaho NSF EPSCoR Water Resources in a Changing Climate

2004-2013, Director, Boise Center Aerospace Laboratory, Dept Geosciences, ISU

2008-2010, Co-chair, Dept Geosciences, Idaho State University

Academic Accomplishments:

2013-Present, Professor, Dept Geosciences, Boise State University

2010-2013, Research Professor, Dept Geosciences, Idaho State University (ISU)

2005-2010, Associate Research Professor, Dept of Geosciences, Idaho State University

2000-2005, Assistant Research Professor, Dept of Geosciences, Idaho State University

Consulting:

1996-1997, Staff Geotechnical Engineer, GeoEngineers Inc., Redmond, WA, 1996-1997

ADMINISTRATIVE TRAINING

Chairing the Academic Department, A Workshop for Division and Department Chairs and Deans, American Council on Education, 2010

AWARDS

Idaho Business Review 2007 Accomplished Under 40

Idaho State University Outstanding Researcher 2007-2008

I. RESEARCH

1. PUBLICATIONS

Peer-Reviewed (*student author)

58. Olsoy, P.J., Mitchell, J.J., Levia, D.F., Clark, P.E., Glenn, N.F., in press, Estimation of big sagebrush leaf area index with terrestrial laser scanning, *Ecological Indicators*, 10.1016/j.ecolind.2015.10.034.
57. Li, A., Glenn, N.F., Olsoy, P.J., Mitchell, J.J., Shrestha, R., 2015, Aboveground biomass estimates of sagebrush using terrestrial and airborne LiDAR data in a dryland ecosystem, *Ag & Forest Met*, 213 (November): 138–47. doi:10.1016/j.agrformet.2015.06.005.
56. Harpold, A. A., Marshall, J. A., Lyon, S. W., Barnhart, T. B., Fisher, B., Donovan, M., Brubaker, K. M., Crosby, C. J., Glenn, N. F., Glennie, C. L., Kirchner, P. B., Lam, N., Mankoff, K. D., McCreight, J. L., Molotch, N. P., Musselman, K. N., Pelletier, J., Russo, T., Sangireddy, H., Sjöberg, Y., Swetnam, T., and West, N. 2015. Laser vision: lidar as a transformative tool to advance critical zone science, *Hydrol. Earth Syst. Sci. Discuss.*, 12, 1017-1058, doi:10.5194/hessd-12-1017-2015, 2015.
55. Passalacqua, P., Belmont, P., Staley, D. M., Simley, J. D., Arrowsmith, J R., Bode, C. A., Crosby, C., DeLong, S., Glenn, N.F., Kelly, S. A., Lague, D., Sangireddy, H., Schaffrath, K., Tarboton, D., Wasklewicz, T., Wheaton, J., 2015. Analyzing high resolution topography for advancing the understanding of mass and energy transfer through landscapes: A review. *Earth-Science Reviews*, Volume 148, Pages 174–193.
54. Mitchell, J.J, Shrestha, R., Spaete, L.P., Glenn, N.F., 2015, Combining airborne hyperspectral and LiDAR data across local sites for upscaling shrubland structural information: lessons for HypsIRI. *Remote Sensing of Environment*, Volume 167, Pages 98-110, doi:10.1016/j.rse.2015.04.015.
53. Paprocki, N., Glenn, N.F., Atkinson, Eric C., Strickler, Katherine M., Watson, C., Heath, J.A., et al., 2015, Changing Habitat Use Associated with Distribution Shifts of Wintering Raptors, *Journal of Wildlife Habitat*, 79 (3): 402–12.
52. Olsoy, Peter J.; Forbey, Jennifer S.; Rachlow, Janet L.; Nobler, Jordan D.; Glenn, Nancy F.; and Shipley, Lisa A.. (2015). "Fearscape: Mapping Functional Properties of Cover for Prey with Terrestrial LiDAR". *BioScience*, 65(1), 74-80. <http://dx.doi.org/10.1093/biosci/biu189>.
51. Yang, P., Ames, D.P., Fonseca, A., Anderson, D., Shrestha, R., Glenn, N.F., 2014, What is the Effect of LiDAR-Derived DEM Resolution on Large-Scale Watershed Model Results?, *Environmental Modelling & Software*, 58, 48-57.
50. Olsoy, P.*, Glenn, N.F., Clark, P.E., 2014, Estimating Sagebrush Biomass Using Terrestrial

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Laser Scanning, *Rangeland Ecology & Management*, 67 (2): 224-228.

49. Olsoy, P.*, Glenn, N.F., Clark, P.E, Derryberry, D.R, 2014, Aboveground total and green biomass of dryland shrub derived from terrestrial laser scanning, *ISPRS Journal of Photogrammetry and Remote Sensing*, 88, 166-173.

48. Murgoitio, J.*, Shrestha, R., Glenn, N., Spaete, L., 2014, Airborne LiDAR and terrestrial laser scanning derived vegetation obstruction factors for visibility models, *Transactions in GIS*, 18(1): 147-160.

47. Mitchell, J.J., Shrestha, R., Moore-Ellison, C.*, and Glenn, N.F., 2014, Single and Multi-date Landsat Classifications of Basalt to Support Soil Survey Efforts, *Remote Sensing*, 2013, 5(10), 4857-4876; doi:10.3390/rs5104857.

46. Murgoitio, J.*, Shrestha, R., Glenn, N.F, Spaete, L.P, 2013, Improved visibility calculations with tree trunk obstruction modelling from aerial LiDAR, *International Journal of Geographical Information Science*, 27, 10: 1865-1883, DOI:10.1080/13658816.2013.767460.

46. Gould, S.*, Glenn, N., Sankey, T., McNamara, J., Spaete, L., 2013, Influence of a dense, low-height shrub species on the accuracy of a LiDAR-derived DEM, *PE&RS*, 79, 5: 421-431.

45. Hruska, R.C., Mitchell, J.J., Anderson, M.O., Glenn, N.F., 2012, Radiometric and Geometric Analysis of Hyperspectral Imagery Acquired from an Unmanned Aerial Vehicle, *Remote Sensing*, 4(9):2736-2752.

44. Benjankar, R.*, Jorde, K., Yager, E., Egger, G., Goodwin, P., Glenn, N., 2012, The impact of river modification and dam operation on floodplain vegetation succession trends in the Kootenai River, USA, *Ecological Engineering*, 46, 88-97.

43. Mitchell, J.*, Glenn, N.F., Sankey, T., Derryberry, D.R., Germino, M., 2012, Remote sensing of sagebrush canopy nitrogen, *Remote Sensing of Environment*, 124, 217-223.

42. Sankey, J., Germino, M., Benner, S., Olin, P., Glenn, N.F, Hoover, A., 2012, Transport of biologically important nutrients by wind in an eroding cold desert, *Aeolian Research*, Vol 7, 17-27.

41. Sankey, J., Germino, M., Glenn, N.F., 2012, Dust supply varies with sagebrush microsites and time since burning in experimental erosion events, *JGR-Biogeosciences*, 117, G01013, doi:10.1029/2011JG001724, 2012.

40. Mitchell, J.*, Glenn, N.F., Sankey, T., Derryberry, D.R., Anderson, M.O., Hruska, R., 2012, Spectroscopic detection of nitrogen concentrations in sagebrush, *Remote Sensing Letters*, 3(4), 285-294.

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39. Hasselquist N.J., Germino M.J., Sankey J.B., Ingram L.J., Glenn, N.F., 2011, Aeolian nutrient fluxes following wildfire in sagebrush steppe: implications for soil carbon storage. *Biogeosciences*, 8, 3649-3659.
38. Sankey, J.*, Eitel, J.U., Glenn, N.F., Germino, M.J., Vierling, L.A., 2011, Quantifying burning effects, roughness and potential dust emission with laser altimetry of soil surfaces at submeter scales, *Geomorphology*, doi:10.1016/j.geomorph.2011.08.016, 135, 181-190.
37. Benjankar, R.*, Egger, G., Jorde, K., Goodwin, P., Glenn, N., 2011, Dynamic floodplain vegetation model development for the Kootenai River, USA, *Journal of Environmental Management*, 92: 3058-3070.
36. Sankey, T., Glenn, N.F., 2011, Landsat 5 TM and lidar fusion for sub-pixel juniper tree cover estimates, *Photogrammetric Engineering & Remote Sensing*, 77(12), 1241-1248.
35. Streutker, D.R., Glenn, N.F., Shrestha, R., 2011, A slope-based method for matching elevation surfaces, *Photogrammetric Engineering and Remote Sensing*, 77(7), 743-750. This paper won: 2nd place for the 2012 John I. Davidson President's Award for Practical Papers from American Society of Photogrammetry and Remote Sensing (ASPRS).
34. Mitchell, J.*, Glenn, N.F., Sankey, T., Derryberry, D.R., Anderson, M.O., Hruska, R., 2011, Small-footprint LiDAR estimations of sagebrush canopy characteristics. *Photogrammetric Engineering & Remote Sensing*, 77 (5), 521-530.
33. Glenn, N.F., Spaete, L., Sankey, T., Derryberry, D., Hardegree, S., Mitchell, J.*, 2011, Errors in LiDAR-derived shrub height and crown area on sloped terrain, *Journal of Arid Environments*, 75 (4), 377-382.
32. Spaete, L., Glenn, N., Derryberry, D., Sankey, T., Mitchell, J., Hardegree, S., 2011, Vegetation and slope effects on accuracy of a LiDAR-derived DEM in the sagebrush steppe, *Remote Sensing Letters*, 2 (4), 317-326.
31. Tinkham, W.T.*, Huang, H.*, Smith, A.M.S., Shrestha, R., Falkowski, M.J., Hudak, A.T., Link, T.E., Glenn, N.F., Marks, D.G., 2011, Letter: A Comparison of Two Open Source LiDAR Surface Classification Algorithms, *Remote Sensing*, 3(3), 638-649; doi:10.3390/rs3030638.
30. Benjankar, R.*, Glenn, N.F., Egger, G., Jorde, K., Goodwin, P., 2010, Comparison of Field-Observed and Simulated Map Output from a Dynamic Floodplain Vegetation Model Using Remote Sensing and GIS Techniques, *GIScience & Remote Sensing*, 47 (4), 480-497
29. Homan, J.W.*, Luce, C., McNamara, J., Glenn, N., 2010, Improvement of

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distributed snowmelt energy balance modeling with MODIS-based NDSI-derived fractional snow-covered area data, *Hydrologic Processes*, DOI: 10.1002/hyp.7857

28. Sankey, T.T., Glenn, N., Ehinger, S.*, Boehm, A., and S. Hardegree. 2010. Characterizing western juniper expansion via a fusion of Landsat 5 Thematic Mapper and lidar data. *Rangeland Ecology and Management*, 63, 514-523.

27. Sankey, J.*, Glenn, N., Germino, M., Gironella, A., Thackray, G., 2010, Relationships of Aeolian Surface Change with LiDAR-Derived Landscape Surface Roughness following Wildfire, *Geomorphology*, 119, 135–145, 10.1016/j.geomorph.2010.03.013

26. Glenn, N.F. and Finley, C.*, 2010, Fire and vegetation type effects on soil hydrophobicity and infiltration in the sagebrush-steppe: I. Field analysis, *Journal of Arid Environments*, 74, 653-659, [10.1016/j.jaridenv.2009.11.009](https://doi.org/10.1016/j.jaridenv.2009.11.009)

25. Finley, C.*, and Glenn, N.F., 2010, Fire and vegetation type effects on soil hydrophobicity and infiltration in the sagebrush-steppe: II. Hyperspectral analysis, *Journal of Arid Environments*, 74, 660-666, [10.1016/j.jaridenv.2009.11.010](https://doi.org/10.1016/j.jaridenv.2009.11.010)

24. Wang, C., and Glenn, N.F., 2009, Estimation of fire severity using pre- and post-fire LiDAR data in sagebrush steppe rangelands, *International Journal of Wildland Fire*, 18, 848–856.

23. Mitchell, J.*, and Glenn, N.F., 2009, Matched filtering subpixel abundance estimates in mixture-tuned matched filtering classifications of leafy spurge (*Euphorbia esula* L.), *International Journal of Remote Sensing*, 30 (23), 6099-6119.

22. Norton, J.*, Glenn, N., Germino, M., Weber, K., Seefeldt, S., 2009, Relative suitability of indices derived from Landsat ETM+ and SPOT 5 for detecting fire severity in sagebrush steppe, *International Journal of Applied Earth Observation and Geoinformation*, 11(5): 360-367, [10.1016/j.jag.2009.06.005](https://doi.org/10.1016/j.jag.2009.06.005).

21. Sankey, J.*, Germino, M., Glenn, N., 2009, Aeolian sediment transport following wildfire in sagebrush steppe, *Journal of Arid Environments*, 73 (10): 912–919, DOI: [10.1016/j.jaridenv.2009.03.016](https://doi.org/10.1016/j.jaridenv.2009.03.016).

20. Sankey, J.*, Germino, M., Glenn, N., 2009, Relationships of post-fire aeolian transport to soil and atmospheric moisture, *Aeolian Research*, 1(1-2): 75-85, DOI: [10.1016/j.aeolia.2009.07.002](https://doi.org/10.1016/j.aeolia.2009.07.002).

19. Singh, N.*, and Glenn, N.F., 2009, Multitemporal spectral analysis for cheatgrass (*Bromus tectorum*) classification, *International Journal of Remote Sensing*, 30 (13): 3441 - 3462.

18. Lifton, Z.*, Thackray, G., Van Kirk, R., Glenn, N., 2009, Influence of rock strength on the valley morphometry of Big Creek, central Idaho, USA, *Geomorphology*, 111: 173–181.

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17. Wang, C., and Glenn, N.F., 2009, Integrating LiDAR intensity and elevation data for terrain characterization in a forested area, *IEEE Geoscience and Remote Sensing Letters*, 6 (3), 463-466.
16. Mitchell, J.*, and Glenn, N.F., 2009, Leafy Spurge (*Euphorbia esula* L.) Classification Performance Using Hyperspectral and Multispectral Sensors, *Rangeland Ecology & Management*, 62.
15. Wang, C., and Glenn, N.F., 2008, A linear regression method for tree canopy height estimation using airborne LiDAR data, *Canadian Journal of Remote Sensing*, 34:217-227.
14. Moore, C.*, Hoffman, G., Glenn, N., 2007, Quantifying Basalt Rock Outcrops in NRCS Soil Map Units Using Landsat-5 Data, *Soil Survey Horizons*, 48: 59-62.
13. Khan, S., Glenn, N.F., 2006. New strike-slip faults and litho-units mapped in Chitral (N. Pakistan) using field and ASTER data yield regionally significant results, *International Journal of Remote Sensing*, 27 (20): 4495-4512.
12. Mundt, J.*, Glenn, N., Weber, K., Pettingill, J., 2006. Determining target detection limits and accuracy delineation using an incremental technique. *Remote Sensing of Environment*, 105, 34-40.
11. Streutker, D. and Glenn, N., 2006. LiDAR measurement of sagebrush steppe vegetation heights. *Remote Sensing of Environment*, 102, 135-145.
10. Mundt, J.*, Streutker, D., Glenn, N., 2006. Mapping sagebrush distribution via fusion of hyperspectral and LiDAR classifications. *Photogrammetric Engineering and Remote Sensing*, 72 (1): 47-54.
9. Glenn, N.F., Streutker, D., Chadwick, J., Thackray, G., Dorsch, S.*, 2006. Analysis of LiDAR-derived topographic information for characterizing and differentiating landslide morphology and activity. *Geomorphology*, 73 (1-2) 131-148.
8. Mundt, J.*, Glenn, N., Weber, K., Prather, T., Lass, L., Pettingill, J., 2005. Discrimination of hoary cress and determination of its detection limits via hyperspectral image processing and accuracy assessment techniques. *Remote Sensing of Environment*, 96: 509-517.
7. Glenn, N.F., Mundt, J.T.*, Weber, K.T., Prather, T.S., Lass, L.W., Pettingill, J., 2005. Hyperspectral data processing for repeat detection of small infestations of leafy spurge. *Remote Sensing of Environment*, 95: 399-412.
6. Chadwick, J., Glenn, N., Thackray, G., Dorsch, S.*, 2005. Landslide Surveillance: New Tools for an Old Problem. *EOS*, 86(11): 109, 114.

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5. Chadwick, J., Dorsch, S.*, Glenn, N., Thackray, G., Shilling K., 2005. Application of Multi-Temporal High Resolution Imagery and GPS in a Study of the Motion of a Canyon Rim Landslide. *ISPRS Journal of Photogrammetry and Remote Sensing*, 59(4): 212-221.
4. Lass, L., Prather, T., Glenn, N., Weber, K., Mundt, J*, Pettingill, J., 2005. Early Detection of Spotted Knapweed and Babysbreath with a Hyperspectral Sensor, *Weed Science*, 53:242–251.
3. Glenn, N.F., J.R. Carr, 2004. Establishing a relationship between soil moisture and RADARSAT-1 SAR data obtained over the Great Basin, Nevada, U.S.A. *Canadian Journal of Remote Sensing* 30/2, pp.1-6.
2. Glenn, N. F., J.R. Carr, 2004. The effects of soil moisture on SAR delineation of geomorphic surfaces in the Great Basin, Nevada, U.S.A. *Journal of Arid Environments* 56/4, pp. 643-657.
1. Glenn, N. F., J.R. Carr, 2003. The use of geostatistics in relating soil moisture to RADARSAT-1 SAR data obtained over the Great Basin, Nevada, U.S.A. *Computers and Geosciences*, 29/5, pp.577-586.

2. GRANTS AWARDED, ~\$10M

PIs are listed in order (PI, Co-PI, etc)

Workshops-NEON: Training in Scientific Discoveries with NEON's AOP, NSF, \$100,000, 11/1/2015-11/30/2017

Modeling the long-term effects of fuel reduction and seeding treatments on fuel loads and fire regimes in the Great Basin, Joint Fire Sciences Program, \$268,810, 11/2015-10/2018

Integrating TLS and ALS to Describe Riparian Vegetation Structure, Glenn, N., Spaete, L., Bureau of Reclamation / Sound Science LLC, \$45,592, 6/1/2015-9/30/2015

Monitoring Earth's Hydrosphere: Integrating Remote Sensing, Modeling, and Verification, Flores, L., Glenn, N., McNamara, J., Marshall, HP, \$1,479,990, 10/1/2014-9/30/2017

Scalable Vegetation Structure for Ecosystem Modeling in the Western US, Glenn, N., Flores, L., Mitchell, J, Ustin, S., NASA Terrestrial Ecology, \$748,000, 1/1/2014-12/31/2016

Birds of Prey Remote Sensing, Glenn, N., BLM, \$34,460, 10/01/2014 – 09/30/2017

INL Joint Appointment, Glenn, N., DOE, \$54,167, 10/01/2014-9/30/2015

Quantifying and predicting fuels and the effects of reduction treatments along successional and invasion gradients in sagebrush habitats, October 2011 – September 2014, Shinneman, D., Pilliod, D., Arkle, R., Glenn, N., \$546,723, Joint Fire Science Program, (\$73,137 to ISU via subcontract from USGS)

BCAL MapWindow Virtual Watersheds, October 2010 – September 2015, \$487,500, Glenn, N., Ames, D., NOAA

Orchard Training Area Impacts Mapping and Cave Visualization, Glenn, N., Idaho Military Division, \$17,000, 9/1/2013 – 12/31/2013

Orchard Training Area Vegetation and Cave Mapping, Glenn, N., Idaho Military Division, \$89,000, 10/01/2012 – 09/30/2014

Collaborative Research: Making Point Clouds Useful to Earth Scientists, Glenn, N., \$219,000 (\$320,000 total), NSF, 9/01/2012 – 08/31/2015

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LiDAR Remote Sensing of Snake River and Priest Lake, Glenn, N., \$142,000, IDWR/FEMA, October 2011-May 2012

Water Resources in a Changing Climate, September 2008-December 2013, Baxter, C., Crosby, B., Germino, M., Ames, D., Finney, B., Thackray, G, Glenn, N. (ISU PIs), NSF Idaho EPSCoR (\$15M to State of Idaho) (Glenn's portion: \$65,000 for outreach, \$234,750 for CI, \$155,583 for Lead Scientist)

BCAL MapWindow Watershed Modeling LiDAR, September 2009-September 2013, \$340,650, Ames, D., Glenn, N., NOAA

Collaborative Research: Cyberinfrastructure Development for the Western Consortium of Idaho, Nevada, and New Mexico, September 2009-August 2013, \$2M to Idaho from NSF EPSCoR; (Glenn, N., Ames, D., for Idaho State University's portion (\$387,200 over 3 years))

Remote Sensing Strategic Planning: Joint Appointment, January 2011-September 2013, \$193,565, Glenn, N., Idaho National Laboratory

Remote Sensing Strategic Planning: BCAL Support, January 2011-September 2012, \$70,095, Glenn, N., Idaho National Laboratory

Faculty Staff Exchange: Post-doctoral Researcher, October 2010-September 2011, \$48,250, Glenn, N., Idaho National Laboratory

UAV and hyperspectral remote sensing, April 2009-September 2011, \$41,000, Glenn, N., Idaho National Laboratory

CESU Rapid Carbon Assessment, June 2011-October 2011, Glenn, N., \$11,297, USDA NRCS

Upgrade of Computing Equipment in the Digital Mapping Laboratory, Idaho State University, \$75,000, August 2009-2010, Crosby, B., Ames, D., Glenn, N., Welhan, J., NSF

Fusion of remotely sensed data sources for modeling eolian soil transport, July 2007 – May 2011, \$360,515, Glenn, N., Germino, M., Department of Defense

Hyperspectral and LiDAR landscape modeling, October 2006-September 2010, \$462,120, Glenn, N., NOAA

Evaluating Invasive Species and Habitat Quality in The Owyhee Uplands With Remote Sensing, September 2007-August 2011, \$27,000, Glenn, N., BLM

Rangeland Fire and Erosion, August 2008-July 2010, \$159,000, Germino, M., Glenn, N., BLM

Development of a Geospatial Outreach Program – Boise Center Aerospace Laboratory, October 2005 – September 2010, \$475,900, Glenn, N., Ames, D., NOAA.

Quantifying Basalt Rock Outcrops in NRCS Soil Map Units Using Landsat-5 Data, September 2007-December 2008, \$23,500, Glenn, N., USDA NRCS

Implementation of Remote Sensing Techniques for Invasive Species Management, August 2006-September 2009, \$43,459, Glenn, N., USDA NRCS.

Eolian transport and remote sensing, INRA SSGP Doctoral Fellow Program, Fall 2006-Spring 2008 (\$50,000), Glenn, N., funding for Joel Sankey, PhD in Engineering and Applied Sciences

Hyperspectral remote sensing, INRA SSGP Doctoral Fellow Program, Fall 2007-Spring 2009 (\$50,000), Glenn, N., funding for Jessica Mitchell, PhD in Engineering and Applied Sciences

Creation of a New Learning Community by Integration of Breeze, WebCT, Distance Learning and Smart Screens at Idaho State University, July 1, 2006-June 30, 2007, Glenn, N., Ames, D., Hughes, S., \$59,556, Idaho SBOE.

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Pacific NorthWest Regional Collaboratory (PNWRC) Rangeland Monitoring FY06, October 2006 – August 2007, \$53,800, Glenn, N., Battelle Memorial Institute, Pacific Northwest Division.

Boise Center Aerospace Laboratory, October 2004 – September 2007, \$494,739, Glenn, N., Ames, D., Hughes, S., Weber, K., NOAA.

Landscape Data Fusion and Assessment: Improved Feature Extraction using Multivariate Stacking, Year 3, July 2005 – June 2006, \$53,427, Glenn, N., Battelle Memorial Institute, Pacific Northwest Division.

Detection, Prediction, Impact, and Management of Invasive Plants Using GIS, June 2002- May 2005, \$1,500,000, Weber, K., Glenn, N.F., Germino, M., NASA Goddard, NAG5-2301.

Development and Implementation of Remote Sensing Techniques to Monitor Invasive Plant Species in the State of Idaho, October 2001 – March 2005, \$801,695, Pettingill, J., Glenn, N.F. (ISU PI), Weber, K., Prather, T., Lass, L., NASA Stennis, NAG13-02029

Synthetic Aperture Radar Analysis of Multi-scale Geologic and Environmental Processes in Idaho and the Intermountain West, August 2001-July 2004, \$575,000, Thackray, G.D., Hughes, S.S., Glenn, N.F., and Rodgers D.W., NASA EPSCoR, NCC5-577. Two year extension, August 2004 – July 2006, with additional \$377,445.

Landscape Data Fusion and Assessment: Improved Feature Extraction using Multivariate Stacking, Year 2, May 2004 – May 2005, \$49,252, House, E., Glenn, N.F., Windholz, T., Weber, K., Battelle Memorial Institute, Pacific Northwest Division.

NativeView Connections, March 2004 – February 2005, \$25,000, Glenn, N., Hughes, S., Idaho Space Grant Consortium, from NASA Workforce Development Program.

Selenium Information System Project (SISP), July 2004 – September 2005, \$68,537, Weber, K., Windholz, T., Glenn, N., Bechtel BWXT ID LLC.

Student Outreach and Training for Long-term Environmental Studies in Remote Sensing with INEEL, December 2001-September 2004, \$105,646, Inouye, R., Glenn, N.F., Bechtel BWXT ID LLC

Landscape Data Fusion and Assessment: Improved Feature Extraction using Multivariate Stacking, March 2003 – March 2004, \$102,224, House, E., Glenn, N.F., Windholz, T., Weber, K., Battelle Memorial Institute, Pacific Northwest Division

Wildfire Effects on Rangeland Ecosystems and Livestock Grazing in Idaho, May 2001- March 2004, \$500,000, Weber, K., Glenn, N.F., Holmer, R., Link, P., Minshall, W., Maschner, H., and Peterson, C., NASA Goddard, NAG5-10982

GeoSTAC, August 2002 – July 2003, \$30,174, Hughes, S., Glenn, N., NASA EPSCoR, Idaho Space Grant Consortium

Postdoctoral Researcher in Remote Sensing at Idaho State University, August 2002 – July 2003, \$15,000, Glenn, N., NASA EPSCoR, Idaho Space Grant Consortium

Application of the SEBAL methodology for estimating evapotranspiration and consumptive use of water through remote sensing (student and outreach support), May 2002 – December 2003, \$37,340, Glenn, N.F., Hughes, S.S., Idaho Department of Water Resources

Development of a selenium information system, December 2001 – September 2002, \$20,000, Glenn, N.F. and Co-PI: Weber, K.T., Bechtel BWXT ID LLC

Modeling landslide hazards and sediment transport after wildfires with remote sensing: Yellowjacket Creek drainage, Lemhi County, Idaho, June 2001 – February 2002, \$10,000, Glenn, N.F., NASA Idaho Space Grant Consortium

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3. INVITED TALKS (from more than 125 presentations, 2000-2013)

Glenn, N.F., Li, A., Shrestha, R., Spaete, L, Improving Aboveground Carbon Estimates in Dryland Ecosystems with Airborne Lidar and Satellite Laser Altimetry, AGU December 2014 (Invited)

Glenn, N.F., Shrestha, R., Spaete, L, Wheaton, J., Hudak, A., Bailey, P., Spatially-explicit techniques for earth surface characterization using multi-source and multi-temporal laser scanning data, AGU December 2013 (Invited)

Glenn, N.F., LiDAR for Evapotranspiration Modeling, Western States Remote Sensing of Evapotranspiration Workshop, October 2011, Boise, ID

Glenn, N.F. Mitchell, J., Spaete, L., Sankey, T., Shrestha, R., Hardegree, S.P., Modeling low-height vegetation with airborne, LiDAR ID# EP44B-05, American Geophysical Union, 13-17 December 2010, San Francisco, CA.

Shrestha, R., Glenn, N.F., Spaete, L., 2010. Multi-temporal LiDAR change detection for terrain analysis using slope-based automatic co-registration ID# EP51D-0574, American Geophysical Union, 13-17 December 2010, San Francisco, CA.

Shrestha, R., Glenn, N.F., Hudak, A.T., Spaete, L., 2010. Characterizing bare-earth elevations from airborne LiDAR data in a shrub-dominated mountain environment ID# C33C-0554, American Geophysical Union, 13-17 December 2010, San Francisco, CA.

Glenn, N., 2008. LiDAR derived surface morphology and change detection, *Studying Earth Surface Processes with High-Resolution Topographic Data Workshop*, Boulder, CO

Glenn, N., 2008, Lasers in the Sage, Rangeland Ecology & Management Tri-State Short Course, April 2008, Boise, ID

Glenn, N., 2008, Introduction & Application of Remote Sensing for Surveying, Idaho Society of Professional Land Surveyors Annual Conference, February 2008, Pocatello, ID

Glenn, N., 2007, Detection and modeling of invasive plants and their surrounding environments with hyperspectral imaging and other platforms in semiarid regions, University of Idaho, Moscow, ID, May 2007.

Glenn, N., 2006, LiDAR and Hyperspectral Remote Sensing for Landscape Modeling, Southwest GIS User's Group Meeting, May 2006, Nampa, ID

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Glenn, N. and Streutker, D., 2006, LiDAR and Hyperspectral Remote Sensing for Landscape Modeling, University of Idaho Center for Ecohydraulics Research Colloquium, March 2006, Boise, ID

Glenn, N., 2006, Remote Sensing of Cheatgrass in Idaho, BLM Owyhee Initiative Project Meeting, January 2006, Portland, OR

Glenn, N., 2005. Analysis of LiDAR-derived topographic information for characterizing and differentiating landslide morphology and activity, Colorado School of Mines Heiland Lecture Series, Golden, Colorado, March 2005.

Glenn, N. , 2005, Remote Sensing for Natural Resources and Beyond, Presented to the US Fish and Wildlife Service, Boise, ID, March 2005

Glenn, N. , 2005, Results of the NASA BAA: Development of Remote Sensing Techniques to Monitor Invasive Species in the State of Idaho, Idaho Weed Conference, Nampa, Idaho, February 2005

Glenn, N., and Pettingill, J., 2004. NASA Remote Sensing of Invasive Weeds Project, Presentation, 12th North America Weed Management Association Annual Conference, Rapid City, SD, September, 2004

II. TEACHING

1. Classroom Instruction

Geography 361/561 Remote Sensing & Image Processing, Fall 2015 (11)

Geography 361/561 Remote Sensing & Image Processing, Online Course, Summer 2015 (8)

Geography 361/561 Remote Sensing & Image Processing, Online Course, Spring 2014 (8)

Geography 361/561 Remote Sensing & Image Processing, Fall 2014 (30)

Geosciences 581 Selected Topics in Remote Sensing Fall 2014 (5)

Geosciences 661 Advanced Image Processing Spring 2014 (4)

Geology 4409/5509 Remote Sensing

- Spring 2012, 40 students, Boise (12), Pocatello (14), Idaho Falls (11)
- Spring 2011, 37 students, Boise (9), Pocatello (16), Idaho Falls (12)
- Spring 2010, 30 students, Boise (12), Pocatello (12), Idaho Falls (6)
- Spring 2009, 26 students, Boise (8), Pocatello (17), Idaho Falls (1)
- Spring 2008, 19 students, Boise (4), Pocatello (8), Idaho Falls (7)
- Spring 2007, 24 students, Boise (5), Pocatello (10), Idaho Falls (9)
- Spring 2006, 24 students, Boise (4), Pocatello (13), Idaho Falls (7)
- Spring 2005, 12 students, Boise (1), Pocatello (11)
- Spring 2001, 13 students, Pocatello
- Fall 2001, 14 students, Pocatello (developed new course)

Geology 6609 Advanced Image Processing

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- Fall 2012, 7 students, Boise (5), Pocatello (4), Moscow (2) (enrolled students from ISU, Boise State University, and University of Idaho)
- Fall 2010, 7 students, Boise (3), Pocatello (2), Idaho Falls (2)
- Fall 2008, 2 students, Pocatello (1), Boise (1)
- Fall 2007, 2 students, Pocatello (2)
- Fall 2006, 5 students, Boise (2), Pocatello (1), Idaho Falls (2) (developed new upper graduate student level course)

Geology 5599 LiDAR and Image Processing

- Fall 2011, 7 students, Boise (3), Idaho Falls (4) (developed new upper level graduate student level course)
- Fall 2012, 10 students, Boise (1 UI, 2 BSU, 1 ISU), Pocatello (4), Moscow (2 UI)

Geology 6606 Geostatistics

- Spring 2012, 20 students, Boise (4), Pocatello (12), Idaho Falls (4)

Geology Field Camp

- Summer 2007, 21 students, 3 days
- Summer 2006, 21 students, 3 days
- Summer 2005, 21 students, 3 days
- Summer 2004, 7 – 21 students, 2 - 4 days

2. Research Experiences Offered to Students (beyond formal advising)

- 2014-Present, Kate Carter-Cram, Sage International High School Student
- Fall 2015 – Undergraduate
 - Rick Raymondi
 - Maren Watkins
- Summer 2015 – Undergraduate
 - Maren Watkins
 - Soraya (Catherine) Yazdanpour
- Spring 2015 – Undergraduate
 - Maren Watkins
- Summer 2014 - Undergraduates
 - William Carter, Timothy Phero
- Spring 2013 - Graduate
 - Mike Griffel, Post-baccalaureate Geotech Certificate, Geol 648, Remote sensing fire
- Fall 2012 - Graduate
 - Michael Overton, M.S. GIScience, Geol 648, 2 credits, LiDAR programming
 - Mike Griffel, Post-baccalaureate Geotech Certificate, Geol 648, Remote sensing fire
- Spring 2011 – Undergraduate and graduate
 - Andrew Farias, B.S. Geomatics, Geol 582, 3 credits, *LiDAR remote sensing*
 - Mike Griffel, Post-baccalaureate Geotech Certificate, *Coordinated internship with Idaho Department of Water Resources*
- Spring 2009 - Undergraduate

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- Ashley Hayes, B.S. Geology, Geol 582, 3 credits, *Remote sensing*
- Spring 2007-Spring 2011 - Undergraduate
 - Carol Moore, B.S. EES, Mapping rock outcrops with remote sensing
 - This research has resulted in one publication to date, a \$20,000 grant award, and an **undergraduate research award** for Carol by the Cooperative Ecosystems Studies Unit (CESU); undergraduate research also supported by Idaho NSF and NASA EPSCoR
- Spring 2007 - Graduate
 - Brian Davis, Post-baccalaureate Geotechnology Certificate, Geol 648, 2 credits, *Mapping invasive species with remote sensing*
- Fall 2006 - Undergraduate
 - Carol Moore, B.S. Geology, Geol 482, 2 credits, *Determining rock outcrops with remote sensing in Clark County for NRCS soil surveys*
- Spring 2006 - Graduate
 - Randy Lee, INL, MS GIS, Geol 648, 3 credits, *Development of spectral and spatial techniques for elevation models for hydrology*
- Fall 2003 - Undergraduate
 - Chad Gentry, B.S. Biology, Geol 482, 1 credit, *Remote sensing*
- Fall 2002 - Graduate
 - Jeremy Shive, M.S. Biology, Geol 648, 1 credit, *Development of hyperspectral remote sensing techniques*
 - Tanya Johnson, B.S. Anthropology, Geol 482, 3 credits, *Remote sensing of archaeological sites in the Eastern Snake River Plain*
- Spring 2002 - Graduate
 - Ben McMahan, M.S. Anthropology, Geol 648, 1 credit, *Multitemporal stacking to simulate hyperspectral imaging*

3. Internship Experiences Offered to Students

- Kate Carter-Cram, Sage International School, Summer 2014-present
- Parker Moore, Meridian High School Junior, Fall 2011
- Scott Miller, BS Geology, internship at NOAA-Boulder with Dr. Bob Zamora, Summer 2007
- Jackie Langille, BS Geology, internship at NOAA-Boulder with Dr. Bob Zamora, Summer 2006, *Correlation of Precipitation and Soil Water Content to Rising River Levels*
- Allan Anselmo, MS GIS, internship at NOAA-Boulder with Dr. Bob Zamora, Summer 2005, *Programming for Soil Moisture*

4. Graduate Students

Primary advisor:

- Ann Marie Raymondi, MS Biology
- Hamid Dashti, PhD Geosciences
- Nayani Ilangakoon, PhD Geosciences
- Shital Dhakal, MS Hydrology

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- Alex Boehm, Linking Regional Climate to Slope Aspect and Soils to assess potential causes of success and failure of seedling establishment, MS GISci, August 2015
- Randy Lee, MS in GISci (non-thesis)
- Kyle Anderson, Use of Terrestrial Laser Scanning to Estimate Fuelbed Characteristics in Shrub-Steppe, MS GISci, December 2014
 - Michigan Biological Field Station
- Jacob Tibbits, MS in GISci (non-thesis), December 2013
 - Eureka County - BLM
- Peter Olsoy, LiDAR-hyperspectral data fusion, MS GISci, May 2013
 - PhD Student Washington State University
- Amberle Keith, Non-thesis MS GISci, May 2013
- Denise Jensen, Non-thesis MS GISci, May 2013
- Catherine Zajanc, Non-thesis MS GISci, May 2013
- Jayson Murgoitio, LiDAR line-of-sight modeling, MS GISci, May 2012
 - Bureau of Land Management Scientist, Idaho
- Sam Gould, LiDAR accuracy and validation in mountain watersheds, MS GISci, May 2012
 - Weld County GIS
- Jed Gregory, Non-thesis MS GISci, May 2012
 - Bureau of Land Management Scientist, Wyoming
- Jessica Mitchell, December 2010, Application in Hyperspectral and LiDAR Remote Sensing to Improve the Characterization of Low-height Sparse Vegetation Ecosystems, PhD INRA Fellow / Engineering and Applied Science
 - Assistant Professor, Appalachian State University
- Joel Sankey, December 2009, Dynamics of Post-Wildfire Aeolian Transport in Cold Desert Shrub Steppe, PhD, INRA Fellow / Engineering and Applied Science
 - USGS
- Sara Ehinger, Design, Development, and Application of LiDAR Data Processing Tools, MS GISci, May 2010
 - GIS Scientist with USFS
- Jessica Mitchell, August 2007, Spectral and spatial detection limits of leafy spurge (*Euphorbia esula* L.): Sensor Comparisons and Matched Filtered Behavior, MS GIS
- Jill Norton, December 2006, The Use of Remote Sensing Imagery to Determine Wildland Burn Severity In Semiarid Sagebrush-Steppe Rangelands, M.S. GIS
 - GIS Scientist with Power Engineers
- Charles Finley, August 2006, Field evaluation and hyperspectral imagery analysis of fire-induced water repellent soils and burn severity in Southern Idaho rangelands, M.S. GIS
 - GIS Scientist with Idaho Power
- Nagendra Singh, May 2005, Development of a Multitemporal Data Analysis Approach for Extracting Information from Medium-Resolution Imagery: An application for cheatgrass detection (*Bromis tectorum*), M.S. Geology
 - Oak Ridge National Lab Remote Sensing Scientist

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- Jacob Mundt, December 2003, Detection of leafy spurge (*Euphorbia esula*) in Swan Valley, Idaho, using hyperspectral remote sensing with limited training data, M.S. Geology.
 - Weld County GIS and Web Manager
- Diane Sprague-Wheeler, May 2003, The Use of Remote Sensing Imagery for Evaluation of Post-Wildfire Susceptibility to Landslide and Erosion Hazards in the Salmon-Challis National Forest, Lemhi County, Idaho, M.S. Geology.
 - Geologist, Soda Springs Ranger District, Caribou-Targhee National Forest

Secondary advisor/Committee Member:

- Stephanie Coates, MS Biology
- Elizabeth Ronar, MS Hydrology
- Ryan Will, MS Hydrology
- Chris Tennant, May 2014, PhD Geosciences, Served on PhD Advisory Committee (pre-candidacy)
- Theo Barnhart, May 2013, MS Geology, Morphodynamics of the Selawik Retrogressive Thaw Slump, Northwest Alaska
- Teva Veluppillia, Non-thesis MS GISci, May 2012
- Robert Beazer, August 2013, PhD EAS, Integrating Social Attitudes, Spatial Data, and Monte Carlo Simulation Modeling for Siting of High Voltage Power Lines
- Danny Anderson, May 2012, PhD EAS, Detailed Hydrographic Feature Extraction from High-Resolution LiDAR Data
- Yang Cao, PhD EAS Advisory Committee, Spring 2012
- Kacy Krieger, January 2012, MS Geology, The Topographic Form and Evolution of Thermal Erosion Features: A First Analysis Using Airborne and Ground-Base LiDAR in Arctic Alaska
- Jiri Kadlec, PhD EAS Advisory Committee, Fall 2011
- Robert Beazer, PhD EAS Advisory Committee, Fall 2011
- Pam Bond, May 2011, MS GISci, Sagebrush Steppe Shrub Height and Canopy Cover Estimation Using LiDAR and Landsat 5 TM Data
- Carl Rudeen, May 2012, MS GISci, Sage grouse modeling
- Amber Hoover, August 2010, MS Biology, A Comprehensive Examination of the Interactions between Aeolian Sediment Transport and Vegetation
- Brian Marchionni, expected Fall 2009, MS GIS, Design and Development of an Extensible Open Source Geospatial Toolbox and Graphical Modeling Environment
- Jeyakanthan Veluppillai, Fall 2008, MS GIS, Development and application of soil and water assessment tool interfaces for MapWindow GIS application (OpenSWAT)
- Christopher Michaelis, Spring 2007, MS GIS, Application of OGC specifications to client-side GIS
- Bettie Keetch, July 2006, Using PTRAs and QuarkNet Teaching Materials and Methods in the Secondary School Classroom, M.S. Natural Sciences
- Zach Lifton, August 2005, Bedrock controls on the fluvial geomorphology of Big Creek, Valley County, Idaho, M.S. Geology
- Ryan Baum, May 2005, Multiple stressors and landscape variations in remotely sensed vegetation indices of sagebrush-steppe over the past ca. 20 years, M.S. GIS

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- Stephen Dorsch, May 2004, The Geologic Framework, Movement History and Mechanics of the Salmon Falls Landslide, Twin Falls County, Idaho, M.S. Geology, (served as Ex-Officio Committee Member)
- Jen Carr Merrill, August 2003, The Formation of Leaton Gulch, Grouse Peak, Pahsimeroi Mountains, Custer County, Idaho: Neoproterozoic Conglomerates and Breccias and Their Relation to the Beaverhead Impact Structure, M.S. Geology (served on thesis committee for defense only)

Served as Graduate Faculty Representative (GFR):

- Richard Boyes, May 2013, Ph.D., Counseling
- Jessica Berry, May 2013, Ph.D., Counseling
- Nancy Byron, May 2013, M.S., Counseling
- Suzanne Burton, May 2013, M.S., Counseling
- Cordelia Germino, May 2012, M.S., Education
- David Nichols, May 2012, M.S., Counseling
- Melanie Person, May 2012, Ph.D., Counseling
- Amy Davis, April 2011, M.S., Counseling
- Addy (Adriana) Wissel, May 2011, Ph.D., Counseling
- Kristi Weismann, April 2010, M.S. Counseling, Department of Counseling
- Laura Alvarez, April 2010, M.S. Counseling, Department of Counseling
- Colleen Matthews, April 2009, M.S., Speech Language Pathology
- Kris Kirsch, April 2008, M.S. Counseling, Department of Counseling
- Chelsea D'Addabbo, April 2008, M.S., Speech Language Pathology
- Nicole Jordan, April 2007, Mental Health Counseling, M.S. Counseling, Department of Counseling
- Leslie Soares, April 2007, M.S., Speech Language Pathology
- Camilla Pearson, July 2006, Structural Family Therapy, M.S. Counseling, Department of Counseling
- Nikki Kerns, April and July 2006, Cochlear Implantation and Aural Rehabilitation, Speech Language Pathology
- Rhonda Oppelt, April 2006, M.S. Counseling, Department of Counseling
- Lisa Paternoster, April 2005, Structural Family Therapy, M.S. Counseling, Department of Counseling
- Cyndia Glorfield, March 2005, Emotionally Focused Therapy, M.S. Counseling, Department of Counseling
- Jeremy Shive, May 2004, Mapping Amphibian Habitat Distribution in the Frank Church-River of No Return Wilderness, ID Using Multiple Scales of Remotely Sensed Data, M.S. Thesis, Biology

Served as Committee Member for Other Universities:

- Jeff Reeder, M.S., University of Idaho Ecohydraulics, December 2012, A method for automatic and unsupervised detection of shallow landslides from LiDAR-derived, high-resolution digital elevation models using a wavelet transform

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- Rohan Benjankar, Ph.D., University of Idaho Ecohydraulics, Summer 2009, Quantification of reservoir operation-based losses to floodplain physical processes and impact on the floodplain vegetation at the Kootenai River, USA
- Joel Homan, MS Hydrology, Boise State University, Incorporating the MODIS Snow Product into Distributed Snowmelt Models, Spring 2008

Post-doctoral scientists and Research professors

- Dr. Aihua Li, Post-doc, September 2012 - present
- Dr. Rupesh Shrestha, Post-doc, April 2010-2015
- Dr. Jessica Mitchell, Post-doc, September 2012 – 2013
- Dr. Teki Sankey, Research Assistant Professor, September 2008-2012
- Dr. Cheng Wang, Post-doc, Remote Sensing, August 2007-June 2009
- Dr. David Streutker, Post-doc, Physics, April 2003-August 2006
- Dr. Mohamed Aly, Post-doc, Geology, August 2006 – July 2008
- Dr. Ahmed Said, Research Assistant Professor, Hydrology, October 2006-April 2008
- Dr. John Chadwick, Post-doc, Geology, July 2002 – July 2005

Student Awards

- Carol Moore, 2011, Undergraduate student, Best Poster Award, Using 3D visualizations for environmental outreach. EPSCoR Third Annual Western Tri-State Consortium Meeting, April 2011, Santa Ana Pueblo, NM.
- Joel Sankey, 2010, Outstanding PhD Student, Idaho State University
- Jacob Tibbits - INRA First Prize Student Poster Award, 2007 for: Tibbits, J., Theau, J., Glenn, N., Weber, K.), October 2007. The use of Remote Sensing and GIS to Model Rangeland Health Characteristics. INRA-BSU Environmental Sensing Symposium, Boise, ID.
- Jessica Mitchell - INRA Second Prize Student Poster Award, 2007 for: Mitchell, J., Glenn, N., October 2007. Matched Filter Abundance Estimates in Mixture Tuned Matched Filtered Classifications of Leafy Spurge. INRA-BSU Environmental Sensing Symposium, Boise, ID.
- Carol Moore, Undergraduate Student Researcher Award, Great Basin Cooperative Ecosystems Studies Unit, 2008 Reno, NV, CESU Annual Meeting
- Yardenia Martinez (University of Houston) - Society of Exploration Geophysics Best Student Poster Paper for Martinez, Y., Khan, S., Link, P., Glenn, N., Mapping geology and structure using multispectral and hyperspectral data and evaluating topographic correction methods: Case study, Salmon River Mountains of east-central Idaho, 2005 SEG Annual Meeting

5. Workshops & Other

March 2015, LiDAR Derived DEMs applied to Landslide, Fault, Earthquake Rupture, and Landscape Changes, National Autonomous University of Mexico, Mexico City, Mexico; in coordination with OpenTopography, 25 students for 2 days.

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June 2014, LiDAR Processing Workshop, Czech Globe, Brno, Czech Republic

25 participants for 4 days for hands-on LiDAR image processing and hyperspectral processing using BCAL LiDAR Tools

June 2011, Spaceward Bound Workshop, a NASA and Idaho Space Grant Consortium

workshop for teachers to learn about remote sensing and field geology, Idaho, June 24, 2011

April 2011, LiDAR Processing Workshop, International Symposium for the Remote Sensing of the Environment, Sydney, Australia

20 participants from 8 different countries for hands-on LiDAR image processing using ISU BCAL software tools

August 2010, LiDAR Processing Workshop, Idaho EPSCoR, Boise, Idaho

15 student and faculty participants for hands-on LiDAR image processing using ISU BCAL software tools

March 2009, ISU Boise Research Day, Panelist, Boise, Idaho

1 hour panel on collecting, organizing, and analyzing data for research

April 2003, Hyperspectral Workshop, University Place, Idaho Falls, Idaho

1 day hyperspectral image processing workshop (speakers and hands-on) for INL, ISU, and other university, state and federal agencies

October 2002, Idaho State Department of Agriculture (ISDA), Boise, Idaho

1-day hands-on remote sensing workshop for county weed managers for continuing education credit

August 2002, Surface Energy Balance Algorithm for Land (SEBAL) Expert Training, Pocatello, Idaho

Organized 5-day workshop for 17 attendees from state and federal government, various universities, and the private sector.

May 2001, Remote Sensing Workshop, Intermountain GIS Conference, Boise, Idaho Taught 1 day workshop of fundamentals of remote sensing

III. SERVICE

Boise State University (2013-) & Idaho State University (2000-2013)

1. International

- **Czech Globe**, Hosted visiting scientists at BSU and provided workshop in Czech Republic (May-June 2014)

2. University

- Lead, Search Committee for Human Environment Systems Cluster Hire, 2014-

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- Joint appointment with DOE Idaho National Laboratory (INL), 2011-
- Lead, Cyberinfrastructure NSF Idaho EPSCoR, 2013-
- Dean, College of Science and Engineering Search Committee, 2013
- Vice President for Research and Economic Development Search Committee, 2011-2012
- Member of President's advisory group, 2011
- Member, ISU-College of Science and Engineering Advisory Board, 2010-2012
- Member, ISU-Meridian Health Sciences Center Dean's Advisory Council, 2007-2013
- Serve on Idaho Cyberinfrastructure Working Group, NSF EPSCoR Idaho, 2009-2012
- Member of Promotion Committee for Matt Germino, Biology, 2010-2011
- Search committee member for soils position, Biology, 2009-2010
- Attended National EPSCoR Conference and Legislative Visits as ISU representative, February 2009-2010
- Adjunct Graduate Faculty with an endorsement to chair thesis or dissertation committees, Boise State University, 2008-
- Affiliate Graduate Faculty, University of Idaho, 2007-
- Organized booth for ISU-Boise ISU Day at the Capitol, 2007
- Presenter at ISU Office of Research "Collaborative Research" Seminar, 2007
- Member of VP for Research search committee, 2006 and 2007
- ISU Meridian Health Sciences Center Research Committee, Chair 2006-2009; Member 2009-
- ISU-Meridian Health Sciences Center Strategic Task Force Committee, 2006-
- ISU Technical Representative, Pacific Northwest Regional Collaboratory (PNWRC), 2000-2007
- Idaho Space Grant Consortium, ISU Representative Executive Committee Member, 2001, 2008 –2010
- ISU GIS Oversight Committee Member, 2002 – 2008
- ISU Geotechnology Faculty Member, 2002 -
- Developed collaborative ties for ISU presence in the Idaho Water Center (IWC), starting in 2004 and leading to ISU's research space in the IWC in November 2005
- ISU Day at the Capitol, Legislative Luncheon, 2004
- Support Clinical Lab Sciences (Department of Biology, Boise), Institute of Rural Health, Pharmacy, Public health, and CSED with poster development and printing for conferences, 2004-present
- GIS and Remote Sensing Presentations to Nursing Students, 2004-2005
- Serve on selection committee for the ISU Boise Student Excellence Award, 2005 – 2009
- Generated grants by serving as PI or Co-PI providing over \$1M in indirects to university
- PI on several outreach and curriculum-based grants for university-wide benefit:
 - *Creation of a New Learning Community by Integration of Breeze, WebCT, Distance Learning and Smart Screens at Idaho State University*, July 1, 2006-June 30, 2007, Glenn, N., Ames, D., Hughes, S., \$59,556, Idaho SBOE.
 - *Development of a Geospatial Outreach Program - Boise Center Aerospace Laboratory*, October 2005 – September 2008, \$475,900, Glenn, N., Ames, D., NOAA.

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- *NativeView Connections*, March 2004 – February 2005, \$25,000, Glenn, N., Hughes, S., Idaho Space Grant Consortium, from NASA Workforce Development Program.
- *GeoSTAC*, August 2002 – July 2003, \$30,174, Hughes, S., Glenn, N., NASA EPSCoR, Idaho Space Grant Consortium
- GFR to multiple students and departments (see list under 'Students')

3. University-wide Research Centers

- Search committee member, Lecturer, ISU GIS TReC (2004-2005)
- Numerous outreach and education grants with ISU GIS TReC, for example:
 - *Detection, Prediction, Impact, and Management of Invasive Plants Using GIS*, June 2002- May 2005, \$1,500,000, Weber, K., Glenn, N.F., Germino, M., NASA Goddard, NAG5-2301.
 - *Development and Implementation of Remote Sensing Techniques to Monitor Invasive Plant Species in the State of Idaho*, October 2001 - March 2005, \$801,695, Pettingill, J., Glenn, N.F. (ISU PI), Weber, K., Prather, T., Lass, L., NASA Stennis, NAG13-02029 (ISU's portion is \$193,036).
- Outreach and education grant with the Center for Ecological Research and Education (CERE)
 - *Student Outreach and Training for Long-term Environmental Studies in Remote Sensing with INEEL*, December 2001-September 2004, \$105,646, Inouye, R., Glenn, N.F., Bechtel BWXT ID LLC

4. Department of Geosciences

- Department Co-Chair, 2008-2010
- P&T committee for Dr. Dan Ames, 2008
- Search committees:
 - Cyberinfrastructure TT, 2011-2012
 - Geospatial Lecturer, 2011
 - Geospatial Hydrology, 2010-2011
 - Geospatial Analysis Non TT Teaching/Research Position, 2007
 - Earth and Environmental Science TT Geoscience Position, 2003-2004; 2004-2005
 - Idaho Falls Geoscience TT Teaching/Research Position, 2003-2004
- Regularly attend weekly faculty meetings
- Active participant in department reviews and documents
- Co-authored PhD in Geosciences proposal
- Support of Idaho Falls GIS laboratory, software/IT support, 2003-2004, 2010-2011
- Support of ISU Digital Mapping Laboratory, 1.2 years full-time salary, 2004-2005
- Grants providing indirects in which \$500,000 has been recovered by the department
- Represent and establish ISU-Geosciences presence in Boise, ID, resulting in establishing the Department of Geosciences' Boise Center Aerospace Laboratory (BCAL) in 2004
- Assisted in developing GeoSTAC (website, course design and development)

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5. Community Service

- Co-Founder and previous member of the Board of Directors for Sage International Charter School, including author of \$700,000 grant awarded to Sage International Charter School, 2008-2012
- Established the Idaho LiDAR Consortium, a website and collaboration tool to share LiDAR remote sensing data and reduce acquisition costs for State of Idaho
- Host to Open-House for ISU BCAL IQ-Station, 2011-2012
- Host to 60 4th graders from Mountain View Elementary – tour lab/visualization IQ-Station, speak about research, 2011
- Host to College of Idaho undergraduates – tour lab, speak about research, 2010
- Search committee member for IDWR GIS Section Manager, 2010
- Idaho Water Center Green Team, 2008-2009
- Idaho Water Center GIS Day, 2008
- Parents Association Committee, Treasure Valley YMCA, Member, 2005-2009
- Hosted Open House for ISU BCAL at the Idaho Water Center's University of Idaho's Presidential Sustainability Symposium, October 2008
- Eurasian Water Milfoil Outreach Talk, June 2008
- Review Panel for The Nature Conservancy's Landscape Toolbox, 2008-
- Idaho Geospatial Committee, Higher Education Representative, 2003 – 2009
The role of the IGC, as defined by Governor Kempthorne's Executive Order 2001-07, is to provide policy level direction and promote efficient and effective use of resources for matters related to geographic information.
- Mars Rover, TECH Challenge Volunteer (April 2003, 2004, 2010), 1 day remote sensing workshops for middle school students
- Women in GIS (WIG), Member, 2003-2009; This is an informal group (about 20 women) founded in and local to Boise. The mission of WIG is to provide educational opportunities for K-12 in geospatial technologies (GIS, GPS, and remote sensing). Examples of projects include education in the classroom, hosting public workshops at conferences, hosting GIS Day activities (Nov 2003, 2008), demonstrating GPS techniques to the public (May 2009).
- Weed Legislative Tour with demonstration of GPS/GIS/Remote sensing capabilities, Member of Organizing Committee, Ada and Bonneville Counties, 2004

6. Professional

Committees

- Member, NASA's Terrestrial Ecology, Carbon Cycle, Land Use and Biodiversity (TECLUB), 2014-
- Member, User Working Group, NASA's Oak Ridge National Laboratory, Distributed Active Archive Center for Biogeochemical Dynamics, 2014-
- Panel Member, Algorithm Theoretical Basis Documents (ATBD) for NASA's ICESat-2, 2014-
- Chair, Coordinating Committee, Great Basin Research and Management Partnership, 2014 - (Member since 2013)

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- Advisory Board Member, OpenTopography (NSF), 2010-
- Committee Member, UNAVCO (NSF) Terrestrial Imaging Geodesy Working Group, 2013-2015
- Board Member, Boise WaterShed Inc., 2014-
- NIH Panel Review Member, 2011
- NSF Panel Review Member, 2009-2013
- Member, Idaho Geological Survey Geologic Mapping Advisory Committee, 2009-
- Established Idaho LiDAR Consortium and Chair of State of Idaho Elevation Framework Technical Working Group, 2009-
- University of Nevada Reno, College of Science, Mackay School of Earth Sciences and Engineering, Geological Sciences & Engineering ABET, 2012
- University of Nevada Reno, College of Science, Mackay School of Earth Sciences and Engineering, Geological Sciences & Engineering Advisory Board Member, 2009-2012
- Search Committee Member for CI Coordinator for Idaho NSF EPSCoR, 2010
- Remote sensing review for identification of core indicators for the Bureau of Land Management (BLM), October 2008
- Working group member for NSF/National Center for Airborne Laser Mapping Workshop: Studying Earth Surface Processes with High-Resolution Topographic Data Workshop; developed whitepaper with colleagues from the University of Arizona, San Diego State University, and UC Davis titled "Current capabilities and community needs for software tools and educational resources for use with LiDAR high resolution topography data" for the National Research Council.
- University of Idaho Department of Civil Engineering, Center for Ecohydraulics Search Committee Member for Geomorphologist, 2007
- INRA and BSU Symposium on Environmental Sensing, October, 2007, Planning Committee and Session Chair, 2007
- American Society for Photogrammetry and Remote Sensing, Intermountain Region Fall Technical Meeting, 2005, Idaho Water Center, Boise, Idaho, Co-Convener
- Geological Society of America, Rocky Mountain (56th Annual) and Cordilleran (100th Annual) Joint Meeting, May, 2004; Hydrologic Science, Geomorphology, and Environmental Geoscience Session, Chair
- NASA Applications Division Remote Sensing of Invasive Plant Member, 2007-
- NASA Applications Division and USDA Agricultural Decision Support Systems, Remote Sensing of Invasive Plant Member, 2003
- American Society for Photogrammetry and Remote Sensing, Intermountain Region Fall Technical Meeting, November 3, 2005, Boise, Idaho, Convener
- NASA Applications Division PP&A Disaster Management Panel, Member, 2002
- American Society for Photogrammetry and Remote Sensing, Intermountain Region Spring Technical Meeting, April 12, 2001, Pocatello, Idaho, Convener;
- General Assembly of the European Geophysical Society, Nice, France, April, 2001; Program NH7.05 Landslides and related phenomena: Remote sensing and monitoring of landslides, Co-chair

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- CEOS (Committee of Earth Observation Satellites) International Landslide Hazard Disaster Working Group, Member and Co-Editor, 2001-2002

Manuscript Reviews

- Canadian Journal of Remote Sensing
- Catena
- Environmental and Engineering Geoscience
- Environmental Management
- Environmental Research
- Earth Surface Processes and Landforms
- Earth Science Reviews
- Geological Society of America Bulletin
- Geophysics
- Geophysical Research Letters
- Geology
- Geomorphology
- ISPRS Journal of Photogrammetry and Remote Sensing
- International Journal of Applied Earth Observation and Geoinformation
- International Journal of Digital Earth
- IEEE Transactions on Geoscience and Remote Sensing
- Journal of Arid Environments
- Photogrammetric Engineering and Remote Sensing (PE&RS)
- Remote Sensing of Environment
- Remote Sensing
- Sensors
- Weed Science, Weed Technology
- Wetlands

Book Reviews

- Wiley: 6th Edition of Remote Sensing and Image Interpretation by Thomas M. Lillesand, Ralph W. Kiefer, and Jonathan W. Chipman
- Oxford University Press, Remote Sensing of Vegetation, by Jones & Vaughan

Proposal Reviews

- NSF Division of Ecological & Biological Cluster
- NSF Division of Earth Sciences Instrumentation & Facilities Program
- NASA Solid Earth and Natural Hazards Program
- NASA EPSCoR – National and Statewide
- NASA Innovation in Aeronautics Instruction
- Idaho Space Grant Consortium Fellowship and Research Initiation Grants
- US Civilian Research & Development Foundation: Azerbaijan-U.S. Bilateral Grants Program and Central Asia Research Travel Grant Program
- USDA NRI Competitive Grants Program

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- USDA Cooperative State Research, Education and Extension Service Small Business Innovation Research Program (1, 2011)
- University of Missouri Research Board
- ACS Petroleum Research Fund
- Department of Defense ERDC (5, 2011)
- Bureau of Reclamation (2, 2011)

Professional Organizations

- American Geophysical Union, Member, 1999-
- American Society for Photogrammetry and Remote Sensing, Member, 1999-
- Society of Aeolian Research, 2010-
- Society of Women Engineers, Member, 1994-2000
- Tau Beta Pi, Engineering Honor Society, Member
- Association of Engineering Geologists, Member, 1994-2000
- ISU Professional Women, Member, 2000-2002, 2004
- Urban Regional Information Systems Association (URISA), Member
 - Vice-president, Northern Rockies Chapter, 2003-2004
 - President, Northern Rockies Chapter, 2004-2005

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Matthew J. Kohn

Personal Data

Address: Department of Geosciences
Boise State University
Boise, Idaho 83725
208-426-2757 mattkohn@boisestate.edu

Educational Experience

1991: Ph. D. in Geology, Rensselaer Polytechnic Institute, Troy, NY 12180
1989: M. S. in Geology, Rensselaer Polytechnic Institute, Troy, NY 12180
1986: B. S. in Geology, Massachusetts Institute of Technology, Cambridge, MA 02139

Research Interests and Expertise

Development and use of geochemical techniques to investigate paleoecology, paleoclimate, metamorphism, and orogenesis, including major elements, trace elements, stable isotopes, and radiogenic isotopes. Climatic and physiological analysis of organic phosphates. Chemical and isotopic analysis of metamorphic minerals. Stable isotope, electron microprobe, ion microprobe, and ICP-MS analysis; geochronology; thermodynamics, kinetics and phase equilibria.

Research and Teaching Positions

2011- University Distinguished Professor, Boise State University
2010- Professor, Boise State University
2007-2010 Associate Professor, Boise State University
2005-2006 Visiting Professor, sabbatical leave, Washington State University
2004-2007 Associate Professor, University of South Carolina
1998-2004 Assistant Professor, University of South Carolina
1996-98 Post-Doctoral research staff, Lawrence Livermore National Laboratory
1994-96 Research scientist, University of Wisconsin - Madison.
1995 Visiting Assistant Professor, Northern Illinois University (Fall Semester).
1991-93 NSF Post-Doctoral fellow, stable isotope geochemistry, UW-Madison.
1986-91 NSF graduate fellow, RA, TA, metamorphic petrology, RPI.
1983-86 Undergraduate researcher, sedimentology and structural geology, MIT.

Awards, Fellowships, and Honors

Undergraduate Research (MIT):

Sea Grant, 1984, 1985; Goetze Grant, 1985

Graduate Research (RPI):

GSA research grant, 1987, 1988; Sigma Xi grant, 1987; NSF graduate fellowship, 1986-1989

Professional:

NSF post-doctoral fellowship, 1991-1993
Two Thumbs Up Teaching/Service Award, 2002 (USC; multiple recipients each year)
Undergraduate Research Mentor of the Year Award, 2004 (USC; 1 recipient each year)
Fellow, Mineralogical Society of America (2007)
Fellow, Geological Society of America (2008)
University Distinguished Professor, BSU (2011; permanent designation)
Mineralogical Society of America Distinguished Lecturer (2012-2013)
Shell London Lecturer (2013)

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Proposals Funded (~\$8.5M)

Proposal title	Source/dates	Amount
PIRE: Exterra Field Institute and Research Endeavor (E-FIRE)	NSF-PIRE/OIA (lead PI) 2016-2021	\$4.02M
Field testing Raman microspectroscopic thermobarometers in garnet	NSF-Petrology and Geochemistry 2015-2017	\$147k
MRI: Acquisition of an electron probe microanalyzer for Earth Science and Materials research and education	NSF-Instrumentation and Facilities (lead PI). 2014-2016	\$987k
Collaborative research: Deciphering subduction dynamics: Case study of the Catalina Schist	NSF-Tectonics (co-PI). 2014-2016	\$42k
Collaborative research: calibrating mid-Miocene greenhouse climate and ecology in a key high southern latitude locale	NSF-Sedimentary Geology and Paleobiology (lead PI). 2014-2016	\$99k
Metamorphic and tectonic evolution of the Tethyan Himalaya, central Nepal	NSF-Tectonics. 2013-2015	\$191k
Experimental calibration of stable isotope and REE partitioning in bioapatite	NSF-Geobiology, low-Temp Geochemistry. 2013-2015	\$143k
RAPID: An unusual opportunity to track snow ablation using stable isotope evolution of the 2011-2012 snowpack near Boise, Idaho	NSF-Hydrologic Sciences. 2012-2013	\$20k
Petrologic and chronologic evaluation of Himalayan tectonic models in southern Bhutan	NSF-Tectonics. 2011-2014	\$205k
Acquisition of a stable isotope mass spectrometer for Earth science and ecological research	NSF-Instrumentation and Facilities (lead PI). 2009-2010	\$377k
Acquisition of a 213nm laser and cathodoluminescence-detector for microanalysis of zircon and other Earth materials	NSF-Instrumentation and Facilities (lead PI), 2008-2009	\$138k
Collaborative research: Testing mechanical models of Himalayan orogenesis in NW India (co-PI with D. Robinson)	NSF-Tectonics, 2008-2012	\$275k
Collaborative research: How did the grassland biome evolve in South America? (co-PI with C.A.E. Strömberg and R.H. Madden)	NSF-Paleobiology, 2008-2012	\$120k
Collaborative Research: Tectonic rates from differential garnet geochronology	NSF-Petrology & Geochem., (lead PI) 2008-2010	\$105k
Acquisition of a stable isotope ratio mass spectrometer for climate change research (co-PI with R. Thunell)	NSF-Instrumentation and Facilities, 2006-2007	\$336k
Testing paleoenvironmental models of the Cretaceous Western Interior Seaway via stable isotopes of fossil turtles and fish	PRF (American Chemical Society), 2006-2008	\$79k
Timing, conditions, and rates of thrust transport in the Nepalese Himalaya	NSF-Tectonics, 2005-2008	\$130k

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Testing Paleozoic vs. Cenozoic metamorphism in the Greater Himalaya, Nepal	NSF-Petrology & Geochem., 2005-2006	\$36k
Collaborative Research: Extensional unroofing of the central Menderes metamorphic complex, southwestern Turkey (Co-PI with E. Catlos)	NSF-Tectonics, 2005-2008	\$50k
Timing and magnitude of climate change across the Eocene-Oligocene transition, northern Great Plains, USA,	NSF – Paleoclimate, 2004-2007	\$231k
Evolution of LREE+Th distributions in minerals during prograde metamorphism	NSF-Petrology & Geochem., 2003-2005	\$88k
SGER: Fossil bone as a paleoclimate indicator	NSF – Geology and Paleontology 2003-2005	\$24k
Collaborative Research: Acadian vs. Taconian tectonism in the southern Appalachian Western Blue Ridge – Implications for models of terrane accretion.	NSF – Tectonics, (lead PI) 2003-2005	\$135k
Metamorphic evolution of the Main Central Thrust, Nepal	NSF-Petrology & Geochem., 2000-2004	\$209k
Monazite dating via the electron microprobe: a new geochronologic technique	USC, 2001-2002	\$12k
Constraints on Miocene uplift of the central Cascade Range, Oregon	NSF – Tectonics, 2000-2002,	\$136K
Mountain building and climate change	USC, 1999-2000	\$10k
Oxygen isotope compositions of fossil biogenic phosphates: climate reconstruction in East Africa. (With M. Schoeninger and J. Valley)	NSF – Archaeometry, 1996-1997	\$60k
Case study investigation of the relationships between fluid infiltration and deformation using oxygen isotope zoning in metamorphic porphyroblasts	NSF-Petrology & Geochem., 1994-1996	\$92k
Determination of the importance of fluid infiltration during regional metamorphism via modeling and measurement of oxygen isotope zonation in garnet	NSF –Postdoctoral fellowship, 1991-1993	\$70k

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Supervision of Postdoctoral Scholars.

1. Christopher Parkinson. Himalayan tectonics. 2001 – 2003
2. Jennifer Chambers. Himalayan tectonics. 2008 – 2010
3. Stacey Corrie. Himalayan tectonics. 2010 – 2013
4. Celina Suarez. Trace elements in fossils. 2011 – 2012

Supervision of Doctoral Students.

1. Alessandro Zanazzi "Paleoclimatology and paleoecology of the Eocene-Oligocene transition, central North America" PhD 2009.
2. Alan B. Coulson. "Ecologic and paleontologic utility of marine turtle bone phosphate oxygen isotopes" PhD 2009.
3. Stacey Corrie "Geochemical and geochronological constraints on the tectonothermal history of the central and eastern Nepal Himalaya." PhD 2010.
4. Amanda Drewicz "Paleoclimatic and paleoecological response of the American Southwest Desert to abrupt Pleistocene climate change." PhD 2016.
5. Robin Trayler "Geochemical partitioning of synthetic bioapatites and mid-Miocene climates of southern South America." PhD 2016.
6. Buchanan Kerswell "Geochemical applications of tourmaline to petrogenesis and Himalayan tectonics." PhD 2020.

Supervision of Masters Students.

1. Jennifer Josef "Continental paleoclimate of Southern Argentina, 38 Ma to the present" M.S., 2002.
2. Robert King "Characterization of fluid flow and metasomatism in the mantle wedge from Franciscan Complex ultramafic blocks" M.S., 2002.
3. Stacey Corrie "Age of metamorphism and tectonic evolution of the Western Blue Ridge, Great Smoky Mountains, NC." M.S., 2005
4. Jessica Sousa "Measuring the rate of garnet growth: implications for Rb-Sr garnet geochronology" M.S. 2011.
5. Andrea Wolfowicz "Ti-in-quartz temperatures of mylonitic orthogneiss, Scandinavian Caledonides" M.S. 2012.
6. Jesse Walters "Metamorphic evolution of the Tethyan Himalayan Sequence, Annapurna region, central Nepal." M.S. 2016.

Supervision of Undergraduate Senior Theses.

1. Jennifer Miselis "Oxygen isotope record of Cascade Range uplift" 2001.
2. Stacey Russo "Paleoclimate record of Plio-Pleistocene Idaho from oxygen isotope compositions of fossil teeth" 2002.
3. Cari Fuller "Ultra-High Pressure metamorphism in Brazil" 2003.

Supervision of Undergraduate Research (Underlined name = research resulted in student co-authored journal publication).

1. L. Childs Cantey. 1999-1999. "Electron microprobe characterization of South Carolina eclogites". B.S., 2000
2. Jennifer Miselis. 1999–2001. "Paleoclimate evolution of central Oregon as a monitor of Cascade Range uplift". B.S., 2001
3. Stacia Russo. 2001–2002. "Oxygen Isotopes of teeth". B.S., 2002
4. Margaret Malloy. 2001–2002. "Electron microprobe dating of metamorphic monazite, Great Smoky Mountains, NC". B.S. 2002.

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5. Cari Fuller. 2002–2003. “UHP metamorphism in Brazil.” B.S. 2003.
6. J. McIver Law. 2001–2003. “Oxygen isotopic and climatic history of central Oregon and western Idaho during the last 5 million years.” B.S. 2003.
7. Lauren Byrne. 2001–2002. “Oxygen isotopes of teeth, and carbon isotopes of plant phytoliths”.
8. Kim Davis. 2002–2003. “Stable isotope composition of fossil bone vs. paleosol carbonate – use for paleoclimate studies”. B.S. 2004
9. Moriah McKay. 2003–2005. “Carbon isotope compositions of Pleistocene fauna, South Carolina”. B.S. 2005
10. Michael Grigsby. 2009–2009. “Stable isotope compositions of modern herbivore, omnivore, and carnivore teeth from Idaho.” B.S. 2009
11. Michelle Gordon. 2009–2010. “Stable isotope compositions of fossil teeth from southern Argentina. B.S. 2011.
12. Jennifer Morris. 2010–2011. “Trace elements in modern teeth from Idaho” B.S., 2011
13. Alma Palacios. 2011–2012. “Stable isotope paleoecology of the mid-Pliocene, Hagerman Fossil Beds National Monument, Idaho” B.S. 2015.
14. Joey Dean. 2011–2012. “Oxygen and hydrogen isotope systematics in grasshoppers” B.S. 2012.
15. Christopher Markley. 2011–2012 “Zr and zircon systematics in eclogites” B.S. 2012.
16. Eliza Schulz. 2012–2013 “Stable isotope systematics of grasshoppers” B.S. 2013.
17. Remington Brooks. 2013. “Calibration of keratin stable isotope analysis.” B.S. 2013
18. Jean Carlos Ferreira (Brazilian exchange student). 2015. “Thermometry and geochronology of Santa Catalina subduction zone rocks.” B.S. 2016
19. Tainah Pinto dos Santos (Brazilian exchange student). 2015. “Thermometry and geochronology of Himalayan metacarbonates, central Bhutan.” B.S. 2016

Other Research Supervision.

Mark Wieland. Electron microprobe analyst, 2002 – 2003.
J. McIver Law. Stable isotope analyst, 2003 – 2005.
Emily Hinz. PhD candidate, geophysics. Trace elements in teeth, 2008-2009.
Shannon Murray. PhD candidate, geophysics. Trace elements in wood, 2009-2010.
Erika Akin. Stable isotope analyst, 2009 – 2010.
Dr. Celina Suarez. Trace element analyst, 2010-2011.
Eliza Schulz. Stable isotope analyst, 2014.

Professional Memberships (current only)

American Association for the Advancement of Science (AAAS)
American Geophysical Union (AGU)
Geochemical Society (GS)
Geological Society of America (GSA)
Mineralogical Society of America (MSA)
Society for Advancement of Chicanos and Native Americans in Science (SACNAS)
Society of Vertebrate Paleontology (SVP)

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Classes Taught

Geology of the National Parks (non-majors)
Introduction to geology (Physical Geology; non-majors)
Introductory mineralogy (undergraduate majors)
Rocks and minerals/Earth materials (undergraduate majors)
Evolution of mountain belts (undergraduate majors)
Field Geology (undergraduate majors)
Igneous and metamorphic petrology (undergraduate- and graduate-level)
Stable isotope geochemistry (undergraduate- and graduate-level)
Radiogenic isotope geochemistry (undergraduate- and graduate-level)
Paleoclimatology and Paleooceanography (graduate-level)
Methods in stable isotope geochemistry (graduate-level)
Analytical methods (graduate-level)
Southern Appalachian tectonics (graduate-level)
Scandinavian Caledonides tectonics (graduate-level)

Field Work

North America:

New England Appalachians (1986-1995, 1998)
Grenville Province, Central Ontario, Adirondacks (1992, 1995)
Death Valley (1993)
Northern New Mexico (1995)
Northern California (1998, 1999, 2013)
Southern Appalachians (1999-2005)
Central and southeastern Oregon (2000-2005)
Southern Colorado, northern New Mexico (field camp; 2004-2008)
Northwest Nebraska and East Central Wyoming (2005-2006)
Santa Catalina Island, California (2013, 2014)

Asia:

Central Nepal (1997, 2001, 2014)
Western Turkey (2006)
NW India (2007, 2009)
Bhutan (2008, 2011)

South America:

Southern Chile (1987)
Southern Argentina (2009, 2010, 2012, 2015)

Europe:

Swiss, Austrian and Italian Alps (1993, 2009)
Northern Norway (2010)

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Service (external):

Member, MSA Centennial Committee (2015-)
Councilor (elected), Mineralogical Society of America (2015-2017)
Member, Proposal Review Panel, NSF (2015-2016)
Chair, MSA Shortcourse Committee (2014-)
Member, Shortcourse Committee, MSA (2012-)
Chair, GSA Mineralogy-Geochemistry-Petrology-Volcanology Award committee (2013-2015)
Member, GSA Mineralogy-Geochemistry-Petrology-Volcanology Award committee (2012-2015)
Member, Development Committee, SVP (2005-)
Secretary (elected), Volcanology-Geochemistry-Petrology section, AGU (2010-2012)
Member, Executive Committee, VGP section, AGU (2010-2012)
AE: Geological Society of America Bulletin (2001-2010)
Member, Proposal Review Panel, NSF (2007-2009)
Member, Bowen Award Committee, VGP, AGU (2004-2006)
AE: Journal of Geophysical Research (1998-2001)
Member, Proposal Review Panel, IGPP-LLNL (1998)

Reviewer For:

National Science Foundation:
 Anthropology
 Continental Dynamics
 Instrumentation and Facilities
 Major Research Instrumentation
 Petrology & Geochemistry
 Post-doctoral Fellows
 Sedimentary Geology and Paleobiology
 Tectonics
German National Science Foundation
Graduate Women in Science
IGPP-LLNL
Petroleum Research Fund
Swiss National Science Foundation

American Journal of Physical Anthropology
American Journal of Science
American Mineralogist
Canadian Mineralogist
Chemical Geology
Contributions to Mineralogy and Petrology
Current Anthropology
Earth and Planetary Science Letters
Geochimica et Cosmochimica Acta
Geological Society of America Bulletin
Geology
Geosphere
Journal of Archaeological Science

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Journal of Biogeography
Journal of Ecology
Journal of Geology
Journal of the Geological Society
Journal of Geophysical Research
Journal of Metamorphic Geology
Journal of Petrology
Journal of South American Earth Sciences
Nature
Oecologia
Palaeogeography, Palaeoclimatology, Palaeoecology
Palaios
Paleobiology
PLoS One
Proceedings of the Idaho Academy of Science
Quaternary Science Reviews
Science

Service (internal – college, university, or administrative positions only):

Member, BSU Distinguished Professor Award Committee (2011-)
Member, BSU Honorary Doctorate Committee (2010-)
Member, BSU Employee Campaign Committee (2009-2011)
Member, BSU Interdisciplinary Studies Committee (2008-)
Member, BSU College of Arts & Sciences Awards and Honors Committee (2009-2011)
Member, USC Electron Microscopy Center Advisory Committee (2000-2006)
Chair, Ethics Committee, Geological Sciences, USC (1999 – 2006)
Director, Undergraduate Studies, Geological Sciences, USC (2004-2005)

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Publications

Books: 2 books edited

Kohn, MJ (2007) Paleoaltimetry: geochemical and thermodynamic approaches. Reviews in Mineralogy and Geochemistry, v. **66**, Mineralogical Society of America and Geochemical Society, Washington D.C.

Kohn, MJ, Rakovan, J, and Hughes, J, eds. (2002) Phosphates: Geochemical, Geobiological and Materials Importance. Reviews in Mineralogy and Geochemistry, v. **48**, Mineralogical Society of America and Geochemical Society, Washington, D.C.

Articles: 105 peer-reviewed papers published or in press; c. 10 papers in review/prep. After 1991, double underlined names are undergraduate students; underlined names are graduate students; † = ≥100 citations; †† = ≥250 citations (ISI basis)
ISI stats: >5500 citations, h = 41; Google stats: >7000 citations, h=48

Review Cuitiño, JI, Fernicola, JC, **Kohn, MJ**, Trayler, RB, Naipauer, M, Bargo, MS, Kay, RF and Vizcaíno, SF. U-Pb geochronology of the Santa Cruz Formation at the Santa Cruz and Bote rivers (southernmost Patagonia, Argentina) and implications for fossil vertebrate communities. Journal of South American Earth Sciences, in review.

Mandal, S, Robinson, DM, **Kohn, MJ**, Khanal, S, Das, O, and Bose, S. Zircon U-Pb ages and Hf isotopes of the Askot klippe, Kumaun, northwest India: Implications for Paleoproterozoic tectonics, basin evolution and associated metallogeny of the northern Indian cratonic margin. Tectonics. In review.

Kohn, MJ. Carbon isotope discrimination in C3 land plants is independent of atmospheric pCO₂. Geochemical Perspectives Letters, in review.

2016 (105) **Kohn, MJ** (2016) Metamorphic chronology – a tool for all ages: Past achievements and future prospects. American Mineralogist, in press.

(104) Wolfowicz, A, **Kohn, MJ**, Northrup, CJ (2016). Thermal structure of shear zones from Ti-in-quartz thermometry of mylonites: Methods and examples from the basal shear zone, northern Scandinavian Caledonides. In: Ductile Shear Zones: from Micro- to Macro-scales. S. Mukherjee and K. Mulchrone, eds. Wiley-Blackwell. In press.

2015 (103) Eagle, RA, Enriquez, M, Grellet-Tinner, G, Pérez-Huerta, A, Hu, D, Tütken, T, Montanari, S, Loyd, SJ, Ramirez, P, Tripathi, AK, **Kohn, MJ**, Cerling, TE, Chiappe, LM, Eiler, JM (2015) Isotopic ordering in eggshells reflects body temperatures and suggests differing thermophysiology in two Cretaceous dinosaurs. Nature Communications, DOI:10.1038/ncomms9296.

(102) Penniston-Dorland, SC, **Kohn, MJ**, and Manning, CE. The global range of subduction zone thermal structures from exhumed blueschists and eclogites: Rocks are hotter than models. Earth and Planetary Science Letters, **428**, 243-254.

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- (101) Selkin, PA, Boyle, J, Carlini, AA, Davies-Vollum, KS, Dunn, R, **Kohn, MJ**, Madden, RH, Strömberg, CAE (2015). Climate, dust, and fire across the Eocene-Oligocene transition, Patagonia. *Geology*, **43**, 567-570.
- (100) **Kohn, MJ**, Strömberg, CAE, Madden, RH, Dunn, RE, Evans, S, Palacios, A, and Carlini, AA (2015) Quasi-static Eocene-Oligocene climate in Patagonia promotes slow faunal evolution and mid-Cenozoic cooling. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **435**, 24-37.
- (99) Khanal, S, Robinson, DM, **Kohn, MJ** and Mandal, S (2015) Evidence for a far traveled thrust sheet in the Greater Himalayan thrust system, and an alternative model to building the Himalaya. *Tectonics*, **34**, 31-52.
- (98) **Kohn, MJ**, Corrie, SL, and Markley, C (2015) The fall and rise of metamorphic zircon. *American Mineralogist*, **100**, 897-908. [**A most-read article**]
- (97) Zanazzi, A, Judd, E, Fletcher, A, Bryant, H, and **Kohn, MJ** (2015) Eocene-Oligocene latitudinal climate gradients in North America inferred from stable isotope ratios in perissodactyl tooth enamel. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **417**, 561-568.
- (96) Dunn, RE, Strömberg, CAE, Madden, RH, **Kohn, MJ**, Carlini, AA (2015) Canopy, climate and faunal change in the Cenozoic of Patagonia. *Science*, **347**, 258-261.
- 2014** (95) Suarez, CA, Gonzalez, LA, Ludvigson, GA, Kirkland, JI, Cifelli, RL, and **Kohn, MJ** (2015) Multi-taxa isotopic investigation of paleohydrology in the Lower Cretaceous Cedar Mountain Formation, eastern Utah, U.S.A.: Deciphering effects of the Nevadaplano Plateau on regional climate. *Journal of Sedimentary Research*, **84**, 975-987.
- (94) **Kohn, MJ**. (2014) "Thermobarometry": calibration of spectroscopic barometers and thermometers for mineral inclusions. *Earth and Planetary Science Letters*, **388**, 187-196.
- (93) **Kohn, MJ** (2014) Himalayan metamorphism and its tectonic implications. *Annual Review of Earth and Planetary Sciences*, **42**, 381-419.
- (92) Vucetich, MG, Pérez, ME, Ciancio, MR, Carlini, AA, Madden, RH and **Kohn, MJ** (2014) A new acaremyid rodent (Caviomorpha, Octodontoidea) from Scarritt Pocket, Deseadan (late Oligocene) of Patagonia (Argentina). *Journal of Vertebrate Paleontology*, **34**, 689-698.
- 2013** (91) Caddick, MJ and **Kohn, MJ** (2013) Garnet: witness to the evolution of destructive plate boundaries. *Elements*, **9**, 427-432.
- (90) Strömberg, CAE, Dunn, RE, Madden, RH, **Kohn, MJ** and Carlini, AA (2013). Decoupling the spread of grasslands from the evolution of grazer-type herbivores in South America. *Nature Communications*, DOI:10.1038/ncomms2508.
- (89) Sousa, J, **Kohn, MJ**, Schmitz, MD, Northrup, CJ, and Spear, FS (2013). Strontium isotope zoning in garnets: implications for matrix equilibration, geochronology, and phase equilibrium modeling. *Journal of Metamorphic Geology*, **31**, 437-452.

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FEBRUARY 18, 2016**

- (88) **Kohn, MJ** and Moses, RJ (2013). Trace element diffusivities in bone rule out simple diffusive uptake during fossilization but explain *in vivo* uptake and release. *Proceedings of the National Academy of Science*, **110**, 419-424.
- (87) **Kohn, MJ**, Morris, J and Olin, P. (2013) Trace element concentrations in teeth – a modern Idaho baseline with implications for archeometry, forensics and palaeontology. *Journal of Archaeological Science*, **40**, 1689-1699.
- (86) **Kohn, MJ** (2013) Geochemical zoning in metamorphic minerals. In: *Treatise on Geochemistry*, v. 3: The Crust (R. Rudnick, ed.). Elsevier, 2nd edition. 249-280.
- (85) Dunn, RE, Madden, RH, **Kohn, MJ**, Schmitz, MD, Strömberg, CAE, Carlini, AA, Crowley, J and Ré, GH (2013). A new chronology for middle Eocene–early Miocene South American Land Mammal Ages. *GSA Bulletin*, **125**, 539-555.
- 2012** (84) Corrie, SL, **Kohn, MJ**, McQuarrie, N and Long, SP (2012). Flattening the Bhutan Himalaya. *Earth and Planetary Science Letters*, **349-350**, 67-74.
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54. **Kohn, MJ**, Evans, SL, Dean, J, Nufio, C (2012) B51G-0647. Stable isotope systematics in grasshopper assemblages along an elevation gradient, Colorado. AGU annual meeting, San Francisco
53. Corrie, SL, **Kohn, MJ**, Markley, C (2012) V33C-2881. Zirconium partitioning in metamorphic minerals and growth of metamorphic zircon. AGU annual meeting, San Francisco
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45. Markley, C, **Kohn, MJ**, Corrie, SL (2012) Zirconium partitioning in mafic rocks as a tool for interpreting zircon geochronology. BSU Undergraduate research symposium
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1. Menard, T, Spear, FS, and **Kohn, MJ** (1989) Metamorphic evolution of the Strafford Dome, east-central Vermont, **21**, 32.

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EDUCATION

- Ph.D. **University of New Mexico:** Albuquerque, New Mexico. Fall 2004. Research and Teaching Assistant, Dept. of Earth and Planetary Sciences. Dissertation: Forest Fires, Holocene Climate Change, and Geomorphic Response: South Fork Payette River, Idaho. GPA 4.0
- M.A. **University of Oregon:** Eugene, Oregon. May 2000. Research Assistant and Graduate Teaching Fellow, Dept. of Geography. Thesis: The Effects of Dredge Mining on Channel Adjustment: Granite Creek, Eastern Oregon. GPA 4.04
- B.A. **The Colorado College:** Colorado Springs, Colorado. May 1995. Dept. of Geology, emphasis in Environmental Geology. Honors Thesis: A Classification and Mineralogical Description of Ferricrete Samples in the New World Mining District of Montana. GPA 3.6

PEER REVIEWED PUBLICATIONS

* (denotes graduate student author)

** (denotes undergraduate student author)

- Pelletier, J.D., A.B. Murray, J.L. Pierce, P.R. Bierman, D.D. Breshears, B.T. Crosby, M. Ellis, E. Foufoula-Georgiou, A.M. Heimsath, C. Houser, N. Lancaster, M. Marani, D.J. Merritts, L.J. Moore, J.L. Pederson, M.J. Poulos, T.M. Rittenour, J.C. Rowland, P. Ruggiero, D.J. Ward, K.X. Whipple, A.D. Wickert, and E.M. Yager, 2015, Forecasting the response of Earth's surface to future climatic and land-use changes: A review of methods and research needs. *Earth's Future*.
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- Weppner, K.*, **Pierce, J.L.**, Betancourt, J.L., 2013, Holocene Fire Occurrence and Alluvial Responses at the Leading Edge of Pinyon-Juniper Migration in the Northern Great Basin, *Quaternary Research*. V. 80, pp. 143-157.
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- Power MJ, Marlon J, Ortiz N, Bartlein PJ, . . . **Pierce J**, 2008, Changes in fire regime since the Last Glacial Maximum: an assessment based on a global synthesis and analysis of charcoal data. *Climate Dynamics*, 30:887–907.
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- Pierce, J.L.**, Meyer, G.A., and Jull A.J.T., 2004, Fire-induced erosion and millennial-scale climate change in northern ponderosa pine forests: *Nature*, v. 432, p. 87-90.
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OTHER PUBLICATIONS

- Pierce, J.L.**, 2004, Holocene fire regimes and geomorphic response in conifer forests of the northwestern United States: Evidence of millennial-scale climate change: Dissertation, University of New Mexico, 242 pp
- Pierce, J.L.**, 2000, The effects of dredge mining on channel adjustment: Granite Creek, Eastern Oregon: Thesis (M.A.), University of Oregon, 175 pp.

ABSTRACTS AND PRESENTATIONS

- Pierce, J.L.**, Meyer, G., Bigio E., Nelson, N., Poulos, M., Jenkins, S., Weppner K., Riley, K., Fitch, E., Frechette, J., 2015, Who is in the driver's seat? Millennial-scale records of wildfire in the western USA reveal a complex interplay of climate, fire, and vegetation, 2015, AGU Fall Meeting, San Francisco, Dec 14-18. B11N-05.

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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- Will, R., Glenn, N., Benner, S., **Pierce, J.L.**, Spaete, L., Li, A., 2015, Mapping SOC (Soil Organic Carbon) using LiDAR-derived vegetation indices in a random forest regression model, AGU Fall Meeting, San Francisco, Dec 14-18. B43I-0666
- Stanbery, C., Will, R., Benner, S., . . **Pierce, J.L.**, 2015, Soil Inorganic Carbon Thresholds and Formation: What are the Controls in a Transitional, Semi-Arid Watershed? AGU Fall Meeting, San Francisco, Dec 14-18. H21C-1380.
- Poulos, M.J., **Pierce, J.L.**, McNamara, J.P., Flores, A.N., Benner, S.G., 2015, Systematic Mapping and Statistical Analyses of Valley Landform and Vegetation Asymmetries Across Hydroclimatic Gradients, AGU Fall Meeting, San Francisco, Dec 14-18, H11C-1363.
- Pierce, J.L.**, Meyer, G., Bigio E., Nelson, N., Poulos, M., Jenkins, S., Weppner K. Riley, K., Fitch, E., Frechette, J., 2015A synthesis of alluvial records of wildfire in the western USA: a complex interplay of climate and vegetation, Geological Society of America Meeting, Baltimore, MD, Nov. 1-4.
- Gibble, K., **Pierce, J.L.**, Lindquist, E., 2015, Models and mechanisms of post-fire erosional response in rangelands: a case study from the Boise foothills, Geological Society of America Meeting, Baltimore, MD, Nov. 1-4.
- Gibble, K., **Pierce, J.L.**, Lindquist, E., 2015, Post-fire debris flow prediction models and decision making at the wildland urban interface of Boise, Idaho, Geological Society of America Meeting, Baltimore, MD, Nov. 1-4.
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- Hummer, P.J.** , **Pierce, J.L.**, and Benner, S.G., 2013, Dust in the Wind: Modern and Ancient Dust Compositions, AGU Fall Meeting, San Francisco, Dec. 9-13. PP11B-1827.
- Murray, E.M.,* Cobourn, K., Flores, A.N., **Pierce, J.L.**, Kunkel, M.L., 2013, The Impact of Changing Snowmelt Timing on Non-Irrigated Crop Yield in Idaho, AGU Fall Meeting, San Francisco, Dec. 9-13 GC13B-1063.
- Duffin, J.** , Lindquist, E., **Pierce, J.L.**, Wuerzer, T. Lawless, B., McCoy, J., 2013, Modern Approaches to Wildfire Mitigation by Air and by Ground: An Interdisciplinary Perspective AGU Fall Meeting, San Francisco, Dec. 9-13, V23B-2825.
- Lindquist, E., **Pierce, J.L.**, 2013, Climate change impacts on urban wildfire and flooding policy in Idaho: a comparative policy network perspective AGU Fall Meeting, San Francisco, Dec. 9-13, NH51B-1614.
- Poulos, M.J., **Pierce, J.L.**, McNamara, J.P., Flores, A.N., Benner, S.G., 2013, A Multi-Scale Assessment of How Topoclimate-Driven Ecohydrologic Feedbacks Impact Drainage Erosion, Incision and Expansion AGU Fall Meeting, San Francisco, Dec. 9-13, EP53B-0794.
- Pierce, J.L.**, Riley, K.E., Weppner, K.N. and Betancourt, J.L., 2013, The arrival and influence of fire-prone pines in Idaho: a tale of two ecosystems, GSA Fall Meeting, Denver Colorado, Oct. 27-30.
- Guillinger, J.** , and **Pierce, J.L.**, 2013, Quantifying and extrapolating soil inorganic carbon across soils of the western Snake River Plain, Idaho, using pressurized calcimetry, GSA Fall Meeting, Denver Colorado, Oct. 27-30.
- Pierce, J.L.**, and Riley, K.E., 2012, Wildfires and debris flows: substantial contributors to millennial-scale basin-wide sediment yields in the Salmon River, Idaho, GSA Annual Meeting, Charlotte, N.C., Nov. 4-7.
- Pierce, J.L.**, Weppner, K., and Riley, K.E., Northern rocky mountain wildfires and debris flows: millennial-scale interactions among climate, fire, vegetation, and geomorphic response, 2012 (INVITED). GC22C-01. AGU Fall Meeting, San Francisco Dec. 3-7.
- Weppner, K.N.* , **Pierce, J.L.**, and Betancourt, J.L., 2012, Climate drivers and landscape response: Holocene fire, vegetation and erosion at City of Rocks National Reserve, Idaho. Northwest Scientific Association, annual meeting, Boise Idaho, March 28-31, 2012.

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

- Micheletty, P.D.** , Goode, J., **Pierce, J.L.**, and Buffington, J.M., 2011, Comparison of reach-scale morphologic adjustment in confined and unconfined alluvial mountain rivers, Olympic Peninsula, Washington, EP21C-0717, AGU Fall Meeting, San Francisco, CA, Dec. 5-9
- Riley, K.E.* , **Pierce, J.L.**, Hopkins, A.J.,** and Wright, G.B., 2011, Wildfires, debris flows, and climate: Using modern and ancient deposits to reconstruct Holocene sediment yields in central Idaho, EP21D-07. AGU Fall Meeting, San Francisco, CA, Dec. 5-9
- Austreng, A.C.,* Olin, P.H., Hummer, A.,** **Pierce, J.L.**, deGraaff. M., Benner, S.G., 2011 Carbon Sequestration in Semi-arid Ecosystems: Potential Benefits of Sagebrush Restoration B23F-08. AGU Fall Meeting, San Francisco, CA, Dec. 5-9
- Poulos, M.J.* , **Pierce, J.L.**, Flores, A.N., Benner, S.G., McNamara, J.P., 2011, Valley Asymmetry and Topoclimate-Driven Feedbacks among Hillslope Hydrology, Soil Development, Vegetation, and Erosion EP31A-0793. AGU Fall Meeting, San Francisco, CA, Dec. 5-9
- Weppner, K.* , **Pierce, J.L.**, Betancourt, J.L., 2011, Holocene vegetation, fire and erosional history of City of Rocks National Reserve, South-Central Idaho EP31A-0801. AGU Fall Meeting, San Francisco, CA, Dec. 5-9
- Pierce, J.L., Riley, K.E., Kenworthy, M., Poulos, M.J., Weppner, K., Nelson, N., Svenson, L., 2011, What climate conditions enhance hillslope erosion in semi-arid regions? EP51C-06. AGU Fall Meeting, San Francisco, CA, Dec. 5-9
- Kenworthy, M.K.* , Rittenour, T., Pierce, J.L., 2011, OSL dating without sand lenses: Late Pleistocene alluvial fan aggradation in the Lost River Range, Idaho, EP51C-05. AGU Fall Meeting, San Francisco, CA, Dec. 5-9
- Riley, K.E.* , and **Pierce, J.L.**, 2011, Debris flows vs. sheetfloods: How fire, vegetation and climate control erosional response in small steep basins, T-67, GSA Annual Meeting, Minneapolis MN, Oct. 9-12.
- Riley, K.E.* , and **Pierce, J.L.**, 2011, The role of Holocene climate change and fire-related debris flows on long-term (103-104) sediment yields in the Middle Fork Salmon River Watershed, central Idaho, 12-4, GSA Rocky Mountain and Cordilleran Joint Meeting, Logan UT, May 18–20.
- Poulos, M.J.* , Flores, A.N., Benner, S.G., **Pierce, J.L.**, 2011, Valley asymmetry maps for the American cordillera reveal patterns suggestive of tectonic, lithologic, climatic and fluvial drivers, 12-1, GSA Rocky Mountain and Cordilleran Joint Meeting, Logan UT, May 18–20.
- J. M. Davis, C. V. Baxter, B. T. Crosby, **J. L. Pierce**, and E. J. Rosi-Marshall, 2010, Do indirect effects of global climate change on forest, fire, and flow dynamics mediate responses of stream-riparian ecosystems? American Society of Limnology and Oceanography and the North American Benthological Society. Joint Meeting June 6-10, 2010, Santa Fe, New Mexico, USA.
- Weppner, K.N.* , **Pierce, J.L.**, and Betancourt, J.L., 2010, Holocene climate, wildfire and vegetation in a forest-steppe ecotone at the City of Rocks National Reserve, Idaho, Geological Society of America Abstracts with Programs, Vol. 42, No. 5, p. 417.

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FEBRUARY 18, 2016**

- Riley, K.* , **Pierce, J.L.**, 2010, Fire frequency and fire-related deposition during the Holocene: a study of alluvial fans in the middle fork salmon river watershed, Idaho, Geological Society of America Abstracts with Programs, Vol. 42, No. 5, p. 417.
- Sutfin, N.** , **Pierce, J.L.**, Sharp, W., 2010, Estimating the age of terminal fluvial deposition on Quaternary fans of the Lost River Basin, Northern Rocky Mountains, USA, Geological Society of America Abstracts with Programs.
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- Riley, K.E.* , **Pierce, J.L.**, and Hopkins, A.** , 2010, The role of episodic fire-related debris flows on long-term (103-104) sediment yields in the Middle Fork Salmon River Watershed, in central Idaho, EP33C-0785, presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
- Kenworthy, M.K.* , **Pierce, J.L.**, Rittenour, T., Sharp, W, Pierce, K.L, 2009, Quaternary climate change and hillslope processes: What can we learn from alluvial fans? Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract : EP41C-0615.
- Kunkel, M., and Pierce, J.L, 2009, The influence of PDO and ONI on the timing of snowmelt in Idaho, Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract : U13B-0057.
- Pierce, J.L, Baxter, C., Yager, E M, Fremier, A., Crosby, B T, Smith, A M, Kennedy, B., Hicke, J A., Feris, K., 2009, Forests, fire, floods and fish: nonlinear biophysical responses to changing climate, Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract : U13B-0074
- Poulos, M J., Pierce, J L, Flores, A N, Benner, S G, Smith, T J, McNamara, J P , 2009, Aspect-Driven Changes in Slope Stability Due to Ecohydrologic Feedbacks, Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract : EP53D-0640
- Pierce, J. L.**, Meyer, G.A., Nelson, N.A, Svenson, L., Riley, 2009, How does Holocene climate change drive wildfires, sediment delivery from hillslopes, and main channel response? Geological Society of America Abstracts with Programs, Vol. 41, No. 7, p. 40. (*invited*)
- Pierce, J. L.**, Meyer, G.A., and Rittenour, T, 2009, Terrace records of Holocene incision, aggradation, and relationships between hillslope erosion and main channel processes in central Idaho, Geological Society of America Abstracts with Programs, Vol. 41, No. 7, p. 227
- Kenworthy, M.K.* , **Pierce, J.L.**, Rittenour, T., 2009, Climate, sediment supply, and stream power: episodes of enhanced deposition on alluvial fans of the Lost River Range, Idaho, Geological Society of America Abstracts with Programs, Vol. 41, No. 7, p. 227.
- Poulos, M J., Pierce, J L, Flores, A N, Benner, S G, Smith, T J, McNamara, J P , 2009, Microclimate Controls on Slope Angles in the Idaho Batholith, AGU Chapman Conference: Examining Ecohydrological Feedbacks of Landscape Change Along Elevation Gradients in Semiarid Regions Boise and Sun Valley, Idaho USA 4–8 October 2009.

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FEBRUARY 18, 2016**

- Svenson, L.,* **Pierce, J.L.**, Wilkins, D., and Whitman, J., 2009, Fire and climate in a lodgepole-pine forest in central Idaho: annual, interannual, centennial, and millennial perspectives, Association of American Geographers Abstracts, March 22-27, Las Vegas, USA.
- Pierce, J.L.**, Meyer, G. A., Rittenour, T., 2008, Main Channel Response to Holocene Climate Change and Hillslope Sedimentation, Geological Society of America Abstracts with Programs, ISSN 0016-7592 - Vol. 40, no. 6.
- Poulos, M.J.** , **Pierce, J.L.**, Pierce, K.L, 2008, Drainage Basin Influences on Alluvial Fan Processes in the Lost River Range, Idaho, Geological Society of America Abstracts with Programs, ISSN 0016-7592 - Vol. 40, no. 6.
- Meyer, G.A., **Pierce, J.L.**, Frechette, J.D., New, J. Nelson, N.A., Persico, L., 2008, Medieval-Period Droughts, Fires, Floods and Geomorphic Change In Interior Western USA Mountains, Geological Society of America Abstracts with Programs, ISSN 0016-7592 - Vol. 40, no. 6.
- Kenworthy, M.K.* , Rittenour, T., **Pierce, J.L.**, 2008, Using OSL to Assess the Role of Climate and Glaciation in Sediment Delivery to Alluvial Fans of the Lost River Range, Idaho Geological Society of America Abstracts with Programs, ISSN 0016-7592 - Vol. 40, no. 6, 150-2.
- McVeigh, B.E.,** **Pierce, J.L.**, Pierce, K.L., Sharp, W.D., 2008, Mapping of the Bull Lake and Pinedale Glaciations in the Lost River Range, Idaho, Based on Carbonate Coat Thicknesses of Geomorphic Features Geological Society of America Abstracts with Programs, ISSN 0016-7592 - Vol. 40, no. 6, 150-3.
- Sutfin, N.A.** , **Pierce, J.L.**, Sharp, W., Pierce, K.L, 2008, Using the Thickness of Pedogenic Carbonate Coatings as a Proxy for Ages of Alluvial Fan Abandonment in the Lost River Range of Eastern Idaho, Geological Society of America Abstracts with Programs, ISSN 0016-7592 - Vol. 40, no. 6, 150-4.
- Kunkel, M.A.,* **Pierce, J.L.**, 2008, Reconstructing Snowmelt in Idaho's Watershed Using Historic Streamflow Records: Methods and Applications, Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract C21A-0492.
- Weigel, A.B.* Pierson, F.B., Kormos, P.R., Williams, C. J., **Pierce J.L.**, 2008, Soil Water Repellency and Groundcover Effects on Infiltration in Response to Prescribed Burning of Steeply-Sloped Sagebrush Hillslopes. Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract H33D-1036.
- Pierce, J.L.**, Rittenour, T., Meyer, G.A., 2008, (INVITED) Relationships between main channel incision and increased sediment yields following forest fires: is climate the driver? Geological Society of America, sectional meeting, Las Vegas, NV.
- Kunkel, M.A.* , **Pierce, J.L.**, 2008, Snowmelt, Summer Drought and Fire: Using Stream Gage Data to Extend Snowmelt Records in Fire Prone Areas of Idaho's Watershed, *Western Snow Conference*, April 15-17, Hood River, Oregon
- Pierce, J.L.**, Meyer, G.A., 2008, (INVITED) Modern and Long-term Records of Climate Change and Forest Fires in the Western U.S., American Society of Environmental History National Annual Conference, Boise, Idaho.

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- Pierce, J. L.**, Phillips, R. J., Rittenour, T., Sharp, W. D., Pierce, K. L., 2007, What climatic factors control intervals of deposition and stability on alluvial fans? *Geological Society of America Abstracts with Programs*, Vol. 39, No. 6, P. 261.
- Meyer, G, Frechette, J. D., New, J. K., **Pierce, J. L.**, 2007, Fire, climate, and fans. *Geological Society of America Abstracts with Programs*, Vol. 39, No. 6, p. 259.
- Nelson, N.A.,* **Pierce, J.L.**, 2007, Alluvial fan records of fire and geomorphic response in rangeland ecosystems. *Geological Society of America Abstracts with Programs*, Vol. 39, No. 6, p. 259.
- Kunkel, M.A.,* **Pierce, J.L.**, 2007, Snowmelt, Summer Drought and Fires: Using Stream Gage Data to Extend Snowmelt Records in Fire-prone Areas of Central Idaho. *Eos Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract C33A-03.
- Phillips, R. J., **Pierce, J.L.**, Sharp, W.A, and Pierce, K.L., 2006, Climatic and Tectonic Controls on Alluvial Fan Evolution: The Lost River Range, Idaho, American Geophysical Union Abstracts with Programs.
- Kunkel, M.A.,* and **Pierce, J. L.**, 2006, The Influence of ENSO and PDO on Idaho's Snowpack, American Geophysical Union Abstracts with Programs.
- Nelson, N.A.,* and **Pierce, J. L.**, 2006, Spatial Patterns of Post-Fire Soil Water Repellency in Rangelands, American Geophysical Union Abstracts with Programs.
- Pierce, J.L.**, and Meyer, G.A., 2006, Late Holocene records of fire in alluvial fan sediments: fire-climate relationships and implications for management of rocky mountain forests,
- Meyer, G. A. **Pierce, J. L.**, New, J., and Frechette, J., 2006, episodic erosion forced by fire and climate in the Western United States, Geological Society of America Abstracts with Programs.
- Pierce, J.L.**, and Meyer, G.A., 2006, Holocene Fire Regimes and Geomorphic Response in Conifer Forests of the Northwestern United States: Evidence of Millennial-Scale Climate Change, International Quaternary Association Abstracts with Programs, XIX AMQUA Biennial Meeting August 18-20.
- Pierce, J.L.**, and Meyer, G.A., 2006, Droughts, forest fires, and erosion in the Northern U.S.A. Rockies during the last two millennia, Pacific Climate of North America, Twenty-Second Pacific Climate Workshop, 26-29 March.
- Pierce, J.L.**, and Rittenour, T., 2005, Terrace records of Quaternary incision and relationships between hillslope erosion and main channel processes in Central Idaho, American Geophysical Union Abstracts with Programs.
- Pierce, J.L.**, and Meyer, G.A., 2005, Drought, forest fires, and debris flows: modern and 800-1000 cal yr BP, Geological Society of America Abstracts with Programs, Vol. 37, No. 7, p. 464.
- Pierce, J.L.**, 2005, Climate-driven variations in Holocene fire regimes and geomorphic response in central Idaho, Association of American Geographers Meeting, Denver, April 5-9.
- Pierce, J.L.**, and Meyer, G.A., 2005, Alluvial fan records of climate-driven variability in Holocene fire regimes in ponderosa pine forests of central Idaho, Fire History and Climate Synthesis in the Western United States, Workshop Flagstaff Arizona, May 1-3.

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- Pierce, J.L.,** and Meyer, G.A., 2005, Debris flows, fires, and channel disturbance: a millennial-scale perspective, Joint meeting of the American Geophysical Union and the North American Benthological Society, New Orleans May 22-27.
- Pierce, J.L.,** Meyer, G.A., 2004, Fire, Holocene Climate Change, and Geomorphic Response Recorded in Alluvial Fan Sediments, American Geophysical Union Abstracts with Programs, vol. 85(47), Abstract B44C-06.
- Pierce, J.L.,** Meyer, G.A., 2004, The Effects of Holocene Climate Change on Fire Regimes in Idaho Ponderosa Pine Forests, Geological Society of America Abstracts with Programs, Vol. 36, No. 4, p. 13.
- Pierce, J.L.,** Meyer, G.A., 2003, A Record of Extreme Sedimentation Events in Central Idaho: Fire, Climate, and Changing Sediment Yields Over the Holocene, American Geophysical Union Abstracts with Programs, vol. 84(46) Abstract H42L-03.
- Pierce, J.L.,** Meyer, G.A., 2003, Holocene fire regimes and geomorphic response in conifer forests of the northwestern United States: evidence of millennial-scale climate change, International Quaternary Association Programs with Abstracts, vol. 16, p. 192.
- Pierce, J.L.,** Meyer, G.A., and Jull, A.J.T., 2002, Variability of fire regimes in ponderosa pine forests, Geological Society of America Abstracts with Programs, v. 34, p. 41.
- Pierce, J.L.,** and Meyer, G.A., 2002, Holocene Forest Fire Records as Evidence of Millennial-Scale Climate Change in the Northwestern United States: American Geophysical Union Abstracts with Programs, vol. 83, p. 265.
- Pierce, J.L.,** Meyer, G.A., 2001, Using evidence of fires in alluvial fan stratigraphy to interpret variations in Holocene fire regimes in central Idaho, Geological Society of America Abstracts with Programs, v.33, p.69
- Pierce, J.L.,** Meyer, G.A., and Wood, S.H., 2000a, Fires, storms, and erosional events in the Idaho Batholith: Geological Society of America Abstracts with Programs, v.32, p.118
- Pierce, J.L.,** Meyer, G.A., and Wood, S.H., 2000b, Processes, magnitude, and timing of fire-related sedimentation events in the western Idaho Batholith: American Geophysical Union Abstracts with Programs, v. 81, p.497.
- Pierce, J.L.,** 1999, Dredge mining effects on channel adjustment: Granite Creek, eastern Oregon: Geological Society of America Abstracts with Programs, v.31, p.253
- Pierce, J.L.,** 1999, Geomorphic response to historic dredge mining: planimetric and cross-sectional channel changes of Granite Creek, eastern Oregon: American Geophysical Union Abstracts with Programs, v. 80, p. 488.

AWARDS AND GRANTS

- 2015 An integrated study of post- fire wind and water erosion in western rangelands. Funding Agency: NSF RAPID PI Pierce, J.L., Co PIs Glenn, Nancy, Yager, Elowyn: Amount \$46636.

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- 2015 Communities at Risk: Hazards from post-wildfire erosion in the Boise Wildland Urban Interface. Funding Agency: Murdock Foundation. PI Pierce, J.L. Amount \$15,000.
- 2014 Reynolds Creek Critical Zone Observatory, Hypothesis testing and model parameterization of soil respiration across a range of experimentally altered hydroclimates to enable predictions of ecosystem carbon balance in a changing climate, Determining interactive effects of climate induced changes in precipitation regime on soil microbial community structure and function. Funding agency: NSF CZO. Funding amount: \$610,628.
- 2011 The role of Holocene climate change and episodic fire-related sedimentation on long-term (103-104) sediment yields in the Middle Fork Salmon River Watershed, in central Idaho. Funding Agency: NSF EPSCoR PI: Pierce, J.L., Co PIs: Crosby, Ben; Baxter, Colden; Yager, Elowyn; Flores, Lejo. Amount Awarded: **\$19,901**
- 2011 Examining centennial-scale linkages among climate, wildfire, and land-use at the City of Rocks National Reserve. Funding agency: U.S. Park Service. PI. Pierce, J.L. Collaborators: Bastis , Kristen (USPS). Amount requested: \$51,139
- 2011 WSC-Category 2 Collaborative Research: Tracking climate perturbations through the coupled pathways of water and ecosystem services in the intermountain west. PI: McNamara, Jim (Pierce, co-PI). Funding Agency: NSF. Amount requested: \$3,832,797
- 2010 Rangeland Ecosystems: carbon storage, vegetation change, and climate. S. Benner and J. Pierce (co-PIs). **\$292,600**
- 2008 Idaho EPSCoR RII: Water Resources in a Changing Climate V. Walden (P.I.) and many others **\$15 million** amount awarded to **J. Pierce, \$283,000.**
- 2008 Fire and erosion in rangeland ecosystems **J. Pierce (P.I.)**, S. Benner, N. Glenn, M. Germino, L. Vierling, S. Bunting, Bureau of Land Management **\$492,000.**
- 2007 Assessing climatic controls on intervals of stability and deposition on alluvial fans **J. Pierce (P.I.)**, T. Rittenour, W. Sharp, K. Pierce, National Science Foundation: Geomorphology and Land Use Dynamics **\$134,914.**
- 2007 Fire and Disturbance in the Sawtooths, **J. Pierce (P.I.)**. U.S. Fish and Wildlife, **\$15,817.**
- 2006 Fire and Disturbance in the Sawtooths **J. Pierce (P.I.)**. U.S. Fish and Wildlife **\$10,000.**
- 2006 Drought, fire and timing of snowmelt in central Idaho **J. Pierce (P.I.)** J. McNamara, C. Whitlock. Department of Energy – INRA (Inland Northwest Research Alliance) **\$ 62,506.**
- 2006 Past Records of Fire and Disturbance for the Sawtooth National Recreation Area **J. Pierce (P.I.)** J. Whitman-Meridian Academy High School. M.J. Murdock Charitable Trust, Partners in Science Awards **\$15,000.**
- 2006 Cesium signature detection, **J. Pierce (P.I.)** S. Benner, M. Schmitz Idaho National Laboratories, **\$51,624.**
- 2005 Henry's Fork Watershed Council grant for research within the watershed, R. Van Kirk (P.I.) **J. Pierce \$5,000.**
- 2004 V.C. Kelley Outstanding Doctoral Candidate of the Year Scholarship **\$2500.**
- 2004 Outstanding Geoscience Student Award, Association for Women Geoscientists, Denver Chapter
- 2001 J. Hoover Mackin Award Honorable Mention, Quaternary Geology and Geomorphology Division of the Geological Society of America.
- 2001 Geological Society of America award for graduate research (\$1,975).

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- 2001 Author, NSF-Research Opportunities for Undergraduates grant for supporting undergraduate field assistants (\$3600).
- 2000 Best Talk Award, Annual American Geophysical Union Conference, Wildfires and Surficial Processes Session.
- 1999 Chrysalis Award for Graduate Research, Association of Woman Geoscientists.
- 1995 Thomas J. Watson Fellowship Award--\$16,500 award for individual research on the environmental effects of mining operations in China, Indonesia, and Australia.
- 1995 Woman Geoscientist of the Year at the Colorado College --Association for Woman Geoscientists.
- 1995 Outstanding Geology Student of the Year at the Colorado College--Eastwing Award.

WORK AND TEACHING EXPERIENCE

- 2010-present Associate Professor, Boise State University Dept. of Geosciences. Courses: Geomorphology, Advanced Geomorphology, Climate Change, Field Geology. Primary advisor for seven masters students, co-advisor for one PhD student.
- 2005- 2009 Assistant Professor, Boise State University Dept. of Geosciences. Courses: Geomorphology, Advanced Geomorphology, Climate Change, Field Geology. Primary advisor for seven masters students, co-advisor for one PhD student.
- 2005 Assistant Professor, Idaho State University Dept. of Geosciences. Courses: Physical Geography (taught as Earth Systems Science), Advanced Geomorphology: Geomorphology and Salmon. Main advisor for one master's student, and serving on committees for two other students. Member of the ISU Watershed Science Consortium, and co-director of the new Earth and Environmental Science Program (to be implemented in Fall, 2006).
- 2003 Teaching assistant for UNM field camp (summer) and Geomorphology (fall). Assisted student mapping projects for summer field camp and 400/500 level geomorphology course.
- 2003 Instructor, Geomorphology, Dept. of Geosciences, Boise State University. Taught 300-level geomorphology. Prepared lab and lecture material, led course field trips, advised students for GSA geomorphology projects.
- 2000-2003 Research Assistant, Dept. of Earth and Planetary Science, Univ. of New Mexico. NSF-funded research for dissertation.
- 1999 Instructor, Geomorphology. Dept. of Geography, University of Oregon. Prepared lecture and labs for the 300 level summer course in geomorphology.
- 1997-2000 Research and Teaching Assistant, Dept. of Geography, Univ. of Oregon. Courses assisted include physical geography, geomorphology, cartography, human geography, and geography of the post-Soviet states.

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- 1997 Research Assistant, Mineral Policy Center, Washington DC. Researched environmental effects of hard-rock mining operations in the United States, Lobbied for reform of the 1872 Mining Law to the U.S. Congress.
- 1996-1997 Riparian Specialist, American Water Resource Company, Hailey Idaho. Conducted analysis of riparian and floodplain areas adjacent to the urban interface, and designed and installed bank stabilization structures.
- 1995-1996 Fellow, Thomas J. Watson Foundation. --\$16,500 award for one year of individual research on the environmental effects of mining operations in China, Indonesia, and Australia.
- 1994-1995 Researcher, KECK Foundation. Described and classified the mineralogy of Ferricrete Samples in the New World Mining District of Montana.

INVITED PRESENTATIONS, FIELD TRIPS, AND SPECIAL MEETINGS

- 2015 Invited speaker for Geological Society of America Meeting, Baltimore MD Nov. 1-4.
2015 Invited speaker for 'Restoring the West' conference, Logan Utah, Oct. 28-29.
- 2015 Invited speaker for Geologists of Jackson Hole, Jan. 25,
- 2015 Invited field trip leader for Idaho Conservation League's 'Wild Idaho' Conference, Sawtooth Valley Idaho, May 23-24.
- 2013 Invited panelist, Idaho Public Television, Sept.
2012 Invited speaker for Bi-annual American Quaternary Association, Duluth, MN, June 21-24.
2012 Invited panelist "Connecting Science to Policy: The Issue of Climate Change," Boise State University, March 5, 2012
- 2011 Invited speaker, Idaho State Legislature, March 15th, 2011, "Effects of climate change on Idaho's agricultural production."
- 2010 Invited speaker for Idaho Conservation League's 'Wild Idaho' Conference, Sawtooth Valley Idaho, May 21-22.
- 2010 Invited speaker 'Climate Change: Past, Present and Future' for Boise State University Earth Day, April 20, 2010.
- 2009 K-12 McCall Outdoor Science School Field Instructor (Geology) July 9-10. 2009.
- 2009 Field Trip leader and invited speaker for Idaho Conservation League's 'Wild Idaho' Conference, Sawtooth Valley Idaho, May 15-17.
- 2009 Idaho State Legislature, Senate Committee on Agricultural Affairs, Invited Speaker "How will future climate change affect Idaho?" March 10, 2009.
- 2009 U.S. Geological Survey, invited speaker "Climate change and wildfires in Idaho's Forests" March 10, 2009.

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- 2008 Field trip co-leader” Geology of Table Rock” (Saturday field trip for the community, sponsored by the Geology Student Club). Venue: Table Rock, Boise Idaho November 8, 2008.
- 2008 Boise State University, Department of Geosciences Seminar Series, Invited Seminar "What Drives Holocene Intervals of Incision and Aggradation of Mountain Stream Channels?" October 13, 2008
- 2008 “Records of Past Forest Fires and Climate Change “ Department of Geology, University of Montana, Missoula Montana, October 26, 2008.
- 2008 Invited speaker for ‘Project Learning Tree’, (summer education for Idaho K-12 teachers) *Fire and climate in Idaho’s ecosystems: Lessons from the past and implications for the future.*, June 19, 2008
- 2008 Field Trip leader and invited speaker for Idaho Conservation League’s ‘Wild Idaho’ Conference, Sawtooth Valley Idaho, May 17-18 2008.
- 2008 Presentation to State of Idaho House of Representatives, Environment, Energy and Technology Committee, *Changing climate patterns in Idaho* February 12, 2008.
- 2008 “Changing Climate Patterns in Idaho” American Society of Fisheries National Annual Conference. Venue: Feb. 6-8, Post Falls, Idaho
- 2008 “Forest Fires and Changing Climate Patterns in Idaho” New Horizons in Education, KBSU Radio broadcast, with Dr. Bob Kustra. Venue: Radio broadcast January 18.
- 2008 "Modern and Long-term Records of Climate Change and Forest Fires in the Western U.S." American Society of Environmental History National Annual Conference, Boise Idaho.
- 2008 “Forest Fires and Changing Climate Patterns in Idaho” U.S. Fish and Wildlife Service, May 15, Boise Idaho.
- 2008 Invited speaker for Geological Society of America regional meeting, Las Vegas NV, March 23, 2008
- 2007 Field Trip leader and invited speaker for Idaho Conservation League’s ‘Wild Idaho’ Conference, Sawtooth Valley Idaho, May 25 2007
- 2007 Invited Panelist, “Land Management: Changes in our Local Environment” Idaho Environmental Forum Fourth Annual Boise River Conference - Aug. 8, 2007.
- 2007 Panelist for ‘Dialogue’ Idaho Public Television program on Wildland Fire, September 13, 2007.
- 2007 Invited speaker, “Fire and Climate Change” for Boise National Forest District Rangers, November 13, 2007.
- 2007 Invited speaker, Sigma Xi, Boise State University Chapter, April 23rd, 2007

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- 2007 Invited speaker, University of Idaho, “What Will Climate Change Mean For Idaho And The Interior West?” online webcast.
- 2007 Invited speaker for the annual meeting of the Society for American Foresters, C’oeur D’Alaine, Idaho
- 2007 Invited speaker for Geosciences seminar series, University of Idaho.
- 2006 Invited speaker for the 3rd International Congress of Wildland Fire, San Diego California.
- 2006 Invited speaker for the International Quaternary Association meeting, Bozeman, Montana
- 2006 Invited speaker for the Pacific Climate of North America meeting, Monterey California
- 2006 Invited speaker for the University of Idaho College of Natural Resources seminar series
- 2005 Invited speaker for the Boise State University Department of Anthropology seminar series
- 2005 Invited speaker for the Western States Seismic Policy Council Annual Conference, Boise Idaho
- 2005 Invited participant, “Fire History and Climate Synthesis in the Western United States” workshop May 1-3, Flagstaff Arizona.
- 2004 Invited speaker for the Idaho State University Department of Biology seminar series
- 2004 Field trip co-leader, May 2004 Rocky Mountain/Cordilleran GSA meeting, Boise Idaho. Field trip title: “Fire and Ice in Central Idaho: Modern and Holocene Fires, Debris Flows, and Climate in the Payette River Basin, and Quaternary and Glacial Geology in the Sawtooth Mountains.”
- 2003 Field trip leader and organizer, fall 2003 Friends of the Pleistocene field trip (Rocky Mountain Cell). Organized 3-day field trip for ~75 participants, presented results of research, and compiled and edited informal field trip guide.
- 2002 Invited participant, “Fire and Aquatic Ecosystems” meeting, Boise Idaho.

PROFESSIONAL AND COMMUNITY SERVICE

2011

- Co-convener of special session at the fall 2011 AGU meeting entitled, “Climate Change and Landscape Response I, II & III” co-sponsored by Atmospheric Sciences (A), Global Environmental Change (GC), Paleoceanography and Paleoclimatology (PP). This session had ~50 submissions and four invited speakers.
- Co-convener of special session at the spring 2011 NSF EPSCoR meeting entitled, “Climate Change and Landscape Response ,” Albuquerque New Mexico.

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- Reviewer for Geological Society of America (journal) and the National Science Foundation (proposals)

- Instructor: McCall Outdoor Science School Teacher Institute, June 23-June 26, 2011. Instructed ~60 K-12 teachers about forest fires in Idaho, and educational methods for learning about fires.
- Volunteer: “FIRE Up Your Summer!” June 11th, 2011, Foothills Learning Center, Boise Idaho, assisted with fire education day led by Kerry Riley (BSU MS student) for ~40 community members.
- Committee Member: Boise State University Science Competition Day organizational committee
- Committee Member: Boise State University Graduate Curriculum committee
- Reviewer: GSA Bulletin, NSF

2010

- Committee Member: Boise State University Science Competition Day organizational committee
- Co-advisor (with Viskupic) for the student Geoclub
- Elected Board Member, Quaternary Geology and Geomorphology Division of the Geological Society of America
- Elected Board Member, Idaho Conservation League
- Reviewer: Quaternary Research, Quaternary Science Reviews, National Science Foundation

2009

- New Murdock charitable trust funded project with Meridian High School (Jeremy Whitman, PI; Wilkins, and Pierce, co-collaborators) will use dendrochronology as an educational tool for K-12 student education.
- K-12 McCall Outdoor Science School Field Instructor (Geology) July 9-10, 2009. Overnight field trip to the South Fork Payette River with ~15 K-12 students. Primary instructor, field geology and geomorphology.
- Field Trip leader and invited speaker for Idaho Conservation League’s ‘Wild Idaho’ Conference, Sawtooth Valley, Idaho, May 15-17.
- Committee Member: Science Competition Day organizational committee (Geosciences representative).
- Co-advisor (with Viskupic) for the student Geoclub

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- Elected Board Member, Quaternary Geology and Geomorphology Division of the Geological Society of America
- Reviewer, National Science Foundation
- Reviewer, Geological Society of America Bulletin

2008

- Primary Organizer and Presenter for “Focus the Nation” a two-day, national event to promote education about climate change. Venue: Boise State University, January 30-31, 2008. Primary Coordinator and committee chair for Focus the Nation at Boise State University. Boise State University participated in a nation-wide ‘Focus the Nation’ event on January 31st, 2008. This event included two days of organized lectures and presentations on global change, a business symposium, a research symposium, a climate change art contest, individual carbon footprint calculation booths, calculation of the university’s carbon footprint, and a roundtable discussion with community leaders about local solutions to climate change. (Because this event took place in 2008, I will summarize the outcomes of the event in next year’s tenure packet. The bulk of the organization and effort, however, took place in 2007).
- Field trip co-leader” Geology of Table Rock” (Saturday field trip for the community, sponsored by the Geology Student Club). Venue: Table Rock, Boise Idaho November 8, 2008.
- Committee Member: Science Competition Day organizational committee (Geosciences representative).
- College of Arts and Sciences Promotion and Tenure committee
- Elected Board Member, Quaternary Geology and Geomorphology Division of the Geological Society of America
- National Science Foundation proposal review panel member, EAR, November 11-November 15, 2008.
- Reviewer, National Science Foundation
- Reviewer, Geological Society of America Bulletin
- National Science Foundation proposal review panel member, EAR, November 11-November 15, 2008.

STUDENT ADVISING

2011-2012

- Graduate Student Advising:
 - a. Primary advisor: Mike Poulos (MS), Kerry Riley (MS), Kerrie Weppner (MS), Megan Kenworthy (MS), Annika Quick (PhD)

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- b. Committee Member: Andrew Austrang (MS), Mel Kunkel (PhD), Ricci Loughridge (MS), Ryan Warden (MS), Brian Stark (MS)
- Undergraduate Student Advising
 - a. Paul Micheletti (Senior Capstone Advisor)
 - b. Kara Ferguson (Senior Capstone Advisor)
 - c. Dawn Jarrells (Undergraduate Research Advisor)
- High School Student Advising:
 - a. Alex Baca (Treasure Valley Math and Science, internship advisor)

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Jay D. Carlisle, Ph.D.

Research Director, Intermountain Bird Observatory
Research Assistant Faculty, Department of Biological Sciences
Boise State University
Boise, ID 83725
208-426-5203 (Office)
jaycarlisle@boisestate.edu

EDUCATION

Undergraduate Institutions:	Major	Degree and Year
Sterling College, Craftsbury Common, VT	Natural Resources	
Audubon Expedition Institute, Belfast, ME	Environmental Education	
The Evergreen State College, Olympia, WA	Ecology	B.S. 1995
Graduate Institution:		
University of South Dakota, Vermillion, SD	Biology	Ph.D. 2005

SKILLS AND QUALIFICATIONS

Communication Skills: For many years I have focused on developing effective communication skills (*written and oral, including listening skills*), with applications to teaching, advising, personnel management, and other aspects of my professional and personal life. This includes taking great joy in sharing natural history, scientific research, and other ecological issues with students and the general public.

Field Research and Experimental Design: I have performed professional field work in various capacities in each year since 1993 in many states and I feel very comfortable in a variety of field situations. I have designed and executed many research projects in addition to my PhD research.

APPOINTMENTS AND OTHER RELEVANT EXPERIENCE

Coordinator, Idaho Bird Conservation Partnership. **2011-**

Assistant Research Faculty, Department of Biological Sciences, Boise State University, Boise, ID. **2011-**

Research Director, Intermountain Bird Observatory, Boise State University, Boise, ID. **2005-**

Conservation Director, Harris Ranch, Boise, ID. **2008-09** (*part-time*)

Instructor, University of South Dakota, Department of Biology. **2005**

Crew Leader / Biological Technician / Field Assistant / Education Intern. 1992-1999, variety of seasonal positions in many states covering breeding, migration, and winter projects and a wide variety of methods

Travel in Latin America and functionality in Spanish: Argentina, Costa Rica, Guatemala, Mexico, Panama, Peru, and Venezuela; includes 1 month of language school in Guatemala

PUBLICATIONS

- Scholer, M. N., B. Martin, M. Ferrer, A. Onrubia, M. J. Bechard, G. S. Kaltenecker, and **J. D. Carlisle**. *In press* (2015). Variable shifts in the autumn migration phenology of soaring birds in southern Spain. *Ardea*.
- Miller, R. A., A. Onrubia, B. Martin, G. S. Kaltenecker, **J. D. Carlisle**, M. J. Bechard, and M. Ferrer. *In press* (2015). Local and regional weather patterns influencing post-breeding migration counts of soaring birds at the Strait of Gibraltar, Spain. *Ibis*.
- Ware, H. E., C. J. W. McClure, J. D. Carlisle, and J. R. Barber. 2015. A phantom road experiment reveals traffic noise is an invisible source of habitat degradation. *Proceedings of the National Academy of Sciences* 112:12105-12109.
- Jeffries, M. I., R. A. Miller, M. D. Laskowski, and **J. D. Carlisle**. 2015. High Prevalence of *Leucocytozoon* Parasites in Nestling Northern Goshawks (*Accipiter gentilis*) in the Northern Great Basin, U.S.A. *Journal of Raptor Research* 49:294-302.
- Pollock, J., **J. D. Carlisle**, C. Runco, and G. Kaltenecker. 2015. Increasing capture frequency for Flammulated Owls and Northern Saw-whet Owls during fall migration. *Journal of Raptor Research* 49:88-92.
- Miller, R. A., **J. D. Carlisle**, N. Paprocki, G. S. Kaltenecker, and J. A. Heath. 2015. Annual variation in autumn migration phenology and energetic condition at a stopover site in the western United States. Pp. 177–191 in E. M. Wood and J. L. Kellermann (editors), Phenological synchrony and bird migration: changing climate and seasonal resources in North America. *Studies in Avian Biology* 47, CRC Press, Boca Raton, FL.
- Miller, R. A., **J. D. Carlisle**, and M. J. Bechard. 2014. Effects of prey abundance on breeding season diet of northern goshawks (*Accipiter gentilis*) within an unusual prey landscape. *Journal of Raptor Research* 48:1-12.
- McClure, C. J. W., H. E. Ware, **J. Carlisle**, G. Kaltenecker, and J. R. Barber. 2013. An experimental investigation into the effects of traffic noise on distributions of birds: avoiding the phantom road. *Proceedings of the Royal Society B* 280 (1773):20132290.
- Miller, R. A., **J. D. Carlisle**, M. J. Bechard, and D. Santini. 2013. Predicting nesting habitat of Northern Goshawks in mixed aspen-lodgepole pine forests in a high-elevation shrub-steppe dominated landscape. *Open Journal of Ecology* 3:109–115. doi:10.4236/oje.2013.32013.
- Carlisle, J. D.**, K. L. Olmstead, C. H. Richart, and D. L. Swanson. 2012. Food availability, foraging behavior, and diet of autumn landbird migrants in the Boise Foothills of southwestern Idaho. *Condor* 114:449-461.
- Carlisle, J. D.** 2012. Irruptive migration of Chestnut-backed Chickadees to southwestern Idaho. *Western Birds* 43:12-20.
- Smith, J. P., J. P. Delong, L. L. Leppert, S. L. Stock, G. S. Kaltenecker, and **J. D. Carlisle**. 2012. Morphometric variation in Flammulated Owls captured during autumn migration in the western United States. *Journal of Raptor Research* 46:109-120.
- Spotswood, E. N., K. R. Goodman, **J. D. Carlisle**, J. Rousseau, R. L. Cormier, D. Humple, S. L. Guers, and G. G. Barton. 2012. How safe is mist netting? Evaluating the risk of injury and

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- mortality to birds. *Methods in Ecology and Evolution* 3:29-38. doi: 10.1111/j.2041-210X.2011.00123.x.
- Miller, R. A., **J. D. Carlisle**, and G. S. Kaltenecker. 2011. Impacts of regional cold fronts and localized weather phenomena on autumn migration of raptors and landbirds in Southwest Idaho, USA. *Condor* 113:274-283.
- Carlisle, J. D.**, S. K. Skagen, B. E. Kus, C. van Riper III, K. L. Paxton, and J. F. Kelly. 2009. Landbird migration in the American West: recent progress and future research directions. *Condor* 111:211-225.
- Carlisle, J. D.**, G. S. Kaltenecker, and R. S. Brady. 2007. Status of Broad-winged (*Buteo platypterus*) and Red-shouldered Hawks (*B. lineatus*) during autumn migration in southwestern Idaho, 1995-2006. *Western Birds* 38:251-260.
- Carlisle, J. D.**, C. H. Trost, S. L. Stock, and G. S. Kaltenecker. 2006. Autumn landbird communities in the Boise Foothills and Owyhee Mountains of southwestern Idaho compared by mist net captures. *Western Birds* 37:215-227.
- Stock, S. L., P. J. Heglund, G. S. Kaltenecker, **J. D. Carlisle**, and L. L. Leppert. 2006. Comparative ecology of the Flammulated Owl and Northern Saw-whet Owl during fall migration. *Journal of Raptor Research* 40:120-129.
- Carlisle, J. D.**, and R. L. Holberton. 2006. Relative efficiency of fecal versus regurgitation samples for assessing diet and deleterious effects of a tartar emetic on migratory birds. *Journal of Field Ornithology* 77:126-135.
- Gentry, D., D. L. Swanson, and **J. D. Carlisle**. 2006. Species richness and nesting success of migrant songbirds in natural river corridors and anthropogenic woodlands in southeastern South Dakota. *Condor* 108:140-153.
- Carlisle, J. D.**, G. S. Kaltenecker, and D. L. Swanson. 2005. Molt strategies and age differences in migration timing among autumn landbird migrants in southwestern Idaho. *Auk* 122:1070-1085.
- Carlisle, J. D.**, G. S. Kaltenecker, and D. L. Swanson. 2005. Stopover ecology of autumn landbird migrants in the Boise Foothills of southwestern Idaho. *Condor* 107:244-258.
- Carlisle, J. D.**, and C. J. Ralph. 2005. Towards the establishment of landbird migration monitoring networks in the United States. In C.J. Ralph and T. Rich (eds.) Third International Partners in Flight Conference, March 20-24, 2002, Asilomar Conference Grounds, California. USDA Forest Service Gen. Tech. Rep. PSW-GTR-191.
- Carlisle, J. D.**, S. L. Stock, G. S. Kaltenecker, and D. L. Swanson. 2004. Habitat associations, relative abundance, and species richness of autumn landbird migrants in southwestern Idaho. *Condor* 106:549-566.
- Carlisle, J. D.** 2004. Considering the potential importance of western montane habitats during autumn landbird migration. Pages 10-11 in Skagen, S. K., Melcher, C. P., and Hazlewood, R. (eds.) 2004. Migration stopover ecology of western avian populations: A southwestern migration workshop. U. S. Geological Survey, Biological Resources Discipline, Open-File Report 2004-1452, 29 p. <http://www.fort.usgs.gov/products/publications/21409/21409.pdf>

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Carlisle, J. D., H. S. Hoff, and P. M. Mabee. 2004. Breeding bird inventory of Spirit Mound Historic Prairie in Clay County – an area being restored to tallgrass prairie. *South Dakota Bird Notes* 56:32-41.

COMMUNITY AND SYNERGISTIC ACTIVITIES

- **Coordinator for Idaho Bird Conservation Partnership**
 - Promoting better communication and cooperation among the state’s natural resource agencies, universities, NGOs, and individuals for coordinating research and conservation.
- **Education and community outreach** in association with research activities (20+ years).
 - Hands-on education to thousands of people aged 5 to 85 and mentoring over 150 students (mostly undergraduate), young biologists, and volunteers in conservation-related science.
- **Organized/co-chaired two symposia:**
 - “*Networks for Monitoring Landbird Migration*” at 3rd International Partners in Flight meeting (March 2002; Monterey, California).
 - “*Migration Across the Diverse Western Landscape: Recent Progress, the Importance of Riparian and Other Habitats, and Future Directions*” at 77th Cooper Ornithological Society meeting (June 2007; Moscow, Idaho).
- **Reviewer** for many journals including: The Auk, The Condor, Journal of Field Ornithology, Northwestern Naturalist, Ornithologia Neotropical, and Wilson Journal of Ornithology
- **Lead bird-watching field trips** for local birding clubs (Golden Eagle Audubon Society and Southwest Idaho Birder’s Association) and help **compile the Boise Christmas Bird Count**
- Voting member of the **Idaho Bird Records Committee** (<http://idahobirds.net/ibrc/ibrc.html>)

CURRICULUM VITAE for MATTHEW J. GERMINO

USGS Forest and Rangeland Ecosystem Science Center
Great Basin Landscape Conservation Cooperative
Email: mgermino@usgs.gov, Ph: 208-426-3353
(Shortened version, September 2014)

EDUCATION

PhD Botany, 2000	University of Wyoming, Laramie
MS Botany, 1996	University of Wyoming, Laramie
BS Environmental Science, 1994	University of Massachusetts, Amherst

APPOINTMENTS

<i>Supervisory Research Ecologist (GS 13/7)</i>	2011-present, United States Geologic Survey Forest and Rangeland Ecosystem Science Center Snake River Field Station, Boise ID
<i>Affiliate/Adjunct Professor</i>	2011-present, Idaho State University, Boise State University, University of Idaho
<i>Professor (Asst., T&P to Asso. then Full)</i>	2001-2011 Department of Biological Sciences, Idaho State University, Pocatello ID
<i>Postdoctoral</i>	2000-2001, Montana State University
<i>Research Associate</i>	1998-2000, Wake Forest University, NC
<i>GIS Specialist</i>	1996-1998, University of Wyoming
<i>Teaching Assistant</i>	1994-1996 University of Wyoming
<i>Research Assistant</i>	1993 Hubbard Brook Ecosystem Study
<i>Research Assistant</i>	1992 USFS/Univ of Massachusetts Ozone Project

GRADUATE TEACHING (past, 500 or greater level is graduate, “g” denotes grad/undergrad crosslisting)

Field Ecology	BIOL 489g, 4 cr, Spring every year
Plant Form & Function	BIOL 408g, 3 cr, Fall alternating years, co-taught
Plant Physiology	BIOL 404gL, 4 cr, Fall every year
Topical Grad Seminars	BIOL 418g, 692, 1-2 cr, Spring every year

Recent rotations included Plant Ecology (3 cr, BIOL 409g), Physiological Ecology (4 cr, BIOL 307), Environmental Physiology (3 cr, BIOL 607), GIS and remote sensing classes (variable credit). Ecotopic and graduate seminars offered on topic like Ecosystem Ecology, Fire Ecology, Ecohydrology, and Resource Ecology.

GRANTS

Competitive grants funded since 2006 (½ of grant support shown, total>\$2M)

Germino MJ. Subalpine and Alpine Species Range Shifts with Climate Change. 2012. DOE PER, \$120,000/3 yr to MJG (\$650,000 total)

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- Germino MJ. Effects of Genotype and Management Treatments of Native and Invasive Herbs on Success of Sagebrush Restoration, 2013. US Fish and Wildlife Service, Great Basin Landscape Conservation Cooperative, \$31,000/2 yr
- Hardegree S, Abatazoglou J, Brunson M, Germino MJ 2012. Weather data and forecasting applications for management of ecological site transitions. USDA AFRI Rangelands Program, \$120,000/3yr to MJG, (\$450,000 total)
- Germino MJ. 2012. Sagebrush Ecosystems in a Changing Climate. Northwest Climate Science Center, \$120,000/2 yr.
- Germino MJ. 2011, 2012. Selecting sagebrush seed sources for restoration in a variable climate: ecophysiological evaluation of common gardens. Great Basin Native Plant Selection and Increase Project. \$30,000/1yr + 47,000/2yr.
- Germino MJ, Chambers J, Brown C. Exotic Bromus grasses in agroecosystems of the western US: REEnet synthesis of current and future invasions, impacts, and management USDA AFRI, \$200,000/4 yr.
- Germino MJ and others. 2008. Climate and water, Research Infrastructure Improvement Grant. \$275,000/5 yr to MJG. NSF EPSCoR
- Maschner H, Germino MJ, Rosentreter R, McCurry M. 2007. MRI: Acquisition of Mass Spectrometers and Related Equipment to Create the ISU Interdisciplinary Lab for Elemental and Isotopic Analysis (ILEIA), \$587,410 (\$350K to IRMS used by MJG)
- Glenn N, Germino MJ. 2007. Data fusion for remote surveillance of wind erosion in semiarid landscapes. DOD EPSCOR. \$360,000/3 yr (1/2 to MJG)
- Germino MJ, Graumlich LJ, Littell J, Mantua N. 2007. Climatic and biotic co-limitation of conifer establishment at treelines: addressing uncertainty in bioclimatic model forecasts of forest change. DOE National Institute for Climate Change Research. \$335,000/3 yr (\$130K to MJG)
- Germino MJ, Horton JL, Marshall JD, Huntly NJ, Inouye R. 2006. Land use effects on persistence of exotic forbs in sagebrush steppe: Are loss of foundation species and disruption of soil resource partitioning causal links? USDA NRI Biology of Weedy and Invasive Plants. \$325,000/3 yr (current) (\$245K to MJG)
- Germino MJ. 2006-2008. Evapotranspiration of constructed sagebrush-steppe communities at INL. Stoller Corp/DOE, \$80,000/3 yr
- Germino MJ. 2006. Carbon balance of tree seedlings at treeline. Andrew Mellon Foundation, \$50,000/2 yr.

PUBLICATIONS (*student or postdoctoral advisee)

- 59) Chambers JC, **Germino MJ**, Belnap J, Brown CS, Schupp EW, St. Clair SB, 2014. Plant Community Resistance to Exotic Bromus Species. In: Germino MJ, Chambers JC, Brown C (eds). Exotic brome grasses in arid and semi-arid ecosystems of the Western US: Causes, consequences, and management implications. Springer. Accepted.
- 58) **Germino MJ**, Belnap J, Stark J, Rau B. 2014. Ecosystem impacts of exotic annual Bromus species. In: Germino MJ, Chambers JC, Brown C (eds). Exotic brome grasses in arid and semi-arid ecosystems of the Western US: Causes, consequences, and management implications. Springer. Invited/in revision.
- 57) **Germino MJ**, Richardson BA, Lazarus B, Pendelton R, Pendelton B. 2014. Ecophysiology of Blackbrush. In: Esque T, Meyer S, Walker L (eds) *The blackbrush ecosystem: Shrubland stability in a changing world*. Springer Verlag. Accepted.

- 56) **Germino MJ**, Reinhardt K. 2014. Desert shrub responses to experimental modification of precipitation seasonality and soil depth: relationship to the two-layer hypothesis and ecohydrological niche. *Journal of Ecology*. 102:989-997
- 55) Chambers JC, Bradley BA, D'Antonio C, **Germino MJ**, Grace J, Hardegree SP, Miller RF, Pyke DP. 2014. Resilience to Stress and Disturbance, and Resistance to *Bromus tectorum* L. Invasion in Cold Desert Shrublands of Western North America. *Ecosystems*. 17:360-375
- 54) Richardson BA, Kitchen SG, Pendelton RL, Pendelton BK, **Germino MJ**, Rehfeldt GE, Meyer SE. 2014. Adaptive responses reveal contemporary and future ecotypes in a desert shrub. *Ecological Applications*. 24:413-427
- 53) Beever EA, Mattson BJ, **Germino MJ**, Post van der Burg M, Bradford JB, Brunson MW. 2014. Exploring successes and challenges of broad-scale conservation across the globe *Conservation Biology* 2:302-314
- 52) **Germino MJ**. 2014. Plants in Alpine Environments. In: "The Plant Sciences – Ecology and the Environment" (26 pages) editor: R Monson. Springer, www.springerreference.com/docs/html/chapterdbid/349825.html
- 51) Sorensen, P.O., **Germino, M.J.**, Feris, K., 2013, Microbial community responses to 17 years of altered precipitation are seasonally dependent and coupled to co-varying effects of water content on vegetation and soil carbon. *Soil Biology and Biochemistry*, 64: 155-163
- 50) Wagenbrenner N, **Germino M**, Lamb B, Robichaud P, Foltz R. 2013. Wind erosion from a sagebrush steppe burned by wildfire: Measurements of PM10 and horizontal sediment flux. *Aeolian Research*. 10:25-36
- 49) Adams HD, **Germino MJ**, Breshears DD, Barron-Gafford DA, Guardiola-Claramonte M, Zou CB, Huxman TE. 2013. Nonstructural leaf carbohydrate dynamics of *Pinus edulis* during drought-induced tree mortality reveal role for carbon metabolism in mortality mechanism. *New Phytologist*. 197:1142-1151
- 48) Castanha C, Torn MS, **Germino MJ**, B. Weibel B, Kueppers ML. 2013: Conifer seedling recruitment across a gradient from forest to alpine tundra: effects of species, provenance, and site. *Plant Ecology & Diversity*, DOI:10.1080/17550874.2012.716087
- 47) Mitchell JJ, Glenn NF, Sankey TT, Derryberry DR, **Germino MJ**. 2013. Remote sensing of canopy nitrogen. *Remote Sensing of Environment* 124:217-223
- 47) Moyes A, **Germino MJ**, Castanha C, Kueppers L. 2012. Warming and the dependence of limber pine (*Pinus flexilis*) establishment on summer soil moisture within and above its current elevation range. *Oecologia* 171:271-282
- 45) Sankey J, **Germino MJ**, Sankey T, Hoover A .2012. Fire effects on the spatial patterning of soil properties in sagebrush steppe, USA: Meta-analysis. *International Journal of Wildland Fire* 21:545 - 556
- 44) Sankey J, **Germino MJ**, Glenn N, Benner S. 2012. Bioavailable nutrients transported by wind in an eroding cold desert. *Aeolian Research*. 5:17-27
- 43) Hasselquist N, **Germino MJ**, SankeyJ, Glenn N, Ingram J. 2011. High potential for nutrient redistribution in aeolian sediment fluxes following wildfire in sagebrush steppe. *Biogeosciences* 8: 3649-3659
- 42) Sankey J, **Germino MJ**, Glenn NJ. 2012. Dust supply varies with sagebrush microsites and time since burning in experimental erosion events. *Journal of Geophysical Research-Biogeosciences* 117:1-13
- 41) Sankey J, Eitel J, Glenn N, **Germino MJ**, Vierling L. 2011. Quantifying relationships of burning, roughness, and potential dust emission with laser altimetry of soil surfaces at submeter scales. *Geomorphology* 117:1-13

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

- 40) Hoover A, **Germino MJ**. 2012. Post-fire, Resource-Island Effects on *Bromus tectorum* and *Pseudoroegneria spicata*: Evidence From a Common-Garden Study. *Rangeland Ecology and Management* 65:160-170
- 39) Reinhardt K, **Germino MJ**, Castanha C, Kueppers L. 2011. Provenance-level variation in mobile carbon pools corresponds to gas exchange, growth, and survival in *Pinus flexilis* seedlings from forest to alpine. *Tree Physiology* 31: 615-625
- 38) Wilcox B et al. including **Germino MJ**. 2011. Invasion of shrublands by exotic grasses: ecohydrological consequences in cold vs. warm deserts. *Ecohydrology* 5: 160-173
- 37) Hill J, **Germino MJ**, Alongi D. 2011. Carbon-use efficiency in green sinks is increased when a diversity of apoplastic sugars are available for uptake. *Journal of Experimental Botany*. 62: 2013-2022
- 36) Bansal S, Reinhardt K, **Germino MJ**. 2010. Linking carbon balance to establishment patterns: Comparison of whitebark pine and Engelmann spruce seedlings along an herb cover exposure gradient at treeline. *Plant Ecology*, accepted.
- 35) Bansal, S*, **Germino MJ**. 2010. Unique responses of respiration, growth, and non-structural carbohydrate storage in sink tissue of conifer seedlings to an elevation gradient at timberline. *Environmental and Experimental Botany*. In press.
- 34) Sankey J*, Glenn NF, **Germino MJ**, Gironella A, Thackray G. 2010. Relationships of aeolian erosion and deposition with LiDAR-derived landscape surface roughness following wildfire *Geomorphology* 119, 135-145
- 33) Debinski DD, Wickham H, Kindscher K, Caruthers JC, **Germino MJ**. 2010. Montane meadow change during drought varies with background hydrologic regime and plant functional group. *Ecology* 91: 1672-1681
- 32) Bansal S*, **Germino MJ**. 2010. Variation in ecophysiological properties among conifers at an ecotonal boundary: comparison of establishing seedlings and established adults at timberline. *Journal of Vegetation Science* 21:133-142
- 31) Prevey J*, **Germino MJ**, Huntly N. 2010. Loss of foundation species increases population growth of exotic forbs in sagebrush steppe. *Ecological Applications*. 20: 1890-1902.
- 30) Prevey J*, **Germino MJ**, Huntly NJ, Inouye RS. 2010. Exotic plants increase and native plants decrease with loss of foundation species in sagebrush steppe. *Plant Ecology* 207:39-49.
- 29) Sankey J*, **Germino MJ**, Glenn NF. 2009. Relationships of post-fire aeolian transport to soil and atmospheric moisture, *Aeolian Research* 1: 75-85.
- 28) Norton J, Glenn NF, Germino MJ, Weber K, Seefeldt K. 2009. Relative suitability of indices derived from Landsat ETM+ and SPOT 5 for detecting fire severity in sagebrush steppe. *Int. J. Appl. Earth Observation and Geoinformation* 11: 360-367
- 27) Alongi-Johnson DA, Hill JP, **Germino MJ**. 2009. Opportunistic heterotrophy in gametophytes of the homosporous fern *Ceratopteris richardii* (Pteridaceae L.) and its ecophysiological and evolutionary implication. *Botany* 87: 1-8
- 26) Sankey J*, **Germino MJ**, Glenn NF. 2009. Aeolian sediment transport following wildfire in sagebrush steppe. *Journal of Arid Environments* 73: 912-919
- 25) Smith WK, **Germino MJ**, Johnson DM, Reinhardt K. 2009. The altitude of alpine treeline: a bellwether of climate change effects. *The Botanical Review* 75(2):163-190
- 24) Bansal S*, **Germino MJ**. 2009. Temporal variation of nonstructural carbohydrates in montane conifers: similarities and differences among developmental stages, species, and environmental conditions. *Tree Physiology* 29: 559-568
- 23) Bansal S*, **Germino MJ**. 2008. Carbon balance of conifer seedlings at timberline: relative changes in uptake, storage, and utilization. *Oecologia* 158: 217-227

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FEBRUARY 18, 2016**

- 22) Sankey TS, **Germino MJ**. 2008. Detection of juniper encroachment using remote sensing and GIS. *Rangeland Ecology and Management* 61: 359-464
- 21) Seefledt S, **Germino MJ**, DiChristina KM*. 2007. Prescribed fires have minor and transient effects on herbaceous vegetation cover and composition. *Applied Vegetation Science* 10: 249-256
- 20) DiCristina K, **Germino MJ**. 2006. Correlation of neighborhood relationships, carbon assimilation, and water status of sagebrush seedlings establishing after fire. *Western North American Naturalist* 66: 441-449
- 19) Maher E, **Germino MJ**. 2006. Microsite differentiation among conifer species during seedling establishment at alpine-treeline. *Ecoscience* 13: 334-341
- 18) **Germino MJ**, Hasselquist NJ, McGonigle TM, Smith WK, Sheridan P. 2006. Colonization of conifer seedling roots by fungal mycelium in an alpine-treeline ecotone: Relationships to microsite, developmental stage, and ecophysiology of seedlings. *Canadian Journal of Forest Research* 36: 901-909
- 17) Broderon C, **Germino MJ**, Smith WK. 2006. Photosynthesis during an episodic drought in *Abies lasiocarpa* and *Picea engelmannii* across an alpine treeline. *Arctic, Antarctic, and Alpine Research* 38: 34-41
- 16) Hill JP, **Germino MJ**, Wraith JM, Olson B, Swan M. 2006. Advantages in water relations contribute to greater photosynthesis in *Centaurea maculosa* compared to established grasses. *International Journal of Plant Sciences* 167: 269-277
- 15) Hill JP, **Germino MJ**. 2005. Coordinated variation in ecophysiological properties among life stages and tissue types in an invasive forb of shrub steppe. *Canadian Journal of Botany* 83: 1488-1495
- 14) Maher E, **Germino MJ**, Hasselquist NJ. 2005. Interactive effects of tree and herb cover on survivorship, physiology, and microclimate of conifer seedlings at the alpine-treeline ecotone. *Canadian Journal of Forest Research* 35: 567-574
- 13) Hasselquist NJ, **Germino MJ**, McGonigle TC, Smith WK. 2005. Variability of *Cenococcum* infection and its ecophysiological significance for young conifers at alpine-treeline. *New Phytologist* 165: 867-873
- 12) Johnson DM, **Germino MJ**, Smith WK. 2004. Abiotic factors limiting photosynthesis in *Abies lasiocarpa* and *Picea engelmannii* seedlings below and above alpine timberline. *Tree Physiology* 24: 377-387
- (11 Earlier publications)
- (grey literature reports and proceedings papers, reviewed or not, are not listed here)

INVITED PRESENTATIONS (>150 contributed presentations at scientific society meetings not shown)

- Richardson B, **Germino MJ**. 2014. Comparisons of contemporary and future predictions of the climate niche and ecological genetics of big sagebrush and blackbrush. Society for Ecological Restoration, Society of Ecological Restoration Joint Meeting of Pacific Northwest and Great Basin Chapters, Bend OR, Oct 6-10
- Germino MJ**. 2014. Sagebrush responses to shifting climate and fire disturbances: Basic insights for restoration. Society of Ecological Restoration Joint Meeting of Pacific Northwest and Great Basin Chapters, Bend OR, Oct 6-10
- Germino MJ**, Glenn NF. 2014. Wildfire size effects on site and soil stability: wind erosion in cold-desert rangelands. Large Fire Conference, Association for Fire Ecology. May 22, Missoula MT

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- Huber DP, Lohse K, **Germino MJ**. 2013. Climate Controls on Soil Hydrological and Nutrient Partitioning in Dryland Ecosystems. Chapman conference on Soil-mediated drivers of coupled biogeochemical and hydrological processes across scales. Tucson AZ. October 21-24
- Germino MJ**. 2013. Ecophysiology of blackbrush. 12th Biennial Conference of Science and Management on the Colorado Plateau. Flagstaff AZ. Sept 16-19.
- Germino MJ**. 2013. Nutrient fluxes and their relationship to ecosystem changes associated with post-fire wind erosion and dust emission. 12th Biennial Conference of Science and Management on the Colorado Plateau. Flagstaff AZ. Sept 16-19.
- Kueppers L, Moyes AB, **Germino MJ**, Torn MS. 2013. Responses of subalpine tree recruitment to warming within and above current altitudinal ranges. Ecological Society of America Annual Meeting. Minneapolis MN, Aug 4-9
- Germino MJ**. 2013. Can ecophysiology link pattern to process or molecules to landscapes for the study of treeline responses to climate? Ecological Society of America Annual Meeting. Minneapolis MN, Aug 4-9
- Germino MJ**, Richardson B, Lazarus B, Shaw N. 2013. Local ecophysiological adaptation evident in tetraploid but not diploid big sagebrush National Native Seed Conference, Santa Fe NM, April 8-11 [
- Richardson BA, **Germino MJ**, Kitchen SG, Pendleton RL, Pendleton BK, Meyer SE. 2013. Climate-adapted populations of blackbrush (*Coleogyne ramosissima*). National Native Seed Conference, Santa Fe NM, April 8-11
- Germino MJ**, Svenson L, Reinhardt K (2013) Sagebrush responses to climate. Intermountain Native Plant Summit (7th annual) March 26-27, Boise
- Germino MJ**, Glenn NF, Hardy R, Miller S. 2013. "Dust, an emerging problem in the Great Basin: insights from 2013. Great Basin Consortium, 2nd annual meeting. Boise ID Jan 14-16, 2013

Previous invited presentations I delivered:

2012. Mountain West Water Institute Meeting, Idaho Falls,
2012. Plenary for Tri-State (ID-NV-NM) NSF EPSCoR annual meeting, Sun Valley
2012. Great Basin Restoration Initiative / Native Plant Program Annual Meeting, Salt Lake City UT
2011. American Geophysical Union Annual Meeting, San Francisco CA
2011. Department of Geological Sciences, Boise State University. Sept 23.
- 2011 Great Basin Consortium First Annual Meeting, Nov 2011, Reno NV (I was session organizer)
- 2011 Association for Fire Ecology Annual Meeting, Nov 2011, Snowbird UT (session organizer)
2011. USDA Investigators Conference, July 25, Washington DC
2011. Idaho Weed Association, Boise ID, Mar 20
2011. Great Basin Restoration Initiative / Native Plant Program Annual Meeting, Salt Lake City UT
2011. NSF EPSCoR Tri-State Meeting, Apr 14, Albuquerque NM
2011. Portneuf Watershed Partnership, ID Department of Environmental Quality Pocatello ID
2010. American Geophysical Union Annual Meeting. San Francisco CA, Dec 10-15.
- 2010 Society of Range Management – Idaho Annual meeting on Sagebrush Steppe
- 2010 Ecological Society of America Annual Meeting, Pittsburg, PA, Aug 4-8
- 2010 The Future of High-Elevation Five-Needle White Pines in W North America, Missoula MT,
- 2010 16th Bi-annual Wildland Shrub Symposium, Logan UT, May 20th
- 2010 NSF EPSCoR ID-NV-NM joint meeting on water and climate, Lake Tahoe
2010. University of California, Merced.
2010. Department of Biology, Boise State University.
2010. Ecology and Evolution Department, University of Nevada, Reno
2009. Centro Investigaciones Ecosistemas Patagonia. Coyhaique, Chile,
2009. Restoring the West Conference, Logan UT, October 27-28.

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2009. University of Sheffield, June 4, 2009.
2009. International Association for Landscape Ecology, Snowbird, UT,
2009. Idaho Native Plant Society, Idaho Museum of Natural History.
2008. Whitebark Pine Ecosystem Foundation Annual Meeting. Grand Targhee WY
2008. DOD Army Corps of Engineers Topographic Engineering Center, Alexandria VA.
2008. USDA NRI PI meeting, Milwaukee WI, August 6.
2008. Idaho State University, Department of Geosciences,
2008. Department of Ecology and Evolution, Iowa State University, Ames
2007. Idaho Weed Summit Keynote, Idaho State Department of Agriculture, Boise, October 3.
2007. University of Idaho, Moscow, October 15.
2007. Weed Science Society of America Annual Meeting. San Antonio TX. February 6
2007. Idaho Academy of Sciences Annual Meeting, Idaho Falls ID. April 21
2006. Environmental Sciences Department, Washington State University, Pullman, October 19.
2006. Univ of Wyo/NPS Research Station, AMK Ranch, Grand Teton National Park, WY, June 22.
2006. Intermountain Native Plant Society annual meeting. Boise ID, March 28.
2006. Geology Department, Boise State University. March 6.
2005. University of Texas, Arlington, April 20.
2004. Symposium on remote sensing and rangeland change. Idaho State University. October 7.
2004. Society for Ecological Restoration annual meeting, Victoria, BC. Aug 24-26.
2002,3. Idaho National Engineering and Environmental Lab, Idaho Falls ID, Feb 20, Nov 15.
2001. Ecology Department, Montana State University, Bozeman MT, March 8
2001. Department of Biology, Idaho State University, Pocatello ID, February 15
2000. Land Resources Department, Montana State University, Bozeman MT, May 8
2000. Station Alpine du Lautaret, Grenoble, France, August 31-September 2
1999. Ecological Society of America Annual Meeting, Spokane WA, August 8-12
1996. Department of Biology, Denver University, October 12

RESEARCH-RELATED SERVICE

Manuscript and proposal reviews

National Science Foundation, USDA NRI (now AFRI) Competitive Grants Program, DOE National Institute for Climate Change Research, Netherlands Organization for Scientific Research, Review for George Mendelez Wright NPS Scholarship program, 2009-present

Aeolian Research	Ecohydrology	Functional Ecology
Agroforestry Systems	Ecological Applications	Global Ecology & Biogeography
American Journal of Botany	Ecological Monographs	International J of Plant Sciences
Arctic and Alpine Research	Ecological Research	Invasive Plant Species Mgmt
Australian Journal of Botany	Ecology	Journal of Applied Ecology
Biol J of the Linnean Society	Ecology and Evolution	Journal of Arid Environments
Botany	Ecology Letters	Journal of Ecology
Canadian J Forest Research	Ecosphere	J of Tropical Forest Science
Climate Change	European J of Forest Research	Journal of Vegetation Science
Climate Change Biology	Evolution	New Phytologist
Diversity and Distributions	Forest Ecol and Management	Northwest Science
	Frontiers in Ecology	Oecologia
		Oikos
		Plant Biology

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Plant Ecology	Rangeland Ecol & Mgmt	Trees-Structure and Function
Plant Ecology and Diversity	Restoration Ecology	Western North Am. Naturalist
Plant Species Biology	Science of the Total Environment	
Physical Geography	Tree Physiology	

Editorial appointments, panel or society service

2014	Assisted with panel and reviewer selection, served panel, and reviewed proposals for the Great Basin Landscape Conservation Cooperative Science funding program, 2014
2014	Review Panel, University of Nevada, CABNR Hatch Grant Program, 2014
2013-present	Editorial board, Rangeland Ecology and Management, 2013-present
2013-present	Editorial board, PLOS One, 2013-current
2011-13	Guest editor (subject/associate-level) for <i>Ecological Applications</i> , 2011, 2012, 2013
2011	Advisory Panelist, National Science Foundation, Division of Biology, Mar 2011
2011-14	Central Great Basin/Mojave REA review, Summer 2011. Also: Lead participant in "Challenges and Opportunities Report for CBR REA, led Soils and Stability theme and co-led Plant Ecology theme, Jan-Sept 2014
2012-present	Vice President for Society for Ecological Restoration Great Basin Chapter
2011-12	Northern Great Basin REA review, Dec 2011, Jan 2012.
2005-2006	Editorial review board for Tree Physiology
2008	USDA National Research Initiative, CSREES
2007-2011	On Coordinating Committee for Great Basin Research and Management Partnership
2010	Organized session on "Water and terrestrial ecosystems: reciprocity and feedbacks" for NSF EPSCoR NV/NM/ID meeting, Lake Tahoe NV, April 8 th .
2010	Organized session with proceedings on "Wind Erosion in warm and cold desert shrublands: causes, consequences, and management implications" for the 16 th Annual Wildland Shrub Symposium in Utah, May 18-20 th .
2010	Co-organized session on ecology of reproduction and growth in five-needled pines for the High-Five Pine Meeting in Missoula MT, June 28-30 th .
2010	Co-organized symposium on sagebrush ecology and management for Idaho meeting of Society of Range Management, Idaho Falls Nov 11-12 th .

ADVISING OF GRADUATE STUDENTS

Advising graduate students, current:

Cassandra Gause, MS Biology candidate, Idaho State University, *Cheatgrass responses to climate variability*.

Martha Brabec, MS Biology candidate, Boise State University, *Intraspecific diversity of seedlings responses to climate, in big sagebrush following fire*.

Kellie Rey, MS Hydrosociences candidate, Boise State University, *Use of stable isotopes to partition evaporation and transpiration in semiarid rangelands*

Serving on graduate committees, current:

Xavier Gagne, MS Geology candidate, Boise State University, *Carbon and microelement variation under cheatgrass*

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David Huber, PhD candidate, Idaho State University. *Ecohydrological and biogeochemical responses to climate change and invasive species in sagebrush steppe*

Patricia Xochi Campos, MS candidate, Boise State University. *Climate and plant community effects on patch-level nutrient exchanges in sagebrush steppe*

Alex Suazo, PhD Candidate in Ecology, University of Idaho, *Climate effects on rangeland vegetation*

Serving on graduate committees, past:

Masaru Takahashi, PhD candidate, Idaho State University. *Insect-plant interactions in sagebrush steppe*

Ryan Long, PhD candidate, Idaho State University. *Climate and habitat use of elk*

Ryan Bellmore, PhD Dec 2011, Idaho State University. *Ecology and aquatic-terrestrial interactions on dredged streams*

Service prior to February 2011

Graduate students advised (lead), Idaho State University:

Amber Hoover, MS 2010. *Relationships of plant communities, soil micro-topography, landscape aerodynamic properties, and wind erosion in post-fire cold desert*. (Best Poster Award, Idaho State University Graduate Research Symposium, 2009)

Joel Sankey, PhD 2009. *Wind erosion of soil following wildfire in sagebrush steppe*. (Outstanding Graduate Student award for Idaho State University, 2010)

Judson Hill, MS 2009, *Contribution of flexibility in photosynthetic ecophysiology to carbon gain advantages in exotic forbs of sagebrush steppe*. (National Hispanic Scholar)

Sheel Bansal, PhD 2008. *Role of carbon balance during establishment of conifer trees in the timberline ecotone* (Outstanding Graduate Student award for Idaho State University, 2009)

Janet Prevey, MS 2008. *Linking ecophysiological differences between exotic and native plants to population dynamics of exotic species in disturbed sagebrush steppe*. (Best oral presentation award, Utah State Graduate Research Symposium, April 2009)

Ryan Baum, MS 2005. *Disturbances increase variability in remotely sensed indices of vegetation in sagebrush steppe over the past ca. 20 years*.

Katherine DiChristina, MS 2004. *Effects of neighboring vegetation and soil moisture on establishment of mountain big sagebrush (*Artemisia tridentata* spp. *vaseyana*) seedlings after fire*. (Best Student Poster Award, Society for Range Management annual meeting, 2004)

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Eliza Maher, MS 2004. *Effects of surrounding vegetation on establishment of conifer seedlings in alpine treeline ecotones of the Rocky Mountains*

Niles Hasselquist, MS 2004. *Interactions of fungal symbionts and conifer seedlings near alpine-treeline*

Graduate advisory committees served on, Idaho State University:

Larry Cook, PhD 2007. *Cesium uptake in plants of sagebrush steppe*

Chris Jenkins, PhD 2007. *Landscape disturbance, trophic interactions, and life history variation in Great Basin rattlesnakes*

Kim Gilliland, MS 2006. *Plant community responses to historic aleut village occupation in Alaska*

Nancy Hampton, PhD candidate, degree not awarded. 2004-2008. *Aggregation of the sagebrush defoliator moth in a highly connected landscape*

Karen Krause, MS candidate, degree not awarded. 2003-2006. *Forest fire effects on soil water content and conifer seedling establishment*

Jacob Mundt, MS 2004. *Detection of leafy spurge in Swan Valley IS using hyperspectral remote sensing with limited training data*

Nagendra Singh, MS 2005. *Development of a multitemporal data analysis approach for extracting information from medium resolution imagery: application for cheatgrass detection*

Jill Norris, MS 2006. *Development of a reliable remote sensing initial-assessment burn severity model*

Jeremiah Billa, MS Physics 2006. *Patterns of Radionuclide Deposition in Idaho*

Graduate advisory committee service to other Universities:

Sebastien Renard, PhD 2011, Universite' Laval, Quebec

Kea Woodruff, MS 2010, University of Idaho

Pat Sorensen, MS 2010, Boise State University

Jennifer Wolf, MS 2010, University of California

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CURRICULUM VITAE

TODD E. KATZNER
Research Wildlife Biologist
Forest and Rangeland Ecosystem Science Center
U.S. Geological Survey
970 Lusk St., Boise, ID, 83706
E-mail: tkatzner@usgs.gov

CURRENT POSITIONS

<u>Institution</u>	<u>Title</u>	<u>Year</u>
U.S. Geological Survey Forest and Rangeland Ecosystem Science Center, Snake River Field Station	Research Wildlife Biologist	2014 – present

EDUCATION

<u>Institution</u>	<u>Degree</u>	<u>Year Graduated</u>
Arizona State University Diss. title: <i>Ecology and behavior of four coexisting eagle species at Naurzum Zapovednik, Kazakhstan</i>	Ph.D. (Biology)	May, 2003
The University of Wyoming Thesis title: <i>Winter ecology of the pygmy rabbit (<i>Brachylagus idahoensis</i>) in Wyoming.</i>	M.S. (Zool. & Phys.)	December, 1994
Oberlin College	B.A. (Biology)	May, 1991

COURSES TAUGHT

<u>Courses</u>	<u>Capacity</u>	<u>Subjects covered</u>	<u>Institution</u>
Conservation Ecology	Instructor/Lecturer	Multiple topics	West Virginia Univ. 2013, 2014
Stat. Method for Biol. Sci.	Lead Instructor	Introductory topics	Kostanay State Pedagog. Inst. 2013
Climate chg & Ecol syst.	Lead Instructor	Multiple topics	West Virginia University, 2012
Conservation Biology	Lead Instructor	Conservation Biology Seminar	University of Pittsburgh, 2009
Non-invasive mark-recap	Lead Instructor	Non-invasive mark-recapture	Duquesne University, PA, 2008, 2009
Mammalogy	Lead Instructor	All topics	Arizona State University, Sierra Anches Field Stn., 2002
Mammalogy	Lead Instructor	All topics	Coe College, 1995

GRANTS AND RESEARCH FUNDING

National Fish and Wildlife Foundation. 2014. California condor flight response in a variable meteorological and topographic environment. Co-PI with Jonathan Hall, Tricia Miller, Adam Duerr, David Brandes, Melissa Braham and Michael Lanzone. \$150,000.

US Bureau of Land Management – California State Office. 2014. Golden eagle demography: genetic approaches to population biology in the face of renewable energy development in the California desert. *Grant modification*. Co-PI with Andrew DeWoody, Jacqueline Doyle. \$144,598 (through Purdue University)

US National Park Service. 2014. Aerial surveys for golden eagles: identifying sources of bias and developing effective survey methods. \$63,590

California Department of Fish and Wildlife. 2014. Movement ecology of California Condors within the DRECP area. \$83,540. Co-PI with Adam Duerr, Jonathan Hall, Melissa Braham, Philip Turk & Tricia Miller.

Central Asian Regional Environmental Center/USAID. 2013. Fostering trans-boundary cooperation on small watercourses in central Asia. \$180,500. Co-PI with Gerald Iwan.

American Eagle Foundation. 2013. Local and Migratory Movements of Upper Midwest Wintering Bald Eagles. \$16,250. Co-PI with Trish Miller, Michael Lanzone and Adam Duerr.

US Fish and Wildlife Service. 2013. Lead (Pb) Isotope Ratios in Tissues of Golden Eagles in the Continental United States: An Investigation into Possible Sources of Contamination. \$200,008. Co-PI with Alan Harmata & Marco Restani.

US Bureau of Land Management – California State Office. 2013. Golden eagle home range, habitat use, demography and renewable energy development in the California desert (*Grant Modification*). Co-PI with David Brandes,

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- Adam Duerr, Philip Turk, Tricia Miller and Michael Lanzone. \$34,000.
- US Bureau of Land Management – California State Office. 2012. Golden eagle demography: genetic approaches to population biology in the face of renewable energy development in the California desert. *Grant modification*. Co-PI with Andrew DeWoody, Jacqueline Doyle. \$84,223, through Purdue University)
- Virginia Department of Game and Inland Fisheries. 2013. Distribution, differentiation and hybridization of king and clapper rails in eastern Virginia. \$419,368. Co-PI with Trish Miller, Adam Duerr, Jim Anderson, Amy Welsh, & Michael Lanzone.
- Virginia Department of Game and Inland Fisheries. 2013. Surveys for peregrine falcons in Western Virginia. \$76,483.
- Virginia Department of Game and Inland Fisheries. 2013. Demography, population size and habitat use of eastern golden eagles in Virginia. \$256,046. Co-PI with Adam Duerr & Trish Miller.
- Virginia Department of Game and Inland Fisheries. 2013. Assessing lead levels in avian scavengers in Virginia. Co-PI with Adam Duerr & Tricia Miller. \$266,480.
- Virginia Department of Game and Inland Fisheries. 2012. Bald eagle conservation and management in Virginia. Co-PI with Adam Duerr and Tricia Miller. \$295,000.
- US Bureau of Land Management – California State Office. 2012. Golden eagle demography: genetic approaches to population biology in the face of renewable energy development in the California desert. Co-PI with Andrew DeWoody, Jacqueline Doyle, Phil Turk, Adam Duerr, Tricia Miller, Michael Lanzone and David Brandes. \$126,000 (\$26,907 through WVU, \$99,093 through Purdue University).
- California Department of Fish and Game. 2012. Data collection and synthesis of current knowledge of golden eagles. Co-PI with Adam Duerr, Trish Miller, Phil Turk & David Brandes. \$255,000.
- US Bureau of Land Management – California State Office. Golden eagle home range, habitat use, demography and renewable energy development in the California desert (*Grant Modification*). Co-PI with David Brandes, Adam Duerr, Philip Turk, Tricia Miller and Michael Lanzone. \$54,390.
- RES America. 2012. Assessing Granite Wind for RES America. Co-PI with Trish Miller, Adam Duerr, and Phil Turk. \$41,440.
- USDA Forest Service, Northern Research Station. 2012. Avian response to fire. Co-PI with John Edwards & Tom Shuler. \$15,000. (*continuation of previous award from 2011*).
- WVU McIntyre-Stennis Program. 2011. Application of Novel Technologies and Approaches for Enhancing Wildlife Ecology and Conservation. \$4,000 (year II).
- International Association of Avian Trainers and Educators. 2012. Conservation ecology of the globally threatened red-footed falcon. Co-PI with Evgeny A. Bragin. \$2,000.
- Quebec Department of Wildlife and Natural Resources. 2012. Trapping and telemetry of golden eagles during winter in Pennsylvania. Co-PI with Tricia Miller & Michael Lanzone. \$10,000.
- US Bureau of Land Management – California State Office. 2011. Golden eagle home range, habitat use, demography and renewable energy development in the California desert. Co-PI with David Brandes, Adam Duerr, Philip Turk, Tricia Miller and Michael Lanzone. \$321,054.
- National Birds of Prey Trust. 2011. Conservation ecology of the globally threatened red-footed falcon (*Falco vespertinus*): migration, breeding and winter ecology (Year II). \$6,166.
- USDA Forest Service, Northern Research Station. 2011. Avian response to fire. Co-PI with John Edwards & Tom Shuler. \$25,000.
- WVU McIntyre-Stennis Program. 2011. Application of Novel Technologies and Approaches for Enhancing Wildlife Ecology and Conservation. \$4,000.
- Transportation Research Board of the National Academies. 2011. Pilot Test the Ecological Approaches to Environmental Protection Developed in Capacity Research Projects C06A and C06B. Co-PI with Jim Anderson, Walter Veselka, Michael Strager, Hodjat Ghadimi, Lian-Shin Lin, J. Todd Petty, Daniel Welsch, Todd Miller, Norse Angus, & Laura Conley-Reinhart 2011. \$360,628.
- National Birds of Prey Trust. Conservation ecology of the globally threatened red-footed falcon (*Falco vespertinus*): migration breeding and winter ecology. Co-PI with Evgeny Bragin. 2010. \$7,725.
- Virginia Department of Game and Inland Fisheries. Winter ecology and conservation of golden eagles in Virginia. Co-PI with Rob Brooks, Brady Porter, Mike Lanzone, Trish Miller & Maria Wheeler. 2010. \$104,300.
- US Department of Energy, 20% Wind by 2030: Overcoming the Challenges. Developing high-resolution spatial data of migration corridors for avian species of concern in regions of high potential wind development. Co-PI with Dave Brandes, Rob Brooks, Charles Maisonneuve, Andrew Mack, Trish Miller & Michael Lanzone. 2010. \$193,000.
- Kick Start Partnership Program. Keystone Innovation Zone Kick Start Grant. 2009. \$5,000.
- The Technology Collaborative. Development of a universal plug-and-play M2M platform. 2009. \$150,000.

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Civilian Research and Defense Foundation. Non-invasive ecology, monitoring and conservation of raptors in north-central Kazakhstan. Co-PI with Andrew DeWoody and Evgeny Bragin. 2009-2010. \$45,000.

Idea Foundry. Transformation Fellowship Program to Cellular Tracking Technologies, LLC. \$40,000.

Pennsylvania Wild Resource Conservation Program. Assessing Genetic Diversity of Pennsylvania's Eastern Golden Eagles: How Unique Are They? Co-PI with Brady Porter. 2008-2009. \$33,958.

West Virginia State Cooperative Grant Program. Assessing Genetic Diversity of West Virginia's Eastern Golden Eagles: How Unique Are They? Co-PI with Brady Porter. 2008-2009. \$8,059.

Pennsylvania State Wildlife Grant Program. Assessing risks of wind energy development for a priority "umbrella" species: Pennsylvania's special responsibility for conservation of eastern golden eagles. Co-PI with Dave Brandes, Trish Miller, Robert Mulvihill, Michael Lanzone, 2008-2010. \$70,000.

Innovation Works. Emerging Technology Assistance Program. Grant to Cellular Tracking Technologies, LLC, for product development. 2008. \$25,000.

Quebec Department of Wildlife and Natural Resources. Telemetry, home range, migration and management of birds of prey in the context of wind energy development. 2008. \$23,250.

Wild Bird Global Avian Influenza Network for Surveillance. Monitoring Avian Influenza within and across species in Kazakhstan. 2008. \$50,661.

Alexandria Zoological Park. Support for white-tailed sea eagle research. 2008. \$1,000.

Association of Zoos and Aquariums - Conservation Endowment Fund. Non-invasive genetic estimation of population size of critically endangered *Gyps* vultures in Asia. Co-PI with Yula Kapetanakos and Nancy Clum. 2007 - 2008. \$22,765.

Allegheny Plateau Audubon Society. GPS Telemetry of golden eagles in Pennsylvania. Co-PI with Trish Miller, Dave Brandes, Robert Mulvihill, Michael Lanzone, 2008. \$5,000

National Birds of Prey Trust. Molecular ecology and conservation of imperial eagles (*Aquila heliaca*) and white-tailed eagles (*Haliaeetus albicilla*) from Kazakhstan. Co-PI with Andrew DeWoody. 2007-2008. \$31,000.

Pennsylvania State Wildlife Grant Program. Assessing conservation needs of eastern golden eagles in Pennsylvania. Co-PI with Dave Brandes, Trish Miller, Robert Mulvihill, Michael Lanzone, 2007-2008. \$25,000.

Wild Bird Global Avian Influenza Network for Surveillance. Monitoring Avian Influenza within and across species in Kazakhstan. 2007. \$48,360.

National Geographic Society - Committee for Research and Exploration. Non-invasive genetic monitoring of the endangered Eastern Imperial Eagle in Kazakhstan. Co-PI with Andrew DeWoody, Evgeny Bragin and Jamie Rudnick. 2006. \$19,850.

Wildlife Conservation Society - International Programs. Ecology and conservation of a unique community of endangered eagles at the Naurzum Zapovednik, Kazakhstan. Co-PI with Evgeny A. Bragin. 2002: \$4,845; 2003: \$5,700; 2004: \$6,270; 2005: \$9,416; 2006: \$4,840; 2007: \$5,000.

Wildlife Conservation Society - International Programs. Status and conservation of vultures in south-eastern Kazakhstan. Co-PI with Sergei L. Sklyarenko. 2001-2002. \$8,875; 2003: \$5,300; 2004: \$5,830; 2005: \$5,744; 2006: \$5,700; 2007: \$5,000.

Wildlife Conservation Society - International Programs. Conservation and monitoring of vultures China. 2005: \$5,625.

Graduate College and Department of Biology, Arizona State University. Travel grant. 2001: \$1,000, 2002: \$514

Wildlife Conservation Society - International Programs, Research Fellowship Program. Ecology and conservation of a unique community of endangered eagles at the Naurzum Zapovednik, Kazakhstan. Co-PI with Evgeny A. Bragin. 2000-2001. \$11,650.

The Frank M. Chapman Memorial Fund, American Museum of Natural History. Integrating competition and predation in a unique community of endangered eagles in Kazakhstan. 2000. \$2,000.

Northwest Airlines - Travel Support for Research. 2000. \$125.

The Graduate College, Arizona State University. Graduate training in the biological sciences: preparing for the future. Co-PI with Dr. Thomas Dowling, Martin Gerrits, Lisa Dent, Jill Welter, Dr. Michael Moore and Dr. James Collins. 1999-2000. \$5,880.

Northwest Airlines - Travel Support for Research. 1999. \$125.

Biological Resources Division, US Geological Survey: Spatial and temporal relationships between habitats and primary prey of raptors in Kazakhstan. Co-PI with Andrew Smith. 1997-2000. \$22,327.

World Nature Association Grant. Conservation alternatives for endangered species management at the Naurzum Zapovednik, Kazakhstan. 1997. \$800.

The Frank M. Chapman Memorial Fund, American Museum of Natural History. Raptor conservation studies in a unique ecosystem in north-central Kazakhstan. 1997. \$2,000.

The International Osprey Foundation Endowment Fund Grant. Raptor conservation studies in a unique ecosystem in

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north-central Kazakhstan. 1997. \$1,000.
Russian & East European Studies Consortium Travel Grant, Arizona State University. 1997. \$500.
Hawk Mountain-Zeiss Raptor Research Award. Raptor conservation studies in a unique ecosystem in north-central Kazakhstan. 1997. \$1,000.
Graduate Research Support Program, Arizona State University. Modeling predator-prey dynamics and their interaction with landscape level processes in a unique system in Kazakhstan. 1997. \$2,000.
Hughes Student Research Grant, Oberlin College. 1991.

FOUNDATION AND PRIVATE DONOR FUNDING

2014: \$55,500 (Kazakhstan programs, support for students *4)
2013: \$63,300 (Grad student support *2, Research Support, Operating support – Avian Conservation Center of Appalachia, EGEWG support)
2012: \$42,320 (Golden Eagle & General Research Support, Support for student education, Kazakhstan Programs)
2011: \$25,850 (Golden Eagle Research Support, Research Support, Kazakhstan field station)
2010: \$25,000 (Research support, Kazakhstan field station)
2009: \$16,500 (Departmental research support, Kazakhstan field station, Urban peregrines)
2008: \$20,500 (Departmental research support, Kazakhstan field station, Urban peregrines)
2007: \$17,000 (Kazakhstan field station, Departmental research support, Urban peregrines)
2006: \$5,000 (Kazakhstan field station)

PEER-REVIEWED PUBLICATIONS (last 10 years)

63. Bragin, E.A., S.L. Sklyarenko & **T.E. Katzner**. 2014. Book review: Birds of Central Asia. The Wilson Journal of Ornithology. 126(3): 614-620.
62. Berl, J. L., J.W. Edwards, J.S. Bolsinger & **T.E. Katzner**. 2014. Red-headed woodpecker nest survival in northern New York. Wilson Journal of Ornithology. *In press*.
61. Kapetanacos, Y.A., I.J. Lovette, **T.E. Katzner**. 2014. Development of microsatellite markers and a restriction endonuclease digest assay for non-invasive sampling of endangered Oriental White-rumped, Slender-billed and Red-headed Vultures. Conservation Genetics Resources. 6(3): 539 – 542. DOI 10.1007/s12686-014-0186-8.
60. Doyle, J.M., **T.E. Katzner**, P.H. Bloom, Y. Ji., B.K. Wijayawardena & J.A. DeWoody. 2014. The genome sequence of a widespread apex predator, the golden eagle (*Aquila chrysaetos*). PLoS ONE 9(4): e95599. doi:10.1371/journal.pone.0095599
59. Duerr, A.E., T. Miller, M. Lanzone, D. Brandes, J. Cooper, K. O'Malley, C. Maisonneuve, J. Tremblay, & **T. Katzner**. 2014. Stereotyped flight response of slope-soaring birds to seasonal variation in thermal generation. Functional Ecology. *In second revision*.
58. Gordon, I.J. D.M. Evans, T.W.J. Garner, **T. Katzner**, M.E. Gompper, R. Altwegg, T.A. Branch, J.A. Johnson & N. Pettorelli. 2014. Enhancing communication between conservation biologists and conservation practitioners: Letter from the Conservation Front Line. Animal Conservation. 17: 1-2. doi:10.1111/acv.12097.
57. **Katzner, T.E.** D. S. Jackson, J. Ivy, E.A. Bragin & J. A. DeWoody. 2014. Variation in offspring sex ratio of a sexually dimorphic, long-lived raptor, the Eastern Imperial Eagle. Ibis. 156: 395-403.
56. Miller, T.M. R.P. Brooks, M. Lanzone, D. Brandes, J. Cooper, K. O'Malley, C. Maisonneuve, J. Tremblay, A. Duerr & **T. Katzner**. 2014. Assessing risk to birds from industrial wind energy development via paired resource selection models. Conservation Biology, 28:745 – 755. doi: 10.1111/cobi.12227.
55. **Katzner, T.**, Johnson, J.A., Evans, D.M., Garner, T.W.J., Gompper, M.E., Altwegg, R., Branch, T.A., Gordon, I.J. & Pettorelli, N. 2013. Challenges and opportunities for animal conservation from renewable energy development. Animal Conservation. 16:367 – 369. doi:10.1111/acv.12067
54. Pettorelli, N., D.M. Evans, T.W.J. Garner, T. Katzner, M.E. Gompper, R. Altwegg, T.A. Branch, J.A. Johnson, K. Acevedo-Whitehouse, L. DaVolls, E. Rantanen & I.J. Gordon. 2013. Addressing gender imbalances in *Animal Conservation*. Animal Conservation. 16:131-133. doi:10.1111/acv.12032.
53. Al Hasani, I.K., J.F. Azar, K. Nishimura, Z.S. Amr & **T. Katzner**. 2012. Distribution, diet and winter ecology of the Imperial Eagle *Aquila heliaca* in Jordan. Vertebrate Zoology. 62(2): 273-280.
52. Latta, S.C., L.J. Musher, K.N. Latta & **T.E. Katzner**. 2013. Influence of human population size and the built environment on avian assemblages in urban green spaces. Urban Ecosystems. 16: 463 - 479. doi: 10.1007/s11252-012-0282-z.
51. **Katzner, T.E.** & N. J. Collar. 2013. Are insular populations of the Philippine falconet (*Microhierax erythrogenys*)

- steps in a cline? *The Condor*, 115: 576 - 583.
50. Брагин Е.А., **Катцнер Т.**, Брагин А.Е. 2012. Летние скопления крупных пернатых хищников и проблема оценки их численности// Труды Мензбировского орнитологического общества, том I: Материалы XIII Международной орнитологической конференции Северной Евразии. - Махачкала: АЛЕФ, С. 234-240. [Summer accumulations of birds of prey and the problem of estimating their number. Proceedings Menzbier Ornithological Society, Volume I: Proceedings of the XIII International Ornithological Conference of North Eurasia. - Makhachkala: Pp. 234-240]
49. Evans, D.M., P. Barnard, L.P. Koh, C.A. Chapman, R. Altwegg, T.W.J. Garner, M.E. Gompper, I.J. Gordon, **T.E. Katzner** & N. Pettorelli. 2012. Funding nature conservation: who pays? *Animal Conservation*. 15: 215-216.
48. Брагин, Е.А. & **T.E. Katzner**. 2012. Вторая находка гнезда лутка *Mergus albellus* в Наурзумском бору. *Русский орнитологический журнал*, Том 21, Экспресс-выпуск 743: 724-725. [Second nest record of Smew *Mergus albellus* in the Naurzum forest. *Russian Ornithological Journal, Express Issue*. 21(743):724-725].
47. Sklyarenko, S.L. & **T.E. Katzner**. 2012. Состояние популяций хищных птиц-падальщиков в Казахстане [The status of populations of vultures in Kazakhstan]. Орнитологический вестник Казахстана и Средней Азии.[Ornithological News of Kazakhstan and Middle Asia.] Volume 1. Almaty, 2012. 248 pp.
46. **Katzner, T.**, D. Brandes, T. Miller, M. Lanzone, C. Maisonneuve, J. Tremblay, R. Mulvihill & G. Merovich. 2012. Topography drives migratory flight altitude of golden eagles: implications for on-shore wind energy development. *Journal of Applied Ecology*. 49: 1178-1186. doi: 10.1111/j.1365-2664.2012.02185.x
45. Lanzone, M., T. Miller, P. Turk, D. Brandes, C. Halverson, C. Maisonneuve, J. Tremblay, J. Cooper, K. O'Malley, R. Brooks, & **T. Katzner**. 2012. Flight responses by a migratory soaring raptor to changing meteorological conditions. *Biology Letters*, 8:710-713.
44. Duerr, A., T. Miller, M. Lanzone, D. Brandes, J. Cooper, K. O'Malley, C. Maisonneuve, J. Tremblay, **T. Katzner**. 2012. Testing an emerging paradigm in migration ecology shows surprising differences in efficiency between flight modes. *PLoS ONE* 7(4): e35548. doi:10.1371/journal.pone.0035548
43. Gordon, I.J., K. Acevedo-Whitehouse, R. Altwegg, T.W.J. Garner, M.E. Gompper, **T.E. Katzner**, N. Pettorelli & S. Redpath. 2012. What the 'food security' agenda means for animal conservation in terrestrial ecosystems. *Animal Conservation*. 15: 115-116.
42. Branch, T.A., J.D. Austin, K. Acevedo-Whitehouse, I.J. Gordon, M.E. Gompper, **T.E. Katzner** & N. Pettorelli. 2012. Fisheries conservation and management: finding consensus in the midst of competing paradigms. *Animal Conservation*. 15: 1-3.
41. **Katzner, T.E.**, M. Wheeler, J.J. Negro, Y. Kapetanakis, J.A. DeWoody, M. Horvath & Irby Lovette. 2012. To pluck or not to pluck: scientific methodologies should be carefully chosen, not "one size fits all." *Journal of Avian Biology*. 43: 15-17.
40. **Katzner, T.**, B.W. Smith, T. A. Miller, D. Brandes, J. Cooper, M. Lanzone, D. Brauning, C. Farmer, S. Harding, D. Kramar, C. Koppie, C. Maisonneuve, M. Martell, E.K. Mojica, C. Todd, J.A. Tremblay, M. Wheeler, D.F. Brinker, T.E. Chubbs, R. Gubler, K. O'Malley, S. Mehus, B. Porter, R.P. Brooks, B.D. Watts & K.L. Bildstein. 2012. Status, biology and conservation priorities for North America's eastern Golden Eagle (*Aquila chrysaetos*) population. *The Auk*. 129(1): 168-176. Cover photo.
39. Borher, G., D. Brandes, J. Mandel., K. Bildstein, T. Miller, M. Lanzone, **T. Katzner**, C. Maisonneuve, J. Tremblay. 2012. Estimating updraft velocity components over large spatial scales: Contrasting migration strategies of golden eagles and turkey vultures. *Ecology Letters*. 15: 96-103. doi: 10.1111/j.1461-0248.2011.01713.x
38. **Katzner, T.E.**, J.D. Winton, F.A. McMorris & D. Brauning. 2012. Dispersal, band recovery and causes of death in a reintroduced and rapidly growing population of Peregrine Falcons. *Journal of Raptor Research*. 46(1): 75-83.
37. Donnelly, R.E., **T. Katzner**, I.J. Gordon, M.E. Gompper, S. Redpath, T.W.J. Garner, R. Altwegg, D.H. Reed, K. Acevedo-Whitehouse & N. Pettorelli. 2011. Putting the eco back in ecotourism. *Animal Conservation*. 14: 325-327.
36. **Katzner, T.E.**, J.R. Ivy, E.A. Bragin, E.J. Milner-Gulland & J.A. DeWoody. 2011. Cryptic population size and conservation: consequences of making the unknown known. *Animal Conservation*, 14:340-341.
35. **Katzner, T.E.**, J.R. Ivy, E.A. Bragin, E.J. Milner-Gulland & J.A. DeWoody. 2011. Conservation implications of inaccurate estimation of cryptic population size. *Animal Conservation*. 14:328-332. Feature article, cover photo.
34. Reyers, B., N. Pettorelli, **T. Katzner**, M. Gompper, S. Redpath, T. Garner, R. Altwegg, D. Reed & I. Gordon.

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2010. Animal conservation and ecosystem services: garnering the support of mightier forces. *Animal Conservation*. 13: 523 – 525.
33. Iverson, S., A. Gavrilov, **T. Katzner**, J. Takekawa, S. Newman, T. Miller, W. Hagemeijer, B. Sivananthaperumal, T. Mundkur, C. DeMattos & L. Ahmed. 2010. Migratory movements of waterfowl in Central Asia: implications for avian influenza transmission by wild birds. *Ibis*. 153: 279–292
32. Pettorelli, N., I. J. Gordon, **T. Katzner**, M. E. Gompper, K. Mock, S. Redpath, T. W. J. Garner & R. Altwegg. 2010. Protected areas: the challenge of maintaining a strong backbone for conservation strategies worldwide. *Animal Conservation* 13: 333–334.
31. Jones, J.P.G., B. Collen, P. Baxter, P. Bubbs, J. Illian, **T. Katzner**, A. Keane, J. Loh, E. McDonald-Madden, E. Nicholson, H. Pereira, H. Possingham, A. Pullin, A. Rodrigues, V. Ruiz-Gutierrez, M. Sommerville, E.J. Milner-Gulland. 2010. The ‘why’, ‘what’ and ‘how’ of global biodiversity indicators: looking beyond 2010. *Conservation Biology*. 25(3): 450–457.
30. Terraube, J., Arroyo, B.E., Mougeot, F., **Katzner, T.E.** and E.A. Bragin. 2010. Breeding biology of the Montagu’s harrier (*Circus pygargus*) in north-central Kazakhstan. *Journal of Ornithology*. 151 (3): 713–722.
29. Blackburn, T.M., N. Pettorelli, **T. Katzner**, M. E. Gompper, K. Mock, T. W. J. Garner, R. Altwegg, S. Redpath & I. J. Gordon. 2010. Dying for conservation: eradicating invasive alien species in the face of opposition. *Animal Conservation*. 13:227–228.
28. Gordon, I.J., N. Pettorelli, **T. Katzner**, M. E. Gompper, K. Mock, S. Redpath, T. W. J. Garner & R. Altwegg. 2010. International year of biodiversity: missed targets and the need for better monitoring, real action and global policy. *Animal Conservation*. 13:113–114.
27. Penteriani, V., N. Pettorelli, I.J. Gordon, **T. Katzner**, K. Mock, S. Redpath, R. Altwegg & M.E. Gompper. 2010. New European Union fisheries regulations could benefit conservation of marine animals. *Animal Conservation*. 13:1–2.
26. Pettorelli, N., **T. Katzner**, I. Gordon, T. Garner, K. Mock, S. Redpath and M. Gompper. 2009. Possible consequences of the Copenhagen climate change meeting for conservation of animals. *Animal Conservation* 12: 503–504.
25. Brandes, D., Miller, T.M. and **T. Katzner**. 2009. Wind Power Mortality. In: Majumdar, S.K., ed., Avian Ecology and Conservation: A Pennsylvania Focus with National Implications. Pennsylvania Academy of Sciences. pp. 300 – 303.
24. Miller, T.M., Brandes, D., Lanzone, M., Ombalski, D., Maisonneuve, C. and **T. Katzner**. 2009. Golden eagle migration and winter behavior in Pennsylvania. In: Majumdar, S.K., ed., Avian Ecology and Conservation: A Pennsylvania Focus with National Implications. Pennsylvania Academy of Sciences. pp 111 - 125.
23. Rudnick, J.A., **T.E. Katzner**, and J.A. DeWoody. 2009. Genetic Analyses of Noninvasively Collected Feathers Can Provide Insights into Avian Demography and Behavior. in: Aronoff, J.B., ed. Handbook of Nature Conservation: Global, Environmental and Economic Issues. Nova Publishers. pp.181–197.
22. Poulakakis, N., A. Antoniou, G. Mantziou, A. Parmakelis, T. Skartsi, D. Vasilakis, J. Elorriaga, J. De La Puente, A. Gavashelishvili, M. Ghasabyan, **T. Katzner**, M. Mcgrady, N. Batbayar, M. Fuller and T. Natsagdorj. 2008. Population structure, diversity, and phylogeography in the near-threatened Eurasian black vultures *Aegypius monachus* (Falconiformes; Accipitridae) in Europe: insights from microsatellite and mitochondrial DNA variation. *Biological Journal of the Linnean Society*. 95:859–872.
21. Rudnick, J.A., **T.E. Katzner**, E.A. Bragin, and J.A. DeWoody. 2008. A non-invasive genetic evaluation of population size, natal philopatry, and roosting behavior of non-breeding eastern imperial eagles (*Aquila heliaca*) in central Asia. *Conservation Genetics* 9: 667–676.
20. Rudnick, J.A., **T.E. Katzner**, E.A. Bragin, and J.A. DeWoody. 2007. Species identification of birds through genetic analysis of naturally shed feathers. *Molecular Ecology Notes* 7: 757–762.
19. Ryabtsev, V. and **T. Katzner**. 2007. Severe declines of Eastern Imperial Eagle *Aquila heliaca* populations in the Baikal region, Russia: a modern and historical perspective. *Bird Conservation International* 17:197–209.
18. **Katzner, T.**, E.J. Milner-Gulland and E. Bragin. 2007. Using modeling to improve monitoring of structured populations: are we collecting the right data? *Conservation Biology* 21(1): 241–252.
17. Kenward, R., **T. Katzner**, M. Wink, V. Marcström, S. Walls, M. Karlbom, R. Pfeffer, E. Bragin, K. Hodder, and A. Levin. 2007. Rapid sustainability modelling for raptors by radio-tagging and DNA-fingerprinting. *Journal of Wildlife Management* 71(1): 238–245.
16. **Katzner, T.**, E. Bragin, S. Knick and A. Smith. 2006. Spatial structure in the diet of imperial eagles *Aquila heliaca* in Kazakhstan. *Journal of Avian Biology* 37: 594–600.
15. **Katzner, T.**, E. Bragin and E.J. Milner-Gulland. 2006. Modelling populations of long-lived birds of prey for

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- conservation: a study of Imperial Eagles (*Aquila heliaca*) in Kazakhstan. *Biological Conservation* 132: 322-335.
14. Rudnick, J.A., **T.E. Katzner**, E.A. Bragin, O.E. Rhodes, Jr., and J.A. DeWoody. 2005. Using naturally shed feathers for individual identification, genetic parentage analyses, and population monitoring in an endangered Eastern imperial eagle (*Aquila heliaca*) population from Kazakhstan. *Molecular Ecology* 14: 2959-2967.
13. **Katzner, T.** 2005. Corruption - a double-edged sword for conservation? A response to Smith and Walpole. *Oryx* 39(3):260-262.
12. **Katzner, T.**, S. Robertson, B. Robertson, J. Klusarits, K. McCarty, and K.L. Bildstein. 2005. Increasing the efficiency of conservation efforts: an example using a nest box program for American kestrels (*Falco sparverius*). *Journal of Field Ornithology* 76(3):217-226.
11. **Katzner, T.**, E. Bragin, S. Knick and A. Smith. 2005. Relationship between demographics and dietary specificity of Imperial Eagles in Kazakhstan. *Ibis* 147:576-586.
10. Busch, J.D., **T. Katzner**, E. Bragin and P. Keim. 2005. Tetranucleotide microsatellites for *Aquila* and *Haliaeetus* eagles. *Molecular Ecology Notes* 5:39-41.
9. Leppert, L.L., S. Layman, E.A. Bragin, and **T.E. Katzner**. 2004. Hemoparasite prevalence in Imperial Eagles (*Aquila heliaca*), Steppe Eagles (*Aquila nipalensis*), and White-tailed Sea Eagles (*Haliaeetus albicilla*) from Kazakhstan. *Journal of Wildlife Diseases*. 40(2): 316-319.
8. **Katzner, T.E.**, C.H. Lai, J.D. Gardiner, J.M. Fogglin, D. Pearson and A.T. Smith. 2004. Adjacent nesting by Bearded Vulture (*Gypaetus barbatus*) and Himalayan Griffon Vulture (*Gyps himalayensis*) on the Tibetan Plateau, China. *Forktail*. 20: 94-96.
- (7 earlier entries)

BOOKS, BOOK CHAPTERS, BOOK EDITING

5. Watson, J. 2011. 2nd Edition. The Golden Eagle. *T & A.D. Poyser*. **Contributing author/editor.**
4. Tingay, R.E. and **T.E. Katzner**, eds. 2010. The Eagle Watchers. *Cornell University Press*.
3. **Katzner, T.E.** and R. E. Tingay. 2010. Eagle Diversity, Ecology and Conservation. *In*. Tingay, R.E. and **T.E. Katzner**, eds. 2010. The Eagle Watchers. *Cornell University Press*.
2. **Katzner, T.E.** 2010. Eastern Imperial Eagle. *In*: Tingay, R.E. and **T.E. Katzner**, eds. 2010. The Eagle Watchers. *Cornell University Press*.
1. **Katzner, T.E.** 2008. Downward Spiral: Catastrophic Decline of South Asia's Vultures. pp. 139 – 145 *In*: Fern, E. & Redford, K. H., eds. 2008 – 2009 *State of the Wild: a Global Portrait of Wildlife, Wildlands and Oceans*. Wildlife Conservation Society, New York, NY & Island Press, Washington DC.

CONFERENCE PROCEEDINGS & PUBLISHED REPORTS (last 10 years)

20. DRECP ISP. 2012. Final report: Independent science review for the California Desert Renewable Energy Conservation Plan (DRECP). [Abella, S., D. Bedford, T. Beedy, K. Berry, D. Cayan, L. DeFalco, S. Haase, **T. Katzner**, K. Nussear, S. Schwarzbach, W. Spencer, D. Stoms, J. Stritholt, T. Weller, J. Yee]. Prepared for Renewable Energy Action Team for the California Desert Renewable Energy Conservation Plan. 82pp.
19. Bragin, E.A., T. Katzner & A.E. Bragin. 2012. Population size, age structure, mortality and spatial relations of the population of Imperial Eagle *Aquila heliaca* at forest patches of Kostanay Region. // Birds of Prey in the dynamic environment of the third Millennium: status and prospects. Proceeding of the 6th International Conference on Birds of Prey and Owls of Northern Eurasia. Kryvyi Rih, 27-30 September 2012. Pp.131-141.
18. **Katzner, T.**, P. Turk, A. Duerr, D. Brandes, T. Miller, M. Lanzone. 2012. Golden Eagle Home Range, Habitat Use, Demography and Renewable Energy Development in the California Desert – Interim Report to the Bureau of Land Management, California State Office.
17. Брагин Е.А., **Катцнер Т.**, Брагин А.Е. 2012. Пространственные связи популяции орла-могильника *Aquila heliaca* островных лесов Костанайской области [The spatial relations of the Imperial Eagle *Aquila heliaca* population of forest patches of Kostanay Region]. Proceedings of the second international conference on biodiversity of Asian steppes. Kostanay, Kazakhstan, 5-6 June 2012.
16. **Katzner, T.E.** J.A.R. Ivy, E.A. Bragin, E.J. Milner-Gulland & J.A. DeWoody. 2012. How many eagles are at Naurzum? Proceedings of the second international conference on biodiversity of Asian steppes. Kostanay, Kazakhstan, 5-6 June 2012.
15. Maisonneuve, C., T. Miller, J.A. Tremblay, **T. Katzner**, M. Lanzone and D. Brandes. 2011. Differential vulnerability of Bald and Golden Eagles to wind turbine collision on breeding grounds in Québec. Proceedings of the Conference on Wind energy and Wildlife impacts, 2-5 May 2011, Trondheim, Norway.

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- Roel May and Kjetil Bevanger (eds). NINA Report 693.
14. Tremblay, J.A., C. Maisonneuve, **T. Katzner**, T. Miller, M. Lanzone and D. Brandes. 2011. A case study of the interaction between landscape configuration and habitat use at a wind facility by golden eagles (*Aquila chrysaetos*). Proceedings of the Conference on Wind energy and Wildlife impacts, 2-5 May 2011, Trondheim, Norway. Roel May and Kjetil Bevanger (eds). NINA Report 693.
13. Maisonneuve, C., T. Miller, M. Lanzone, **T. Katzner**. 2009. Studies on threatened species of birds of prey and wind farms in eastern North America. Birds of Prey and Wind Farms: Analysis of Problems and Possible Solution. Documentation of an international workshop in Berlin, 21st and 22nd October 2008.
12. Sklyarenko, S. and T. Katzner. 2008. The black vulture, *Aegypius monachus*, in central Asia. Proceedings of the International Symposium on the Black Vulture *Aegypius monachus*. Cordoba, Spain.
11. Bragin, E.A., J. Rudnik, **T. Katzner**, A. DeWoody. 2008. New methods for raptors research: results of research on the imperial eagle in north Kazakhstan. Research and conservation of birds of prey of northern Eurasia. Materials of the 5th international conference on birds of prey of northern Eurasia. Ivanovo, 4-7 February 2008. Ivanovo State University Press. Edited by V.M.Galushin, V.N.Melnikov, A.I.Shretaikov, D.I.Chudnenko. 360 p. In Russian.
10. Bragin, A. **T. Katzner**, P. Sharpe, D. Garselon, A. E. Bragin. 2008. Results of research on imperial eagle migrations from northern Kazakhstan. Research and conservation of birds of prey of northern Eurasia. Materials of the 5th international conference on birds of prey of northern Eurasia. Ivanovo, 4-7 February 2008. Ivanovo State University Press. Edited by V.M.Galushin, V.N.Melnikov, A.I.Shretaikov, D.I.Chudnenko. 360 p. In Russian.
9. Rudnick, J.A., **T. E. Katzner**, and J.A. DeWoody. 2008. Genetic analyses of noninvasively collected feathers can provide new insights into avian demography and behavior. Biological Conservation Research Trends.
8. **Katzner, T.**, E.J. Milner-Gulland and E. Bragin. 2007. Using modeling to improve monitoring of eagles: are we collecting the right data? International Scientific Conference "Biological Diversity of Asian Steppe," Kostanay, Kazakhstan.
7. Risebrough, R.W., M.A. Virani, **T.E. Katzner** and J.W. Duckworth. 2006. Collapse of vulture populations in southern Asia. In: Proceedings of the 23rd International Ornithological Congress, Beijing, China. Acta Zoologica Sinica. 52(supplement): 42-43.
6. **Katzner, T.**, A. Gavashelishvili, S. Sklyarenko, M. McGrady, J. Shergalin, and K. Bildstein. 2004. Population and Conservation Status of Griffon Vultures in the Former Soviet Union. Pp. 235-240. In: Chancellor, R. D. & B.-U. Meyburg eds. Raptors Worldwide: Proceedings of the WWGBP - 6th World Conference on Birds of Prey and Owls, Budapest, Hungary.
5. Bragin, E. and **T. Katzner**. 2004. Population trends and nesting success of Imperial Eagle, Golden Eagle and White-tailed Sea Eagle in north-west Kazakhstan in 1990-2002. Pp. 551-556. In: Chancellor, R. D. & B.-U. Meyburg eds. Raptors Worldwide: Proceedings of the WWGBP - 6th World Conference on Birds of Prey and Owls, Budapest, Hungary.
- (4 earlier entries)

PAPERS PRESENTED, WORKSHOPS ATTENDED & SESSIONS ORGANIZED OR CHAIRED (last 10 years)

140. Mallon, J., **T. Katzner** and K. Bildstein. 2014. Non-migratory flight response explains inter-specific variation in soaring flight behavior of New World Vultures. Wilson Ornithological Society – Association of Field Ornithologists Annual Meeting, Newport, RI.
139. Wheeler, M., B Porter and **T. Katzner**. 2014. The genetics of conservation translocations: a tale of two eagles. Wilson Ornithological Society – Association of Field Ornithologists Annual Meeting, Newport, RI.
138. Slover, C. and **T. Katzner**. 2014. Whip-poor-wills are associated with the interface of forest-agriculture habitat in rural West Virginia. Wilson Ornithological Society – Association of Field Ornithologists Annual Meeting, Newport, RI.
137. Dennhardt, A., **T. Katzner**, A. Duerr, G. Merovich, and D. Brandes. 2014. Modeling Migration and Citizen-Science Data to Estimate Golden Eagle (*Aquila chrysaetos canadensis*) Abundance in Eastern North America: Are Present Estimates Too High or Low? Wilson Ornithological Society – Association of Field Ornithologists Annual Meeting, Newport, RI.
136. **Invited Expert**. 2014. American Wind Wildlife Institute Innovative Technologies Workshop. Charlotte, NC.
135. **Katzner, T.E.** 2014. Developing high-resolution spatial data of migration corridors for avian species of concern in regions of high potential wind development. US Department of Energy: Wind Power Peer Review,

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Arlington, VA.

134. **Session Organizer:** Golden eagles in California and Nevada: Status, behavior and movements and protection. Desert Tortoise Council, 39th Annual Meeting & Symposium. Ontario, CA. Oral presentation.
133. Duerr, A.E., T.A. Miller, M. Braham & **T. Katzner**. 2014. Flight behavior of desert golden eagles. Desert Tortoise Council, 39th Annual Meeting & Symposium. Ontario, CA. Oral presentation.
132. **Katzner, T.E.**, A. Duerr, T. Miller & M. Braham. 2014. Movements of eagles in the California desert. Desert Tortoise Council, 39th Annual Meeting & Symposium. Ontario, CA. Oral presentation.
131. Doyle, J. **T. Katzner**, P. Bloom, Y. Ji., B. Wijayawardena & A. DeWoody. 2014. Genome sequence of a California golden eagle: foundation of a new tool for wildlife management. The Western Section of The Wildlife Society 2014 Annual Meeting. Reno, NV. Oral presentation.
130. Weldy, M. T. Miller, S.R. Wood, M. Strager & **T. Katzner**. 2014. Using public data and satellite imagery to construct natural resource management databases: wind turbine installations in Nevada and California. The Western Section of The Wildlife Society 2014 Annual Meeting. Reno, NV. Poster presentation.
129. **Katzner, T.**, D. Nelson, M. Braham, J. Doyle, P. Bloom, T. Miller, A. Duerr & A. DeWoody. 2014. Origins of eagles killed at the Altamont Pass Wind Resource Area. The Western Section of The Wildlife Society 2014 Annual Meeting. Reno, NV. Oral presentation.
128. Braham, M., A. Duerr, T. Miller, M. Lanzone, D. Brandes & **T. Katzner**. 2014. Year-round home range of Mojave golden eagles: interpreting the scale of threat from renewable energy development. The Western Section of The Wildlife Society 2014 Annual Meeting. Reno, NV. Oral presentation.
127. **Katzner T.** & A. Duerr. 2014. Desert eagles and renewable energy. California – Nevada Golden Eagle Working Group Meeting. Reno, NV. Oral presentation.
126. Doyle JM, **Katzner TE**, Bloom PH, Ji Y, Wijayawardena BK, Nelson D and JA DeWoody. 2014. Genetic and genomic insights into the biology of the golden eagle. Purdue University Ecolunch, West Lafayette, Indiana. Oral presentation.
- 125. Workshop Organizer:** Eastern Golden Eagle Working Group, Second Meeting. Sainte-Anne-des-Monts, Quebec, Canada, 10-13 July 2012.
124. Doyle JM, **Katzner TE**, Bloom PH, Ji Y, Wijayawardena BK and JA DeWoody. 2013. The genome sequence of a widespread apex predator, the golden eagle (*Aquila chrysaetos*). 11th Annual Ecological Genomics Symposium, Kansas City, Kansas. Oral presentation.
123. Behmke, S., J. Fallon, A. Duerr & T. Katzner. 2013. Chronic Lead Poisoning is Epidemic in Obligate Scavengers in Eastern North America. Worldwide Raptor Conference. Bariloche, Argentina. Oral presentation.
122. Dennhardt, A., T. Katzner, A. Duerr, G. Merovich & D. Brandes. 2013. Modeling Migration Counts to Estimate Abundance: a Population Estimate for Golden Eagles (*Aquila chrysaetos canadensis*) in eastern North America. Worldwide Raptor Conference. Bariloche, Argentina. Oral presentation.
121. Miller, T.A., R.P. Brooks, M.J. Lanzone, D. Brandes, C. Maisonneuve, J.A. Tremblay, J. Cooper, K. O'Malley, A.E. Duerr, T.E. Katzner. 2013. Biotic and Abiotic Factors Influencing Directness of Migratory Flight Paths of Golden Eagles (*Aquila chrysaetos*) in Eastern North America are Scale Dependent. Worldwide Raptor Conference. Bariloche, Argentina. Oral presentation.
120. Lanzone, M.J., P. J. Turk, T.A. Miller, A. Duerr, D. Brandes, J. Cooper, J. Tremblay, C. Maisonneuve, and T. Katzner. 2013. Subsidized Lift in Migratory Flight of Golden Eagles (*Aquila chrysaetos*). Worldwide Raptor Conference. Bariloche, Argentina. Oral presentation.
119. Nelson, D.M., **T. Katzner**, T.A. Miller, A.E. Duerr, J. Cooper, M. Lanzone, M. Wheeler, and D. Brandes. 2013. Assessing the movements and diets of golden eagles in eastern North America using stable isotope and telemetry data. Ecological Society of America annual meeting- Minneapolis, MN.
118. Slover, C. & **T. Katzner**. 2013. Impacts of prescribed burning on avian community structure in the central Appalachians. WVU-Davis College Graduate Student Research Symposium, Morgantown, WV
117. Dennhardt, A., **T. Katzner**, A. Duerr, G. Merovich & D. Brandes. 2013. Modeling migratory flight routes of Golden Eagles (*Aquila chrysaetos*) in variable meteorological and topographic landscapes. WVU-Davis College Graduate Student Research Symposium, Morgantown, WV
116. Chidester, R., Turk, P., **Katzner, T.**, Duerr, A., Miller, T., and Lanzone, M. 2013. 'Using a Logistic Model to Assess Misclassification of Predicted Flight of Golden Eagles. Poster, Spring Banquet of the Pittsburgh Chapter of the American Statistical Association, Pittsburgh, PA.
- 115. Katzner, T.**, P. Turk, A. Duerr, T. Miller, M. Lanzone, J. Cooper, D. Brandes, C. Maisonneuve & J. Tremblay. 2013. Subsidized lift in migratory flight of golden eagles. Wilson Ornithological Society Annual Meeting, Williamsburg, VA.

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114. Duerr, A., T. Miller, M. Lanzone, D. Brandes, J. Cooper, K. O'Malley, C. Maisonneuve, J. Tremblay & **T. Katzner**. 2013. Meteorological drivers of soaring migratory flight of golden eagles in eastern North America. Wilson Ornithological Society Annual Meeting, Williamsburg, VA.
113. Dennhardt, A., T. Katzner, A. Duerr, G. Merovich & D. Brandes. 2013. Modeling migratory flight routes of raptors in variable meteorological and topographic landscapes. Wilson Ornithological Society Annual Meeting, Williamsburg, VA.
112. Wheeler, M., B. Porter & **T. Katzner**. 2013. The genetic impact of translocations and reintroductions: a tale of two eagles. Wilson Ornithological Society Annual Meeting, Williamsburg, VA.
111. Slover, C. & **T. Katzner**. 2013. Impacts of prescribed burning on avian community structure in the central Appalachians. Wilson Ornithological Society Annual Meeting, Williamsburg, VA. *poster presentation*.
110. **Katzner, T.E.**, A.E. Duerr, T.A. Miller, M.J. Lanzone, D. Brandes & P. Turk. 2012. Monitoring Seasonal Movements and Ranging Behavior Of Golden Eagles in the Context of Energy Development. California-Nevada Golden Eagle Working Group Symposium: distribution, abundance, and population status of golden eagles in California and Nevada, Sacramento, CA.
109. **Katzner, T.E.**, A.E. Duerr, D. Brandes, T.A. Miller, M.J. Lanzone, C. Maisonneuve, J.A. Tremblay, R. Mulvihill, G. Merovich, K. O'Malley, J. Cooper. 2012. Meteorological and topographic drivers of migratory flight of golden eagles: implications for wind energy development. Oral Presentation. National Wind Coordinating Collaborative Research Meeting. Denver, CO, USA.
108. Miller, T.A., R.P. Brooks, M.J. Lanzone, D. Brandes, C. Maisonneuve, J.A. Tremblay, J. Cooper, K.O'Malley, A.E. Duerr, **T.E. Katzner**. 2012. Competing resource selection modeling predicts risk for preventing and mitigating impacts to flying birds from industrial wind energy developments. Oral Presentation. National Wind Coordinating Collaborative Research Meeting. Denver, CO, USA.
107. Duerr, Adam E., T.A. Miller, M.J. Lanzone, D. Brandes, J. Cooper, C. Maisonneuve, J. Tremblay, P. Turk, K. O'Malley, R.P. Brooks, **T. Katzner**. 2012. Golden eagles in eastern North America: Population status and habitat use relative to wind energy development. The Wildlife Society 19th Annual Conference. Portland OR. 17 October.
106. Kapetanacos, Y., **T. Katzner**, & I. Lovette. 2012. Filling in the gaps: using non-invasive genetic mark-recapture to develop a comprehensive demographic assessment of critically endangered vultures in Cambodia. North American Ornithological Conference, Vancouver, BC, 14-18 August 2012.
105. Miller, T., R. Brooks, **T. Katzner**, M. Lanzone, C. Maisonneuve, J. Tremblay, J. Cooper & K. O'Malley. 2012. Seasonal and intraspecific drivers of movement ecology of a migratory avian predator. North American Ornithological Conference, Vancouver, BC, 14-18 August 2012.
104. Duerr, A.E., T. Miller, M. Lanzone, D. Brandes, J. Cooper, K. O'Malley, C. Maisonneuve, J. Tremblay & **T. Katzner**. 2012. Weather drives migratory flight behavior of golden eagles: implications for understanding wind-wildlife interactions and climate change effects on migratory behavior. North American Ornithological Conference, Vancouver, BC, 14-18 August 2012.
103. **Katzner, T.**, D. Brandes, T. Miller, M. Lanzone, C. Maisonneuve, J. Tremblay, B. Mulvihill & G. Merovich. 2012. Topography drives migratory flight altitude of golden eagles: implications for wind energy development. North American Ornithological Conference, Vancouver, BC, 14-18 August 2012.
102. Wheeler, M., **T. Katzner** & B. Porter. 2012. Assessing the genetic diversity and distinctiveness of eastern North American golden eagles: long-term conservation impacts of exotic introductions on a small native population. North American Ornithological Conference, Vancouver, BC, 14-18 August 2012.
101. Tremblay, J. C. Maisonneuve, **T. Katzner**, T. Miller, M. Lanzone, D. Brandes. 2012. A case study of the interaction between landscape configuration and habitat use at a wind facility by golden eagles (*Aquila chrysaetos*). North American Ornithological Conference, Vancouver, BC, 14-18 August 2012.
100. **Workshop Organizer:** Eastern Golden Eagle Working Group, Second Meeting. Sainte-Anne-des-Monts, Quebec, Canada, 10-13 July 2012.
99. Брагин Е.А., **Катцнер Т.**, Брагин А.Е. 2012. Пространственные связи популяции орла-могильника *Aquila heliaca* островных лесов Костанайской области [The spatial relations of the Imperial Eagle *Aquila heliaca* population of forest patches of Kostanay Region]. Second international conference on biodiversity of Asian steppes. Kostanay, Kazakhstan, 5-6 June 2012.
98. **Katzner, T.E.** J.A.R. Ivy, E.A. Bragin, E.J. Milner-Gulland & J.A. DeWoody. 2012. How many eagles are at Naurzum? Second international conference on biodiversity of Asian steppes. Kostanay, Kazakhstan, 5-6 June 2012. *Plenary session*.
97. **Katzner, T.E.**, D. Brandes, T.A. Miller, M. Lanzone, C. Maisonneuve, J. Tremblay, R. Mulvihill & G. Merovich.

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2012. Topography drives migratory flight altitude of golden eagles: implications for on-shore wind energy development. Northeastern Association of Fish and Wildlife Agencies Annual Meeting, Charleston, WV.
96. **Katzner, T.**, B.W. Smith, T. A. Miller, D. Brandes, J. Cooper, M. Lanzone, D. Brauning, C. Farmer, S. Harding, D. Kramar, C. Koppie, C. Maisonneuve, M. Martell, E.K. Mojica, C. Todd, J.A. Tremblay, M. Wheeler, D.F. Brinker, T.E. Chubbs, R. Gubler, K. O'Malley, S. Mehus, B. Porter, R.P. Brooks, B.D. Watts & K.L. Bildstein. 2012. Status, biology and conservation priorities for North America's eastern Golden Eagle (*Aquila chrysaetos*) population. Northeastern Association of Fish and Wildlife Agencies Annual Meeting, Charleston, WV.
95. Miller, T.A., M. Lanzone, R.P. Brooks, J. Cooper, P.J. Turk, **T.E. Katzner**, C. Maisonneuve & J.A. Tremblay. 2012. Seasonal variation in home range size and movement patterns of golden eagles (*Aquila chrysaetos*) in eastern North America. Northeastern Association of Fish and Wildlife Agencies Annual Meeting, Charleston, WV.
94. Duerr, A.E., T.A. Miller, M. Lanzone, D. Brandes, K. O'Malley, C. Maisonneuve, J. Tremblay & **T. Katzner**. 2012. Flight speed during migration: is using slope soaring faster than gliding between thermals? Northeastern Association of Fish and Wildlife Agencies Annual Meeting, Charleston, WV.
93. Sklyarenko, S. & **T. Katzner**. 2011. Status of populations of vultures in Kazakhstan. International ornithological conference devoted to centenary of birth of M.N. Korolov, Almaty, Kazakhstan. [In Russian, given as Состояние популяций хищных птиц-падальщиков в Казахстане. Международная орнитологическая конференция, посвященная 100-летию со дня рождения М.Н. Корелова].
92. **Participant:** American Wind Wildlife Institute, Eagle Workshop. 2011. Hosted by USFWS Mountain and Prairie Office, Region 6, Denver, Colorado, USA.
91. **Katzner, T.**, T. Miller, D. Brandes, J. Cooper, A. Duerr, M. Lanzone, C. Maisonneuve, J. Tremblay, R. Brooks, P. Turk & K. O'Malley. 2011. High frequency GPS telemetry to evaluate migration and habitat use of raptors relative to wind development. The Wildlife Society's 18th Annual Conference, Kona, Hawaii.
90. **Katzner, T.**, B.W. Smith, T. A. Miller, D. Brandes, J. Cooper, M. Lanzone, D. Brauning, C. Farmer, S. Harding, D. Kramar, C. Koppie, C. Maisonneuve, M. Martell, E.K. Mojica, C. Todd, J.A. Tremblay, M. Wheeler, D.F. Brinker, T.E. Chubbs, R. Gubler, K. O'Malley, S. Mehus, B. Porter, R.P. Brooks, B.D. Watts & K.L. Bildstein. 2011. Status, biology and conservation priorities for North America's eastern Golden Eagle (*Aquila chrysaetos*) population. Raptor Research Foundation 2011 Annual Meeting, Duluth, MN.
89. Maisonneuve, C., J. Tremblay, T. Miller, **T. Katzner**, M. Lanzone, D. Brandes. 2011. Variation in home range sizes of golden eagles (*Aquila chrysaetos canadensis*) breeding in Quebec. Raptor Research Foundation 2011 Annual Meeting, Duluth, MN.
88. Miller, T., M. Lanzone, D. Brandes, C. Maisonneuve, J. Cooper, K. O'Malley, R. Brooks & **T. Katzner**. 2011. Characteristics of spring migration of golden eagles (*Aquila chrysaetos*) through eastern North America, as determined by GPS-GSM and conventional satellite telemetry. Raptor Research Foundation 2011 Annual Meeting, Duluth, MN.
87. Miller, T., M. Lanzone, **T. Katzner**, P. Turk, D. Brandes, C. Maisonneuve, J. Tremblay, J. Cooper, K. O'Malley & R.P. Brooks. 2011. Striking a balance: Modeling migration of golden eagles (*Aquila chrysaetos*) through wind energy developments of the Central Appalachian Mountains, USA. Raptor Research Foundation 2011 Annual Meeting, Duluth, MN. *Student presentation award winner*.
86. Brandes, D., C. Maisonneuve, J. Tremblay, T. Miller, **T. Katzner**, & M. Lanzone. 2011. Influence of high-latitude warming on fall migration timing of eastern golden eagles (*Aquila chrysaetos*). Raptor Research Foundation 2011 Annual Meeting, Duluth, MN.
85. Cooper, J., T. Miller, **T. Katzner**, M. Lanzone, D. Kramar, K. O'Malley, C. Maisonneuve, & J. Tremblay. 2011. Winter ranging behavior of golden eagles (*Aquila chrysaetos*) in the central Appalachian Mountains. Raptor Research Foundation 2011 Annual Meeting, Duluth, MN.
84. Wheeler, M., B. Porter & **T. Katzner**. 2011. Assessing the genetic diversity and distinctness of eastern North American golden eagles. Raptor Research Foundation 2011 Annual Meeting, Duluth, MN.
83. Duerr, A., T. Miller, M. Lanzone, J. Cooper, P. Turk & **T. Katzner**. 2011. High frequency GPS-GSM telemetry to measure migration speed: do golden eagles migrate faster when using orographic or thermal lift? Raptor Research Foundation 2011 Annual Meeting, Duluth, MN.
82. Lanzone, M., C. Halverson, T. Miller, P. Turk, D. Brandes & **T. Katzner**. 2011. High-frequency GPS-GSM telemetry provides new insights into raptor behavior and ecology. Raptor Research Foundation 2011 Annual Meeting, Duluth, MN.
81. **Session chair:** Conservation of Vultures Around the World. Workshop on the future of vultures in Israel and the

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- Middle East. 19-22 September 2011, Kfar Blum, Hula Valley, Israel.
80. **Katzner, T.** Y. Kapetanakis, I. Lovette, S. Sklyarenko, H. Rainy & B. Pech. 2011. Non-invasive monitoring to estimate demography of vultures in central & south Asia. Workshop on the future of vultures in Israel and the Middle East. 19-22 September, Kfar Blum, Hula Valley, Israel.
79. Miller, T., M. Lanzone, P. Turk, D. Brandes, C. Maisonneuve, J. Tremblay, J. Cooper, K. O'Malley, **T. Katzner**, R.P. Brooks. 2011. Striking a balance: Modeling migration of golden eagles (*Aquila chrysaetos*) through wind energy developments of the Central Appalachian Mountains, USA. Spatial Ecology and Conservation Conference, Birmingham, UK.
78. **Katzner, T.**, T. Miller, M. Lanzone, D. Brandes, R. Brooks, J. Cooper, C. Maisonneuve, J. Tremblay, K. O'Malley. 2010. Golden Eagles and Wind Energy in Eastern North America. U.S. Fish and Wildlife Service, Northeast Region Biologists Conference, 15-18 Feb, Baltimore, MD.
77. **Katzner, T.** 2010. Demography of eastern golden eagles: population estimation for the past and present. Hawk Mountain Sanctuary, Kempton, PA.
76. **Workshop Organizer:** Eastern Golden Eagle Working Group, First Meeting. Hawk Mountain Sanctuary, 17-19 November 2010, Kempton, PA.
75. **Katzner, T.**, T. Miller, M. Lanzone, D. Brandes, R. Brooks, J. Cooper, C. Maisonneuve, J. Tremblay, K. O'Malley. 2010. Interactions between migratory birds of prey and wind turbines: insights from novel high frequency gps-gsm telemetry. NWCC Wind Wildlife Research Meeting, Denver, CO.
74. Tremblay, J., C. Maisonneuve, **T. Katzner**, T. Miller, M. Lanzone, & D. Brandes. 2010. A case study of the interaction between landscape configuration and visits of a wind facility by Golden Eagles (*Aquila chrysaetos*). NWCC Wind Wildlife Research Meeting, Denver, CO.
73. Maisonneuve, C., J. Tremblay, **T. Katzner**, T. Miller, M. Lanzone & D. Brandes. 2010. Influence of landscape configuration on wind facility frequentation by Golden eagles - A case study. Raptor Research Foundation Annual Meeting, Ft. Collins, CO.
72. **Katzner, T.** T. Miller, M. Lanzone, D. Brandes, & R. Brooks. 2010. Threats to migrating raptors from development of wind energy: Golden eagles as an umbrella species for conservation. Ecological Society of America, Annual Conference, Pittsburgh, PA.
71. **Session Moderator:** Movement and Migration. The 6th International Conference on Asian Raptors, ARRCN. Ulaanbaatar, Mongolia.
70. **Katzner, T.** 2010. Marking and tracking methods for birds of prey: why do it and what options are available. The 6th International Conference on Asian Raptors, ARRCN. Ulaanbaatar, Mongolia.
69. **Katzner, T.**, T. Anderson, T. Miller & M. Lanzone. 2010. High frequency gps-gsm telemetry for study of movement ecology of raptors. The 6th International Conference on Asian Raptors, ARRCN. Ulaanbaatar, Mongolia.
68. **Katzner, T.**, T. Miller, M. Lanzone, D. Brandes, & R. Brooks. 2010. Threats to migrating golden eagles from development of wind energy. Wilson Ornithological Society 2010 Annual Meeting, Geneva, NY.
67. Brandes, D., G. Bohrer, J. Mandel, **T. Katzner**, T. Miller, M. Lanzone, C. Maisonneuve, and J. Tremblay. 2010. Raptor migration by computer – using modeling and satellite tracking data to fill in the gaps. 2010 Conference of the Hawk Migration Association of North America, Duluth, MN.
66. Anderson, T., C. Halverson, **T. Katzner**, M. Lanzone & T. Miller. 2010. High frequency GPS-GSM telemetry data to delineate flight strategies of migratory birds: an example with golden eagles. Bird Migration and Global Change: Second Conference. Algeciras, Spain.
65. **Session Moderator:** Eagle population monitoring and field research. 2009. Third Annual Conference of the Eagle Conservation Alliance, Ainsa, Spain.
64. Miller, T., D. Brandes, M. Lanzone, D. Ombalski, C. Maisonneuve, R.P. Brooks and **T. Katzner**. 2009. Flight behavior of migrating golden eagles in the eastern USA: insights from high-frequency telemetry. Third Annual Conference of the Eagle Conservation Alliance, Ainsa, Spain.
63. Lanzone, M., C. Halverson and **T. Katzner**. 2009. High frequency GSM telemetry for tracking eagles. Third Annual Conference of the Eagle Conservation Alliance, Ainsa, Spain.
62. **Session Moderator:** General Session. Raptor Research Foundation 2009 Annual Conference, Pitlochry, Scotland.
61. Brandes, D., **T. Katzner**, T. Miller and M. Lanzone. 2009. Simulation of golden eagle (*Aquila chrysaetos*) migration pathways through the central Appalachians. Raptor Research Foundation 2009 Annual Conference, Pitlochry, Scotland.
60. Miller, T., D. Brandes, M. Lanzone, D. Ombalski, C. Maisonneuve, R.P. Brooks and **T. Katzner**. 2009. Modeling migratory flight characteristics of eastern North American golden eagles (*Aquila chrysaetos*) using high-

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- frequency telemetry data. Raptor Research Foundation 2009 Annual Conference, Pitlochry, Scotland.
59. Lanzone, M., C. Halverson and **T. Katzner**. 2009. Development of a high-frequency GSM telemetry device for tracking raptors. Raptor Research Foundation. 2009 Annual Conference, Pitlochry, Scotland.
58. Jackson, D.S., J.A.R. Ivy, E.A. Bragin, A. DeWoody & **T. Katzner**. 2009. Variation in offspring sex ratio of the sexually dimorphic, long-lived eastern imperial eagle. Raptor Research Foundation 2009 Annual Conference, Pitlochry, Scotland.
57. Miller, T., M. Lanzone, C. Maisonneuve, A. Mack, R.P. Brooks and **T. Katzner**. 2009. Multi-scale application of a common hydrological measure to migratory flight paths obtained from satellite and high frequency GSM telemetry. American Ornithologists Union, Philadelphia, PA.
56. **Participant**: "Scaling biodiversity monitoring from the local to the global." 2009. Hosted by Centre for Population Biology, Imperial College London. Ascot, UK.
55. Kapetanakis, Y. and **T. Katzner**. 2009. DNA barcoding is for the birds: using an old technique in new situations: a case study for Asian vultures. Wilson Ornithological Society & Association of Field Ornithologists, 2009 Joint Annual Conference, Pittsburgh, PA. 2006-2009.
54. Miller, T., M. Lanzone, R. Brooks and **T. Katzner**. 2009. Flight characteristics of golden eagles (*Aquila chrysaetos*) migrating through eastern North America as determined by GPS telemetry. Wilson Ornithological Society & Association of Field Ornithologists, 2009 Joint Annual Conference, Pittsburgh, PA. 2006-2009.
53. Lanzone, M., C. Halverson, and **T. Katzner**. 2009. A high frequency GSM telemetry device for tracking wildlife. Wilson Ornithological Society & Association of Field Ornithologists, 2009 Joint Annual Conference, Pittsburgh, PA. 2006-2009.
52. Maisonneuve, C., T.A. Miller, M.J. Lanzone, and **T.E. Katzner**. 2008. Studies on threatened species of birds of prey and wind farms in eastern North America. Nature and Biodiversity Conservation Union. International Workshop on Birds of Prey and Wind Farms. Berlin, Germany.
51. Miller, T.A., C. Maisonneuve and **T.E. Katzner** 2008. Determining where, in eastern North America, there is the greatest potential for conflict between Golden Eagles and wind power development. Wind Wildlife Research Meeting VII. Milwaukee, WI.
50. **Katzner, T.E.**, J. Ibañez, N. Collar. 2008. Ecology and conservation status of the Philippine eagle: a species in need of landscape scale conservation. Setting landscape conservation targets and promoting them through compatible land use in the Philippines. Conservation International (CI) and World Agroforestry Centre (ICRAF) Philippines Project Meeting, Los Baños, Philippines.
49. **Participant**: Setting landscape conservation targets and promoting them through compatible land use in the Philippines. 2008. Conservation International (CI) and World Agroforestry Centre (ICRAF) Philippines Project Meeting, Los Baños, Philippines.
48. **Participant**: Defying Extinction: Philippine Eagle Action Plan National Workshop" 2008. Tagaytay, Philippines. Co-hosted by Philippines Protected Areas and Wildlife Bureau and the Philippine Eagle Foundation.
47. Bragin, E.A., J. Rudnik, **T. Katzner**, A. DeWoody. 2008. New methods for raptors research: results of research on the imperial eagle in north Kazakhstan. 5th international conference on birds of prey of northern Eurasia. Ivanovo, Russia.
46. Bragin, A., **T. Katzner**, P. Sharpe, D. Garcelon, A. E. Bragin. 2008. Results of research on imperial eagle migrations from northern Kazakhstan. 5th international conference on birds of prey of northern Eurasia. Ivanovo, Russia.
45. Rudnick, J.A., **T.E. Katzner**, E.A. Bragin, and J.A. DeWoody. 2007. A noninvasive genetic evaluation of population size and natal philopatry of non-breeding eastern imperial eagles (*Aquila heliaca*) in Kazakhstan. Conservation Genetics Symposium, New York, NY.
44. **Session Moderator**: Sampling and Techniques. 2007 Joint Conference of the Raptor Research Foundation and the Hawk Migration Association of North America, Fogelsville, PA.
43. Brandes, D., **T. Katzner**, T. Miller, M. Lanzone, K. Bildstein and D. Ombalski. 2007. A terrain-based dynamic model for simulating raptor migration through the Appalachians. 2007 Joint Conference of the Raptor Research Foundation and the Hawk Migration Association of North America, Fogelsville, PA.
42. Miller, T., D. Brandes, M. Lanzone, D. Ombalski, R. Mulvihill, R. Brooks and **T. Katzner**. 2007. Flight characteristics of golden eagles (*Aquila chrysaetos*) migrating through eastern North America as determined by GPS telemetry. 2007 Joint Conference of the Raptor Research Foundation and the Hawk Migration Association of North America, Fogelsville, PA.
41. Lanzone, M., T. Miller, D. Brandes, D. Ombalski, R. Mulvihill and **T. Katzner**. 2007. Golden eagle (*Aquila chrysaetos*) wintering behavior in the Appalachian Mountains of eastern North America using GPS satellite

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

- telemetry. 2007 Joint Conference of the Raptor Research Foundation and the Hawk Migration Association of North America, Fogelsville, PA.
40. **Katzner, T.E.**, J. Rudnick, E.A. Bragin and J.A. DeWoody. 2007. What you see isn't always what you get: how accurate are counts of raptors and how many non-breeders are really out there? 2007 Joint Conference of the Raptor Research Foundation and the Hawk Migration Association of North America, Fogelsville, PA.
39. **Katzner, T.E.**, J. Rudnick, E.A. Bragin, J.A. DeWoody and E.J. Milner-Gulland. 2007. New approaches to monitoring eagles: collecting the most appropriate data & doing it without disturbing the birds. 2nd Annual meeting of the Eagle Conservation Alliance. Puebla, Mexico.
38. **Katzner, T.**, E.J. Milner-Gulland and E. Bragin. 2007. Using modeling to improve monitoring of eagles: are we collecting the right data? International Scientific Conference "Biological Diversity of Asian Steppe," Kostanay, Kazakhstan.
37. Terraube, J., B. Arroyo, F. Mougeot and **T. Katzner**. 2006. Reproductive and trophic ecology of Pallid Harriers in north Kazakhstan: implications for population dynamics and conservation. 9th Congress on Spanish Harriers. Castuera, Extramadura, Spain.
36. Sklyarenko, S. and **T. Katzner**. 2006. Status and distribution of black vulture, Eurasian griffon vulture and Himalayan griffon vulture in central Asia. Conference on Ornithological Research in Northern Eurasia. Stavropol, Russia.
35. Rudnick, J.A., **T.E. Katzner**, E.A. Bragin, and J.A. DeWoody. 2005. A Noninvasive Investigation of Juvenile Population Size and Natal Philopatry in the Eastern Imperial Eagle. Conservation Genetics Symposium, Pacific Grove, CA.
34. Poulakakis, N., Mantziou, G., Antoniou, A., Parmakelis, A., Skartsi, T., Vasilakis, D., Elorriaga, J., de la Puente, J., Gavashelishvili, A., Ghasabian, M., **Katzner, T.**, McGrady, M. Batbayar, N., Fuller, M., and Natsagdorj, T. 2005 Using microsatellite markers to infer the genetic structure of *Aegypius monachus* (Aves:Accipitridae). International Conference on Conservation and Management of Vulture Populations, Thessaloniki, Greece.
33. **Katzner, T.**, E.J. Milner-Gulland and E. Bragin. 2005. Using modeling to improve monitoring of birds: are we collecting the right data? Wilson Ornithological Society - Association of Field Ornithologists 2005 Joint Meeting. Beltsville, MD.
32. Rudnick, J. **T. Katzner**, O.E. Rhodes, Jr., J.A. DeWoody. 2004. Non-invasive Monitoring of an Eastern Imperial Eagle Population in Kazakhstan. Society for Conservation Biology Conference, New York, NY.
31. Galushin, V., **T. Katzner** and S. Sklyarenko. 2004. The black vulture in Russia and Kazakhstan. International Symposium on the Black Vulture *Aegypius monachus*. Cordoba, Spain.
30. **Katzner, T.**, E. Bragin, E.J. Milner-Gulland. 2004. Using modelling to improve monitoring of raptors in forest-steppe: an example with Imperial Eagles (*Aquila heliaca*) in Kazakhstan. International Symposium on Ecology and Conservation of Steppe-Land Birds, Lleida, Spain.
29. Rudnick, J. **T. Katzner**, O.E. Rhodes, Jr., J.A. DeWoody. 2004. Non-invasive monitoring of an Imperial Eagle population in Kazakhstan. 2004 Meeting of the Indiana Chapter of The Wildlife Society, Bloomington, IN, U.S.A. *Poster presentation*.
28. Rudnick, J.A., **T.E. Katzner**, E.A. Bragin, and J.A. DeWoody. 2004. Non-invasive Monitoring of an Eastern Imperial Eagle Population in Kazakhstan. Midwest Fish and Wildlife Conference Indianapolis, IN.
- (27 earlier entries)

INVITED SYMPOSIA (last 10 years)

69. **Katzner, T.E.** 2014. Golden eagles in the Appalachians. Atlantic Flyway Council 2014 Summer Meeting, Charleston, WV.
68. **Katzner T.E.** 2014. Golden eagles and wind energy in the Appalachians. West Virginia State Parks Superintendents Annual Meeting, Chief Logan State Park, WV.
67. **Katzner, T.E.** 2013. California eagle research: behavior, in-season movements, territory size and non-invasive monitoring. DRECP Golden Eagle Monitoring Plan Meeting, Sacramento, CA.
66. **Katzner, T.E.** 2013. Conservation ecology of West Virginia's golden eagles and the threat from renewable energy development. Department of Biology, West Virginia University, Morgantown, WV.
65. **Katzner, T.E.** 2013. Movement ecology of golden eagles and renewable energy development in the central Appalachians. University of Maryland, Center for Environmental Sciences, Appalachian Laboratory, Frostburg, MD.
64. **Katzner, T.E.** 2013. Interactions between development of renewable energy and migration of birds of prey in the central Appalachian Mountains. West Virginia Wind Forum, Davis, WV.

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63. **Katzner, T.E.,** J. Rodrigue, K. O'Malley & C. Waggy. 2013. Golden eagle movement and abundance in West Virginia. WVDNR Wildlife Resources Workshop, Stonewall Resort, WV.
62. **Katzner, T.E.,** J. Rodrigue, K. O'Malley & C. Waggy. 2013. Camera trapping to estimate abundance and occupancy of golden eagles (and other species?) in West Virginia. Cooperative WV DNR/Forest Service Stamp Meeting, Greenbank, WV.
61. **Katzner, T.E.** 2013. Conservation ecology of golden eagles and the threat from renewable energy development. Oberlin College, Oberlin, OH.
60. **Katzner, T.E.** 2013. Conservation of North American golden eagles: movement ecology and renewable energy development. University of North Texas. Denton, TX.
59. **Katzner, T.E.** A.E. Duerr & T.A. Miller. 2013. Measuring and understanding relationships of desert eagles to the environment and to renewable energy development: context and preliminary interpretation. Desert Tortoise Council 38th Annual Symposium, Las Vegas, NV.
58. **Katzner, T.E.** 2013. Conservation of North American golden eagles: movement and behavior in the face of renewable energy development. Department of Forestry and Natural Resources, Purdue University, IN.
57. **Katzner, T.E.** 2012. Golden eagles & wind energy in eastern North America: new threats along historical migration routes. Eastern Massachusetts Hawkwatch Annual Meeting Plenary Speaker, Bedford, MA.
56. **Katzner, T.E.** 2012. Golden eagles & wind energy in eastern North America: new threats along historical migration routes. Sharon Audubon Society, Sharon, CT.
55. **Katzner, T.E.** 2012. Understanding Movement Ecology and Risk Assessment for Golden Eagles and Wind Energy in Eastern North America. Department of Biology, University of Pittsburgh, Pittsburgh, PA.
54. **Katzner, T.E.** 2012. Status and ecology of the golden eagle in West Virginia. 55th Annual Joint Reservoir Management Meeting. Chief Logan State Park, WV.
53. **Katzner, T.E.** 2011. Golden eagles & wind energy in eastern North America: new threats along historical migration routes. USFWS Science Seminar Series, USFWS Region 5 regional offices, Hadley, MA.
52. **Katzner, T.E.** 2011. West Virginia's Golden Eagles and Wind Energy: new threats along historical migration routes. Mountaineer Audubon Society, Morgantown, WV.
51. **Katzner, T.** 2011. Status, conservation and demography of eastern golden eagles in West Virginia. WVDNR-USFS Stamps Meeting, Blackwater State Park, Davis, WV.
50. **Katzner, T.** 2011. Non-invasive demography of central Asian eagles. WVU – International Research Symposium, Morgantown, WV.
49. **Katzner, T.E.** 2011. Conservation and Ecology of Eagles around the World. Three Rivers Bird Club, Pittsburgh, PA.
48. **Miller, T.M., M. Lanzone, D. Brandes, T. Katzner.** 2011. Golden Eagle Research Project. Pennsylvania Society for Ornithology. Annual Meeting, Bedford, PA.
47. **Katzner, T.E.** 2011. West Virginia's Golden Eagles and Wind Energy: new threats along historical migration routes. Maurice Brooks Lecture, Morgantown WV.
46. **Katzner, T.E.** 2011. Conservation and Ecology of Eagles around the World. The Wildlife Society, WVU Student Chapter, Morgantown, WV.
45. **Katzner, T.E.** 2011. Asian vulture decline: addressing the world's greatest modern ornithological conservation catastrophe. Linn County Community Connections Speaker, Cedar Rapids, IA.
44. **Katzner, T.E.** 2011. Golden Eagles and Wind Energy in Eastern North America. Coe College Department of Biology, Cedar Rapids, IA.
43. **Katzner, T.E.** 2011. Conservation and Ecology of Eagles around the World. International Association of Avian Trainers and Educators, Annual Conference, Pittsburgh, PA, 17 Feb 2011. *Keynote address.*
42. **Katzner, T.E.** 2011. Asian vulture decline: addressing the world's greatest modern ornithological conservation catastrophe. Wildlife & Fisheries Seminar, Division of Forestry & Natural Resources, West Virginia University, Morgantown, WV.
41. **Katzner, T.E.** 2010. Golden eagles and wind energy: siting wind power for improved conservation management. Delaware Valley Ornithological Club, Philadelphia, PA.
40. **Katzner, T.E.** 2010. Golden eagles and energy development in the central Appalachians: application of novel high frequency GSM telemetry for predictive modeling. US Forest Service, Parsons, WV.
39. **Katzner, T.E.** 2010. Developing best practices for siting wind turbines: utility grade wind energy and soaring birds of prey. Pennsylvania Game Commission, Wind Energy Cooperator's Meeting, Harrisburg, PA.
38. **Katzner, T.E.** 2010. Eagle conservation ecology across two continents. West Virginia University Division of Forestry and Natural Resources, Morgantown, WV.

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37. **Katzner, T.E.** 2010. Non-invasive approaches to demography of rare and endangered species. Smithsonian Conservation Biology Institute, Front Royal, VA.
36. **Katzner, T.E.** 2010. Non-invasive approaches to demography of rare and endangered species. Department of Biology, Indiana University of Pennsylvania, Indiana, PA.
35. **Maisonneuve, C., J. A. Tremblay, T. Miller, D. Brandes, M. Lanzone, and T. Katzner.** 2009. L'utilisation de la télémétrie satellitaire pour intégrer les besoins des oiseaux de proie dans le développement éolien. (The use of satellite telemetry to integrate the needs of birds of prey in the wind energy development) University of Québec at Rimouski.
34. **Katzner, T.E.** 2009. Eagles and Vultures in Asia: Non-invasive demography of threatened & endangered species. Birding and Ornithology Club, University of Pittsburgh, Pittsburgh, PA.
33. **Katzner, T.E., Y. Kapetanakis, I. Lovette, S. Sklyarenko & N. Clum.** 2009. Asian vulture decline: addressing the world's greatest modern ornithological conservation catastrophe. Delaware – Otsego Audubon Society, Oneonta, NY.
32. **Katzner, T.E.** 2009. Non-invasive demography of threatened & endangered vultures and eagles. Department of Biology, Hartwick College, Oneonta, NY.
31. **Katzner, T.E., D. Brandes, M. Lanzone, C. Maisonneuve, T. Miller and D. Ombalski.** 2009. Migrating eagles and wind turbines: filling the information void. Biology Department, State University of New York, College at Oneonta, Oneonta, NY.
30. **Katzner, T.E., D. Brandes, M. Lanzone, C. Maisonneuve, T. Miller and D. Ombalski.** 2009. Sustainable energy and wildlife: research for coexistence. Sigma Xi Society, Alcoa Inc., Chapter.
29. **Katzner, T.E., D. Brandes, M. Lanzone, C. Maisonneuve, T. Miller and D. Ombalski.** 2009. Eagles and falcons in Pennsylvania: research and natural history for conservation. Point Park University, Pittsburgh PA.
28. **Katzner, T.E.** 2009. Migrating Eagles and Wind Turbines: Filling the Information Void. The Pennsylvania State University, New Kensington Campus.
27. **Brandes, D., Katzner, T., Miller, T., Lanzone, M., and D. Ombalski.** 2009. Appalachian wind energy and raptors: moving forward in a data vacuum. Appalachian Laboratory, University of Maryland Center for Environmental Science.
26. **Katzner, T.E.** 2008. Migrating Eagles and Wind Turbines: Filling the Information Void. Hawk Mountain Sanctuary Association, Kempton, PA.
25. **Katzner, T.E.** 2008. Counting accurately from afar: non-invasive approaches to demography of rare and endangered species. The University of Pittsburgh Pymatuning Laboratory of Ecology, Linesville, PA.
24. **Katzner, T.E.** 2008. Migrating Eagles and Wind Turbines: Conflict Potential in an Information Void. Pennsylvania Society of Ornithology Annual Meeting, Pittsburgh, PA.
23. **Katzner, T.E.** 2008. Human population density: impacts on biodiversity. Lessons from a cross continental evaluation. Invited Plenary Speaker, Wildlife Conservation Society of the Philippines, Baybay City, Philippines.
22. **Katzner, T.E.** 2008. Migrating Eagles and Wind Turbines: Resolving Conflict in an Information Void. University of Pittsburgh, Honors College, Pittsburgh, PA.
21. **Katzner, T.E.** 2008. Research and conservation medicine: present and future perspectives from a field biologist. University of Pennsylvania, College of Veterinary Medicine, Philadelphia, PA.
20. **Katzner, T.E.** 2008. Non-invasive sample collection provides new insight to demographics of rare and endangered species. National Museum of the Philippines, Manila, Philippines.
19. **Katzner, T.E.** 2008. Conservation ecology at arm's length: non-invasive approaches to demography of rare and endangered species. Department of Biology, University of the Philippines – Diliman, Manila, Philippines.
18. **Katzner, T.E.** 2007. Conservation ecology at arm's length: non-invasive approaches to demography of rare and endangered species. Department of Biology, Westminster College, New Wilmington PA.
17. **Katzner, T.E.** 2007. Conservation ecology at arm's length: non-invasive approaches to demography of rare and endangered species. Odum School of Ecology, University of Georgia, Athens, GA.
16. **Katzner, T.E.** 2006. Non-invasive population studies of threatened raptors. Pennsylvania Society of Ornithology Annual Meeting, Powdermill Nature Reserve, PA.
15. **Katzner, T.E.** 2006. Conservation ecology at arm's length: non-invasive demography of rare and endangered species. Department of Biological Sciences. Duquesne University, Pittsburgh, PA.
14. **Katzner, T.E.** 2005. Ecology and conservation of eagles and vultures in central Asia: non-invasive approaches to the study of rare and endangered species. Vermont Institute of Natural Sciences, Queche, VT.
13. **Katzner, T.E.** 2005. Conservation ecology at arm's length: non-invasive demography of rare and endangered

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- species. Department of Biology Seminar. University of Pittsburgh, Pittsburgh, PA.
- 12. Katzner, T.E.** 2005. Spatial structure in diet of Imperial Eagles (*Aquila heliaca*) in Kazakhstan and its relation to their demography. Coe College Wilderness Field Station, Ely, MN.
- 11. Katzner, T.E.** 2005. Conservation of imperial eagles in Kazakhstan: can we use modeling to assess and improve our monitoring? Ecology & Evolution Seminar. University of Pittsburgh, Pittsburgh, PA.
- 10. Katzner, T.E.** 2004. Does predator diet impact demography? An example from a population of imperial eagles in Kazakhstan. Ecology and Evolution Seminar. Imperial College London at Silwood Park, UK.
- 9. Katzner, T.E.** 2004. Is coexistence of eagles in Kazakhstan mediated by competition? Unidad de Biología Aplicada, Estación Biológica de Doñana, Sevilla, Spain.
- (8 earlier entries)**

EDITORIAL AND REVIEWING ACTIVITY

Advisory Board: Animal Conservation (2013 – present)

Editor: Animal Conservation (2007 - 2013)

Handling Editor: Conservation Biology (2013 – present)

Review Panel: U.S. National Science Foundation (2010)

Book reviews: Yale University Press (2008)

Review Board (grants): National Birds of Prey Trust (2005-present)

Review Panel: Association of Zoos and Aquariums Conservation Endowment Grant Program (AZA-CEF; 2008)

Editorial Board: Animal Conservation (2005 - 2006)

Editor and compiler: Reports of the Workshop “Conservation of *Gyps* vultures in Asia.” North American Ornithological Conference (2002)

Editor and compiler: Reports of the Workshop “Indian griffon vultures and their problems.” 4th Eurasian Congress on Raptors (2001)

Reviewing (2014): Conservation Leadership Program (5), Conservation Biology (1), Grinnell Research Award, Cooper Ornithological Society (*3); Wilson Ornithological Society/Association of Field Ornithologists Travel Award (*10), Book Chapter (Conservation Behavior), PLoS One, Oikos, Journal of Raptor Research (*2), Biological Conservation (*2), Journal of Applied Ecology, Ibis, Western Birds, Global Ecology and Conservation

Reviewing (2013): The Auk, APLU Board of Natural Resources, Grinnell Research Award, Cooper Ornithological Society (*6); Acta Zoologica Academiae Scientiarum Hungaricae (*3), Animal Conservation, Canadian Field Naturalist, Wildlife Biology, Civilian Defense Research Foundation, Peer Review – USFWS Eagle Fatality Model, American Wind Wildlife Institute – Expert Panel; PLoS One (*2), National Birds of Prey Trust (*16), Journal of Applied Ecology, Wildlife Conservation Society of the Philippines, Journal of Raptor Research

Reviewing (2012): National Geographic Society, Virginia Department of Game and Inland Fisheries Bald Eagle Management Guidelines, Small Grants Committee of Biological Field Station of KPGI, Kazakhstan (*7), Bird Study/Ringing & Migration (*2), Mike Madders Field Research Award (*2), Oryx, Journal of Raptor Research (*2), The Wildlife Society Bulletin (*2), American Association of Zoos and Aquariums, Conservation Endowment Fund (AZA-CEF; *3), Canadian Journal of Zoology (*2), National Birds of Prey Trust (*22), Save Our Species (SOS) Grants of IUCN, Animal Conservation, Pittsburgh Zoo and PPG Aquarium - PPG Sustainability Fund (*7), Conservation Leadership Program (CLP; *5), Wilson Ornithological Society – Student Travel Grants (*11), Journal of Field Ornithology

Reviewing (2011): International Foundation for Science (IFS), Save Our Species, IUCN Conservation Grants (*4), The Auk, Conservation Biology, Methods in Ecology and Evolution, American Institute of Biological Sciences: USFWS Population Status of Golden Eagles in North America, Mike Madders Field Research Award (*2), Conservation Leadership Program (*7), Ornitologia Neotropical, USGS External Peer Review, Forktail; American Zoological and Aquarium Association Conservation Endowment Grant Program (AZA-CEF; *4), The Wildlife Society: USFWS Draft Land-based Wind Turbine Guidelines, Ibis (*2), Journal of Raptor Research, National Birds of Prey Trust (*17)

Reviewing (2010): American Institute of Biological Sciences: USFWS Bald and Golden Eagle Protection Act Standards for Review of Wind Energy Projects, Proceedings of the Royal Society, B: Biology, Forktail (*2), European Journal of Wildlife Research, Ibis (*2), U.S. National Science Foundation, The Auk, Animal Conservation, Basic and Applied Ecology (*2), Forest Ecology and Management, Acta Zoologica Bulgaria (*2), National Birds of Prey Trust (*4), Oryx (*2), Journal of Raptor Research (*2). American Zoological and Aquarium Association Conservation Endowment Grant Program (AZA-CEF; 6),

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Reviewing (2009): U.S. National Science Foundation (2), The Auk, International Foundation for Science, American Zoological and Aquarium Association Conservation Endowment Grant Program (AZA-CEF; 6), Biological Conservation, Journal of Raptor Research, Acta Zoologica Bulgaria (*2), National Birds of Prey Trust.

Reviewing (2008): The Auk, Journal of Wildlife Management, Ibis, The Condor, Oryx (2), Ornithologia, Biological Conservation, Journal of Raptor Research (3), Journal of Mammalogy, Ardea, Mongolian Journal of Biology, Oecologia, Pittsburgh Zoo Conservation Fund Grant Program, American Zoological and Aquarium Association Conservation Endowment Grant Program (AZA-CEF; 5), Wildlife Conservation Society Research Fellowship Program (2), International Foundation for Science (Research Grants)

Reviewing (2007): Ecology, Ecological Applications, Conservation Biology, Oryx, Journal of Avian Biology, Ibis, Journal of Applied Ecology, Journal of Raptor Research, ActionBioscience.org, American Institute of Biological Sciences, Wildlife Conservation Society of the Philippines Proceedings, BP Conservation Leadership Program Grant, Association of Zoos and Aquariums Conservation Endowment Grant Program (AZA-CEF; 3), Wildlife Conservation Society - International Research Fellowship Program (2), BP Conservation Leadership Program Grant, Federal Recovery Plan for the Washington Pygmy Rabbit

Reviewing (2006): Journal of Applied Ecology, Biological Conservation (2), Bird Conservation International (2), Ecography (2), Ibis (2), Oryx (2), Animal Conservation, Journal of Raptor Research, Belgian Journal of Zoology, Vulture News, BP Conservation Leadership Program Grant, American Zoological and Aquarium Association Conservation Endowment Grant Program (AZA-CEF; 3), International Foundation for Science (Research Grants), Wildlife Conservation Society, International Research Fellowship Program,

Reviewing (2005): Journal of Applied Ecology, Animal Conservation, Journal of Raptor Research, Ostrich: the African Journal of Ornithology, Vulture News, American Zoological and Aquarium Association Conservation Endowment Grant Program (AZA-CEF; 3), BP Conservation Leadership Program Grant, International Foundation for Science (Research Grants)

Reviewing (2004): Animal Conservation, Journal of Mammalogy, Condor, Oryx, Vulture News, Mongolian Journal of Biology, Wildlife Conservation Society - International Research Fellowship Program

Reviewing (2003): Oryx, Journal of Raptor Research, Conference Proceedings: 6th World Conference on Birds of Prey and Owls, Budapest, Hungary, Wildlife Conservation Society - International Research Fellowship Program

Reviewing (other): Action Plan: Pallid Harriers, BirdLife International (2002), Proceedings of the Workshop on Golden Eagles at the 1999 Raptor Research Foundation Meeting (2001), Journal of Field Ornithology (2000), Journal of Raptor Research. (1999), Journal of Mammalogy (1998), Washington State Recovery Plan for the Pygmy Rabbit (1995)

Language Editing: Acta Theriologica Sinica (2005)

Text Editor: A birdwatching guide to Georgia. Gavashelishvili et al. 2005.

Text Editor: The Naurzum State Nature Reserve. E. Bragin, 2005

POSTDOCTORAL BIOLOGISTS AND GRADUATE STUDENTS SUPERVISED

<u>Postdoc/Biologists</u>	<u>Research Topic</u>	<u>Institution</u>
Jonathan Hall	Human dimensions of conservation biology 2012 – present	West Virginia University Morgantown, WV
Tricia Miller	Golden & bald eagle ecology & conservation 2012 – present	West Virginia University Morgantown, WV
Adam Duerr	Golden eagle movement & conservation 2011 – present	West Virginia University Morgantown, WV
Melissa Braham	Eagle movement & conservation 2012 – present	West Virginia University Morgantown, WV
<u>Grad. Students</u>	<u>Degree & Research Topic</u>	<u>Institution</u>
Mark Paulson	M.S. (expected 2017) <i>Golden eagle surveys in Alaska</i>	West Virginia University Morgantown, WV
Camille Concepcion	Ph.D. (expected 2016) <i>Movement ecology of Philippine raptors</i>	West Virginia University Morgantown, WV
Bethany Drahota	M.S. (expected 2016, PCMI degree) <i>Bald eagle distribution & management</i>	West Virginia University Morgantown, WV
Julie Mallon	M.S. (expected 2015) <i>Flight behavior of American vultures</i>	West Virginia University Morgantown, WV
Sirimgul Zarapova	Ph.D. (delayed)	Institute of Zoology

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Shannon Behmke	<i>Seasonal bird migration</i> M.S. (expected 2014; PCMI degree)	Almaty, Kazakhstan West Virginia University
Christina Slover	<i>New world vulture environmental toxicology</i> M.S. (expected 2014)	Morgantown, WV West Virginia University
Andrew Dennhardt	<i>Impact of fire on Fernow breeding birds</i> M.S. (2014)	Morgantown, WV West Virginia University
Joshua Daniel	<i>Golden eagle pop. size estimate & movement</i> M.S. (expected 2014)	Morgantown, WV West Virginia University
Yula Kapetanakos	<i>Black bear home range & habitat use</i> Ph.D. (expected 2014)	Morgantown, WV Cornell University
Maria Wheeler	<i>Non-invasive demography of Asian vultures</i> Ph.D. (2014)	Ithaca, NY Duquesne University
Almat Abayev	<i>Population genetics of US golden eagles</i> Ph.D. (delayed)	Pittsburgh, PA Institute of Zoology
Trish Miller	<i>Migration of birds of prey</i> Ph.D. (2012)	Almaty, Kazakhstan The Pennsylvania State University
Michelle Losee	<i>Golden eagle migration & wind power</i> Ph.D. (expected 2016)	State College, PA Antioch New England
Gretchen Nareff	<i>Golden eagle density & distribution in AZ</i> Ph.D. (expected 2016)	Keene, NH West Virginia University
Jacob Berl	<i>Cerulean warbler ecology & distribution</i> M.S. (2013)	Morgantown, WV West Virginia University
Glenna Schmid	<i>Ecology of red headed woodpeckers</i> M.S. (2012)	Morgantown, WV West Virginia University
Crissa Cooley	<i>Aging birds via Pentosidine</i> Ph.D. (expected 2015)	Morgantown, WV West Virginia University
Jesse Fallon	<i>Pentosidine aging & cormorant management</i> Ph.D. (expected 2015)	Morgantown, WV Virginia Tech
Jennifer Gabel	<i>Physiological injury to birds from oil spills</i> Ph.D. (2007)	Blacksburg, VA Duquesne University
	<i>Gene flow & frag. anal. of Cherokee Darter</i>	Pittsburgh, PA

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Steven Knick

Present Position (since 1990): Supervisory Research Ecologist

U.S. Geological Survey, Forest and Rangeland Ecosystem Science Center, 970 Lusk Boise, ID 83706; Phone: (208) 426-5208; email: steve_knick@usgs.gov

Education

B.S. Wildlife Ecology, 1977, University of Minnesota, St. Paul, MN

M.S. Wildlife Biology, 1980, Washington State University, Pullman, WA Thesis: Factors influencing low density bobcat populations in southeastern Washington.

Ph.D. Zoology, 1987, University of Montana, Missoula, MT Dissertation: Ecology of bobcats in southeastern Idaho.

Publications

- Knick, S. T., S. E. Hanser, and M. Leu. 2014. Ecological scale of bird community response to pinyon-juniper removal. *Rangeland Ecology and Management* 67:*in press*
- Knick, S. T., M. Leu, J. T. Rotenberry, S. E. Hanser, and K. A. Fesenmyer. 2014. Diffuse migratory connectivity in two species of shrubland birds: evidence from stable isotopes. *Oecologia* 174:595-608. DOI 10.1007/s00442-013-2791-8
- Knick, S. T., S. E. Hanser, and K. L. Preston. 2013. Modeling ecological minimum requirements for distribution of greater sage-grouse leks: implications for population connectivity across their western range, U.S.A. *Ecology and Evolution* 3:1539-1551. DOI: 10.1002/ece3.557
- Fesenmyer, K. A., and S. T. Knick. 2011. Seasonal movements and environmental triggers to fall migration of sage sparrows. *Wilson Journal of Ornithology* 123:803-807.
- Meinke, C. W., S. T. Knick, and D. A. Pyke. 2009. Prioritizing sagebrush ecosystems in the Intermountain West (U.S.A) for restoration. *Restoration Ecology* 17:652-659.
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- Katzner, T. E., E. A. Bragin, S. T. Knick, and A. T. Smith. 2003. Species coexistence mediated by intraspecific interactions: evidence from a multi-species assemblage of eagles in central Asia. *Condor* 105:538-551.

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FEBRUARY 18, 2016**

- Knick, S. T., D. S. Dobkin, J. T. Rotenberry, M. A. Schroeder, M. W. Vander Haegen, and C. Van Riper III. 2003. Teetering on the edge or too late? Conservation and research issues for avifauna of sagebrush habitats. *Condor* 105:611-634.
- Knick, S. T., and J. T. Rotenberry. 2002. Effects of habitat fragmentation on passerine birds breeding in Intermountain shrubsteppe. *Studies in Avian Biology* 25:130-140.
- Knick, S. T., and J. T. Rotenberry. 2000. Ghosts of habitats past: contribution of landscape change to current habitats used by shrubland birds. *Ecology* 81:220-227.
- Knick, S. T. 1999. Requiem for a sagebrush ecosystem? *Northwest Science* 73:47-51.
- Knick, S. T., and J. T. Rotenberry. 1999. Spatial distribution of breeding passerine bird habitats in a shrubsteppe region of southwestern Idaho. *Studies in Avian Biology* 19:104-111. Invited
- Rotenberry, J. T., and S. T. Knick. 1999. Multiscale habitat associations of the sage sparrow: implications for conservation biology. *Studies in Avian Biology* 19:95-103. Invited
- Knick, S. T., and J. T. Rotenberry. 1998. Limitations to mapping habitat use areas in changing landscapes using the Mahalanobis distance statistic. *Journal of Agricultural, Biological, and Environmental Statistics* 3:311-322. Invited
- Knick, S. T., and D. L. Dyer. 1997. Spatial distribution of black-tailed jackrabbit habitat determined by GIS in southwestern Idaho. *Journal of Wildlife Management* 61:75-85.
- Knick, S. T., and J. T. Rotenberry. 1997. Landscape characteristics of disturbed shrubsteppe habitats in southwestern Idaho. *Landscape Ecology* 12:287-297.
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- Knick, S. T., and J. T. Rotenberry. 1995. Landscape characteristics of fragmented shrubsteppe habitats and breeding passerine birds. *Conservation Biology* 9:1059-1071.
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- Knick, S. T. 1990. Ecology of bobcats relative to exploitation and a prey decline in southeastern Idaho. *Wildlife Monograph* 108. 42pp.
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- Knick, S. T., and W. Kasworm. 1989. Shooting mortality in small populations of grizzly bears. *Wildlife Society Bulletin* 17:11-15.
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- Knick, S. T., and T. N. Bailey. 1986. Long distance movements by two bobcats from southeastern Idaho. *American Midland Naturalist* 116:222-223.
- Knick, S. T., J. D. Brittell, and S. J. Sweeney. 1985. Population characteristics of bobcats in Washington state. *Journal of Wildlife Management* 48:721-728.
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FEBRUARY 18, 2016

- Knick, S. T., and L. D. Mech. 1980. Sleeping distances in wild wolf packs. *Behavioral and Neural Biology* 28:507-511.
- Mech, L. D., and S. T. Knick. 1978. Sleeping distances in wolf pairs in relation to the breeding season. *Behavioral Biology* 23:521-525.

Books

- Knick, S. T., and J. W. Connelly (editors). 2011. Greater sage-grouse: ecology and conservation of a landscape species and its habitats. *Studies in Avian Biology* 38. University of California Press, Berkeley, CA. (Wildlife Publications Award, Outstanding Edited Book. The Wildlife Society 2012)
- Knick, S. T., and J. W. Connelly. Greater sage-grouse and sagebrush: an introduction to the landscape. Pp. 1-9.
- Knick, S. T. Historical development, principal federal legislation, and current management of sagebrush habitats: implications for conservation. Pp 13-31.
- Miller, R. F., S. T. Knick, D. A. Pyke, C. W. Meinke, S. E. Hanser, M. J. Wisdom, and A. L. Hild. Characteristics of sagebrush habitats and limitations to long-term conservation. Pp. 145-184.
- Knick, S. T., S. E. Hanser, R. F. Miller, D. A. Pyke, M. J. Wisdom, S. P. Finn, E. T. Rinkes, and C. J. Henny. Ecological influence and pathways of land use in sagebrush. Pp. 203-251.
- Knick, S. T., and S. E. Hanser. Connecting pattern and process in greater sage-grouse population and sagebrush landscapes. Pp. 383-405.
- Johnson, D. H., M. J. Holloran, J. W. Connelly, S. E. Hanser, C. L. Amondson, and S. T. Knick. Influences of environmental and anthropogenic features on greater sage-grouse populations, 1997-2007. Pp. 407-450.
- Wisdom, M. J., C. W. Meinke, S. T. Knick, and M. A. Schroeder. Factors associated with extirpation of sage-grouse. Pp. 451-472.
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- Connelly, J. W., S. T. Knick, et al. Conservation of greater sage-grouse: a synthesis of current trends and future management. Pp. 549-563.
- Hanser, S. E., M. Leu, S. T. Knick, and C. L. Aldridge (editors). 2011. Assessment of threats to sagebrush habitats and associated species of concern in the Wyoming Basins. Allen Press, Lawrence, KS.
- Knick, S. T. et al. Introduction: the Wyoming Basins Ecoregional Assessment. Pp. 1-9.
- Finn, S. P., and S. T. Knick. Changes to the Wyoming Basins landscape from oil and natural gas development. Pp. 69-87.
- Knick, S. T. et al. Management considerations. Pp. 387-409.

Conservation Assessment

- Connelly, J. W., S. T. Knick, M. A. Schroeder, and S. J. Stiver. 2004. Range-wide conservation assessment for greater sage-grouse and sagebrush habitats. Western Association of Fish and Wildlife Agencies, Cheyenne, WY. (available online at <http://sagemap.wr.usgs.gov>).

Invited Papers and Book Chapters

- Wisdom, M. J., M. M. Rowland, L. H. Suring, L. Schueck, C. W. Meinke, and S. T. Knick. 2005. Evaluating species of concern at regional scales. Pp. 5-74 *in* Wisdom, M. J., M. M. Rowland, and L. H. Suring (editors). Habitat threats in the sagebrush ecosystem: methods of regional assessment and applications in the Great Basin. Alliance Communications Group, Lawrence, KA.
- Wisdom, M. J., M. M. Rowland, L. H. Suring, L. Schueck, C. W. Meinke, S. T. Knick, and B. C. Wales. 2005. Habitats for groups of species. Pp. 205-231 *in* Wisdom, M. J., M. M. Rowland, and L. H. Suring

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FEBRUARY 18, 2016**

- (editors). Habitat threats in the sagebrush ecosystem: methods of regional assessment and applications in the Great Basin. Alliance Communications Group, Lawrence, KS.
- Knick, S. T., and M. R. Fuller. 2003. Radical changes in a sagebrush landscape: the role of exotic cheatgrass in disrupting a system. Pp. 54-56 *in* Dombeck, M., C. Wood, and J. Williams (editors). From conquest to conservation: our public land legacy. Island Press, Covelo, CA.
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- Marzluff, J. M., J. J. Millspaugh, and S. T. Knick. 2001. High tech behavioral ecology: modeling the distribution of animal activities to better understand wildlife space use and resource selection. Pp.309-326 *in* J. J. Millspaugh and J. M. Marzluff (editors). Radiotracking and animal populations. Academic Press, San Diego, CA. Invited
- Knick, S. T., J. T. Rotenberry, and B. Van Horne. 2000. Effects of disturbance on shrub steppe habitats and raptor prey in the Snake River Birds of Prey National Conservation Area, Idaho. Pp. 98-99 *in* P. G. Entwistle, A. M. DeBolt, J. H. Kaltenecker, and K. Steenhof (compilers). Proceedings: sagebrush steppe ecosystems symposium. Bureau of Land Management Publication No. BLM/ID/PT-001001+1150, Boise, ID.
- Knick, S. T. 1996. New concepts in landscape ecology for managing wildlife on rangelands. Pages 18-24 *in* W. D. Edge and S. L. Olson Edge (editors). Proceedings of sustaining rangeland ecosystems symposium. Oregon St. Univ. Press, Corvallis, OR.
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- Knick, S. T., J. T. Rotenberry, and T. J. Zarriello. 1992. Use of satellite imagery to detect changes in vegetation communities in the Snake River Birds of Prey Area, southwestern Idaho. Pages 97-105 *in* R. Herrmann (editor). Managing water resources during global change. Proc. 28th American Water Resources Association.
- Knick, S. T. 1989. Bobcat *Felis rufus*. Pages 125-126 *in* T. W. Clark, A. H. Harvey, R. D. Dorn, D. L. Genter, and C. Groves (editors). Rare, sensitive, and threatened species of the greater Yellowstone ecosystem. Northern Rockies Conservation Cooperative.
- Brittall, J. D., S. J. Sweeney, and S. T. Knick. 1979. Washington bobcats: diet, population dynamics, and movements. Pages 107-110 *in* P.C. Escherich and L. G. Blum (editors). Proc. 1979 bobcat research conference. Nat. Wildl. Fed. Sci. and Tech. Ser. 6. 137pp.

Other Papers

- Knick, S. T., J. T. Rotenberry, and B. A. Hoover. 2000. Simulating fire spread and shrubland dynamics in a semiarid rangeland of southwestern Idaho using GIS and remotely sensed data. Page 110 *in* Neuenschwander, L. F., K. C. Ryan, and G. E. Golberg (editors). Proceedings-Joint Fire Science Conference and Workshop. Crossing the millennium: integrating spatial technologies and ecological principles for a new age in fire management. Vol. 2. University of Idaho, Moscow, ID.
- U.S. Department of the Interior. 1998. Review panel report on the Intermountain Greenstripping Research Program. (Lead author).
- U.S. Department of the Interior. 1996. Effects of military training and fire in the Snake River Birds of Prey National Conservation Area. BLM/IDARNG Research Project Final Report. U.S. Geol. Surv.,

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FEBRUARY 18, 2016**

Biol. Res. Div., Snake River Field Sta., Boise, ID 130pp. (Principal authors: K. Steenhof and S. T. Knick.)

Knick, S. T., and J. T. Rotenberry. 1995. Habitat relationships and breeding passerine birds on the Snake River Birds of Prey Area. U.S. Bur. Land Manage, Idaho Tech. Bull. No. 95-5.

Knick, S. T. 1989. Grizzlies of the Selkirks. Idaho Wildlife 9:4-7.

Knick, S. T. 1987. What do the bobcats do when the jackrabbits are gone? Idaho Wildlife 7:1417.

Presentations (2004 to present)

Knick, S. T., and S. E. Hanser. 2014. Local and landscape determinants of juniper treatment success in establishing sagebrush bird communities. July. Western Association of Fish and Wildlife Agencies, San Antonio, TX.

Hanser, S. E., and S. T. Knick. 2014. Fall habitat selection and migratory pathways of sagebrush-obligate passerines in the intermountain west. September. American Ornithological Union/Cooper Society, Estes Park, CO.

Knick, S. T., and S. E. Hanser. 2014. Local and landscape determinants of juniper treatment success in establishing sagebrush bird communities. June. Western Governors Association, Colorado Springs, CO.

Knick, S. T. 2014. Maximizing minimums: mapping basic requirement for greater sage-grouse. January. Webinar.

Knick, S. T. 2014. Sagebrush and sage-grouse landscape management: minimums and maximums. November. International Sage-grouse Forum, Salt Lake City, UT.

Knick, S. T., and D. E. Naugle. 2014. Tying it all together to conserve sage-grouse long-term: Range-wide connectivity study. May. Sage-grouse Initiative, Annual Meeting, Twin Falls, ID.

Knick, S. T., and S. E. Hanser. 2014. Bird community response to juniper removal. I. Stability, shock, and reality. March. The Wildlife Society, Northwest Chapter, Boise, ID.

Knick, S. T., and S. E. Hanser. 2014. Ecological scale of bird community response to pinyon-juniper removal. October. Society for Ecological Restoration, Bend, OR.

Hanser, S. E., and S. T. Knick. 2014. Bird response to juniper removal. II. Winners and losers. March. The Wildlife Society, Northwest Chapter, Boise, ID.

Pyke, D. A., S. T. Knick, J. C. Chambers, M. Pellant, J. L. Beck, E. W. Schupp, and P. S. Doescher. 2014. Restoration of greater sage-grouse habitat: a framework for landscape and site-specific decisions. August. Ecological Society of America, Sacramento, CA.

Knick, S. T., M. Leu, J. T. Rotenberry, S. E. Hanser, and K. A. Fesenmyer. 2013. Diffuse migratory connectivity in two species of shrubland birds: evidence from stable isotopes. August. Joint AOU/COS Meetings, Chicago, IL.

Hanser, S. E., S. T. Knick, and M. Leu. 2013. Migratory pathways of sagebrush-obligate passerines in the Intermountain West. August. Joint AOU/COS Meetings, Chicago, IL.

Isdell, R., Leu, M., Knick, S., Hanser, S., Rotenberry, J. 2013. Factors influencing shrubland bird habitat use on the wintering grounds in the southwestern U.S. March. Wilson Ornithological Society. Williamsburg, VA.

Knick, S. T., and J. C. Freemuth. 2012. If we know everything we need to know to conserve sage-grouse, why aren't we doing it? Idaho Chapter, The Wildlife Society, Boise, ID.

Knick, S. T. 2012. Landscape influence on gene flow in greater sage-grouse: conservation actions through cores and corridors. Western Association of Fish and Wildlife Agencies, Kona, HI.

Knick, S. T., S. E. Hanser, and K. L. Preston. 2012. Modeling ecological minimum requirements for greater sage-grouse across their western range, U.S.A. Pacific Northwest Climate Science Conference, Boise, ID.

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- Knick, S. T., S. E. Hanser, and K. L. Preston. 2012. Modeling ecological minimum requirements for greater sage-grouse across their western range, USA. Western Sage and Columbian Sharp-tailed Grouse Conference, Steamboat Springs, CO.
- Preston, K. L., S. E. Hanser, R. F. Johnson, and S. T. Knick. 2012. Using ecological minimum requirements to model greater sage-grouse habitat across their western range, U.S.A. North American Ornithological Congress, Vancouver, BC.
- Hanser, S.E., Knick, S.T., and Leu, M. 2012. Resistance and resilience of bird communities to pinyon-juniper removal by prescribed fire. Society for Range Management, Spokane, WA.
- Knick, S.T., Hanser, S.E., and Leu, M. 2012. Multiscale costs and benefits of prescribed fire on bird communities in pinyon-juniper woodlands. Oregon Natural Desert Association, Bend, OR.
- Knick, S. T. 2011. Greater sage-grouse. A landscape species and its habitat. Association of Fish and Wildlife Agencies, Omaha, NE.
- Knick, S. T. 2011. Conservation issues for greater sage-grouse. Approaches to prioritize management. Great Basin Science Delivery Project. Webinar.
- Knick, S. T. 2011. Are we getting what we expect? Short-term response by bird communities to treatments in pinyon-juniper woodlands. International Fire Science Association. Webinar.
- Knick, S. T., S. E. Hanser, and M. Leu. 2011. Short-term response by bird communities to pinyon-juniper removal by prescribed fire. Association of Fire Ecologists, Park City, UT.
- Knick, S. T. 2010. Science, sage-grouse, and public land policy. Idaho Environmental Forum, Boise, ID.
- M. Leu, C. L. Aldridge, S. E. Hanser, S. T. Knick, and S. E. Nielson. 2010. Distribution of sagebrush associated bird species in the Wyoming Basin: influence of anthropogenic land-use patterns, and habitat and abiotic factors. American Ornithological Union Annual Meeting. February. San Diego, CA.
- Finn, S. P., and S. T. Knick. 2010. Energy development-induced landcover change in western Wyoming: using spatiotemporal reconstructions to inform future landscapes. March. Wildlife conservation and energy development in the northwest. Idaho Chapter, The Wildlife Society, Boise, ID.
- Knick, S. T., and S. E. Hanser. 2009. Connecting pattern and process in greater sage-grouse populations and sagebrush landscapes. The Wildlife Society, Monterey, CA.
- Knick, S. T., and M. Leu. 2009. The distribution of woodland-sagebrush avian communities in the Intermountain West. Ecological Society of America, Albuquerque, NM.
- M. Leu, S. Knick, S. Hanser, K. Fesenmyer, and J. Rotenberry. 2009. Wintering ecology of shrubland birds on DoD installations: linking landscape and habitat. Dept. of Defense Sustaining Military Readiness Meeting. July. Phoenix, AZ.
- Fesenmyer, K. A., and S. T. Knick. 2008. Behavior, movement, habitat use, and mortality of sage sparrows during the fall migratory period: a telemetry study. August. International Ornithological Congress, Portland, OR. Presented
- Hanser, S. E., M. Leu, C. L. Aldridge, M. M. Rowland, S. E. Nielson, and S. T. Knick. 2008. The effects of anthropogenic features and habitat on greater sage-grouse habitat use in the Wyoming Basins. International Ornithological Congress, Portland, OR. Presented
- Knick, S. T. 2008. Why should we connect sage-grouse habitats. Nevada Conservation Area Design. May. Reno, NV. INVITED
- Knick, S. T., and S. E. Hanser. 2008. Connectivity in sagebrush landscapes: the influence of habitat pattern on process in greater sage-grouse populations. Nevada Conservation Area Design. May. Reno, NV. INVITED
- Knick, S. T. The role of habitat disturbance in driving sagebrush steppe bird dynamics: sparrows and sage-grouse. October. USGS Wildlife Program Review, Reston, VA. INVITED

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- S. E. Hanser, M. Leu, C. L. Aldridge, M. Rowland, S. E. Nielson, and S. T. Knick. 2008. The effects of anthropogenic features and habitat of Greater Sage-Grouse habitat use in the Wyoming Basins. American Ornithological Union Annual Meeting. August. Portland, OR.
- Leu, M., S. Knick, S. Hanser, K. Fesenmyer, and J. Rotenberry. 2007. Migratory connectivity between breeding and wintering populations of shrubsteppe sparrows using stable isotopes. Cooper Ornithological Society, Moscow, ID.
- Hanser, S. E., and S. T. Knick. 2007. Greater sage-grouse as an umbrella species for shrubland passerine birds: a multi-scale approach. Cooper Ornithological Society, Moscow, ID. Invited
- Fesenmyer, K., S. T. Knick, M. Leu, and S. Hanser. 2007. Predicting migratory pathways of shrubland birds using GIS cost-path analysis. Cooper Ornithological Society, Moscow, ID.
- Knick, S. T. 2007. Sagebrush steppe restoration from an ecological perspective: what is success and how will we know it? Restoring the West Conference. Utah State University, Logan, UT. Invited Plenary
- Knick, S. T., and S. E. Hanser. 2007. Sagebrush steppe restoration and shrubland obligate birds. Restoring the West Conference. Utah State University, Logan, UT. Invited
- Leu, M., S. Hanser, and S. Knick. 2006. The human footprint model in western landscapes. Balancing Energy Development and Raptor Conservation in the Western United States: Promoting Partnerships in Research, Monitoring, and Management. Invited
- Preston, K. L., J. T. Rotenberry, and S. T. Knick. 2006. GIS-based niche modeling as a tool for multispecies conservation planning. Society for Conservation Biology.
- Knick, S. T., J. W. Connelly, M. A. Schroeder, and S. J. Stiver. 2005. Range-wide conservation assessment of greater sage-grouse and sagebrush habitats. Western Governors Association, Reno, NV. Invited
- Knick, S. T., J. T. Rotenberry, and R. Sallabanks. 2005. Conserving birds in shrubland ecosystems: fitting the many pieces together in a very large and difficult puzzle. The Wildlife Society. Madison, WI.. Invited
- Leu, M., S. Hanser, and S. Knick. 2005. Using a human footprint model to predict exotic plant invasion. Ecology and Management of Pinyon-Juniper and Sagebrush Communities. Invited
- Meinke, C. W., and S. T. Knick. 2005. Prioritizing restoration of sagebrush systems in the Intermountain West. The Wildlife Society, Idaho Chapter, Boise, ID.
- Aldridge, C. L., S. E. Nielsen, H. L. Beyer, M. S. Boyce, S. T. Knick, M. A. Schroeder, and J. W. Connelly. 2004. Range-wide patterns of sage-grouse extirpation: lessons from the past, predictions for the future. The Wildlife Society, Calgary, ALB.
- Knick, S. T., M. Leu, and T. R. Loveland. 2004. Effect of multiscale habitat change on populations of birds breeding in sagebrush habitats. The Ecological Society of America, Portland, OR.
- Leu, M., S. Hanser, and S. Knick. 2004. The human footprint in the west: a large-scale analysis of human impacts. The Ecological Society of America, Portland, OR.
- Finn, S., T. Rinkes, and S. Knick. 2004. Impact of energy development on sagebrush ecosystems. The Ecological Society of America, Portland, OR.

Graduate Student Advising

Boise State University

MS advisor, Bruce Schoeberl, Thesis: Influence of fragmentation on shrubsteppe-obligate passerines. 2003

Committee member, 5 MS students

University of Idaho

PhD committee, Joseph Holbrook. Current

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David S. Pilliod

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EDUCATION

1995-2001	Ph.D. Ecology	Idaho State University, Pocatello, ID
1987-1991	B.A. Biology	University of California, Santa Cruz, CA

PROFESSIONAL EXPERIENCE

2011-present	Affiliate Assistant Professor, Ecology Department, Montana State University, Bozeman, MT
2008-present	Adjunct Graduate Faculty, Department of Biological Sciences, Boise State University, Boise, ID
2006-present	Supervisory Research Ecologist, US Geological Survey, Forest and Rangeland Ecosystem Science Center, Boise, ID
2004-2006	Assistant Professor and Museum Curator of Herpetology, Department of Biological Sciences, College of Science and Mathematics, California Polytechnic State University, San Luis Obispo, CA
2003-2006	Affiliate Faculty, College of Forestry and Conservation, University of Montana
2002-2004	Post-doctoral Research Ecologist, USDA Forest Service, Aldo Leopold Wilderness Research Institute, Rocky Mountain Research Station, Missoula, MT
2001-2002	Post-doctoral Research Associate, US Geological Survey, Amphibian Research and Monitoring Initiative under contract with the University of Montana
2000-2001	Research Assistant, Idaho GAP Analysis Project, Idaho State University

GRADUATE LEVEL TEACHING EXPERIENCE

California Polytechnic State University San Luis Obispo

BIO427: Wildlife Management
BIO470: Conservation Biology
BIO471: Exercises in Conservation Biology
BIO590: Graduate Seminar: Fire Ecology

Idaho State University

BIO425: Human Anatomy
BIO425L: Human Anatomy Lab
BIO470: Graduate Seminar: Perspectives on Amphibian Declines

GRANTS, CONTRACTS, AND AWARDS

2014	Confederated Tribes of the Colville Reservation. "Scientific support of the Chief Joseph Hatchery Program" \$42,609. (PI: Pilliod)
2014	Portland Water Bureau. "Salmon redd identification using eDNA" \$21,950. (PI: Pilliod)

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- 2014 State of Idaho Military Division . “Range and training land analysis data management and reporting” \$36,394. (PIs: Zarriello, Pilliod)
- 2014 U.S. Fish and Wildlife Service. “Columbia spotted frog habitat and population trends analysis” \$25,000. (PI: Pilliod)
- 2014 U.S. Fish and Wildlife Service. “Automated Pattern Recognition as a Non-invasive Method for Capture-Recapture Population Studies of Chiricahua Leopard Frogs (*Lithobates chiricahuensis*)” \$16,850. (PI: Pilliod)
- 2014 U.S. Geological Survey. “SageSuccess: Sagebrush restoration for sage-grouse habitat needs” \$128,375 (PIs: Pilliod, Bradford, Duniway, Germino, Manier, Pyke)
- 2013 Bureau of Land Management. “Land treatment digital library data analysis and reporting” \$1.4M (PI: Pilliod)
- 2013 Idaho Department of Fish and Game. “Status and trends of Columbia Spotted Frog populations and habitats in the Owyhees” \$16,000. (PI: Pilliod)
- 2012 Bureau of Land Management. “Forecasting insect community responses to changes in land management and climate in Upper Columbia Basin sagebrush steppe” \$281,370. (PIs: Pilliod, Rohde)
- 2012 Bureau of Land Management National Landscape Conservation System. “Effects of herbicide applications for shrubland habitat restoration on ground-dwelling and pollinator insect communities on the Morley Nelson Snake River Birds of Prey National Conservation Area” \$32,000. (PI: Pilliod)
- 2012 Bureau of Land Management Idaho State Office. “Grazing Database” \$16,000. (PI: Pilliod)
- 2012 Confederated Tribe of the Colville Reservation. “Landscape-level assessment of spring chinook distribution throughout the Okanogan basin using environmental DNA” \$43,000. (PIs: Pilliod, Laramie)
- 2012 State of Idaho Military Division. “Reptile occupancy and abundance monitoring on the Idaho National Guard Orchard Training Area” \$40,000. (PIs: Cossel, Pilliod)
- 2012 Wyoming Department of Transportation. ”Evaluation of a wetland mitigation site: amphibian population dynamics” \$86,852. (PIs: Muths, Pilliod, Corn, Hossack)
- 2011 Joint Fire Science Program. “Quantifying and predicting fuels and the effects of reduction treatments along successional and invasion gradients in sagebrush habitats” \$546,723. (PIs: Shinneman, Pilliod, Arkle)
- 2011 USGS Amphibian Research and Monitoring Initiative. “Detecting amphibian species using environmental DNA from filtered water samples” \$48,769. (PIs: Pilliod, Waits, Goldberg, Arkle)
- 2010 USDA Payette National Forest. “Monitoring stream biota and habitats after Meadow Creek stream restoration in the Stibnite Mine tailings area and effects of prescribed fire in the Bald Hill Fuels Treatment project area” \$80,833. (PI: Pilliod)
- 2010 Great Basin Landscape Conservation Cooperative. “Tools for monitoring Great Basin wildlife species across altered landscapes: Research in support of Great Basin LCC” \$30,600.
- 2009 Bureau of Land Management. “A centralized digital library of BLM land treatment legacy” \$1.4M (PI: Pilliod)
- 2009 Joint Fire Science Program. “Fire rehabilitation effectiveness: A chronosequence approach for the Great Basin” \$1.1M (PIs: Pyke, Pilliod, Brooks, Chambers, Grace)

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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- 2008 Joint Fire Science Program. "Feasibility of a chronosequence approach to identifying post-fire effectiveness of seeding non-forested rangelands" \$97,066. (PIs: Pyke, Brooks, Chambers, Pilliod, Wirth)
- 2008 Joint Fire Science Program. "Cumulative effects of fire and fuels management on stream water quality and ecosystem dynamics" \$316,765. (PIs: Pilliod and Arkle)
- 2008 USGS Amphibian Research and Monitoring Initiative, Research Grant Program. "Automated amphibian digital identification system." \$66,596. (PI: Pilliod)
- 2006 USDA Payette National Forest. "Monitoring stream biota and habitats after Meadow Creek stream restoration in the Stibnite Mine tailings area." \$27,059. (PI: Pilliod, 2006, 2008)
- 2006 USDA Forest Service Rocky Mountain Research Station. "Post-fire recovery in stream ecosystems." \$10,000. (PI: Pilliod)
- 2005 Joint Fire Science Program. Funding extension for project "Effects of prescribed and wildland fire on aquatic ecosystems in western forests." \$75,038. (PIs: Pilliod, Bury, and Corn)
- 2005 USGS Amphibian Research and Monitoring Initiative, Research Grant Program. "Monitoring amphibians in Idaho on U.S. Forest Service lands: the importance of landscape connectivity for amphibian conservation." \$225,996. (PIs: Klaver, Pilliod, and others).
- 2004 U.S. Fish and Wildlife Service. Contract for authoring and editing book *Habitat Management Guidelines for Amphibians and Reptiles in the Pacific Northwest Region*. \$20,000. (PIs: Wind and Pilliod)
- 2004 USGS Fire Science Program. "Effects of prescribed fire on stream ecosystems." \$18,308. (PI: Pilliod)

REFEREED PUBLICATIONS

- Arkle, R.S., D.S. **Pilliod**, S.E. Hanser, M.L. Brooks, J.C. Chambers, J.B. Grace, K.C. Knutson, D.A. Pyke, J.L. Welty, and T.A. Wirth. 2014. Quantifying restoration effectiveness using multi-scale habitat models: implications for sage-grouse in the Great Basin. *Ecosphere* 5(3):31. <http://dx.doi.org/10.1890/ES13-00278.1>
- Knutson, K.C., D.A. Pyke, T.A. Wirth, R.S. Arkle, D.S. **Pilliod**, M.L. Brooks, J.C. Chambers, J.B. Grace. 2014. Long-term effects of seeding after wildfire on vegetation in Great Basin shrubland ecosystems. *Journal of Applied Ecology*. doi: 10.1111/1365-2664.12309
- Pilliod**, D.S., C.S. Goldberg, R.S. Arkle, and L.P. Waits. 2014. Factors influencing detection of eDNA from a stream-dwelling amphibian. *Molecular Ecology Resources* 9: doi-10.1111/1755-0998.12159.
- Hossack, B.R., M.J. Adams, C.A. Pearl, K. Wilson, E.L. Bull, K. Lohr, D. Patla, D.S. **Pilliod**, J. Jones, K. Wheeler, S. McKay, P.S. Corn. 2013. Roles of patch characteristics, drought frequency, and restoration in driving long-term trends of a widespread amphibian. *Conservation Biology* 27:1410-1420.
- Pilliod**, D.S., and R.S. Arkle. 2013. Performance of quantitative sampling methods across gradients of cover in Great Basin plant communities. *Rangeland Ecology and Management* 66:634-647.
- Pilliod**, D.S., C.S. Goldberg, R.S. Arkle, and L.P. Waits. 2013. Estimating occupancy and abundance of stream amphibians using environmental DNA from filtered water samples. *Canadian Journal of Fisheries and Aquatic Sciences* 70: 1123-1130.

- Pilliod**, D.S., J.L. Welty, and R. Stafford. 2013. Terrestrial movement patterns of western pond turtles (*Actinemys marmorata*) in central California. *Herpetological Conservation and Biology* 8: 207-221.
- Pilliod**, D.S., R.S. Arkle, and B.A. Maxell. 2013. Persistence and extirpation in invaded landscapes: patch characteristics and connectivity determine effects of non-native predatory fish on native salamanders. *Biological Invasions* 15:671-685.
- Arkle, R.S., D.S. **Pilliod**, and J.L. Welty. 2012. Pattern and process of prescribed fires influence effectiveness at reducing wildfire severity in dry coniferous forests. *Forest Ecology and Management* 276:174-184.
- Jain, T.B., D.S. **Pilliod**, R.T. Graham, L.B. Lentile, and J.E. Sandquist. 2012. Index for characterizing post-fire soil environments in temperate coniferous forests. *Forests* 3:445-466.
- Goldberg, C.S., D.S. **Pilliod**, R.S. Arkle, and L.P. Waits. 2011. Molecular detection of vertebrates in stream water- a demonstration using Rocky Mountain tailed frogs and Idaho giant salamanders. *PLoS ONE* 6: e22746. doi:10.1371/journal.pone.0022746.
- Hossack, B.R., and D.S. **Pilliod**. 2011. Amphibian responses to wildfire in the western United States- Emerging patterns from short-term studies. *Fire Ecology* 7: 129-144.
- Muths, E., R.D. Scherer, and D.S. **Pilliod**. 2011. Compensatory effects of recruitment and survival when amphibian populations are perturbed by disease. *Journal of Applied Ecology* 48:873-879.
- Arkle, R.S. and D.S. **Pilliod**. 2010. Prescribed fires as ecological surrogates for wildfires: a stream and riparian perspective. *Forest Ecology and Management* 259: 893-903.
- Arkle, R.S., D.S. **Pilliod**, and K. Strickler. 2010. Fire, flow, and dynamic equilibrium in stream macroinvertebrate communities. *Freshwater Biology* 55:299-314.
- Murphy, M.A., R. Dezzani, D.S. **Pilliod**, and A. Storfer. 2010. Landscape genetics of high mountain frog metapopulations. *Molecular Ecology* 19:3634-3649.
- Pilliod**, D.S., B.R. Hossack, P.F. Bahls, E.L. Bull, P.S. Corn, G. Hokit, B.A. Maxell, J.C. Munger, and A. Wyrick. 2010. Nonnative salmonids affect amphibian occupancy at multiple spatial scales. *Diversity and Distributions* 16:959-974.
- Pilliod**, D.S., E. Muths, R.D. Scherer, P.E. Bartelt, P.S. Corn, B.A. Hossack, B. Lambert, R. McCaffrey, and C. Gaughan. 2010. Effects of amphibian chytrid fungus on individual survival probability in wild boreal toads. *Conservation Biology* 24:1259-1267.
- Shive, J.P., D.S. **Pilliod**, and C.R. Peterson. 2010. Hyperspectral analysis of Columbia spotted frog habitat. *Journal Wildlife Management* 74:1387-1394.
- Stone, K., D.S., **Pilliod**, K. Dwire, C.C. Rhoades, S.P. Wollrab, and M.K. Young. 2010. Fuel reduction management practices in riparian areas of the western USA. *Environmental Management* 46:91-100.
- Pilliod**, D.S. and E. Wind. 2009. Northwest partners in amphibian and reptile conservation. In: Olson, D.H. (coord. ed.), *Herpetological conservation in northwestern North America. Northwestern Naturalist* 90: 80-81.
- Jain, T.B., W. Gould, R.T. Graham, D.S. **Pilliod**, L.B. Lentile, and G. Gonzalez. 2008. A soil burn severity index for understanding soil-fire relations in tropical forests. *Ambio* 37:563-568.
- Muths, E., D.S. **Pilliod**, and L. Livo. 2008. Distribution and environmental limitations of an amphibian pathogen in the Rocky Mountains, USA. *Biological Conservation* 141:1484-1492.

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

- Petrisko, J.E., C.A. Pearl, D.S. **Pilliod**, P.P. Sheridan, C.F. Williams, C.R. Peterson, and R.B. Bury. 2008. *Saprolegniaceae* identified on amphibian eggs throughout the Pacific Northwest, USA, by internal transcribed spacer sequences and phylogenetic analysis. *Mycologia* 100:171-180.
- Karraker, N.E., D.S. **Pilliod**, E.L. Bull, P.S. Corn, L.V. Diller, L.A. Dupuis, M.P. Hayes, B.R. Hossack, G.R. Hodgson, E.J. Hyde, K. Lohman, B.R. Norman, L.M. Ollivier, C.A. Pearl, C.R. Peterson. 2006. Taxonomic variation in oviposition by tailed frogs (*Ascaphus* spp.). *Northwestern Naturalist* 87:87-97.
- Hossack, B.R., P.S. Corn, and D.S. **Pilliod**. 2005. Lack of significant changes in the herpetofauna of Theodore Roosevelt National Park, North Dakota, since the 1920s. *American Midland Naturalist* 154:423-432.
- Funk, W.C., M.S. Blouin, P.S. Corn, B.A. Maxell, D.S. **Pilliod**, S. Amish, and F.W. Allendorf. 2005. Population structure of Columbia spotted frogs (*Rana luteiventris*) is strongly affected by the landscape. *Molecular Ecology* 14:483-496.
- Dunham, J.B., D.S. **Pilliod**, and M.K. Young. 2004. Assessing the consequences of nonnative trout in headwater ecosystems in western North America. *Fisheries* 29:18-26.

CONFERENCE PRESENTATIONS

Invited Addresses

- 2014 Pilliod, D.S. Will environmental DNA analysis revolutionize understanding of species distributions and biodiversity? Department of Biological Sciences, Montana State University, Bozeman, MT, 9 April.
- 2014 Pilliod, D.S. Best field practices for collection of environmental DNA samples. USGS Webinar Series, 3 April.
- 2014 Pilliod, D.S. Applications of environmental DNA for monitoring aquatic organisms. Idaho Chapter and Northwest Section of The Wildlife Society, Boise, ID, 5 March.
- 2012 Pilliod, D.S. Using environmental DNA from filtered water samples to detect Rocky Mountain Tailed Frogs and Idaho Giant Salamanders. Idaho Department of Environmental Quality Water Quality Meeting, Boise, ID, 9 February.
- 2012 Pilliod, D.S., R.S. Arkle, C. Goldberg, L. Waits. Molecular detection of amphibian species using environmental DNA. Idaho Partners for Amphibian and Reptile Conservation, Boise, ID, 6 March.
- 2012 Pilliod, D.S. Why are low-severity prescribed fires still effective at reducing severity of future wildfires? Fire Lab Seminar Series, Missoula, MT, 1 March.
- 2012 Pilliod, D.S. Evaluating historic seeding treatments in western grasslands and shrublands using the Land Treatment Digital Library, Society for Range Management, Spokane, WA, 29 January.
- 2010 Pilliod, D.S. Land treatment legacy: advantages and challenges of knowing where and how vegetation was manipulated on public lands. Alternative Management Strategies in Big Sagebrush Steppe: Perspectives, Opportunities and Supporting Evidence session, Idaho Chapter of the Society for Range Management, Idaho Falls, ID, 10-12 November.
- 2010 Pilliod, D.S., Welty, J. Archiving Legacy Data from Land Treatment Projects: Applications for Management and Science. Eastern Nevada Landscape Coalition, Ely, NV, 10-11 June.

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- 2010 Pilliod, D.S. Monitoring wildlife responses to restoration projects. Emerging Conservation Challenges session, Society for Northwestern Vertebrate Biology, Medford, OR, 23-26 February.
- 2009 Are prescribed fires ecological surrogates for wildland fires? a stream perspective. National Interagency Fire Center, Boise, ID, 18 March.
- 2008 Mountain-climbing frogs and tree-climbing salamanders. Idaho Herpetological Society, Boise, ID, 16 March.
- 2007 Interactions of upland, riparian, and instream disturbances on stream biota. Interrelationships between fire, aquatic and terrestrial fauna, and conservation planning session, USFS Region 4 Integrated Resources Workshop, Ogden, UT, 28 February.
- 2006 A frogs-eye view of heterogeneous landscapes. Presentation at Department of Biology seminar series, Humboldt State University, Arcata, CA. 7 April.
- 2006 The role of introduced trout as amphibian predator and disease vector in the northwest. Presentation at special session on Perspectives, Fieldwork, and Ecology of the Pacific Northwest at Society for Northwestern Vertebrate Biology meeting, Olympia, WA, 28 March.
- 2005 Conservation biology of amphibians: How bad is it and what can be done? Presentation to Central Coast Biological Society, San Luis Obispo, CA, 20 October.
- 2005 Tailed frog responses to burn severity in the Bitterroot Mountains. Presentation to Regional Training Academy, US Forest Service Region 1, Missoula, MT, 24 March.
- 2005 Conserving amphibian habitats in montane environments: a case study on Columbia spotted frogs (*Rana luteiventris*). Presentation at special session on Herpetofauna Habitat Conservation and Management at joint meeting of Society for Northwestern Vertebrate Biology and Oregon Chapter The Wildlife Society, 24 February, Corvallis, OR.
- 2005 Effects of burn severity on stream amphibian populations. Presentation at special session on Wildlife and Fire at joint meeting of Society for Northwestern Vertebrate Biology and Oregon Chapter The Wildlife Society, Corvallis, OR, 24 February.
- 2004 How are forest-dwelling amphibians coping with the recent wildfires in the northern Rockies? Keynote address at Idaho Herpetological Society annual meeting, Boise, ID, 13 November.
- 2004 Wildfire effects on stream communities in Idaho. Department of Biology seminar series, Boise State University, Boise, ID, 12 November.
- 2004 Effects of wildland fire on stream ecosystems. Presentation to USFS Region 1 Watersheds, Wildlife, and Fisheries Resources Program, Missoula, MT, 9 July.
- 2004 Fish issues in wilderness: wild or not? Panel discussion at special session: Conservation at the Crossroads, Missoula, MT, 23 April.
- 2004 Habitat management guidelines for amphibians and reptiles. Presentation at special session on Partners for Amphibian and Reptile Conservation session at Society for Northwestern Vertebrate Biology, Ellensburg, WA, 26 March.
- 2004 Effects of wildland fires on stream amphibian populations in the greater Northwest. Presentation at special session on Fire and Fuel Reduction Effects on Wildlife at Society for Northwestern Vertebrate Biology, Ellensburg, WA, 26 March.

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Contributed Papers and Posters (Senior Author only)

- 2013 Pilliod, D.S. and J. Welty. Land Treatment Digital Library. Great Basin Consortium Conference, University of Nevada, Reno, NV, 9-10 December.
- 2013 Pilliod, D.S., Goldberg, C.S., Arkle, R.S., Waits, L.P. Successes and challenges of using eDNA to monitor amphibians in high-gradient streams. Society for Conservation Biology: International Congress for Conservation Biology.
- 2013 Pilliod, D.S., Olson, D.H. Reptile species richness and (climate change) vulnerability across Northwestern North America. Society for Northwest Vertebrate Biology 2013 Annual Meeting.
- 2012 Pilliod, D.S., Welty, J. Effects of land treatments on subsequent wildfire and vegetation state transitions in the Great Basin. International Fire Management and Ecology Congress, Portland, OR, 3-7 December.
- 2012 Pilliod, D.S. Automated pattern recognition program for leopard frogs. World Congress of Herpetology, Vancouver, BC, 8-13 August.
- 2012 Pilliod, D.S. and R.D. Scherer. The demography of sources and sinks in an amphibian metapopulation. Society for Northwestern Vertebrate Biology, Hood River, OR, 22 March.
- 2012 Pilliod, D.S., R.S. Arkle, C. Goldberg, L. Waits. Molecular detection of amphibian species using environmental DNA. Northwest Partners for Amphibian and Reptile Conservation, Hood River, OR, 20 March.
- 2012 Pilliod, D.S. and R.D. Scherer. The demography of sources and sinks in an amphibian metapopulation. Idaho Chapter of The Wildlife Society, Boise, ID, 3 March.
- 2011 Pilliod, D.S., R.S. Arkle, and J.L. Welty. Spring-ignited prescribed fires reduce the severity of subsequent wildfire in central Idaho. Association of Fire Ecology, Interior West. Snowbird, UT, 6-9 November.
- 2011 Pilliod, D.S. Introducing an automated pattern recognition program for leopard frogs. Paper presented at Annual meeting Society for Northwestern Vertebrate Biology and Washington Chapter of The Wildlife Society, Gig Harbor, WA, 22-25 March.
- 2011 Pilliod, D.S. Rocky Mountain Tailed Frog responses to disturbance and restoration. Paper presented at Annual meeting Society for Northwestern Vertebrate Biology and Washington Chapter of The Wildlife Society, Gig Harbor, WA, 22-25 March.
- 2011 Pilliod, D.S., R.S. Arkle, and T.R. Kulp. Stream ecosystem responses to restoration at the Stibnite Mine, Idaho. Poster presented at 9th Biennial USGS Pacific Northwest Science Conference "Interdisciplinary Approaches to Regional Science", Vancouver, WA, 1-3 March.
- 2010 Pilliod, D.S. and R.S. Arkle. Can remaining fishless lakes maintain native amphibians in the northern Rocky Mountains? Paper presented at National Conservation Training Center Webinar, 27-28 October.
- 2010 Pilliod, D.S. and J. Welty. Availability of land treatment data for time-series investigations of vegetation responses to climate. Poster presented at Climate Change in the Great Basin and Mojave Desert Workshop, Las Vegas, NV, 20-22 April.
- 2010 Pilliod, D.S. Movement patterns of western pond turtles on the Carrizo Plain Ecological Reserve, California. Paper presented at Society for Northwestern Vertebrate Biology, Medford, OR, 23-26 February.

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- 2010 Pilliod, D.S. and J. Welty. Land Treatment Digital Library: A dynamic system to enter, store, retrieve, and analyze Federal land-treatment data. Poster presented at Society for Range Management, Denver, CO, 8-11 February.
- 2009 Pilliod, D.S. and J. Welty. Land Treatment Digital Library: A dynamic system to enter, store, retrieve, and analyze Federal land-treatment data. Poster presented at Restoring the West Conference, Logan, UT, 27-28 October.
- 2009 Pilliod, D.S., E. Muths, and R.D. Scherer. 2009. Survival with disease: effects of the amphibian chytrid fungus on toad populations. Paper presented at Annual Meeting of the Society of Northwestern Vertebrate Biology, Stevenson, WA, 18-21 February.
- 2008 Pilliod, D.S. and R.S. Arkle. Are prescribed fires ecological surrogates for wildland fires? A stream perspective. Paper presented at Idaho Chapter of The Wildlife Society, Boise, ID, 5 March.
- 2008 Pilliod, D.S. and R.S. Arkle. Are prescribed fires ecological surrogates for wildland fires? A stream perspective. Paper presented at Society Northwestern Vertebrate Biology, Missoula, MT, 27 February.
- 2007 Pilliod, D.S. Amphibian diseases in the Northwest. Paper presented at Idaho Herpetological Society, Boise, ID, 3 November.
- 2007 Pilliod, D.S., E. Muths, and L.J. Livo. Spatial distribution of the amphibian chytrid fungus at boreal toad breeding sites in the Rocky Mountains, USA. Paper presented at OR/WA Chapter of The Wildlife Society, Pendleton, OR, 12-13 April.
- 2006 Pilliod, D.S., R. Arkle, R.B. Bury, T. Jain, and J. Evans. Fire in riparian forests: effects on stream amphibian reproduction in the Northwest, USA. Paper presented at International Society of Fire Ecology and Management, San Diego, CA, 7 November.
- 2006 Pilliod, D.S. Effects of non-native fish on amphibian reproduction and occupancy at multiple spatial scales. Paper presented at Idaho Chapter of The Wildlife Society, Boise, ID, 7-8 March.
- 2005 Pilliod, D.S. R. Arkle, P.S. Corn, and R.B. Bury. Effects of prescribed and wildand fire on stream ecosystems in western forests. Poster presented at annual meeting Joint Fire Sciences Program, San Diego, CA, 1 November.
- 2004 Pilliod, D.S. and others. The role of nonnative fishes on amphibian distributions in the northern Rocky Mountains. Paper presented at Joint Meeting of Ichthyologists and Herpetologists, Norman, Oklahoma, 26-31 May.
- 2004 Pilliod, D.S., P.S. Corn, and R.B. Bury. Effects of prescribed and wildand fire on stream ecosystems in western forests. Paper presented at annual meeting Joint Fire Sciences Program, Phoenix, AZ, 6-8 April.

RESEARCH RELATED SERVICE

I served as a professional reviewer of research grant proposals for the Joint Fire Science Program Research Grants (2009), M.J. Murdock Charitable Trust for Undergraduate Research (2010), Joint Fire Science Program Graduate Research Innovation Grants (2013), and Department of Defense Legacy Research Proposals (2014).

I am a reviewer and referee for 29 different scientific journals.

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I was co-chair and served on the Joint National Steering Committee for Partners for Amphibian and Reptile Conservation (2009-2013). I was Curator of Herpetology at the California Polytechnic State University Museum (2005-2007). I served as the Vice-President (Inland Region) for the Society for Northwestern Vertebrate Biology (2003-05) and Board of Advisors for the scientific journal Herpetological Conservation and Biology since its inception in 2006.

GRADUATE STUDENTS

ADVISOR

- 2014 Ashley Rohde. MS Biology, Boise State University. Influence of wildfire disturbance and post-fire seeding on vegetation and insects in sagebrush habitats.
- 2013 Matthew Laramie. MS Biology, Boise State University. Distribution of chinook salmon (*Oncorhynchus tshawytscha*) in Upper-Columbia River Sub-basins from environmental DNA analysis.
- 2009 Jackie Hancock. MS Biological Sciences, California Polytechnic State University. Arroyo toad (*Bufo californicus*) life history, population status, population threats, and habitat assessment of conditions at Fort Hunter Liggett, Monterey County, California.
- 2008 Jenny Morris. MS Biological Sciences, California Polytechnic State University. Interactions between invasive and native amphibians in the Tassajara Creek watershed.
- 2007 Robert Arkle. MS Biological Sciences, California Polytechnic State University. The ecological complexity of terrestrial-aquatic linkages: fire and flow disturbance in mountain stream communities.

COMMITTEE MEMBER

- 2015 Terra Gleeson. MS Biology, Boise State University. The spatial and temporal effects of prey availability on American kestrel reproductive success.
- 2014 Erin Kenison. MS Biological Sciences, Montana State University. Predator-prey interactions between introduced trout and long-toed salamanders and ways to mitigate nonconsumptive effects
- 2010 Oksana Kelly. PhD Engineering and Applied Science, Idaho State University. Automated digital individual identification system with an application to the northern leopard frog *Lithobates pipiens*.
- 2009 Brian Dugas. MS Agriculture, California Polytechnic State University. Spatial, seasonal, and size-dependent variation in the diet of Sacramento pike minnow in the main stem of Chorro Creek, Central Coast California.
- 2006 Jennifer Moonjian. MS Biological Sciences, California Polytechnic State University. A current distribution and a dietary analysis of San Joaquin kit fox in San Luis Obispo County.
- 2006 Michael Sauer. MS Biological Sciences, California Polytechnic State University. Airborne hyperspectral remote sensing of salt marsh vegetation in Morro Bay, California.
- 2005 Erica Lindgren. MS Biological Sciences, California Polytechnic State University. Nest survivorship of two Neotropical migratory birds in a mature riparian forest and an adjacent restored site.

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EDUCATION

Ph.D., Botany, The University of Wyoming (2006)
M.A., Geography, Natural Resource Management Emphasis, The University of Wyoming
B.S., Social Science, Michigan State University, East Lansing, MI

PROFESSIONAL EXPERIENCE

2009-present Supervisory Research Fire Ecologist, U.S. Geological Survey – Forest & Rangeland Ecosystem Science Center, Boise, ID.
2006-2009 Postdoctoral Ecologist/Applied Scientist, The Nature Conservancy / U.S. Forest Service Northern Research Station, Grand Rapids, MN.
2002-2005 Research Assistant, University of Wyoming, Laramie, WY.
1998-2002 Executive/Science Director, Southern Rockies Ecosystem Project, Denver, CO.
1996-1998 Information Manager, Colorado Natural Heritage Program, Fort Collins, CO.

RECENT FUNDING RECEIVED

Shinneman, D., T. Link, K. Kavanagh, E. Strand, S. McIlroy, S. Powell, R. Scheller, J. Campbell, D. Marks, D. Seyfried, A. Winstral. 2014. *Projecting climate change effects on aspen distribution and productivity in the central and northern Rockies by coupling hydrological and landscape-disturbance models*. USDI Northwest Climate Science Center. \$476,295
Brooks, M., D. Shinneman. 2014. *Wildfire patterns and interactions with vegetation within the range of the sage grouse*. U.S. Geological Survey. \$132,784.
Shinneman, D. 2012 & 2014. *Quantifying post-fire recovery of sagebrush steppe ecosystems in the Northern Columbia Basin*. USDI Bureau of Land Management. \$102,997 (2012); \$102,996 (2014).
Shinneman, D. 2012. *West-Wide Ponderosa Pine Genetics Study: Haplotype Environmental Envelope Development*. USDI Bureau of Land Management. \$25,244.
Shinneman, D., D. Pilliod, R. Arkle, N. Glenn. 2011. *Quantifying and predicting fuels and the effects of reduction treatments along successional and invasion gradients in sagebrush habitats*. Joint Fire Sciences Program. \$546,723.
Shinneman, D. 2010/11. *Potential influence of climate change on fire regimes and forest composition in the Border Lakes Region: implications for long-term carbon sequestration and forest management*. U.S. Forest Service Northern Research Station. \$50,172.
Earnst, S., D. Shinneman, P. Weisberg, J. Yang. 2009. *Quantifying vulnerability of quaking aspen woodlands and associated bird communities to global climate change in the northern Great Basin*. U.S. Geological Survey National Climate Change and Wildlife Science Center. \$857,652.
Shinneman, D. 2009. *Modeling climate change effects on future forest fire regimes in the Intermountain West*. U.S. Geological Survey. \$45,480.
Fraver, S., J. Bradford, B. Palik, D. Shinneman. 2008. *Effects of blowdown, salvage logging, and wildfire on regeneration and fuel characteristics in Minnesota's forests*. Joint Fire Sciences Program. \$180,714.
Palik, B., D. Shinneman. 2007. *Modeling forest conditions and fire risk in the Border Lakes Region of northern Minnesota and northwestern Ontario*. U.S. Forest Service, National Fire Plan. \$75,135.

PEER-REVIEWED PUBLICATIONS (2004-PRESENT)

Gustafson, E.J. and **D.J. Shinneman**. (Accepted). Approaches to modeling landscape-scale drought-induced forest mortality. In A. H. Perera, B. R. Sturtevant, and L. Buse, editors. *Modeling Forest Landscape Disturbances*. Springer, New York.

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- Yang, J., P.J. Weisberg, **D.J. Shinneman**, T.E. Dilts, S.L. Earnst, and R.M. Scheller. (In review). Fire modulates climate change response of aspen across topoclimatic gradients in a semi-arid montane landscape. *Landscape Ecology*.
- Shinneman, D.J.**, W.L. Baker, P.C. Rogers, and D. Kulakowski. 2013. Fire regimes of quaking aspen in the Mountain West. *Forest Ecology and Management* 299:22-34.
- Shinneman, D. J.**, B. J. Palik, and M. W. Cornett. 2012. Can landscape-level ecological restoration influence fire risk? A spatially-explicit assessment of a northern temperate-southern boreal forest landscape. *Forest Ecology and Management* 274:126-135.
- Sturtevant, B. R., B. R. Miranda, D. J. Shinneman, E. J. Gustafson, and P. T. Wolter. 2012. Comparing modern and presettlement forest dynamics of a subboreal wilderness - Does spruce budworm enhance fire risk? *Ecological Applications* 22:1278-1296.
- Bradford, J. B., S. Fraver, A. Milo, A.W. D'Amato, B. Palik, and **D.J. Shinneman**. 2012. Effects of multiple interacting disturbances and salvage logging on forest carbon stocks. *Forest Ecology and Management* 267:209-214.
- Fraver, S., T. Jain, J.B. Bradford, A.W. D'Amato, D. Kastendick, B. Palik, **D. Shinneman**, and J. Stanovick. 2011. The efficacy of salvage logging in reducing subsequent fire severity in conifer-dominated forests of Minnesota, USA. *Ecological Applications* 21:1895-1901.
- Rickenbach, M., L.A. Schulte, D.B. Kittredge, W.G. Labich, and **D.J. Shinneman**. 2011. Cross-boundary cooperation: A mechanism for sustaining ecosystem services from private lands. *Journal of Soil and Water Conservation* 66:91A-96A.
- Shinneman, D.J.**, M.W. Cornett, and B.J. Palik. 2010. Simulating restoration strategies for a southern boreal forest landscape with complex land ownership patterns. *Forest Ecology and Management* 259:446-458.
- Sharik, T.L., W. Adair, F.A. Baker, M. Battaglia, E.J. Comfort, A.W. D'Amato, C. Delong, R.J. DeRose, M.J. Ducey, M. Harmon, L. Levy, J. A. Logan, J. O'Brien, B.J. Palik, S.D. Roberts, P.C. Rogers, **D.J. Shinneman**, T. Spies, S.L. Taylor, C. Woodall, and A. Youngblood. 2010. Emerging themes in the ecology and management of North American forests. *International Journal of Forestry Research* 2010, Article ID 964260:11 Pages.
- Shinneman, D.**, B. Miller, and K. Kunkal. 2010. The natural landscape of the Southern Rockies. Pages 161-184 *in*: Reading, R.P., B. Miller, A.L. Masching, R. Edward, M.K. Phillips, Eds. *Awakening spirits: Restoration of wolves in the Southern Rockies*. Fulcrum Publishing, Golden, CO.
- Gosnell, H., and **D. Shinneman**. 2010. The Human Landscape. Pages 79-100 *in*: Reading, R.P., B. Miller, A.L. Masching, R. Edward, M.K. Phillips, Eds. *Awakening spirits: Restoration of wolves in the Southern Rockies*. Fulcrum Publishing, Golden, CO.
- Shinneman, D.J.**, and W.L. Baker. 2009. Environmental and climatic variables as potential drivers of post-fire cover of cheatgrass (*Bromus tectorum*) in seeded and unseeded semiarid ecosystems. *International Journal of Wildland Fire* 18:191-202.
- Shinneman, D.J.**, and W.L. Baker. 2009. Historical fire and multidecadal drought as context for piñon-juniper woodland restoration in western Colorado. *Ecological Applications* 19:1231-1245.
- Sturtevant, B.R., R.M. Scheller, B.R. Miranda, **D. Shinneman**, and A. Syphard. 2009. Simulating dynamic and mixed-severity fire regimes: A process-based fire extension for LANDIS-II. *Ecological Modelling* 220:3380-3393.
- Bauer, M., B. Loeffelholz, and **D. Shinneman**. 2009. Border Lakes land-cover classification. Research Map NRS-1. U.S. Department of Agriculture, Forest Service, Northern Research Station, Newtown Square, PA. 14 p. [DVD, booklet, and printed map included].
- Shinneman, D.J.**, W.L. Baker, and P. Lyon. 2008. Ecological restoration needs derived from reference conditions for a semi-arid landscape in Western Colorado, USA. *Journal of Arid Environments* 72:207-227.
- Baker, W.L., and **D.J. Shinneman**. 2004. Fire and restoration of piñon-juniper woodlands in the western United States: a review. *Forest Ecology and Management* 189:1-21.

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

PRESENTATIONS, SEMINARS, AND WORKSHOPS

- Shinneman, D.J., M. Brooks, J.R. Matchett. Jul 2014. Wildfire patterns and interactions with vegetation within the range of the sage grouse. Sagebrush Restoration/Rehabilitation Science Coordination in the Great Basin, Washington, D.C.
- Shinneman, D.J., D. Pilliod, R.A. Arkle, N. Glenn, S. McIlroy. May 2014. Assessing fuel loads across successional and invasion gradients in degraded sagebrush landscapes. Large Wildland Fires: Social, Political and Ecological Effects. Missoula, Montana.
- Anderson, Kyle, N.F. Glenn, L.P. Spaete, D.J. Shinneman, R.S. Arkle, D.S. Pilliod, S.K. McIlroy. May 2014. Using terrestrial laser scanning to model fuel characteristics in shrub-steppe. Large Wildland Fires: Social, Political and Ecological Effects. Missoula, Montana.
- Shinneman, D.J., Mar 2014. Fire regimes of quaking aspen in the Intermountain West. Fire, Historical Change, and Resilience Management in Quaking Aspen Webinar co-hosted by the Western Aspen Alliance and Utah State University Forestry Extension.
- Germino, M.J., M. Brabec, A. Halford, B. Richardson, D. Shinneman, W. Davidson. Dec 2013. Post-fire sagebrush establishment across the landscape: experimental tests to inform restoration success. Great Basin Consortium Conference, Reno, NV.
- Shinneman, D. Nov 2013. Fire ecology in a rapidly changing world: dynamic science for a critical mission. USGS Northwest Region Science and Management Meeting, Boise, ID.
- Shinneman, D.J. Jan 2013. Modeling fire regimes and forest change in the Border Lakes Region. Lakes States Fire Science Consortium Webinar.
- Earnst, S., D. Shinneman, J. Yang, P. Weisberg, K. Glueckert, S. McIlroy, K. Brodhead. Oct 2012. Modeling potential effects of climate change on aspen and associated bird communities. Pacific Northwest Climate Science Conference, Boise, ID
- Shinneman, D.J., W.L. Baker, D. Kulakoski, P. Rogers. Jun 2012. Fire regimes of quaking aspen in the Intermountain West. Western Aspen Alliance Symposium - Aspen Resilience in Quaking Aspen: restoring ecosystem processes through applied science. DeBeque, CO.
- Shinneman, D.J., J. Yang, P. Weisberg, S. Earnst, R. Scheller. Apr 2012. Vulnerability of aspen and associated bird communities to climate change in the northern Great Basin. U.S.-International Association for Landscape Ecology Annual Symposium, Newport, RI.
- Shinneman, D.J., S. Earnst, P. Weisberg, J. Yang. Nov 2011. Vulnerability of aspen and associated bird communities to climate change. Great Basin Consortium Meeting. Reno, NV.
- Shinneman, D.J. Oct 2011. Piñon-Juniper Restoration Ecology: Important considerations for biomass harvesting in the Southwest. Restoring the West Conference 2011: Sustaining Forests, Woodlands, & Communities Through Biomass Use. Utah State University, Logan, UT.
- Shinneman, D.J. Mar 2011. Disturbance drivers and interactions: Key areas of research for ecological restoration. Dept. of Wildland Resources, Seminar Utah State University, Logan, UT.
- Earnst, S.L., D.J. Shinneman, P.J. Weisberg, J. Yang. Oct 2010. Vulnerability of quaking aspen and avian communities to global climate change. Restoring the West: Managing Plant and Animal Conflicts. Utah State University, Logan, UT.
- Shinneman, D.J. Mar 2010. Fire ecology and management: Complexity, changing environments and challenges ahead. U.S. Department of Interior - Spotlight on Science, Portland, OR.
- Shinneman, D.J. Mar 2010. Fire ecology and management: Complexity, changing environments and challenges ahead. Boise State University, Department of Geosciences Seminar, Boise, ID.
- Shinneman, D., S. Earnst, P. Weisberg, J. Yang. Feb 2010. Quantifying vulnerability of quaking aspen woodlands & associated bird communities to global climate change in the northern Great Basin. National Climate Change and Wildlife Science Center, Workshop on Downscaled Climate Model Data, Raleigh, NC.
- Shinneman, D.J. Feb 2010. Fire ecology of sagebrush ecosystems. Boise State University, Department of Biological Sciences, seminar, Boise, ID.

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- Shinneman, D.J. Nov 2009. Fire Ecology & Management: Complexity, changing environments and challenges ahead. Boise State University, Department of Biology Seminar, Boise, ID.
- Dunn, L., D. Shinneman. Feb 2009. Post-blowdown salvage logging impacts on fuel loads and fire severity in jack pine stands. The future of fire and wind in northern Minnesota Forests: Lessons learned from the 1999 blowdown. University of Minnesota, Cloquet Forestry Center. Cloquet, MN.
- Shinneman, D.J., M. Cornett, B. Palik. Dec 2008. Modeling forest restoration strategies and assessing fire risk for the Border Lakes Region (Minnesota, USA; Ontario, Canada). CFANS Solution-Driven Science Symposium: Challenges and Opportunities for the 21st Century: Northern Forests in a Changing Environment, University of Minnesota, St. Paul, MN.
- Shinneman, D., B. Palik, M. Cornett. Aug 2008. The Border Lakes Project: A “natural” collaboration between The Nature Conservancy & the USFS Northern Research Station. USFS Northern Research Station. St. Paul, MN.
- Shinneman, D., M. Cornett, B. Palik. Apr 2008. Modeling ecological restoration and fuels reduction strategies for the forests of the Border Lakes Region. 23rd Annual Landscape Ecology Symposium: Landscapes Patterns and Processes, Madison, WI.
- Sturtevant, B.R., B. Miranda, D.J. Shinneman, E.J. Gustafson. Apr 2008. Simulated interactions between spruce budworm and fire: comparing the past and the future. 23rd Annual Landscape Ecology Symposium: Landscapes patterns and Processes, Madison, WI.
- Shinneman, D.J. Jan 2008. Variables influencing post-fire cover of cheatgrass (*Bromus tectorum*) in seeded and unseeded semi-arid ecosystems in western Colorado. Association for Fire Ecology - Fire in the Southwest: Integrating Fire into Management of Changing Ecosystems, Tucson, AZ.
- Shinneman, D., M. Cornett, B. Palik. Jan 2008. Modeling ecological restoration strategies for the forests of the Border Lakes Region. 6th Annual Forest and Wildlife Research Review, Duluth, MN.
- Baker, W.L., D.J. Shinneman, H.L. Getz, P. Lyon. Sep 2007. Fire, drought, grazing, and restoration across an old growth piñon-juniper/sagebrush landscape in western Colorado. Plant Community Restoration Workshop, Grand Junction, CO.
- Shinneman, D.J. Jun 2007. Modeling the effects of disturbance regimes in the Border Lakes Region. Minnesota Forest Resource Council Meeting, Duluth, MN.
- Shinneman, D.J. May 2007. Using GIS and modeling to examine forest change in the Border Lakes Region. Guest lecture at Itasca Community College, Grand Rapids, MN.
- Shinneman, D.J. Mar 2007. Modeling the effects of disturbance regimes in the Border Lakes Region. Department of Forest Resources Seminar, University of Minnesota, St. Paul, MN.
- Sturtevant, B.R., B.R. Miranda, D.J. Shinneman, R.M. Scheller. Oct 2006. A Canadian Fire Module for LANDIS-II. LANDIS-II Workshop, Madison, WI.
- Baker, W.L., D.J. Shinneman, H.L. Getz, P. Lyon. Apr 2006. Fire, drought, grazing, and restoration across an old growth piñon-juniper/sagebrush landscape in western Colorado. University of Nevada, Reno.
- Lytle, D.E., D.J. Shinneman, M.W. Cornett, B.J. Palik. Mar 2006. The Border Lakes Partnership: Interagency collaboration on desired future conditions in a landscape of international significance. Sustainable Natural Resources management: Defining our Legacy. The 1st Minnesota Natural Resources Conference, Brainerd, MN.
- Shinneman, D.J., W.L. Baker. Apr 2005. Stand age structure and disturbance dynamics of a piñon-juniper woodland landscape in western Colorado. Association of American Geographers Annual Meeting, Denver.

GRADUATE STUDENT COMMITTEE MEMBER

- M.S. Thesis Committee. Anderson, K. (presently). Vegetation measurements in sagebrush steppe using terrestrial laser scanning. Dept. of Geosciences, Idaho State University.
- Ph.D. Dissertation Committee. (presently). The Influence of Environmental Gradients, Treatment History, Grazing, and Post-fire Rehabilitation Seed Selection on *Bromus tectorum* Invasion and Fire Regimes. Forest, Rangeland, and Fire Sciences, University of Idaho.

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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- M.S. Thesis Committee. Gardner, R. 2010-2013. Linking pattern and process: aspen clonal diversity and landscape history. Dept. of Wildland Resources, Utah State University.
- M.S. Thesis Committee. Weppner, K. 2010-2012. Climate drivers and landscape response: Holocene fire, vegetation and erosion in a semiarid ecosystem, City of Rocks National Reserve, Idaho. Hydrologic Sciences, Boise State University.

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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CURRICULUM VITAE
DAVID L. ANDERSON
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EDUCATION

Ph.D., Biological Sciences.

Louisiana State University, Department of Biological Sciences, Baton Rouge, Louisiana.

Dissertation Focus: Structure and organization of avian assemblages in forest canopies.

M.S., Raptor Biology.

Boise State University, Department of Biology & Raptor Research Center, Boise, Idaho.

Thesis: Raptor Diversity in the Río Plátano Biosphere Reserve, Honduras

B.S., Wildlife Management, 1991.

Humboldt State University, College of Natural Resources, Arcata, California.

Peace Corps volunteer, 1991-1993.

Wildlands Promoter, Sierra de Agalta National Park, Honduras

CURRENT POSITION

DIRECTOR, GYRFALCON AND TUNDRA CONSERVATION PROGRAM. • The Peregrine Fund,
Boise, Idaho. 2012 to present.

PREVIOUS POSITIONS IN WILDLIFE MANAGEMENT AND CONSERVATION

WILDLIFE TECHNICIAN • *Idaho Department of Fish and Game.* 2001-2003

Deer Parks Wildlife Mitigation Unit, Menan, Idaho.

APPOINTMENTS WITH FEDERAL AND STATE AGENCIES, NON-PROFITS

Idaho Department of Fish and Game, Nampa. 2000

Oregon Department of Fish and Wildlife, Roseburg. 1994

Institute for Wildlife Studies, Arcata, California. 1991, 1994, 1996

US Forest Service – California, Montana, and Arizona. 1987, 1989, 1990

Humboldt State University, Arcata, California. 1986, 1988

California Department of Fish and Game, Rancho Cordova. 1986

PROTECTED AREAS SPECIALIST • *Peace Corps.* 1991-1993

Sierra de Agalta National Park, Honduras.

PREVIOUS ECOLOGICAL FIELD RESEARCH

AVIAN ECOLOGY IN FOREST CANOPIES • *Louisiana State University.* 2004 -

Baton Rouge, Louisiana/Pico Bonito National Park, Honduras.

DISTRIBUTION AND ECOLOGY OF THE HONDURAN EMERALD • *Louisiana State University.* 2007 -

CERULEAN WARBLER MIGRATION ECOLOGY • *Louisiana State University.* 2005 to 2007

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DIURNAL RAPTOR DISTRIBUTION AND ECOLOGY • *The Peregrine Fund*. 1999

Boise, Idaho/Tawabka Biosphere Reserve, Honduras.

RAPTOR DIVERSITY AND LANDSCAPE HETEROGENEITY • *Department of Biology, Boise State University*. 1995-1998

Boise, Idaho/Río Plátano Biosphere Reserve, Honduras.

GRANTS

Mohamed Bin Zayed Conservation Trust. • 2014. \$320,000. Funds for Gyrfalcon and Tundra Ecology in a Changing World.

Loacker Foundation. • 2014. \$50,000. Funds for Gyrfalcon research and conservation in western Alaska

Trust for Mutual Understanding. • 2014. \$20,000. Travel funds for Russian Scientists to the first international meeting of the Tundra Conservation Network, Boise, Idaho.

Conservation of the Honduran Emerald (*Amazilia luciae*) in Santa Barbara, Honduras. • 2009. \$300,000. Funds obtained for Empresa Propietaria de la Red Eléctrica.

Structure and composition of canopy bird assemblages in lowland rainforests. *Ph.D. dissertation fieldwork*. 2006-2007. \$24,650 received from USAID, Cleveland Metroparks Zoo, USFWS Neotropical Migratory Bird Conservation Act, LSU Museum of Natural Science, Global Forest Science, Eagle Optics, and The Explorers Club.

Cerulean Warbler Migration Ecology. • *Co-principle investigator with Melinda Welton*. 2005-2007. >\$40,000 received from The Nature Conservancy, US Fish and Wildlife Service Neotropical Migratory Bird Conservation Act, The American Bird Conservancy, Lyndhurst Foundation, Tucker Foundation, Linnaean Society of London, the Birder's Exchange, and Optics for the Tropics.

Avian diversity in the Río Plátano Biosphere Reserve • *M.S. fieldwork in Honduras 1996-1997*. \$11,000 from Lincoln Park Zoo Scott Neotropic Fund, American Bird Conservancy, Hawk Mountain, BSU Raptor Research Center, and The Peregrine Fund.

PUBLICATIONS

Peer Reviewed –

Anderson, D. L. 2014. *Amazilia luciae*, species account. Neotropical Birds on-line. Cornell Lab of Ornithology. doi:

http://neotropical.birds.cornell.edu/portal/species/overview?p_p_spp=252731

Bennett, R. E., I. Zuniga, M. Bonta, **D. L. Anderson**, S. McCann, L. Herrera. 2014. First nest record of Red-throated Caracara (*Ibycter americanus*) for Middle America. *Wilson Journal of Ornithology* 126:389-392.

Anderson, D. L., and L. N. Naka. 2011. Comparative structure and organization of canopy bird assemblages in Honduras and Brazil. *Condor* 113:7-23.

Anderson, D. L., P. R. House, R. E. Hyman, R. Steiner, H. R. Hawkins, S. Thorn, M. J. Rey, M. R. Espinal, and L. E. Marineros. 2010. Rediscovery of the Honduran Emerald *Amazilia luciae* in western Honduras: insights on the ecology, distribution, and conservation status of a 'Critically Endangered' hummingbird. *Bird Conservation International* 20:255-262.

Anderson, D. L. 2009. Ground versus canopy methods for the study of birds in tropical forest canopies: implications for ecology and conservation. *Condor* 111:226-237.

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FEBRUARY 18, 2016

- Shoch, D. S., and **Anderson D. L.** 2007. Status of tern colonies in the Honduras Bay Islands. *Waterbirds* 50:403-411.
- Anderson, D. L.**, D. A. Wiedenfeld, M. J. Bechard, and S. J. Novak. 2004. Avian diversity in the Moskitia region of Honduras. *Ornitologia Neotropical* 15:447-442.
- Thorstrom, R., R. Watson, A. Baker, S. Ayers, and **D. L. Anderson.** 2002. Preliminary ground and aerial surveys for Orange-breasted Falcons in Central America. *Journal of Raptor Research* 36:39-44.
- Anderson, D. L.** 2001. Landscape heterogeneity and diurnal raptor diversity in Honduras: The role of indigenous shifting cultivation. *Biotropica* 33:511-519.
- Anderson, D. L.** 2000. Notes on the breeding, distribution, and taxonomy of the Ocellated Poorwill (*Nyctriphrynus ocellatus*) in Honduras. *Ornitologia Neotropical* 11:233-238.
- McCarthy, T. J., **D. Anderson**, and G. Cruz D. 1999. Tree sloths (Mammalia: *Xenarthra*) in Nicaragua and Honduras, Central America. *Southwestern Naturalist* 44:410-414.
- Anderson, D. L.**, M. Bonta, and P. Thorn. 1998. New and noteworthy bird records from Honduras. *Bulletin British Ornithological Club* 118:178-183.
- Invited Chapter –*
- Anderson, D. L.**, and C. Devenish. 2009. Honduras. Pp. 255-260 *in* C. Devenish, D. F. Díaz Hernandez, R. P. Clay, I. Davidson, and I. Yépez Zabala [Eds.], Important bird areas of the Americas – Priority sites for biodiversity conservation. BirdLife International, Quito, Ecuador.

SELECTED TALKS

- Anderson, D. L.** 2009. Comparative structure and organization of canopy bird assemblages in Honduras and Brazil: an ecological perspective. Oral presentation, American Ornithologist's Union annual meeting, Philadelphia, Pennsylvania.
- Anderson, D. L.** 2008. Ground-based vs. canopy-based methods: lessons for the study of canopy birds in lowland tropical forests. Oral presentation, American Ornithologist's Union, Cooper Ornithological Society, and Society of Canadian Ornithologists Joint Meeting, Portland, Oregon.
- Anderson, D. L.**, and M. J. Welton. 2008. Migration stopover of the Cerulean Warbler (*Dendroica cerulea*) in northern Middle America. Poster, Wilson Ornithological Society and Association of Field Ornithologists Joint Meeting, Mobile, Alabama.
- Welton, M. J., **D. L. Anderson**, T. Beachy, and G. Colorado. 2008. Cerulean Warbler migration stopover ecology. Oral presentation, III Cerulean Warbler summit, Bogotá, Colombia.
- Melhman, D., M. Welton, **D. L. Anderson**, G. Colorado, P. Hamel, M. I. Moreno, and P. Salaman. 2006. An examination of the migration routes and stopover ecology of the Cerulean Warbler (*Dendroica cerulea*). Oral presentation, IV North American Ornithological Conference, Veracruz, Mexico.

STUDENTS MENTORED

Bryce Robinson. 2013 to present. M.Sc. Student in Raptor Biology, Boise State University. Thesis committee co-Chair.

Jilma Rachel Guinea. 2014. Undergraduate enrolled in NSF program Research Experiences for Undergraduates. Boise State University, Raptor Biology Program. Mentor on project "Characteristics of reproductive habitat for Harpy Eagles in Darién Province, Panama."

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CHRISTOPHER J. W. MCCLURE, PH.D.
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EDUCATION

INSTITUTION AWARDED	DEGREE	MAJOR	DATE
Auburn University	Ph.D.	Biology	5/2012
University of Georgia	B.S.	Environmental Economics and Management	5/2005

SELECTED EXPERIENCE

EMPLOYER DATES	POSITION	
The Peregrine Fund	Director of American Kestrel Partnership and Quantitative Ecologist	1/2014-Present
Sound Science, LLC	Ecological Consulting Associate	3/2013-Present
Boise State University	Postdoctoral Research Associate	3/2012-12/2013
Consolidated Resources, LLC	Statistical Consultant	4/2011-3/2012
Greenspace Group, LLC	GIS Consultant	4/2011-3/2012
Auburn University	Graduate Research Assistant	5/2007-8/2010

GRADUATE LEVEL TEACHING EXPERIENCE

INSTITUTION	CLASSES	YEARS
Auburn University	Lecturer: Habitat Assessment and Analysis (Graduate Level)	2009

GRANTS

AMOUNT	GRANT	YEAR
\$159,000	National Science Foundation—IOS (Co PI, Pending)	2014
\$600,000	National Science Foundation—CNH (Senior Personnel)	2014
\$95,000	National Park Service CESU Grant (Co PI)	2013
\$57,500	National Park Service CESU Supplement (Collaborator)	2013
\$6,000	American Philosophical Society	2013
\$20,000	National Park Service CESU Supplement (Collaborator)	2012
\$200	American Ornithologists' Union Marcia Brady Tucker Travel Award	2011
\$250	Auburn University Student Travel Award	2010
\$600	Association of Field Ornithologists Student Travel Award	2010
\$69,000	National Institutes of Health (Collaborator)	2009
\$200	American Ornithologists' Union Marcia Brady Tucker Travel Award	2009
\$1,200	Birmingham Audubon Society Walter F. Coxe Research Award	2008

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PUBLICATIONS

28. Kroschel, W.A., W.B. Sutton, **C.J.W. McClure**, and T.K. Pauley. Decline of the Cheat Mountain Salamander over a 32-year Period and the Potential Influence of Competition from Sympatric Species. *Journal of Herpetology*. in press
27. **McClure, C.J.W.**, and G.E. Hill. The Rusty Blackbird. In E. Soehren (ed). *Alabama Wildlife, Volume 1*. University of Alabama Press. in press
26. de J. Vargas González, J., F. H. Vargas, D. Carpio, and **C.J.W. McClure**. 2014. Vegetation characteristics in nesting sites of the Harpy Eagle (*Harpia harpyja*) in Darien, Panama. *Ornithologia Neotropical*. 25: 207–218
25. Steen, D.A., J. C. Godwin, **C.J.W. McClure**, and M. Barbour. 2014. Informing management of endemic habitat specialists: Multi-scale habitat selection of the Red Hills Salamander. *Journal of Wildlife Management*. 78(3): 463–470.
24. Steen, D.A., **C.J.W. McClure**, J.C. Brock, D.C. Rudolph, J.B. Pierce, J.R. Lee, W.J. Humphries, B.B. Gregory, W.B. Sutton, L.L. Smith, D.L. Baxley, D.J. Stevenson, and C. Guyer. Copperheads are common when kingsnakes are not: relationships between the abundances of a predator and one of their prey. *Herpetologica*. 70(1): 69–76 .
23. Steen, D.A., **C.J.W. McClure**, J.C. Brock, D.C. Rudolph, J.B. Pierce, J.R. Lee, W.J. Humphries, B.B. Gregory, W.B. Sutton, L.L. Smith, D.L. Baxley, D.J. Stevenson, and C. Guyer. 2014. Snake co-occurrence patterns are best explained by habitat and hypothesized effects of interspecific interactions. *Journal of Animal Ecology*. 83: 286–295
22. **McClure, C.J.W.**, H.E. Ware, J. Carlisle, G. Kaltenecker, and J. R. Barber. 2013. An experimental investigation into the effects of traffic noise on distributions of birds: Avoiding the phantom road. *Proceedings of the Royal Society of London: B*. 280: 20132290.
21. **McClure, C.J.W.**, B.W. Rolek, G.E. Hill. 2013. Seasonal use of habitat by shrubland birds in a southeastern national forest. *Wilson Journal of Ornithology*. 125(4): 731-743
20. Steen, D.A., **C.J.W. McClure**, and S.P. Graham. 2013. Relative influence of weather and season on anuran calling activity. *Canadian Journal of Zoology*. 91: 462–467
19. Estep, L. K., **C. J. W. McClure**, P. Vander Kelen, N. D. Burkett-Cadena, S. Sickerman, J. Hernandez, J. Jinright, B. Hunt, J. Lusk, and V. Hoover. 2013. Risk of exposure to Eastern Equine Encephalomyelitis Virus increases with the density of Northern Cardinals. *PLoS ONE* 8:e57879.
18. Burkett-Cadena, N.D., **C.J.W. McClure**, L.K Estep, G.E. Hill, T.R. Unnasch, and M.D. Eubanks. 2013. Hosts or habitats: What drives the spatial distribution of mosquitoes? *Ecosphere*. 4(2): art30.
17. Steen, D. A., **C. J. W. McClure**, L. L. Smith, B. J. Halstead, C. K. Dodd, Jr., W. B. Sutton, J. R. Lee, D. L. Baxley, W. J. Humphries, and C. Guyer. 2013. The effect of coachwhip presence on body size of North American racers suggests competition between these sympatric snakes. *Journal of Zoology*. 289 (2):86–93.
16. McDonald, K.W., **C.J.W. McClure**, B.W. Rolek, G.E. Hill. 2012. Bird diversity shifts north with global warming. *Ecology and Evolution*. 2(12):3052–3060.
15. **McClure, C.J.W.**, B.W. Rolek, G.E. Hill. 2012. Predicting occupancy of wintering migratory birds: Is microhabitat information necessary? *Condor*. 114(3):482–490

14. **McClure, C.J.W.**, G.E. Hill. 2012. Dynamic versus static occupancy: How stable are habitat associations through a breeding season? *Ecosphere*. 3(7):60.
13. Steen, D.A., M. Baragona, **C.J.W. McClure**, and L.L. Smith. 2012. Population structure and morphology of a small population of Loggerhead Musk Turtles (*Sternotherus minor minor*) in Okaloosa County, Florida. *Florida Field Naturalist*. 40(2):47–55
12. Steen, D.A., **C.J.W. McClure**, J.C. Brock, D.C. Rudolph, J.B. Pierce, J.R. Lee, W.J. Humphries, B.B. Gregory, W.B. Sutton, L.L. Smith, D.L. Baxley, D.J. Stevenson, and C. Guyer. 2012. Landscape level influences of terrestrial snake occupancy within the southeastern United States. *Ecological Applications*. 22(4): 1084–1097
11. Estep, L.K., **C.J.W. McClure**, N.D. Burkett-Cadena, H.K. Hassan, T.R. Unnasch, and G.E. Hill. 2012. Developing models for the forage ratios of *Culiseta melanura* and *Culex erraticus* based on characteristics of avian hosts. *Journal of Medical Entomology*. 49(2):378–387
10. **McClure, C.J.W.**, L.K. Estep, and G.E. Hill. 2012. Effects of species ecology and urbanization on the accuracy of a cover-type model: A test using GAP analysis. *Landscape and Urban Planning*. 105 (4): 417–424
9. **McClure, C.J.W.**, B.W. Rolek, K. McDonald, G.E. Hill. 2012. Climate change and the decline of a once common bird. *Ecology and Evolution*. 2(2): 370–378
8. **McClure, C.J.W.**, L.K. Estep, and G.E. Hill. 2011. Using public land cover data to determine habitat associations of birds in Tuskegee National Forest, Alabama. *Southern Journal of Applied Forestry* 25(4): 199–209
7. Balenger, S.L., **C.J.W. McClure**, and G.E. Hill. 2011. Primer design and transcript quantification of a highly multiplexed RT-PCR for a non-model avian species. *Molecular Ecology Resources*. 12(1): 116–122
6. **McClure, C. J. W.**, N. D. Burkett-Cadena, R. Ligon, and G. E. Hill. 2011. Actual or perceived abundance? Interpreting annual survey data in the face of changing phenologies. *Condor* 113(3): 490–500
5. **McClure, C.J.W.**, L.K. Estep, and G.E. Hill. 2011. A multi-scale analysis of competition between House Finches and House Sparrows in the Southeast US. *Condor* 113(2): 462–468
4. Estep, L.K., **C.J.W. McClure**, N.D. Burkett-Cadena, T.L. Hicks, H.K. Hassan, G.E. Hill, and T.R. Unnasch. 2011. A multi-year study of mosquito feeding patterns on avian hosts in a southeastern focus of eastern equine encephalitis virus. *American Journal of Tropical Medicine & Hygiene* 84(5): 718–726
3. Burkett-Cadena, N.D., **C.J.W. McClure**, R.A. Ligon, S.P. Graham, C. Guyer, G.E. Hill, S.S. Ditchkoff, M.D. Eubanks, H.K. Hassan, and T.R. Unnasch. 2011. Host reproductive phenology drives seasonal patterns of host use in mosquitoes. *PLoS ONE* 6(3): e17681
2. **McClure, C.J.W.** and D.A. Steen. 2010. Geographic Distribution: *Hemidactylus turcicus*. *Herpetological Review* 41:512
1. Jacob, B., N.D. Burkett-Cadena, J. Luvall, S. Parcak, **C.J.W. McClure**, L.K. Estep, G.E. Hill, E. Cupp, R. Novak, and T. Unnasch. 2010. Developing GIS-based eastern equine encephalitis vector-host models in Tuskegee, Alabama. *International Journal of Health Geographics*. 9:12.

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SELECTED PRESENTATIONS

- McClure, C.J.W.**, H.E. Ware, J. Carlisle, G. Kaltenecker, and J. R. Barber. An experimental investigation into the effects of traffic noise on distributions of birds: Avoiding the phantom road. Presented at 131st Stated Meeting of the American Ornithologists' Union. Chicago, IL. August 14, 2013.
- McClure, C.J.W.**, B.W. Rolek, K. McDonald, G.E. Hill. Effects of weather and climate on the breeding distribution of the Rusty Blackbird. Presented at 129th Stated Meeting of the American Ornithologists' Union. Jacksonville, FL. July 28, 2011
- McClure, C.J.W.**, B.W. Rolek, K. McDonald, G.E. Hill. Effects of weather and climate on the breeding distribution of the Rusty Blackbird. Southeast Ecology and Evolution Conference. Auburn, AL. March 26, 2011
- McClure, C. J. W.**, N. D. Burkett-Cadena, R. Ligon, and G. E. Hill. Interpreting Breeding Bird Survey data in the face of climate change (poster). Presented at the annual meeting of the Association of Field Ornithologists. Ogden, UT. August 13, 2010
- McClure, C.J.W.**, L.K. Estep, and G.E. Hill. Habitat associations of birds in Tuskegee National Forest, AL. Presented at 128th Stated Meeting of the American Ornithologists' Union. San Diego, CA, February 9, 2010
- McClure, C.J.W.**, L.K. Estep, and G.E. Hill. Are House Finches responsible for the decline of House Sparrows in the Southeast US? Presented at 127th Stated Meeting of the American Ornithologists' Union. Philadelphia, PA, August 14, 2009

MENTORING EXPERIENCE (AT BOISE STATE UNIVERSITY)

STUDENT STATUS	ROLE	# STUDENTS	YEAR
Master's	Committee Member	3	Current
REU	Co-advisor	1	2014
Master's	Committee Member	1	2013

Richard T. Watson, Ph.D.

Current Position

Vice President and International Programs Director, The Peregrine Fund

5668 West Flying Hawk Lane, Boise, ID 83709, USA. Tel: 208-362-3716,
Fax: 208-362-2376, E-mail: rwatson@peregrinefund.org. Responsible for design, implementation, and management of The Peregrine Fund's raptor research and conservation projects worldwide.

Professional Preparation

Post-doctoral Fellow, Ecophysiology, Desert Ecological Research Unit, Namibia, 1986-1988.

Ph.D., Raptor Ecology, University of the Witwatersrand, South Africa, 1980-1986.

B.Sc., Marine Zoology, Honors, *Summa Cum Laude*, University College of North Wales, Bangor, United Kingdom, 1976-1979.

Appointments

2007-Present: Vice President, The Peregrine Fund.

1998-Present: International Programs Director, The Peregrine Fund.

1992-2007: Africa Programs Director, The Peregrine Fund.

1990-Present: Adjunct Faculty, Boise State University, Idaho State University.

1990-2000: Madagascar Project Director, The Peregrine Fund.

1988-1989: Avian Ecology Consultant, Hawk Watch International, Connecticut Audubon Society, and School for Field Studies.

Recent Collaborators

James Belthoff, Boise State University; Mark Fuller, US Geological Survey; Martin Gilbert, Wildlife Conservation Society; Rhys Green, University of Cambridge; Jeff Johnson, University of North Texas; David Mindell, California Academy of Sciences; J. Lindsay Oaks, Washington State University, School of Veterinary Medicine; Patricia Parker, University of Missouri—St Louis; Mark Pokras, Tufts University School of Veterinary Medicine; Ruth Tingay, Natural Resources, UK.

Program and Administrative Experience

Dr. Watson has worked for The Peregrine Fund since 1990, initially to establish the Madagascar Project to study and conserve three of the world's most endangered birds of prey. This work led to the rediscovery of two of these species (thought by some to be extinct) and the establishment of an 810 square mile national park, Madagascar's largest, to protect their rain forest habitat. It also led to the

establishment of an innovative community-based conservation project to protect wetlands essential for the endangered Madagascar Fish-Eagle. This project now serves as a model for others in Madagascar.

Dr. Watson developed a position as Program Director for Africa, establishing and supervising new projects throughout Africa. This included Bearded Vulture reintroduction to Kenya, Cape Vulture conservation in South Africa, raptor conservation and local capacity building in Zimbabwe, Kenya and Ethiopia, and Crowned Eagle conservation in Ivory Coast. He also supervises U.S. and local graduates at Masters and Ph.D. levels and is adjunct faculty at Boise State and Idaho State Universities.

In 1998 Dr. Watson was appointed as The Peregrine Fund's International Program Director, responsible for all programs and projects outside of the United States. Work involves designing new projects, proposal preparation, establishing projects in country, hiring and training staff, supervision of projects and studies including objectives, methods, analysis and presentation, as well as project financial affairs, and presenting results to donors and The Peregrine Fund's Board. In 2000 he formed and led the team that in 2003 discovered the fatal effects of diclofenac on South Asian vultures. In 2007 he led the team that demonstrated that lead (Pb) from hunters' bullets contaminates venison prepared by professional butchers and puts consumers at risk of lead exposure. In 2008 he convened the international conference on lead (Pb) from spent ammunition effects on wildlife and humans. In 2011 he convened the international conference on Gyrfalcons and Ptarmigan in a changing world to investigate the effects of climate change on this Arctic predator-prey system. He currently supervises 18 projects on three continents. Dr. Watson was appointed to The Peregrine Fund's Board of Directors as Vice President in 2007.

Graduate Students

1. Yozora Tadehara, M.Sc. 2011-present. Candidate, Boise State University. Saker Falcon home range variation in an artificial grid of nest boxes in Mongolia.
2. Ruth Tingay, Ph.D. 2005, University of Nottingham, United Kingdom. Historical distribution, contemporary status and cooperative breeding in the Madagascar Fish Eagle: implications for conservation. 392 pp.
3. Nyambayar Batbayar, M.Sc., 2004, Boise State University. Ecology and conservation of the Cinereous Vulture in Mongolia.
4. Sarah Karpanty, Ph.D., 2003, University of New York, Stony Brook. Behavioral and ecological interactions of raptors and lemurs in southeastern Madagascar: A multiple predator approach. 287 pp.
5. Suzanne Schultz, Ph.D., 2003, University of Liverpool, United Kingdom. Ecology of Crowned Eagles in Ivory Coast.

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6. Laura Estep, Fulbright Scholar, 2001, Eckerd College. Population viability analysis of the Madagascar Fish Eagle.
7. Munir Virani, Ph.D., 1999, University of Leicester, United Kingdom. Augur Buzzard ecology.
8. Ruth Tingay, M.Sc., 1999, University of Nottingham, United Kingdom. Role of extra-pair birds in the breeding of Madagascar Fish Eagles.
9. Lily-Arison René de Roland, Ph.D., 1999, University of Antananarivo, Madagascar. Ecology of rain forest *Accipiters* in Madagascar.
10. Simon Rafanomezantsoa, DEA (M.Sc. equivalent), 1998, University of Antananarivo, Madagascar. Natal dispersal by Madagascar Fish Eagles.
11. Lakew Berhanu, M.Sc., 1998, Durrell Institute for Conservation and Ecology, University of Kent, United Kingdom. Raptor conservation in Ethiopia.
12. René Land, Watson Scholar, 1997, Tufts University. Organochlorine pesticide contamination of Madagascar Fish Eagle prey.
13. Zarasoa, DEA (M.Sc. equivalent), 1996, University of Antananarivo, Madagascar. Forest regeneration and impacts of people in the Madagascar Fish Eagle conservation area.
14. James Berkelman, Ph.D., 1996, Virginia State University. Habitat requirements of the Madagascar Fish Eagle.
15. Stefania Strzalkowska, M.Sc., 1995, Idaho State University. Avian monitoring on Masoala Peninsula, Madagascar.
16. Lily Arison René de Roland, DEA (M.Sc. equivalent), 1995, University of Antananarivo, Madagascar. Biology of Frances' Sparrowhawk.
17. Suzanne Razafindramanana, DEA (M.Sc. equivalent), 1995, University of Antananarivo, Madagascar. Breeding biology of the Madagascar Fish eagle.
18. Munir Virani, M.Sc., 1994, University of Leicester, United Kingdom. Sokoke Scops Owl ecology.
19. James Berkelman, M.Sc., 1993, Boise State University. Ecology of the Madagascar Buzzard.

Publications

Dr. Watson has authored or co-authored 130 scientific and technical publications since 1983.

First or Sole Authorship

1. **Watson, R.T.**, C., McClure, H. Vargas, and J.P. Jenny. Submitted. Trial restoration of the Harpy Eagle, a large, long-lived tropical forest eagle. *Journal of Raptor Research*.
2. **Watson, R.T.**, T. Cade, W.G. Hunt, M. Fuller, and E. Potapov (Eds.). **2011**. Gyrfalcons and ptarmigan in a changing world. Volumes I and II. The Peregrine Fund, Boise, Idaho, USA. 800 pp.
<http://www.peregrinefund.org/subsites/conference-gyr/proceedings/index.html>
3. **Watson, R.T. 2011**. Lead fragments from spent ammunition in hunter-killed game animals: The source of lead exposure and its effects in California Condors. [Bleifragmente von Jagdgeschossen in erlegten Wildtieren: Die Quelle der Bleivergiftungen und ihre Auswirkungen auf den Kalifornischen Kondor.] Pp. 86-97 in Krone, O. (ed). Bleivergiftungen bei Greifvögeln. Leibniz-Institut für Zoo- und Wildtierforschung (IZW), Berlin.
4. **Watson, R.T. 2011**. Primary prevention of lead exposure from ingested spent ammunition: Solutions on behalf of California Condors and human health. [Vorbeugung von Bleivergiftungen: Lösungsansätze bezogen auf den Kalifornischen Kondor und die menschliche Gesundheit.] Pp. 114-121 in Krone, O. (ed). Bleivergiftungen bei Greifvögeln. Leibniz-Institut für Zoo- und Wildtierforschung (IZW), Berlin.
5. **Watson, R.T. 2010**. The Bateleur. *In* Tingay, R., and Katzner, T. (Eds.), *The Eagle Watchers*. Cornell University Press, Ithaca, New York.
6. **Watson, R.T.**, M. Fuller, M. Pokras, and W. G. Hunt, (Eds.). **2009**. Ingestion of lead from spent ammunition: Implications for wildlife and humans. *Proceedings of the conference, May 2008, Boise*. The Peregrine Fund, Boise, Idaho, USA. 383 pp.
7. **Watson, R.T.** and D. Avery. **2009**. Hunters and anglers at risk of lead exposure in the United States. *In* R. T. Watson, M. Fuller, M. Pokras, and W. G. Hunt, (Eds.). *Ingestion of lead from spent ammunition: Implications for wildlife and humans*. The Peregrine Fund, Boise, Idaho, USA.
8. **Watson, R.T.**, M. Gilbert, and M. Virani. **2008**. Neck-drooping posture of Oriental White-backed Vultures (*Gyps bengalensis*) in close proximity to human observers. *Journal of Raptor Research* 42(1):66-67.

9. **Watson, R.T.**, Rene de Roland, L.A., Rabearivony, J., and R. Thorstrom. **2008.** Community-based wetland conservation protects endangered species in Madagascar: Lessons from science to conservation. *Proc 16th Biodiversity Symposium*, Philippine Wildlife Conservation Society, Manila, Philippines. *Banwa* 4(1):81-95
10. **Watson, R.T. In press.** Vultures in Crisis: The latest ecological canary in the coal-miner's cage. Book chapter in *Tale Feathers*.
11. **Watson, R.T. 2007.** The effect of diclofenac on south Asian *Gyps* vultures: Lessons for wildlife biologists. Pp. 185-192 in *Neotropical Raptors* (Bildstein et al., Eds.). Hawk Mountain Sanctuary, Allentown, PA.
12. **Watson, R.T.**, M. Gilbert, J.L. Oaks, and M. Virani. **2004.** The collapse of vulture populations in South Asia. *Biodiversity* 5(3): 3-7.
13. **Watson, R.T. 2004.** A deadly mystery solved. *Birdscapes* (Fall): 32-33.
14. **Watson, R.T.**, M. Virani, R. Risebrough, and J.L. Oaks. **2004.** Catastrophic vulture population decline in Asia: Current knowledge and a proposal to understand its cause. Pp. 9-13 in D.M. Prawiradilaga (ed.) *Proceedings of the Second Symposium on Raptors of Asia, 2000*. Asian Raptor Research Conservation Network, Indonesia.
15. **Watson, R.T. 2002.** The Peregrine Fund's Pan-African Raptor Conservation Programme and partnership with the Zimbabwe Falconers' Club. *Honeyguide* 48(2):130-134.
16. **Watson, R.T. 2000.** Flight, foraging and food of the Bateleur *Terathopius ecaudatus*: an aerodynamically specialized, opportunistic forager. Pp. 65-75 in Chancellor, R.D. and B.-U. Meyburg (eds) *Raptors at Risk*, WWGBP/Hancock House, Berlin.
17. **Watson, R.T.** and R. Rabarisoa. **2000.** Sakalava fishermen and Madagascar Fish Eagles: enhancing traditional conservation rules to control resource abuse that threatens a key breeding area for an endangered eagle. *Ostrich* 71(1 & 2):2-10.
18. **Watson, R.T.** J. Berkelman, R. Rabarisoa, R. Thorstrom, and C.R.B. Watson. **2000.** Description of nesting and foraging habitat of the Madagascar Fish Eagle *Haliaeetus vociferoides*: a conservation initiative. *Ostrich* 71(1 & 2):336-340.
19. **Watson, R.T.**, A. Andrianarimisa, D. Razandrizanakanirina, and L. Kalavaha. **2000.** Madagascar Fish Eagle *Haliaeetus vociferoides* and community-based wetland conservation. Pp. 333-340 in Chancellor, R.D. and B.-U. Meyburg (eds) *Raptors at Risk*, WWGBP/Hancock House, Berlin.
20. **Watson, R.T.**, A.W.A Maritz, and P. Mundy. 2000. Bateleur, *Terathopius ecaudatus*. Pp. 82-83 in G.H. Verdoorn, K.L. Bildstein, and S. Ellis (Eds.). *Selected African*

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Falconiformes Conservation Assessment and Management Plan. IUCN/SSC Conservation Breeding Specialist Group, Apple Valley, Minnesota, USA.

21. **Watson, R.T.** and S. Razafindramanana. **1999.** Nearest neighbor nest distances, home range and territory area of the Madagascar Fish Eagle (*Haliaeetus vociferoides*). *J. Raptor Res.* 33(4):335-338.
22. **Watson, R.T.,** S. Razafindramanana, R. Thorstrom, and S. Rafanomezantsoa. **1999.** Breeding biology, extra-pair birds, productivity, siblicide and conservation of the Madagascar Fish Eagle. *Ostrich* 70(2):105-111.
23. **Watson, R.T.** **1998.** The plight of the Fish Eagle. People, eagles and wetlands' conservation in Madagascar. *Africa Birds & Birding* 3(4):34-41.
24. **Watson, R.T. (Ed.)** **1997a.** Madagascar Wetlands Conservation Project: developing community-based conservation in a proposed wetland biosphere reserve in Madagascar. Progress Report III, 1995-1996. The Peregrine Fund, Boise, ID. 416 pp.
25. **Watson, R.T.** **1997b.** Madagascar Wetlands Conservation Project overview. Pp. 1-13 in Watson (1997a).
26. **Watson, R.T.** **1997c.** Summary of achievements: 1995-1996. Pp. 15-29 in Watson (1997a).
27. **Watson, R.T.** **1997d.** Madagascar Fish-Eagle conservation. Pp. 45-49 in Watson (1997a).
28. **Watson, R.T.** **1997e.** Hacking Madagascar Fish-Eagles: training in methodology for future population management. Pp. 51-53 in Watson (1997a).
29. **Watson, R.T.** **1997f.** Madagascar Fish-Eagle sibling rescue in 1995 and 1996. Pp. 283-287 in Watson (1997a).
30. **Watson, R.T.** **1997g.** Captive breeding and display aviary for Madagascar Fish-Eagles in Parc Tsimbazaza: a multiple conservation opportunity. Pp. 413-416 in Watson (1997a).
31. **Watson, R.T.** **1997h.** Sakalava fishermen and Madagascar Fish-Eagles: enhancing traditional conservation rules to control resource abuse that threatens a key breeding area for an endangered eagle. Pp. 65-88 in Watson (1997a).
32. **Watson, R.T.** **1997i (Ed).** Masoala Project: Use of raptors and other avifauna for conservation, monitoring and evaluation of rain forest on Masoala Peninsula. Progress Report IV. The Peregrine Fund, Boise, ID. 196 pp.

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33. **Watson, R.T. 1997j.** Masoala Project overview. Pp. 1-13 *in* Watson (1997i).
34. **Watson, R.T.,** A. Andrianarimisa, and R. Rabarisoa. **1997.** Lake Soamalipo Field Station: headquarters for community-based conservation and management of Madagascar Fish-Eagles. Pp. 55-58 *in* Watson (1997a).
35. **Watson, R.T.,** J. Berkelman, R. Rabarisoa, R. Thorstrom, and C.R.B. Watson. **1997.** Description of nesting and foraging habitat of the Madagascar Fish Eagle *Haliaeetus vociferoides*: a conservation initiative. Pp. 315-327 *in* Watson (1997a).
36. **Watson, R.T.** and S. Razafindramanana. **1997.** Weather patterns at Lake Soamalipo, Ankivahivahy Camp. Pp. 231-236 *in* Watson (1997a).
37. **Watson, R.T.,** S. Razafindramanana, R. Thorstrom, and S. Rafanomezantsoa. **1997.** Breeding biology, trios, productivity, siblicide and conservation of the Madagascar Fish-Eagle. Pp. 289-306 *in* Watson (1997a).
38. **Watson, R.T.,** D. Razandrizanakanirina, and R. Rabarisoa. **1997.** Developing the community-based wetland conservation project: sociological studies and community motivation in 1996. Pp. 125-157 *in* Watson (1997a).
39. **Watson, R.T.** and R. Thorstrom. **1997.** Birding and ecotourism as a conservation tool on Masoala: the Madagascar Red Owl and The Peregrine Fund's nest reward program. Pp. 123-126 *in* Watson (1997i).
40. **Watson, R.T.,** S. Thomsett, D. O'Daniel, and R. Lewis. **1996.** Breeding, growth, development, and management of the Madagascar Fish Eagle (*Haliaeetus vociferoides*). *J. Raptor Research* 30(1):21-27.
41. **Watson, R.T. 1996.** The Peregrine Fund Project in Madagascar. *Bull. Afr. Bird Club* 3:7-8.
42. **Watson, R.T. (Ed.). 1995.** Madagascar Project: Wetlands Conservation Project. Progress Report II, 1993 and 1994. Second edition. The Peregrine Fund, Boise, ID. 265 pp.
43. **Watson, R.T. 1995.** Update on The Peregrine Fund's Madagascar Project. *Working Group on Birds in the Madagascar Region Newsletter* 5(1):2-4.
44. **Watson, R.T.,** S. Thomsett, and D. O'Daniel. **1995.** Growth, development, and experimental management of the Madagascar Fish Eagle (*Haliaeetus vociferoids*). *J. Raptor Research* 29:68.
45. **Watson, R.T.,** and R. Lewis. **1994.** Raptor studies in Madagascar's rain forest. Pp. 283-290. *In* Meyburg, B.-U. And R.D. Chancellor (eds) *Raptor conservation today*. WWGBP/The Pica Press.

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46. **Watson, R.T. (Ed.) 1994a.** Madagascar Project: Wetlands Conservation Project. Progress Report II, 1993 and 1994. The Peregrine Fund, Boise, ID. 173 pp.
47. **Watson, R.T. 1994b.** Waterbird census on lakes of the Antsalova region. Pp. 193-196 *in* Watson (1994a).
48. **Watson, R.T. 1994c.** Madagascar Fish Eagle *Haliaeetus vociferoides* experimental species management. Pp. 233-235 *in* Watson(1994a).
49. **Watson, R.T. and R. Rabarisoa. 1994.** Madagascar Fish Eagle off-shore survey. Pp. 223-231 *in* Watson (1994a).
50. **Watson, R.T. 1993.** Using birds of prey as a conservation tool: The Peregrine Fund's World Programme. *Proc. VIII Pan-Afr. Orn. Congr.:* 132.
51. **Watson, R.T., J. Berkelman, R. Lewis, and S. Razafindramanana. 1993.** Conservation studies on the Madagascar Fish Eagle *Haliaeetus vociferoides*. *Proc. VIII Pan-Afr. Orn. Congr. Annales Musée de L'Afrique Centrale (Zoologie)* 268:192-196.
52. **Watson, R.T. (Ed.) 1992a.** Madagascar Project: an integrated program for development of local capacity for conservation of natural resources. Progress Report I, 1991 and 1992. The Peregrine Fund, Boise, ID. 152 pp.
53. **Watson, R.T. 1992b.** Madagascar Project overview. Pp 1-7 *in* Watson 1992a.
54. **Watson, R.T. 1992c.** Chronology of achievements. Pp 9-12 *in* Watson 1992a.
55. **Watson, R.T. 1992d.** Training of Malagasy personnel and graduates. Pp 13-15 *in* Watson 1992a.
56. **Watson, R.T. 1992e.** Madagascar Project, the next three years: summary. Pp 17-18 *in* Watson 1992a.
57. **Watson, R.T. 1992f.** Madagascar Fish Eagle and Wetland Conservation Project overview. Pp 101-105 *in* Watson 1992a.
58. **Watson, R.T. 1992g.** Madagascar Fish Eagle and Wetland Conservation Project, the next three years. Pp 141-148 *in* Watson 1992a.
59. **Watson, R.T. and S. Strzalkowska. 1992.** Masoala Project: the next three years. Pp. 81-95 *in* Watson (1992a).
60. **Watson, R.T. and S. Thomsett. 1992.** Experimental species management program: 1993. Pp. 127-129 *in* Watson (1992a).

61. **Watson, R.T. 1991a.** Using birds of prey as an environmental conservation tool: The Peregrine Fund's world programme. *Environmental Conservation* 18(3):269-270.
62. **Watson, R.T. 1991b.** Saving birds of prey. *Oil Progress* 41:2-8.
63. **Watson, R.T. 1990.** Breeding biology of the Bateleur. *Ostrich* 61:13-23.
64. **Watson, R.T. 1990.** Population dynamics of the Bateleur in Kruger National Park. *Ostrich* 61:5-12.
65. **Watson, R.T., R. Anelich, and A.L. Schutte. 1990.** Fungi in the gut contents of Namib Desert dune Lepismatidae (Thysanura: Insecta). *Madoqua* 17(1):53-54.
66. **Watson, R.T. 1989.** Aggressive display and territoriality of the Bateleur *Terathopius ecaudatus*. *S. Afr. J. Zool.* 24(2):146-150.
67. **Watson, R.T. 1989.** Niche separation in Namib Desert dune Lepismatidae (Thysanura: Insecta): detritivores in an allochthonous detritus ecosystem. *J. Arid Environments* 17:37-48.
68. **Watson, R.T. 1988.** The influence of nestling predation on nest site selection and behaviour of the Bateleur. *S. Afr. J. Zool.* 23(3):143-149.
69. **Watson, R.T. 1988.** The ecology, biology and population dynamics of the Bateleur Eagle *Terathopius ecaudatus*. *Gabar* 3:49-50.
70. **Watson, R.T. 1988.** Bateleur behavior...and conservation. *African Wildlife* 42(5):277-279.
71. **Watson, R.T. and J. Irish. 1988.** An introduction to the Lepismatidae (Thysanura: Insecta) of the Namib Desert sand dunes. *Madoqua* 15(4):285-293.
72. **Watson, R.T. 1987.** Flight identification of Bateleur age classes: A conservation incentive. *Bokmakierie* 39:37-39.
73. **Watson, R.T. 1987.** Bateleurs, poison, and the future. *Custos* 15(11):22-37.
74. **Watson, R.T. and C. Watson. 1987.** Interspecific piracy between Tawny Eagles and Bateleurs: How common is it? *Gabar* 2:9-11.
75. **Watson, R.T. 1987.** Psammophilous Lepismatidae of the Namib Desert. *Bull. Desert Ecological Research Unit, Transvaal Museum Bull. Suppl.* 7:7-8.
76. **Watson, R.T. and C.R.B. Watson. 1985.** A trap to capture Bateleur eagles and other scavenging birds. *S. Afr. J. Wildl. Res.* 15:63-66.

77. **Watson, R.T. 1983.** Range reduction of the Bateleur *Terathopius ecaudatus* and the development of agriculture in South Africa. *Proc. Symp. Birds & Man*. Witwatersrand Bird Club, Johannesburg.
78. **Watson, R.T. 1983.** Home range and habitat utilization of the Bateleur: A preliminary study. *Proc. Second Symp. African Predatory Birds*. Natal Bird Club, Durban.
79. **Watson, R.T. 1981.** The Bateleur Eagle project, 1981. *Bokmakierie* 34(3):52-54.

Co-authorship

80. Campbell-Thompson, E., F.H. Vargas, **R.T. Watson**, A. Muela, and N.C. Cáceres. 2012. Effect of sex and age at release on the independence of hacked Harpy Eagles. *Journal of Raptor Research* 46:158-167.
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UNIVERSITY OF IDAHO

SUBJECT

Online, Master of Public Administration

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section III.G;
Section V.R.3.a.x

BACKGROUND/DISCUSSION

The Department of Political Science currently offers the Master of Public Administration degree to residential students at the University of Idaho (UI), and this will not change. The UI intends to reach more place-bound practitioners by also offering the program through distance delivery. The program trains practitioners for local governments and has a secondary focus on small, rural communities and economic development to better serve Idaho. The UI proposes expanding the program through online delivery.

The objectives of the program are to provide training and continuing education for practitioners in Idaho's local governments and beyond. Students in the program will gain analytical and methodological skills that will contribute to effective decision making in local governments, gain broader and timely knowledge and skills in human resource management and government budgeting, gain expanded knowledge and appreciation for economic development programming in small governments, and gain expanded knowledge and appreciation for problems of rural communities.

The program is designed for in-service students; that is, students currently employed in either the public or private sector. Students must meet University of Idaho requirements for graduate admissions. However, the program, per accrediting agency guidelines, is open to all students with a bachelor's degree from an accredited college or university. The students will complete a 3-hour course – POLS 559 Field Based Research – that will serve as the program capstone. There is no thesis option.

The Master of Public Administration is a general management degree that emphasizes public management and policy. As a general management degree, like the Master of Business Administration, it provides training that is appropriate for the private sector, especially in functions that are compliance oriented, such as human resources management, auditing, regulatory compliance, etc. According to the Idaho Department of Labor, by 2020 management positions will increase by 13.7%, business and financial operations positions by 14%, community and social service positions by 16.9%, life, physical, and social science positions by 9.2%.

IMPACT

The UI proposes to charge each student a fee of \$7,500 per year consistent with Board Policy V.R.3.a. Students will not be charged the UI's per credit online course fee (currently \$35.00). This is a substantial discount from the regular graduate tuition and fees and is a strong incentive for students to join the program. All students will be enrolled full-time (9 credits per semester).

The request to establish a unique fee structure will allow students who are employed to have a clear flat rate amount for their degree. An amount that is both market competitive and fair can help students and their employers plan for both the time and money required to complete the program. Given the focus on a student population that will be largely from rural areas the availability and affordability of such a degree offers a truly valuable and unique opportunity for a population that may otherwise never pursue a graduate degree.

The funds would be used to support the delivery of the program, including instruction, technology, course development (shifting to distance delivery), marketing, and support for faculty involved in the program to engage in continuous professional development ensuring students in the program are receiving a high quality education and engaging with excellent faculty.

ATTACHMENTS

Attachment 1 – Program Proposal

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STAFF COMMENTS AND RECOMMENDATIONS

The University of Idaho anticipates a cohort enrollment of 25 students initially with a new cohort to begin every fall. By year two, the UI projects a continuous enrollment of 50 students. If for some reason that projection is not met, the UI still plans to have the program available online to students.

The UI requests approval to assess an online program fee consistent with Board Policy V.R.3.a.(x) at \$7,500 per year for students taking a nine-credit load. Based on the information provided in the proposal, staff finds that the request to assess the online program fee meets policy requirements.

Consistent with Board Policy III.Z, the Master of Public Administration is a statewide program responsibility for Boise State University (BSU). BSU's program focuses on General Public Administration, Environmental & Natural Resource Policy and Administration, and State & Local Government Policy and Administration; while the UI program focuses on small, rural, and remote local governance. Because the UI proposes to expand their existing MPA program to online delivery, Board Policy III.Z, does not apply. This policy is currently not "applicable to programs for which 90% or more of all activity is required or completed online". Staff would note that BSU is developing an online Master of Public Administration with an international focus in the future.

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The following represents graduate Public Administration programs being offered by public postsecondary institutions:

Institution	Program Title	CIP Code	Degree Level	Location	Regional/ Statewide	Method of Delivery
BSU	Public Administration Emphases in: General Public Administration, Environmental & Natural Resource Policy & Admin., State and Local Govt. Policy & Admin.	44.0401	M.P.A.	Boise	Statewide	Traditional
UI	Public Administration	44.0401	M.P.A.	Moscow	Regional	Traditional
ISU	Political Science- Public Administration	45.1101	M.P.A.	Pocatello	Regional	Traditional

The proposal went through the program review process and was recommended for approval by the Council on Academic Affairs and Programs (CAAP) on January 14, 2016.

Board staff recommends approval.

BOARD ACTION

I move to approve the request by University of Idaho to offer the Master of Public Administration through distance delivery and to assess an online program fee in the amount of \$7,500 per year; for 9 credits per semester.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

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Institutional Tracking No. FS-16-024

UCC-16-022f

Idaho State Board of Education
Proposal for **Graduate and Doctoral Degree Program**

Date of Proposal Submission:	October 2015
Institution Submitting Proposal:	University of Idaho
Name of College, School, or Division:	College of Letters, Arts, and Social Sciences
Name of Department(s) or Area(s):	Department of Political Science

Program Identification for Proposed New, Modified, or Discontinued Program:

Title:	Online Master of Public Administration Program		
Degree:	Master of Public Administration		
Method of Delivery:	Distance Delivered		
CIP code (consult IR /Registrar)	44.0401		
Proposed Starting Date:	Fall 2016		
Indicate if the program is:	X	Regional Responsibility	Statewide Responsibility

Indicate whether this request is either of the following:

- | | |
|--|---|
| <input type="checkbox"/> New Graduate Program | <input type="checkbox"/> Contract Program/Collaborative |
| <input type="checkbox"/> New Doctoral Program | <input checked="" type="checkbox"/> Expansion of an Existing Graduate/Doctoral Program
(new learning modality) |
| <input type="checkbox"/> New Off-Campus Graduate Program | <input type="checkbox"/> Consolidation of an Existing Graduate/Doctoral Program |
| <input type="checkbox"/> New Off-Campus Doctoral Program | <input type="checkbox"/> Discontinuation of an existing Graduate/Doctoral Program |

Andrew E. Kutz 12/14/15

College Dean (Institution)

Date

Vice President for Research (as applicable)

Date

Graduate Dean (as applicable)

Academic Affairs Program Manager

Date

[Signature] 12-14-15
Chief Fiscal Officer (Institution)

Date

Chief Academic Officer, OSBE

Date

[Signature]
Chief Academic Officer (Institution)

Date

SBOE/OSBE Approval

Date

[Signature]
President

Date

March 16, 2012

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**INSTRUCTION, RESEARCH, AND STUDENT AFFAIRS
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Before completing this form, refer to Board Policy Section III.G., Program Approval and Discontinuance. This proposal form must be completed for the creation of each new program and each program discontinuation. All questions must be answered.

- 1. Describe the nature of the request.** Will this program be related or tied to other programs on campus? Please identify any existing program, option that this program will replace. *If this is request to discontinue an existing program, provide the rationale for the discontinuance. Indicate the year and semester in which the last cohort of students was admitted and the final term the college will offer the program. Describe the teach-out plans for continuing students.*

The Department of Political Science currently offers the Master of Public Administration degree at the University of Idaho. The program trains practitioners for local governments and has a secondary focus on small, rural communities and economic development to better serve Idaho. We propose expanding the program through online delivery. Our intention is to reach more place-bound practitioners in Idaho's local governments.

- 2. List the objectives of the program.** The objectives should address specific needs the program will meet. They should also identify and the expected student learning outcomes and achievements. *This question is not applicable to requests for discontinuance.*

The objectives of the program are to provide training and continuing education for practitioners in Idaho's local governments. Dr. Brian Ellison has interviewed city supervisors throughout the state that have asked for more training and development for town employees. Students in the program will gain analytical and methodological skills that will contribute to effective decision making in local governments, gain broader and timely knowledge and skills in human resource management and government budgeting, gain expanded knowledge and appreciation for economic development programming in small governments, and gain expanded knowledge and appreciation for problems of rural communities.

- 3. Briefly describe how the institution will ensure the quality of the program** (i.e., program review). Will the program require specialized accreditation (it is not necessary to address regional accreditation)? If so, please identify the agency and explain why you do or do not plan to seek accreditation. *This question is not applicable to requests for discontinuance.*

The Network of Schools of Public Policy, Affairs, and Administration (NASPAA) accredits Master of Public Administration programs. NASPAA provides model curriculums, assessment tools, a seven-year accreditation review process, and other academic and administrative resources for MPA programs. We intend to seek NASPAA accreditation for the online program.

- 4. List new courses that will be added to your curriculum specific for this program.** Indicate number, title, and credit hour value for each course. Please include course descriptions for new and/or changes to courses. *This question is not applicable to requests for discontinuance.*

POLS 504 (3 credit hours): Problems in Rural Governance. This course focuses on special problems that are unique to communities and towns in rural environments. These include issues related to communication, political participation, economic and social resiliency, grant writing, education, economic development, and others.

All additional courses needed to complete the program have been prepared for distance delivery. The periodicity with which these courses would be offered via distance delivery will be responsive to the curricular needs of the students who matriculate through the distance program.

Special Note: A research project is currently underway that will develop the information needed to support this course and the program. The project focuses on the issues and needs faced by Idaho's rural and remote communities, and surveys public employees in 200 towns and 44 counties. A secondary objective of the project is develop a number of pedagogical resources for the program that directly reflect problems and needs in Idaho.

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5. Please provide the program completion requirements to include the following and attach a typical curriculum to this proposal as Appendix A. *For discontinuation requests, will courses continue to be taught?*

Credit hours required:	30 credit hours
Credit hours required in support courses:	3 credit hours
Credit hours in required electives:	No electives
Credit hours for thesis or dissertation:	3 Field Research
Total credit hours required for completion:	36 credit hours

6. Describe additional requirements such as preliminary qualifying examination, comprehensive examination, thesis, dissertation, practicum or internship, some of which may carry credit hours included in the list above. *This question is not applicable to requests for discontinuance.*

The program is designed for in-service students; that is, students currently employed in either the public or private sector. Students must meet University of Idaho requirements for graduate admissions. But the program, per accrediting agency guidelines, is open to all students with a bachelor's degree from an accredited college or university. The students will complete a 3-hour course – POLS 559 Field Based Research – that will serve as the program capstone. There is not a thesis option.

7. Identify similar programs offered within Idaho or in the region by other colleges/universities. *If the proposed request is similar to another state program, provide a rationale for the duplication.*

Degrees/Certificates offered by school/college or program(s) within disciplinary area under review

Institution and Degree name	Level	Specializations within the discipline (to reflect a national perspective)	Specializations offered within the degree at the institution
BSU	MPA	Public Administration	General PA, Environment and Natural Resources, State and Local Government
CSI			
CWI			
EITC			
ISU	MPA	Public Administration	State, Local and Nonprofit Administration, Environmental Administration, Public Health Administration
LCSC			
NIC			
UI	MPA	Public Administration	Local Government: <u>No MPA program in the state or the nation focuses on rural and remote local governance.</u>

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- 8. Describe the methodology for determining enrollment projections.** If a survey of student interest was conducted, attach a copy of the survey instrument with a summary of results as **Appendix B**. *This question is not applicable to requests for discontinuance.*

The program will be limited to cohorts of 25 students; a new cohort will begin every fall. This means that by year two the program will have a continuous enrollment of 50 students. Since this will be the only MPA program in the US with a rural local governance focus, we believe that expanding to other Rocky Mountain States with similar demographics will support our enrollment projections.

- 9. Enrollment and Graduates.** Using the chart below, provide a realistic estimate of enrollment at the time of program implementation and over three year period based on availability of students meeting the criteria referenced above. Include part-time and full-time (i.e., number of majors or other relevant data) by institution for the proposed program, last three years beginning with the current year and the previous two years. Also, indicate the projected number of graduates and graduation rates.

Discontinuations. Using the chart below include part-time and full-time (i.e., number of majors or other relevant data) by institution for the proposed discontinuation, last three years beginning with the current year and previous two years. Indicate how many students are currently enrolled in the program for the previous two years, to include number of graduates and graduation rates.

Institution	Relevant Enrollment Data			Number of Graduates			Graduate Rate
	Current	Year 1 Previous	Year 2 Previous	Current	Year 1 Previous	Year 2 Previous	
BSU	62	49	49	21	20	22	
ISU	19	16	18	9	5	5	
LCSC							
UI	7	9	14	2	7	8	
CSI							
CWI							
EITC							
NIC							

Special Note: Prior to Fall 2013 there was no active effort to recruit or maintain students in the MPA program due to lack of personnel. A new chair of political science was hired in Fall 2013 who built an MPA Advisory Committee and redesigned, in partnership with several local governments in Idaho, the MPA program. Curriculum changes for the MPA program with a local focus were completed in AY 2014-2015. The first semester of the redesigned MPA program is Fall 2015.

- 10. Will this program reduce enrollments in other programs at your institution?** If so, please explain.

No. The online MPA program will be delivered to place bound, in service students. The on-campus MPA program is designed to serve pre-service students; that is, students without work experience and that require an internship for program completion.

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- 11. Provide verification of state workforce needs such as job titles requiring this degree.** Include State and National Department of Labor research on employment potential.

Using the chart below, indicate the total projected job openings (including growth and replacement demands in your regional area, the state, and nation. Job openings should represent positions that require graduation from a program such as the one proposed. Data should be derived from a source that can be validated and must be no more than two years old. *This question is not applicable to requests for discontinuance.*

The Master of Public Administration is a general management degree that emphasizes public management and policy. As a general management degree, like the Master of Business Administration, it provides training that is appropriate for the private sector, especially in functions that are compliance oriented, such as human resources management, auditing, regulatory compliance, etc. According to the Idaho Department of Labor, by 2020 management positions will increase by 13.7%, business and financial operations positions by 14%, community and social service positions by 16.9%, life, physical, and social science positions by 9.2%.

	Year 1	Year 2	Year 3
Local (Regional)	121	146	161
State	1020	1122	1234
Nation	5119	5631	6194

- a. Describe the methodology used to determine the projected job openings. If a survey of employment needs was used, please attach a copy of the survey instrument with a summary of results as **Appendix C.**

Estimates are based on data from the Idaho Department of Labor (https://idahoworks.gov/ada/skillmatch/jobseeker_sm/jbs_searchresults_dsp.cfm?searchForm=true) and the web site Monster (<http://www.monster.com>). Job categories were based upon the US Department of Labor's categories that relate to job positions that usually require an MPA. The positions are: local government analyst, program coordinator, program assistant/manager, policy analyst, statistician, research associate, marketing/PA specialist, and city manager/administrative officer.

- b. Describe how the proposed change will act to stimulate the state economy by advancing the field, providing research results, etc.

The program is specifically designed to help local government practitioners enhance and develop their skills in economic development.

- c. Is the program primarily intended to meet needs other than employment needs, if so, please provide a brief rationale?

The primary goal of this program is to provide education that would serve employment and professional development needs of currently employed individuals.

- 12. Will any type of distance education technology be utilized in the delivery of the program on your main campus or to remote sites? Please describe.** *This question is not applicable to requests for discontinuance.*

The proposal is for an on-line Master of Public Administration program. The technology and training needed to support the program is current at the University of Idaho.

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- 13. Describe how this request is consistent with the State Board of Education's strategic plan and institution's role and mission.** *This question is not applicable to requests for discontinuance.*

The On-line MPA program is in direct support of the SBOE strategic plan in that: 1) A Well Educated Citizenry – it provides more access to Idaho citizens to opportunity in higher education; and 2) Innovation and Economic Development – it improves innovation and creativity, promotes economic growth, increases efficiency.

- 14. Describe how this request fits with the institution's vision and/or strategic plan.** *This question is not applicable to requests for discontinuance.*

Goals of Institution Strategic Mission	Proposed Program Plans to Achieve the Goal
Teaching and Learning	The online MPA program gives the university the opportunity to meet critical objective in teaching and learning: expanding professional education, developing increased opportunities for underserved communities, and increasing access to local learners.
Scholarly and Creative Activity	Increasing Interdisciplinary Scholarship: Public administration is the interdisciplinary study of government. We are also building this program on an empirical foundation that is lacking in public administration in the nation.
Outreach and Engagement	The redesign of the Master of Public Administration program was based on an outreach model. We have local government partners associated with the program that have pledged internship and scholarship support. In that context, the MPA online proposal is intended to help the University of Idaho, CLASS, and the Department provides meaningful outreach to Idaho's towns.
Community Culture	One of the most interesting findings from current scholarship on local government is that cultural tolerance has a significant impact on economic development; that is, the more culturally tolerant the community the more economically successful. That message will be built in to the coursework for this program.

- 15. Is the proposed program in your institution's Five-Year plan? Indicate below.** *This question is not applicable to requests for discontinuance.*

Yes ____ No X

If not on your institution's Five-Year plan, provide a justification for adding the program.

The Master of Public Administration program is well established at the University of Idaho. The request is to offer the program online. Hence it would not appear on the institution's five-year plan.

- 16. Explain how students are going to learn about this program and where students are going to be recruited from (i.e., within institution, out-of-state, internationally).** *For requests to discontinue a program, how will continuing students be advised of impending changes and consulted about options or alternatives for attaining their educational goals?*

The program will be marketed through direct contact with local governments, county governments, and the University of Idaho Extension Offices. Students will come from local municipal and county government across Idaho.

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17. In accordance with Board Policy III.G., an external peer review is required for any new doctoral program. Attach the peer review report as **Appendix D**.

N/A

18. Program Resource Requirements. Using the **Excel spreadsheet** provided by the Office of the State Board of Education indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first three fiscal years of the program. Include reallocation of existing personnel and resources and anticipated or requested new resources. Second and third year estimates should be in constant dollars. Amounts should reconcile budget explanations below. If the program is contract related, explain the fiscal sources and the year-to-year commitment from the contracting agency(ies) or party(ies). Provide an explanation of the fiscal impact of the proposed discontinuance to include impacts to faculty (i.e., salary savings, re-assignments).

a. Personnel Costs

Faculty and Staff Expenditures

Project for the first three years of the program the credit hours to be generated by each faculty member (full-time and part-time), graduate assistant, and other instructional personnel. Also indicate salaries. After total student credit hours, convert to an FTE student basis. Please provide totals for each of the three years presented. Salaries and FTE students should reflect amounts shown on budget schedule.

Name, Position & Rank	Annual Salary Rate	FTE Assignment to this Program	Projected Student Credit Hours	FTE Students
Brian Ellison, Professor	\$109,278	2 courses/yr.	750	83
Manoj Shrestha, Associate Professor	\$ 59,202	2 courses/yr.	750	83
Juliet Carlisle, Assistant Professor	\$ 58,282	1 course/yr.	375	42
New PA Faculty Member 1	\$70,000	2 courses/yr.	750	83
New PA Faculty Member 2 (year 2)	\$70,000	2 courses/yr.	500	56
Patrick Wilson, Professor	\$80,479.30	1 course/yr.	375	42
UI Faculty Member		1 course/yr	375	42
Practitioner		1 course/yr.	375	42
Field Based Research	\$4,000	1 course/yr.	300	33

Project the need and cost for support personnel and any other personnel expenditures for the first three years of the program.

Administrative Expenditures

Describe the proposed administrative structure necessary to ensure program success and the cost of that support. Include a statement concerning the involvement of other departments, colleges, or other institutions and the estimated cost of their involvement in the proposed program

Name, Position & Rank	Annual Salary Rate	FTE Assignment to this Program	Value of FTE Effort to this Program
Brian Ellison, Chair, Professor, Director	\$109,278	.10	10,700

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Two new tenure track professors of public administration will be required to deliver the program. One will be hired in year 1, and the second will be hired in year 2. In addition, a 0.25 FTE temporary lecturer (adjunct faculty) will be required for field based research, and 0.1 FTE effort of the Director is included for program administration and oversight.

b. Operating Expenditures

Briefly explain the need and cost for operating expenditures (travel, professional services, etc.)

There will be costs for faculty members to receive online course development training. Those will be minimal after the program begins. There may also some travel costs, membership dues to NASPAA (after accreditation), and some recruiting materials.

In addition, the program will incur a liability to other UI units for not charging the per credit online course fee. This expense is included in the budget, calculated at the current \$35.00 per credit rate times 18 credits per academic year for the specified number of students.

c. Capital Outlay

None

(1) Library resources

- (a) Evaluate library resources, including personnel and space. Are they adequate for the operation of the present program? If not, explain the action necessary to ensure program success.

The library at the University of Idaho provides excellent resources for study and research in public administration. It provides support to the current MPA program on campus.

- (b) Indicate the costs for the proposed program including personnel, space, equipment, monographs, journals, and materials required for the program.

Library faculty estimates that personnel support for the program will be \$2,000 annually.

- (c) For off-campus programs, clearly indicate how the library resources are to be provided.

University libraries across the country are increasingly providing materials in a digital format. Students in the on line program can search the library for materials, which will be delivered digitally. It should be noted that on campus students receive materials in the same way.

(2) Equipment/Instruments

Describe the need for any laboratory instruments, computer(s), or other equipment. List equipment, which is presently available and any equipment (and cost), which must be obtained to support the proposed program.

None.

d. Revenue Sources

- (1) If funding is to come from the reallocation of existing state appropriated funds, please indicate the sources of the reallocation. What impact will the reallocation of funds in support of the program have on other programs?

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There will be no reallocation of existing state appropriations. An initial startup allocation will be provided internally, and thereafter the revenue generated by the program will be sufficient to cover expenses.

We propose a different funding plan. The SBOE has given institutions permission to set unique fee schedules for programs that are entirely distance delivered. For the online MPA, we propose to charge each student a fee of \$7,500 per year, and students would not be charged the UI's per credit online course fee (currently \$35.00). This is a substantial discount from the regular graduate tuition and fees and is a strong incentive for students to join the program. All students will be enrolled full-time (9 credits per semester).

- (2) If the funding is to come from other sources such as a donation, indicate the sources of other funding. What are the institution's plans for sustaining the program when funding ends?

N/A

- (3) If an above Maintenance of Current Operations (MCO) appropriation is required to fund the program, indicate when the institution plans to include the program in the legislative budget request.

N/A

- (4) Describe the federal grant, other grant(s), special fee arrangements, or contract(s) to fund the program. What does the institution propose to do with the program upon termination of those funds?

There are no grants, special fees, or contracts needed to fund the program.

- (5) Provide estimated fees for any proposed professional or self-support program.

There are no other fees associated with this program.

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APPENDIX A

POLITICAL SCIENCE AND PUBLIC AFFAIRS RESEARCH GRADUATE DEGREE PROGRAMS

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Political Science and Public Affairs Research. See the College of Graduate Studies section for the general requirements applicable to each degree.

Master of Arts. Major in Political Science. General College of Graduate Studies M.A. requirements for application must be followed. Applicants must also submit three letters of recommendation and a 300-500 word statement of purpose directly to the Department of Political Science.

Master of Public Administration. Major in Public Administration. The Martin School and the Department of Political Science at the University of Idaho offers the Master of Public Administration (MPA) degree for students interested in careers in the governance and management of local governments and communities. Students can expect to leave the program with intellectual and analytical skills, and the practical experience needed to enhance their ability to serve local governments and communities. The program is public service oriented, and is delivered in partnership with communities in Idaho and Washington.

Practitioner involvement in this program provides students with a more relevant and practical education than that found in more traditional programs. Academic faculty members work closely with local government professionals to deliver courses and professional development opportunities. In addition to internships, all students are required to complete a practicum designed to deliver the skills needed in professional communication and employment.

The program requires 36 hours of coursework and offers two tracks. The internship track is designed for students who have little or no public administration experience while the in-service track is designed for working professionals who seek to strengthen their leadership skills. Internship track students complete a 3 to 6-hour internship to gain hands-on experience in the governance of local government and communities. In-service students must complete 3 hours of [PoIS 559](#) Field Based Research in lieu of the internship.

Both tracks share a core curriculum of 18 hours:

[PoIS 555](#) Seminar in Administrative Theory (3 cr)

[PoIS 557](#) Governmental Budgeting (3 cr)

[PoIS 558](#) Research Methods for Local Government and Community Administration (3 cr)

[PoIS 560](#) Public Administration Practicum (3 credits taken 1 credit per semester)

[PoIS 572](#) Local Government Politics and Administration (3 cr)

[PoIS 575](#) Public Personnel Administration (3 cr)

Students will then develop their specific interests in local government by choosing 12 to 15 hours of elective courses in consultation with and approval of their advisor. These courses may be chosen in alignment with the bioregional planning and community design graduate program, or other UI graduate programs.

Although no specific undergraduate preparation is required for the MPA, applicants must have a 3.0 GPA and GRE General Test Scores that are no more than five years old. Three letters of recommendation are also required. Students with a lower GPA may, on occasion, be admitted provisionally.

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PROGRAM RESOURCE REQUIREMENTS

Indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first three fiscal years of the program. Include reallocation of existing personnel and resources and anticipated or requested new resources. Second and third year estimates should be in constant dollars. Amounts should reconcile subsequent pages where budget explanations are provided. If the program is contract related, explain the fiscal sources and the year-to-year commitment from the contracting agency(ies) or party(ies). Provide an explanation of the fiscal impact of the proposed discontinuance to include impacts to faculty (i.e., salary savings, re-assignments).

I. PLANNED STUDENT ENROLLMENT										
		FY	2017	FY	2018	FY	2019	Cumulative Total		
		FTE	Headcount	FTE	Headcount	FTE	Headcount	FTE	Headcount	
A. New enrollments		25	25	50	50	75	75	150	150	
B. Shifting enrollments		0	0	0	0	0	0	0	0	

II. REVENUE										
		FY	2017	FY	2018	FY	2019	Cumulative Total		
		On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time	
1. Appropriated (Reallocation)								\$0.00	\$0.00	
2. Appropriated (New)								\$0.00	\$0.00	
3. Federal								\$0.00	\$0.00	
4. Tuition		\$187,500.00		\$375,000.00		\$562,500.00		\$1,125,000.00	\$0.00	
5. Student Fees								\$0.00	\$0.00	
6. Other (Specify)								\$0.00	\$0.00	
Total Revenue		\$187,500.00		\$375,000.00		\$562,500.00		\$1,125,000.00	\$0.00	
<i>Ongoing is defined as ongoing operating budget for the program which will become part of the base.</i>										
<i>One-time is defined as one-time funding in a fiscal year and not part of the base.</i>										

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III. EXPENDITURES									
		FY	2017	FY	2018	FY	2019	Cumulative Total	
		On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
A. Personnel Costs									
1. FTE		1.35		2.35		2.35		6.05	0.00
2. Faculty		\$70,000.00		\$140,000.00		\$140,000.00		\$350,000.00	\$0.00
3. Administrators		\$10,928.00		\$10,928.00		\$10,928.00		\$32,784.00	\$0.00
4. Adjunct Faculty		\$4,000.00		\$4,000.00		\$4,000.00		\$12,000.00	\$0.00
5. Instructional Assistants								\$0.00	\$0.00
6. Research Personnel								\$0.00	\$0.00
7. Support Personnel								\$0.00	\$0.00
8. Fringe Benefits		\$26,837.00		\$48,957.00		\$48,957.00		\$124,751.00	\$0.00
9. Other:								\$0.00	\$0.00
Total FTE Personnel and Costs		\$111,765.00	\$0.00	\$203,885.00	\$0.00	\$203,885.00	\$0.00	\$519,535.00	\$0.00

		FY	2017	FY	2018	FY	2019	Cumulative Total	
		On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
B. Operating Expenditures									
1. Travel		\$1,000.00		\$1,000.00		\$1,000.00		\$3,000.00	\$0.00
2. Professional Services								\$0.00	\$0.00
3. Other Services		\$1,000.00		\$500.00		\$500.00		\$2,000.00	\$0.00
4. Communications								\$0.00	\$0.00
5. Utilities								\$0.00	\$0.00
6. Materials and Supplies		\$2,000.00		\$2,000.00		\$2,000.00		\$6,000.00	\$0.00
7. Rentals								\$0.00	\$0.00
8. Repairs & Maintenance								\$0.00	\$0.00
9. Materials & Goods for Manufacture & Resale								\$0.00	\$0.00
10. Miscellaneous: Online course fee for students		\$15,750.00		\$31,500.00		\$47,250.00		\$94,500.00	\$0.00
Total Operating Expenditures		\$19,750.00	\$0.00	\$35,000.00	\$0.00	\$50,750.00	\$0.00	\$105,500.00	\$0.00

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		FY	2017	FY	2018	FY	2019	Cumulative Total	
		On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
C. Capital Outlay									
1. Library Resources		\$2,000.00		\$2,000.00		\$2,000.00		\$6,000.00	\$0.00
2. Equipment								\$0.00	\$0.00
Total Capital Outlay		\$2,000.00	\$0.00	\$2,000.00	\$0.00	\$2,000.00	\$0.00	\$6,000.00	\$0.00
D. Capital Facilities Construction or Major Renovation									
		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
E. Indirect Costs (overhead)									
		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTAL EXPENDITURES:		\$133,515.00	\$0.00	\$240,885.00	\$0.00	\$256,635.00	\$0.00	\$631,035.00	\$0.00
Net Income (Deficit)		\$53,985.00	\$0.00	\$134,115.00	\$0.00	\$305,865.00	\$0.00	\$493,965.00	\$0.00

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UNIVERSITY OF IDAHO

SUBJECT

University of Idaho, College of Law, Creation of a Master of Laws (LL.M.) Degree

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section III.G.3.c.i.

BACKGROUND/DISCUSSION

The University of Idaho, College of Law seeks to launch a Master of Laws (LL.M.) degree program in August 2016. The LL.M. degree would offer students four curricular emphasis areas, three of which mirror the curricular strengths of the J.D. program and one focused on educating international students with a first degree in law in their home country. The LL.M. degree is the first non-J.D. program proposed at the University of Idaho, College of Law.

The LL.M. degree will start with four emphasis areas that align with the J.D. curricular strengths at the College of Law: Democracy, Justice & the American Legal System; Natural Resources & Environmental Law (NREL); Business Law & Entrepreneurship (BLE); and Litigation and Alternative Dispute Resolution (LADR). The LL.M. is a graduate law degree, and all incoming students would be required to have a first degree in law (in the United States that is a J.D. degree, but in many others it is a Bachelor's degree). The LL.M. program will primarily recruit lawyers from foreign countries and provide approximately 9 to 12 months of instruction in Moscow at the University of Idaho.

The College of Law seeks to create the LL.M. degree as part of the university's strategic vision for the future of the law school statewide. As the College develops locational offerings in Boise, this is an effort to ensure that the Moscow location continues to have a robust and important role. One of the benefits of creating an LL.M. program based in Moscow is that the UI will ensure a diverse learning environment for students college-wide. The LL.M. program will supplement the thriving J.D. program and help the College meet its dual campus objectives. Additionally, the perspective these students will bring to the classroom and co-curricular life will enrich the experience of all students at the College. The UI expects that in creating this program it will bring a stronger focus to global ways of thinking about law and legal systems, a needed perspective for students entering an increasingly global practice of law. The LL.M. degree is one part of the university's increased efforts to internationalize educational offerings. Other efforts on the horizon include study abroad and exchange opportunities. Lastly, the LL.M. and J.D. students will create a dynamic student body that learns and grows with one another as students and then alumni. Having a diverse, international alumni body will help the College of Law long term from many standpoints, including in branding, development, enrollment, and employer relations.

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The creation of the LL.M. degree proposal and curriculum has gone through the regular College and University programmatic processes, receiving endorsement. The American Bar Association is making an acquiescence decision at a late January meeting. It is anticipated that the result of that review will be favorable.

IMPACT

The goal of the program initially is to offer an intellectually stimulating Master of Laws degree for international students with a first degree of law in their home country. Students can take the degree and perspective they've gained back to their home countries to advance themselves professionally and encourage cross-border understanding. The curriculum will give students a solid introduction to the American legal system and prepare students to sit for a bar exam in a number of states, if interested. If students are not interested in sitting for a bar exam in another state, they can enroll in the LL.M. degree to study one of the curricular strength areas.

The goals for the program will be achieved through an integration of the LL.M. students into a number of J.D. courses and the offering of two specialized courses geared to their specific needs. The Dean and faculty director have experience working with international students and will ensure the high quality of the program meets the needs of our students.

The College stands to benefit financially from the impact of this second degree offering as well as contribute to the University's overall goal to increase enrollment.

LL.M. students will pay the current non-resident tuition and fees rate, the same as J.D. students from out-of-state or abroad. This rate includes a College of Law professional fee, which will apply to LL.M. students as well.

ATTACHMENTS

Attachment 1 – Program Proposal

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STAFF COMMENTS AND RECOMMENDATIONS

The UI anticipates initial enrollment to be 5-10 students in the first two years with enrollment increasing by the fourth year of the program to approximately 10-15 students annually. The UI provides that if the program grows beyond those projections, they will reevaluate to determine whether additional faculty and staff resources are needed or if there is interest in growing the program.

Consistent with Board Policy III.Z, the University of Idaho (UI) has the statewide program responsibility for the J.D. Law program. Currently the LL.M. is not listed in this capacity. In view of that, the UI has expressed interest in adding the LL.M. degree as a statewide program responsibility. Because the statewide program list is in Board Policy III.Z, the proposed update would require policy amendments for Board approval. Staff will work with the UI to consider this request.

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The proposal went through the program review process and was recommended for approval by the Council on Academic Affairs and Programs (CAAP) on January 14, 2016.

Board staff recommends approval.

BOARD ACTION

I move to approve the request by the University of Idaho to offer a Master of Laws (LL.M.) degree starting in Summer 2016.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

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FS-16-025

Institutional Tracking No. _____

UCC-16-020a

Idaho State Board of Education
Proposal for **Graduate and Doctoral Degree Program**

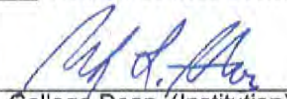
Date of Proposal Submission:	October 13, 2015
Institution Submitting Proposal:	University of Idaho
Name of College, School, or Division:	College of Law
Name of Department(s) or Area(s):	

Program Identification for Proposed New, Modified, or Discontinued Program:

Title:	Master of Laws (LL.M.)
Degree:	Master of Laws (LL.M.)
Method of Delivery:	Live, in person
CIP code (consult IR /Registrar)	22.0101
Proposed Starting Date:	Summer 2016 (for Fall 2016 enrollment of the first students)
Indicate if the program is:	<input type="checkbox"/> Regional Responsibility <input type="checkbox"/> Statewide Responsibility

Indicate whether this request is either of the following:

- | | |
|--|---|
| <input checked="" type="checkbox"/> New Graduate Program | <input type="checkbox"/> Contract Program/Collaborative |
| <input type="checkbox"/> New Doctoral Program | <input type="checkbox"/> Expansion of an Existing Graduate/Doctoral Program |
| <input type="checkbox"/> New Off-Campus Graduate Program | <input type="checkbox"/> Consolidation of an Existing Graduate/Doctoral Program |
| <input type="checkbox"/> New Off-Campus Doctoral Program | <input type="checkbox"/> Discontinuation of an existing Graduate/Doctoral Program |


College Dean (Institution) 12/14/15 Date

Vice President for Research (as applicable) Date

Graduate Dean (as applicable)

Academic Affairs Program Manager Date


Chief Fiscal Officer (Institution) 12-14-15 Date

Chief Academic Officer, OSBE Date


Chief Academic Officer (Institution) Date

SBOE/OSBE Approval Date


President Date

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UCC-16-020a

Before completing this form, refer to Board Policy Section III.G., Program Approval and Discontinuance. This proposal form must be completed for the creation of each new program and each program discontinuance. All questions must be answered.

- 1. Describe the nature of the request.** Will this program be related or tied to other programs on campus? Please identify any existing program, option that this program will replace. *If this is request to discontinue an existing program, provide the rationale for the discontinuance. Indicate the year and semester in which the last cohort of students was admitted and the final term the college will offer the program. Describe the teach-out plans for continuing students.*

The proposed Master of Laws (LL.M.) degree is tied to the Juris Doctor (J.D.) degree at the College of Law in that every class but two needed to operate the LL.M. is already offered regularly through the J.D. curriculum.

The LL.M. program will operate closely parallel to the existing J.D. program. For example, an LL.M. student will take the same Business Organizations course as the J.D. students. All of the classes in the LL.M. program will be shared with the J.D. program except two new courses called Introduction to American Law and Legal Education, and Legal Writing and Research for LL.M. Students. They will be new courses taught initially as 901 seminars. The Introduction course will be required for all international students in the LL.M. program and the Legal Writing course will be required for all students in the Democracy, Justice & American Legal System emphasis. The integration of the LL.M. students into the J.D. classroom environment for all other courses allows for the efficient allocation of law school resources to the new program. The integration also provides the opportunity to reap the educational benefits of direct interaction between J.D. and LL.M. students studying in the same academic environment.

- 2. List the objectives of the program.** The objectives should address specific needs the program will meet. They should also identify the expected student learning outcomes and achievements. *This question is not applicable to requests for discontinuance.*

The LL.M. degree will start with four emphasis areas that align with our J.D. curricular strengths at the College of Law: Democracy, Justice & the American Legal System; Natural Resources & Environmental Law (NREL); Business Law & Entrepreneurship (BLE); and Litigation and Alternative Dispute Resolution (LADR). The LL.M. is a graduate law degree, and all incoming students would be required to have a first degree in law (in this country that is a J.D. degree, but in many others it is a Bachelor's degree). The LL.M. program will primarily recruit lawyers from foreign countries and provide approximately 9 to 12 months of instruction in Moscow at the University of Idaho.

This degree will provide significant value to the LL.M. students that enroll. The goal of the program is to strengthen the foreign lawyers' knowledge of various aspects of American law,

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especially for those seeking to sit for a bar exam in states that permit it. For foreign and domestic students looking to specialize in one of our J.D. emphasis areas, the program allows them to chart out a focused area of study in the field of their choice. For international lawyers, this knowledge and the accompanying degree are designed to advance the careers of lawyers working abroad or doing business with American companies, governments, and organizations. The degree also prepares recipients to participate in rule of law development efforts in their home countries.

It is expected that most LL.M. degree recipients will return to influential legal, academic, and business positions in their home countries after completion of their study. The degree affiliation of these lawyers with the University of Idaho and their experience living in Idaho could play a positive role in their encouraging future foreign investment in this state, tourism, and greater diplomatic understanding. The LL.M. degree also qualifies some of the graduates to hold positions in the judiciary and certain government legal positions, another potential point of influence and connection for the University and state internationally. The graduates of our LL.M. program also support the University of Idaho's internationalization efforts and offer the College of Law an immediate international network of alumni.

- 3. Briefly describe how the institution will ensure the quality of the program** (i.e., program review). Will the program require specialized accreditation (it is not necessary to address regional accreditation)? If so, please identify the agency and explain why you do or do not plan to seek accreditation. *This question is not applicable to requests for discontinuance.*

The American Bar Association is the accrediting body for law schools nationwide. The College of Law is required to receive the ABA's acquiescence in order to start an LL.M. program. The acquiescence process takes just a couple of months and does not require a site inspection. The ABA primarily wants to ensure that "the additional degree program will not detract from a law school's ability to maintain a sound J.D. degree program."

In addition to the quality assessment of the program by the ABA, the College of Law will ensure the quality of the program through the admissions process. To be considered for the LL.M. program, an applicant must have a J.D. (Juris Doctor) from an accredited U.S. law school or a first law degree (J.D., LL.B. or the equivalent) from a foreign law school. Admission to the LL.M. program is competitive. In evaluating applications, the Committee takes into consideration the applicant's grades and rank in his or her law school and other university studies, letters of recommendation, occupational interests, professional and personal accomplishments, and other factors. The program is designed for intellectually curious and thoughtful candidates who come from a variety of legal systems and backgrounds and who have demonstrated an intent to return to their country to contribute to academia or the legal profession. The College is equally interested in applicants pursuing careers in law teaching and research, government service, the judiciary, international organizations, non-governmental organizations and private practice.

The following items are required as part of the application process:

- Non-refundable \$50 application fee
- LL.M. Application (through LSAC or in hard copy directly)

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- Law School Admission Council Credential Assembly Service (CAS) Report (if applying through LSAC, if not then all materials should be sent directly to the College of Law)
- Transcripts from former institutions indicating an already awarded Bachelor's degree in law
- CV/Resume
- Personal Statement - Not to exceed 3 pages and includes your reasons for wanting to study law and your reasons for wanting to study law at the University of Idaho.
- Letters of Recommendation - At least 2 are required and it is strongly recommended that at least one letter come from a post-secondary professor whose class you have taken if possible.
- A detailed addendum of explanation if any question on the CHARACTER AND FITNESS section is answered "Yes."
- An Employment Addendum if Question 16 is answered "No."
- A TOEFL, IELTS or other score if you were educated outside of the U.S., your native language is not English, and you have received no educational instruction in English.

An Admissions Committee made up of faculty and staff at the College of Law will review the above materials to determine admission into the LL.M. program.

- 4. List new courses that will be added to your curriculum specific for this program.** Indicate number, title, and credit hour value for each course. Please include course descriptions for new and/or changes to courses. *This question is not applicable to requests for discontinuance.*

All of the classes in the LL.M. program will be shared with the J.D. program except two new courses called Introduction to American Law and Legal Education, and Legal Writing and Research for LL.M. Students. They will be new courses taught initially as 901 seminars. The Introduction course will be required for all international students in the LL.M. program and the Legal Writing course will be required for all students in the Democracy, Justice & American Legal System emphasis.

- 5. Please provide the program completion requirements to include the following and attach a typical curriculum to this proposal as Appendix A.** *For discontinuation requests, will courses continue to be taught?*

Credit hours required:	2 credits
Credit hours required in support courses:	
Credit hours in required electives:	22 credits
Credit hours for thesis or dissertation:	
Total credit hours required for completion:	24 credits

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6. Describe additional requirements such as preliminary qualifying examination, comprehensive examination, thesis, dissertation, practicum or internship, some of which may carry credit hours included in the list above. *This question is not applicable to requests for discontinuance.*

The LL.M. program is primarily geared to foreign lawyers, thus the students will likely all be international. If students are interested, they may arrive earlier than the start of this course and access the University of Idaho's American Language and Culture Program. Applicants must receive a satisfactory score on the TOEFEL, IELTS or other English language proficiency exam, but the opportunity to participate in the American Language and Culture Program will be made available to all as English will be their second language. The University's English language satisfaction options are as followed:

- TOEFL: 550 on the paper test or 79 on the internet test
- IELTS: Minimum score of 6.5
- UI American Language and Culture Program: With a Level 6 Pass
- Earned degree at an accredited institution OR successfully completed upper level college courses, both taught and evaluated in English

7. Identify similar programs offered within Idaho or in the region by other colleges/universities. *If the proposed request is similar to another state program, provide a rationale for the duplication.*

Degrees/Certificates offered by school/college or program(s) within disciplinary area under review

Institution and Degree name	Level	Specializations within the discipline (to reflect a national perspective)	Specializations offered within the degree at the institution
BSU			
CSI			
CWI			
EITC			
ISU			
LCSC			
NIC			
UI			

No other program exists in Idaho either at a public or private institution. There are no similar programs in the region either (within 250 miles of Moscow). Gonzaga University used to have an LL.M. but now will recognize 30 credits of foreign coursework to the J.D. degree instead. The J.D. degree is the only option at Gonzaga. The University of Montana, Seattle University, and Concordia University also do not have LL.M. degrees. Lewis and Clark has LL.M. degrees in Animal Law and Environmental Law. Willamette has LL.M degrees in Dispute Resolution, Transnational Law and a General concentration geared toward international students. The University of Washington has numerous LL.M. degrees in a variety of subjects. UW and Willamette thus appear to be the closest regional competitor with an LL.M. degree emphasis focused on international students. UW currently charges out of state and international students

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\$45,024 per year and Willamette charges \$39,355. Our current out of state and international student tuition is \$30,010, making us the most cost-conscious choice.

Looking a bit farther away, the University of Oregon has LL.M. concentrations in Environmental and Natural Resources Law, Business Law and American Law, but Eugene is 450 plus miles away from Moscow. Just a bit further away, the University of Utah offers an Environmental and Natural Resources LL.M. and Brigham Young University has an LL.M. in American Law for international students. Given the focus of the former and the religious affiliation of the latter, these two programs also do not seem to be much in the way of competition for students.

- 8. Describe the methodology for determining enrollment projections.** If a survey of student interest was conducted, attach a copy of the survey instrument with a summary of results as **Appendix B**. *This question is not applicable to requests for discontinuance.*

The law school anticipates that initial enrollment in the program will be modest and will grow as the reputation of the program spreads internationally. The College of Law anticipates an initial enrollment of 5 to 10 LL.M. students in the first couple of years with enrollment increasing by the fourth year of the program to approximately 10 to 15 students annually. If interest in the program grows beyond those projections, the College will reevaluate whether additional faculty and staff resources are needed to handle the growth and whether we want to increase at all.

The estimates for the number of students to enroll come from the law school's study of other LL.M. programs at American law schools. Typically the LL.M. programs at schools with J.D. degree programs of approximately 300 to 400 students will enroll 10 to 20 students in their LL.M. program each year. The law school will initially reallocate administrative time of the Deans to launch the program by traveling to countries in Asia, Europe, and Latin America to establish relationships with potential students. Deans Adams and Dodge have run programs like this at other institutions and are familiar with the avenues to recruit potential students. The LSAC also now runs an LL.M. Credential Service, which allows law schools to generate reports of potential LL.M. students and market to them electronically. Significant in person travel will be needed at first, but as the program grows the travel will phase into a regular pattern

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- 9. Enrollment and Graduates.** Using the chart below, provide a realistic estimate of enrollment at the time of program implementation and over three year period based on availability of students meeting the criteria referenced above. Include part-time and full-time (i.e., number of majors or other relevant data) by institution for the proposed program, last three years beginning with the current year and the previous two years. Also, indicate the projected number of graduates and graduation rates.

Discontinuations. Using the chart below include part-time and full-time (i.e., number of majors or other relevant data) by institution for the proposed discontinuation, last three years beginning with the current year and previous two years. Indicate how many students are currently enrolled in the program for the previous two years, to include number of graduates and graduation rates.

Institution	Relevant Enrollment Data			Number of Graduates			Graduate Rate
	Current (2016)	Year 1 Previous (2017)	Year 2 Previous (2018)	Current	Year 1 Previous	Year 2 Previous	
BSU							
ISU							
LCSC							
UI	5	8	10				
CSI							
CWI							
EITC							
NIC							

- 10. Will this program reduce enrollments in other programs at your institution?** If so, please explain.

The J.D. program's enrollment will not be impacted by the addition of an LL.M. program. The JD program courses are not impacted with the addition of an LL.M. program. There is space available in nearly every class. JD enrollment is a separate process for a different type of applicant. The LL.M. program requires a first law degree in your home country where the JD program is the first law degree in this country. So they are two different populations of potential students. If anything, having a more diverse and internationally minded student body could increase enrollment in the J.D. program in that it is attractive to some applicants.

- 11. Provide verification of state workforce needs such as job titles requiring this degree.** Include State and National Department of Labor research on employment potential.

Using the chart below, indicate the total projected job openings (including growth and replacement demands in your regional area, the state, and nation. Job openings should represent positions which require graduation from a program such as the one proposed. Data should be derived from a source that can be validated and must be no more than two years old. *This question is not applicable to requests for discontinuance.*

	Year 1	Year 2	Year 3
Local (Regional)	0	0	0
State			

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Nation			
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- a. Describe the methodology used to determine the projected job openings. If a survey of employment needs was used, please attach a copy of the survey instrument with a summary of results as **Appendix C**.

The LL.M. program is focused on international students who plan to return to their home countries. Under the F-1 visa regulations, students must intend to return after the program but are given up to 12 months of optional practical training to work legally in the United States.

- b. Describe how the proposed change will act to stimulate the state economy by advancing the field, providing research results, etc.

It is expected that most LL.M. degree recipients will return to influential legal, academic, and business positions in their home countries after completion of their study. The degree affiliation of these lawyers with the University of Idaho and their experience living in Idaho could play a positive role in their encouraging future foreign investment in this state, tourism, and greater diplomatic understanding. The graduates of our LL.M. program also support the University of Idaho's internationalization efforts and offer the College of Law an immediate international network of alumni. The benefits of internationalization through the LL.M. also include increased scholarly opportunities for faculty on the international level.

- c. Is the program primarily intended to meet needs other than employment needs, if so, please provide a brief rationale.

The primary needs met are for students who will take the LL.M. degree to their home country and enjoy the professional benefit of an advanced law degree received in the United States. While those students are enrolled, the University and College benefit from their presence and engagement on campus and in the classroom.

- 12. Will any type of distance education technology be utilized in the delivery of the program on your main campus or to remote sites? Please describe.** *This question is not applicable to requests for discontinuance.*

The College of Law maintains locations in Moscow and Boise. Students in the LL.M. program may enroll in courses taught in Boise via distance education to Moscow. All of those courses are taught live and interactive, like a traditional classroom environment, except that the professor is in the other location. All that said, all of the required courses are currently taught live in Moscow. Only optional elective courses for the degree might employ this method of delivery.

- 13. Describe how this request is consistent with the State Board of Education's strategic plan and institution's role and mission.** *This question is not applicable to requests for discontinuance.*

The addition of an LL.M. program is consistent with the following State Board of Education and University of Idaho strategic plan goals:

SBOE Goal 1: A Well Educated Citizenry, Objective D Quality Education and UI Goal 1: Teaching and Learning, Objective A and B - The LL.M. program will also be a significant benefit to our approximately 350 J.D. students. Our J.D. students will have the opportunity to meet

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experienced lawyers from other countries, learn about the system of laws in those countries, and expand their knowledge of other cultures and legal systems. In an increasingly global legal market it is imperative that American law students gain exposure to and knowledge of legal systems throughout the world.

SBOE Goal 2: Innovation and Economic Development, Objective 3 Economic Growth and UI Goal 3: Outreach and Engagement Objective B – The LL.M. program will bring a new population of international students to the University and state. These students live in Idaho for a year, pay tuition, and contribute to the overall economy. The connections formed through this economic growth can lead to individual and institutional partnerships that bring Idaho to the attention of people worldwide.

UI Goal 4: Community & Culture, Objective A – Because the LL.M. program is focused on international students, the University stands to benefit from their uniquely diverse contributions in and out of the classroom. This program helps the University build on the recruitment of a diverse student body and strategically assists with the President's stated desire for more international students on campus.

- 14. Describe how this request fits with the institution's vision and/or strategic plan.** *This question is not applicable to requests for discontinuance.*

Goals of Institution Strategic Mission	Proposed Program Plans to Achieve the Goal
Goal 1: Teaching and Learning	Program students are already attorneys and the LL.M. degree will enhance their learning of the US legal system while contributing to J.D. students' exposure to global legal concepts.
Goal 3: Outreach and Engagement	Program will permit the University and College to increase international connections through students and eventually alums.
Goal 4: Community and Culture	Program will recruit international students to enroll at UI thus increasing the diversity of the student body and contributing to the international student population.

- 15. Is the proposed program in your institution's Five-Year plan? Indicate below.** *This question is not applicable to requests for discontinuance.*

Yes X No

If not on your institution's Five-Year plan, provide a justification for adding the program.

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16. Explain how students are going to learn about this program and where students are going to be recruited from (i.e., within institution, out-of-state, internationally). *For requests to discontinue a program, how will continuing students be advised of impending changes and consulted about options or alternatives for attaining their educational goals?*

The College of Law will take J.D. promotional pieces and emails, like the viewbook and prospective student emails, and repurpose them with LL.M. specific information. The primary recruiting tool will be an LL.M. viewbook about the College, Moscow, and the degree program. The LL.M. CRM resource will also be used to communicate with prospective students electronically.

A complete plan, similar to what is done for the J.D. program, will be developed in fall 2015. Recruiting events around the world are available through EducationUSA, QS World Grad School Fair, embassy presentations, online college fairs, and more. The College will also maximize our recruiting efforts by making sure COGS and IPO have materials about the LL.M. program for when they do international recruitment. Efforts will be made to use faculty relationships to schedule campus visits to present to undergraduate law students abroad.

17. In accordance with Board Policy III.G., an external peer review is required for any new doctoral program. Attach the peer review report as **Appendix D**.

Not applicable.

18. **Program Resource Requirements.** Using the **Excel spreadsheet** provided by the Office of the State Board of Education indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first three fiscal years of the program. Include reallocation of existing personnel and resources and anticipated or requested new resources. Second and third year estimates should be in constant dollars. Amounts should reconcile budget explanations below. If the program is contract related, explain the fiscal sources and the year-to-year commitment from the contracting agency(ies) or party(ies). Provide an explanation of the fiscal impact of the proposed discontinuance to include impacts to faculty (i.e., salary savings, re-assignments).

a. Personnel Costs

Faculty and Staff Expenditures

Project for the first three years of the program the credit hours to be generated by each faculty member (full-time and part-time), graduate assistant, and other instructional personnel. Also indicate salaries. After total student credit hours, convert to an FTE student basis. Please provide totals for each of the three years presented. Salaries and FTE students should reflect amounts shown on budget schedule.

Name, Position & Rank	Annual Salary Rate	FTE Assignment to this Program	Projected Student Credit Hours	FTE Students
Jeffrey Dodge, Associate Dean and Associate Clinical Professor of Law	\$118,000	10% time	2	10
Temp. Lecturer - Legal Writing & Research to	\$6,000	1 3 credit class	3	8-10

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LLM Students				
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Project the need and cost for support personnel and any other personnel expenditures for the first three years of the program.

Administrative Expenditures

Describe the proposed administrative structure necessary to ensure program success and the cost of that support. Include a statement concerning the involvement of other departments, colleges, or other institutions and the estimated cost of their involvement in the proposed program

Name, Position & Rank	Annual Salary Rate	FTE Assignment to this Program	Value of FTE Effort to this Program
Carole Wells, Director of Admissions	\$65,000	5% time	Handles the administrative aspects of the application process.
Cindy Hollenbeck, Marketing & Communications Manager	\$45,000	5% time	Handles the marketing and communications collateral development.

b. Operating Expenditures

Briefly explain the need and cost for operating expenditures (travel, professional services, etc.)

No additional operating expenditures are needed to run this program beyond an approximate \$15,000 annual travel budget to recruit internationally for the program.

c. Capital Outlay

(1) Library resources

- (a) Evaluate library resources, including personnel and space. Are they adequate for the operation of the present program? If not, explain the action necessary to ensure program success. The LL.M. program will draw upon the already existing law libraries in Moscow and Boise for resources. No additional resources will be needed to support the program.
- (b) Indicate the costs for the proposed program including personnel, space, equipment, monographs, journals, and materials required for the program. No additional costs are needed for the LL.M. program.
- (c) For off-campus programs, clearly indicate how the library resources are to be provided.

(2) Equipment/Instruments

Describe the need for any laboratory instruments, computer(s), or other equipment. List equipment, which is presently available and any equipment (and cost) which must be obtained to support the proposed program. No additional costs are needed for the LL.M. program.

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d. Revenue Sources

- (1) If funding is to come from the reallocation of existing state appropriated funds, please indicate the sources of the reallocation. What impact will the reallocation of funds in support of the program have on other programs?

No additional costs are needed for the LL.M. program. Current College of Law resources will be used to start and maintain the program except for the addition of a part time, temporary instructor (adjunct) to teach the legal writing and research course.

- (2) If the funding is to come from other sources such as a donation, indicate the sources of other funding. What are the institution's plans for sustaining the program when funding ends?

Not applicable.

- (3) If an above Maintenance of Current Operations (MCO) appropriation is required to fund the program, indicate when the institution plans to include the program in the legislative budget request.

Not applicable.

- (4) Describe the federal grant, other grant(s), special fee arrangements, or contract(s) to fund the program. What does the institution propose to do with the program upon termination of those funds?

Not applicable.

- (5) Provide estimated fees for any proposed professional or self-support program.

LL.M. students will pay the current non-resident tuition and fees rate, the same as J.D. students from out of state or abroad. That rate includes a College of Law professional fee, which will apply to LL.M. students as well. The rates are broken down and included in the budget spreadsheet.

**ATTACHMENT A
CURRICULUM DETAILED ON PAGES 5 to 8**

March 9, 2015 – Revised April 13, 2015 – Approved by College of Law Faculty May 6, 2015

To: College of Law Curriculum Committee and Faculty

From: Mark Adams, Dean and Professor of Law and Jeffrey A. Dodge, Associate Dean for Students & Administration and Associate Clinical Professor of Law

Subject: Proposal to Establish an LL.M. Degree

The University of Idaho College of Law administration proposes the creation of an LL.M. (Masters of Law) degree program to begin in Summer 2016. The LL.M. degree will start with four emphasis areas that align with our J.D. curricular strengths at the College of Law: Democracy, Justice & the American Legal System; Natural Resources & Environmental Law (NREL); Business Law & Entrepreneurship (BLE); and Litigation and Alternative Dispute Resolution (LADR). The LL.M. is a graduate law degree, and all incoming students would be required to have a first degree in law, in this country that is a J.D. degree, but in many others it is a Bachelors degree. The LL.M. program will primarily recruit lawyers from foreign countries and provide approximately 9 to 12 months of instruction in Moscow at the University of Idaho.

Ideal Proposal Time Frame

- March 9, 2015 – Proposal to the Chair of the College of Law Curriculum Committee
- March 2015 – Curriculum Committee Reviews Proposal at Two Meetings
- April 1, 2015 – Proposal Memo Discussed at the College of Law Faculty Meeting and Voted On (if ready)
- May 6, 2015 – Proposal Memo Voted on by College of Law Faculty (if not in April)
- May 2015 – Complete Idaho State Board of Education Proposal for Graduate and Doctoral Degree Form (Attachment A) and Baccalaureate and Graduate Degree Programs Budget Template (Attachment B) to Reflect Faculty Approval; Submit SBOE Forms to the Provost's Office; and Begin ABA Acquiescence Questionnaire to Start a Non-J.D. Degree (Attachment C)
- Summer 2015 – Develop Marketing Materials for Use After ABA and SBOE Approvals
- July 2015 – ABA Acquiescence Questionnaire Due to the ABA
- September 2015 – UCC and Faculty Senate Approval
- September 2015 – ABA Accreditation Committee Meeting to Review for Acquiescence
- December 2015 – Proposal Before the State Board of Education for Approval
- January to May 2016 – Attend Recruiting Events, Initiate Marketing and Process Applications; Enroll Students and Issue Student Visa Documents
- August 2016 – Enroll First Class of LL.M. Students

Justification

This degree will provide significant value to the LL.M. students that enroll. The goal of the program is to strengthen the foreign lawyers' knowledge of various aspects of American law, especially for those seeking to sit for a bar exam in states that permit it. For foreign and

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domestic students looking to specialize in one of our J.D. emphasis areas, the program allows them to chart out a focused area of study in the field of their choice. For international lawyers, this knowledge and the accompanying degree are designed to advance the careers of lawyers working abroad or doing business with American companies, governments, and organizations. The degree also prepares recipients to participate in rule of law development efforts in their home countries. A thesis option will provide an opportunity for LL.M. recipients to prepare for academic positions, but is not required nor available for every emphasis.

The LL.M. program will also be a significant benefit to our approximately 350 J.D. students. Our J.D. students will have the opportunity to meet experienced lawyers from other countries, learn about the system of laws in those countries, and expand their knowledge of other cultures and legal systems. In an increasingly global legal market it is imperative that American law students gain exposure to and knowledge of legal systems throughout the world.

The LL.M. program will operate closely parallel to the existing J.D. program. For example, an LL.M. student will take the same Business Organizations course as the J.D. students. All of the classes in the LL.M. program will be shared with the J.D. program except two new courses called Introduction to American Law and Legal Education and Legal Writing and Research for LL.M. Students. They will be new courses taught initially as 901 seminars. The Introduction course will be required for all international students in the LL.M. program and the Legal Writing course will be required for all students in the Democracy, Justice & American Legal System emphasis. The integration of the LL.M. students into the J.D. classroom environment for all other courses allows for the efficient allocation of law school resources to the new program. The integration also provides the opportunity to reap the educational benefits of direct interaction between J.D. and LL.M. students studying in the same academic environment.

It is expected that most LL.M. degree recipients will return to influential legal, academic, and business positions in their home countries after completion of their study. The degree affiliation of these lawyers with the University of Idaho and their experience living in Idaho could play a positive role in their encouraging future foreign investment in this state, tourism, and greater diplomatic understanding. The graduates of our LL.M. program also support the University of Idaho's internationalization efforts and offer the College of Law an immediate international network of alumni. (See Attachment D - LSAC data that shows the gender and county of origin for fall 2013 applied and enrolled LL.M. students)

Competition

There are no similar programs in the state or local region (within 250 miles of Moscow). Gonzaga University used to have an LL.M. but now will recognize 30 credits of foreign coursework to the J.D. degree instead. The J.D. degree is the only option at Gonzaga. The University of Montana, Seattle University, and Concordia University also do not have LL.M. degrees. Lewis and Clark has LL.M. degrees in Animal Law and Environmental Law. Willamette has LL.M. degrees in Dispute Resolution, Transnational Law and a General concentration geared toward international students. The University of Washington has numerous LL.M. degrees in a variety of subjects. UW and Willamette thus appear to be the closest regional competitor with an LL.M. degree emphasis focused on international students. UW currently charges out of state and international students \$45,024 per year and Willamette charges \$39,355. Our current out of state and international student tuition is \$30,010, making us the most cost conscious choice.

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Looking a bit farther away, the University of Oregon has LL.M. concentrations in Environmental and Natural Resources Law, Business Law and American Law, but Eugene is 450 plus miles away from Moscow. Just a bit further away, the University of Utah offers an Environmental and Natural Resources LL.M. and Brigham Young University has an LL.M. in American Law for international students. Given the focus of the former and the religious affiliation of the latter, these two programs also do not seem to be much in the way of competition for students.

Program Demand and Productivity

The law school anticipates that initial enrollment in the program will be modest and will grow as the reputation of the program spreads internationally. The College of Law anticipates an initial enrollment of 5 to 10 LL.M. students in the first couple of years with enrollment increasing by the fourth year of the program to approximately 10 to 15 students annually. If interest in the program grows beyond those projections, the College will reevaluate whether additional faculty and staff resources are needed to handle the growth and whether we want to increase at all.

The estimates for the number of students to enroll come from the law school's study of other LL.M. programs at American law schools. Typically the LL.M. programs at schools with J.D. degree programs of approximately 300 to 400 students will enroll 10 to 20 students in their LL.M. program each year. The law school will initially reallocate administrative time of the Deans to launch the program by traveling to countries in Asia, Europe, and Latin America to establish relationships with potential students. Deans Adams and Dodge have run programs like this at other institutions and are familiar with the avenues to recruit potential students. The LSAC also now runs an LL.M. Credential Service, which allows law schools to generate reports of potential LL.M. students and market to them electronically. Significant in person travel will be needed at first, but as the program grows the travel will phase into a regular pattern.

Administration & Faculty

The administrators involved are: Dean, Associate Dean for Students & Administration, Associate Dean for Faculty, Assistant to the Deans, Director of Admissions, Director of Academic Success, and Assistant Dean for Career Development. It is currently expected that the Associate Dean for Students & Administration will serve as the Faculty Director of the LL.M. program and lead the recruitment and enrollment strategies. The Associate Dean role will be reviewed to permit the addition of these responsibilities. Advising of the students will fall to faculty the students are working with to meet their curricular goals in emphasis areas. The Faculty Director, with the support and assistance of interested faculty, will teach the introductory course in an intensive fashion in August before schools starts each year. The administration will evaluate how best to offer Legal Writing and Research for LL.M. students with the faculty resources available or a qualified adjunct professor.

Application for Admission Requirements

To be considered for the LL.M. program, an applicant must have a J.D. (Juris Doctor) from an accredited U.S. law school or a first law degree (J.D., LL.B. or the equivalent) from a foreign law school. Admission to the LL.M. program is competitive. In evaluating applications, the Committee takes into consideration the applicant's grades and rank in his or her law school and other university studies, letters of recommendation, occupational interests, professional and personal accomplishments, and other factors. The program is designed for intellectually curious and thoughtful candidates who come from a variety of legal systems and backgrounds and who

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have demonstrated an intent to return to their country to contribute to academia or the legal profession. The College is equally interested in applicants pursuing careers in law teaching and research, government service, the judiciary, international organizations, non-governmental organizations and private practice.

The following items are required as part of the application process:

- Non-refundable \$50 application fee
- LL.M. Application (through LSAC or in hard copy directly)
- Law School Admission Council Credential Assembly Service (CAS) Report (if applying through LSAC, if not then all materials should be sent directly to the College of Law)
- Transcripts from former institutions
- CV/Resume
- Personal Statement - Not to exceed 3 pages and includes your reasons for wanting to study law and your reasons for wanting to study law at the University of Idaho.
- Letters of Recommendation - At least 2 are required. You may choose whomever you wish to write on your behalf. However, it is strongly recommended that at least one letter come from a post-secondary professor whose class you have taken if possible.
- A detailed addendum of explanation if any question on the CHARACTER AND FITNESS section is answered "Yes."
- An Employment Addendum if Question 16 is answered "No."
- A TOEFL, IELTS or other score if you were educated outside of the U.S., your native language is not English, and you have received no educational instruction in English.
- Thesis Proposal (Optional) – Include a summary of the type of research you hope to complete at the University of Idaho. The proposal should indicate if there are faculty you hope to work with on the research.

Bar Examination Opportunities for Graduates

This program is intended to give foreign lawyers knowledge of American law that will enhance their careers in their home country. The degree program's emphasis on Democracy, Justice & the American Legal System will be marketed as a track that would allow students to take a bar exam and become licensed to practice law in the U.S. The other emphasis areas will not qualify students. While Idaho is not a state they would be able to practice in, there are other states, like New York and California, that would recognize this degree as qualifying for the bar examination. The College of Law will provide career counseling, resume review, and guidance to LL.M. students as they pursue their degree and prepare to return to their home country.

Curriculum

To earn the LL.M. degree, students will be required to successfully complete a minimum of 24 credits and maintain a 2.0 or higher. The students will begin with a late summer course called Introduction to American Law and Legal Education (2 credits). The 24-credit requirement is in line with other LL.M. programs around the country. If students are interested, they may arrive earlier than the start of this course and access the University of Idaho's American Language and Culture Program. Applicants must receive a satisfactory score on the TOEFL, IELTS or other English language proficiency exam, but the opportunity to participate in the American Language and Culture Program will be made available to all as English will be their second language. The University's English language satisfaction options are as followed:

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- TOEFL: 550 on the paper test or 79 on the internet test
- IELTS: Minimum score of 6.5
- UI American Language and Culture Program: With a Level 6 Pass
- Earned degree at an accredited institution OR successfully completed upper level college courses, both taught and evaluated in English

The Introduction to American Law and Legal Education course will introduce the LL.M. students to the various structures and sources of American law. This will include topics such as: the civil law and common law systems, the United States Constitution, the branches of government, statutes, and regulations, and the expectations at U.S. law schools. The course will draw on the rich resources of our faculty, local attorneys, and regional court systems through guest speakers and field trips.

The LL.M. students will otherwise be able to enroll in classes already offered at the law school to complete their remaining 24 credits. The rules for an F-1 student visa require they be enrolled full time. The students who enroll in, for example, the summer of 2016 are thus expected to complete the program in May 2017.

The law school will also offer a limited number (maximum 5) of LL.M. students the option of completing a thesis project. An applicant for the LL.M. program will have to apply to be admitted to the program under the “thesis option.” This will give the law school the ability to assess whether the student has the ability to complete a substantial written project during the academic year. A faculty member would need to agree in advance to work on the thesis paper with the student over the year, so a thesis plan is expected at the time of application. The faculty advisor for the thesis will guide the LL.M. students in the development of their topic, help them to identify other faculty members that may provide assistance, and monitor the student’s progress towards completion of the thesis. Students in the thesis option will be required to enroll in a 2-credit directed study course in the spring, which will count toward the 24 credits need to receive the LL.M. degree.

Finally, the law school will provide additional opportunities for LL.M. students to learn about the American legal system through invitations to events such as faculty colloquia and symposia, conferences, court hearings, Bellwood and more.

Emphasis Curriculum

The LL.M. degree will have four curricular emphasis areas to start and can be added to over time. Aside from the Democracy, Justice & the American Legal System emphasis, the curriculum will line up with the expectations of students in the J.D. emphasis areas, but be compressed to account for the short time frame students are enrolled in the LL.M. All international students, regardless of emphasis area, must take Introduction to American Law and Legal Education (2 credits). The emphasis area requirements then split off as followed. As a note of caution, at the time this memo was prepared this portion had not been vetted by the emphasis area faculty, but is being sent to them for review and feedback. Below is a first attempt to translate the emphasis expectations in the J.D. program to a one-year LL.M. degree. Students who need to complete a substantial writing paper or thesis can do so in a paper course or under the supervision of a faculty member in a directed study.

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Democracy, Justice & the American Legal System

In this emphasis area, students are required to take the following classes:

- Legal Writing and Research for LL.M. Students (2 or 3 credit separate writing course)
- Professional Responsibility

While it is recommended they take as many of these courses as possible, students must also complete at least six credits of bar exam-tested coursework in the following subjects:

- | | |
|-----------------------------|------------------------|
| • Advanced Torts | • Evidence |
| • Business Associations | • Family Law |
| • Civil Procedure I & II | • Native American Law* |
| • Conflict of Laws | • Property |
| • Constitutional Law I & II | • Property Security |
| • Contracts | • Sales |
| • Criminal Law | • Torts |
| • Criminal Procedure | |

*Native American Law can satisfy requirements for the LL.M. degree, but cannot be counted by students seeking to sit for a bar exam.

Natural Resources and Environmental Law

In this emphasis area, students are required to take the following classes:

- Administrative Law
- Environmental Law or Introduction to Natural Resources Law

Students are also expected to take at least 10 credits of natural resources and environmental law courses from the following list:

- | | |
|--|--|
| • Environmental Law | • Native American Natural Resource Law |
| • Environmental Policy | • Natural Resource Law Seminar |
| • Interdisciplinary Methods in Water Resources | • Water Law I |
| • International Environmental and Water Law | • Water Law II |
| • Introduction to Natural Resources Law | • Water Law Practicum |
| • Land Use Law and Planning | • Water and Energy Policy Seminar |
| • Law, Science, and the Environment | • Wildlife Law and Policy |
| • Lawyering Process | • Up to 3 credits may be satisfied by non-law graduate courses with approval of both the NREL LL.M. emphasis advisor |

Business Law and Entrepreneurship

In this emphasis area, students are required to take the following classes:

- Business Associations
- Contracts

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- Property Security or Sales

Students are also expected to take 9 credits of additional business law and entrepreneurship courses from the following list:

- | | |
|---|---|
| • Accounting for Lawyers | • Partnership & LLC Taxation |
| • Administrative Law | • Patents |
| • Advanced Torts | • Property Security (if not taken as a required course) |
| • Antitrust | • Real Estate Transactions |
| • Bankruptcy | • Sales (if not taken as a required course) |
| • Consumer Law | • Securities Regulation |
| • Copyrights | • Suretyship and Guaranty |
| • Corporate Taxation | • Taxation |
| • Cyberlaw | • Trademarks & Trade Dress |
| • Introduction to Intellectual Property | • White Collar Crime |
| • Mass Media Law | • Workplace Law |
| • Negotiable Instruments | |

Litigation and Alternative Dispute Resolution

In this emphasis area, students who want a general law focus are required to take the following classes:

- Administrative Law
- Negotiation and Appropriate Dispute Resolution
- Civil Mediation or Family Mediation

Students must then take at least 6 additional credits from the list below:

- | | |
|-------------------------|---------------------|
| • Constitutional Law I | • Lawyering Process |
| • Constitutional Law II | • Remedies |
| • Evidence | |

In this emphasis area, students who want a criminal law focus are required to take the following classes:

- Criminal Law
- Criminal Procedure
- Negotiation and Appropriate Dispute Resolution
- Civil Mediation or Family Mediation

Students must then take at least 3 additional credits from the list below:

- Advanced Criminal Procedure
- Advanced Topics in Criminal Procedure
- Constitutional Law I
- Constitutional Law II
- Evidence
- White Collar Crime

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In this emphasis area, students who want a family law focus are required to take the following classes:

- Family Law
- Negotiation and Appropriate Dispute Resolution
- Family Mediation

Students must then take at least 7 additional credits from the list below:

- Children and the Law
- Community Property
- Wills, Trusts & Estates
- Constitutional Law II
- Domestic Violence and the Law

Students in this emphasis area are required to compete in either the mediation or negotiation intermural competition held annually.

Grading

Unlike many of the J.D. students, English will not be the first language of LL.M. students. They also will not have an advanced understanding of the common law system as they usually come from civil law countries. The legal writing and research skills in those countries are markedly different. It is very common for LL.M. students to be more direct than analytical. Their writing is more about the rule and conclusion than articulating the issue and applying the facts. Civil law systems are, in short, more focused on the rules than the argument. These facts, coupled with the reality that LL.M. students are here to learn more about the common law systems, develop their legal English skills, and grow academically in a shorter time than J.D. students, it is important for their grading assessment to also be different and not directly comparative. We suggest we grade LL.M. students with the following guidance:

- A – Very Good – Excellent Performance
- B - Good – Performance Above Average
- C - Pass – Performance Worthy of Credit
- D or F – Fail – Performance Unworthy of Credit

It is important to note that because LL.M. and J.D. students are not comparable in terms of performance in classes, they will not be ranked together either. LL.M. students will not have a class rank, just a GPA and their degree.

Recruiting and Marketing Strategy

The College of Law will take J.D. promotional pieces and emails, like the viewbook and prospective student emails, and repurpose them with LL.M. specific information. The primary recruiting tool will be an LL.M. viewbook about the College, Moscow, and the degree program. The LL.M. CRM resource will also be used to communicate with prospective students electronically.

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A complete plan, similar to what is done for the J.D. program, will be developed in summer 2015. Recruiting events around the world are available through EducationUSA, QS World Grad School Fair, embassy presentations, online college fairs, and more. The College will also maximize our recruiting efforts by making sure COGS and IPO have materials about the LL.M. program for when they do international recruitment. Efforts will be made to use faculty relationships to schedule campus visits to present to undergraduate law students abroad.

Enrollment Goals & Credit Hours

Below is a breakdown of the anticipated enrollment in the LL.M. program and the anticipated credit hours needed to support the program each year. The number of credit hours are being provided to show that the impact of these additional students on the seats in classes. In spring 2015 alone, the capacity in University of Idaho College of Law classes was well over 1,000 hours in Moscow.

Year	Enrollment	Annual Credit Hours
2016-17	5	120
2017-18	10	240
2018-19	10	240
2019-20	15	360
2020-21	15	360

Budget Considerations

For the most part, operating the LL.M. program utilizes the resources already available through our J.D. program. The following details the known costs to initiate such a program:

ABA Application for Acquiescence - \$6,000

Marketing Materials – Design, Print & Mail - \$10,000

Recruitment Abroad - \$15,000 the first year and \$10,000 annually thereafter

Library Resources - \$2,000

General Supplies and Materials - \$2,000

The above costs do not include faculty or staff labor to recruit, enroll and support the new LL.M. program. On the revenue side, each international student pays out of state tuition, which this year is \$30,010. Many schools offer nominal scholarships to show interest in their admitted students, but with our lower tuition, we may not have to. For each student we enroll, we get their total professional fee, approximately \$85K for 10 students and they will go into our overall enrollment, helping our centrally allocated budget. If we only enroll five students in the initial year of the program, our revenue will still exceed our expenses. When we are able to enroll closer to 10 students each year (more or less in some years) the financial gain will far exceed the expenses needed to maintain the program. Operating the LL.M. program will thus not take away financially or resource wise from the J.D. program.

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College of Law

Proposed Catalog Changes

Effective Term (unless otherwise noted) = Summer 2016

1. Create the following program

Master of Law (LL.M.)

Required course work includes the College of Law requirements and the following:

Law 857 Introduction to American Law and Legal Education (2 cr)

And one of the following emphases:

A. Democracy, Justice & the American Legal System

Law 856 Legal Writing and Research for LL.M. Students (3 cr)

Law 962 Professional Responsibility (3 cr)

Bar exam-tested Electives (6 cr):

Law 805 Civil Procedure and Introduction to Law (3 cr)

Law 806 Civil Procedure II (3 cr)

Law 807 Property (4 cr)

Law 809 Torts (4 cr)

Law 812 Criminal Law (3 cr)

Law 813 Contracts (4 cr)

Law 816 Constitutional Law I (4 cr)

Law 851 Advanced Torts (2-3 cr)

Law 905 Constitutional Law II (3 cr)

Law 919 Business Associations (4 cr)

Law 924 Sales (3 cr)

Law 925 Property Security (3 cr)

Law 949 Native American Law (3 cr)*

Law 950 Evidence (3 cr)

Law 953 Criminal Procedure (3 cr)

Law 960 Conflict of Laws (2 cr)

Law 963 Family Law (3 cr)

Courses to total 24 credits for this degree

B. Natural Resources and Environmental Law

Law 907 Administrative Law (3 cr)

One of the following (3 cr):

Law 947 Environmental Law (3 cr)

Law 948 Introduction to Natural Resources Law (3 cr)

Natural Resources and Environmental Law Electives (10 cr):

Law 855 Water Law Practicum (2-3 cr)

Law 906 Natural Resources Law Seminar (3 cr)

Law 934 Land-Use Law and Planning (3 cr)

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Law 937 Wildlife Law and Policy (3 cr)
Law 938 International Environmental and Water Law (3 cr)
Law 939 Law, Science, and the Environment (2 cr)
Law 942 Water Law I (1-2 cr)
Law 946 Water and Energy Policy Seminar (2 cr)
Law 947 Environmental Law (3 cr)
Law 948 Introduction to Natural Resources Law (3 cr)
Law 951 Environmental Policy (3 cr)
Law 969 Water Law II (2 cr)
Law 971 Lawyering Process Seminar (2 cr)
Law 979 Native American Natural Resource Law (3 cr)
WR 506 Interdisciplinary Methods in Water Resources (3 cr)
Up to 3 credits may be satisfied by non-law graduate courses with approval of both the NREL
LL.M. emphasis advisor

Courses to total 24 credits for this degree

C. Business Law and Entrepreneurship

Law 813 Contracts (4 cr)
Law 919 Business Associations (4 cr)

One of the following (3 cr):

Law 924 Sales (3 cr)
Law 925 Property Security (3 cr)

Business Law and Entrepreneurship Electives (9 cr):

Law 851 Advanced Torts (2-3 cr)
Law 854 Corporate Taxation (2-3 cr)
Law 903 Introduction to Intellectual Property (3 cr)
Law 907 Administrative Law (3 cr)
Law 908 Workplace Law (4 cr)
Law 910 Antitrust (3 cr)
Law 911 Principles of Suretyship (2 cr)
Law 918 Cyberlaw (2-3 cr)
Law 920 Securities Regulation (3 cr)
Law 921 Accounting for Lawyers (2 cr)
Law 922 Trademarks and Trade Dress (2 cr)
Law 923 Negotiable Instruments, Bank Collections and Deposits, and Other Payment Systems (3 cr)
Law 924 Sales (3 cr)
Law 925 Property Security (3 cr)
Law 926 Bankruptcy (3 cr)
Law 927 Partnership and LLC Taxation (2-3 cr)
Law 930 Taxation (3-4 cr)
Law 931 Patents (2 cr)
Law 980 Copyrights (2-3 cr)
Law 984 Real Estate Transactions (2-3 cr)
Law 989 Mass Media Law (2 cr)
Law 990 Consumer Law (3 cr)
Law 992 White Collar Crime (3 cr)

Courses to total 24 credits for this degree

D. Litigation and Alternative Dispute Resolution

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One of the following tracks:

General Track

Law 907 Administrative Law (3 cr)

Law 917 Negotiation and Appropriate Dispute Resolution (3 cr)

One of the following (3 cr):

Law 912 Civil Mediation (2 cr)

Law 913 Family Mediation (2 cr)

Litigation and Alternative Dispute Resolution Electives (6 cr):

Law 816 Constitutional Law I (4 cr)

Law 905 Constitutional Law II (3 cr)

Law 950 Evidence (3 cr)

Law 971 Lawyering Process Seminar (2 cr)

Law 952 Remedies (3 cr)

Criminal Law Track

Law 812 Criminal Law (3 cr)

Law 917 Negotiation and Appropriate Dispute Resolution (3 cr)

Law 953 Criminal Procedure (3 cr)

One of the following (3 cr):

Law 912 Civil Mediation (2 cr)

Law 913 Family Mediation (2 cr)

Criminal Law Elective (3 cr):

Law 816 Constitutional Law I (4 cr)

Law 901 Advanced Criminal Procedure (3 cr)

Law 901 Advanced Topics in Criminal Procedure (3 cr)

Law 905 Constitutional Law II (3 cr)

Law 950 Evidence (3 cr)

Law 992 White Collar Crime (3 cr)

Family Law Track

Law 913 Family Mediation (2 cr)

Law 917 Negotiation and Appropriate Dispute Resolution (3 cr)

Law 963 Family Law (3 cr)

Family Law Electives (7 cr):

Law 905 Constitutional Law II (3 cr)

Law 941 Wills, Estates, and Trusts (3 cr)

Law 945 Community Property (2 cr)

Law 964 Children and the Law (2-3 cr)

Law 995 General Practice/Domestic Violence & Sexual Assault Clinic (1-3 cr, max 6)

Students are required to compete in either the mediation or negotiation intermural competition held annually.

Courses to total 24 credits for this degree

**Law 949 Native American Law (3 cr) can satisfy requirements for the LL.M. degree, but cannot be counted by students seeking to sit for a bar exam.*

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Program Resource Requirements. Indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first three fiscal years of the program. Include reallocation of existing personnel and resources and anticipated or requested new resources. Second and third year estimates should be in constant dollars. Amounts should reconcile subsequent pages where budget explanations are provided. If the program is contract related, explain the fiscal sources and the year-to-year commitment from the contracting agency(ies) or party(ies). Provide an explanation of the fiscal impact of the proposed discontinuance to include impacts to faculty (i.e., salary savings, re-assignments).

I. PLANNED STUDENT ENROLLMENT

	FY	2016	FY	2017	FY	2018	Cumulative Total	
	FTE	Headcount	FTE	Headcount	FTE	Headcount	FTE	Headcount
A. New enrollments	5	5	8	8	10	10	23	23
B. Shifting enrollments	0	0	0	0	0	0	0	0

II. REVENUE

	FY	2016	FY	2017	FY	2018	Cumulative Total	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
1. Appropriated (Reallocation)							\$0.00	\$0.00
2. Appropriated (New)							\$0.00	\$0.00
3. Federal							\$0.00	\$0.00
4. Tuition		\$111,130.00		\$177,808.00		\$222,260.00	\$0.00	\$511,198.00
5. Student Fees		\$45,040.00		\$72,064.00		\$90,080.00	\$0.00	\$207,184.00
6. Other (Specify)							\$0.00	\$0.00
Total Revenue	\$0.00	\$156,170.00	\$0.00	\$249,872.00	\$0.00	\$312,340.00	\$0.00	\$718,382.00

Ongoing is defined as ongoing operating budget for the program which will become part of the base.

One-time is defined as one-time funding in a fiscal year and not part of the base.

III. EXPENDITURES

IRSA

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	FY	2016	FY	2017	FY	2018	Cumulative Total	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
A. Personnel Costs								
1. FTE							0.00	0.00
2. Faculty							\$0.00	\$0.00
3. Administrators	11800		11800		11800		\$35,400.00	\$0.00
4. Adjunct Faculty	6000		6000		6000		\$18,000.00	\$0.00
5. Instructional Assistants							\$0.00	\$0.00
6. Research Personnel							\$0.00	\$0.00
7. Support Personnel	5500		5500		5500		\$16,500.00	\$0.00
8. Fringe Benefits	5884.8		5884.8		5884.8		\$17,654.40	\$0.00
9. Other:							\$0.00	\$0.00
Total FTE Personnel and Costs	\$29,184.80	\$0.00	\$29,184.80	\$0.00	\$29,184.80	\$0.00	\$87,554.40	\$0.00

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	FY		FY		FY		Cumulative Total	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
B. Operating Expenditures								
1. Travel		\$15,000.00		\$10,000.00		\$10,000.00	\$0.00	\$35,000.00
2. Professional Services							\$0.00	\$0.00
3. Other Services							\$0.00	\$0.00
4. Communications		\$5,000.00		\$5,000.00	\$2,000.00		\$2,000.00	\$10,000.00
5. Utilities							\$0.00	\$0.00
6. Materials and Supplies		\$2,000.00					\$0.00	\$2,000.00
7. Rentals							\$0.00	\$0.00
8. Repairs & Maintenance							\$0.00	\$0.00
9. Materials & Goods for Manufacture & Resale							\$0.00	\$0.00
10. Miscellaneous - Scholarships		\$25,000.00		\$25,000.00		\$30,000.00	\$0.00	\$80,000.00
Total Operating Expenditures	\$0.00	\$22,000.00	\$0.00	\$15,000.00	\$2,000.00	\$10,000.00	\$2,000.00	\$47,000.00

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	FY		FY		FY		Cumulative Total	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
C. Capital Outlay								
1. Library Resources		\$2,000.00					\$0.00	\$2,000.00
2. Equipment							\$0.00	\$0.00
Total Capital Outlay	\$0.00	\$2,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
D. Capital Facilities Construction or Major Renovation								
E. Indirect Costs (overhead)								
TOTAL EXPENDITURES:	\$29,184.80	\$24,000.00	\$29,184.80	\$15,000.00	\$31,184.80	\$10,000.00	\$89,554.40	\$47,000.00
Net Income (Deficit)	-\$29,184.80	\$132,170.00	-\$29,184.80	\$234,872.00	-\$31,184.80	\$302,340.00	-\$89,554.40	\$671,382.00

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Applications by Law School Region as of 17AUG2015

ATTACHMENT B(2)

LLM Applications as of 17 August 2015		
Law School Region	Number	Pct Chg from Prev Year
Far West (FW)	6,813	+0.53%
Great Lakes (GL)	4,390	+2.05%
Midsouth (MS)	6,372	+7.27%
Midwest (MW)	637	+27.15%
Mountain West (MT)	273	-4.21%
New England (NG)	3,168	+9.92%
Northeast (NE)	9,625	+1.02%
Northwest (NW)	595	+14.64%
South Central (SC)	961	+3.56%
Southeast (SE)	1,214	+38.11%
TOTAL	34,048	+4.63%

ATTACHMENT B(3)

Gender and First Law Degree Country 2013 Report

COUNTRY	GENDER	APPLICANTS	MATRICULANTS
Afghanistan	Male	1	0
Albania	Female	2	0
Albania	Male	4	0
Algeria	Male	1	0
Argentina	Female	14	2
Argentina	Male	18	5
Armenia	Female	5	2
Armenia	Male	2	0
Australia	Female	57	14
Australia	Male	45	7
Austria	Female	7	1
Austria	Male	5	1
Azerbaijan	Female	2	1
Azerbaijan	Male	2	1
Bahrain	Female	1	0
Bangladesh	Female	2	0
Bangladesh	Male	4	0
Barbados	Female	4	0
Belarus	Female	5	1
Belarus	Male	2	1
Belgium	Female	25	12
Belgium	Male	31	14
Benin	Female	1	0
Benin	Male	1	0
Bolivia	Female	4	1
Bolivia	Male	3	3
Bosnia and Herzegovina	Female	2	0
Brazil	Female	134	46
Brazil	Male	118	46
Bulgaria	Female	2	0
Bulgaria	Male	1	1
Burkina Faso	Male	2	0
Burundi	Female	1	0
Burundi	Male	2	0
Cambodia	Female	3	0
Cameroon	Female	6	2
Cameroon	Male	24	10
Canada	Female	48	8
Canada	Male	38	7
Chad	Male	1	1
Chile	Female	20	6
Chile	Male	67	16
China	Female	882	338
China	Male	367	147
Colombia	Female	53	11
Colombia	Male	43	11
Congo	Male	1	0
Congo Democratic Republic of the	Female	1	0

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ATTACHMENT B(3)

Gender and First Law Degree Country 2013 Report

COUNTRY	GENDER	APPLICANTS	MATRICULANTS
Congo Democratic Republic of the	Male	3	1
Costa Rica	Female	7	2
Costa Rica	Male	3	1
Cote d Ivoire	Male	2	1
Croatia	Female	1	1
Croatia	Male	2	0
Czech Republic	Female	2	1
Czech Republic	Male	1	0
Denmark	Female	3	0
Denmark	Male	4	2
Dominican Republic	Female	15	5
Dominican Republic	Male	8	2
Ecuador	Female	8	1
Ecuador	Male	21	8
Egypt	Female	7	1
Egypt	Male	18	4
El Salvador	Male	4	2
Eritrea	Female	1	0
Eritrea	Male	2	1
Estonia	Female	1	0
Ethiopia	Female	11	0
Ethiopia	Male	15	4
Finland	Female	4	2
Finland	Male	2	1
France	Female	128	45
France	Male	72	25
Gambia	Male	1	0
Georgia	Female	4	0
Georgia	Male	7	0
Germany	Female	45	14
Germany	Male	60	19
Ghana	Female	6	0
Ghana	Male	11	1
Greece	Female	14	3
Greece	Male	18	6
Guatemala	Female	2	2
Guatemala	Male	6	1
Haiti	Female	1	0
Haiti	Male	2	0
Honduras	Male	1	0
Hong Kong	Female	10	3
Hong Kong	Male	7	0
Hungary	Female	5	2
Hungary	Male	2	0
Iceland	Female	5	3
Iceland	Male	3	1
India	Female	214	49
India	Male	120	26

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ATTACHMENT B(3)

Gender and First Law Degree Country 2013 Report

COUNTRY	GENDER	APPLICANTS	MATRICULANTS
Indonesia	Female	11	3
Indonesia	Male	26	8
Iran, Islamic Republic of	Female	26	9
Iran, Islamic Republic of	Male	18	3
Iraq	Female	1	1
Iraq	Male	13	3
Ireland	Female	14	7
Ireland	Male	12	1
Israel	Female	31	14
Israel	Male	32	9
Italy	Female	32	10
Italy	Male	50	18
Jamaica	Female	3	0
Jamaica	Male	2	0
Japan	Female	85	32
Japan	Male	216	105
Jordan	Female	6	1
Jordan	Male	14	1
Kazakhstan	Female	7	2
Kazakhstan	Male	5	1
Kenya	Female	8	1
Kenya	Male	6	0
Korea, Democratic Republic of (North)	Female	1	0
Korea, Republic of (South)	Female	97	31
Korea, Republic of (South)	Male	181	97
Kosovo	Male	1	0
Kuwait	Female	4	0
Kuwait	Male	2	0
Kyrgyzstan	Female	1	0
Kyrgyzstan	Male	3	1
Lebanon	Female	8	2
Lebanon	Male	13	5
Lesotho	Female	1	0
Liberia	Female	3	0
Liberia	Male	6	3
Libya	Female	1	0
Libya	Male	1	0
Lithuania	Female	2	0
Lithuania	Male	1	0
Luxembourg	Female	1	1
Macao	Female	6	2
Macao	Male	3	2
Macedonia, The Former Yugoslav Republic Of	Female	3	1
Macedonia, The Former Yugoslav Republic Of	Male	1	0
Malawi	Female	1	0
Malawi	Male	1	0
Malaysia	Female	2	1
Malaysia	Male	1	1

**INSTRUCTION, RESEARCH, AND STUDENT AFFAIRS
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ATTACHMENT B(3)

Gender and First Law Degree Country 2013 Report

COUNTRY	GENDER	APPLICANTS	MATRICULANTS
Malta	Male	1	0
Mexico	Female	75	27
Mexico	Male	111	34
Moldova, Republic of	Female	4	1
Moldova, Republic of	Male	1	0
Mongolia	Female	3	0
Mongolia	Male	6	1
Morocco	Male	1	1
Nepal	Male	4	0
Netherlands	Female	8	2
Netherlands	Male	9	2
New Zealand	Female	6	3
New Zealand	Male	10	3
Nicaragua	Female	1	0
Nicaragua	Male	1	1
Niger	Male	1	0
Nigeria	Female	68	14
Nigeria	Male	63	13
Norway	Female	5	3
Norway	Male	1	0
Oman	Male	1	1
Pakistan	Female	5	1
Pakistan	Male	17	0
Panama	Female	7	4
Panama	Male	11	4
Papua New Guinea	Female	1	0
Papua New Guinea	Male	1	0
Paraguay	Female	4	3
Paraguay	Male	4	1
Peru	Female	29	7
Peru	Male	24	10
Philippines	Female	20	4
Philippines	Male	23	8
Poland	Female	11	2
Poland	Male	7	1
Portugal	Female	7	2
Portugal	Male	5	1
Qatar	Female	3	1
Qatar	Male	2	1
Romania	Female	9	2
Romania	Male	4	1
Russian Federation	Female	66	28
Russian Federation	Male	25	4
Rwanda	Male	1	0
Saudi Arabia	Female	76	17
Saudi Arabia	Male	204	39
Senegal	Male	2	0
Serbia	Female	2	1

**INSTRUCTION, RESEARCH, AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

ATTACHMENT B(3)

Gender and First Law Degree Country 2013 Report

COUNTRY	GENDER	APPLICANTS	MATRICULANTS
Serbia	Male	4	1
Singapore	Female	6	1
Singapore	Male	2	1
Slovakia	Female	2	0
Slovakia	Male	3	0
Slovenia	Female	1	0
Slovenia	Male	1	0
South Africa	Female	33	5
South Africa	Male	15	1
Spain	Female	28	5
Spain	Male	21	8
Sri Lanka	Male	1	0
Sudan	Male	3	0
Swaziland	Male	1	0
Sweden	Female	14	6
Sweden	Male	7	2
Switzerland	Female	40	12
Switzerland	Male	46	16
Syrian Arab Republic	Female	3	0
Syrian Arab Republic	Male	1	0
Taiwan	Female	72	25
Taiwan	Male	61	17
Tajikistan	Male	1	0
Tanzania, United Republic of	Female	2	0
Tanzania, United Republic of	Male	4	0
Thailand	Female	65	21
Thailand	Male	37	13
Togo	Male	1	0
Tunisia	Female	1	0
Turkey	Female	37	9
Turkey	Male	22	4
Uganda	Female	12	1
Uganda	Male	4	0
Ukraine	Female	22	4
Ukraine	Male	9	3
United Arab Emirates	Female	4	0
United Arab Emirates	Male	8	3
United Kingdom	Female	211	54
United Kingdom	Male	159	39
United States of America/Territories	Female	520	116
United States of America/Territories	Male	812	183
Uruguay	Female	3	1
Uruguay	Male	2	0
Uzbekistan	Female	2	1
Uzbekistan	Male	8	0
Venezuela, Bolivarian Republic of	Female	11	2
Venezuela, Bolivarian Republic of	Male	15	4
Vietnam	Female	7	1

INSTRUCTION, RESEARCH, AND STUDENT AFFAIRS
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ATTACHMENT B(3)

Gender and First Law Degree Country 2013 Report

COUNTRY	GENDER	APPLICANTS	MATRICULANTS
Vietnam	Male	3	1
Zambia	Male	1	0
Zimbabwe	Male	1	0
Total		7215	2140

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UNIVERSITY OF IDAHO

SUBJECT

Online, Bachelor of Science in Sociology, Criminology emphasis

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section III.G.3.c.i.(1)

BACKGROUND/DISCUSSION

The University of Idaho, College of Letters, Arts, and Social Sciences proposes to establish a distance delivered Bachelor's degree in Sociology with an emphasis in Criminology ("soc-crim"). While the University of Idaho currently offers a B.A./B.S. degree in soc-crim to residential students, and this will not change, there is regional and state-level demand for a distance-delivered criminology program among three groups: (1) *Adult learners and criminal justice professionals* looking to advance their careers by earning a Bachelor's degree; (2) *Students with an Associate of Arts in Criminal Justice* who would like to finish a Bachelor's degree; and, (3) *Place-bound students in Idaho and beyond* but whose life circumstances prevent them from attending school.

Offering the sociology-criminology emphasis via distance delivery expands the availability of one of the most popular majors on campus. In practical terms it will also serve an identified need for citizens employed in law enforcement and correctional agencies and place-bound students who would like to finish their degrees or build off of their Associates degree.

The curriculum is already developed and currently being delivered face to face. The majority of the courses required for the degree are already available in an online format. There are several additional existing courses in the curriculum that would be developed for distance delivery by the time of offering the emphasis via distance.

The Bureau of Labor Statistics (BLS) estimates that protective services jobs (e.g., jobs in law enforcement, corrections, and other justice-related services) will grow by 7.9% in the U.S. between 2012-2022 with approximately 1.1 million job openings created through growth and replacement needs. Labor market growth in protective services industry jobs is projected to be slightly stronger in Idaho. In 2012, there were 12,958 protective service jobs in Idaho with a projected 10-year growth estimate of 9.8% over ten years (to 14,222 jobs). The BLS estimates that Idaho will see an average of 506 yearly job openings in this field due to occupational growth and replacement.

IMPACT

INSTRUCTION, RESEARCH, AND STUDENT AFFAIRS
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The attached program proposal includes a detailed budget for adding this delivery modality and engaging a new population of individuals in pursuing a college education. There is no need to develop new curriculum, only to create the materials that would be congruent with distance delivery technologies. The funding requested would also allow for the program to grow to serve distance students across the state and region.

ATTACHMENTS

Attachment 1 – Program Proposal

Page 3

STAFF COMMENTS AND RECOMMENDATIONS

Currently Board Policy III.G, requires public postsecondary institutions to submit a proposal if they are transitioning an existing program to an online format for approval.

Per Board Policy III.Z, no institution is assigned the statewide program responsibility for the Bachelor of Science in Sociology with an emphasis in Criminology.

The proposal went through the program review process and was recommended for approval by the Council on Academic Affairs and Programs (CAAP) on January 14, 2016.

Staff recommends approval.

BOARD ACTION

I move to approve the request by the University of Idaho to offer the Bachelor of Science with a major of Sociology, Criminology emphasis through distance delivery.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

Institutional Tracking No. FS-16-020

UCC-16-022b

**Idaho State Board of Education
Proposal for Baccalaureate Degree Program**

Date of Proposal Submission:	September 2015
Institution Submitting Proposal:	University of Idaho
Name of College, School, or Division:	CLASS
Name of Department(s) or Area(s):	Sociology and Anthropology

Program Identification for Proposed New, Modified, or Discontinued Program:

Title:	Sociology, Criminology emphasis		
Degree:	BS		
Method of Delivery:	Distance delivered		
CIP code (consult IR /Registrar)	45.1101		
Proposed Starting Date:	Fall 2016		
Indicate if the program is:	<input checked="" type="checkbox"/> Regional Responsibility	<input type="checkbox"/>	Statewide Responsibility

Indicate whether this request is either of the following:

- | | |
|---|--|
| <input type="checkbox"/> New Program/major | <input type="checkbox"/> Expansion of an Existing Program |
| <input type="checkbox"/> New Off-Campus Instructional Program | <input type="checkbox"/> Discontinuance of an Existing Program |
| <input type="checkbox"/> Contract Program/Collaborative | <input checked="" type="checkbox"/> Other : Adding delivery modality |
| <input type="checkbox"/> Consolidation of an Existing Program | |

Andrew E. Kurtz 12/14/15
College Dean (Institution) Date

Vice President for Research (as applicable) Date

Graduate Dean (as applicable)

State Administrator, SDPTE (as applicable) Date

[Signature] 12-14-15
Chief Fiscal Officer (Institution) Date

Academic Affairs Program Manager Date

[Signature]
Chief Academic Officer (Institution) Date

Chief Academic Officer, OSBE Date

[Signature]
President Date

SBOE/OSBE Approval Date

March 16, 2012
Page 1

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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Before completing this form, refer to Board Policy Section III.G., Program Approval and Discontinuance. This proposal form must be completed for the creation of each new program. All questions must be answered.

- 1. Describe the nature of the request.** Will this program be related or tied to other programs on campus? Please identify any existing program, option that this program will replace. *If this is request to discontinue an existing program, provide the rationale for the discontinuance. Indicate the year and semester in which the last cohort of students was admitted and the final term the college will offer the program. Describe the teach-out plans for continuing students.*

This is a proposal to establish a distance delivered bachelor's degree in sociology with an emphasis in criminology ("soc-crim"). While the University of Idaho currently offers a B.A./B.S. degree in soc-crim to residential students, there is potentially regional and state-level demand for a distance delivered criminology degree among three groups: (1) *Adult learners and criminal justice professionals* looking to advance their careers by earning a bachelor's degree; (2) *Students with an A.A. in criminal justice* who would like to finish a bachelor's degree; and, (3) *Place-bound students in Idaho and the Pacific Northwest with affective ties to the University of Idaho* but whose life circumstances prevent them from attending school in Moscow, Idaho. It will not replace any existing program.

- 2. List the objectives of the program.** The objectives should address specific needs the program will meet. They should also identify the expected student learning outcomes and achievements. *This question is not applicable to requests for discontinuance.*

Offering the sociology-criminology emphasis via distance delivery expands the availability of one of the most popular majors on campus. In practical terms it will also serve an identified need for citizens employed in Idaho's law enforcement and correctional agencies and place-bound students who would like to finish their degrees or build off of their Associates degree. Learning outcomes for the program are the same as identified for students pursuing a sociology degree and particularly align with University learning outcomes #1 (learn and integrate), #2 (think and create) and #5 (practice citizenship)

- 3. Briefly describe how the institution will ensure the quality of the program** (i.e., program review). Will the program require specialized accreditation (it is not necessary to address regional accreditation)? If so, please identify the agency and explain why you do or do not plan to seek accreditation. *This question is not applicable to requests for discontinuance.*

The distance program will not require specialized accreditation. There is no nationally or regionally recognized body that accredits Soc/crim programs. Program evaluation would be conducted as part of regular departmental review of majors and minors.

- 4. List new courses that will be added to your curriculum specific for this program.** Indicate number, title, and credit hour value for each course. Please include course descriptions for new and/or changes to courses. *This question is not applicable to requests for discontinuance.*

New courses will not be added to the curriculum, what is being created is the distance delivery of existing courses. List below identifies existing courses that will need to be developed for distance delivery.

1	SOC411	Social Data Analysis
2	SOC331	Criminological Theory
3	SOC 311	Development of Social Theory
4	SOC332	Punishment & Society
5	SOC334	Police and Social Control
6	SOC420	Sociology of Law

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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7	SOC439	Inequalities in the Justice System
8	SOC330	Juvenile Delinquency
9	SOC427	Racial and Ethnic Relations
10	SOC335	Terrorism, Justice, and Society
11	SOC336	Comparative Justice Systems
12	SOC427	Racial and Ethnic Relations
13	SOC333	White Collar Crime
14	SOC338	Regulation of Vice

5. Please provide the program completion requirements, to include the following and attach a typical four-year curriculum to this proposal as Appendix A. *For discontinuation requests, will courses continue to be taught?*

Credit hours required	36
Credit hours in institutional general education or core curriculum:	32
Credit hours in required electives:	52
Total credit hours required for degree program:	120

6. Describe additional requirements such as comprehensive examination, senior thesis or other capstone experience, practicum, or internship, some of which may carry credit hours included in the list above. *This question is not applicable to requests for discontinuance.*

Senior Capstone is required for the degree. The capstone is Soc. 401 Justice Policy issues

7. Identify similar programs offered within Idaho or in the region by other colleges/universities. If the proposed request is similar to another state program, provide a rationale for the duplication.

There are currently no other public or non-profit universities in Idaho that that offer a completely distance delivered bachelor's degree in criminology or criminal justice.

Degrees/Certificates offered by school/college or program(s) within disciplinary area under review

Institution and Degree name	Level	Specializations within the discipline (to reflect a national perspective)	Specializations offered within the degree at the institution
BSU	AA, BA, BS, MA	Criminal justice	
CSI	AA	Criminal Justice	
CWI	AA	Criminal Justice	
EITC		None	
ISU	AA/Cert	Criminal justice	
LCSC	BA, BS	Justice Studies	
NIC	AA	Criminal Justice	

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
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UI	BA,BS	Sociology-Criminology	
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- 8. Describe the methodology for determining enrollment projections.** If a survey of student interest was conducted, attach a copy of the survey instrument with a summary of results as **Appendix B**. *This question is not applicable to requests for discontinuance.*

Enrollment projections are based on two methodologies. First, an online survey of 20 police and correctional agencies/divisions in the state. Second, in-depth interviews with the criminal justice program coordinators at each of the state's community colleges. Information in Appendix B summarizes the findings

- 9. Enrollment and Graduates.** Using the chart below, provide a realistic estimate of enrollment at the time of program implementation and over three year period based on availability of students meeting the criteria referenced above. Include part-time and full-time (i.e., number of majors or other relevant data) by institution for the proposed program, last three years beginning with the current year and the previous two years. Also, indicate the number of graduates and graduation rates.

Discontinuations. Using the chart below include part-time and full-time (i.e., number of majors or other relevant data) by institution for the proposed discontinuation, last three years beginning with the current year and previous two years. Indicate how many students are currently enrolled in the program for the previous two years to include number of graduates and graduation rates.

Institution	Relevant Enrollment Data			Number of Graduates			Graduate Rate
	Current	Year 1 Previous	Year 2 Previous	Current (2014)	Year 1 Previous	Year 2 Previous	
BSU							
ISU							
LCSC							
UI	148	152	152	26	44	27	
CSI							
CWI							
EITC							
NIC							

Note: graduation numbers are for soc/crim only. All soc. Majors graduating during the same time period are 59, 79, 67.

- 10. Will this program reduce enrollments in other programs at your institution?** If so, please explain.

No, the expectation is that by offering the degree via distance delivery we are making the program available to new audiences that cannot otherwise be served.

- 11. Provide verification of state workforce needs such as job titles requiring this degree.** Include State and National Department of Labor research on employment potential.

The Bureau of Labor Statistics (BLS) estimates that protective services jobs (e.g., jobs in law enforcement, corrections, and other justice-related services) will grow by 7.9% in the U.S. between 2012-2022 with approximately 1.1 million job openings created through growth and replacement needs. Labor market growth in

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protective services industry jobs is projected to be slightly stronger in Idaho. In 2012, there were 12,958 protective service jobs in Idaho with a projected 10-year growth estimate of 9.8% over ten years (to 14,222 jobs). The BLS estimates that Idaho will see an average of 506 yearly job openings in this field due to occupational growth and replacement.

Using the chart below, indicate the total projected job openings (including growth and replacement demands in your regional area, the state, and nation. Job openings should represent positions which require graduation from a program such as the one proposed. Data should be derived from a source that can be validated and must be no more than two years old. *This question is not applicable to requests for discontinuance.*

	Year 1	Year 2	Year 3
Local (Regional)	Not available	Not available	Not available
State	506	506	506
Nation	110,000	118,690	128,067

- a. Describe the methodology used to determine the projected job openings. If a survey of employment needs was used, please attach a copy of the survey instrument with a summary of results as **Appendix C**.

Estimates are based on Bureau of Labor Statistics, *Employment by major occupational group, 2012 and projected 2022*. Retrieved from: http://www.bls.gov/emp/ep_data_occupational_data.htm and Idaho Department of Labor, *Idaho 2012-2022 Long Term Occupational Projections*. Retrieved from: <http://lmi.idaho.gov/projections>.

- b. Describe how the proposed change will act to stimulate the state economy by advancing the field, providing research results, etc.

The proposed change provides enhanced opportunities for people throughout the state to either further their education or complete degrees. Such opportunities contribute to the Board of Education's goal of raising the percentage of Idahoans completing their college degree.

- c. Is the program primarily intended to meet needs other than employment needs, if so, please provide a brief rationale.

The proposed change is intended to meet employment needs but it is also intended to provide learning opportunities for place-bound citizens in an area of considerable student demand.

- 12. Will any type of distance education technology be utilized in the delivery of the program on your main campus or to remote sites? Please describe.** *This question is not applicable to requests for discontinuance.*

The proposed program is distance-education delivery. The University of Idaho uses the Blackboard (BbLearn) course management system for distance delivered courses. It is accessible to students who have access to the internet

- 13. Describe how this request is consistent with the State Board of Education's strategic plan and institution's mission, core themes, and primary emphasis areas.** *This question is not applicable to requests for discontinuance.*

The proposed program contributes to the university's mission through expanded delivery of a degree program that is of value to the state's citizens and contributes to goals 1, 2 and 3 in the strategic plan. It is a program that makes access to our sociology/criminology degree available to citizens throughout the state, training students for careers in law enforcement, corrections, and other justice-related fields.

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- 14. Describe how this request fits with the institution's vision and/or strategic plan.** *This question is not applicable to requests for discontinuance.*

Goals of Institution Strategic Mission	Proposed Program Plans to Achieve the Goal
Goal 1 objective A, build adaptable curricula	Program is creating new delivery of curricula to reach a broader segment of Idaho's population. Proposal makes a high demand program available to a significant place-bound population
Goal 2, Objective B: Strengthen Partnerships	A distance program will build connections with many law enforcement agencies in the state needing additional training for employees as well as foster connections with community colleges throughout the state.

- 15. Is the proposed program in your institution's 5-year plan? Indicate below.** *This question is not applicable to requests for discontinuance.*

Yes _____ No x

If not on your institution's 5-year plan, provide a justification for adding the program.
This is not a new program request. It is a request to add program modality.

- 16. Explain how students are going to learn about this new program and where students are going to be recruited from (i.e., within institution, out-of-state, internationally).** *For requests to discontinue program, how will continuing students be advised of impending changes and consulted about options or alternatives for attaining their educational goals?*

Students will be recruited to the program from two places, the state's community college system and through the state's law enforcement and correctional agencies. As noted above faculty have already been in contact with both entities. As program is implemented there will be an accompanying advertising campaign specifically targeting those audiences.

- 17. Program Resource Requirements.** Using the **Excel spreadsheet** provided by the Board office indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first three fiscal years of the program. Include reallocation of existing personnel and resources and anticipated or requested new resources. Second and third year estimates should be in constant dollars. Amounts should reconcile budget explanations below. If the program is contract related, explain the fiscal sources and the year-to-year commitment from the contracting agency(ies) or party(ies). Provide an explanation of the fiscal impact of the proposed discontinuance to include impacts to faculty (i.e., salary savings, re-assignments).

a. Personnel Costs

Faculty and Staff Expenditures

Project for the first three years of the program the credit hours to be generated by each faculty member (full-time and part-time), graduate assistant, and other instructional personnel. Also indicate salaries. After total student credit hours, convert to an FTE student basis. Please provide totals for each of the three years presented. Salaries and FTE students should reflect amounts shown on budget schedule.

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Year 1

Name, Position & Rank	Annual Salary Rate	FTE Assignment to this Program	Projected Student Credit Hours	FTE Students
New assistant professor	62,000	1.0	270	18
New assistant professor	62,000	1.0	270	18

Year 2

Name, Position & Rank	Annual Salary Rate	FTE Assignment to this Program	Projected Student Credit Hours	FTE Students
New assistant professor	62,000	1.0	540	38
New assistant professor	62,000	1.0	540	38

Year 3

Name, Position & Rank	Annual Salary Rate	FTE Assignment to this Program	Projected Student Credit Hours	FTE Students
New assistant prof	62,000	1.0	594	42
New assistant prof	62,000	1.0	594	42

Project the need and cost for support personnel and any other personnel expenditures for the first three years of the program.

Administrative Expenditures

Describe the proposed administrative structure necessary to ensure program success and the cost of that support. Include a statement concerning the involvement of other departments, colleges, or other institutions and the estimated cost of their involvement in the proposed program

Half time program manager/advisor will work with department faculty to manage the advising/support needs of the added students in the program.

Name, Position & Rank	Annual Salary Rate	FTE Assignment to this Program	Value of FTE Effort to this Program
Half time advisor	20,000	.5	100%

b. Operating Expenditures

Briefly explain the need and cost for operating expenditures (travel, professional services, etc.)

Travel funding will support faculty and/or advisor travel to community colleges throughout the state, both for ongoing recruitment and to continue to build at seamless 2+2 transition. It is also expected that travel will periodically be necessary to visit law enforcement and correctional agencies.

Materials funding will support/develop advertising and promotional materials for the program.

Additional support for program development can be covered by the web fees generated by the courses being

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offered. Given the scope of the expansion it is expected that there will be unanticipated expenses associated with starting such a program.

c. Capital Outlay

(1) Library resources

- (a) Evaluate library resources, including personnel and space. Are they adequate for the operation of the present program? If not, explain the action necessary to ensure program success.

\$2000.00 is requested as ongoing support for the program and increased student demand for access to online resources.

- (b) Indicate the costs for the proposed program including personnel, space, equipment, monographs, journals, and materials required for the program.

- (c) For off-campus programs, clearly indicate how the library resources are to be provided.

Through online access to journals

(2) Equipment/Instruments

Describe the need for any laboratory instruments, computer(s), or other equipment. List equipment, which is presently available and any equipment (and cost) which must be obtained to support the proposed program.

Funds are requested to purchase laptop computers for the two faculty and staff/advisor.

d. Revenue Sources

- (1) If funding is to come from the reallocation of existing state appropriated funds, please indicate the sources of the reallocation. What impact will the reallocation of funds in support of the program have on other programs?

There will be no reallocation of existing state appropriations. An initial startup allocation will be provided internally, and thereafter the revenue generated by the program will be sufficient to cover expenses.

Students will be charged the regular distance tuition and fees as approved by the SBOE annually. In addition, students will pay the regular \$35.00 per credit online course fee.

- (2) If the funding is to come from other sources such as a donation, indicate the sources of other funding. What are the institution's plans for sustaining the program when funding ends?

There will be no funding from other sources.

- (3) If an above Maintenance of Current Operations (MCO) appropriation is required to fund the program, indicate when the institution plans to include the program in the legislative budget request.

N/A

- (4) Describe the federal grant, other grant(s), special fee arrangements, or contract(s) to fund the program. What does the institution propose to do with the program upon termination of those funds?

N/A

- (5) Provide estimated fees for any proposed professional or self-support program.

N/A

Appendix A: Sociology Curriculum/Criminology Emphasis

Sociology (B.A. or B.S.)

Required course work includes the university requirements (see regulation J-3), the general requirements for either the B.A. or B.S. degree and the following courses (electives must be approved by the student's advisor):

Anth 100 Introduction to Anthropology (3 cr)

Soc 101 Introduction to Sociology (3 cr)

Soc 311 Development of Social Theory (3 cr)

Two of the following (6 cr):

Soc 411 Quantitative Social Science Methods (3 cr)

Soc 413 Qualitative Social Science Methods (3 cr)

Stat 251 Statistical Methods (3 cr)

Related fields (e.g. anthropology, economics, environmental science, geography, history, political science, psychology, statistics, and women's and gender studies) (12 cr)*

One of the following (3 cr):

Soc 423 Sociology of Prosperity: Social Class and Economics in the 21st Century (3 cr)

Soc 424 Sociology of Gender (3 cr)

Soc 427 Racial and Ethnic Relations (3 cr)

Soc 439 Inequalities in the Justice System (3 cr)

One of the following (3 cr):

Soc 340 Social Change & Globalization (3 cr)

Soc 341 Science, Technology, and Society (3 cr)

Soc 343 Power, Politics, and Society (3 cr)

Soc 465 Environment, Policy, and Justice (3 cr)

*Note: Must be approved by student's advisor

Select one of the following emphases:

A. Criminology

Soc 260 Intro to Deviance and Crime (3 cr)

Soc 331 Criminology Theory (3 cr)

Soc 461 Capstone: Justice Policy Issues (3 cr)

One of the following (3 cr):

PolS 467 Constitutional Law (3 cr)

PolS 468 Civil Liberties (3 cr)

PolS 469 The Judicial Process (3 cr)

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Soc 420 Sociology of Law (3 cr)

Selected upper-division emphasis electives (12 cr):

Soc 315 Community Service Learning (1-4 cr, max 4)**

Soc 325 Family, Violence, and Society (3 cr)

Soc 330 Juvenile Delinquency (3 cr)

Soc 332 Sociology of Punishment (3 cr)

Soc 333 Elite and White Collar Crime (3 cr)

Soc 334 Police and Social Control (3 cr)

Soc 335 Terrorism, Society and Justice (3 cr)

Soc 336 Comparative Criminal Justice Systems (3 cr)

Soc 337 Violence and Society (3 cr)

Soc 338 Regulation of Vice (3 cr)

Soc 339 Crime and the Media (3 cr)

Soc 344 Urban Sociology (3 cr)

Soc 345 Extremism and American Society (3 cr)

Soc 403 Workshop (cr arr)

Soc 404 Special Topics (cr arr)

Soc 420 Sociology of Law (3 cr)

Soc 439 Inequalities in the Justice System (3 cr)

Soc 450 Dynamics of Social Protest (3 cr)

Soc 465 Environment, Policy, and Justice (3 cr)

Soc 498 Internship (1-6 cr, max arr)**

Soc 499 Directed Study (cr arr)**

Courses to total 120 credits for this degree

**Note: A maximum of 3 credits may be earned in Soc 315, Soc 498, and Soc 499, respectively

Appendix B: survey data summary

In order to estimate the level of demand for a distance delivered criminology degree program, sociology faculty distributed a brief online survey to a purposive sample of twenty police and correctional agencies/divisions in Idaho. Eleven of the twenty agencies completed the survey (55% response rate).

The first section of the survey asked the respondents about their agency's education-related hiring requirements and support for higher education. Eight of the eleven respondents indicated that only a high school diploma or its equivalent is required for newly hired officers (see Table 1). Many of the agencies, however, reported that their department encourages its officers to complete additional education beyond the minimum standards (8 of 11). Just under half of the agencies provide direct financial benefits (e.g., tuition reimbursement) to officers who pursue education beyond the minimum requirements. In addition, several respondents from departments that do not offer direct financial incentives indicated that their agencies provide strong indirect incentives, such as giving officers with four-year degrees extra points on competitive promotional exams, which makes it more likely that they will achieve higher salaries through promotion.

Table 1: Agency Support for Continuing Officer Education

Question	Number	Percent
What are the minimum educational requirements to be hired as a sworn officer in your department (excluding P.O.S.T. certification)?		
High School Diploma	8	73%
Associate of Arts (60 credit hours)	3	27%
Bachelor's Degree	0	0%
Does your department encourage its officers to complete additional education beyond the minimum hiring requirements?		
Yes	8	73%
No	3	27%
Does your department offer financial incentives for officers or staff to pursue additional education beyond the minimum hiring requirements?		
Yes	4	36%
No	7	64%

The second section of the survey included several questions that were designed to allow us to generate rough estimates of the number of officers who might be interested in taking distance delivered criminology courses. The first question in this section asked the respondents to estimate number of officers in their department who might be interested in taking distance delivered classes. The second question asked them to report the total number of officers working for their department. Altogether, the respondents reported that the agencies employed a total of 2,560 officers (see Table 2). At the same time, the respondents estimated that 443 officers across the

eleven agencies would be interested in taking distance delivered classes in criminology, resulting in an estimated 17% of the officers working for the responding agencies who might be interested in enrolling in a distance delivered criminology program. If we project that percentage on to the Idaho's population of 12,958 individuals working in the State's protective services occupations, then we can estimate that approximately 2,203 individuals working in this field in Idaho may consider enrolling in a distance delivered program in criminology. Of course, that figure is a rough estimate and only represents a possible pool of individuals who might be interested in enrolling in a distance criminology program. However, if marketing and outreach efforts can draw in 2% of that pool on a yearly basis, then the distance program could expect to enroll a minimum of 44 criminal justice professionals per year in the program.

In their written comments at the end of the survey, several respondents indicated that two common barriers prevent officers from enrolling in university programs. First, their non-traditional work schedules make it difficult to enroll in traditional or blended classes. Second, several respondents noted that distance classes tend to be too expensive. We believe that these issues create an opportunity for the University of Idaho. First, the current per credit cost for the UI is lower for in-state students than our potential market competitors. Second, the distance soc-crim program will build in the flexibility that working criminal justice professionals need to complete their degrees.

Table 2: Agency Estimates for Officers Interested in Taking Distance Delivered Classes

Estimates	Number
Total number of officers working for the eleven responding agencies/divisions?	2,560
<i>Estimated</i> number of officers interested in taking online criminology classes?	443
<i>Estimated</i> percentage of officers interested in taking online criminology classes?	17%
Total Idaho employment in protective services occupations (2012)	12,958
<i>Estimated</i> number of individuals working in Idaho's protective services occupations that may consider enrolling in an online criminology program	2,203

The final section of the agency survey asked the respondents to identify the types of courses and skills that officers might look for in a distance delivered criminology program. Overall, the respondents indicated that the classes and skills that officers are looking for as similar to the classes and skills already emphasized in the residential soc-crim program. For example, the most commonly mentioned classes included juvenile delinquency, policing, corrections, constitutional law, criminal law, and deviance (see Table 3). In addition, the kinds of skills most frequently mentioned by the respondents are the same types of skills that the residential program currently emphasizes (i.e., critical thinking, writing, problem-solving, and communication skills) and which will be built into the

distance delivered degree. Taken as a whole, this indicates to us that the distance criminology program will have the characteristics that should be attractive to criminal justice professionals looking to complete a four-year degree.

Table 3: Reported Desired Classes and Skills Training in a Four-Year Criminology Program

Desired Classes	Desired Skills
Juvenile Justice*	Critical Thinking
Policing*	Communication/Verbal Skills
Constitutional Law*	Writing
Criminal Law*	Problem Solving
Research/Crime Analysis*	Research and Analysis Skills
Corrections*	Leadership Skills
Deviance*	
Drugs/Alcohol/Vice Crime*	
Leadership	
Mental Health and Crime	
Interpersonal Communication	
Cultural Competency	
Conflict Management	

Table Notes: An asterisk indicates a class already offered through the UI's residential criminology program.

Interviews with Community College Criminal Justice Program Coordinators

One of the other important potential sources of demand for a distance delivered criminology program in the Idaho comes from students enrolled in two-year criminal justice programs who would like to complete a four-year degree. To gauge the potential market demand among Idaho community college students, sociology faculty completed phone interviews with the faculty coordinators for the criminal justice programs at Idaho's three community colleges—the College of Western Idaho (CWI), the College of Southern Idaho (CSI), and the Northern Idaho College (NIC).

All three coordinators were strongly supportive of the idea of a four-year criminology program at the University of Idaho and each coordinator indicated that they believed there would be strong demand among their students for the program. After consulting with their respective offices for institutional research, the coordinators provided the following figures. There are over 1,000 students enrolled in two-year criminal justice programs in the state (485 at CWI, 290 at CSI and 240 at NIC). A little over 100 students graduated out of these programs in 2014 (50 at CWI, 30 at CSI and 23 at NIC). Each college contact estimated that about one-half (50%) of all students were interested in a 4-year distance program in criminology, criminal justice or justice studies. From this estimate, we can roughly infer that an additional 50 graduates from a 2-year program in the state would be interested in a distance 4-year degree program in 2014.

INSTRUCTION, RESEARCH AND STUDENT AFFAIRS

FEBRUARY 18, 2016

PROGRAM RESOURCE REQUIREMENTS

Indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first three fiscal years of the program. Include reallocation of existing personnel and resources and anticipated or requested new resources. Second and third year estimates should be in constant dollars. Amounts should reconcile subsequent pages where budget explanations are provided. If the program is contract related, explain the fiscal sources and the year-to-year commitment from the contracting agency(ies) or party(ies). Provide an explanation of the fiscal impact of the proposed discontinuance to include impacts to faculty (i.e., salary savings, re-assignments).

I. PLANNED STUDENT ENROLLMENT										
		FY	2017	FY	2018	FY	2019	Cumulative Total		
		FTE	Headcount	FTE	Headcount	FTE	Headcount	FTE	Headcount	
A. New enrollments		38	50	76	100	84	110	198	260	
B. Shifting enrollments		0	0	0	0	0	0	0	0	
<i>budgeting assumptions: Student count based on 60 percent full time students (12 credits) and 40 percent part time students (6 credits)</i>										
II. REVENUE										
		FY	2017	FY	2018	FY	2019	Cumulative Total		
		On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time	
1. Appropriated (Reallocation)								\$0.00	\$0.00	
2. Appropriated (New)								\$0.00	\$0.00	
3. Federal								\$0.00	\$0.00	
4. Tuition		\$267,540.00		\$535,080.00		\$588,588.00		\$1,391,208.00	\$0.00	
5. Student Fees		\$27,300.00		\$54,600.00		\$60,060.00		\$141,960.00	\$0.00	
6. Other (Specify)*		\$33,600.00		\$67,200.00		\$73,920.00		\$174,720.00	\$0.00	
Total Revenue		\$328,440.00	\$0.00	\$656,880.00	\$0.00	\$722,568.00	\$0.00	\$1,707,888.00	\$0.00	
<i>Distance Tuition Rates used: 3185 FT & 318.50 per credit</i>										
<i>*Distance education fee \$35.00/credit. Budgeting assumptions based on 60 percent full time students (12 cr.) and 40 percent part time students (6 cr.)</i>										
<i>Ongoing is defined as ongoing operating budget for the program which will become part of the base.</i>										
<i>One-time is defined as one-time funding in a fiscal year and not part of the base.</i>										

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

III. EXPENDITURES										
		FY	2017	FY	2018	FY	2019	Cumulative Total		
		On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time	
A. Personnel Costs										
1. FTE		2.0		2.0		2.0		6.00	0.00	
2. Faculty		\$124,000.00		\$124,000.00		\$124,000.00		\$372,000.00	\$0.00	
3. Administrators								\$0.00	\$0.00	
4. Adjunct Faculty								\$0.00	\$0.00	
5. Instructional Assistants								\$0.00	\$0.00	
6. Research Personnel								\$0.00	\$0.00	
7. Support Personnel		\$20,000.00		\$20,000.00		\$20,000.00		\$60,000.00	\$0.00	
8. Fringe Benefits		\$47,024.00		\$47,024.00		\$47,024.00		\$141,072.00	\$0.00	
9. Other:								\$0.00	\$0.00	
Total FTE Personnel and Costs		\$191,024.00	\$0.00	\$191,024.00	\$0.00	\$191,024.00	\$0.00	\$573,072.00	\$0.00	
support personnel: 1/2 time advisor/program manager for online students										
		FY	2017	FY	2018	FY	2019	Cumulative Total		
		On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time	
B. Operating Expenditures										
1. Travel		\$5,000.00		\$5,000.00		\$5,000.00		\$15,000.00	\$0.00	
2. Professional Services								\$0.00	\$0.00	
3. Other Services								\$0.00	\$0.00	
4. Communications								\$0.00	\$0.00	
5. Utilities								\$0.00	\$0.00	
6. Materials and Supplies		\$3,000.00		\$3,000.00		\$3,000.00		\$9,000.00	\$0.00	
7. Rentals								\$0.00	\$0.00	
8. Repairs & Maintenance								\$0.00	\$0.00	
9. Materials & Goods for Manufacture & Resale								\$0.00	\$0.00	
10. Miscellaneous								\$0.00	\$0.00	
Total Operating Expenditures		\$8,000.00	\$0.00	\$8,000.00	\$0.00	\$8,000.00	\$0.00	\$24,000.00	\$0.00	

**INSTRUCTION, RESEARCH AND STUDENT AFFAIRS
FEBRUARY 18, 2016**

		FY	2017	FY	2018	FY	2019	Cumulative Total	
		On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
C. Capital Outlay									
1. Library Resources		\$2,000.00		\$2,000.00		\$2,000.00		\$6,000.00	\$0.00
2. Equipment		\$0.00	\$4,500.00	\$0.00		\$0.00		\$0.00	\$4,500.00
Total Capital Outlay		<u>\$2,000.00</u>	<u>\$4,500.00</u>	<u>\$2,000.00</u>	<u>\$0.00</u>	<u>\$2,000.00</u>	<u>\$0.00</u>	<u>\$6,000.00</u>	<u>\$4,500.00</u>
D. Capital Facilities Construction or Major Renovation									
		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
E. Indirect Costs (overhead)									
		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTAL EXPENDITURES:		<u>\$201,024.00</u>	<u>\$4,500.00</u>	<u>\$201,024.00</u>	<u>\$0.00</u>	<u>\$201,024.00</u>	<u>\$0.00</u>	<u>\$603,072.00</u>	<u>\$4,500.00</u>
Net Income (Deficit)		<u>\$127,416.00</u>	<u>-\$4,500.00</u>	<u>\$455,856.00</u>	<u>\$0.00</u>	<u>\$521,544.00</u>	<u>\$0.00</u>	<u>\$1,104,816.00</u>	<u>-\$4,500.00</u>

**BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016**

TAB	DESCRIPTION	ACTION
1	RETIREMENT PLAN COMMITTEE APPOINTMENTS	Motion to approve
2	CHIEF EXECUTIVE OFFICER COMPENSATION	Motion to approve
3	BOISE STATE UNIVERSITY Multi-Year Employment Agreement – Women’s Head Volleyball Coach	Motion to approve
4	UNIVERSITY OF IDAHO Multi-Year Employment Agreement – Athletic Director	Motion to approve

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BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

SUBJECT

Retirement Plan Committee Appointments

REFERENCE

April 2015 Idaho State Board of Education (Board) approved second reading of Board Policy II.R., establishing a Retirement Plan Committee

APPLICABLE STATUTES, RULE OR POLICY

Idaho Code §33-107A, 107B, 107C

Idaho Code §59-513

Idaho State Board of Education Governing Policies & Procedures, Section II.K.

BACKGROUND / DISCUSSION

The Board is the Plan Sponsor for three Defined Contribution (DC) Optional Retirement Plan (ORP) plans used by non-PERSI employees at the colleges and universities. The Board has a 401(a) mandatory plan (with employer and employee contributions), and also voluntary 403(b) and 457(b) plans (with employee-only contributions). The exclusive Board-approved vendors for the 401(a) and 457(b) plans are TIAA-CREF and VALIC. These two vendors are available for 403(b) plans, along with a half-dozen other plan vendors that employees can elect to use, and with whom the Board has established information sharing agreements.

The Board has assigned oversight responsibility for the above-described plans to an ORP Committee, chaired by a Board member appointed by the Board President and made up of representatives from the institutions and community colleges, as well as other experts in the area of retirement planning drawn from outside the staffs of the colleges and universities. Once convened, the committee will provide financial market expertise as it relates to evaluating portfolio performance, reviewing vendor fees, and carrying out fiduciary oversight.

Working with the previously-designated ORP chair, Bill Goesling, staff has solicited a highly-qualified slate of volunteer candidates for service on the ORP Committee. The nominees are listed below:

- “Internal” experts representing the four- and two year institutions
 - Sarah Jones: Human Resources director at Boise State University (BSU), as a representative of participants in sponsored plans
 - Brandi Terwilliger: Human Resources director at the University of Idaho (UI) as a representative of participants in sponsored plans
 - Jeff Phelps: Controller at Lewis-Clark State College (LCSC)
 - Eric Nielson: Human Resources Director at the College of Southern Idaho (CSI) as the representative of a community college

BUSINESS AFFAIRS AND HUMAN RESOURCES
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- “External” experts (private sector members knowledgeable about financial markets)
 - Richelle Sugiyama: Retirement/Benefits expert on Public Retirement System of Idaho (PERSI) staff—previous consultant to Board staff on ORP matters
 - Kent Kinyon: Former LCSC Controller, key planner during establishment of current process for the Board’s ORP vendors
 - Jane Buser: Former BSU HRS Director—one of the principal architects in the establishment of the higher education ORP system and transfer of faculty and staff from the PERSI system
 - Bryan Raymond: Financial Advisor/Planner, Wells Fargo Advisors

IMPACT

The proposed nominees comprise a highly experienced and diverse team which is well qualified to assist the Board in carrying out its fiduciary duties as the plan sponsor of the DC Plans, in accordance with industry standards and best practices.

ATTACHMENTS

Attachment 1—Section II.R. Retirement Plan Committee

Page 3

STAFF COMMENTS AND RECOMMENDATIONS

Staff recommends appointment of the above-listed eight nominees as members of the ORP committee.

BOARD ACTION

I move to appoint Sarah Jones, Brandi Terwilliger, Jeff Phelps, Eric Nielson, Richelle Sugiyama, Kent Kinyon, Jane Buser, and Bryan Raymond as members of the Board’s Optional Retirement Plan Committee.

Moved by_____ Seconded by_____ Carried Yes____ No____

**Idaho State Board of Education
GOVERNING POLICIES AND PROCEDURES**

SECTION: II. HUMAN RESOURCES

Subsection: R. Retirement Plan Committee

April 2015

1. The Retirement Plan Committee is a special committee of the Board. The Committee provides stewardship of the retirement plans sponsored by the Board for the exclusive benefit of participants and their beneficiaries. The Committee may establish necessary procedures to carry out its responsibilities. Such procedures must be consistent with the Board's Governing Policies and Procedures.
2. The Committee shall consist of five or more members appointed by, and serving at the pleasure of, the Board. The chair of the Committee shall be appointed by the Board President and shall be a Board member. Other members of the Committee shall include two participants in the sponsored plans: one representative from a public four-year institution and one representative from a community or technical college. At least two members shall be private sector members who are knowledgeable about financial markets. All committee members should have investment, legal or benefits management expertise sufficient to evaluate the risks associated with the Committee's purpose. A quorum of any meeting of the Committee shall consist of a majority of the members. Committee members shall not be compensated for their service on the Committee. The Committee will meet as needed, but not less than semi-annually. The Committee is supported by the Board's Chief Fiscal Officer and by the Board's outside tax counsel.
3. Board-sponsored plans include the 401(a) Optional Retirement Plan (ORP), and the 403(b) and 457(b) voluntary deferred compensation plans (collectively referred to hereinafter as "Plan" or "Plans"). The Board is the Plans' named fiduciary and has authority to manage and control the Plans' operation and administration. The Board retains exclusive authority to amend the Plans and select Trustees/Custodians.
 - a. The Committee shall report at least annually to the Board.
 - b. The Committee members shall sign a conflict of interest disclosure questionnaire.
 - c. The Board delegates execution of the following fiduciary responsibilities with respect to the Plans to the Committee:
 - i. Establishing, periodically reviewing, and maintaining a written investment policy, including investment allocation strategies.
 - ii. Overseeing administration of the Plans in accordance with the investment policy, including:
 - a) Selecting an appropriate number and type of investment asset classes and management styles for Plan participants, including default investment elections.
 - b) Establishing performance criteria and benchmarks for selected asset classes.
 - c) Researching, selecting, and withdrawing Plan investments as appropriate for specified asset classes or styles.

- d) Reviewing communication methods and materials to ensure that Plan participants receive adequate investment education and performance information.
 - e) Ensuring the Committee and the Plans comply with applicable laws, regulations, and the terms of the Plan pertaining to investments.
 - iii. Reviewing and monitoring investment performance, including the reasonableness of investment fees, against appropriate benchmarks and in accordance with the investment policy.
 - iv. Managing the Plans to ensure regulatory compliance pertaining to Plan investments, including required Plan amendments and document retention;
 - v. Monitoring the Plans' vendors and implementation of contractual service arrangements;
 - vi. Advising the Board on selection or termination of the Plans' trustee(s)/custodian(s);
 - vii. Monitoring for reasonableness and consistency with the Plans' terms any investment product fees and charges passed through to Plan participants; and
 - viii. Retaining investment consultants, subject to approval by the Board's executive director.
- 4. The Trustee(s) and/or Custodian(s) of the sponsored plans will be responsible for holding and investing the Plans' assets in accordance with the terms of the Trust/Custodial Agreement.
- 5. The Committee may recommend to the Board's executive director the engagement of outside consultants and/or other professionals. The services of consultants and other professionals may include, but are not limited to:
 - a. Providing formal reviews of the performance of the investment options. Such reviews shall be based on established criteria and shall include recommendations for changes where appropriate;
 - b. Advising the Committee of any recommended modifications to the investment structure of the Plans; and
 - c. Advising the Committee as to the appropriate performance benchmarks for the investment options.

BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

SUBJECT

Chief Executive Officer Compensation

REFERENCE

May 2015

The Idaho State Board of Education (Board) completed performance evaluations and approved salaries for the chief executive officers of Boise State University, Idaho State University, University of Idaho, Lewis-Clark State College, and Eastern Idaho Technical College.

June 2015

Board amended contracts for the presidents, extending the contract terms for one (1) additional year, incorporating the salaries approved at the May 2015 Board meeting.

APPLICABLE STATUTES, RULE OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section I.E.2.c.

BACKGROUND/DISCUSSION

In the process of reviewing compensation for the institution executives, the Board determined that the current annual salary level (\$183,051.44) for the president of Lewis-Clark State College (LCSC) significantly lags behind the median of base salaries for that institution's Board-approved peers (less than 80% of the median and average of counterpart salaries at the peer institutions, excluding LCSC's three aspirational peers). This negative gap for the LCSC president significantly exceeds the comparable differences between the salaries of each of the three university presidents and their respective peers. Phased equity adjustments are appropriate to bring the LCSC chief executive position closer to the median of LCSC's peers and to ensure that the Board can fairly compensate and retain an outstanding officer in this position.

IMPACT

An increase of _____ to the annual salary for LCSC's president will result in a salary level no higher than _____% of the median salary for chief executives at LCSC's thirteen Board-approved peer institutions, and will represent a substantial step in improving compensation equity for the chief executive officers at Idaho institutions.

BOARD ACTION

I move to amend the current employment contract for Dr. Tony Fernández as President of Lewis-Clark State College to include an annual salary in the amount of \$_____, effective March 11, 2016.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

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**BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016**

BOISE STATE UNIVERSITY

SUBJECT

Multi-year contract with Shawn Garus, Head Women's Volleyball Coach

REFERENCE

June 2012	Idaho State Board of Education (Board) approved a two and one half year employment agreement with Women's Head Volleyball Coach Shawn Garus.
December 2014	Board approved a two year employment agreement with Women's Head Volleyball Coach Shawn Garus.

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section II.H.

BACKGROUND/DISCUSSION

In December 2014, the Board approved a two year employment contract with Shawn Garus as the Head Women's Volleyball Coach effective February 2015 through January 2017. Boise State University (BSU) now requests approval to enter into a new multi-year contract with Coach Garus with a raise, a one-time bonus, and revised incentive pay to include a grade point average (GPA) incentive.

In 2015, the Women's Volleyball Team went 23-7 overall and 15-3 in Mountain West play. The 15 conference wins tied the most in school history, and were the most since joining the Mountain West in 2011. The BSU Broncos won nine games in a row to end the season and 15 of their last 16. Coach Garus was named Mountain West Coach of the Year and coached five all-conference players, which is also a school record.

The new contract will be a one (1) year, eleven (11) month agreement, commencing on February 28, 2016 and terminating on January 31, 2018, with the option for a one-year extension. The one-time bonus is \$750. The new salary is \$100,000, with incentives as follows:

Academic Achievement

Academic incentive pay may be earned if annual team APR ranks nationally and meets the following levels in the national ranking within women's volleyball:

2015 – 2016 academic year:

National Rank Within Sport:

970-974	\$1,500
975-979	\$1,750
980-984	\$2,000
985 and above	\$5,000

BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

2016 – 2017 academic year on:

National Rank Within Sport:

970-974	\$1,500
975-979	\$1,750
980-984	\$2,000
985 and above	\$3,500

Annual Team Grade Point Average

3.0+ Average Team GPA \$1,500

Athletic Achievement

Conference Championship	\$5,000
	OR
Qualifying team for NCAA Tournament	\$3,000
	AND
Top 25 National Ranking at End of Season	\$2,500
NCAA Regional Coach of the Year	\$3,000
NCAA National Coach of the Year	\$5,000
Conference Coach of the Year	\$3,000
Winning Record	\$1,500
	Or
Number of Wins	
20 Wins	\$2,500 or
21 Wins	\$3,000 or
22 Wins	\$3,500 or
23 Wins	\$4,000 or
24+ Wins	\$4,500 or
Top 50 Team RPI at End of Season:	\$7,500

In the event coach Garus terminates the agreement for convenience, the following liquidated damages will be due: \$20,000 for the first year of the contract or \$10,000 for the second year.

IMPACT

The proposed multi-year contract includes a \$100,000 base salary with a one-time bonus of \$750. Depending on academic and athletic performance, maximum compensation (based on 2015-2016 academic year bonus levels) for the first year of the contract would be \$131,000.

ATTACHMENTS

Attachment 1 – Clean version of Proposed Contract	Page 5
Attachment 2 – Redline Comparison between the 2015-17 to Proposed	Page 19
Attachment 3 – Redline Comparison between the Model to Proposed	Page 33
Attachment 4 – 4 Year APR Scores and GPA	Page 63
Attachment 5 – Max compensation Calculation	Page 64
Attachment 6 – Peers Liquidated Damages Comparison	Page 65

BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

Attachment 7 – Mountain West Salary/Incentive Chart

Page 66

STAFF COMMENTS AND RECOMMENDATIONS

The proposed contract substantially conforms to the Board-specified multi-year contract template. This contract includes provisions for academic bonuses for the coach based on a combination of team APR scores and GPA—a relatively new approach for coach contracts. This contract may provide an opportunity for Board members to note and discuss the proposed (or alternate) approaches for academic bonuses; for example, the relative weighting of academic performance to a team's athletic performance (in this case, with the APR bonus equivalent to a conference championship); the change in the APR incentive from the first to the second year of the contract; and/or the relative weight of monetary bonuses between APR and GPA. A history of the team's recent APR and GPA performance is included in Attachment 4. Staff recommends approval.

BOARD ACTION

I move to approve the request by Boise State University to enter into a new multi-year agreement with Coach Garus commencing on February 28, 2016 and terminating on January 31, 2018, with the option for a one-year extension in substantial conformance with the terms of the agreement set forth in Attachment 1.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

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EMPLOYMENT AGREEMENT

This Employment Agreement (the “Agreement”) is entered into this _____ day of _____, (“Effective Date”) by and between Boise State University (“the University”) and Shawn Garus (“Coach”).

ARTICLE 1

1.1. Employment. Subject to the terms and conditions of this Agreement, the University shall employ Coach as the head coach (the “Position”) of its intercollegiate women’s volleyball (the “Team”). Coach represents and warrants that Coach is fully qualified to serve, and is available for employment, in this capacity.

1.2. Reporting Relationship. Coach shall report and be responsible directly to the University’s Director of Athletics (the “Director”) or the Director’s designee. Coach shall abide by the reasonable instructions of Director or the Director’s designee and shall confer with the Director or the Director’s designee on all administrative and technical matters. Coach shall also be under the general supervision of the University’s President (the “President”).

1.3. Duties. Coach shall manage and supervise the Team and shall perform such other duties in the University’s athletic program as the Director may assign and as may be described elsewhere in this Agreement. Coach shall, to the best of Coach’s ability, and consistent with University policies and procedures, perform all duties and responsibilities customarily associated with the Position.

ARTICLE 2

2.1. Term. This Agreement is for a fixed-term appointment of one (1) year eleven (11) months, commencing on February 28, 2016 and terminating, without further notice to Coach, on January 31, 2018 (the “Term”), unless sooner terminated in accordance with other provisions of this Agreement.

2.2. Extension or Renewal. This Agreement is renewable solely upon an offer from the University on or before October 1, 2017 and an acceptance by Coach, both of which must be in writing and signed by the parties. Extension of the contract will be at the sole discretion of the University and not based on athletic or academic achievement. Any renewal is subject to the prior approval of the University’s Board of Trustees. This Agreement in no way grants to Coach a claim to tenure in employment, nor shall Coach’s service pursuant to this Agreement count in any way toward tenure at the University.

ARTICLE 3

3.1 Regular Compensation.

3.1.1. In consideration of Coach's services and satisfactory performance of this Agreement, the University shall provide to Coach:

- a) A salary in the amount of \$100,000 per year, payable in biweekly installments in accordance with normal University procedures, and such salary increases as may be determined appropriate by the Director and President and approved by the University's Board of Trustees;
- b) A one-time bonus payment in the amount of \$750;
- c) The opportunity to receive such employee benefits calculated on the "base salary" as the University provides generally to non-faculty exempt employees;
- d) Assignment of one vehicle through the Department's trade-out program during the term of this Agreement, subject to and according to the policy of the University's Board of Trustees. Insurance premiums for the assigned vehicle shall be paid by Coach. Any vehicle assigned shall be returned in the same or similar condition as it was upon being assigned, reasonable wear and tear excepted; and
- e) The opportunity to receive such employee benefits as the University's Department of Athletics (the "Department") provides generally to its employees of a comparable level. Coach hereby agrees to abide by the terms and conditions, as now existing or hereafter amended, of such employee benefits.

3.2 Supplemental Compensation. Coach may earn supplemental compensation as follows:

3.2.1. Academic Achievement Incentive Pay. Coach shall qualify for Academic Incentive Pay as follows:

- a) For the 2015-16 academic year, if the single year team Academic Progress Rate ("APR") for the Team meets the following levels in the National Ranking within Women's Volleyball:

National Score within Sport
970-974 = \$1,500

**BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016**

ATTACHMENT 1

975-979	=	\$1,750
980-984	=	\$2,000
985 and above	=	\$5,000

If Coach qualifies for Academic Incentive Pay, it will be paid as soon as reasonably practical following APR rating determination and verification by the NCAA, if Coach is still employed by the University on that date.

- b) For the 2016-17 academic year, if the single year team Academic Progress Rate (“APR”) for the Team meets the following levels in the National Ranking within Women’s Volleyball:

National Score within Sport		
970-974	=	\$1,500
975-979	=	\$1,750
980-984	=	\$2,000
985 and above	=	\$3,500

and

Coach shall qualify for Academic Incentive Pay if the Annual Team Grade Point Average (“GPA”), defined as the average of the fall and spring term GPAs for scholarship student-athletes, meets the following level:

3.0+ Average Team GPA	=	\$1,500
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If Coach qualifies for Grade Point Average Pay, it will be paid in conjunction with APR, if Coach is still employed by the University on that date.

3.2.2. Athletic Achievement Incentive Pay. Coach may qualify for Athletic Incentive Pay as follows:

- | | |
|--|---------|
| a) The greater of the following two: | |
| Conference Championship: | \$5,000 |
| Qualify team for NCAA Tournament: | \$3,000 |
| b) Top 25 National Ranking at End of Season: | \$2,500 |
| c) NCAA Regional Coach of the Year: | \$3,000 |
| d) NCAA National Coach of the Year: | \$5,000 |
| e) Conference Coach of the Year: | \$3,000 |

f) The greatest of the following:

Winning Record:	\$1,500 or
Amount of Wins:	
20 Wins	\$2,500 or
21 Wins	\$3,000 or
22 Wins	\$3,500 or
23 Wins	\$4,000 or
24+ Wins	\$4,500 or
Top 50 Team RPI at End of Season:	\$7,500

If Coach qualifies for Athletic Incentive Pay under this Section, University will pay Coach on the first regular pay date in February if Coach is still employed by the University on that date.

3.2.3. Conditions for payment of Academic and Athletic Achievement Incentive supplemental compensation

Any such supplemental compensation paid to Coach shall be accompanied with a detailed justification for the supplemental compensation and such justification shall be separately reported to the Board of Trustees as a document available to the public under the Idaho Public Records Act.

3.2.4. Coach may receive the compensation hereunder from the University or the University's designated media outlet(s) or a combination thereof each year during the term of this Agreement in compensation for participation in media programs and public appearances (collectively, "Programs"). Agreements requiring Coach to participate in Programs related to Coach's duties as an employee of the University are the property of the University. The University shall have the exclusive right to negotiate and contract with all producers of media productions and all parties desiring public appearances by Coach. Coach agrees to cooperate with the University in order for the Programs to be successful and agrees to provide Coach's services to and appear on the Programs and to cooperate in their production, broadcasting, and telecasting. Neither Coach nor any assistant coach shall appear without the prior written approval of the Director on any radio or television program (including but not limited to a coach's show, call-in show, or interview show) or a regularly scheduled news segment, except that this prohibition shall not apply to routine news media interviews for which no compensation is received. Without the prior written approval of the Director, Coach shall not appear in any commercial endorsements which are broadcast on radio or television that conflict with those broadcast on the University's designated media outlets.

3.2.5. Coach agrees that the University has the exclusive right to operate athletic camps ("Camps") on its campus using University facilities. The University shall allow Coach the opportunity to earn supplemental compensation by assisting with the Camps in Coach's capacity as a University employee. Coach hereby agrees to assist in the marketing, supervision,

and general administration of the Camps. Coach also agrees that Coach will perform all obligations mutually agreed upon by the parties. In exchange for Coach's participation in the Camps, the University shall pay Coach supplemental compensation.

3.2.6. Coach agrees that the University has the exclusive right to select footwear, apparel and/or equipment for the use of its student-athletes and staff, including Coach, during official practices and games and during times when Coach or the Team is being filmed by motion picture or video camera or posing for photographs in their capacity as representatives of the University. In order to avoid entering into an agreement with a competitor of any University selected vendors, Coach shall submit all outside consulting agreements to the University for review and approval prior to execution. Coach shall also report such outside income to the University in accordance with National Collegiate Athletic Association (the "NCAA") rules. Coach further agrees that Coach will not endorse any athletic footwear, apparel and/or equipment products, and will not participate in any messages or promotional appearances which contain a comparative or qualitative description of athletic footwear, apparel, or equipment products.

3.3. General Conditions of Compensation. All compensation provided by the University to Coach is subject to deductions and withholdings as required by law or the terms and conditions of any fringe benefit in which Coach participates. However, if any fringe benefit is based in whole or in part upon the compensation provided by the University to Coach, such fringe benefit shall be based only on the compensation provided pursuant to section 3.1.1 and paid from the University to Coach, except to the extent required by the terms and conditions of a specific fringe benefit program.

ARTICLE 4

4.1. Coach's Specific Duties and Responsibilities. In consideration of the compensation specified in this Agreement, Coach, in addition to the obligations set forth elsewhere in this Agreement, shall:

4.1.1. Devote Coach's full time and best efforts to the performance of Coach's duties under this Agreement;

4.1.2. Develop and implement programs and procedures with respect to the evaluation, recruitment, training, and coaching of Team members which enable them to compete successfully and reasonably protect their health, safety, and well-being;

4.1.3. Observe and uphold all academic standards, requirements, and policies of the University and encourage Team members to perform to their highest academic potential and to graduate in a timely manner; and

4.1.4. Know, recognize, and comply with all applicable laws and the policies, rules and regulations of the University, the University's Board of Trustees, the conference of which the University is a member (the "Conference"), and the NCAA; supervise and take appropriate steps to ensure that Coach's assistant coaches, any other employees for whom Coach

is administratively responsible, and the members of the Team know, recognize, and comply with all such laws, policies, rules and regulations; and immediately report to the Director and to the University's Director of NCAA Compliance if Coach has reasonable cause to believe that any person or entity, including without limitation representatives of the University's athletic interests, has violated or is likely to violate any such laws, policies, rules or regulations. Coach shall cooperate fully with the University and Department at all times. The applicable laws, policies, rules, and regulations include the following, as they may be amended from time-to-time: (a) Governing Policies and Procedures and Rule Manual of the University's Board of Trustees; (b) the University's Policy Manual; (c) the policies of the Department; (d) NCAA rules and regulations; and (e) the rules and regulations of the Conference.

4.2 Outside Activities. Coach shall not undertake any business, professional or personal activities, or pursuits that would prevent Coach from devoting Coach's full time and best efforts to the performance of Coach's duties under this Agreement, that would otherwise detract from those duties in any manner, or that, in the opinion of the University, would reflect adversely upon the University or its athletic program. Subject to the terms and conditions of this Agreement, Coach may, with the prior written approval of the Director, who may consult with the President, enter into separate arrangements for outside activities and endorsements which are consistent with Coach's obligations under this Agreement. Coach may not use the University's name, logos, or trademarks in connection with any such arrangements without the prior written approval of the Director and the President.

4.3 Outside Income. In accordance with NCAA rules, Coach shall obtain prior written approval from the President and Director for all athletically-related income and benefits from sources outside the University. Coach shall report the source and amount of all such income and benefits to the President whenever reasonably requested, but in no event less than annually before the close of business on June 30th of each year or the last regular University work day preceding June 30th. The report shall be in a format reasonably satisfactory to the University. In no event shall Coach accept or receive directly or indirectly any monies, benefits, or gratuities whatsoever from any person, association, corporation, University booster club, University alumni association, University foundation, or other benefactor, if the acceptance or receipt of the monies, benefits, or gratuities would violate applicable law or the policies, rules, and regulations of the University, the University's Board of Trustees, the Conference, or the NCAA. Sources of such income shall include, but are not limited to, the following: (a) income from annuities; (b) sports camps, clinics, speaking engagements, consultations, directorships, or related activities; (c) housing benefits (including preferential housing arrangements); (d) country club membership(s); (e) complimentary tickets (e.g., tickets to a Stampede game); (f) television and radio programs; (g) endorsement or consultation contracts with athletic shoe, apparel, or equipment manufacturers.

4.4. Hiring Authority. Coach shall have the responsibility and the sole authority to recommend to the Director the hiring and termination of assistant coaches for the Team, but the decision to hire or terminate an assistant coach shall be made by the Director and shall, when necessary or appropriate, be subject to the approval of President and the University's Board of Trustees.

4.5. Scheduling. Coach shall consult with, and may make recommendations to, the Director or the Director's designee with respect to the scheduling of Team's competitions, but the final decision shall be made by the Director or the Director's designee.

4.6. Other Coaching Opportunities. Coach shall not, under any circumstances, interview for, negotiate for, or accept employment as a coach at any other institution of higher education or with any professional sports team requiring performance of duties set forth herein prior to the expiration of this Agreement, without the prior approval of the Director. Such approval shall not unreasonably be withheld. Without first giving ten (10) days prior written notice to the Director, Coach shall not negotiate for or accept employment, under any circumstances, as a coach at any other institution of higher education or with any professional sports team requiring the performance of the duties set forth herein.

ARTICLE 5

5.1. Termination of Coach for Cause. The University may, in its discretion, suspend Coach from some or all of Coach's duties, temporarily or permanently, and with or without pay; reassign Coach to other duties; or terminate this Agreement at any time for good or adequate cause, as those terms are defined in applicable rules, regulations, and policies.

5.1.1. In addition to the definitions contained in applicable rules and policies, the University and Coach hereby specifically agree that the following shall constitute good or adequate cause for suspension, reassignment, or termination of this Agreement:

- a) A deliberate or major violation of Coach's duties under this agreement or the refusal or unwillingness of Coach to perform such duties in good faith and to the best of Coach's abilities;
- b) The failure of Coach to remedy any violation of any of the terms of this Agreement within thirty (30) days after written notice from the University;
- c) A deliberate or major violation by Coach of any applicable law or the policies, rules, or regulations of the University, the University's Board of Trustees, the Conference, or the NCAA, including but not limited to any such violation which may have occurred during the employment of Coach at another NCAA or National Association of Intercollegiate Athletics ("NAIA") member institution;
- d) Ten (10) working days' absence of Coach from duty without the University's consent;
- e) Any conduct of Coach that constitutes moral turpitude or that would, in the University's judgment, reflect adversely on the University or its athletic programs;

- f) The failure of Coach to represent the University and its athletic programs positively in public and private forums;
- g) The failure of Coach to fully and promptly cooperate with the NCAA or the University in any investigation of possible violations of any applicable law or the policies, rules or regulations of the University, the University's Board of Trustees, the Conference, or the NCAA;
- h) The failure of Coach to report a known violation of any applicable law or the policies, rules or regulations of the University, the University's Board of Trustees, the Conference, or the NCAA, by one of Coach's assistant coaches, any other employees for whom Coach is administratively responsible, or a member of the Team; or
- i) A violation of any applicable law or the policies, rules or regulations of the University, the University's Board of Trustees, the Conference, or the NCAA, by one of Coach's assistant coaches, any other employees for whom Coach is administratively responsible, or a member of the Team if Coach knew or should have known by ordinary supervision of the violation and could have prevented it by such ordinary supervision.

5.1.2. Suspension, reassignment, or termination for good or adequate cause shall be effectuated by the University as follows: before the effective date of the suspension, reassignment, or termination, the Director or Director's designee shall provide Coach with notice, which notice shall be accomplished in the manner provided for in this Agreement and shall include the reason(s) for the contemplated action. Coach shall then have an opportunity to respond. After Coach responds or fails to respond, the University shall notify Coach whether, and if so when, the action will be effective.

5.1.3. In the event of any termination for good or adequate cause, the University's obligation to provide compensation and benefits to Coach, whether direct, indirect, supplemental or collateral, shall cease as of the date of such termination, and the University shall not be liable for the loss of any collateral business opportunities or other benefits, perquisites, or income resulting from outside activities or from any other sources.

5.1.4. If found in violation of NCAA regulations, Coach shall, in addition to the provisions of Section 5.1, be subject to disciplinary or corrective action as set forth in the provisions of the NCAA enforcement procedures. This section applies to violations occurring at the University or at previous institutions at which Coach was employed.

5.2. Termination of Coach for Convenience of University.

5.2.1. At any time after commencement of this Agreement, the University, for its own convenience, may terminate this Agreement by giving ten (10) days prior written notice to Coach.

5.2.2. In the event that the University terminates this Agreement for its own convenience, the University shall be obligated to pay to Coach, as liquidated damages and not a penalty, the “base salary” set forth in section 3.1.1(a), excluding all deductions required by law, on the regular paydays of the University until the Term of this Agreement ends or until Coach obtains reasonably comparable employment, whichever occurs first, provided however, in the event Coach obtains other employment after such termination, then the amount of compensation the University pays will be adjusted and reduced by the amount of compensation paid Coach as a result of such other employment, such adjusted compensation to be calculated for each University pay-period by reducing the gross salary set forth in section 3.1.1(a) (before deductions required by law) by the gross compensation paid to Coach under the other employment, then subtracting from this adjusted gross compensation deductions according to law. In addition, Coach will be entitled to continue the health insurance plan and group life insurance as if Coach remained a University employee until the term of this Agreement ends or until Coach obtains reasonably comparable employment or any other employment providing Coach with a reasonably comparable health plan and group life insurance, whichever occurs first. Coach shall be entitled to no other compensation or fringe benefits, except as otherwise provided herein or required by law. Coach specifically agrees to inform the University within ten (10) business days of obtaining other employment and to advise the University of all relevant terms of such employment, including without limitation, the nature and location of the employment, salary, other compensation, health insurance benefits, life insurance benefits, and other fringe benefits. Failure to so inform and advise the University shall constitute a material breach of this Agreement and the University’s obligation to pay compensation under this provision shall end. Coach agrees not to accept employment for compensation at less than the fair market value of Coach’s services, as determined by all circumstances existing at the time of employment. Coach further agrees to repay to the University all compensation paid by the University after the date Coach obtains other employment, to which Coach is not entitled under this provision.

5.2.3. The parties have both been represented by, or had the opportunity to consult with, legal counsel in the contract negotiations and have bargained for and agreed to the foregoing liquidated damages provision, giving consideration to the fact that Coach may lose certain benefits, supplemental compensation, or outside compensation relating to Coach’s employment with the University, which damages are extremely difficult to determine with certainty. The parties further agree that the payment of such liquidated damages by the University and the acceptance thereof by Coach shall constitute adequate and reasonable compensation to Coach for the damages and injury suffered by Coach because of such termination by the University. The liquidated damages are not, and shall not be construed to be, a penalty.

5.2.4 In the event of non-renewal or termination of Coach’s employment,

Coach will use all accumulated annual leave prior to the end of the contract period.

5.3. Termination by Coach for Convenience.

5.3.1. Coach recognizes that Coach's promise to work for the University for the entire term of this Agreement is of the essence of this Agreement. Coach also recognizes that the University is making a highly valuable investment in Coach's employment by entering into this Agreement and that its investment would be lost were Coach to resign or otherwise terminate Coach's employment with the University before the end of the contract Term.

5.3.2. Coach may terminate this Agreement for convenience during its term by giving prior written notice to the University. Termination shall be effective ten (10) days after such written notice is given to the University. Such termination must occur at a time outside the Team's season (including NCAA post-season competition) so as to minimize the impact on the program.

5.3.3. If Coach terminates this Agreement for convenience at any time, all obligations of the University shall cease as of the effective date of the termination. If Coach terminates this Agreement for convenience, Coach shall pay to the University, as liquidated damages and not a penalty, for the breach of this Agreement the following sum: (a) if the Agreement is terminated on or before January 31, 2017, the sum of \$20,000.00; (b) if the Agreement is terminated between February 1, 2017 and January 31, 2018 and inclusive, the sum of \$10,000.00. The liquidated damages shall be due and payable within twenty (20) days of the effective date of the termination, and any unpaid amount shall bear simple interest at a rate eight (8) percent per annum until paid.

5.3.4. The parties have both been represented by, or had the opportunity to consult with, legal counsel in the contract negotiations and have bargained for and agreed to the foregoing liquidated damages provision, giving consideration to the fact that the University will incur administrative and recruiting costs in obtaining a replacement for Coach, in addition to potentially increased compensation costs if Coach terminates this Agreement for convenience, which damages are extremely difficult to determine with certainty. The parties further agree that the payment of such liquidated damages by Coach and the acceptance thereof by the University shall constitute adequate and reasonable compensation to the University for the damages and injury suffered by it because of such termination by Coach. The liquidated damages are not, and shall not be construed to be, a penalty. This section 5.3.4 shall not apply if Coach terminates this Agreement because of a material breach by the University.

5.3.5. Except as provide elsewhere in this Agreement, if Coach terminates this Agreement for convenience, Coach shall forfeit to the extent permitted by law Coach's right to receive all supplemental compensation and other payments and all accumulated annual leave.

5.4. Termination Due to Disability or Death of Coach.

5.4.1. Notwithstanding any other provision of this Agreement, this Agreement shall terminate automatically if Coach becomes totally or permanently disabled as defined by the University's disability insurance carrier, becomes unable to perform the essential functions of the Position, or dies.

5.4.2. If this Agreement is terminated because of Coach's death, Coach's salary and all other benefits shall terminate as of the last day worked, except that Coach's personal representative or other designated beneficiary shall be paid all compensation due or unpaid and death benefits, if any, as may be contained in any fringe benefit plan now in force or hereafter adopted by the University and due to Coach's estate or beneficiaries hereunder.

5.4.3. If this Agreement is terminated because Coach becomes totally or permanently disabled as defined by the University's disability insurance carrier, or becomes unable to perform the essential functions of the position of head coach, all salary and other benefits shall terminate, except that Coach shall be entitled to receive any compensation due or unpaid and any disability-related benefits to which Coach is entitled by virtue of employment with the University.

5.5. Interference by Coach. In the event of suspension, reassignment or termination, Coach agrees that Coach will not interfere with the University's student-athletes or otherwise obstruct the University's ability to transact business or operate its intercollegiate athletics program.

5.6. No Liability. The University shall not be liable to Coach for the loss of any collateral business opportunities or any other benefits, perquisites or income from any sources that may ensue as a result of any termination of this Agreement by either party or due to death or disability or the suspension or reassignment of Coach, regardless of the circumstances.

5.7. Waiver of Rights. Because Coach is receiving a multi-year contract and the opportunity to receive supplemental compensation and because such contracts and opportunities are not customarily afforded to University employees, if the University suspends or reassigns Coach, or terminates this Agreement for good or adequate cause or for convenience, Coach shall have all the rights provided for in this Agreement but hereby releases the University from compliance with the notice, appeal, and similar employment-related rights provided for in the State Board of Education Rule Manual (ID. ADMIN. CODE r. 08.01.01 et seq.) and Governing Policies and Procedures Manual, and University Policies.

ARTICLE 6

6.1. Board Approval. This Agreement shall not be effective until and unless approved of the University's Board of Trustees and executed by both parties as set forth below. In addition, the payment of any compensation pursuant to this Agreement shall be subject to: the approval of the University's Board of Trustees, the President, and the Director; the sufficiency of legislative appropriations; the receipt of sufficient funds in the account from which such

compensation is paid; and the Board of Trustees and University's rules or policies regarding furloughs or financial exigency.

6.2. University Property. All personal property, material, and articles of information, including, without limitation, keys, credit cards, personnel records, recruiting records, team information, films, statistics or any other personal property, material, or data, furnished to Coach by the University or developed by Coach on behalf of the University or at the University's direction or for the University's use or otherwise in connection with Coach's employment hereunder are and shall remain the sole property of the University. Within twenty-four (24) hours of the expiration of the Term of this Agreement or its earlier termination as provided herein, Coach shall immediately cause any such personal property, materials, and articles of information in Coach's possession or control to be delivered to the Director.

6.3. Assignment. Neither party may assign its rights or delegate its obligations under this Agreement without the prior written consent of the other party.

6.4. Waiver. No waiver of any default in the performance of this Agreement shall be effective unless in writing and signed by the waiving party. The waiver of a particular breach in the performance of this Agreement shall not constitute a waiver of any other or subsequent breach. The resort to a particular remedy upon a breach shall not constitute a waiver of any other available remedies.

6.5. Severability. If any provision of this Agreement is determined to be invalid or unenforceable, the remainder of the Agreement shall not be affected and shall remain in effect.

6.6. Governing Law. This Agreement shall be subject to and construed in accordance with the laws of the state of Idaho as an agreement to be performed in Idaho. Any action based in whole or in part on this Agreement shall be brought in state district court in Ada County, Boise, Idaho.

6.7. Oral Promises. Oral promises of an increase in annual salary or of any supplemental or other compensation shall not be binding upon the University.

6.8. Force Majeure. Any prevention, delay or stoppage due to strikes, lockouts, labor disputes, acts of God, inability to obtain labor or materials or reasonable substitutes therefore, governmental restrictions, governmental regulations, governmental controls, enemy or hostile governmental action, civil commotion, fire or other casualty, and other causes beyond the reasonable control of the party obligated to perform (including financial inability), shall excuse the performance by such party for a period equal to any such prevention, delay or stoppage.

6.9. Non-Confidentiality. Coach hereby consents and agrees that this document may be released and made available to the public after it is signed by Coach. Coach further agrees that all documents and reports Coach is required to produce under this Agreement may be released and made available to the public at the University's sole discretion.

6.10. Notices. Any notice under this Agreement shall be in writing and be delivered in person or by public or private courier service (including U.S. Postal Service Express Mail) or certified mail with return receipt requested or by facsimile. All notices shall be addressed to the parties at the following addresses or at such other addresses as the parties may from time to time direct in writing:

the University: Boise State University
 Director of Athletics
 1910 University Drive
 Boise, Idaho 83725-1020

with a copy to: Boise State University
 Office of the President
 1910 University Drive
 Boise, Idaho 83725-1000

Coach: Shawn Garus
 Last known address on file with
 University's Human Resource Services

Any notice shall be deemed to have been given on the earlier of: (a) actual delivery or refusal to accept delivery, (b) the date of mailing by certified mail, or (c) the day facsimile delivery is verified. Actual notice, however and from whomever received, shall always be effective.

6.11. Headings. The headings contained in this Agreement are for reference purposes only and shall not in any way affect the meaning or interpretation hereof.

6.12. Binding Effect. This Agreement is for the benefit only of the parties hereto and shall inure to the benefit of and bind the parties and their respective heirs, legal representatives, successors and assigns.

6.13. Non-Use of Names and Trademarks. Coach shall not, without the University's prior written consent in each case, use any name, trade name, trademark, or other designation of the University (including contraction, abbreviation or simulation), except in the course and scope of Coach's official University duties.

6.14. No Third Party Beneficiaries. There are no intended or unintended third party beneficiaries to this Agreement.

6.15. Entire Agreement; Amendments. This Agreement constitutes the entire agreement between the parties and supersedes all prior agreements and understandings with respect to the same subject matter. No amendment or modification of this Agreement shall be effective unless in writing, signed by both parties, and approved by the University's Board of Trustees.

**BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016**

ATTACHMENT 1

6.16. Opportunity to Consult with Attorney. Coach acknowledges that Coach has had the opportunity to consult and review this Agreement with an attorney. Accordingly, in all cases, the language of this Agreement shall be construed simply, according to its fair meaning, and not strictly for or against any party.

IN WITNESS WHEREOF, the parties agree to the terms and conditions of this Agreement and the incorporated documents attached hereto and have executed this Agreement freely and agree to be bound hereby as of the Effective Date.

UNIVERSITY

COACH

Dr. Robert Kustra, President

Shawn Garus

Approved by the Board on the ____ day of _____, 2016.

EMPLOYMENT AGREEMENT

This Employment Agreement (the “Agreement”) is entered into this _____ day of _____, (“Effective Date”) by and between Boise State University (“the University”) and Shawn Garus (“Coach”).

ARTICLE 1

1.1. Employment. Subject to the terms and conditions of this Agreement, the University shall employ Coach as the head coach (the “Position”) of its intercollegiate women’s volleyball (the “Team”). Coach represents and warrants that Coach is fully qualified to serve, and is available for employment, in this capacity.

1.2. Reporting Relationship. Coach shall report and be responsible directly to the University’s Director of Athletics (the “Director”) or the Director’s designee. Coach shall abide by the reasonable instructions of Director or the Director’s designee and shall confer with the Director or the Director’s designee on all administrative and technical matters. Coach shall also be under the general supervision of the University’s President (the “President”).

1.3. ~~1.3~~ Duties. Coach shall manage and supervise ~~the University’s~~ the Team and shall perform such other duties in the University’s athletic program as the Director may assign and as may be described elsewhere in this Agreement. Coach shall, to the best of Coach’s ability, and consistent with University policies and procedures, perform all duties and responsibilities customarily associated with the Position.

ARTICLE 2

2.1. Term. This Agreement is for a fixed-term appointment of ~~two (2) years~~ one (1) year eleven (11) months, commencing on February ~~1, 2015~~ 28, 2016 and terminating, without further notice to Coach, on January 31, ~~2017~~ 2018 (the “Term”), unless sooner terminated in accordance with other provisions of this Agreement.

2.2. Extension or Renewal. This Agreement is renewable solely upon an offer from the University on or before October 1, ~~2016~~ 2017 and an acceptance by Coach, both of which must be in writing and signed by the parties. Extension of the contract will be at the sole discretion of the University and not based on athletic or academic achievement. Any renewal is subject to the prior approval of the University’s Board ~~Education of Trustees~~. This Agreement in no way grants to Coach a claim to tenure in employment, nor shall Coach’s service pursuant to this Agreement count in any way toward tenure at the University.

ARTICLE 3

3.1 Regular Compensation.

3.1.1. In consideration of Coach's services and satisfactory performance of this Agreement, the University shall provide to Coach:

- a) ~~a)~~ A salary in the amount of ~~\$87,610~~ \$100,000 per year, payable in biweekly installments in accordance with normal University procedures, and such salary increases as may be determined appropriate by the Director and President and approved by the University's Board of Trustees;
- ~~a)~~ b) A one-time bonus payment in the amount of \$750;
- ~~b)~~ c) The opportunity to receive such employee benefits calculated on the "base salary" as the University provides generally to non-faculty exempt employees; ~~and~~
- ~~e)~~ d) Assignment of one vehicle through the Department's trade-out program during the term of this Agreement, subject to and according to the policy of the University's Board of Trustees. Insurance premiums for the assigned vehicle shall be paid by Coach. Any vehicle assigned shall be returned in the same or similar condition as it was upon being assigned, reasonable wear and tear excepted; and
- e) The opportunity to receive such employee benefits as the University's Department of Athletics (the "Department") provides generally to its employees of a comparable level. Coach hereby agrees to abide by the terms and conditions, as now existing or hereafter amended, of such employee benefits.

3.2 Supplemental Compensation. Coach may earn supplemental compensation as follows:

3.2.1. Academic Achievement Incentive Pay. Coach shall qualify for Academic Incentive Pay as follows:

- a) For the 2015-16 academic year, if the single year team Academic Progress Rate ("APR") for the Team meets the following levels in the National Ranking within Women's Volleyball:

National Score within Sport
970-974 = \$1,500

**BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016**

ATTACHMENT 2

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985 and above	=	\$5,000

If Coach qualifies for Academic Incentive Pay, it will be paid as soon as reasonably practical following APR rating determination and verification by the NCAA, if Coach is still employed by the University on that date.

- b) For the 2016-17 academic year, if the single year team Academic Progress Rate ("APR") for the Team meets the following levels in the National Ranking within Women's Volleyball:

<u>National Score within Sport</u>		
<u>970-974</u>	<u>=</u>	<u>\$1,500</u>
<u>975-979</u>	<u>=</u>	<u>\$1,750</u>
<u>980-984</u>	<u>=</u>	<u>\$2,000</u>
<u>985 and above</u>	<u>=</u>	<u>\$3,500</u>

and

Coach shall qualify for Academic Incentive Pay if the Annual Team Grade Point Average ("GPA"), defined as the average of the fall and spring term GPAs for scholarship student-athletes, meets the following level:

<u>3.0+ Average Team GPA</u>	<u>=</u>	<u>\$1,500</u>
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If Coach qualifies for Grade Point Average Pay, it will be paid in conjunction with APR, if Coach is still employed by the University on that date.

3.2.2. Athletic Achievement Incentive Pay. Coach may qualify for Athletic Incentive Pay as follows:

- a) The greater of the following two:

Conference Championship:	\$5,000
OR	
Qualify team for NCAA Tournament:_____	\$3,000

- b) Top 25 National Ranking at End of Season: \$2,500

- c) NCAA Regional Coach of the Year: \$3,000

- d) NCAA National Coach of the Year: \$5,000

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e) Conference Coach of the Year:	_____ \$3,000
f) <u>The greatest of the following:</u>	
Winning Record:	_____ \$1,500 <u>or</u>
<u>Amount of Wins:</u>	
<u>20 Wins</u>	<u>\$2,500 or</u>
<u>21 Wins</u>	<u>\$3,000 or</u>
<u>22 Wins</u>	<u>\$3,500 or</u>
<u>23 Wins</u>	<u>\$4,000 or</u>
<u>24+ Wins</u>	<u>\$4,500 or</u>
<u>Top 50 Team RPI at End of Season:</u>	<u>\$7,500</u>

If Coach qualifies for Athletic Incentive Pay under this Section, University will pay Coach on the first regular pay date in February ~~2014~~ if Coach is still employed by the University on that date.

3.2.3. Conditions for payment of Academic and Athletic Achievement Incentive supplemental compensation

Any such supplemental compensation paid to Coach shall be accompanied with a detailed justification for the supplemental compensation and such justification shall be separately reported to the Board of Trustees as a document available to the public under the Idaho Public Records Act.

3.2.4 ~~The~~ _____ Coach may receive the compensation hereunder from the University or the University's designated media outlet(s) or a combination thereof each year during the term of this Agreement in compensation for participation in media programs and public appearances (collectively, "Programs"). Agreements requiring ~~the~~ Coach to participate in Programs related to Coach's duties as an employee of the University are the property of the University. The University shall have the exclusive right to negotiate and contract with all producers of media productions and all parties desiring public appearances by ~~the~~ Coach. Coach agrees to cooperate with the University in order for the Programs to be successful and agrees to provide Coach's services to and appear on the Programs and to cooperate in their production, broadcasting, and telecasting. ~~It is understood that neither~~ Neither Coach nor any assistant coach shall appear without the prior written approval of the Director on any radio or television program (including but not limited to a coach's show, call-in show, or interview show) or a regularly scheduled news segment, except that this prohibition shall not apply to routine news media interviews for which no compensation is received. Without the prior written approval of the Director, Coach shall not appear in any commercial endorsements which are broadcast on radio or television that conflict with those broadcast on the University's designated media outlets.

3.2.5. Coach agrees that the University has the exclusive right to operate athletic camps ("Camps") on its campus using University facilities. The University shall allow Coach

the opportunity to earn supplemental compensation by assisting with the Camps in Coach's capacity as a University employee. Coach hereby agrees to assist in the marketing, supervision, and general administration of the Camps. Coach also agrees that Coach will perform all obligations mutually agreed upon by the parties. In exchange for Coach's participation in the Camps, the University shall pay Coach supplemental compensation.

3.2.6- Coach agrees that the University has the exclusive right to select footwear, apparel and/or equipment for the use of its student-athletes and staff, including Coach, during official practices and games and during times when Coach or the Team is being filmed by motion picture or video camera or posing for photographs in their capacity as representatives of the University. In order to avoid entering into an agreement with a competitor of any University selected vendors, Coach shall submit all outside consulting agreements to the University for review and approval prior to execution. Coach shall also report such outside income to the University in accordance with National Collegiate Athletic Association (the "NCAA") rules. Coach further agrees that Coach will not endorse any athletic footwear, apparel and/or equipment products, and will not participate in any messages or promotional appearances which contain a comparative or qualitative description of athletic footwear, apparel, or equipment products.

3.3. General Conditions of Compensation. All compensation provided by the University to Coach is subject to deductions and withholdings as required by law or the terms and conditions of any fringe benefit in which Coach participates. However, if any fringe benefit is based in whole or in part upon the compensation provided by the University to Coach, such fringe benefit shall be based only on the compensation provided pursuant to section 3.1.1 and paid from the University to Coach, except to the extent required by the terms and conditions of a specific fringe benefit program.

ARTICLE 4

4.1. Coach's Specific Duties and Responsibilities. In consideration of the compensation specified in this Agreement, Coach, in addition to the obligations set forth elsewhere in this Agreement, shall:

4.1.1. Devote Coach's full time and best efforts to the performance of Coach's duties under this Agreement;

4.1.2. Develop and implement programs and procedures with respect to the evaluation, recruitment, training, and coaching of Team members which enable them to compete successfully and reasonably protect their health, safety, and well-being;

4.1.3. Observe and uphold all academic standards, requirements, and policies of the University and encourage Team members to perform to their highest academic potential and to graduate in a timely manner; and

4.1.4. Know, recognize, and comply with all applicable laws and the policies, rules and regulations of the University, the University's ~~governing board~~ Board of Trustees, the conference of which the University is a member (the "Conference"), and the NCAA; supervise and take appropriate steps to ensure that Coach's assistant coaches, any other employees for whom Coach is administratively responsible, and the members of the Team know, recognize, and comply with all such laws, policies, rules and regulations; and immediately report to the Director and to the University's Director of NCAA Compliance if Coach has reasonable cause to believe that any person or entity, including without limitation representatives of the University's athletic interests, has violated or is likely to violate any such laws, policies, rules or regulations. Coach shall cooperate fully with the University and Department at all times. The applicable laws, policies, rules, and regulations include the following, as they may be amended from time-to-time: (a) ~~State Board of Education~~ Governing Policies and Procedures and Rule Manual of the University's Board of Trustees; (b) the University's Policy Manual; (c) the policies of the Department; (d) NCAA rules and regulations; and (e) the rules and regulations of the Conference.

4.2 Outside Activities. Coach shall not undertake any business, professional or personal activities, or pursuits that would prevent Coach from devoting Coach's full time and best efforts to the performance of Coach's duties under this Agreement, that would otherwise detract from those duties in any manner, or that, in the opinion of the University, would reflect adversely upon the University or its athletic program. Subject to the terms and conditions of this Agreement, Coach may, with the prior written approval of the Director, who may consult with the President, enter into separate arrangements for outside activities and endorsements which are consistent with Coach's obligations under this Agreement. Coach may not use the University's name, logos, or trademarks in connection with any such arrangements without the prior written approval of the Director and the President.

4.3 Outside Income. In accordance with NCAA rules, Coach shall obtain prior written approval from the President and Director for all athletically-related income and benefits from sources outside the University. Coach shall report the source and amount of all such income and benefits to the President whenever reasonably requested, but in no event less than annually before the close of business on June 30th of each year or the last regular University work day preceding June 30th. The report shall be in a format reasonably satisfactory to the University. In no event shall Coach accept or receive directly or indirectly any monies, benefits, or gratuities whatsoever from any person, association, corporation, University booster club, University alumni association, University foundation, or other benefactor, if the acceptance or receipt of the monies, benefits, or gratuities would violate applicable law or the policies, rules, and regulations of the University, the University's ~~governing board~~ Board of Trustees, the Conference, or the NCAA. Sources of such income shall include, but are not limited to, the following: (a) income from annuities; (b) sports camps, clinics, speaking engagements, consultations, directorships, or related activities; (c) housing benefits (including preferential housing arrangements); (d) country club membership(s); (e) complimentary tickets (~~i.e.g.~~, tickets to a Stampede game); (f) television and radio programs; (g) endorsement or consultation contracts with athletic shoe, apparel, or equipment manufacturers.

4.4. Hiring Authority. Coach shall have the responsibility and the sole authority to recommend to the Director the hiring and termination of assistant coaches for the Team, but the decision to hire or terminate an assistant coach shall be made by the Director and shall, when necessary or appropriate, be subject to the approval of President and the University's Board of Trustees.

4.5. Scheduling. Coach shall consult with, and may make recommendations to, the Director or the Director's designee with respect to the scheduling of Team's competitions, but the final decision shall be made by the Director or the Director's designee.

4.6. Other Coaching Opportunities. Coach shall not, under any circumstances, interview for, negotiate for, or accept employment as a coach at any other institution of higher education or with any professional sports team requiring performance of duties set forth herein prior to the expiration of this Agreement, without the prior approval of the Director. Such approval shall not unreasonably be withheld. Without first giving ten (10) days prior written notice to the Director, Coach shall not negotiate for or accept employment, under any circumstances, as a coach at any other institution of higher education or with any professional sports team requiring the performance of the duties set forth herein ~~without first giving ten (10) days prior written notice to the Director~~.

ARTICLE 5

5.1. Termination of Coach for Cause. The University may, in its discretion, suspend Coach from some or all of Coach's duties, temporarily or permanently, and with or without pay; reassign Coach to other duties; or terminate this Agreement at any time for good or adequate cause, as those terms are defined in applicable rules, regulations, and policies.

5.1.1. In addition to the definitions contained in applicable rules and policies, the University and Coach hereby specifically agree that the following shall constitute good or adequate cause for suspension, reassignment, or termination of this Agreement:

- a) A deliberate or major violation of Coach's duties under this agreement or the refusal or unwillingness of Coach to perform such duties in good faith and to the best of Coach's abilities;
- b) The failure of Coach to remedy any violation of any of the terms of this Agreement within thirty (30) days after written notice from the University;
- c) A deliberate or major violation by Coach of any applicable law or the policies, rules, or regulations of the University, the University's ~~governing board~~ Board of Trustees, the Conference, or the NCAA, including but not limited to any such violation which may have occurred during the employment of Coach at

another NCAA or National Association of Intercollegiate Athletics ("NAIA") member institution;

- d) Ten (10) working days' absence of Coach from duty without the University's consent;
- e) Any conduct of Coach that constitutes moral turpitude or that would, in the University's judgment, reflect adversely on the University or its athletic programs;
- f) The failure of Coach to represent the University and its athletic programs positively in public and private forums;
- g) The failure of Coach to fully and promptly cooperate with the NCAA or the University in any investigation of possible violations of any applicable law or the policies, rules or regulations of the University, the University's ~~governing board~~ Board of Trustees, the Conference, or the NCAA;
- h) The failure of Coach to report a known violation of any applicable law or the policies, rules or regulations of the University, the University's ~~governing board~~ Board of Trustees, the Conference, or the NCAA, by one of Coach's assistant coaches, any other employees for whom Coach is administratively responsible, or a member of the Team; or
- i) A violation of any applicable law or the policies, rules or regulations of the University, the University's ~~governing board~~ Board of Trustees, the Conference, or the NCAA, by one of Coach's assistant coaches, any other employees for whom Coach is administratively responsible, or a member of the Team if Coach knew or should have known by ordinary supervision of the violation and could have prevented it by such ordinary supervision.

5.1.2- Suspension, reassignment, or termination for good or adequate cause shall be effectuated by the University as follows: before the effective date of the suspension, reassignment, or termination, the Director or Director's designee shall provide Coach with notice, which notice shall be accomplished in the manner provided for in this Agreement and shall include the reason(s) for the contemplated action. Coach shall then have an opportunity to respond. After Coach responds or fails to respond, the University shall notify Coach whether, and if so when, the action will be effective.

5.1.3- In the event of any termination for good or adequate cause, the University's obligation to provide compensation and benefits to Coach, whether direct, indirect, supplemental or collateral, shall cease as of the date of such termination, and the University shall

not be liable for the loss of any collateral business opportunities or other benefits, perquisites, or income resulting from outside activities or from any other sources.

5.1.4. If found in violation of NCAA regulations, Coach shall, in addition to the provisions of Section 5.1, be subject to disciplinary or corrective action as set forth in the provisions of the NCAA enforcement procedures. This section applies to violations occurring at the University or at previous institutions at which ~~the~~ Coach was employed.

5.2. Termination of Coach for Convenience of University.

5.2.1. At any time after commencement of this Agreement, the University, for its own convenience, may terminate this Agreement by giving ten (10) days prior written notice to Coach.

5.2.2. In the event that the University terminates this Agreement for its own convenience, the University shall be obligated to pay to Coach, as liquidated damages and not a penalty, the "base salary" set forth in section 3.1.1(a), excluding all deductions required by law, on the regular paydays of the University until the Term of this Agreement ends or until Coach obtains reasonably comparable employment, whichever occurs first, provided however, in the event Coach obtains other employment after such termination, then the amount of compensation the University pays will be adjusted and reduced by the amount of compensation paid Coach as a result of such other employment, such adjusted compensation to be calculated for each University pay-period by reducing the gross salary set forth in section 3.1.1(a) (before deductions required by law) by the gross compensation paid to ~~the~~ Coach under the other employment, then subtracting from this adjusted gross compensation deductions according to law. In addition, Coach will be entitled to continue the health insurance plan and group life insurance as if Coach remained a University employee until the term of this Agreement ends or until Coach obtains reasonably comparable employment or any other employment providing Coach with a reasonably comparable health plan and group life insurance, whichever occurs first. Coach shall be entitled to no other compensation or fringe benefits, except as otherwise provided herein or required by law. Coach specifically agrees to inform the University within ten (10) business days of obtaining other employment and to advise the University of all relevant terms of such employment, including without limitation, the nature and location of the employment, salary, other compensation, health insurance benefits, life insurance benefits, and other fringe benefits. Failure to so inform and advise the University shall constitute a material breach of this Agreement and the University's obligation to pay compensation under this provision shall end. Coach agrees not to accept employment for compensation at less than the fair market value of Coach's services, as determined by all circumstances existing at the time of employment. Coach further agrees to repay to the University all compensation paid by the University after the date Coach obtains other employment, to which Coach is not entitled under this provision.

5.2.3. The parties have both been represented by, or had the opportunity to consult with, legal counsel in the contract negotiations and have bargained for and agreed to the foregoing liquidated damages provision, giving consideration to the fact that ~~the~~ Coach may lose

certain benefits, supplemental compensation, or outside compensation relating to Coach's employment with the University, which damages are extremely difficult to determine with certainty. The parties further agree that the payment of such liquidated damages by the University and the acceptance thereof by Coach shall constitute adequate and reasonable compensation to Coach for the damages and injury suffered by Coach because of such termination by the University. The liquidated damages are not, and shall not be construed to be, a penalty.

5.2.4 In the event of non-renewal or termination of Coach's employment, Coach will use all accumulated annual leave prior to the end of the contract period.

5.3- Termination by Coach for Convenience.

5.3.1—~~The~~ Coach recognizes that Coach's promise to work for the University for the entire term of this Agreement is of the essence of this Agreement. ~~The~~ Coach also recognizes that the University is making a highly valuable investment in Coach's employment by entering into this Agreement and that its investment would be lost were Coach to resign or otherwise terminate Coach's employment with the University before the end of the contract Term.

5.3.2—~~The~~ Coach may terminate this Agreement for convenience during its term by giving prior written notice to the University. Termination shall be effective ten (10) days after such written notice is given to the University. Such termination must occur at a time outside the Team's season (including NCAA post-season competition) so as to minimize the impact on the program.

5.3.3—Coach If ~~the~~ Coach terminates this Agreement for convenience at any time, all obligations of the University shall cease as of the effective date of the termination. If ~~the~~ Coach terminates this Agreement for convenience, Coach shall pay to the University, as liquidated damages and not a penalty, for the breach of this Agreement the following sum: (a) if the Agreement is terminated on or before January 31, ~~2016~~2017, the sum of \$20,000.00; (b) if the Agreement is terminated between February 1, ~~2016~~2017 and January 31, ~~2017~~2018 and inclusive, the sum of \$10,000.00. The liquidated damages shall be due and payable within twenty (20) days of the effective date of the termination, and any unpaid amount shall bear simple interest at a rate eight (8) percent per annum until paid.

5.3.4—The parties have both been represented by or had the opportunity to consult with legal counsel in the contract negotiations and have bargained for and agreed to the foregoing liquidated damages provision, giving consideration to the fact that the University will incur administrative and recruiting costs in obtaining a replacement for Coach, in addition to potentially increased compensation costs if Coach terminates this Agreement for convenience, which damages are extremely difficult to determine with certainty. The parties further agree that the payment of such liquidated damages by Coach and the acceptance thereof by the University shall constitute adequate and reasonable compensation to the University for the damages and injury suffered by it because of such termination by Coach. The liquidated damages are not, and

shall not be construed to be, a penalty. This section 5.3.4 shall not apply if Coach terminates this Agreement because of a material breach by the University.

5.3.5. Except as provide elsewhere in this Agreement, if Coach terminates this Agreement for convenience, Coach shall forfeit to the extent permitted by law Coach's right to receive all supplemental compensation and other payments and all accumulated annual leave.

5.4. Termination Due to Disability or Death of Coach.

5.4.1. Notwithstanding any other provision of this Agreement, this Agreement shall terminate automatically if Coach becomes totally or permanently disabled as defined by the University's disability insurance carrier, becomes unable to perform the essential functions of the ~~position of head coach~~Position, or dies.

5.4.2. If this Agreement is terminated because of Coach's death, Coach's salary and all other benefits shall terminate as of the last day worked, except that ~~the~~ Coach's personal representative or other designated beneficiary shall be paid all compensation due or unpaid and death benefits, if any, as may be contained in any fringe benefit plan now in force or hereafter adopted by the University and due to ~~the~~ Coach's estate or beneficiaries hereunder.

5.4.3. If this Agreement is terminated because ~~the~~ Coach becomes totally or permanently disabled as defined by the University's disability insurance carrier, or becomes unable to perform the essential functions of the position of head coach, all salary and other benefits shall terminate, except that ~~the~~ Coach shall be entitled to receive any compensation due or unpaid and any disability-related benefits to which Coach is entitled by virtue of employment with the University.

5.5. Interference by Coach. In the event of suspension, reassignment or termination, Coach agrees that Coach will not interfere with the University's student-athletes or otherwise obstruct the University's ability to transact business or operate its intercollegiate athletics program.

5.6. No Liability. The University shall not be liable to Coach for the loss of any collateral business opportunities or any other benefits, perquisites or income from any sources that may ensue as a result of any termination of this Agreement by either party or due to death or disability or the suspension or reassignment of Coach, regardless of the circumstances.

5.7— Waiver of Rights. Because ~~the~~ Coach is receiving a multi-year contract and the opportunity to receive supplemental compensation and because such contracts and opportunities are not customarily afforded to University employees, if the University suspends or reassigns Coach, or terminates this Agreement for good or adequate cause or for convenience, Coach shall have all the rights provided for in this Agreement but hereby releases the University from compliance with the notice, appeal, and similar employment-related rights provided for in the State Board of Education Rule Manual (ID. ADMIN. CODE r. 08.01.01 et seq.) and Governing Policies and Procedures Manual, and ~~the~~ University Policies.

ARTICLE 6

6.1. Board Approval. This Agreement shall not be effective until and unless approved of the University's Board of Trustees and executed by both parties as set forth below. In addition, the payment of any compensation pursuant to this Agreement shall be subject to: the approval of the University's Board of Trustees, the President, and the Director; the sufficiency of legislative appropriations; the receipt of sufficient funds in the account from which such compensation is paid; and the Board of Trustees and University's rules or policies regarding [furloughs or](#) financial exigency.

6.2. University Property. All personal property, material, and articles of information, including, without limitation, keys, credit cards, personnel records, recruiting records, team information, films, statistics or any other personal property, material, or data, furnished to Coach by the University or developed by Coach on behalf of the University or at the University's direction or for the University's use or otherwise in connection with Coach's employment hereunder are and shall remain the sole property of the University. Within twenty-four (24) hours of the expiration of the Term of this Agreement or its earlier termination as provided herein, Coach shall immediately cause any such personal property, materials, and articles of information in Coach's possession or control to be delivered to the Director.

6.3. Assignment. Neither party may assign its rights or delegate its obligations under this Agreement without the prior written consent of the other party.

6.4. Waiver. No waiver of any default in the performance of this Agreement shall be effective unless in writing and signed by the waiving party. The waiver of a particular breach in the performance of this Agreement shall not constitute a waiver of any other or subsequent breach. The resort to a particular remedy upon a breach shall not constitute a waiver of any other available remedies.

6.5. Severability. If any provision of this Agreement is determined to be invalid or unenforceable, the remainder of the Agreement shall not be affected and shall remain in effect.

6.6. Governing Law. This Agreement shall be subject to and construed in accordance with the laws of the state of Idaho as an agreement to be performed in Idaho. Any action based in whole or in part on this Agreement shall be brought in state district court in Ada County, Boise, Idaho.

6.7. Oral Promises. Oral promises of an increase in annual salary or of any supplemental or other compensation shall not be binding upon the University.

6.8. Force Majeure. Any prevention, delay or stoppage due to strikes, lockouts, labor disputes, acts of God, inability to obtain labor or materials or reasonable substitutes therefore, governmental restrictions, governmental regulations, governmental controls, enemy or hostile

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governmental action, civil commotion, fire or other casualty, and other causes beyond the reasonable control of the party obligated to perform (including financial inability), shall excuse the performance by such party for a period equal to any such prevention, delay or stoppage.

6.9. Non-Confidentiality. ~~The~~ Coach hereby consents and agrees that this document may be released and made available to the public after it is signed by ~~the~~ Coach. ~~The~~ Coach further agrees that all documents and reports Coach is required to produce under this Agreement may be released and made available to the public at the University's sole discretion.

6.10. Notices. Any notice under this Agreement shall be in writing and be delivered in person or by public or private courier service (including U.S. Postal Service Express Mail) or certified mail with return receipt requested or by facsimile. All notices shall be addressed to the parties at the following addresses or at such other addresses as the parties may from time to time direct in writing:

the University: Boise State University
 Director of Athletics
 1910 University Drive
 Boise, Idaho 83725-1020

with a copy to: Boise State University
 Office of the President
 1910 University Drive
 Boise, Idaho 83725-1000

~~the~~ Coach: Shawn Garus
 ~~last~~Last known address on file
 with ~~University~~
 University's Human Resource Services

Any notice shall be deemed to have been given on the earlier of: (a) actual delivery or refusal to accept delivery, (b) the date of mailing by certified mail, or (c) the day facsimile delivery is verified. Actual notice, however and from ~~whoever~~whomever received, shall always be effective.

6.11. Headings. The headings contained in this Agreement are for reference purposes only and shall not in any way affect the meaning or interpretation hereof.

6.12. Binding Effect. This Agreement is for the benefit only of the parties hereto and shall inure to the benefit of and bind the parties and their respective heirs, legal representatives, successors and assigns.

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6.13. Non-Use of Names and Trademarks. ~~The~~ Coach shall not, without the University's prior written consent in each case, use any name, trade name, trademark, or other designation of the University (including contraction, abbreviation or simulation), except in the course and scope of Coach's official University duties.

6.14. No Third Party Beneficiaries. There are no intended or unintended third party beneficiaries to this Agreement.

6.15. Entire Agreement; Amendments. This Agreement constitutes the entire agreement between the parties and supersedes all prior agreements and understandings with respect to the same subject matter. No amendment or modification of this Agreement shall be effective unless in writing, signed by both parties, and approved by the University's Board of Trustees.

6.16. Opportunity to Consult with Attorney. ~~The~~ Coach acknowledges that Coach has had the opportunity to consult and review this Agreement with an attorney. Accordingly, in all cases, the language of this Agreement shall be construed simply, according to its fair meaning, and not strictly for or against any party.

IN WITNESS WHEREOF, the parties agree to the terms and conditions of this Agreement and the incorporated documents attached hereto and have executed this Agreement freely and agree to be bound hereby as of the Effective Date.

UNIVERSITY

COACH

Dr. Robert Kustra, President

Shawn Garus

Approved by the Board on the ____ day of _____, ~~2014.~~
2016.

~~(MODEL ATHLETICS CONTRACT)~~ EMPLOYMENT AGREEMENT

This ~~Employment Agreement~~ ~~(the "Agreement")~~ is ~~entered into~~ this
day of, ("Effective Date") by ~~and~~ ~~between~~
~~(Boise State University (College))~~ ("the University") and ~~(Shawn Garus~~
~~("Coach"))~~.

ARTICLE 1

1.1. Employment. Subject to the terms and conditions of this Agreement, the
University ~~(College)~~ shall ~~employ Coach as the head coach~~ (the "Position") of its
intercollegiate
~~(Sport) team (women's volleyball (the "Team") (or Director of Athletics))~~.
Coach ~~(Director)~~ represents and
warrants that Coach is fully qualified to serve, and is available for employment, in this
capacity.

~~1.2. 4.2. Reporting Relationship~~. Coach shall report and be responsible directly to
the ~~University (College)'s~~ University's Director of Athletics (the "Director") or the Director's
designee. Coach shall abide by the reasonable instructions of Director or the ~~Director's~~ Director's
designee and shall confer with the Director or the Director's designee on all administrative and
technical matters. Coach shall also be under the general supervision of the ~~University~~
~~(College)'s Chief executive officer (Chief executive officer)~~ University's President (the
"President").

~~1.3. 4.3. Duties~~. Coach shall manage and supervise the Team and shall perform
such other duties in the ~~University (College)'s~~ University's athletic program as the Director may
assign and as may be described elsewhere in this Agreement. ~~The University (College) shall~~
~~have the right, at any time, to reassign Coach to duties at the University (College) other~~
~~than as head coach of the Team, provided that Coach's compensation and benefits~~
~~shall not be affected by any such reassignment, except that the opportunity to earn~~
~~supplemental compensation as provided in sections 3.2.1 through (Depending on~~
~~supplemental pay provisions used) shall cease~~ Coach shall, to the best of Coach's
ability, and consistent with University policies and procedures, perform all duties and
responsibilities customarily associated with the Position.

ARTICLE 2

~~2.1. 2.4. Term~~. This Agreement is for a fixed-term appointment of ~~()~~
~~years~~ one (1) year eleven (11) months, commencing on ~~February 28, 2016~~ and
terminating, without further notice to Coach, on ~~January 31, 2018 (the "Term")~~,
unless sooner terminated in accordance with other provisions of this Agreement.

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ATTACHMENT 3

2.2. ~~2.2.~~ Extension or Renewal. This Agreement is renewable solely upon an offer from the University ~~(College)~~ on or before October 1, 2017 and an acceptance by Coach, both of which must be in writing and signed by the parties. Extension of the contract will be at the sole discretion of the University and not based on athletic or academic achievement. Any renewal is subject to the prior approval of the University's Board of ~~Education~~ Trustees. This Agreement in no way grants to Coach a claim to tenure in employment, nor shall Coach's service pursuant to this ~~agreement~~ Agreement count in any way toward tenure at the University ~~(College)~~.

ARTICLE 3

3.1 Regular Compensation.

3.1.1. In consideration of Coach's services and satisfactory performance of this Agreement, the University ~~(College)~~ shall provide to Coach:

- a) ~~An annual~~ A salary in the amount of \$~~_____~~ 100,000 per year, payable in biweekly installments in accordance with normal University ~~(College)~~ procedures, and such salary increases as may be determined appropriate ~~by the Director and Chief executive officer~~ President and approved by the University ~~(College)'s~~ University's Board of
- a) ~~(Regents or Trustees)~~ _____;
- b) ~~b~~ A one-time bonus payment in the amount of \$750;
- c) The opportunity to receive such employee benefits calculated on the "base salary" as the University ~~(College)~~ provides generally to non-faculty exempt employees; ~~and~~
- e) Assignment of one vehicle through the Department's trade-out program during the term of this Agreement, subject to and according to the policy of the University's Board of Trustees. Insurance premiums for the assigned vehicle shall be paid by Coach. Any vehicle assigned shall be returned in the same or similar condition as it was upon being assigned, reasonable wear and tear excepted; and
- e) The opportunity to receive such employee benefits as the University (College)'s University's Department of Athletics (the "Department") provides generally to its employees of a comparable level. Coach hereby agrees to abide by the terms and conditions, as now existing or hereafter amended, of such employee benefits.

3.2 3.2 Supplemental Compensation. Coach may earn supplemental compensation as follows:

3.2.1. ~~Each year~~ Academic Achievement Incentive Pay. Coach shall qualify for Academic Incentive Pay as follows:

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- a) For the 2015-16 academic year, if the single year team Academic Progress Rate ("APR") for the Team ~~is the conference champion or co-champion~~ meets the following levels in the National Ranking within Women's Volleyball:

National Score within Sport

970-974 = \$1,500

975-979 = \$1,750

980-984 = \$2,000

985 and ~~also becomes eligible for a (bowl game pursuant to NCAA Division I guidelines or post season tournament or post season playoffs)~~, above
= \$5,000

If Coach qualifies for Academic Incentive Pay, it will be paid as soon as reasonably practical following APR rating determination and verification by the NCAA, if Coach ~~continues to be~~ is still employed ~~as by the~~ University ~~(College)'s head~~ ~~on that date.~~

- b) For the 2016-17 academic year, if the single year team Academic Progress Rate ("APR") for the Team meets the following levels in the National Ranking within Women's Volleyball:

National Score within Sport) ~~coach~~

970-974 = \$1,500

975-979 = \$1,750

980-984 = \$2,000

985 and above = \$3,500

and

Coach shall qualify for Academic Incentive Pay if the Annual Team Grade Point Average ("GPA"), defined as the average of the ~~ensuing July 1st,~~ fall and spring term GPAs for scholarship student-athletes, meets the following level:

3.0+ Average Team GPA = \$1,500

If Coach qualifies for Grade Point Average Pay, it will be paid in conjunction with APR, if Coach is still employed by the University ~~(College) shall pay to Coach supplemental compensation in an amount equal to~~ on that date.
~~(amount)~~

3.2.2. Athletic Achievement Incentive Pay. Coach may qualify for Athletic Incentive Pay as follows:

- a) The greater of the following two:

Conference Championship: \$5,000

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<u>Qualify team for NCAA Tournament:</u>	<u>\$3,000</u>
b) <u>Top 25 National Ranking at End of Season:</u>	<u>\$2,500</u>
c) <u>NCAA Regional Coach of the Year:</u>	<u>\$3,000</u>
d) <u>NCAA National Coach of the Year:</u>	<u>\$5,000</u>
e) <u>Conference Coach of the Year:</u>	<u>\$3,000</u>
f) <u>The greatest of the following:</u>	
<u>Winning Record:</u>	<u>\$1,500 or</u>
<u>Amount of Wins:</u>	
<u>20 Wins</u>	<u>\$2,500 or</u>
<u>21 Wins</u>	<u>\$3,000 or</u>
<u>22 Wins</u>	<u>\$3,500 or computation of</u>
<u>Coach's Annual Salary during the fiscal year in which the</u>	
<u>championship and (bowl</u>	
<u>23 Wins</u>	<u>\$4,000 or other post</u>
<u>season) eligibility are achieved. The</u>	
<u>24+ Wins</u>	<u>\$4,500 or</u>
<u>Top 50 Team RPI at End of Season:</u>	<u>\$7,500</u>

If Coach qualifies for Athletic Incentive Pay under this Section, University
~~(College) shall determine the appropriate manner in which it shall~~will pay Coach on the
first regular pay ~~Coach any such~~date in February if Coach is still employed by the University
on that date.

3.2.3. Conditions for payment of Academic and Athletic Achievement Incentive
supplemental compensation-

~~3.2.2 Each year the Team is ranked in the top 25 in the (national~~
~~rankings of sport's division, and if Coach continues to be employed as University~~
~~(College)'s head (Sport) coach as of the ensuing July 1st, the University (College)~~
~~shall pay Coach supplemental compensation in an amount equal to (amount or~~
~~computation) of Coach's Annual Salary in effect on the date of the final poll. The~~
~~University (College) shall determine the appropriate manner in which it shall pay~~
~~Coach any such supplemental compensation.~~

~~3.2.3 Each year Coach shall be eligible to receive supplemental compensation in an amount up to (amount or computation) based on the academic achievement and behavior of Team members. The determination of whether Coach will receive such supplemental compensation and the timing of the payment(s) shall be at the discretion of the Chief executive officer in consultation with the Director. The determination shall be based on the following factors: the Academic Progress Rate set by the Board, grade point averages; difficulty of major course of study; honors such as scholarships, designation as Academic All-American, and conference academic recognition; progress toward graduation for all athletes, but particularly those who entered the University (College) as academically at risk students; the conduct of Team members on the University (College) campus, at authorized University (College) activities, in the community, and elsewhere. Any such supplemental compensation paid to Coach shall be accompanied with a detailed justification for the supplemental compensation based on the factors listed above and such justification shall be separately reported to the Board of (Regents or Trustees) as a document available to the public under the Idaho Public Records Act.~~

~~3.2.4 Each year. ___ Coach shall be eligible to may receive supplementalthe compensation in an amount up to ___ (amount or computation) ___ based on the overall development of the intercollegiate (men's/women's) ___ (Sport) ___ program; ticket sales; fundraising; outreach by Coach to various constituency groups, including University (College) students, staff, faculty, alumni and boosters; and any other factors the Chief executive officer wishes to consider. The determination of whether Coach will receive such supplemental compensation and the timing of the payment(s) shall be at the discretion of the Chief executive officer in consultation with the Director.~~

~~3.2.5 The Coach shall receive the sum of ___ (amount or computation) hereunder from the University (College) or the University (College)'sUniversity's designated media outlet(s) or a combination thereof each year during the term of this Agreement in compensation for participation in media programs and public appearances (collectively, "Programs). Coach's right to receive such a payment shall vest on the date of the Team's last regular season or post season competition, whichever occurs later. This sum shall be paid (terms or conditions of payment) :-"). Agreements requiring the Coach to participate in Programs related to hisCoach's duties as an employee of the University (College) are the property of the University (College). The University (College) shall have the exclusive right to negotiate and contract with all producers of media productions and all parties desiring public appearances by the Coach. Coach agrees to cooperate with the University (College) in order for the Programs to be successful and agrees to provide hisCoach's services to and performappear on the Programs and to cooperate in their production, broadcasting, and telecasting. It is understood that neitherNeither Coach nor any assistant coachescoach shall appear without the prior written approval of the Director on any competing radio or television program (including but not limited to a coach's show, call-in~~

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show, or interview show) or a regularly scheduled news segment, except that this prohibition shall not apply to routine news media interviews for which no compensation is received. Without the prior written approval of the Director, Coach shall

not appear in any commercial endorsements which are broadcast on radio or television that conflict with those broadcast on the University (College)'s University's designated media outlets.

~~3.2.6 (SUMMER CAMP—OPERATED BY UNIVERSITY
(COLLEGE))~~

5. Coach agrees that the University (College) has the exclusive right to operate youth (Sport) athletic camps (“Camps”) on its campus using University (College) facilities. —

The University

(College) shall allow Coach the opportunity to earn supplemental compensation by assisting with the University (College)'s camps Camps in Coach's Coach's capacity as a University (College) employee. Coach hereby agrees to assist in the marketing, supervision, and general administration of the University (College)'s football camps Camps. Coach also agrees that Coach will perform all obligations mutually agreed upon by the parties. In exchange for Coach's participation in the -Camps, the University (College)'s summer football camps, the shall pay Coach supplemental compensation.

University (College) shall pay per year as supplemental

3.2.6.

Coach (amount)

compensation during each year of his employment as head (Sport) coach at the

University (College). This amount shall be paid (terms of payment)

~~(SUMMER CAMP—OPERATED BY COACH)~~ Coach may operate a summer youth (Sport) camp at the University (College) under the following conditions:

- ~~a) The summer youth camp operation reflects positively on the~~
University (College) and the Department;
- ~~b) The summer youth camp is operated by Coach directly or through a private enterprise owned and managed by Coach. The Coach shall not use University (College) personnel, equipment, or facilities without the prior written approval of the Director;~~
- ~~c) Assistant coaches at the University (College) are given priority when the Coach or the private enterprise selects coaches to participate;~~
- ~~d) The Coach complies with all NCAA (NAIA), Conference, and University (College) rules and regulations related, directly or indirectly, to the operation of summer youth camps;~~

- e) ~~The Coach or the private enterprise enters into a contract with University (College) and (campus concessionaire) for all campus goods and services required by the camp.~~
- f) ~~The Coach or private enterprise pays for use of University (College) facilities including the .~~
- g) ~~Within thirty days of the last day of the summer youth camp(s), Coach shall submit to the Director a preliminary "Camp~~

~~Summary Sheet" containing financial and other information related to the operation of the camp. Within ninety days of the last day of the summer youth camp(s), Coach shall submit to Director a final accounting and "Camp Summary Sheet." A copy of the "Camp Summary Sheet" is attached to this Agreement as an exhibit.~~

- ~~h) The Coach or the private enterprise shall provide proof of liability insurance as follows: (1) liability coverage: spectator and staff \$1 million; (2) catastrophic coverage: camper and staff \$1 million maximum coverage with \$100 deductible;~~
- ~~i) To the extent permitted by law, the Coach or the private enterprise shall defend and indemnify the University (College) against any claims, damages, or liabilities arising out of the operation of the summer youth camp(s)~~
- ~~j) All employees of the summer youth camp(s) shall be employees of the Coach or the private enterprise and not the University (College) while engaged in camp activities. The Coach and all other University (College) employees involved in the operation of the camp(s) shall be on annual leave status or leave without pay during the days the camp is in operation. The Coach or private enterprise shall provide workers' compensation insurance in accordance with Idaho law and comply in all respects with all federal and state wage and hour laws~~

~~In the event of termination of this Agreement, suspension, or reassignment, University (College) shall not be under any obligation to permit a summer youth camp to be held by the Coach after the effective date of such termination, suspension, or reassignment, and the University (College) shall be released from all obligations relating thereto.~~

~~3.2.7 Coach agrees that the University (College) has the exclusive right to select footwear, apparel and/or equipment for the use of its student-athletes and staff, including Coach, during official practices and games and during times when Coach or the Team is being filmed by motion picture or video camera or posing for photographs in their capacity as representatives of University (College). Coach recognizes that the University (College) is negotiating or has entered into an agreement with (Company Name) to supply the University (College) with athletic footwear, apparel and/or equipment. Coach agrees that, upon the University (College)'s reasonable request, Coach will consult with appropriate parties concerning an (Company Name) product's design or~~

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~~performance, shall act as an instructor at a clinic sponsored in whole or in part by
(Company Name)
, or give a lecture at an event sponsored in whole or in part by (Company Name),
or make other educationally related appearances as may be reasonably requested
by the~~

~~University (College). Notwithstanding the foregoing sentence, Coach shall retain the right to decline such appearances as Coach reasonably determines to conflict with or hinder his duties and obligations as head (Sport) coach.~~ In order to avoid entering into an agreement with a competitor of ~~(Company Name)~~ any University selected vendors, Coach shall submit all outside consulting agreements to the University ~~(College)~~ for review and approval prior to execution. Coach shall also report such outside income to the University ~~(College)~~ in accordance with National Collegiate Athletic Association (the "NCAA (or NAIA)") rules. Coach further agrees that Coach will not endorse any athletic footwear, apparel and/or equipment products, ~~including (Company Name)~~, and will not participate in any messages or promotional appearances which contain a comparative or qualitative description of athletic footwear, apparel, or equipment products.

3.3 ~~General Conditions of Compensation.~~ All compensation provided by the University ~~(College)~~ to Coach is subject to deductions and withholdings as required by law or the terms and conditions of any fringe benefit in which Coach participates. However, if any fringe benefit is based in whole or in part upon the compensation provided by the University ~~(College)~~ to Coach, such fringe benefit shall be based only on the compensation provided pursuant to section 3.1.1 and paid from the University to Coach, except to the extent required by the terms and conditions of a specific fringe benefit program.

ARTICLE 4

~~4.1. Coach's Specific Duties and Responsibilities.~~ In consideration of the compensation specified in this Agreement, Coach, in addition to the obligations set forth elsewhere in this Agreement, shall:

~~4.1.1. Devote Coach's full time and best efforts to the performance of~~

~~4.1.1.~~ Coach's duties under this Agreement;

~~4.1.2. 4.1.2.~~ Develop and implement programs and procedures with respect to the evaluation, recruitment, training, and coaching of Team members which enable them to compete successfully and reasonably protect their health, safety, and well-being;

~~4.1.3. 4.1.3.~~ Observe and uphold all academic standards, requirements, and policies of the University ~~(College)~~ and encourage Team members to perform to their highest academic potential and to graduate in a timely manner; and

~~4.1.4. 4.1.4.~~ Know, recognize, and comply with all applicable laws and the policies, rules and regulations of the University ~~(College)~~, the University's Board of Trustees, the conference of which the University ~~(College)'s governing board, the conference, is a member (the "Conference"), and the NCAA ~~(or NAIA)~~; supervise and take appropriate steps to ensure that Coach's assistant coaches, any other employees for whom Coach is administratively responsible, and the members of the Team know, recognize, and comply with all such laws, policies, rules and regulations; and immediately report to the Director and to the~~

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~~Department's~~University's Director of NCAA Compliance if Coach has reasonable cause to believe that any person or entity, including without limitation representatives of the ~~University~~(College)'sUniversity's athletic interests, has violated or is likely to violate any such laws, policies, rules or regulations. Coach shall cooperate fully with the University and Department at all times. The applicable laws, policies, rules, and regulations include the following, as they may be amended from time-to-time: (a) Governing Policies and Procedures and Rule Manual of the University's Board of Trustees; (b) the University's Policy Manual; (c) the policies of the Department; (d) NCAA rules and regulations; and (e) the rules and regulations of the Conference.

~~University (College) and Department at all times. The names or titles of employees whom Coach supervises are attached as Exhibit C. The applicable laws, policies, rules, and regulations include: (a) State Board of Education and Board of Regents of the University of Idaho Governing Policies and Procedures and Rule Manual; (b) University (College)'s Handbook; (c) University (College)'s Administrative Procedures Manual; (d) the policies of the Department; (e) NCAA (or NAIA) rules and regulations; and (f) the rules and regulations of the (Sport) conference of which the University (College) is a member.~~

4.2

4.2 Outside Activities. Coach shall not undertake any business, professional or personal activities, or pursuits that would prevent Coach from devoting Coach's full time and best efforts to the performance of Coach's duties under this Agreement, that would otherwise detract from those duties in any manner, or that, in the opinion of the University ~~(College)~~, would reflect adversely upon the University ~~(College)~~ or its athletic program. Subject to the terms and conditions of this Agreement, Coach may, with the prior written approval of the Director, who may consult with the ~~Chief executive officer~~ President, enter into separate arrangements for outside activities and endorsements which are consistent with ~~Coach's~~ Coach's obligations under this Agreement. Coach may not use the ~~University (College)'s~~ University's name, logos, or trademarks in connection with any such arrangements without the prior written approval of the Director and the ~~Chief executive officer~~ President.

4.3 ~~NCAA (or NAIA) Rules.~~ Outside Income. In accordance with NCAA ~~(or NAIA)~~ rules, Coach shall obtain prior written approval from the ~~University (College)'s Chief executive officer~~ President and Director for all athletically-related income and benefits from sources outside the University ~~(College) and Coach~~ shall report the source and amount of all such income and benefits to the ~~University (College)'s Chief executive officer~~ President whenever reasonably requested, but in no event less than annually before the close of business on June 30th of each year or the last regular University ~~(College)~~ work day preceding June 30th. The report shall be in a format reasonably satisfactory to ~~the University (College)~~. In no event shall Coach accept or receive directly or indirectly any monies, benefits, or gratuities whatsoever from any person, association, corporation, University ~~(College)~~ booster club, University ~~(College)~~ alumni association, University ~~(College)~~ foundation, or other benefactor, if the acceptance or receipt of the monies, benefits, or gratuities would violate applicable law or the policies, rules, and regulations of the University ~~(College), the University (College)'s governing board, the conference, or the NCAA (or NAIA), the University's Board of Trustees, the Conference, or the NCAA.~~ Sources of such income shall include, but are not limited to, the following: (a) income from annuities; (b) sports camps, clinics, speaking engagements, consultations, directorships, or related activities; (c) housing benefits (including preferential housing arrangements); (d) country club membership(s); (e) complimentary tickets (e.g., tickets to a Stampede game); (f) television and radio programs; (g) endorsement or consultation contracts with athletic shoe, apparel, or equipment manufacturers.

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4.4—Hiring Authority. Coach shall have the responsibility and the sole authority to recommend to the Director the hiring and termination of assistant coaches for the Team, but the decision to hire or terminate an assistant coach shall be made by the Director and shall, when necessary or appropriate, be subject to the approval of ~~Chief executive officer~~President and the ~~University (College)'s~~University's Board of ~~—(Trustees—or Regents)~~.

4.5—Scheduling. Coach shall consult with, and may make recommendations to, the Director or the Director's designee with respect to the scheduling of ~~Team~~Team's competitions, but the final decision shall be made by the Director or the Director's designee.

4.7—6. Other Coaching Opportunities. Coach shall not, under any circumstances, interview for, negotiate for, or accept employment as a coach at any other institution of higher education or with any professional sports team, requiring performance of duties set forth herein prior to the expiration of this Agreement, without the prior approval of the Director. Such approval shall not unreasonably be withheld. Without first giving ten (10) days prior written notice to the Director, Coach shall not negotiate for or accept employment, under any circumstances, as a coach at any other institution of higher education or with any professional sports team requiring the performance of the duties set forth herein.

ARTICLE 5

5.1—Termination of Coach for Cause. The University ~~(College)~~ may, in its discretion, suspend Coach from some or all of Coach's duties, temporarily or permanently, and with or without pay; reassign Coach to other duties; or terminate this Agreement at any time for good or adequate cause, as those terms are defined in applicable rules ~~and~~ regulations, and policies.

5.1.1—In addition to the definitions contained in applicable rules and ~~regulations, policies, the~~ University ~~(College)~~ and Coach hereby specifically agree that the following shall constitute good or adequate cause for suspension, reassignment, or termination of this Agreement:

- a) ~~a)~~—A deliberate or major violation of Coach's duties under this agreement or the refusal or unwillingness of Coach to perform such duties in good faith and to the best of Coach's abilities;
- b) ~~b)~~—The failure of Coach to remedy any violation of any of the terms of this ~~agreement~~ Agreement within thirty (30) days after written notice from the University ~~(College)~~;
- c) ~~c)~~—A deliberate or major violation by Coach of any applicable law or the policies, rules, or regulations of the University ~~(College)~~, the University (College)'s governing board University's Board of Trustees, the ~~conference~~ Conference, or the NCAA ~~(NAIA)~~, including but not limited to any such violation which may have occurred during the employment of Coach at another NCAA or ~~NAIA~~ National Association of Intercollegiate Athletics ("NAIA") member institution;
- d) ~~d)~~—Ten (10) working ~~days'~~ days' absence of Coach from duty without the University ~~(College)'s~~ University's consent;
- e) ~~e)~~—Any conduct of Coach that constitutes moral turpitude or that would, in the ~~University (College)'s~~ University's judgment, reflect adversely on the University ~~(College)~~ or its athletic programs;

f) ~~f)~~ — The failure of Coach to represent the University ~~(College)~~ and its athletic programs positively in public and private forums;

- g)- ____ The failure of Coach to fully and promptly cooperate with the NCAA ~~(NAIA)~~ or the University ~~(College)~~ in any investigation of possible violations of any applicable law or the policies, rules or regulations of the University ~~(College)~~, the University (College)'s governing board University's Board of Trustees, the ~~conference~~ Conference, or the NCAA ~~(NAIA)~~;
- h)- ____ The failure of Coach to report a known violation of any applicable law or the policies, rules or regulations of the University ~~(College)~~, the University (College)'s governing board University's Board of Trustees, the ~~conference~~ Conference, or the NCAA ~~(NAIA)~~, by one of Coach's assistant coaches, any other employees for whom Coach is administratively responsible, or a member of the Team; or
- i)- ____ A violation of any applicable law or the policies, rules or regulations of the University ~~(College)~~, the University (College)'s governing board University's Board of Trustees, the ~~conference~~ Conference, or the NCAA ~~(NAIA)~~, by one of Coach's assistant coaches, any other employees for whom Coach is administratively responsible, or a member of the Team if Coach knew or should have known by ordinary supervision of the violation and could have prevented it by such ordinary supervision.

5.1.2- ____ Suspension, reassignment, or termination for good or adequate cause shall be effectuated by the University ~~(College)~~ as follows: before the effective date of the suspension, reassignment, or termination, the Director or ~~his~~ Director's designee shall provide Coach with notice, which notice shall be accomplished in the manner provided for in this Agreement and shall include the reason(s) for the contemplated action. Coach shall then have an opportunity to respond. After Coach responds or fails to respond, the University ~~(College)~~ shall notify Coach whether, and if so when, the action will be effective.

5.1.3- ____ In the event of any termination for good or adequate cause, the University (College)'s University's obligation to provide compensation and benefits to Coach, whether direct, indirect, supplemental or collateral, shall cease as of the date of such termination, and the University ~~(College)~~ shall not be liable for the loss of any collateral business opportunities or other benefits, perquisites, or income resulting from outside activities or from any other sources.

5.1.4- ____ If found in violation of NCAA ~~(NAIA)~~ regulations, Coach shall, in addition to the provisions of Section 5.1, be subject to disciplinary or corrective action as set forth in the provisions of the NCAA ~~(NAIA)~~ enforcement procedures. This section applies to violations occurring at the University ~~(College)~~ or at previous institutions at which ~~the~~ Coach was employed.

5.2. Termination of Coach for Convenience of University ~~(College)~~.

5.2.1—At any time after commencement of this Agreement, ~~the~~ University ~~(College)~~, for its own convenience, may terminate this Agreement by giving ten (10) days prior written notice to Coach.

5.2.2—_____ In the event that ~~the~~ University ~~(College)~~ terminates this Agreement for its own convenience, ~~the~~ University ~~(College)~~ shall be obligated to pay ~~to~~ Coach, as liquidated damages and not a penalty, the “base salary” set forth in section 3.1.1(a), excluding all deductions required by law, on the regular paydays of ~~the~~ University ~~(College)~~ until the ~~term~~ Term of this Agreement ends; or until Coach obtains reasonably comparable employment, whichever occurs first, provided; however, in the event Coach obtains other employment after such termination, then the amount of compensation the University pays will be adjusted and reduced by the amount of compensation paid Coach as a result of such other employment, such adjusted compensation to be calculated for each University pay-period by reducing the gross salary set forth in section 3.1.1(a) (before deductions required by law) by the gross compensation paid to Coach under the other employment, then subtracting from this adjusted gross compensation ~~deduction~~ deductions according to law. In addition, Coach will be entitled to continue ~~his~~ the health insurance plan and group life insurance as if ~~he~~ Coach remained a University ~~(College)~~ employee until the term of this Agreement ends or until Coach obtains reasonably comparable employment or any other employment providing Coach with a reasonably comparable health plan and group life insurance, whichever occurs first. Coach shall be entitled to no other compensation or fringe benefits, except as otherwise provided herein or required by law. Coach specifically agrees to inform ~~the~~ University within ten (10) business days of obtaining other employment; and to advise ~~the~~ University of all relevant terms of such employment, including without limitation, the nature and location of ~~the~~ employment, salary, other compensation, health insurance benefits, life insurance benefits, and other fringe benefits. Failure to so inform and advise ~~the~~ University shall constitute a material breach of this Agreement and ~~the~~ University’s obligation to pay compensation under this provision shall end. Coach agrees not to accept employment for compensation at less than the fair market value of Coach’s services, as determined by all circumstances existing at the time of employment. Coach further agrees to repay to ~~the~~ University all compensation paid ~~to him~~ by ~~the~~ University after the date ~~he~~ Coach obtains other employment, to which ~~he~~ Coach is not entitled under this provision.

5.2.3—_____ The parties have both been represented by, or had the opportunity to consult with, legal counsel in the contract negotiations and have bargained for and agreed to the foregoing liquidated damages provision, giving consideration to the fact that ~~the~~ Coach may lose certain benefits, supplemental compensation, or outside compensation relating to ~~his~~ Coach’s employment with ~~the~~ University ~~(College)~~, which damages are extremely difficult to determine with certainty. The parties further agree that the payment of such liquidated damages by ~~the~~ University ~~(College)~~ and the acceptance thereof by Coach shall constitute adequate and reasonable compensation to Coach for the damages and injury suffered by Coach because of such termination by ~~the~~ University ~~(College)~~. The liquidated damages are not, and shall not be construed to be, a penalty.

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In the event of

5.2.4 non-renewal or termination of Coach's employment, Coach will use all accumulated annual leave prior to the end of the contract period.

5.3. Termination by Coach for Convenience.

5.3.1 ~~The~~ Coach recognizes that ~~his~~ Coach's promise to work for the University ~~(College)~~ for the entire term of this Agreement is of the essence of this Agreement. ~~The~~ Coach also recognizes that the University ~~(College)~~ is making a highly valuable investment in ~~his~~ Coach's employment by entering into this Agreement and that its investment would be lost were ~~he~~ Coach to resign or otherwise terminate ~~his~~ Coach's employment with the University ~~(College)~~ before the end of the contract ~~term~~ Term.

5.3.2 ~~The~~ Coach, ~~for his own convenience~~, may terminate this Agreement for convenience during its term by giving prior written notice to the University ~~(College)~~. Termination shall be effective ten (10) days after such written notice is given to the University ~~(College)~~. Such termination must occur at a time outside the Team's season (including NCAA post-season competition) so as to minimize the impact on the program.

5.3.3 ~~—~~ If ~~the~~ Coach terminates this Agreement for convenience at any time, all obligations of the University ~~(College)~~ shall cease as of the effective date of the termination. If ~~the~~ Coach terminates this Agreement for ~~his~~ convenience ~~he~~ Coach shall pay to the University ~~(College)~~ as liquidated damages and not a penalty, for the breach of this Agreement the following sum:

(a) if the Agreement is terminated on or before January 31, 2017, the sum of \$20,000.00; (b) if the Agreement is terminated between February 1, 2017 and January 31, 2018 and inclusive, the sum of \$10,000.00. The liquidated damages shall be due and payable within twenty (20) days of the effective date of the termination, and any unpaid amount shall bear simple interest at a rate eight (8) percent per annum until paid.

5.3.4 ~~The~~ parties have both been represented by or had the opportunity to consult with legal counsel in the contract negotiations and have bargained for and agreed to the foregoing liquidated damages provision, giving consideration to the fact that the University ~~(College)~~ will incur administrative and recruiting costs in obtaining a replacement for Coach, in addition to potentially increased compensation costs if Coach terminates this Agreement for convenience, which damages are extremely difficult to determine with certainty. ~~The~~ parties further agree that the payment of such liquidated damages by Coach and the acceptance thereof by the University ~~(College)~~ shall constitute adequate and reasonable compensation to the University ~~(College)~~ for the damages and injury suffered by it because of such termination by Coach. The liquidated damages are not, and shall not be construed to be, a penalty. This section 5.3.4 shall not apply if Coach terminates this Agreement because of a material breach by the University ~~(College)~~.

~~5.3.5~~ Except as provide elsewhere in this Agreement, if Coach terminates this Agreement for convenience, ~~he~~Coach shall forfeit to the extent permitted by law ~~his~~Coach's right to receive all supplemental compensation and other payments and all accumulated annual leave.

5.4. Termination ~~due~~Due to Disability or Death of Coach.

5.4.1 ~~Notwithstanding any other provision of this Agreement, this Agreement shall terminate automatically if Coach becomes totally or permanently~~

disabled as defined by the ~~University (College)s~~ University's disability insurance carrier, becomes unable to perform the essential functions of the ~~position of head coach~~ Position, or dies.

5.4.2— If this Agreement is terminated because of ~~Coach's~~ Coach's death, ~~Coach's~~ Coach's salary and all other benefits shall terminate as of the last day worked, except that ~~the Coach's~~ Coach's personal representative or other designated beneficiary shall be paid all compensation due or unpaid and death benefits, if any, as may be contained in any fringe benefit plan now in force or hereafter adopted by the University ~~(College)~~ and due to ~~the Coach's~~ Coach's estate or beneficiaries ~~thereunder~~ hereunder.

5.4.3— If this Agreement is terminated because ~~the~~ Coach becomes totally or permanently disabled as defined by the ~~University (College)s~~ University's disability insurance carrier, or becomes unable to perform the essential functions of the position of head coach, all salary and other benefits shall terminate, except that ~~the~~ Coach shall be entitled to receive any compensation due or unpaid and any disability-related benefits to which ~~he~~ Coach is entitled by virtue of employment with the University ~~(College)~~.

5.5—Interference by Coach. ~~In the event of termination, suspension, or reassignment or termination,~~ Coach agrees that Coach will not interfere with the ~~University (College)s~~ University's student-athletes or otherwise obstruct the ~~University (College)s~~ University's ability to transact business or operate its intercollegiate athletics program.

5.7—6. No Liability. The University ~~(College)~~ shall not be liable to Coach for the loss of any collateral business opportunities or any other benefits, perquisites or income from any sources that may ensue as a result of any termination of this Agreement by either party or due to death or disability or the suspension or reassignment of Coach, regardless of the circumstances.

5.8—7. Waiver of Rights. Because ~~the~~ Coach is receiving a multi-year contract and the opportunity to receive supplemental compensation and because such contracts and opportunities are not customarily afforded to University ~~(College)~~ employees, if the University ~~(College)~~ suspends or reassigns Coach, or terminates this Agreement for good or adequate cause or for convenience, Coach shall have all the rights provided for in this Agreement but hereby releases the University ~~(College)~~ from compliance with the notice, appeal, and similar employment-related rights ~~provide~~ provided for in the State Board of Education Rule Manual (ID. ADMIN. CODE r. 08.01.01 et seq.) and Governing Policies and Procedures, ~~IDAPA 08.01.01 et seq., Manual, and the University (College) Faculty Staff Handbook~~ Policies.

ARTICLE 6

**BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016**

ATTACHMENT 3

6.1 ~~_____~~ Board Approval. -This Agreement shall not be effective until and unless approved of the University (College)'s University's Board of ~~_(Regents or Trustees)_~~ and executed by both parties as set forth below. In addition, the payment of any compensation pursuant to this ~~agreement~~ Agreement shall be subject to: the approval of the University ~~(College)'s~~ University's Board of

~~-(Regents or Trustees)-~~, the ~~Chief executive officer~~President, and the Director; the sufficiency of legislative appropriations; the receipt of sufficient funds in the account from which such compensation is paid; and the Board of ~~-(Regents or Trustees)-~~ and University ~~(College)s~~University's rules or policies regarding furloughs or financial exigency.

6.2. University ~~(College)~~ Property. All personal property ~~-(excluding vehicle(s) provided through the - program)-~~, material, ~~-and -articles -of -information,~~ including, without limitation, keys, credit cards, personnel records, recruiting records, team information, films, statistics or any other personal property, material, or data, furnished to Coach by the University ~~(College)~~ or developed by Coach on behalf of the University ~~(College)~~ or at the ~~University (College)s~~ University's direction or for the ~~University (College)s~~ University's use or otherwise in connection with Coach's employment hereunder are and shall remain the sole property of the University ~~(College)~~. Within twenty-four (24) hours of the expiration of the ~~term~~Term of this ~~agreement~~Agreement or its earlier termination as provided herein, Coach shall immediately cause any such personal property, materials, and articles of information in Coach's possession or control to be delivered to the Director.

6.3. Assignment. Neither party may assign its rights or delegate its obligations under this Agreement without the prior written consent of the other party.

6.4. Waiver. No waiver of any default in the performance of this Agreement shall be effective unless in writing and signed by the waiving party. The waiver of a particular breach in the performance of this Agreement shall not constitute a waiver of any other or subsequent breach. The resort to a particular remedy upon a breach shall not constitute a waiver of any other available remedies.

6.5. Severability. If any provision of this Agreement is determined to be invalid or unenforceable, the remainder of the Agreement shall not be affected and shall remain in effect.

6.6. Governing Law. This Agreement shall be subject to and construed in accordance with the laws of the state of Idaho as an agreement to be performed in Idaho. Any action based in whole or in part on this Agreement shall be brought in ~~the courts of the state of~~ district court in Ada County, Boise, Idaho.

6.7. Oral Promises. Oral promises of an increase in annual salary or of any supplemental or other compensation shall not be binding upon the University ~~(College)~~.

6.8. Force Majeure. Any prevention, delay or stoppage due to strikes, lockouts, labor disputes, acts of God, inability to obtain labor or materials or reasonable substitutes ~~therefor~~therefore, governmental restrictions, governmental regulations, governmental controls, enemy or hostile governmental action, civil commotion, fire or other casualty, and other causes beyond the reasonable control of the party obligated to perform (including financial

| inability), shall excuse the performance by such party for a period equal to any such prevention, delay or stoppage.

6.9—Non-Confidentiality. ~~The~~ Coach hereby consents and agrees that this document may be released and made available to the public after it is signed by ~~the~~ Coach. ~~The~~ Coach further agrees that all documents and reports ~~he~~ Coach is required to produce under this Agreement may be released and made available to the public at the University ~~(College)'s~~ University's sole discretion.

6.10—Notices. Any notice under this Agreement shall be in writing and be delivered in person or by public or private courier service (including U.S. Postal Service Express Mail) or certified mail with return receipt requested or by facsimile. All notices shall be addressed to the parties at the following addresses or at such other addresses as the parties may from time to time direct in writing:

the University ~~(College):~~ Boise State University
Director of Athletics

1910 University Drive
Boise, Idaho 83725-1020

with a copy to: ~~Chief executive officer~~ Boise State University

O dent
1910 University Drive
Boise, Idaho 83725-1000

Coach: Shawn Garus

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ATTACHMENT 3

6.15—Entire Agreement; Amendments. This Agreement constitutes the entire agreement ~~of~~between the parties and supersedes all prior agreements and understandings with respect to the same subject matter. No amendment or modification of this Agreement shall be effective unless in writing, signed by both parties, and approved by University ~~(College)'s~~the University's Board of ~~(Regents or Trustees)~~_____.

6.16—_____ Opportunity to Consult with Attorney. ~~The~~ Coach acknowledges that ~~he~~Coach has had the opportunity to consult and review this Agreement with an attorney. Accordingly, in all cases, the language of this Agreement shall be construed simply, according to its fair meaning, and not strictly for or against any party.

**BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016**

ATTACHMENT 3

IN WITNESS WHEREOF, the parties agree to the terms and conditions of this Agreement and the incorporated documents attached hereto and have executed this Agreement freely and agree to be bound hereby as of the Effective Date.

UNIVERSITY ~~(COLLEGE)~~

COACH

Chief executive officer _____ Date _____ Date _____

Dr. Robert Kustra, President

Shawn Garus

Approved by the Board of ~~(Regents or Trustees)~~ on the _____ day of _____,
2014 _____, 2016.

BOISE STATE UNIVERSITY

Women's Volleyball APR History and National Percentile Rank

SINGLE YEAR NCAA ACADEMIC PROGRESS RATE (APR) SCORES

	2011-12	2012-13	2013-14	2014-15
Women's Volleyball	1000	979	1000	1000
<i>National % Rank by Sport</i>	<i>90-100</i>	<i>30-40</i>	<i>90-100</i>	<i>tba*</i>

REPORT YEAR

Raw Score for single year

Percentile Rank for Sport

* NCAA release May 2016

MULTI-YEAR (4-Year Rolling Average)

Women's Volleyball	948	957	994	1000
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Annual Team Grade PointAverage (Fall/Spring)

2011-12	2012-13	2013-14	2014-15
3.13	2.95	3.11	3.04

ATTACHMENT 5**Coach Shawn Garus Maximum Compensation Calculation - 2016-2018**

		Yr 1	Yr 2
3.1.1a	Annual Base Salary	\$ 100,000.00	\$ 100,000.00
3.2.1	Additional Pay based on Performance	\$ 26,000.00	\$ 26,000.00
3.2.2	Additional Pay based on Academic Achievement	\$ 5,000.00	\$ 5,000.00
	Total Maximum potential annual compensation under Employment Agreement	\$ 131,000.00	\$ 131,000.00

Comparison of Liquidated Damages Clauses in MBB Contracts of Mountain West Conference and Pac 12 Schools						
Coach	School	Length of Contract	2015 Salary (total comp)	Liquidated Damages Clause?	Type of L.D. Clause	Amount(s) over time
Hilbert, Tom	Colorado State	7/1/14 - 12/31/18	\$ 200,000	Yes	Flat Rate	<p>d. Termination by Hilbert. At all times during the Term, Hilbert shall have the right to terminate this Agreement, without cause, at any time upon prior written notice to the University, except that Hilbert shall not, without good cause (such as would be cause for termination for breach by the University), give his notice of termination that is to take effect between July 1 and the last regular season game of the then-current CSU women's volleyball season. If such notice is given during the foregoing time frame, the termination effective date shall be determined at the sole discretion of the Director, but in no event later than the final game (to include any post-season tournament game) of that season.</p> <p>In the event that Hilbert so terminates this Agreement during the Term and accepts a coaching position at another university or for a professional or national team, Hilbert shall pay to the University, as liquidated damages because the Parties agree that the harm to the University cannot otherwise be reasonably calculated, the sum of One Million Dollars (\$1,000,000.00). This amount shall be payable in full on a lump-sum basis within ninety (90) days of the effective date of Hilbert's termination.</p>
Nelson, Jeff	New Mexico	7/1/14 - 6/30/17	\$ 129,406	Yes	Flat Rate	\$35,000 unless termination by coach happens in the 5th full year contract, no damages owed to University
Collins-Parker, Deitre	San Diego State	7/1/15 - 6/30/16	\$ 128,844	n/a		
Fredrick, Cindy	UNLV	7/1/15 - 6/30/16	\$ 126,322	Yes	Tied to base salary	Employee shall pay 1: any unpaid portion of the base guaranteed base salary or 2: six (6) months guaranteed base salary, whichever is less
Callihan, Chad	Wyoming	7/1/15 - 12/31/19	\$ 112,800	n/a		
Netherby-Sewell, Lauren	Fresno State	1/1/13 - 12/31/17	\$ 100,500	No		
Garus, Shawn	Boise State	2/28/16 - 1/31/18	\$ 100,000	Yes	Sliding Scale	Year 1: \$20,000; Year 2: \$10,000
DuBose, Grayson	Utah State	7/1/14 - 6/30/17	\$ 99,100	No		
Nelson, Lee	Nevada	7/1/2015	\$ 95,270	n/a		
Shepardson, Jolene	San Jose State	9/3/15 - 2/5/19	\$ 87,844	No		
McShane, Matt	Air Force	n/a	n/a	n/a		

Head Volleyball Coach Salary and Incentive Comparison in the Mountain West Conference			
Coach	School	2015 Base Salary	Incentives
Hilbert, Tom	Colorado State	\$ 200,000	Courtesy car or equivalent car stipend. Win the MW regular season championship pay is 1/12 of base salary. Win, if instituted, MW tournament championship pay is 1/12 of base salary. Qualify for the NCAA championship tournament pay is 1/12 of base salary. *Hilbert can only receive one payment of 1/12 per year. Advance to Sweet 16 of the NCAA championship tournament pay an additional \$15,000. Advance to Final 4 of the NCAA championship tournament pay an additional \$15,000. Win the NCAA championship tournament pay an additional \$25,000.
Nelson, Jeff	New Mexico	\$ 125,000	Courtesy car provided. Win conference regular season championship pay is one month salary. Win the NCAA tournament pay is one month salary. Reaching regionals pay is \$15,000. Final Four win pay is \$25,000. RPI below 100 pay is \$1,000. RPI below 50 pay is \$2,000. RPI below 25 pay is \$4,000. Average attendance of 1500 per game pay is \$1,000.
Collins-Parker, Deitre	San Diego State	\$ 127,334	\$1,500 personal services. No description.
Fredrick, Cindy	UNLV	\$ 90,000	Courtesy car provided. Win 20 or more games in regular season pay is 25% of one month base salary. Conference regular season champions and/or MW tournament champions pay is 50% of one month base salary. Qualify for NCAA Championship tournament pay is one month base salary. For each win in NCAA Championship tournament pay is 50% of one month base salary. Coach of the Year for MW Conference pay is 25% of one month base salary. District Coach of the Year pay is 25% of one month base salary. National Coach of the Year pay is 50% of one month base salary. APR score is 960 or more pay is 25% of one month base salary.
Callihan, Chad	Wyoming	\$ 102,000	\$10,800 personal services. \$15,000 contingent. No other description.
Netherby-Sewell, Lauren	Fresno State	\$ 100,500	Achieve annual APR at 950 for \$6,500 or 975 at \$10,000. Annual Team GPA of 3.0-3.199 for \$6,000 or 3.2+ for \$12,000. Regular season winning percentage of 70% is \$7,500 or 80% is \$10,000 or 90% is \$12,500. Games do not count exhibition or non-NCAA DI games with opponents outside of conference with RPI of 150 or above. Regular season co-champion is \$10,000. Regular season champion is \$15,000. Participate in 1st or 2nd round of NCAA tournament is \$15,000 or advance to Sweet 16 is \$20,000 or advance to Final Four is \$35,000 or National championship is \$50,000. Final ranking of Top 25 is \$7,500 or Top 10 is \$12,000. Conference Coach of the Year is \$5,000. AVCA Regional Coach of the Year is \$10,000 or AVCA National Coach of the Year is \$20,000.
Garus, Shawn	Boise State	\$ 100,000	See contract.
DuBose, Grayson	Utah State	\$ 90,000	\$2,100 annual car stipend. \$6,000 personal services. \$500 single year APR of 980 goal, \$500 for GPA of 3.5 or higher, \$1,000 for winning championship, \$1,000 for qualifying for post season competition and \$1,000 for Coach of the Year honors.
Nelson, Lee	Nevada	\$ 95,000	Courtesy car provided. No other description.
Shepardson, Jolene	San Jose State	\$ 85,334	\$2,500 personal services. No other description.
McShane, Matt	Air Force	n/a	No description.

BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

UNIVERSITY OF IDAHO

SUBJECT

Multi-year contract for the Director of Athletics.

REFERENCE

August 2004	Original multi-year contract approved by the Idaho State Board of Education (Board).
August 2007	Addendum to extend contract term approved by the Board.
August 2011	Contract Extension approved by the Board.

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies and Procedures, Section II.B.3.c. and II.H.

BACKGROUND/DISCUSSION

The University of Idaho (UI) seeks to extend the contract term for the Director of Athletics (Director), Robert Spear. The original contract was approved by the Board in August 2004 and was extended in August 2007 to 2008. In 2011 the Board approved a new five year contract expiring August 13, 2016. UI proposes a new contract so as to incorporate improvements and language changes that have become standard for all multi-year athletic contracts at the university. Compensation amounts for the Director are unchanged from the current contract terms other than salary increases as part of University wide CEC.

The proposed contract replaces and supersedes the 2011 contract and all addendums. The term of the proposed contract is four (4) years from the date of signature. This effects an approximate three and one-half (3.5) year extension beyond the existing contract term.

IMPACT

The annual base salary is currently \$181,958.40 paid from appropriated funds. The Director will receive supplemental compensation (media payment) of \$15,000 per year and a potential annual bonus of \$10,000 based on the athletic department APR performance. Total potential annual compensation (base salary and media payment) is \$206,958.40.

Liquidated damages for early termination by the Director (Section 5.3.3) are calculated at \$100,000 for termination prior to the next ensuing anniversary date (August 12, 2016); \$50,000 for termination prior to the 2017 anniversary date (August 12, 2017) and \$20,000 for termination prior to the 2018 anniversary date. Terminations after August 12, 2018 will not bear liquidated damages. The liquidated damages apply only if Director is subsequently employed as Athletic Director for any NCAA Division I institution at any time within one year from the

BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

date of termination. These amounts and terms are the result of negotiations between the University and the Athletic Director.

ATTACHMENTS

Attachment 1 – Employment Contract – clean	Page 3
Attachment 2 – Employment Contract – redline	Page 15
Attachment 3 – Contract Comparison to Model – redline	Page 29
Attachment 4 – Max Compensation Calculation	Page 47
Attachment 5 – 4 Year APR History	Page 49
Attachment 6 – Athletic Director Salary Comparison	Page 50
Attachment 7 – Liquidated Damages Summary	Page 51

STAFF COMMENTS AND RECOMMENDATIONS

The proposed contract hews closely to the arrangements contained in the Athletic Director's previously-approved contract. The new contract conforms to the Board's multi-year contract template, including the Board's guidance on bonuses and liquidated damages. Staff recommends approval.

BOARD ACTION

I move to approve the University of Idaho's multi-year employment contract for Athletic Director, Robert Spear, for a term commencing upon execution of the contract after approval, and terminating on August 12, 2019 with provision for a one year extension to August 12, 2020, in substantial conformance to the form presented to the Board in attachment 1.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

EMPLOYMENT AGREEMENT

This Employment Agreement (Agreement) is entered into by and between the University of Idaho (University) and Robert Spear (Director).

ARTICLE 1

1.1. Employment. Subject to the terms and conditions of this Agreement, the University shall employ Director as the Director of its intercollegiate athletics program (Program). Director represents and warrants that Director is fully qualified to serve, and is available for employment, in this capacity.

1.2. Reporting Relationship. Director shall report and be responsible directly to the University's President or the President's designee (collectively "President). Director shall abide by the reasonable instructions of the President and shall confer with the President on all major administrative matters.

1.3. Duties. Director shall manage and supervise the Program and shall perform such other duties in relation to the Program or the University as the President may assign and as may be described elsewhere in this Agreement. The University shall have the right, at any time upon 14 days' written notice, to reassign Director to duties at the University other than as Director of the Program, provided that Director's compensation and benefits shall not be affected by any such reassignment, except that the opportunity to earn supplemental compensation as provided in section 3.2 shall cease.

ARTICLE 2

2.1. Term. This Agreement is for a fixed-term appointment of four (4) years commencing on February __, 2016, and terminating, without further notice to Director, on February __, 2020 unless sooner terminated in accordance with other provisions of this Agreement. This Agreement replaces and supersedes the Agreement between Director and University approved by the University's Board of Regents August 11, 2011 and all addendums thereto.

2.2. Extension or Renewal. This Agreement is renewable solely upon an offer from the University and an acceptance by Director, both of which must be in writing and signed by the parties. Any renewal is subject to the prior approval of University's Board of Regents. This Agreement in no way grants to Director a claim to tenure in employment, nor shall Director's service pursuant to this agreement count in any way toward tenure at the University.

ARTICLE 3

3.1 Regular Compensation.

3.1.1 In consideration of Director's services and satisfactory performance of this Agreement, the University shall provide to Director:

- a) An annual salary of \$181,958.40 payable in biweekly installments in accordance with normal University procedures, and such salary increases as may be determined appropriate by the President and approved by the University's Board of Regents ("Regents");
- b) The opportunity to receive such employee benefits as the University provides generally to non-faculty exempt employees; and
- c) The opportunity to receive such employee benefits as the University's Department of Athletics (Department) provides generally to its employees of a comparable level. Director hereby agrees to abide by the terms and conditions, as now existing or hereafter amended, of such employee benefits.

Director understands and agrees that financial conditions may require the President, in the President's discretion, to institute furloughs or to take such other actions consistent with Regents' policy as the President may determine to be necessary to meet such challenges. In the event of a furlough or other action, the actual salary paid to Director will be less than the salary stated in Paragraph 3.1.1(a) above.

3.2. Supplemental Compensation.

3.2.1 Director shall be eligible to receive supplemental compensation each year based on the academic achievement and behavior of all athletic department athletic team members as follows: If the annual departmental average National Collegiate Athletic Association ("NCAA") Academic Progress Rate ("APR") scores exceed 950 and no individual team fails to meet the NCAA postseason standard, and if Director continues to be employed as University's Athletic Director as of the ensuing July 1st, Director shall receive supplemental compensation of \$10,000. Any such supplemental compensation paid to Director shall be accompanied with a justification for the supplemental compensation based on the factors listed above, and such justification shall be separately reported to the Board of Regents as a document available to the public under the Idaho Public Records Act. The determination shall also be based on the conduct of Athletic Department team members on the University campus, at authorized University activities, in the community, and elsewhere.

3.2.2 The Director shall receive the sum of \$15,000 from the University or the University's designated media outlet(s) or a combination thereof each year during the term of this

Agreement in compensation for participation in media programs and public appearances (collectively “Appearances”). Director’s right to receive such payment shall vest on January 1 of each fiscal year of this Agreement and is expressly contingent on Director’s compliance with University’s financial stewardship policies as set forth in University’s Administrative Procedures Manual Chapter 25. This sum shall be paid in two equal installments in January and July of each year. Agreements requiring the Director to participate in Appearances related to his duties as an employee of University are the property of the University. The University shall have the exclusive right to negotiate and contract with all producers of media productions and all parties desiring public appearances by the Director. Director agrees to cooperate with the University in order for the Appearances to be successful and agrees to provide his services to and perform on the Appearances and to cooperate in their production, broadcasting, and telecasting. It is understood that Director shall not appear without the prior written approval of the President on any radio or television program (including but not limited to a call-in show, or interview show) or a regularly scheduled news segment, through a media outlet that is not University-designated, except that this prohibition shall not apply to routine news media interviews for which no compensation is received. Without the prior written approval of the President, Director shall not appear in any commercial endorsements that are broadcast on radio or television that conflict with those broadcast on the University’s designated media outlets.

3.3. Director agrees that the University has the exclusive right to select footwear, apparel and/or equipment for the use of its student-athletes and staff, including Director, during official practices and games and during times when Director or Program participants are being filmed by motion picture or video camera or posing for photographs in their capacity as representatives of University. Director recognizes that the University is negotiating or has entered into an agreement with Nike to supply the University with athletic footwear, apparel and/or equipment. Director agrees that, upon the University’s reasonable request, Director will consult with appropriate parties concerning Nike products’ design or performance, shall act as an instructor at a clinic sponsored in whole or in part by Nike, and give a lecture at an event sponsored in whole or in part by Nike, and make other educationally-related appearances as may be reasonably requested by the University. Notwithstanding the foregoing sentence, Director shall retain the right to decline such appearances as Director reasonably determines to conflict with or hinder his duties and obligations as Director. In order to avoid entering into an agreement with a competitor of Nike, Director shall submit all outside consulting agreements to the University for review and approval prior to execution. Director shall also report such outside income to the University in accordance with NCAA rules. Director further agrees that Director will not endorse any athletic footwear, apparel and/or equipment products, including Nike, and will not participate in any messages or promotional appearances that contain a comparative or qualitative description of athletic footwear, apparel or equipment products.

3.4. Professional Development Opportunity. During the period of February 1 through August 1 of each year of this Agreement, University agrees to fund through the President’s Office at least one mutually agreeable professional development opportunity for Director in the area relevant to the Director’s duties, including fundraising, athletic administration, or higher education.

3.5 General Conditions of Compensation. All compensation provided by the University to Director is subject to deductions and withholdings as required by law or the terms and conditions of any fringe benefit in which Director participates. However, if any fringe benefit is based in whole or in part upon the compensation provided by the University to Director, such fringe benefit shall be based only on the compensation provided pursuant to section 3.1.1, except to the extent required by the terms and conditions of a specific fringe benefit program.

ARTICLE 4

4.1. Director's Specific Duties and Responsibilities. In consideration of the compensation specified in this Agreement, Director, in addition to the obligations set forth elsewhere in this Agreement, shall:

4.1.1. Devote Director's full time and best efforts to the performance of Director's duties under this Agreement;

4.1.2. Develop and implement programs and procedures with respect to the management and operation of the Department and the management, performance, evaluation, recruitment, and training of Department personnel;

4.1.3. Observe and uphold all academic standards, requirements, and policies of the University and work with Department personnel to encourage Program participants to perform to their highest academic potential and to graduate in a timely manner;

4.1.4. Know, recognize, and comply with all applicable laws and the policies, rules and regulations of the University, the University's governing board, the conference, and the NCAA; supervise and take appropriate steps to ensure that Director's assistant and associate directors, any other employees for whom Director is administratively responsible, and the participants in the Program know, recognize, and comply with all such laws, policies, rules and regulations; and immediately report to the President and to the Department's Director of Compliance if Director has reasonable cause to believe that any person or entity, including without limitation representatives of the University's athletic interests, has violated or is likely to violate any such laws, policies, rules or regulations. Director shall cooperate fully with the University and Department at all times. The applicable laws, policies, rules, and regulations include: (a) State Board of Education and Board of Regents of the University of Idaho Governing Policies and Procedures and Rule Manual; (b) University's Faculty-Staff Handbook; (c) University's Administrative Procedures Manual; (d) the policies of the Department; (e) NCAA rules and regulations; and (f) the rules and regulations of the conference of which the University is a member.

4.2 Outside Activities. Director shall not undertake any business, professional or personal activities, or pursuits that would prevent Director from devoting Director's full time and best efforts to the performance of Director's duties under this Agreement, that would otherwise

detract from those duties in any manner, or that, in the opinion of the University, would reflect adversely upon the University or the Program. Subject to the terms and conditions of this Agreement, Director may, with the prior written approval of the President, enter into separate arrangements for outside activities and endorsements that are consistent with Director's obligations under this Agreement. Director may not use the University's name, logos, or trademarks in connection with any such arrangements without the prior written approval of the President.

4.3. NCAA Rules. In accordance with NCAA rules, Director shall obtain prior written approval from the University's President for all athletically related income and benefits from sources outside the University and shall provide a written detailed account of the source and amount of all such income and benefits to the President whenever reasonably requested, but in no event less than annually before the close of business on June 30th of each year or the last regular University work day preceding June 30th. The report shall be in a format reasonably satisfactory to University. Sources of such income include, but are not limited to, the following:

- (a) Income from annuities;
- (b) Sports camps;
- (c) Housing benefits, including preferential housing arrangements;
- (d) Country club memberships;
- (e) Complimentary ticket sales;
- (f) Television and radio programs; and
- (g) Endorsement or consultation contracts with athletics shoe, apparel or equipment manufacturers.

In no event shall Director accept or receive directly or indirectly any monies, benefits, or gratuities whatsoever from any person, association, corporation, University booster club, University alumni association, University foundation, or other benefactor, if the acceptance or receipt of the monies, benefits, or gratuities would violate applicable law or the policies, rules, and regulations of the University, the University's governing board, the conference, or the NCAA.

4.4 Hiring Authority. Director shall have the responsibility and the sole authority to recommend to the President the hiring and termination of Department personnel, but, except as delegated by the President, the decision to hire or terminate shall be made by the President and shall, when necessary or appropriate, be subject to the approval of the University's Board of Regents.

4.5 Scheduling. Director shall be responsible for the scheduling of athletic games and events but shall consult with the President as the President requests.

4.6 Other Opportunities. Director shall not, under any circumstances, interview for, negotiate for, or accept employment as a director of athletics at any other institution of higher education or with any professional sports team, requiring performance of duties prior to the expiration of this Agreement, without the prior approval of the President. Such approval shall not unreasonably be withheld.

ARTICLE 5

5.1 Termination of Director for Cause. The University may, in its discretion, suspend Director from some or all of Director's duties, temporarily or permanently, and with or without pay; reassign Director to other duties; or terminate this Agreement at any time for good or adequate cause, as those terms are defined in the applicable policies, rules or regulations of the University, the University's governing board, the conference, or the NCAA.

5.1.1 In addition to the definitions contained in applicable policies, rules or regulations of the University, the University's governing board, the conference, or the NCAA, University and Director hereby specifically agree that the following shall constitute good or adequate cause for suspension or termination of this Agreement:

- a) A deliberate or major violation of Director's duties under this Agreement or the refusal or unwillingness of Director to perform such duties in good faith and to the best of Director's abilities;
- b) The failure of Director to remedy any violation of any of the terms of this Agreement within 30 days after written notice from the University;
- c) A deliberate or major violation, as determined by the University, by Director of any applicable law or the policies, rules or regulations of the University, the University's governing board, the conference or the NCAA;
- d) Ten (10) working days' absence of Director from duty without the University's consent;
- e) Any conduct of Director that constitutes moral turpitude or that would, in the University's judgment, reflect adversely on the University or its athletic programs;
- f) The failure of Director to represent the University and its athletic programs positively in public and private forums;
- g) The failure of Director to fully and promptly cooperate with the NCAA or the University in any investigation of possible violations of any applicable law or the policies, rules or regulations of the University, the University's governing board, the conference, or the NCAA;
- h) The failure of Director to report a known violation of any applicable law or the policies, rules or regulations of the University, the University's governing board, the conference, or the NCAA, by any Department employee, any other employees for whom Director is administratively responsible, or a Participant in the Program; or

- i) A violation of any applicable law or the policies, rules or regulations of the University, the University's governing board, the conference, or the NCAA, by any employees for whom Director is administratively responsible, or a Participant in the Program if Director knew or should have known of the violation and could have prevented it by ordinary supervision.

5.1.2 Suspension, reassignment, or termination for good or adequate cause shall be effectuated by the University as follows: before the effective date of the suspension, reassignment, or termination, the President shall provide Director with notice, which notice shall be accomplished in the manner provided for in this Agreement and shall include the reason(s) for the contemplated action. Director shall then have an opportunity to respond. After Director responds or fails to respond, University shall notify Director whether, and if so when, the action will be effective.

5.1.3 In the event of any termination for good or adequate cause, the University's obligation to provide compensation and benefits to Director, whether direct, indirect, supplemental or collateral, shall cease as of the date of such termination, and the University shall not be liable for the loss of any collateral business opportunities or other benefits, perquisites, or income resulting from outside activities or from any other sources.

5.1.4 If found in violation of NCAA regulations, Director shall, in addition to the provisions of Section 5.1, be subject to disciplinary or corrective action as set forth in the provisions of the NCAA enforcement procedures, including suspension without pay or termination of employment for significant or repetitive violations.

5.2 Termination of Director for Convenience of University.

5.2.1 At any time after commencement of this Agreement, University, for its own convenience, may terminate this Agreement by giving ten (10) days prior written notice to Director.

5.2.2 In the event that University terminates this Agreement for its own convenience, University shall be obligated to pay Director, as liquidated damages and not a penalty, the salary set forth in section 3.1.1(a), excluding all deductions required by law, on the regular paydays of University until the term of this Agreement ends or until Director obtains reasonably comparable employment, whichever occurs first; provided, however, in the event Director obtains employment of any kind or nature after such termination, then the amount of compensation the University pays will be adjusted and reduced by the amount of compensation paid Director as a result of such other employment, such adjusted compensation to be calculated for each University pay-period by reducing the gross salary set forth in section 3.1.1(a) (before deductions required by law) by the gross compensation paid to Director under the other employment, then subtracting from this adjusted gross compensation deductions according to law. In addition, Director will be entitled to continue his health insurance plan and group life insurance as if he remained a University employee until the term of this Agreement ends or until Director

obtains reasonably comparable employment or any other employment providing Director with a reasonably comparable health plan and group life insurance, whichever occurs first. Director shall be entitled to no other compensation or fringe benefits, except as otherwise provided herein or required by law. Director specifically agrees to inform University within ten business days of obtaining other employment, and to advise University of all relevant terms of such employment, including without limitation the nature and location of the employment, salary, other compensation, health insurance benefits, life insurance benefits, and other fringe benefits. Failure to so inform and advise University shall constitute a material breach of this Agreement and University's obligation to pay compensation under this provision shall end. Director agrees not to accept employment for compensation at less than the fair value of Director's services, as determined by all circumstances existing at the time of employment. Director further agrees to repay to University all compensation paid to him by University after the date he obtains other employment, to which he is not entitled under this provision.

5.2.3 University has been represented by legal counsel, and Director has either been represented by legal counsel or has chosen to proceed without legal counsel in the contract negotiations. The parties have bargained for and agreed to the foregoing provision, giving consideration to the fact that Director may lose certain benefits, supplemental compensation, or outside compensation relating to his employment with University, which damages are extremely difficult to determine with certainty. The parties further agree that the payment of such liquidated damages by University and the acceptance thereof by Director shall constitute adequate and reasonable compensation to Director for the damages and injury suffered by Director because of such termination by University. The liquidated damages are not, and shall not be construed to be, a penalty.

5.3 Termination by Director for Convenience.

5.3.1 Director recognizes that his promise to work for University for the entire term of this Agreement is of the essence of this Agreement. Director also recognizes that the University is making a highly valuable investment in his employment by entering into this Agreement and that its investment would be lost were he to resign or otherwise terminate his employment with the University before the end of the contract term.

5.3.2 Director, for his own convenience, may terminate this Agreement during its term by giving prior written notice to the University. Termination shall be effective ten (10) days after notice is given to the University.

5.3.3 If Director terminates this Agreement for convenience at any time, all obligations of the University shall cease as of the effective date of the termination. If Director terminates this Agreement for Director's convenience, Director shall pay to the University, as liquidated damages and not as a penalty, the following sum: (a) if the Agreement is terminated on or before August 12, 2016, the sum of \$100,000.00; (b) if the Agreement is terminated between August 13, 2016 and August 12, 2017 inclusive, the sum of \$50,000.00; (c) if the Agreement is terminated between August 13, 2017 and August 12, 2018 inclusive, the sum of \$20,000.00. The

liquidated damages shall be due and payable within twenty (20) days of the effective date of the termination, and any unpaid amount shall bear simple interest at a rate eight (8) percent per annum until paid. The liquidated damages in this section 5.3.3 shall apply only if Director is subsequently employed as Athletic Director for any NCAA Division I institution at any time within one year from the date of such termination.

5.3.4 University has been represented by legal counsel, and Director has either been represented by legal counsel or has chosen to proceed without legal counsel in the contract negotiations. The parties have bargained for and agreed to the foregoing liquidated damages provision, giving consideration to the fact that the University will incur administrative and recruiting costs in obtaining a replacement for Director, in addition to potentially increased compensation costs, if Director terminates this Agreement for convenience. The parties agree that such costs are extremely difficult to determine with certainty. The parties further agree that the payment of such liquidated damages by Director and the acceptance thereof by University shall constitute adequate and reasonable compensation to University for the damages and injury suffered by it because of such termination by Director. The liquidated damages are not, and shall not be construed to be, a penalty. This section 5.3.4 shall not apply if Director terminates this Agreement because of a material breach by the University.

5.3.5 Except as provided elsewhere in this Agreement, if Director terminates this Agreement for convenience, he shall forfeit to the extent permitted by law his right to receive all supplemental compensation and other payments.

5.4 Termination due to Disability or Death of Director.

5.4.1 Notwithstanding any other provision of this Agreement, this Agreement shall terminate automatically if Director becomes totally or permanently disabled as defined by the University's disability insurance carrier, becomes unable to perform the essential functions of the position of Director, or dies.

5.4.2 If this Agreement is terminated because of Director's death, Director's salary and all other benefits shall terminate as of the last day worked, except that Director's personal representative or other designated beneficiary shall be paid all compensation due or unpaid and death benefits, if any, as may be contained in any fringe benefit plan now in force or hereafter adopted by the University and due to Director's estate or beneficiaries thereunder.

5.4.3 If this Agreement is terminated because Director becomes totally or permanently disabled as defined by the University's disability insurance carrier or becomes unable to perform the essential functions of the position of Director, all salary and other benefits shall terminate, except that Director shall be entitled to receive any compensation due or unpaid and any disability-related benefits to which he is entitled by virtue of employment with the University.

5.5 Interference by Director. In the event of termination or suspension, Director agrees that Director will not interfere with the University's student-athletes or otherwise obstruct the University's ability to transact business or operate its intercollegiate athletics program.

5.6 No Liability. The University shall not be liable to Director for the loss of any collateral business opportunities or any other benefits, perquisites or income from any sources that may ensue as a result of any termination of this Agreement by either party or due to death or disability or the suspension of Director, regardless of the circumstances.

5.7 Waiver of Rights. Because Director is receiving a multi-year contract and the opportunity to receive supplemental compensation, and because such contracts and opportunities are not customarily afforded to University employees, if the University suspends Director, or terminates this Agreement for good or adequate cause or for convenience, Director shall have all the rights provided for in this Agreement but hereby releases the University from compliance with the notice, appeal, and similar employment-related rights provided for in the State Board of Education and Board or Regents of the University of Idaho Rules Manual (IDAPA 08) and Governing Policies and Procedures Manual, and the University Faculty-Staff Handbook.

ARTICLE 6

6.1 Board Approval. This Agreement shall not be effective until and unless approved of the University's Board of Regents and executed by both parties as set forth below. In addition, the payment of any compensation pursuant to this agreement shall be subject to the approval of the University's Board of Regents, the President; the sufficiency of legislative appropriations; the receipt of sufficient funds in the account from which such compensation is paid; and the Board of Regents and University's rules regarding financial exigency.

6.2 University Property. All personal property (excluding vehicle(s) provided through the Vandal Wheels program), material, and articles of information, including, without limitation, keys, credit cards, personnel records, recruiting records, team information, films, statistics or any other personal property, material, or data, furnished to Director by the University or developed by Director on behalf of the University or at the University's direction or for the University's use or otherwise in connection with Director's employment hereunder are and shall remain the sole property of the University. Within twenty-four (24) hours of the expiration of the term of this agreement or its earlier termination as provided herein, Director shall immediately cause any such personal property, materials, and articles of information in Director's possession or control to be delivered to the University.

6.3 Assignment. Neither party may assign its rights or delegate its obligations under this Agreement without the prior written consent of the other party.

6.4 Waiver. No waiver of any default in the performance of this Agreement shall be effective unless in writing and signed by the waiving party. The waiver of a particular breach in the performance of this Agreement shall not constitute a waiver of any other or subsequent breach.

The resort to a particular remedy upon a breach shall not constitute a waiver of any other available remedies.

6.5 Severability. If any provision of this Agreement is determined to be invalid or unenforceable, the remainder of the Agreement shall not be affected and shall remain in effect.

6.6 Governing Law. This Agreement shall be subject to and construed in accordance with the laws of the state of Idaho as an agreement to be performed in Idaho. Any action based in whole or in part on this Agreement shall be brought in the courts of the state of Idaho.

6.7 Oral Promises. Oral promises of an increase in annual salary or of any supplemental or other compensation shall not be binding upon the University.

6.8 Force Majeure. Any prevention, delay or stoppage due to strikes, lockouts, labor disputes, acts of God, inability to obtain labor or materials or reasonable substitutes therefor, governmental restrictions, governmental regulations, governmental controls, enemy or hostile governmental action, civil commotion, fire or other casualty, and other causes beyond the reasonable control of the party obligated to perform (including financial inability), shall excuse the performance by such party for a period equal to any such prevention, delay or stoppage.

6.9 Confidentiality. Director hereby consents and agrees that this document may be released and made available to the public after it is signed by Director. Director further agrees that all documents and reports he is required to produce under this Agreement may be released and made available to the public at the University's sole discretion.

6.10 Notices. Any notice under this Agreement shall be in writing and be delivered in person or by public or private courier service (including U.S. Postal Service Express Mail) or certified mail with return receipt requested or by facsimile. All notices shall be addressed to the parties at the following addresses or at such other addresses as the parties may from time to time direct in writing:

the University: Office of the President
University of Idaho
P.O. Box 443151
Moscow, Idaho 83844-3151

with a copy to: Office of University Counsel
University of Idaho
P.O. Box 443158
Moscow, ID 83844-3158

the Director: Robert Spear
Last known address on file with
University's Human Resource Services

**BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016**

ATTACHMENT 1

Any notice shall be deemed to have been given on the earlier of: (a) actual delivery or refusal to accept delivery, (b) the date of mailing by certified mail, or (c) the day facsimile delivery is verified. Actual notice, however and from whomever received, shall always be effective.

6.11 Headings. The headings contained in this Agreement are for reference purposes only and shall not in any way affect the meaning or interpretation hereof.

6.12 Binding Effect. This Agreement is for the benefit only of the parties hereto and shall inure to the benefit of and bind the parties and their respective heirs, legal representatives, successors and assigns.

6.13 Non-Use of Names and Trademarks. The Director shall not, without the University's prior written consent in each case, use any name, trade name, trademark, or other designation of the University (including contraction, abbreviation or simulation), except in the course and scope of his official University duties.

6.14 No Third Party Beneficiaries. There are no intended or unintended third party beneficiaries to this Agreement.

6.15 Entire Agreement; Amendments. This Agreement constitutes the entire agreement of the parties and supersedes all prior agreements and understandings with respect to the same subject matter. No amendment or modification of this Agreement shall be effective unless in writing, signed by both parties, and approved by University's Board of Regents.

6.16 Opportunity to Consult with Attorney. The Director acknowledges that he has had the opportunity to consult and review this Agreement with an attorney, and has either consulted with legal counsel or chosen not to. Accordingly, in all cases, the language of this Agreement shall be construed simply, according to its fair meaning, and not strictly for or against any party.

UNIVERSITY

DIRECTOR

Chuck Staben
President

Date

Robert Spear
Director, Department of Athletics

Date

Approved by the Board of Regents on the ____ day of _____, 2016.

EMPLOYMENT AGREEMENT

This Employment Agreement (Agreement) is entered into by and between the University of Idaho (University) and Robert Spear (Director).

ARTICLE 1

1.1. Employment. Subject to the terms and conditions of this Agreement, the University shall employ Director as the Director of its intercollegiate athletics program (Program). Director represents and warrants that Director is fully qualified to serve, and is available for employment, in this capacity.

1.2. Reporting Relationship. Director shall report and be responsible directly to the University's President or the President's designee (collectively "President"). Director shall abide by the reasonable instructions of the President and shall confer with the President on all major administrative matters.

1.3. Duties. Director shall manage and supervise the Program and shall perform such other duties in relation to the Program or the University as the President may assign and as may be described elsewhere in this Agreement. The University shall have the right, at any time upon 14 days' written notice, to reassign Director to duties at the University other than as Director of the Program, provided that Director's compensation and benefits shall not be affected by any such reassignment, except that the opportunity to earn supplemental compensation as provided in section 3.2 shall cease.

ARTICLE 2

2.1. Term. This Agreement is for a fixed-term appointment of ~~five~~four (54) years commencing on ~~August 13, 2011~~February, 2016, and terminating, without further notice to Director, on ~~August 12, 2016~~February, 2020 unless sooner terminated in accordance with other provisions of this Agreement. This Agreement replaces and supersedes the Agreement between Director and University approved by the University's Board of Regents August ~~12, 2004~~11, 2011 and all addendums thereto.

2.2. Extension or Renewal. This Agreement is renewable solely upon an offer from the University and an acceptance by Director, both of which must be in writing and signed by the parties. Any renewal is subject to the prior approval of University's Board of Regents. This Agreement in no way grants to Director a claim to tenure in employment, nor shall Director's service pursuant to this agreement count in any way toward tenure at the University.

ARTICLE 3

3.1 Regular Compensation.

3.1.1 In consideration of Director's services and satisfactory performance of this Agreement, the University shall provide to Director:

- a) An annual salary of \$~~169,988.40~~181,958.40 payable in biweekly installments in accordance with normal University procedures, and such salary increases as may be determined appropriate by the ~~Director and~~ President and approved by the University's Board of Regents ("Regents");
- b) ~~Such~~The opportunity to receive such employee benefits as the University provides generally to non-faculty exempt employees; and
- c) ~~Such~~The opportunity to receive such employee benefits as the University's Department of Athletics (Department) provides generally to its employees of a comparable level. Director hereby agrees to abide by the terms and conditions, as now existing or hereafter amended, of such employee benefits.

Director understands and agrees that financial conditions may require the President, in the President's discretion, to institute furloughs or to take such other actions consistent with Regents' policy as the President may determine to be necessary to meet such challenges. In the event of a furlough or other action, the actual salary paid to Director will be less than the salary stated in Paragraph 3.1.1(a) above.

3.2. Supplemental Compensation.

3.2.1 Director shall be eligible to receive supplemental compensation each year based on the academic achievement and behavior of all athletic department athletic team members as follows: If the annual departmental average National Collegiate Athletic Association ("NCAA") Academic Progress Rate ("APR") scores exceed 950 and no individual team fails to meet the NCAA postseason standard, and if Director continues to be employed as University's Athletic Director as of the ensuing July 1st, Director shall receive supplemental compensation of \$10,000. Any such supplemental compensation paid to Director shall be accompanied with a justification for the supplemental compensation based on the factors listed above, and such justification shall be separately reported to the Board of Regents as a document available to the public under the Idaho

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Public Records Act. The determination shall also be based on the conduct of Athletic Department team members on the University campus, at authorized University activities, in the community, and elsewhere.

3.2.2 The Director shall receive the sum of \$15,000 from the University or the University's designated media outlet(s) or a combination thereof each year during the term of this Agreement in compensation for participation in media programs and public appearances (collectively "Appearances"). Director's right to receive such payment shall vest on January 1 of each fiscal year of this Agreement and is expressly contingent on Director's compliance with University's financial stewardship policies as set forth in University's Administrative Procedures Manual Chapter 25. This sum shall be paid in two equal installments in January and July of each year. Agreements requiring the Director to participate in Appearances related to his duties as an employee of University are the property of the University. The University shall have the exclusive right to negotiate and contract with all producers of media productions and all parties desiring public appearances by the Director. Director agrees to cooperate with the University in order for the Appearances to be successful and agrees to provide his services to and perform on the Appearances and to cooperate in their production, broadcasting, and telecasting. It is understood that Director shall not appear without the prior written approval of the President on any radio or television program (including but not limited to a call-in show, or interview show) or a regularly scheduled news segment, through a media outlet that is not University-designated, except that this prohibition shall not apply to routine news media interviews for which no compensation is received. Without the prior written approval of the President, Director shall not appear in any commercial endorsements that are broadcast on radio or television that conflict with those broadcast on the University's designated media outlets.

3.3. Director agrees that the University has the exclusive right to select footwear, apparel and/or equipment for the use of its student-athletes and staff, including Director, during official practices and games and during times when Director or Program participants are being filmed by motion picture or video camera or posing for photographs in their capacity as representatives of University. Director recognizes that the University is negotiating or has entered into an agreement with Nike to supply the University with athletic footwear, apparel and/or equipment. Director agrees that, upon the University's reasonable request, Director will consult with appropriate parties concerning Nike products' design or performance, shall act as an instructor at a clinic sponsored in whole or in part by Nike, and give a lecture at an event sponsored in whole or in part by Nike, and make other educationally-related appearances as may be reasonably requested by the University. Notwithstanding the foregoing sentence, Director shall retain the right to decline such appearances as Director reasonably determines to conflict with or hinder his duties and obligations as Director. In order to avoid entering into an agreement with a competitor of Nike, Director shall submit all outside consulting agreements to the University for review and approval prior to execution. Director shall also report such outside income to the University in accordance with NCAA rules. Director further agrees that Director will not endorse any athletic footwear, apparel and/or equipment products, including Nike, and will not participate in any messages or

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promotional appearances that contain a comparative or qualitative description of athletic footwear, apparel or equipment products.

3.4. Professional Development Opportunity. During the period of February 1 through August 1 of each year of this Agreement, University agrees to fund through the President's Office at least one mutually agreeable professional development opportunity for Director in the area ~~of university advancement and~~ relevant to the Director's duties, including fundraising, athletic administration, or higher education.

3.5 General Conditions of Compensation. All compensation provided by the University to Director is subject to deductions and withholdings as required by law or the terms and conditions of any fringe benefit in which Director participates. However, if any fringe benefit is based in whole or in part upon the compensation provided by the University to Director, such fringe benefit shall be based only on the compensation provided pursuant to section 3.1.1, except to the extent required by the terms and conditions of a specific fringe benefit program.

ARTICLE 4

4.1. Director's Specific Duties and Responsibilities. In consideration of the compensation specified in this Agreement, Director, in addition to the obligations set forth elsewhere in this Agreement, shall:

4.1.1. Devote Director's full time and best efforts to the performance of Director's duties under this Agreement;

4.1.2. Develop and implement programs and procedures with respect to the management and operation of the Department and the management, performance, evaluation, recruitment, and training of Department personnel;

4.1.3. Observe and uphold all academic standards, requirements, and policies of the University and work with Department personnel to encourage Program participants to perform to their highest academic potential and to graduate in a timely manner;

4.1.4. Know, recognize, and comply with all applicable laws and the policies, rules and regulations of the University, the University's governing board, the conference, and the NCAA; supervise and take appropriate steps to ensure that Director's assistant and associate directors, any other employees for whom Director is administratively responsible, and the participants in the Program know, recognize, and comply with all such laws, policies, rules and regulations; and immediately report to the President and to the Department's Director of Compliance if Director has reasonable cause to believe that any person or entity, including without limitation representatives of the University's athletic interests, has violated or is likely to violate any such laws,

policies, rules or regulations. Director shall cooperate fully with the University and Department at all times. The applicable laws, policies, rules, and regulations include: (a) State Board of Education and Board of Regents of the University of Idaho Governing Policies and Procedures and Rule Manual; (b) University's Faculty-Staff Handbook; (c) University's Administrative Procedures Manual; (d) the policies of the Department; (e) NCAA rules and regulations; and (f) the rules and regulations of the conference of which the University is a member.

4.2 Outside Activities. Director shall not undertake any business, professional or personal activities, or pursuits that would prevent Director from devoting Director's full time and best efforts to the performance of Director's duties under this Agreement, that would otherwise detract from those duties in any manner, or that, in the opinion of the University, would reflect adversely upon the University or the Program. Subject to the terms and conditions of this Agreement, Director may, with the prior written approval of the President, enter into separate arrangements for outside activities and endorsements that are consistent with Director's obligations under this Agreement. Director may not use the University's name, logos, or trademarks in connection with any such arrangements without the prior written approval of the President.

4.3. NCAA Rules. In accordance with NCAA rules, Director shall obtain prior written approval from the University's President for all athletically related income and benefits from sources outside the University and shall provide a written detailed account of the source and amount of all such income and benefits to the President whenever reasonably requested, but in no event less than annually before the close of business on June 30th of each year or the last regular University work day preceding June 30th. The report shall be in a format reasonably satisfactory to University. Sources of such income include, but are not limited to, the following:

- (a) Income from annuities;
- (b) Sports camps;
- (c) Housing benefits, including preferential housing arrangements;
- (d) Country club memberships;
- (e) Complimentary ticket sales;
- (f) Television and radio programs; and
- (g) Endorsement or consultation contracts with athletics shoe, apparel or equipment manufacturers.

In no event shall Director accept or receive directly or indirectly any monies, benefits, or gratuities whatsoever from any person, association, corporation, University booster club, University alumni association, University foundation, or other benefactor, if the acceptance or receipt of the monies, benefits, or gratuities would violate applicable law or the policies, rules, and regulations of the University, the University's governing board, the conference, or the NCAA.

4.4 Hiring Authority. Director shall have the responsibility and the sole authority to recommend to the President the hiring and termination of Department personnel, but, except as delegated by the President, the decision to hire or terminate

shall be made by the President and shall, when necessary or appropriate, be subject to the approval of the University's Board of Regents.

4.5 Scheduling. Director shall be responsible for the scheduling of athletic games and events but shall consult with the President as the President requests.

4.6 Other Opportunities. Director shall not, under any circumstances, interview for, negotiate for, or accept employment as a director of athletics at any other institution of higher education or with any professional sports team, requiring performance of duties prior to the expiration of this Agreement, without the prior approval of the President. Such approval shall not unreasonably be withheld.

ARTICLE 5

5.1 Termination of Director for Cause. The University may, in its discretion, suspend Director from some or all of Director's duties, temporarily or permanently, and with or without pay; reassign Director to other duties; or terminate this Agreement at any time for good or adequate cause, as those terms are defined in the applicable policies, rules or regulations of the University, the University's governing board, the conference, or the NCAA.

5.1.1 In addition to the definitions contained in applicable policies, rules or regulations of the University, the University's governing board, the conference, or the NCAA, University and Director hereby specifically agree that the following shall constitute good or adequate cause for suspension or termination of this Agreement:

- a) A deliberate or major violation of Director's duties under this Agreement or the refusal or unwillingness of Director to perform such duties in good faith and to the best of Director's abilities;
- b) The failure of Director to remedy any violation of any of the terms of this Agreement within 30 days after written notice from the University;
- c) A deliberate or major violation, as determined by the University, by Director of any applicable law or the policies, rules or regulations of the University, the University's governing board, the conference or the NCAA;
- d) Ten (10) working days' absence of Director from duty without the University's consent;
- e) Any conduct of Director that constitutes moral turpitude or that would, in the University's judgment, reflect adversely on the University or its athletic programs;

- f) The failure of Director to represent the University and its athletic programs positively in public and private forums;
- g) The failure of Director to fully and promptly cooperate with the NCAA or the University in any investigation of possible violations of any applicable law or the policies, rules or regulations of the University, the University's governing board, the conference, or the NCAA;
- h) The failure of Director to report a known violation of any applicable law or the policies, rules or regulations of the University, the University's governing board, the conference, or the NCAA, by any Department employee, any other employees for whom Director is administratively responsible, or a Participant in the Program; or
- i) A violation of any applicable law or the policies, rules or regulations of the University, the University's governing board, the conference, or the NCAA, by any employees for whom Director is administratively responsible, or a Participant in the Program if Director knew or should have known of the violation and could have prevented it by ordinary supervision.

5.1.2 Suspension, reassignment, or termination for good or adequate cause shall be effectuated by the University as follows: before the effective date of the suspension, reassignment, or termination, the President shall provide Director with notice, which notice shall be accomplished in the manner provided for in this Agreement and shall include the reason(s) for the contemplated action. Director shall then have an opportunity to respond. After Director responds or fails to respond, University shall notify Director whether, and if so when, the action will be effective.

5.1.3 In the event of any termination for good or adequate cause, the University's obligation to provide compensation and benefits to Director, whether direct, indirect, supplemental or collateral, shall cease as of the date of such termination, and the University shall not be liable for the loss of any collateral business opportunities or other benefits, perquisites, or income resulting from outside activities or from any other sources.

5.1.4 If found in violation of NCAA regulations, Director shall, in addition to the provisions of Section 5.1, be subject to disciplinary or corrective action as set forth in the provisions of the NCAA enforcement procedures, including suspension without pay or termination of employment for significant or repetitive violations.

5.2 Termination of Director for Convenience of University.

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5.2.1 At any time after commencement of this Agreement, University, for its own convenience, may terminate this Agreement by giving ten (10) days prior written notice to Director.

5.2.2 In the event that University terminates this Agreement for its own convenience, University shall be obligated to pay Director as liquidated damages and not a penalty, the salary set forth in section 3.1.1(a), excluding all deductions required by law, on the regular paydays of University until the term of this Agreement ends or until Director obtains reasonably comparable employment, whichever occurs first; provided, however, in the event Director obtains ~~lesser~~ employment of any kind or nature after such termination, then the amount of compensation the University pays will be adjusted and reduced by the amount of compensation paid Director as a result of such ~~lesser~~other employment, such adjusted compensation to be calculated for each University pay-period by reducing the gross salary set forth in section 3.1.1(a) (before deductions required by law) by the gross compensation paid to Director under the ~~lesser~~other employment, then subtracting from this adjusted gross compensation deductions according to law. In addition, Director will be entitled to continue his health insurance plan and group life insurance as if he remained a University employee until the term of this Agreement ends or until Director obtains reasonably comparable employment or any other employment providing Director with a reasonably comparable health plan and group life insurance, whichever occurs first. Director shall be entitled to no other compensation or fringe benefits, except as otherwise provided herein or required by law. Director specifically agrees to inform University within ten business days of obtaining other employment, and to advise University of all relevant terms of such employment, including without limitation the nature and location of the employment, salary, other compensation, health insurance benefits, life insurance benefits, and other fringe benefits. Failure to so inform and advise University shall constitute a material breach of this Agreement and University's obligation to pay compensation under this provision shall end. Director agrees not to accept employment for compensation at less than the fair value of Director's services, as determined by all circumstances existing at the time of employment. Director further agrees to repay to University all compensation paid to him by University after the date he obtains other employment, to which he is not entitled under this provision.

5.2.3 University has been represented by legal counsel, and Director has either been represented by legal counsel or has chosen to proceed without legal counsel in the contract negotiations. The parties have bargained for and agreed to the foregoing provision, giving consideration to the fact that Director may lose certain benefits, supplemental compensation, or outside compensation relating to his employment with University, which damages are extremely difficult to determine with certainty. The parties further agree that the payment of such ~~sums~~liquidated damages by University and the acceptance thereof by Director shall constitute adequate and reasonable compensation to Director. ~~Such compensation is for the damages and injury suffered by Director because of such termination by University. The liquidated damages are~~ not, and shall not be construed to be, a penalty.

5.3 Termination by Director for Convenience.

5.3.1 Director recognizes that his promise to work for University for the entire term of this Agreement is of the essence of this Agreement. Director also recognizes that the University is making a highly valuable investment in his employment by entering into this Agreement and that its investment would be lost were he to resign or otherwise terminate his employment with the University before the end of the contract term.

5.3.2 Director, for his own convenience, may terminate this Agreement during its term by giving prior written notice to the University. Termination shall be effective ten (10) days after notice is given to the University.

5.3.3 If Director terminates this Agreement for convenience at any time, all obligations of the University shall cease as of the effective date of the termination. If Director terminates this Agreement for Director's convenience, Director shall pay to the University, as liquidated damages and not as a penalty, the following sum: (a) if the Agreement is terminated on or before August 12, ~~2012, 2016,~~ the sum of ~~\$5,000.00~~ 100,000.00; (b) if the Agreement is terminated between August 13, ~~2012~~ 2016 and August 12, ~~2013~~ 2017 inclusive, the sum of ~~\$2,500.00~~ 50,000.00; (c) if the Agreement is terminated between August 13, ~~2013 and August 12, 2014~~ 2017 and August 12, 2018 inclusive, the sum of ~~\$2,000.00~~; (d) ~~if the Agreement is terminated between August 14, 2013 and August 12, 2015 inclusive, the sum of \$1,500.00;~~ (e) ~~if the Agreement is terminated between August 13, 2015 and August 12, 2016 inclusive, the sum of \$1,000.00.~~ The applicable sum ~~20,000.00.~~ The liquidated damages shall be due and payable within twenty (20) days of the effective date of the termination, and any unpaid amount shall bear simple interest at a rate eight (8) percent per annum until paid. The liquidated damages in this section 5.3.3 shall apply only if Director is subsequently employed as Athletic Director for any NCAA Division I institution at any time within one year from the date of such termination.

5.3.4 University has been represented by legal counsel, and Director has either been represented by legal counsel or has chosen to proceed without legal counsel in the contract negotiations. The parties have bargained for and agreed to the foregoing liquidated damages provision, giving consideration to the fact that the University will incur administrative and recruiting costs in obtaining a replacement for Director, in addition to potentially increased compensation costs, if Director terminates this Agreement for convenience. The parties agree that such costs are extremely difficult to determine with certainty. The parties further agree that the payment of such ~~sums~~ liquidated damages by Director and the acceptance thereof by University shall constitute adequate and reasonable compensation to University. ~~Such payments for the damages and injury suffered by it because of such termination by Director. The liquidated damages~~ are not, and shall not be construed to be, a penalty. This section 5.3.4 shall not apply if Director terminates this Agreement because of a material breach by the University.

5.3.5 Except as provided elsewhere in this Agreement, if Director terminates this Agreement for convenience, he shall forfeit to the extent permitted by law his right to receive all supplemental compensation and other payments.

5.4 Termination due to Disability or Death of Director.

5.4.1 Notwithstanding any other provision of this Agreement, this Agreement shall terminate automatically if Director becomes totally or permanently disabled as defined by the University's disability insurance carrier, becomes unable to perform the essential functions of the position of Director, or dies.

5.4.2 If this Agreement is terminated because of Director's death, Director's salary and all other benefits shall terminate as of the last day worked, except that Director's personal representative or other designated beneficiary shall be paid all compensation due or unpaid and death benefits, if any, as may be contained in any fringe benefit plan now in force or hereafter adopted by the University and due to Director's estate or beneficiaries thereunder.

5.4.3 If this Agreement is terminated because Director becomes totally or permanently disabled as defined by the University's disability insurance carrier or becomes unable to perform the essential functions of the position of Director, all salary and other benefits shall terminate, except that Director shall be entitled to receive any compensation due or unpaid and any disability-related benefits to which he is entitled by virtue of employment with the University.

5.5 Interference by Director. In the event of termination or suspension, Director agrees that Director will not interfere with the University's student-athletes or otherwise obstruct the University's ability to transact business or operate its intercollegiate athletics program.

5.6 No Liability. The University shall not be liable to Director for the loss of any collateral business opportunities or any other benefits, perquisites or income from any sources that may ensue as a result of any termination of this Agreement by either party or due to death or disability or the suspension of Director, regardless of the circumstances.

5.7 Waiver of Rights. Because Director is receiving a multi-year contract and the opportunity to receive supplemental compensation, and because such contracts and opportunities are not customarily afforded to University employees, if the University suspends Director, or terminates this Agreement for good or adequate cause or for convenience, Director shall have all the rights provided for in this Agreement but hereby releases the University from compliance with the notice, appeal, and similar employment-related rights provided for in the State Board of Education and Board or Regents of the University of Idaho Rules Manual (IDAPA 08) and Governing Policies and Procedures Manual, and the University Faculty-Staff Handbook.

ARTICLE 6

6.1 Board Approval. This Agreement shall not be effective until and unless approved of the University's Board of Regents and executed by both parties as set forth below. In addition, the payment of any compensation pursuant to this agreement shall be subject to the approval of the University's Board of Regents, the President; the sufficiency of legislative appropriations; the receipt of sufficient funds in the account from which such compensation is paid; and the Board of Regents and University's rules regarding financial exigency.

6.2 University Property. All personal property (excluding vehicle(s) provided through the Vandal Wheels program), material, and articles of information, including, without limitation, keys, credit cards, personnel records, recruiting records, team information, films, statistics or any other personal property, material, or data, furnished to Director by the University or developed by Director on behalf of the University or at the University's direction or for the University's use or otherwise in connection with Director's employment hereunder are and shall remain the sole property of the University. Within twenty-four (24) hours of the expiration of the term of this agreement or its earlier termination as provided herein, Director shall immediately cause any such personal property, materials, and articles of information in Director's possession or control to be delivered to the University.

6.3 Assignment. Neither party may assign its rights or delegate its obligations under this Agreement without the prior written consent of the other party.

6.4 Waiver. No waiver of any default in the performance of this Agreement shall be effective unless in writing and signed by the waiving party. The waiver of a particular breach in the performance of this Agreement shall not constitute a waiver of any other or subsequent breach. The resort to a particular remedy upon a breach shall not constitute a waiver of any other available remedies.

6.5 Severability. If any provision of this Agreement is determined to be invalid or unenforceable, the remainder of the Agreement shall not be affected and shall remain in effect.

6.6 Governing Law. This Agreement shall be subject to and construed in accordance with the laws of the state of Idaho as an agreement to be performed in Idaho. Any action based in whole or in part on this Agreement shall be brought in the courts of the state of Idaho.

6.7 Oral Promises. Oral promises of an increase in annual salary or of any supplemental or other compensation shall not be binding upon the University.

6.8 Force Majeure. Any prevention, delay or stoppage due to strikes, lockouts, labor disputes, acts of God, inability to obtain labor or materials or reasonable substitutes therefor, governmental restrictions, governmental regulations, governmental

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controls, enemy or hostile governmental action, civil commotion, fire or other casualty, and other causes beyond the reasonable control of the party obligated to perform (including financial inability), shall excuse the performance by such party for a period equal to any such prevention, delay or stoppage.

6.9 Confidentiality. Director hereby consents and agrees that this document may be released and made available to the public after it is signed by Director. Director further agrees that all documents and reports he is required to produce under this Agreement may be released and made available to the public at the University's sole discretion.

6.10 Notices. Any notice under this Agreement shall be in writing and be delivered in person or by public or private courier service (including U.S. Postal Service Express Mail) or certified mail with return receipt requested or by facsimile. All notices shall be addressed to the parties at the following addresses or at such other addresses as the parties may from time to time direct in writing:

the University: Office of the President
University of Idaho
P.O. Box 443151
Moscow, Idaho 83844-3151

with a copy to: Office of University Counsel
University of Idaho
P.O. Box 443158
Moscow, ID 83844-3158

the Director: Robert Spear
Last known address on file with
University's Human Resource Services

Any notice shall be deemed to have been given on the earlier of: (a) actual delivery or refusal to accept delivery, (b) the date of mailing by certified mail, or (c) the day facsimile delivery is verified. Actual notice, however and from whomever received, shall always be effective.

6.11 Headings. The headings contained in this Agreement are for reference purposes only and shall not in any way affect the meaning or interpretation hereof.

6.12 Binding Effect. This Agreement is for the benefit only of the parties hereto and shall inure to the benefit of and bind the parties and their respective heirs, legal representatives, successors and assigns.

6.13 Non-Use of Names and Trademarks. The Director shall not, without the University's prior written consent in each case, use any name, trade name, trademark, or

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other designation of the University (including contraction, abbreviation or simulation), except in the course and scope of his official University duties.

6.14 No Third Party Beneficiaries. There are no intended or unintended third party beneficiaries to this Agreement.

6.15 Entire Agreement; Amendments. This Agreement constitutes the entire agreement of the parties and supersedes all prior agreements and understandings with respect to the same subject matter. No amendment or modification of this Agreement shall be effective unless in writing, signed by both parties, and approved by University's Board of Regents.

6.16 Opportunity to Consult with Attorney. The Director acknowledges that he has had the opportunity to consult and review this Agreement with an attorney, and has either consulted with legal counsel or chosen not to. Accordingly, in all cases, the language of this Agreement shall be construed simply, according to its fair meaning, and not strictly for or against any party.

UNIVERSITY

DIRECTOR

~~M. Duane Nellis~~ [Chuck Staben](#)

Date Robert Spear

Date

President

Director, Department of Athletics

Approved by the Board of Regents on the ____ day of _____, ~~201~~[2016](#).

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~~(MODEL ATHLETICS CONTRACT)~~EMPLOYMENT AGREEMENT

This Employment Agreement (Agreement) is entered into by and between _____ (~~the University (College)~~), of Idaho (University) and _____ (~~Coach~~Robert Spear (Director)).

ARTICLE 1

1.1. Employment. Subject to the terms and conditions of this Agreement, the University ~~(College)~~ shall employ ~~Coach~~Coach~~Director~~ as the ~~head coach~~Coach~~Director~~ of its intercollegiate ~~(Sport)~~ team (Team) ~~(or Director of Athletics).~~ ~~Coach (athletics program (Program).~~ Director} represents and warrants that ~~Coach~~Coach~~Director~~ is fully qualified to serve, and is available for employment, in this capacity.

1.2. Reporting Relationship. ~~Coach~~Director shall report and be responsible directly to the University ~~(College)~~'s ~~Director~~President or the ~~Director~~President's designee. ~~Coach~~ (collectively "President). Director shall abide by the reasonable instructions of ~~Director or the Director's designee~~the President and shall confer with the ~~Director or the Director's designee~~President on all major administrative ~~and technical matters.~~ Coach shall also be under the general supervision of the ~~University (College)~~'s Chief executive officer (Chief executive officer).matters.

1.3. Duties. ~~Coach~~Director shall manage and supervise the ~~Team~~Program and shall perform such other duties in relation to the Program or the University ~~(College)'s athletic program~~ as the ~~Director~~President may assign and as may be described elsewhere in this Agreement. The University ~~(College)~~ shall have the right, at any time upon 14 days' written notice, to reassign ~~Coach~~Director to duties at the University ~~(College)~~ other than as ~~head coach~~Director of the ~~Team~~Program, provided that ~~Coach~~Director's compensation and benefits shall not be affected by any such reassignment, except that the opportunity to earn supplemental compensation as provided in ~~sections 3.2.1 through (Depending on supplemental pay provisions used)~~ section 3.2 shall cease.

ARTICLE 2

2.1. Term. This Agreement is for a fixed-term appointment of four (4) years, commencing on February, 2016, and terminating, without further notice to CoachDirector, on February, 2020 unless sooner terminated in accordance with other provisions of this Agreement. This Agreement replaces and supersedes the Agreement between Director and University approved by the University's Board of Regents August 11, 2011 and all addendums thereto.

2.2. Extension or Renewal. This Agreement is renewable solely upon an offer from the University (~~College~~) and an acceptance by ~~Coach~~Director, both of which must be in writing and signed by the parties. Any renewal is subject to the prior approval of

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~~the~~[University's](#) Board of ~~Education~~[Regents](#). This Agreement in no way grants to ~~Coach~~[Director](#) a claim to tenure in employment, nor shall ~~Coach~~[Director](#)'s service pursuant to this agreement count in any way toward tenure at the University ~~(College)~~.

ARTICLE 3

3.1 Regular Compensation.

3.1.1 In consideration of ~~Coach~~[Director](#)'s services and satisfactory performance of this Agreement, the University ~~(College)~~ shall provide to ~~Coach~~[Director](#):

- a) An annual salary of \$~~_____~~ ~~per year,~~[181,958.40](#) payable in biweekly installments in accordance with normal University ~~(College)~~ procedures, and such salary increases as may be determined appropriate by the ~~Director and Chief executive officer~~[President](#) and approved by the University ~~(College)~~'s Board of ~~-(Regents ("Regents-or-Trustees)_____")~~;
- b) The opportunity to receive such employee benefits as the University ~~(College)~~ provides generally to non-faculty exempt employees; and
- c) The opportunity to receive such employee benefits as the University ~~(College)~~'s Department of Athletics (Department) provides generally to its employees of a comparable level. ~~Coach~~[Director](#) hereby agrees to abide by the terms and conditions, as now existing or hereafter amended, of such employee benefits.

[Director understands and agrees that financial conditions may require the President, in the President's discretion, to institute furloughs or to take such other actions consistent with Regents' policy as the President may determine to be necessary to meet such challenges. In the event of a furlough or other action, the actual salary paid to Director will be less than the salary stated in Paragraph 3.1.1\(a\) above.](#)

~~3.2~~ 3.2. Supplemental Compensation.

~~3.2.1. Each year the Team is the conference champion or co-champion and also becomes eligible for a (bowl game pursuant to NCAA Division I guidelines or post-season tournament or post-season playoffs), and if Coach continues to be employed as University (College)'s head (Sport) coach as of the ensuing July 1st, the University (College) shall pay to Coach supplemental compensation in an amount equal to (amount or computation) of Coach's Annual Salary during the fiscal year in which the championship and (bowl or other post-season) eligibility are achieved. The University (College)~~

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~~shall determine the appropriate manner in which it shall pay Coach any such supplemental compensation.~~

~~3.2.2 Each year the Team is ranked in the top 25 in the (national rankings of sport's division), and if Coach continues to be employed as University (College)'s head (Sport) coach as of the ensuing July 1st, the University (College) shall pay Coach supplemental compensation in an amount equal to (amount or computation) of Coach's Annual Salary in effect on the date of the final poll. The University (College) shall determine the appropriate manner in which it shall pay Coach any such supplemental compensation.~~

~~3.2.3 Each year Coach~~3.2.1 Director shall be eligible to receive supplemental compensation ~~in an amount up to (amount or computation) each year~~ based on the academic achievement and behavior of ~~Team members. The determination of whether Coach will receive such~~all athletic department athletic team members as follows: If the annual departmental average National Collegiate Athletic Association ("NCAA") Academic Progress Rate ("APR") scores exceed 950 and no individual team fails to meet the NCAA postseason standard, and if Director continues to be employed as University's Athletic Director as of the ensuing July 1st, Director shall receive supplemental compensation ~~and the timing of the payment(s) shall be at the discretion of the Chief executive officer in consultation with the Director. The determination shall be based on the following factors: the Academic Progress Rate set by the Board, grade point averages; difficulty of major course of study; honors such as scholarships, designation as Academic All-American, and conference academic recognition; progress toward graduation for all athletes, but particularly those who entered the University (College) as academically at-risk students; the conduct of Team members on the University (College) campus, at authorized University (College) activities, in the community, and elsewhere. of \$10,000.~~ Any such supplemental compensation paid to ~~Coach~~Director shall be accompanied with a ~~detailed~~ justification for the supplemental compensation based on the factors listed above, and such justification shall be separately reported to the Board of ~~(Regents or Trustees)~~ as a document available to the public under the Idaho Public Records Act.3.2.4 Each year Coach The determination shall also be ~~eligible to receive supplemental compensation in an amount up to (amount or computation) based on the overall development of the intercollegiate (men's/women's) (Sport) program; ticket sales; fundraising; outreach by Coach to various constituency groups, including University (College) students, staff, faculty, alumni and boosters; and any other factors the Chief executive officer wishes to consider. The determination of whether Coach will receive such supplemental compensation and the timing of the payment(s) shall be at the discretion of the Chief executive officer in consultation with the Director.~~3.2.5

~~The Coach~~based on the conduct of Athletic Department team members on the University campus, at authorized University activities, in the community, and elsewhere.

3.2.2 The Director shall receive the sum of ~~(amount or computation)~~ \$15,000 from the University ~~(College)~~ or the University ~~(College)~~'s

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designated media outlet(s) or a combination thereof each year during the term of this Agreement in compensation for participation in media programs and public appearances (~~Programs~~). ~~Coach~~ collectively "Appearances". Director's right to receive such ~~a~~ payment shall vest on the date of the Team's last regular season or post-season competition, whichever occurs later. ~~This sum shall be paid (terms or conditions of payment)~~ payment shall vest on January 1 of each fiscal year of this Agreement and is expressly contingent on Director's compliance with University's financial stewardship policies as set forth in University's Administrative Procedures Manual Chapter 25. This sum shall be paid in two equal installments in January and July of each year. Agreements requiring the ~~Coach~~ Director to participate in ~~Programs~~ Appearances related to his duties as an employee of University (~~College~~) are the property of the University (~~College~~). The University (~~College~~) shall have the exclusive right to negotiate and contract with all producers of media productions and all parties desiring public appearances by the ~~Coach~~. ~~Coach~~ Director. Director agrees to cooperate with the University (~~College~~) in order for the ~~Programs~~ Appearances to be successful and agrees to provide his services to and perform on the ~~Programs~~ Appearances and to cooperate in their production, broadcasting, and telecasting. It is understood that ~~neither Coach nor any assistant coaches~~ Director shall not appear without the prior written approval of the ~~Director~~ President on any ~~competing~~ radio or television program (including but not limited to a ~~coach's show~~, call-in show, or interview show) or a regularly scheduled news segment, through a media outlet that is not University-designated, except that this prohibition shall not apply to routine news media interviews for which no compensation is received. Without the prior written approval of the President, Director, ~~Coach~~ shall not appear in any commercial endorsements ~~which that~~ are broadcast on radio or television that conflict with those broadcast on the University (~~College~~)'s designated media outlets.

3.2.6 ~~(SUMMER CAMP OPERATED BY UNIVERSITY (COLLEGE))~~ ~~Coach~~ 3.3. Director agrees that the University (~~College~~) has the exclusive right to operate youth (~~Sport~~) camps on its campus using University (~~College~~) facilities. The University (~~College~~) shall allow ~~Coach~~ the opportunity to earn supplemental compensation by assisting with the University (~~College~~)'s camps in ~~Coach's~~ capacity as a University (~~College~~) employee. ~~Coach~~ hereby agrees to assist in the marketing, supervision, and general administration of the University (~~College~~)'s football camps. ~~Coach~~ also agrees that ~~Coach~~ will perform all obligations mutually agreed upon by the parties. In exchange for ~~Coach's~~ participation in the University (~~College~~)'s summer football camps, the University (~~College~~) shall pay ~~Coach~~ (amount) per year as supplemental compensation during each year of his employment as head (~~Sport~~) coach at the University (~~College~~). This amount shall be paid (terms of payment).

~~(SUMMER CAMP OPERATED BY COACH)~~ ~~Coach~~ may operate a summer youth (~~Sport~~) camp at the University (~~College~~) under the following conditions:

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- a) ~~The summer youth camp operation reflects positively on the University (College) and the Department;~~
- b) ~~The summer youth camp is operated by Coach directly or through a private enterprise owned and managed by Coach. The Coach shall not use University (College) personnel, equipment, or facilities without the prior written approval of the Director;~~
- c) ~~Assistant coaches at the University (College) are given priority when the Coach or the private enterprise selects coaches to participate;~~
- d) ~~The Coach complies with all NCAA (NAIA), Conference, and University (College) rules and regulations related, directly or indirectly, to the operation of summer youth camps;~~
- e) ~~The Coach or the private enterprise enters into a contract with University (College) and _____ (campus concessionaire) for all campus goods and services required by the camp.~~
- f) ~~The Coach or private enterprise pays for use of University (College) facilities including the _____.~~
- g) ~~Within thirty days of the last day of the summer youth camp(s), Coach shall submit to the Director a preliminary "Camp Summary Sheet" containing financial and other information related to the operation of the camp. Within ninety days of the last day of the summer youth camp(s), Coach shall submit to Director a final accounting and "Camp Summary Sheet." A copy of the "Camp Summary Sheet" is attached to this Agreement as an exhibit.~~
- h) ~~The Coach or the private enterprise shall provide proof of liability insurance as follows: (1) liability coverage: spectator and staff \$1 million; (2) catastrophic coverage: camper and staff \$1 million maximum coverage with \$100 deductible;~~
- i) ~~To the extent permitted by law, the Coach or the private enterprise shall defend and indemnify the University (College) against any claims, damages, or~~

~~liabilities arising out of the operation of the summer youth camp(s)~~

- j) ~~All employees of the summer youth camp(s) shall be employees of the Coach or the private enterprise and not the University (College) while engaged in camp activities. The Coach and all other University (College) employees involved in the operation of the camp(s) shall be on annual leave status or leave without pay during the days the camp is in operation. The Coach or private enterprise shall provide workers' compensation insurance in accordance with Idaho law and comply in all respects with all federal and state wage and hour laws~~

~~In the event of termination of this Agreement, suspension, or reassignment, University (College) shall not be under any obligation to permit a summer youth camp to be held by the Coach after the effective date of such termination, suspension, or reassignment, and the University (College) shall be released from all obligations relating thereto.~~ 3.2.7 ~~Coach~~ agrees that the ~~University (College)~~ has the exclusive right to select footwear, apparel and/or equipment for the use of its student-athletes and staff, including ~~Coach~~ Director, during official practices and games and during times when ~~Coach or the Team is~~ Director or Program participants are being filmed by motion picture or video camera or posing for photographs in their capacity as representatives of ~~University (College)~~. ~~Coach~~, Director recognizes that the ~~University (College)~~ is negotiating or has entered into an agreement with ~~— (Company Name) — Nike~~ to supply the ~~University (College)~~ with athletic footwear, apparel and/or equipment. ~~Coach~~ Director agrees that, upon the ~~University (College)~~'s reasonable request, ~~Coach~~ Director will consult with appropriate parties concerning ~~an — (Company Name) — product's Nike products'~~ design or performance, shall act as an instructor at a clinic sponsored in whole or in part by ~~— (Company Name) —, or Nike, and~~ give a lecture at an event sponsored in whole or in part by ~~— (Company Name) —, or Nike, and~~ make other educationally-related appearances as may be reasonably requested by the ~~University (College)~~. Notwithstanding the foregoing sentence, ~~Coach~~ Director shall retain the right to decline such appearances as ~~Coach~~ Director reasonably determines to conflict with or hinder his duties and obligations as ~~head — (Sport) — coach~~ Director. In order to avoid entering into an agreement with a competitor of ~~— (Company Name) —, Coach Nike, Director~~ shall submit all outside consulting agreements to the ~~University (College)~~ for review and approval prior to execution. ~~Coach~~ Director shall also report such outside income to the ~~University (College)~~ in accordance with NCAA ~~(or NAIA)~~ rules. ~~Coach~~ Director further agrees that ~~Coach~~ Director will not endorse any athletic footwear, apparel and/or equipment products, including ~~— (Company Name) Nike~~, and will not participate

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in any messages or promotional appearances ~~which~~that contain a comparative or qualitative description of athletic footwear, apparel or equipment products.

3.4. Professional Development Opportunity. During the period of February 1 through August 1 of each year of this Agreement, University agrees to fund through the President's Office at least one mutually agreeable professional development opportunity for Director in the area relevant to the Director's duties, including fundraising, athletic administration, or higher education.

~~3.3-3.5~~ General Conditions of Compensation. All compensation provided by the University ~~-(College)~~ to CoachDirector is subject to deductions and withholdings as required by law or the terms and conditions of any fringe benefit in which CoachDirector participates. However, if any fringe benefit is based in whole or in part upon the compensation provided by the University ~~-(College)~~ to CoachDirector, such fringe benefit shall be based only on the compensation provided pursuant to section 3.1.1, except to the extent required by the terms and conditions of a specific fringe benefit program.

ARTICLE 4

4.1. CoachDirector's Specific Duties and Responsibilities. In consideration of the compensation specified in this Agreement, CoachDirector, in addition to the obligations set forth elsewhere in this Agreement, shall:

4.1.1. Devote CoachDirector's full time and best efforts to the performance of CoachDirector's duties under this Agreement;

4.1.2. Develop and implement programs and procedures with respect to the management and operation of the Department and the management, performance, evaluation, recruitment, and training; ~~and coaching of Team members which enable them to compete successfully and reasonably protect their health, safety, and well-being; of Department personnel;~~

4.1.3. Observe and uphold all academic standards, requirements, and policies of the University ~~-(College)~~ and work with Department personnel to encourage ~~Team members~~Program participants to perform to their highest academic potential and to graduate in a timely manner; ~~and~~

4.1.4. Know, recognize, and comply with all applicable laws and the policies, rules and regulations of the University ~~-(College)~~, the University ~~-(College)~~'s governing board, the conference, and the NCAA ~~-(or NAIA)~~; supervise and take appropriate steps to ensure that CoachDirector's assistant ~~coaches~~and associate directors, any other employees for whom CoachDirector is administratively responsible, and the ~~members of participants in the Team~~Program know, recognize, and comply with

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all such laws, policies, rules and regulations; and immediately report to the ~~Director~~President and to the Department's Director of Compliance if ~~Coach~~Director has reasonable cause to believe that any person or entity, including without limitation representatives of the University ~~(College)~~'s athletic interests, has violated or is likely to violate any such laws, policies, rules or regulations. ~~Coach~~Director shall cooperate fully with the University ~~(College)~~ and Department at all times. ~~The names or titles of employees whom Coach supervises are attached as Exhibit C.~~ The applicable laws, policies, rules, and regulations include: (a) State Board of Education and Board of Regents of the University of Idaho Governing Policies and Procedures and Rule Manual; (b) University ~~(College)~~'s Faculty-Staff Handbook; (c) University ~~(College)~~'s Administrative Procedures Manual; (d) the policies of the Department; (e) NCAA ~~(or NAIA)~~ rules and regulations; and (f) the rules and regulations of the ~~(Sport)~~ conference of which the University ~~(College)~~ is a member.

4.2 Outside Activities. ~~Coach~~Director shall not undertake any business, professional or personal activities, or pursuits that would prevent ~~Coach~~Director from devoting ~~Coach~~Director's full time and best efforts to the performance of ~~Coach~~Director's duties under this Agreement, that would otherwise detract from those duties in any manner, or that, in the opinion of the University ~~(College)~~, would reflect adversely upon the University ~~(College)~~ ~~or its athletic program~~ or the Program. Subject to the terms and conditions of this Agreement, ~~Coach~~Director may, with the prior written approval of the ~~Director, who may consult with the Chief executive officer~~President, enter into separate arrangements for outside activities and endorsements ~~which that~~ are consistent with ~~Coach~~Director's obligations under this Agreement. ~~Coach~~Director may not use the University ~~(College)~~'s name, logos, or trademarks in connection with any such arrangements without the prior written approval of the ~~Director and the Chief executive officer~~President.

~~4.3~~4.3. ~~NCAA (or NAIA) Rules.~~ In accordance with NCAA ~~(or NAIA)~~ rules, ~~Coach~~Director shall obtain prior written approval from the University ~~(College)~~'s ~~Chief executive officer's~~ President for all athletically related income and benefits from sources outside the University ~~(College)~~ and shall ~~report~~ provide a written detailed account of the source and amount of all such income and benefits to the ~~University (College)'s Chief executive officer~~President whenever reasonably requested, but in no event less than annually before the close of business on June 30th of each year or the last regular University ~~(College)~~ work day preceding June 30th. The report shall be in a format reasonably satisfactory to University ~~(College)~~. Sources of such income include, but are not limited to, the following:

- (a) Income from annuities;
- (b) Sports camps;
- (c) Housing benefits, including preferential housing arrangements;
- (d) Country club memberships;
- (e) Complimentary ticket sales;
- (f) Television and radio programs; and
- (g) Endorsement or consultation contracts with athletics shoe, apparel or equipment manufacturers.

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In no event shall ~~Coach~~Director accept or receive directly or indirectly any monies, benefits, or gratuities whatsoever from any person, association, corporation, University-~~(College)~~ booster club, University ~~(College)~~ alumni association, University-~~(College)~~ foundation, or other benefactor, if the acceptance or receipt of the monies, benefits, or gratuities would violate applicable law or the policies, rules, and regulations of the University-~~(College)~~, the University-~~(College)~~'s governing board, the conference, or the NCAA-~~(or NAIA)~~.

4.4 Hiring Authority. ~~Coach~~Director shall have the responsibility and the sole authority to recommend to the ~~Director~~President the hiring and termination of ~~assistant coaches for the Team, but~~Department personnel, but, except as delegated by the President, the decision to hire or terminate ~~an assistant coach~~ shall be made by the ~~Director~~President and shall, when necessary or appropriate, be subject to the approval of ~~Chief executive officer and~~ the University-~~(College)~~'s Board of ~~— (Trustees or Regents) —~~.

4.5 Scheduling. ~~Coach shall consult with, and may make recommendations to, the Director or the Director's designee with respect to the scheduling of Team competitions, but the final decision shall be made by the Director or the Director's designee~~Director shall be responsible for the scheduling of athletic games and events but shall consult with the President as the President requests.

~~4.7~~4.6 Other—Coaching Opportunities. ~~Coach~~Director shall not, under any circumstances, interview for, negotiate for, or accept employment as a ~~coach~~director of athletics at any other institution of higher education or with any professional sports team, requiring performance of duties prior to the expiration of this Agreement, without the prior approval of the ~~Director~~President. Such approval shall not unreasonably be withheld.

ARTICLE 5

5.1 Termination of ~~Coach~~Director for Cause. The University-~~(College)~~ may, in its discretion, suspend ~~Coach~~Director from some or all of ~~Coach~~Director's duties, temporarily or permanently, and with or without pay; reassign ~~Coach~~Director to other duties; or terminate this Agreement at any time for good or adequate cause, as those terms are defined in the applicable policies, rules and/or regulations of the University, the University's governing board, the conference, or the NCAA.

5.1.1 In addition to the definitions contained in applicable policies, rules and/or regulations, University (College) and Coach of the University, the University's governing board, the conference, or the NCAA, University and Director hereby specifically agree that the following shall constitute good or adequate cause for suspension, ~~reassignment,~~ or termination of this Agreement:

- a) A deliberate or major violation of ~~Coach~~Director's duties under this ~~agreement~~Agreement or the refusal or unwillingness of ~~Coach~~Director to perform such duties in good faith and to the best of ~~Coach~~Director's abilities;
- b) The failure of ~~Coach~~Director to remedy any violation of any of the terms of this ~~agreement~~Agreement within 30 days after written notice from the University ~~(College)~~;
- c) A deliberate or major violation ~~by Coach, as determined by the~~ University, by Director of any applicable law or the policies, rules or regulations of the University ~~(College)~~, the University ~~(College)~~'s governing board, the conference or the NCAA ~~(NAIA), including but not limited to any such violation which may have occurred during the employment of Coach at another NCAA or NAIA member institution;~~
- d) Ten (10) working days' absence of ~~Coach~~Director from duty without the University ~~(College)~~'s consent;
- e) Any conduct of ~~Coach~~Director that constitutes moral turpitude or that would, in the University ~~(College)~~'s judgment, reflect adversely on the University ~~(College)~~ or its athletic programs;
- f) The failure of ~~Coach~~Director to represent the University ~~(College)~~ and its athletic programs positively in public and private forums;
- g) The failure of ~~Coach~~Director to fully and promptly cooperate with the NCAA ~~(NAIA)~~ or the University ~~(College)~~ in any investigation of possible violations of any applicable law or the policies, rules or regulations of the University ~~(College)~~, the University ~~(College)~~'s governing board, the conference, or the NCAA ~~(NAIA)~~;
- h) The failure of ~~Coach~~Director to report a known violation of any applicable law or the policies, rules or regulations of the University ~~(College)~~, the University ~~(College)~~'s governing board, the conference, or the NCAA ~~(NAIA), by one of Coach's assistant coaches, by any Department employee,~~ any other employees for whom ~~Coach~~Director is administratively responsible, or a ~~member of Participant in the Team Program;~~ or
- i) A violation of any applicable law or the policies, rules or regulations of the University ~~(College)~~, the University ~~(College)~~'s governing board, the conference, or the NCAA ~~(NAIA), by one of~~

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~~Coach's assistant coaches, by~~ any ~~other~~ employees for whom ~~Coach~~Director is administratively responsible, or a ~~member of Participant in~~ the ~~Team~~Program if ~~Coach~~Director knew or should have known of the violation and could have prevented it by ordinary supervision.

5.1.2 Suspension, reassignment, or termination for good or adequate cause shall be effectuated by the University ~~(College)~~ as follows: before the effective date of the suspension, reassignment, or termination, the ~~Director or his designee~~President shall provide ~~Coach~~Director with notice, which notice shall be accomplished in the manner provided for in this Agreement and shall include the reason(s) for the contemplated action. ~~Coach~~Director shall then have an opportunity to respond. After ~~Coach~~Director responds or fails to respond, University ~~(College)~~ shall notify ~~Coach~~Director whether, and if so when, the action will be effective.

5.1.3 In the event of any termination for good or adequate cause, the University ~~(College)~~'s obligation to provide compensation and benefits to ~~Coach~~Director, whether direct, indirect, supplemental or collateral, shall cease as of the date of such termination, and the University ~~(College)~~ shall not be liable for the loss of any collateral business opportunities or other benefits, perquisites, or income resulting from outside activities or from any other sources.

5.1.4 If found in violation of NCAA ~~(NAIA)~~ regulations, ~~Coach~~Director shall, in addition to the provisions of Section 5.1, be subject to disciplinary or corrective action as set forth in the provisions of the NCAA ~~(NAIA)~~ enforcement procedures. ~~This section applies to violations occurring at the University (College) or at previous institutions at which the Coach was employed, including suspension without pay or termination of employment for significant or repetitive violations.~~

5.2 Termination of ~~Coach~~Director for Convenience of University ~~(College)~~.

5.2.1 At any time after commencement of this Agreement, University-~~(College)~~, for its own convenience, may terminate this Agreement by giving ten (10) days prior written notice to ~~Coach~~Director.

5.2.2 In the event that University ~~(College)~~ terminates this Agreement for its own convenience, University ~~(College)~~ shall be obligated to pay ~~Coach~~Director, as liquidated damages and not a penalty, the salary set forth in section 3.1.1(a), excluding all deductions required by law, on the regular paydays of University-~~(College)~~ until the term of this Agreement ends or until ~~Coach~~Director obtains reasonably comparable employment, whichever occurs first; provided, however, in the event ~~Coach~~Director obtains ~~other~~ employment of any kind or nature after such termination, then the amount of compensation the University pays will be adjusted and reduced by the amount of compensation paid ~~Coach~~Director as a result of such other employment, such adjusted compensation to be calculated for each University pay-period by reducing the gross salary set forth in section 3.1.1(a) (before deductions required by law) by the gross compensation paid to ~~Coach~~Director under the other employment, then subtracting from this adjusted gross compensation deductions according to law. In addition, ~~Coach~~Director will be entitled to continue his health insurance plan and group life insurance as if he remained a University ~~(College)~~-employee until the term of this Agreement ends or until ~~Coach~~Director obtains reasonably comparable employment or any other employment providing ~~Coach~~Director with a reasonably comparable health plan and group life insurance, whichever occurs first. ~~Coach~~Director shall be entitled to no other compensation or fringe benefits, except as otherwise provided herein or required by law. ~~Coach~~Director specifically agrees to inform University within ten business days of obtaining other employment, and to advise University of all relevant terms of such employment, including without limitation the nature and location of the employment, salary, other compensation, health insurance benefits, life insurance benefits, and other fringe benefits. Failure to so inform and advise University shall constitute a material breach of this Agreement and University's obligation to pay compensation under this provision shall end. ~~Coach~~Director agrees not to accept employment for compensation at less than the fair value of ~~Coach~~Director's services, as determined by all circumstances existing at the time of employment. ~~Coach~~Director further agrees to repay to University all compensation paid to him by University after the date he obtains other employment, to which he is not entitled under this provision.

5.2.3 ~~The parties have both~~ University has been represented by, ~~or had the opportunity to consult with,~~ legal counsel, and Director has either been represented by legal counsel or has chosen to proceed without legal counsel in the contract negotiations ~~and.~~ The parties have bargained for and agreed to the foregoing ~~liquidated damages~~ provision, giving consideration to the fact that ~~the Coach~~Director may lose certain benefits, supplemental compensation, or outside compensation relating to his employment with University-~~(College)~~, which damages are extremely difficult to determine with certainty. The parties further agree that the payment of such liquidated

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damages by University ~~(College)~~ and the acceptance thereof by ~~Coach~~Director shall constitute adequate and reasonable compensation to ~~Coach~~Director for the damages and injury suffered by ~~Coach~~Director because of such termination by University ~~(College)~~. The liquidated damages are not, and shall not be construed to be, a penalty.

5.3 Termination by ~~Coach~~Director for Convenience.

5.3.1 ~~The Coach~~Director recognizes that his promise to work for University ~~(College)~~ for the entire term of this Agreement is of the essence of this Agreement. ~~The Coach~~Director also recognizes that the University ~~(College)~~ is making a highly valuable investment in his employment by entering into this Agreement and that its investment would be lost were he to resign or otherwise terminate his employment with the University ~~(College)~~ before the end of the contract term.

5.3.2 ~~The Coach~~Director, for his own convenience, may terminate this Agreement during its term by giving prior written notice to the University ~~(College)~~. Termination shall be effective ten (10) days after notice is given to the University ~~(College)~~.

5.3.3 If ~~the Coach~~Director terminates this Agreement for convenience at any time, all obligations of the University ~~(College)~~ shall cease as of the effective date of the termination. If ~~the Coach~~Director terminates this Agreement for ~~his~~Director's convenience ~~he~~, Director shall pay to the University ~~(College)~~, as liquidated damages and not as a penalty, the following sum: (a) if the Agreement is terminated on or before August 12, 2016, the sum of \$100,000.00; (b) if the Agreement is terminated between August 13, 2016 and August 12, 2017 inclusive, the sum of \$50,000.00; (c) if the Agreement is terminated between August 13, 2017 and August 12, 2018 inclusive, the sum of \$20,000.00. The liquidated damages shall be due and payable within twenty (20) days of the effective date of the termination, and any unpaid amount shall bear simple interest at a rate eight (8) percent per annum until paid. The liquidated damages in this section 5.3.3 shall apply only if Director is subsequently employed as Athletic Director for any NCAA Division I institution at any time within one year from the date of such termination.

5.3.4 ~~The parties have both~~University has been represented by legal counsel, and Director has either been represented by legal counsel or has chosen to proceed without legal counsel in the contract negotiations ~~and~~. ~~The parties~~ have bargained for and agreed to the foregoing liquidated damages provision, giving consideration to the fact that the University ~~(College)~~ will incur administrative and recruiting costs in obtaining a replacement for ~~Coach~~Director, in addition to potentially increased compensation costs, if ~~Coach~~Director terminates this Agreement for convenience, ~~which damages~~. ~~The parties agree that such costs~~ are extremely difficult to determine with certainty. The parties further agree that the payment of such liquidated damages by ~~Coach~~Director and the acceptance thereof by University ~~(College)~~ shall constitute adequate and reasonable compensation to University ~~(College)~~ for the

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damages and injury suffered by it because of such termination by ~~Coach~~Director. The liquidated damages are not, and shall not be construed to be, a penalty. This section 5.3.4 shall not apply if ~~Coach~~Director terminates this Agreement because of a material breach by the University ~~-(College)~~.

5.3.5 Except as provided elsewhere in this Agreement, if ~~Coach~~Director terminates this Agreement for convenience, he shall forfeit to the extent permitted by law his right to receive all supplemental compensation and other payments.

5.4 Termination due to Disability or Death of ~~Coach~~Director.

5.4.1 Notwithstanding any other provision of this Agreement, this Agreement shall terminate automatically if ~~Coach~~Director becomes totally or permanently disabled as defined by the University ~~-(College)~~'s disability insurance carrier, becomes unable to perform the essential functions of the position of ~~head-coach~~Director, or dies.

5.4.2 If this Agreement is terminated because of ~~Coach~~Director's death, ~~Coach~~Director's salary and all other benefits shall terminate as of the last day worked, except that ~~the Coach~~Director's personal representative or other designated beneficiary shall be paid all compensation due or unpaid and death benefits, if any, as may be contained in any fringe benefit plan now in force or hereafter adopted by the University ~~-(College)~~ and due to ~~the Coach~~Director's estate or beneficiaries thereunder.

5.4.3 If this Agreement is terminated because ~~the Coach~~Director becomes totally or permanently disabled as defined by the University ~~-(College)~~'s disability insurance carrier, or becomes unable to perform the essential functions of the position of ~~head-coach~~Director, all salary and other benefits shall terminate, except that ~~the Coach~~Director shall be entitled to receive any compensation due or unpaid and any disability-related benefits to which he is entitled by virtue of employment with the University ~~-(College)~~.

5.5 Interference by ~~Coach~~Director. In the event of termination, ~~or~~ suspension, ~~or reassignment, Coach~~Director agrees that ~~Coach~~Director will not interfere with the University ~~-(College)~~'s student-athletes or otherwise obstruct the University ~~-(College)~~'s ability to transact business or operate its intercollegiate athletics program.

~~5.7~~5.6 No Liability. The University ~~-(College)~~ shall not be liable to ~~Coach~~Director for the loss of any collateral business opportunities or any other benefits, perquisites or income from any sources that may ensue as a result of any termination of this Agreement by either party or due to death or disability or the suspension ~~or reassignment~~ of ~~Coach~~Director, regardless of the circumstances.

~~5.8~~5.7 Waiver of Rights. Because ~~the Coach~~Director is receiving a multi-year contract and the opportunity to receive supplemental compensation, and because such

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contracts and opportunities are not customarily afforded to University ~~(College)~~ employees, if the University ~~(College)~~ suspends ~~or reassigns Coach~~ Director, or terminates this Agreement for good or adequate cause or for convenience, Coach Director shall have all the rights provided for in this Agreement but hereby releases the University ~~(College)~~ from compliance with the notice, appeal, and similar employment-related rights ~~provide~~ provided for in the State Board of Education and Board or Regents of the University of Idaho Rules Manual (IDAPA 08) and Governing Policies and Procedures, ~~IDAPA 08.01.01 et seq.,~~ Manual, and the University ~~(College)~~ Faculty-Staff Handbook.

ARTICLE 6

6.1 Board Approval. This Agreement shall not be effective until and unless approved of the University ~~(College)~~'s Board of ~~(Regents or Trustees)~~ and executed by both parties as set forth below. In addition, the payment of any compensation pursuant to this agreement shall be subject to the approval of the University ~~(College)~~'s Board of ~~(Regents or Trustees)~~, ~~the Chief executive officer, and the Director,~~ the President; the sufficiency of legislative appropriations; the receipt of sufficient funds in the account from which such compensation is paid; and the Board of ~~(Regents or Trustees)~~ and University ~~(College)~~'s rules regarding financial exigency.

6.2 University ~~(College)~~ Property. All personal property (excluding vehicle(s) provided through the Vandal Wheels program), material, and articles of information, including, without limitation, keys, credit cards, personnel records, recruiting records, team information, films, statistics or any other personal property, material, or data, furnished to Coach Director by the University ~~(College)~~ or developed by Coach Director on behalf of the University ~~(College)~~ or at the University ~~(College)~~'s direction or for the University ~~(College)~~'s use or otherwise in connection with Coach Director's employment hereunder are and shall remain the sole property of the University ~~(College)~~. Within twenty-four (24) hours of the expiration of the term of this agreement or its earlier termination as provided herein, Coach Director shall immediately cause any such personal property, materials, and articles of information in Coach Director's possession or control to be delivered to the Director University.

6.3 Assignment. Neither party may assign its rights or delegate its obligations under this Agreement without the prior written consent of the other party.

6.4 Waiver. No waiver of any default in the performance of this Agreement shall be effective unless in writing and signed by the waiving party. The waiver of a particular breach in the performance of this Agreement shall not constitute a waiver of any other or subsequent breach. The resort to a particular remedy upon a breach shall not constitute a waiver of any other available remedies.

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6.5 Severability. If any provision of this Agreement is determined to be invalid or unenforceable, the remainder of the Agreement shall not be affected and shall remain in effect.

6.6 Governing Law. This Agreement shall be subject to and construed in accordance with the laws of the state of Idaho as an agreement to be performed in Idaho. Any action based in whole or in part on this Agreement shall be brought in the courts of the state of Idaho.

6.7 Oral Promises. Oral promises of an increase in annual salary or of any supplemental or other compensation shall not be binding upon the University ~~(College)~~.

6.8 Force Majeure. Any prevention, delay or stoppage due to strikes, lockouts, labor disputes, acts of God, inability to obtain labor or materials or reasonable substitutes therefor, governmental restrictions, governmental regulations, governmental controls, enemy or hostile governmental action, civil commotion, fire or other casualty, and other causes beyond the reasonable control of the party obligated to perform (including financial inability), shall excuse the performance by such party for a period equal to any such prevention, delay or stoppage.

6.9 Confidentiality. ~~The Coach~~ [Director](#) hereby consents and agrees that this document may be released and made available to the public after it is signed by ~~the Coach~~. ~~The Coach~~ [Director](#). [Director](#) further agrees that all documents and reports he is required to produce under this Agreement may be released and made available to the public at the University ~~(College)~~'s sole discretion.

6.10 Notices. Any notice under this Agreement shall be in writing and be delivered in person or by public or private courier service (including U.S. Postal Service Express Mail) or certified mail with return receipt requested or by facsimile. All notices shall be addressed to the parties at the following addresses or at such other addresses as the parties may from time to time direct in writing:

the University ~~(College)~~: [Director](#): [Office](#) of ~~Athletics~~ [the President](#)

[University of Idaho](#)
[P.O. Box 443151](#)
[Moscow, Idaho 83844-3151](#)

with a copy to:

~~Chief executive officer~~ [Office of University Counsel](#)
[University of Idaho](#)
[P.O. Box 443158](#)
[Moscow, ID 83844-3158](#)

the ~~Coach~~ [Director](#):

[Robert Spear](#)
 Last known address on file with
 University ~~(College)~~'s Human Resource Services

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Any notice shall be deemed to have been given on the earlier of: (a) actual delivery or refusal to accept delivery, (b) the date of mailing by certified mail, or (c) the day facsimile delivery is verified. Actual notice, however and from whomever received, shall always be effective.

6.11 Headings. The headings contained in this Agreement are for reference purposes only and shall not in any way affect the meaning or interpretation hereof.

6.12 Binding Effect. This Agreement is for the benefit only of the parties hereto and shall inure to the benefit of and bind the parties and their respective heirs, legal representatives, successors and assigns.

6.13 Non-Use of Names and Trademarks. The ~~Coach~~Director shall not, without the University ~~-(College)-~~'s prior written consent in each case, use any name, trade name, trademark, or other designation of the University ~~-(College)-~~ (including contraction, abbreviation or simulation), except in the course and scope of his official University ~~-(College)-~~ duties.

6.14 No Third Party Beneficiaries. There are no intended or unintended third party beneficiaries to this Agreement.

6.15 Entire Agreement; Amendments. This Agreement constitutes the entire agreement of the parties and supersedes all prior agreements and understandings with respect to the same subject matter. No amendment or modification of this Agreement shall be effective unless in writing, signed by both parties, and approved by University ~~-(College)-~~'s Board of ~~-(Regents or Trustees)-~~.

6.16 Opportunity to Consult with Attorney. The ~~Coach~~Director acknowledges that he has had the opportunity to consult and review this Agreement with an attorney, and has either consulted with legal counsel or chosen not to. Accordingly, in all cases, the language of this Agreement shall be construed simply, according to its fair meaning, and not strictly for or against any party.

UNIVERSITY ~~-(COLLEGE)-~~

~~COACH~~DIRECTOR

_____, ~~Chief executive officer~~

_____, Date

Date

Chuck Staben _____ Date
President

Robert Spear _____ Date
Director, Department of Athletics

Approved by the Board of ~~-(Regents or Trustees)-~~ on the ____ day of _____, 2010-2016.

Spear compensation calculation

3.1.1a	The annual base salary from appropriated funds	\$ 181,958.40
	Annual departmental average National Collegiate Athletic Association ("NCAA") Academic Progress Rate ("APR") scores exceed 950 and no individual team fails to meet the NCAA postseason standard.	
3.2.1		\$ 10,000.00
3.2.2	Media Payment	\$ 15,000.00
	Total potential annual compensation	\$ 206,958.40

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**BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016**

ATTACHMENT 5

University of Idaho – Department-wide APR

Academic Year	Points Earned	Points Possible	Bonus Points	Number of Athletes	Single Year APR	2-year APR	Multi-Year APR
2010-11	1016	1080	3	243	944		
2011-12	1201	1281	6	251	942		
2012-13	1187	1289	0	251	921		
2013-14	1302	1363	15	251	966	944	944
2014-15 ¹	1224	1265	16	259	980		

¹ Pending APR figures; Report not yet finalized or published

**BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016**

ATTACHMENT 6

Summary of Conference AD Salaries

SUN BELT CONFERENCE			
School	Name	AD Salary	Year
Appalachian State	Doug Gillin		
Arkansas State	Terril Mohajir	290,000	2016
Georgia Southern	Tom Kleinlein	204,000	2015
Georgia State	Charlie Cobb	300,000	2014
U Arkansas Little Rock	Chasse Conque	172,000	2016
U Louisiana Monroe	Brian Wickstrom	145,000	2013
U South Alabama	Joel Erdmann	253,720.99	2015
Texas State	Larry Teis	275,000	2014
U Texas Arlington	Jim Baker	298,682	2014
Troy University	Jeremy McClain		
Hartwick College (private)		N/A	N/A
Howard University (private)		N/A	N/A
U Idaho	Rob Spear	181,958	2015
New Jersey Institute Tech	Lenny Kaplan		
New Mexico State	Mario Moccia		

BIG SKY CONFERENCE			
School	Name	AD Salary	Year
Eastern Wash	Bill Chaves	148,701	2014
Idaho State	Jeff Tingey	125,777.60	2015
Montana	Kent Haslam		
Montana State	Peter Fields		
North Dakota	Matthew Larsen	100,170	2015
Northern Arizona	Lisa Campos	193,532	2015
Northern Colorado	Darren Dunn		
Portland State	Mark Rountree	142,320	2014
Sacramento State	William Macriss	155,000	2015
Southern Utah	Ken Beazer	153,952	2014
Weber State	Jerry Bovee	206,004	2014
Idaho	Rob Spear	181,958.40	2015
Cal Poly	Donald Oberhelman	219,000	2015
UC Davis	Terrence Tumey	222,000	2014
Binghamton	Patrick Elliot	215,416	2014
Hartford (private)		N/A	N/A

BUSINESS AFFAIRS AND HUMAN RESOURCES

FEBRUARY 18, 2016

ATTACHMENT 7

**Summary of Liquidated Damages Clauses in Big Sky AD Contracts
(not all institutions responded to our request for information)**

School: University of Idaho

Salary: 165,048

Liquidated Damages Provision: AD receives compensation rest of salary for contract term for early termination without cause by University

5.2.2. In the event that University terminates this Agreement for its own convenience, University shall be obligated to pay Director, as liquidated damages and not a penalty, the salary set forth in section 3.1.1(a), excluding all deductions required by law, on the regular paydays of University until the term of this Agreement ends or until Director obtains reasonably comparable employment, whichever occurs first. In addition,

If AD terminates contract during first year, \$5k, if during second year, \$2.5k, if during third year \$2k, if during fourth year, \$1.5k.

5.3.3. If the Director terminates this Agreement for convenience at any time, all obligations of the University shall cease as of the effective date of the termination. If the Director terminates this Agreement for his convenience and accepts a position as athletic director at another institution within six (6) months of termination of this Agreement, he shall pay to the University, as liquidated damages and not a penalty, for the breach of this Agreement the following sum: (a) if the Agreement is terminated on or before August 15, 2005, the sum of \$5,000.00; (b) if the Agreement is terminated between August 16, 2005 and August 15, 2006 inclusive, the sum of \$2,500.00; (c) if the Agreement is terminated between August 16, 2006 and August 15, 2007 inclusive, the sum of \$2,000.00; (d) if the Agreement is terminated between August 16, 2007 and August 15, 2008 inclusive, the sum of \$1,500.00. The liquidated damages shall be due

.....

School: Eastern Washington

Salary: 148,701

Liquidated Damages provision: AD receives 9 month's salary for early termination without cause.

No provision requiring Coach to pay liquidated damages for leaving early.

IX. Termination for Convenience

You may be terminated for convenience without cause at the discretion of the President by written notice to you, accompanied by the payment of nine months' current salary as liquidated damages, subject to withholding and OASI contributions.

.....

School: Idaho State

Salary: 125,778

Liquidated Damages provision: AD receives rest of salary for contract term

5.2.2 In the event that University terminates this Agreement for its own convenience, University shall be obligated to pay Director, as liquidated damages and not a penalty, the salary set forth in section 3.1.1(a), excluding all deductions required by law, on the regular paydays of University until the term of this Agreement ends;

If AD quits, must pay \$50k during first year, \$40k during second year, or \$30k during third year.

5.3.3 If the Director terminates this Agreement for convenience at any time, all obligations of the University shall cease as of the effective date of the termination. If the Director terminates this Agreement for his convenience he shall pay to the University, as liquidated damages and not a penalty, one of the following sums: \$50,000.00 if terminated during the first year of the contract; \$40,000.00 if terminated during the second year of the contract; and \$30,000.00 if terminated during the third year of the contract. The liquidated damages shall be due and payable within twenty (20) days of the effective date of the termination, and any unpaid amount shall bear simple interest at a rate eight (8) percent per annum until paid.

.....

School: University of Montana

Salary: 150,660

Liquidated Damages provision: No Liquidated Damages Provision

.....

School: Northern Arizona

Salary: 193,532

Liquidated Damages provision: AD receives 100% salary for fiscal year in which she is terminated, 75% for following fiscal year, and 50% for the next year.

16. Termination By University Without Cause: Liquidated Damages

This contract may be terminated by the University President at any time without cause. In such event, the University will pay to VP Campos as liquidated damages, in lieu of any and all other legal remedies or equitable relief: 100% of the Base Salary in the fiscal year of termination, 75% of the following fiscal year's Base Salary (if such fiscal year falls within the Contract Term), and 50% of the Base Salary for a single fiscal year thereafter (if such fiscal year falls within the Contract Term), with no additional payments due regardless of whether any additional years remain in the Contract Term. Payments shall be made in equal monthly installments over the remaining months of the Term, beginning one month after the date of termination.

If AD terminates contract, she must pay \$10,000. University President may waive this fee.

17. Termination by VP Campos

Termination by VP Campos at any time during the Term shall obligate VP Campos to pay to the University, in lieu of all other legal remedies and except as provided in Section 18, liquidated damages in the sum of Ten Thousand Dollars (\$10,000). At the sole discretion of the President, the University may elect to waive VP Campos' obligation under this Section. Such election shall not be deemed a waiver or modification of any other term or obligation of this contract. The parties acknowledge that the University may incur administrative, recruiting and resettlement costs in obtaining a replacement VP in addition to potentially increased compensation costs, which damages are difficult to determine with certainty. Accordingly, the parties agree to this liquidated damages provision. This provision shall not prejudice any right the University may have under Section 18.

School: Northern Colorado
Salary: 160,000
Liquidated Damages provision: None

School: Portland State
Salary: 155,000
Liquidated Damages provision: None

School: University of Montana
Salary: 131,194
Liquidated Damages provision: None

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**BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016**

TAB	DESCRIPTION	ACTION
1	INTERCOLLEGIATE ATHLETICS Financial Reports	Information item
2	INTERCOLLEGIATE ATHLETICS Employee Compensation Reports	Information item
3	OUTCOMES-BASED FUNDING	Information item
4	AMENDMENT TO BOARD POLICY Section V.R. – Establishment of Fees – First Reading	Motion to approve
5	BOISE STATE UNIVERSITY Facility Lease and Purchase Agreement - Gardner Company	Motion to approve
6	BOISE STATE UNIVERSITY Release of Reservation in Grant Deed on Real Property – College of Western Idaho	Motion to approve
7	IDAHO STATE UNIVERSITY Capital Project - Remodel of the Turner Dining Hall, Design-Build Phase	Motion to approve
8	IDAHO STATE UNIVERSITY Issuance of General Revenue Bonds	Motion to approve
9	LEWIS-CLARK STATE COLLEGE Proposed Summer Session Fee Discount	Information item

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BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

SUBJECT

Intercollegiate Athletics Reports of revenues, expenditures, participation

APPLICABLE STATUTE, RULE OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section V.X.5.b.

BACKGROUND/DISCUSSION

Responsibility, management, control and reporting requirements for athletics are detailed in Board policy V.X. The college and universities are required to submit regular financial reports as specified by the Board office. The revenue and expenditures reported must reconcile to the NCAA Agreed Upon Procedures Reports that are prepared annually and reviewed by the external auditors.

IMPACT

The Athletics Reports present the financial status of the intercollegiate athletic programs and the participation of students in the various sport programs. The report on page 7 shows all the institutions have positive fund balances.

ATTACHMENTS

Attachment 1	Charts identifying the revenue by major source by Institution and as a percent of total athletics revenue	Page 3-6
Attachment 2	Charts identifying athletic departments' fiscal year end fund balance by institution	Page 7
Attachment 3	Charts displaying total students participating in athletic programs and number of full-ride scholarships	Page 8

Institution Tabs (BSU, ISU, UI, LCSC)

STAFF COMMENTS AND RECOMMENDATIONS

The Athletics Reports show actual results for fiscal years 2011 through 2015 and the forecast for fiscal year 2016.

All institutions are within their state general funds, gender equity and institutional funds limits.

Staff highlights the following revenue and expenditure data for the Board's consideration:

BSU FY 2016 Estimates

- Ticket Sales down -10.2%
- Athletics Student Aid up 20.1%
- Equipment, Uniforms and Supplies down -39.8%
- Women's Basketball Ticket Sales down -83.7%
- Athletic Director Office up 14.7%

BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

- Marketing and Promotions up 38.5%
- Athletic Director Office up 41.2%
- Total Male Participation down -9.5%
- Total Female Participation down -12.6%

- Fiscal Year Net Income \$10,011
- Ending Fund Balance \$964,079

ISU FY 2016 Estimates

- Student Activity Fees down -2.9%
- Athletic Director Office up 10.0%
- Fund Raising Office up 10.9%
- Marketing and Promotions up 12.8%
- Men's Basketball Ticket Sales down -16.2%

- Fiscal Year Net Income is \$0
- Ending Fund Balance \$1,563,017

UI FY 2016 Estimates

- Ticket Sales down -18.1%
- Institutional Funds includes conference initiation fees outside the limit
FY15 \$625,000 FY16 \$500,000
- Athletic Student Aid up 10.3%
- Coaching Salary/Benefits up 13.5%
- Recruiting down -22.3%
- Football Ticket Sales down -15.8%
- Men's Basketball Ticket Sales down -33.6%
- Academic Support up 25.1%

- Fiscal Year Net Income \$0
- Ending fund balance \$131,446

LCSC FY 2016 Estimates

- Recruiting down -21.2%
- Total Men's Sport Revenue down -12.9%

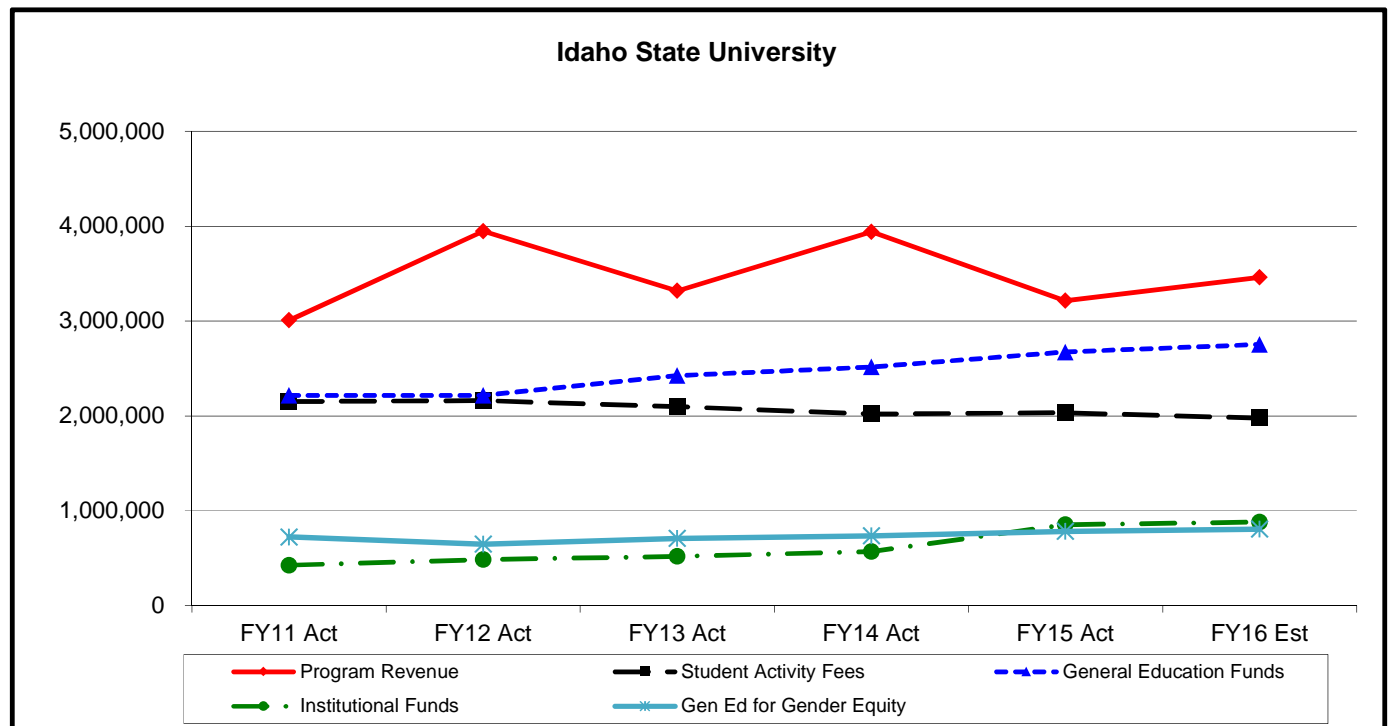
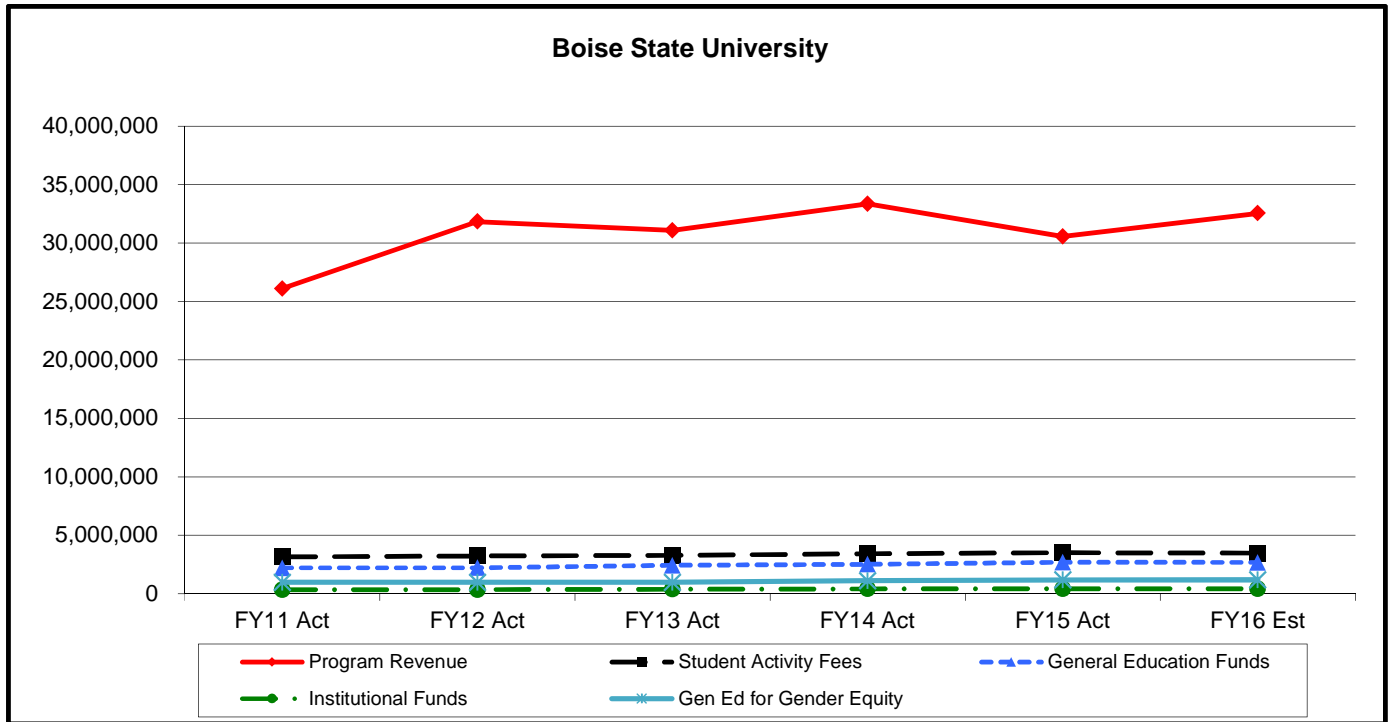
- Fiscal Year Net Income \$0
- Ending fund balance \$240,476

BOARD ACTION

This item is for informational purposes only. Any action will be at the Board's discretion.

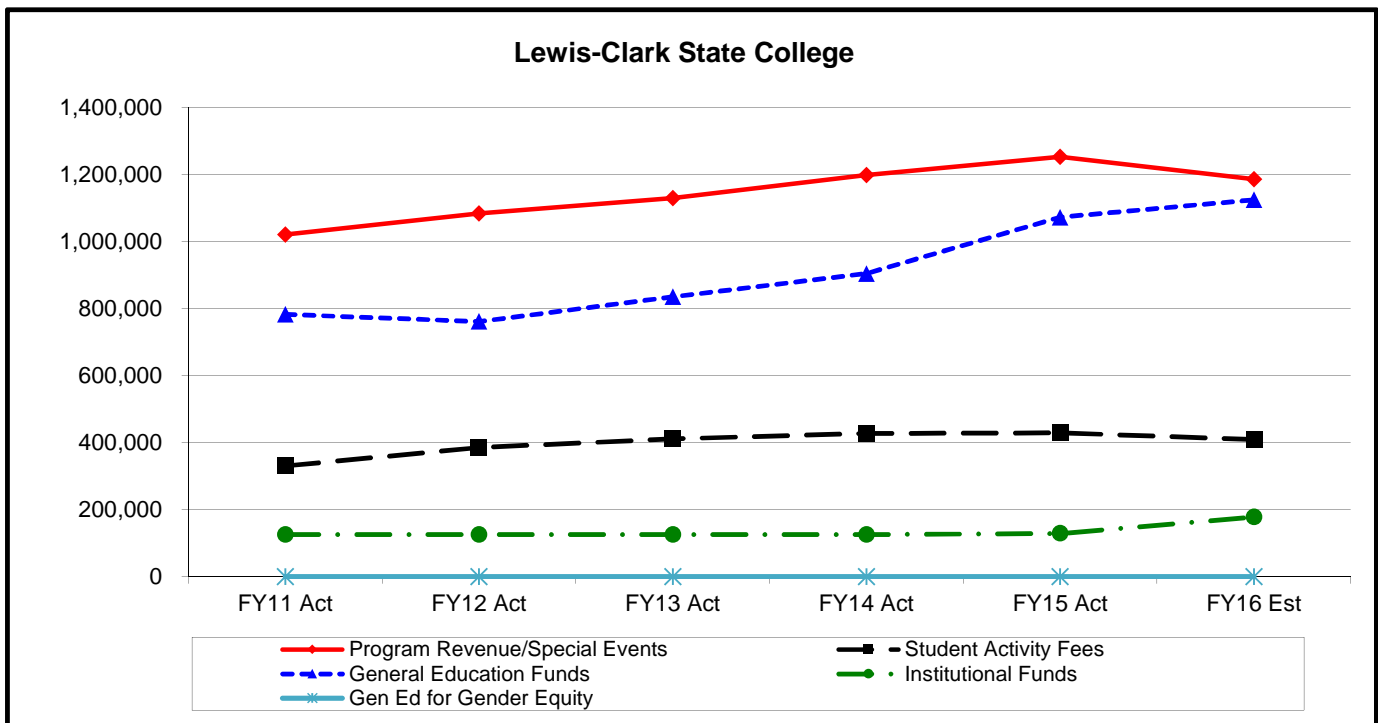
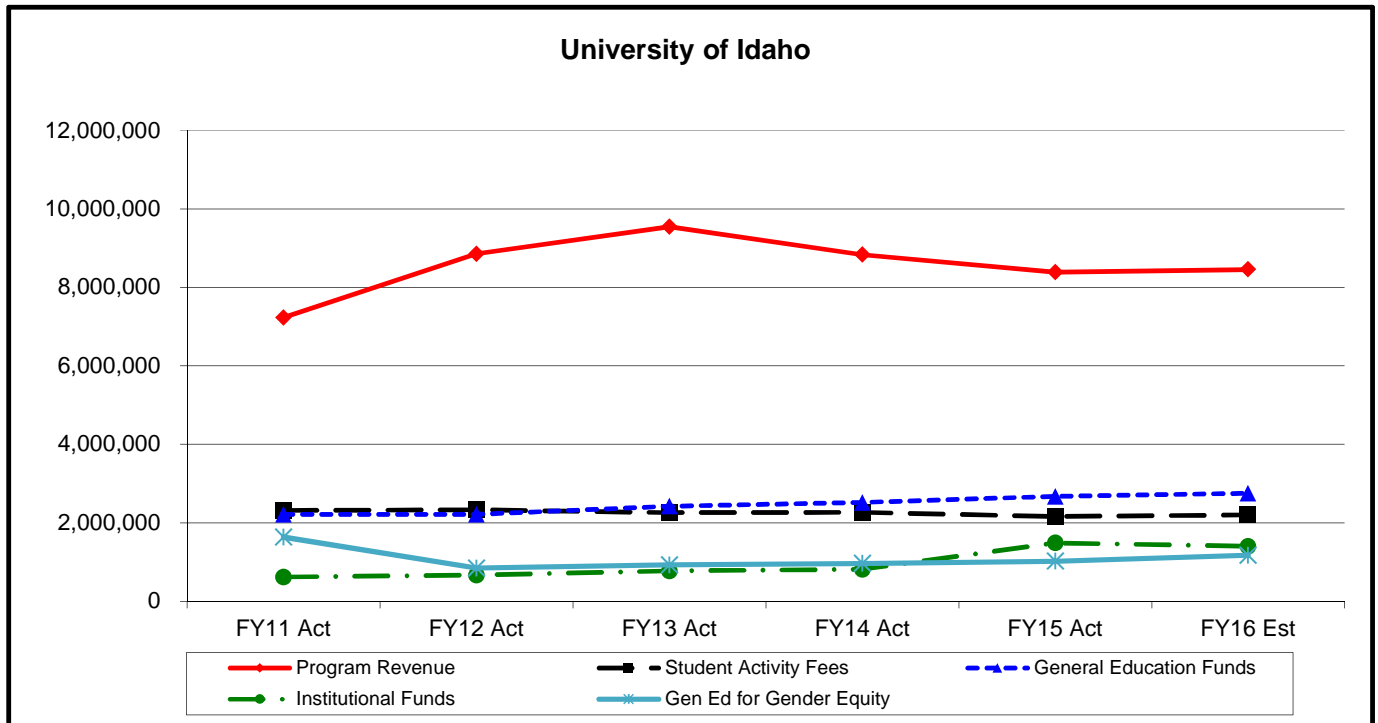
Intercollegiate Athletics Report

Revenue by Major Source



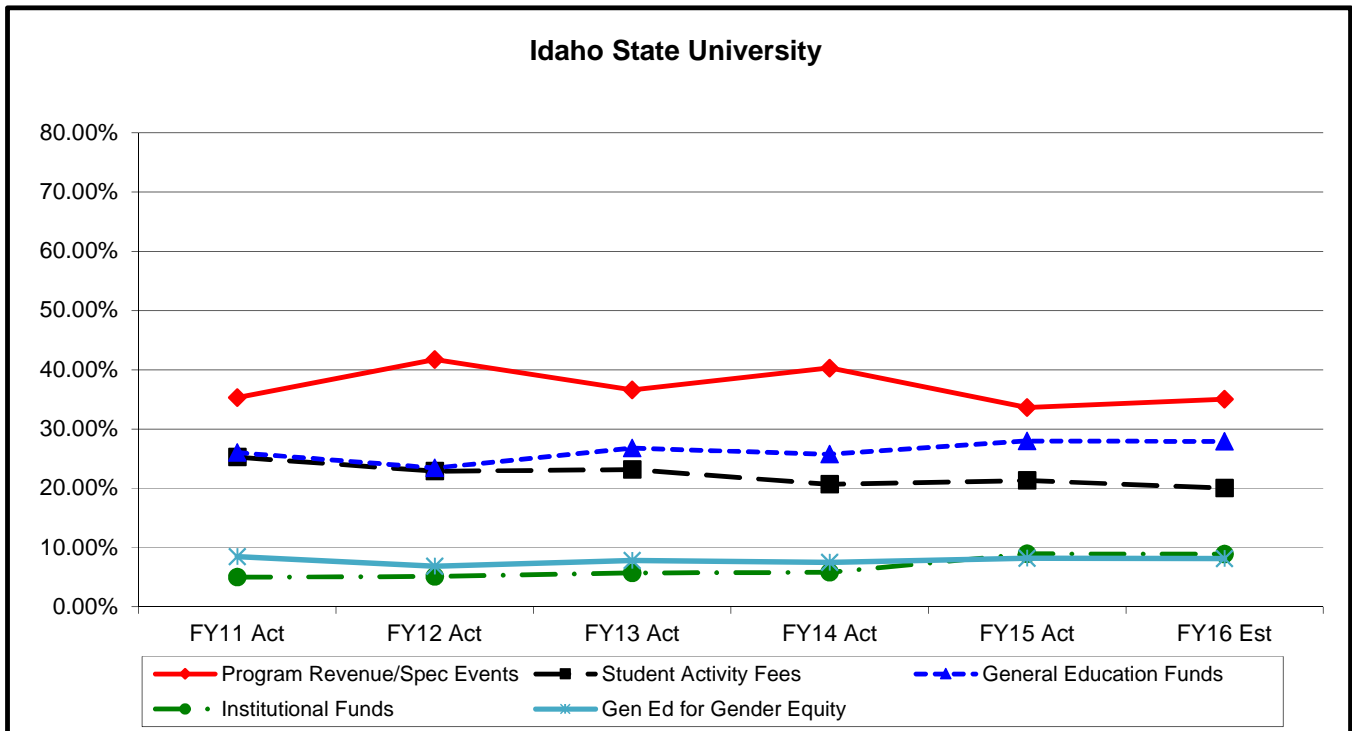
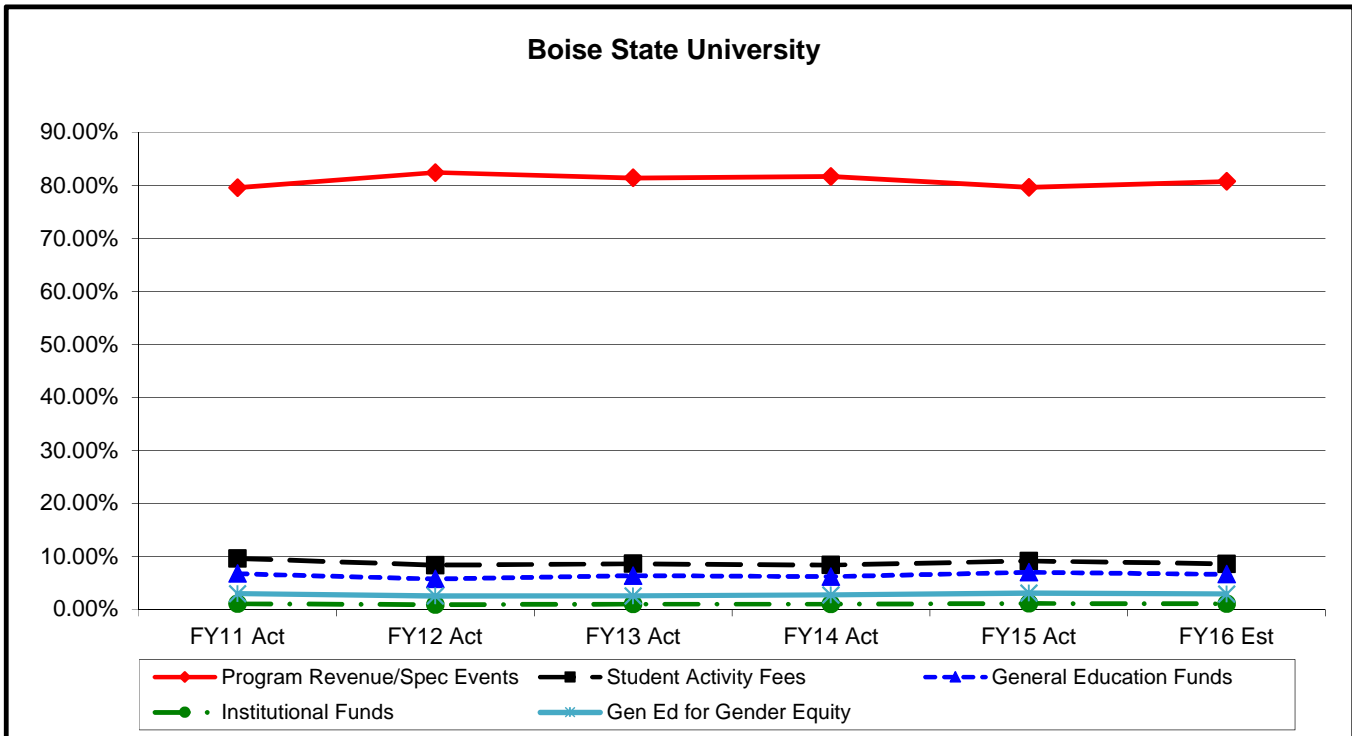
Intercollegiate Athletics Report

Revenue by Major Source



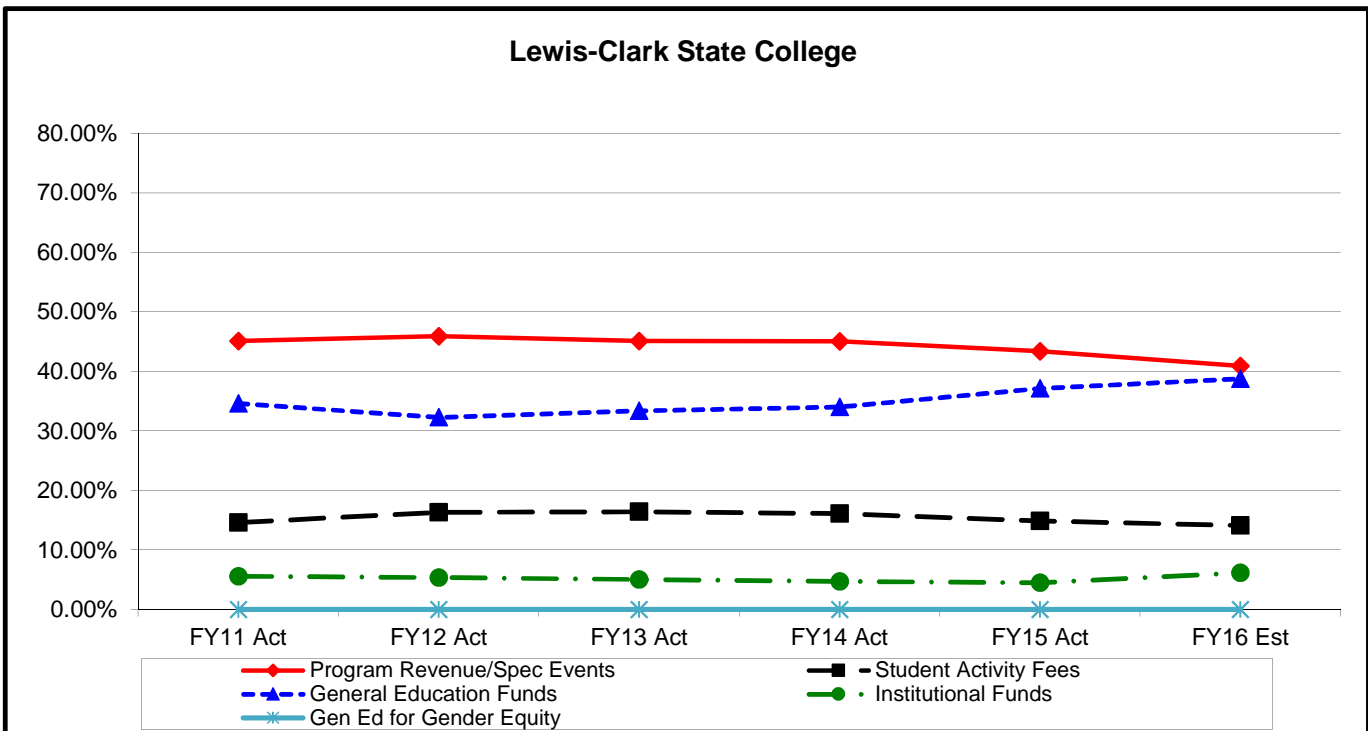
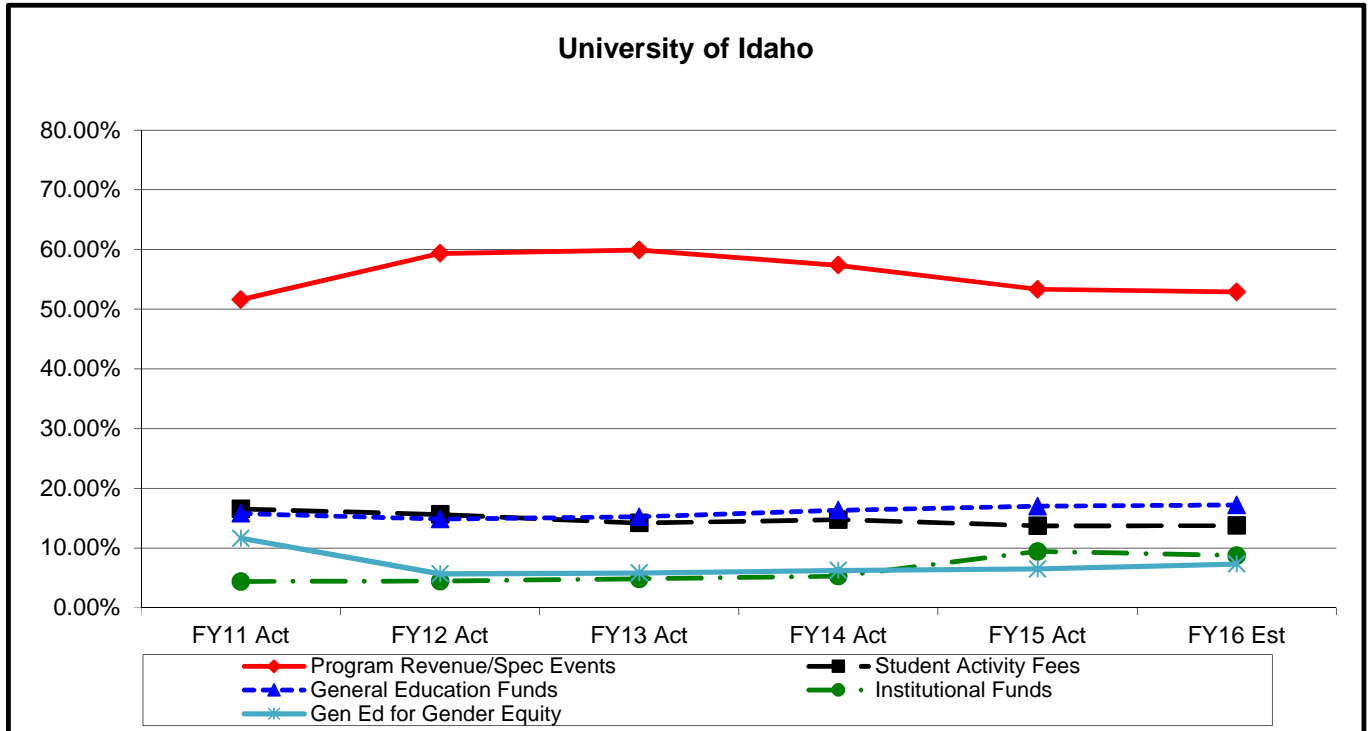
Intercollegiate Athletics Report

Revenue as a Percent of Total Revenue by Major Source



Intercollegiate Athletics Report

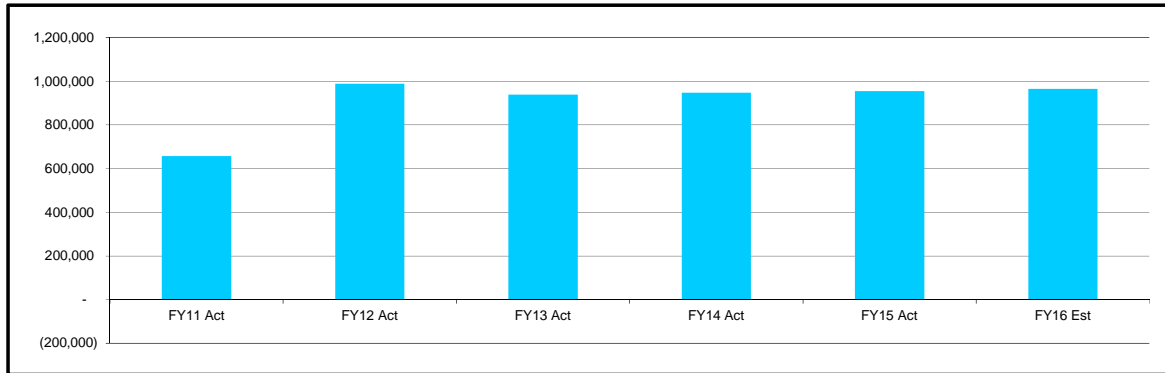
Revenue as a Percent of Total Revenue by Major Source



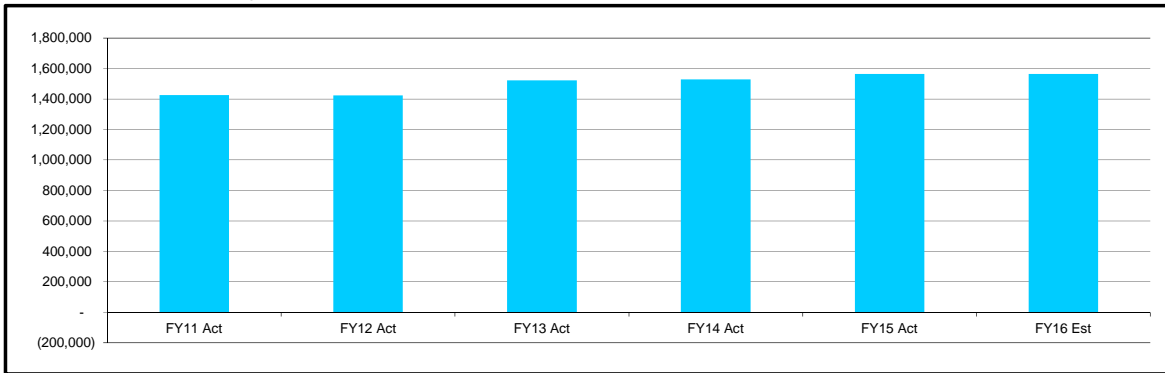
Intercollegiate Athletic Report

Fiscal Year Ending Fund Balance for Athletic Program by Institution

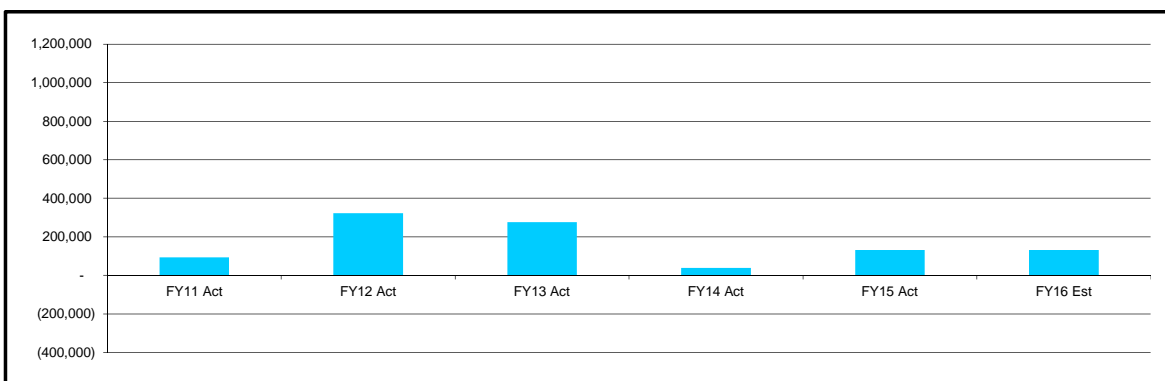
Boise State University



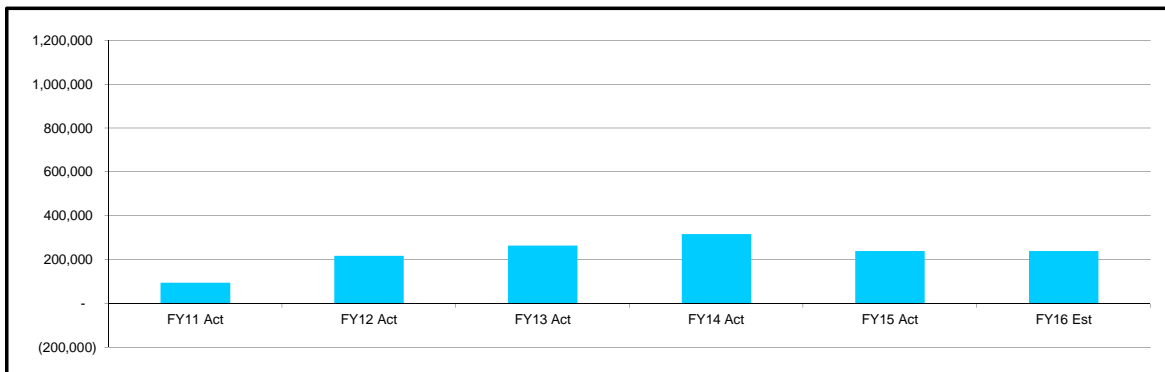
Idaho State University



University of Idaho



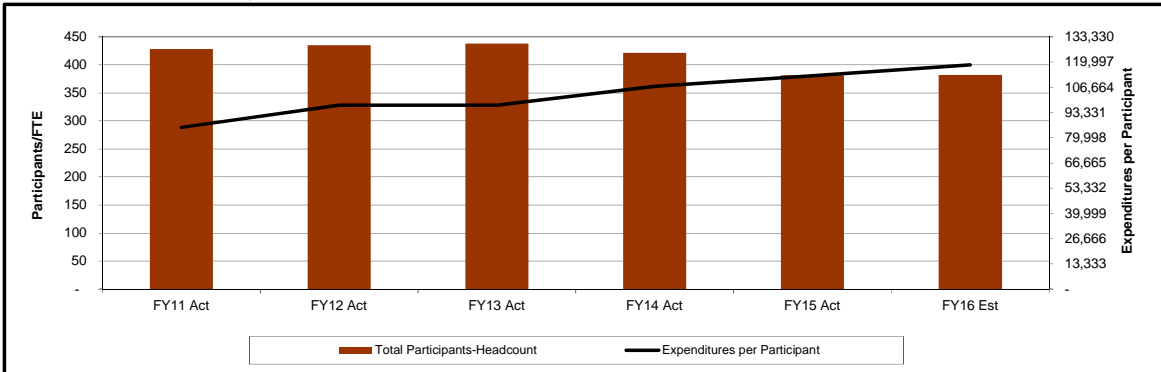
Lewis-Clark State College



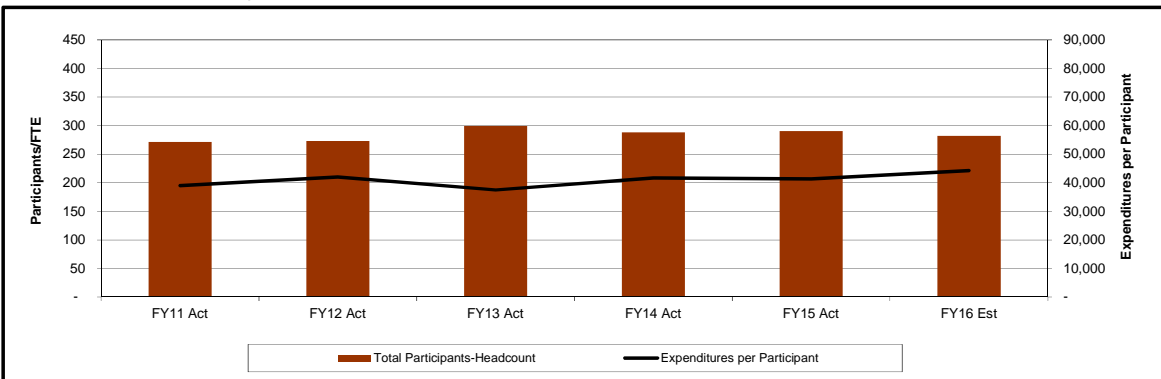
Intercollegiate Athletic Report

Athletic Expenditures by Participant Headcount

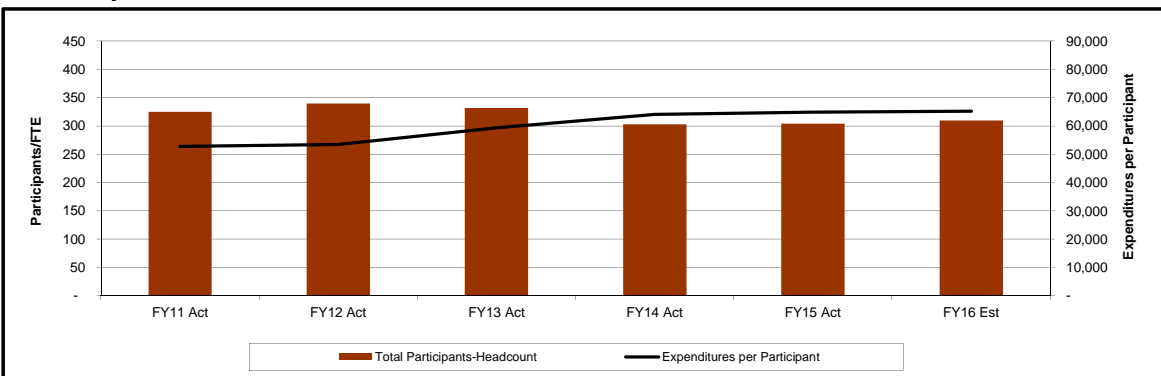
Boise State University



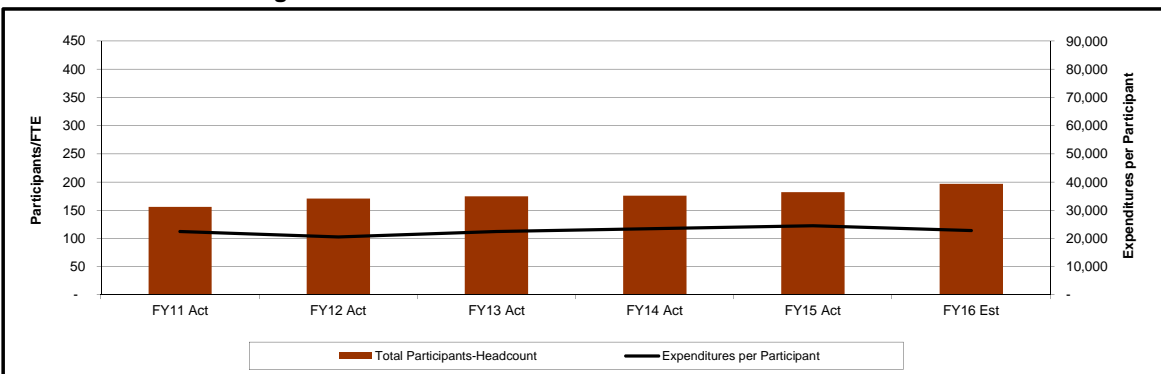
Idaho State University



University of Idaho



Lewis-Clark State College



**College & Universities
Intercollegiate Athletics Report
Summary of Revenue and Expenditures
Boise State University**

Revenues/Expend/Fund Balance	FY11 Act	FY12 Act	FY13 Act	FY14 Act	FY15 Act	FY16 Est	1 YR % Chg	Ave Ann % Chg
1 Revenue (Detail):								
2 Program Revenue:								
3 Ticket Sales	7,615,697	8,306,921	8,309,461	8,564,574	8,057,822	7,236,613	-10.2%	-1.0%
4 Game Guarantees	1,500,000	2,287,500	1,575,000	667,000	1,642,000	505,000	-69.2%	-19.6%
5 Contributions	9,594,181	9,261,601	11,142,524	11,050,335	4,004,671	11,860,071	196.2%	4.3%
6 NCAA/Conference/Tournaments	1,298,910	3,782,335	3,335,018	4,725,927	6,728,820	5,434,656	-19.2%	33.1%
7 TV/Radio/Internet Rights	140,598	64,249	39,095	1,691	1,747	-	-100.0%	-100.0%
8 Program/Novelty Sales, 9 Concessions, Parking	945,438	1,030,353	1,044,473	1,052,770	988,290	862,937	-12.7%	-1.8%
10 Royalty, Advertisement, Sponsorship	3,612,480	3,668,995	3,780,877	4,677,489	4,525,661	5,301,301	17.1%	8.0%
11 Endowment/Investment Income	-	-	-	-	-	-		
12 Other	880,479	3,057,533	1,654,680	2,581,945	1,910,813	1,328,113	-30.5%	8.6%
13 Total Program Revenue	25,587,783	31,459,487	30,881,128	33,321,731	27,859,824	32,528,691	16.8%	11.1%
14 Non-Program Revenue:								
15 NCAA/Bowl/World Series	524,641	385,201	213,059	37,401	2,717,455	29,750	-98.9%	-43.7%
16 Student Activity Fees	3,151,147	3,227,977	3,293,399	3,416,104	3,506,729	3,464,390	-1.2%	1.9%
17 General Education Funds	2,211,077	2,214,700	2,424,400	2,515,800	2,687,152	2,669,634	-0.7%	3.8%
18 GenEd Funds for Gender Eq.	976,872	976,872	976,872	1,109,700	1,178,500	1,178,600	0.0%	3.8%
19 Institutional Funds	346,600	346,600	386,100	406,400	430,200	430,200	0.0%	4.4%
20 Subtotal State/Inst. Support	3,534,549	3,538,172	3,787,372	4,031,900	4,295,852	4,278,434	-0.4%	3.9%
21 Total Non-Program Revenue	7,210,337	7,151,350	7,293,830	7,485,405	10,520,036	7,772,574	-26.1%	1.5%
22 Subtotal Operating Revenue:	32,798,120	38,610,837	38,174,958	40,807,136	38,379,860	40,301,265	5.0%	4.2%
23 Non-Cash Revenue								
24 Third Party Support	-	-	-	-	-	-		
25 Indirect Institutional Support	1,822,713	1,828,871	2,016,485	1,974,714	2,074,162	2,373,275	14.4%	5.4%
26 Non-Cash Revenue	-	-	-	-	-	-		
27 Non-Resident Tuition Waivers	1,983,889	2,210,648	2,373,316	2,351,983	2,550,790	2,607,900	2.2%	5.6%
28 Subtotal Non-Cash Revenue	3,806,602	4,039,519	4,389,801	4,326,697	4,624,952	4,981,175	7.7%	5.5%
29 Total Revenue:	36,604,722	42,650,356	42,564,759	45,133,833	43,004,812	45,282,440	5.3%	4.3%
31 Expenditures:								
32 Operating Expenditures:								
33 Athletics Student Aid	3,865,115	4,126,419	4,412,782	4,574,395	4,907,225	5,893,661	20.1%	8.8%
34 Guarantees	597,500	633,314	650,651	770,946	679,357	962,000	41.6%	10.0%
35 Coaching Salary/Benefits	7,910,123	8,169,987	9,174,828	9,551,342	8,636,698	9,360,286	8.4%	3.4%
36 Admin Staff Salary/Benefits	4,786,700	5,021,919	5,022,466	5,043,009	5,408,050	5,730,218	6.0%	3.7%
37 Fringe Benefits/Severance Payments	-	-	-	-	-	0		
38 Recruiting	383,327	411,603	446,068	588,969	593,491	432,092	-27.2%	2.4%
39 Team Travel	2,061,440	2,163,971	2,537,997	2,242,217	2,731,691	2,537,579	-7.1%	4.2%
40 Equipment, Uniforms and Supplies	1,188,767	1,430,251	1,384,106	1,732,599	2,093,235	1,260,756	-39.8%	1.2%
41 Game Expenses	1,642,127	1,790,666	1,331,753	1,685,148	1,411,630	1,349,350	-4.4%	-3.9%
42 Fund Raising, Marketing, Promotion	389,355	337,076	333,068	335,124	295,851	224,961	-24.0%	-10.4%
43 Direct Facilities/Maint/Rentals	4,430,381	8,520,267	4,780,139	5,383,629	2,282,819	3,281,010	43.7%	-5.8%
44 Debt Service on Facilities	3,360,608	3,383,251	4,399,874	4,305,383	4,899,887	5,602,088	14.3%	10.8%
45 Spirit Groups	118,297	185,101	121,422	175,748	268,071	146,999	-45.2%	4.4%
46 Medical Expenses & Insurance	125,596	134,805	184,118	750,743	1,215,108	1,196,057	-1.6%	56.9%
47 Memberships & Dues	479,800	488,816	524,793	666,757	675,684	770,803	14.1%	9.9%
48 NCAA/Special Event/Bowls	497,587	375,967	235,915	(32,683)	975,055	15,750	-98.4%	-49.9%
49 Other Operating Expenses	935,819	1,107,465	2,683,625	3,025,077	1,299,539	1,527,644	17.6%	10.3%
50 Subtotal Operating Expenditures	32,772,542	38,280,878	38,223,605	40,798,403	38,373,391	40,291,254	5.0%	4.2%
51 Non-Cash Expenditures								
52 3rd Party Coaches Compensation	0	0	0	0	0	0		#NUM!
53 3rd Party Admin Staff Compensation	-	-	-	-	-	-		
54 Indirect Facilities & Admin Support	1,822,713	1,828,871	2,016,485	1,974,714	2,074,162	2,373,275	14.4%	5.4%
55 Non-Cash Expense	-	-	-	-	-	-		
56 Non-Resident Tuition Waivers	1,983,889	2,210,648	2,373,316	2,351,983	2,550,790	2,607,900	2.2%	5.6%
57 Subtotal Non-Cash Expenditures	3,806,602	4,039,519	4,389,801	4,326,697	4,624,952	4,981,175	7.7%	5.5%
58 Total Expenditures:	36,579,144	42,320,397	42,613,406	45,125,100	42,998,343	45,272,429	5.3%	4.4%
60 Net Income/(deficit)	25,578	329,959	(48,647)	8,733	6,469	10,011	54.8%	
62 Ending Fund Balance 6/30	657,554	987,513	938,866	947,599	954,068	964,079	1.0%	
64 Sport Camps & Clinics								
65 Revenue	886,724	755,194	678,940	684,506	577,280	400,000	-30.7%	-14.7%
66 Coach Compensation from Camp	196,637	342,655	282,486	209,423	245,670	150,000	-38.9%	-5.3%
67 Camp Expenses	517,499	509,173	499,941	482,972	486,093	250,000	-48.6%	-13.5%
68 Total Expenses	714,136	851,828	782,427	692,395	731,763	400,000	-45.3%	-10.9%
69 Net Income from Camps	172,588	(96,634)	(103,487)	(7,889)	(154,483)	0	-100.0%	-100.0%

1 YR Ave Ann

**College & Universities
Intercollegiate Athletics Report
Summary of Revenue and Expenditures**

Boise State University

	FY11 Act	FY12 Act	FY13 Act	FY14 Act	FY15 Act	FY16 Est	% Chg	% Chg
1 General Revenue:								
2 Student Fees	3,151,147	3,227,977	3,293,399	3,416,104	3,506,729	3,464,390	-1.2%	1.9%
3 Contributions	9,594,182	9,261,601	11,142,524	11,050,335	4,004,671	11,860,071	196.2%	4.3%
4 State Support	2,211,077	2,214,700	2,424,400	2,515,800	2,687,152	2,669,634	-0.7%	3.8%
5 Institutional Gender Equity	976,872	976,872	976,872	1,109,700	1,178,500	1,178,600	0.0%	3.8%
6 Institutional Support	346,600	346,600	386,100	406,400	430,200	430,200	0.0%	4.4%
7 NCAA/Conference	1,298,910	3,782,335	3,335,018	4,725,927	6,728,820	5,434,656	-19.2%	33.1%
8 TV/Radio/Internet	140,598	64,249	39,095	1,691	1,747	-	-100.0%	-100.0%
9 Concessions/program/etc.	945,438	1,030,353	1,044,473	1,052,770	988,290	862,937	-12.7%	-1.8%
10 Advertising/sponsorship/Royalty	3,612,480	3,668,995	3,780,877	4,677,489	4,525,661	5,301,301	17.1%	8.0%
11 Endowments	-	-	-	-	-	-	-	-
12 NCAA/Special Event/Bowls	524,641	385,201	213,059	37,401	2,717,455	29,750	-98.9%	-43.7%
13 Other	880,479	3,057,533	1,654,680	2,581,945	1,910,813	1,328,113	-30.5%	8.6%
14 Total General Revenue	23,682,424	28,016,416	28,290,497	31,575,562	28,680,038	32,559,652	13.5%	6.6%
15 Revenue By Sport:								
16 Men's Programs:								
17 Football								
18 Ticket Sales	7,009,544	7,550,296	7,537,204	7,470,941	7,021,903	6,325,566	-9.9%	-2.0%
19 Game Guarantees	1,450,000	2,201,000	1,575,000	575,000	1,350,000	425,000	-68.5%	-21.8%
20 Other (Tourn/Bowl/Conf)	-	-	-	-	-	-	-	-
21 Basketball								
22 Ticket Sales	526,157	620,293	653,494	963,751	906,524	858,672	-5.3%	10.3%
23 Game Guarantees	50,000	85,000	-	90,000	275,000	80,000	-	-
24 Other (Tourn/Bowl/Conf)	-	-	-	-	-	-	-	-
25 Track & Field/Cross Country	3,274	5,038	4,544	5,655	4,515	3,634	-19.5%	2.1%
26 Wrestling	28,706	41,361	18,559	7,892	13,009	6,056	-53.4%	-26.7%
27 Total Men's Sport Revenue	9,067,681	10,502,988	9,788,801	9,113,239	9,570,951	7,698,928	-19.6%	-3.2%
28 Women's Programs								
29 Volleyball								
30 Ticket Sales	4,729	6,280	6,565	6,840	6,521	5,249	-19.5%	2.1%
31 Game Guarantees	-	-	-	-	-	-	-	-
32 Other (Tourn/Bowl/Conf)	-	-	-	-	-	-	-	-
33 Basketball								
34 Ticket Sales	20,367	53,907	57,286	77,268	73,457	12,000	-83.7%	-10.0%
35 Game Guarantees	-	-	-	-	15,000	-	-	-
36 Other (Tourn/Bowl/Conf)	-	-	-	-	-	-	-	-
37 Track & Field/Cross Country	3,274	5,158	4,544	5,815	4,515	3,634	-19.5%	2.1%
38 Gymnastics	7,276	9,662	10,098	10,523	12,032	8,075	-32.9%	2.1%
39 Soccer	7,276	9,662	10,098	10,523	10,033	8,075	-19.5%	2.1%
40 Softball	5,093	6,764	7,069	7,366	7,313	5,652	-22.7%	2.1%
41 Total Women's Sport Rev	48,015	91,433	95,660	118,335	128,871	42,685	-66.9%	-2.3%
42 Total Revenue	32,798,120	38,610,837	38,174,958	40,807,136	38,379,860	40,301,265	5.0%	4.2%

College & Universities
Intercollegiate Athletics Report
Summary of Revenue and Expenditures
Boise State University

Expenditures by Admin/Sport		FY11 Act	FY12 Act	FY13 Act	FY14 Act	FY15 Act	FY16 Est	1 zR % Chg	Ave Ann % Chg
43	Administrative and General								
44	Athletic Director Office	1,486,160	2,151,763	1,891,453	2,296,044	2,702,251	3,100,245	14.7%	15.8%
45	Fund Raising Office	1,175,263	626,932	705,861	724,272	492,800	471,027	-4.4%	-16.7%
46	Academic Support	963,391	1,052,068	1,086,948	1,087,742	1,286,857	1,102,963	-14.3%	2.7%
47	Media Relations	261,561	265,624	308,093	322,708	385,425	394,060	2.2%	8.5%
48	Marketing and Promotions	809,449	445,782	473,848	489,248	395,055	547,020	38.5%	-7.5%
49	Ticket Office	291,231	353,820	359,720	353,362	419,502	385,051	-8.2%	5.7%
50	Athletic Training Room	590,457	646,873	643,210	724,540	817,842	843,958	3.2%	7.4%
51	Memberships and Dues	479,800	488,816	524,793	666,219	675,684	770,803	14.1%	9.9%
52	Facilities Mtn & Debt Service	5,051,465	5,427,987	6,313,573	6,343,444	7,092,433	8,337,994	17.6%	10.5%
53	Capital Improvements	3,832,545	7,187,002	3,407,304	3,943,529	733,929	1,533,000	108.9%	-16.7%
54	NCAA/Special Event/Bowls	497,587	375,967	216,747	(32,683)	975,055	15,750	-98.4%	-49.9%
55	Other Miscellaneous	1,444,657	2,582,069	4,600,164	3,393,193	3,714,028	3,886,611	4.6%	21.9%
56	Total Admin & General	16,883,566	21,604,703	20,531,714	20,311,618	19,690,861	21,388,482	8.6%	4.8%
57									
58	Men's Programs:								
59	Football	7,834,316	8,537,612	9,200,026	11,523,144	8,839,739	9,026,052	2.1%	2.9%
60	Basketball	1,926,002	1,729,154	1,757,700	1,978,592	2,382,311	2,116,770	-11.1%	1.9%
61	Track & Field/Cross Country	486,153	503,319	468,870	469,221	562,961	611,686	8.7%	4.7%
62	Tennis	345,771	355,193	324,282	320,856	384,425	354,777	-7.7%	0.5%
63	Wrestling	433,774	486,327	486,511	448,655	460,760	526,030	14.2%	3.9%
64	Golf	180,976	186,419	230,737	247,013	267,479	209,170	-21.8%	2.9%
65	Total Men's Programs	11,206,992	11,798,024	12,468,126	14,987,481	12,897,675	12,844,485	-0.4%	2.8%
66									
67	Women's Programs								
68	Volleyball	528,957	584,346	576,637	577,478	615,567	685,232	11.3%	5.3%
69	Basketball	1,028,579	1,063,506	1,152,429	1,249,635	1,335,838	1,417,367	6.1%	6.6%
70	Track & Field/Cross Country	554,851	591,738	551,227	550,822	660,866	719,156	8.8%	5.3%
71	Tennis	245,434	167,725	291,020	304,029	343,943	355,442	3.3%	7.7%
72	Gymnastics	481,154	512,089	546,568	575,965	611,861	617,771	1.0%	5.1%
73	Golf	192,740	205,041	247,327	270,659	282,466	242,770	-14.1%	4.7%
74	Soccer	557,972	573,723	556,114	650,195	624,530	638,972	2.3%	2.7%
75	Softball	526,695	560,874	600,892	583,781	627,608	697,961	11.2%	5.8%
76	Swimming	565,602	619,109	701,551	736,740	682,176	683,616	0.2%	3.9%
77	Total Women's Programs	4,681,984	4,878,151	5,223,765	5,499,304	5,784,855	6,058,287	4.7%	5.3%
78									
79	Total Expenditures	32,772,542	38,280,878	38,223,605	40,798,403	38,373,391	40,291,254	5.0%	4.2%

**College & Universities
Intercollegiate Athletics Report
Summary of Revenue and Expenditures
Boise State University**

Participants by Sport		FY11 Act	FY12 Act	FY13 Act	FY14 Act	FY15 Act	FY16 Est	1 YR % Chg	Ave Ann % Chg
80	Men's Programs:								
81	Football	112	108	105	111	107	110	2.8%	-0.4%
82	Basketball	16	16	14	16	16	16	0.0%	0.0%
83	Track & Field/Cross Country	45	54	53	42	28	28	0.0%	-9.1%
84	Tennis	11	10	11	10	8	10	25.0%	-1.9%
85	Wrestling	32	28	34	34	33	32	-3.0%	0.0%
86	Golf	8	9	8	9	10	11	10.0%	6.6%
87	Total Male Participation	224	225	225	222	202	207	2.5%	-1.6%
88	Women's Programs								
89	Volleyball	17	18	15	16	14	15	7.1%	-2.5%
90	Basketball	14	14	16	16	16	15	-6.3%	1.4%
91	Track & Field/Cross Country	62	68	63	49	36	36	0.0%	-10.3%
92	Tennis	7	8	11	10	9	9	0.0%	5.2%
93	Gymnastics	18	16	15	16	16	16	0.0%	-2.3%
94	Golf	9	8	9	9	9	10	11.1%	2.1%
95	Soccer	28	31	35	32	27	25	-7.4%	-2.2%
96	Softball	21	20	24	24	25	24	-4.0%	2.7%
97	Swimming	28	27	25	27	27	25	-7.4%	-2.2%
98	Total Female Participation	204	210	213	199	179	175	-2.2%	-3.0%
99	Total Participants	428	435	438	421	381	382	0.3%	-2.2%

**College & Universities
Intercollegiate Athletics Report
Summary of Revenue and Expenditures
Boise State University**

							1 YR	Ave Ann
Full Ride Scholarships (Hdct)							% Chg	% Chg
100	Men's Programs:							
101	Football	67.0	63.0	82.0	82.0	85.0	0.0%	4.9%
102	Basketball	13.0	13.0	13.0	13.0	13.0	0.0%	0.0%
103	Track & Field/Cross Country	2.0	1.0	0.0	0.0	7.0		14.9%
104	Tennis	2.0	2.0	1.0	2.0	1.0	0.0%	-12.9%
105	Wrestling	0.0	2.0	2.0	2.0	0.0	#DIV/0!	#NUM!
106	Golf	1.0	0.0	1.0	0.0	0.0		
107	Subtotal	85.0	81.0	99.0	99.0	106.0	-2.8%	3.9%
108	Women's Programs							
109	Volleyball	11.0	12.0	11.0	12.0	12.0	0.0%	1.8%
110	Basketball	13.0	13.0	15.0	15.0	15.0	0.0%	2.9%
111	Track & Field/Cross Country	3.0	3.0	0.0	3.0	5.0		5.9%
112	Tennis	5.0	5.0	8.0	8.0	8.0	0.0%	9.9%
113	Gymnastics	11.0	12.0	11.0	11.0	12.0	0.0%	1.8%
114	Golf	1.0	1.0	1.0	1.0	1.0	0.0%	
115	Soccer	2.0	2.0	2.0	1.0	1.0	0.0%	-12.9%
116	Softball	1.0	1.0	2.0	5.0	1.0	0.0%	0.0%
117	Swimming	2.0	2.0	1.0	0.0	0.0		-100.0%
118	Subtotal	49.0	51.0	51.0	56.0	55.0	-1.8%	2.0%
119	Total Scholarships	134.0	132.0	150.0	155.0	161.0	-2.5%	3.2%
120	Partial Scholarships by Sport (FTE)							
121	Men's Programs:							
122	Football	12.64	15.20	0.00	0.00	0.00		-100.0%
123	Basketball	0.00	0.00	0.00	0.00	0.00		#NUM!
124	Track & Field/Cross Country	10.39	10.38	9.89	8.95	4.53	77.5%	-5.0%
125	Tennis	2.64	2.50	3.89	2.50	3.47	0.9%	5.8%
126	Wrestling	8.30	7.30	7.21	7.70	9.12	0.0%	1.9%
127	Golf	4.09	3.42	2.85	3.20	4.40	0.0%	1.5%
128	Subtotal	38.06	38.80	23.84	22.35	21.52	16.4%	-8.0%
129	Women's Programs							
130	Volleyball	0.92	0.00	0.00	0.00	0.00		-100.0%
131	Basketball	0.78	0.78	0.00	0.00	0.00		-100.0%
132	Track & Field/Cross Country	12.17	12.26	13.79	10.72	11.14	7.0%	-0.4%
133	Tennis	1.21	0.00	0.00	0.00	0.00		-100.0%
134	Gymnastics	0.87	0.00	1.00	0.00	0.00		-100.0%
135	Golf	3.94	4.38	4.99	4.50	4.18	12.4%	3.6%
136	Soccer	8.72	10.53	11.85	12.43	11.69	5.1%	7.1%
137	Softball	9.72	10.35	10.69	8.24	10.62	1.1%	2.0%
138	Swimming	11.79	11.91	12.71	12.39	11.83	-3.4%	-0.6%
139	Subtotal	50.12	50.21	55.03	48.28	49.46	3.3%	0.4%
140	Total Scholarships	88.18	89.01	78.87	70.63	70.98	7.3%	-2.9%

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**College & Universities
Intercollegiate Athletics Report
Summary of Revenue and Expenditures
Idaho State University**

Revenues/Expend/Fund Balance	FY11 Act	FY12 Act	FY13 Act	FY14 Act	FY15 Act	FY16 Est	1 YR % Chg	Ave Ann % Chg
1 Revenue:								
2 Program Revenue:								
3 Ticket Sales	222,452	326,481	239,520	243,761	306,826	274,475	-10.5%	4.3%
4 Game Guarantees	1,179,000	1,099,500	1,372,700	1,256,000	1,135,500	1,367,500	20.4%	3.0%
5 Contributions	379,301	359,422	406,803	434,592	278,228	492,951	77.2%	5.4%
6 NCAA/Conference/Tournaments	606,968	664,303	601,037	590,406	683,380	612,053	-10.4%	0.2%
7 TV/Radio/Internet Rights	4,782	9,199	13,923	9,293	14,090	4,000	-71.6%	-3.5%
8 Program/Novelty Sales,								
9 Concessions, Parking	17,000	17,000	17,000	17,000	17,000	17,000	0.0%	0.0%
10 Royalty, Advertisement, Sponsorship	499,071	767,784	410,155	538,712	489,341	500,000	2.2%	0.0%
11 Endowment/Investment Income	30,650	23,140	17,851	18,314	18,996	20,024	5.4%	-8.2%
12 Other	63,821	643,142	228,407	814,504	268,758	170,535	-36.5%	21.7%
13 Total Program Revenue	3,003,045	3,909,971	3,307,396	3,922,582	3,212,119	3,458,538	7.7%	2.9%
14 Non-Program Revenue:								
15 NCAA/Bowl/World Series	3,240	36,458	11,670	18,130	0	0	#DIV/0!	-100.0%
16 Student Activity Fees	2,149,637	2,160,685	2,096,674	2,019,527	2,032,777	1,974,760	-2.9%	-1.7%
17 General Education Funds	2,214,700	2,214,700	2,424,400	2,515,800	2,671,900	2,752,200	3.0%	4.4%
18 GenEd Funds for Gender Eq.	721,500	646,500	707,700	734,400	780,000	803,500	3.0%	2.2%
19 Institutional Funds	424,628	485,100	516,700	568,900	852,200	879,700	3.2%	15.7%
20 Subtotal State/Inst. Support	3,360,828	3,346,300	3,648,800	3,819,100	4,304,100	4,435,400	3.1%	5.7%
21 Total Non-Program Revenue	5,513,705	5,543,443	5,757,144	5,856,757	6,336,877	6,410,160	1.2%	3.1%
22 Subtotal Operating Revenue	8,516,750	9,453,414	9,064,540	9,779,339	9,548,996	9,868,698	3.3%	3.0%
23 Non-Cash Revenue								
24 Third Party Support	41,271	37,389	26,863	74,500	60,000	70,000	16.7%	11.1%
25 Indirect Institutional Support	0	0	0	0	300,000	300,000		
26 Non-Cash Revenue	605,374	573,359	605,521	542,696	520,299	600,000	15.3%	-0.2%
27 Non-Resident Tuition Waivers	1,444,723	1,393,045	1,604,010	1,613,326	1,579,246	1,640,334	3.9%	2.6%
28 Subtotal Non-Cash Revenue	2,091,368	2,003,793	2,236,394	2,230,522	2,459,545	2,610,334	6.1%	4.5%
29 Total Revenue:	10,608,118	11,457,207	11,300,934	12,009,861	12,008,541	12,479,032	3.9%	3.3%
31 Expenditures								
32 Operating Expenditures:								
33 Athletics Student Aid	1,902,615	2,130,563	2,374,523	2,381,821	2,485,836	2,418,211	-2.7%	4.9%
34 Guarantees	59,406	61,257	50,187	96,520	113,519	126,000	11.0%	16.2%
35 Coaching Salary/Benefits	1,939,811	1,738,519	1,919,248	1,988,401	2,077,182	2,260,842	8.8%	3.1%
36 Admin Staff Salary/Benefits	1,462,165	1,392,011	1,359,902	1,366,454	1,398,248	1,492,659	6.8%	0.4%
37 Severance Payments	0	0	0	0	0	0		
38 Recruiting	194,743	204,478	190,156	197,269	216,125	230,000	6.4%	3.4%
39 Team Travel	872,386	941,467	1,140,313	979,415	970,845	980,000	0.9%	2.4%
40 Equipment, Uniforms and Supplies	311,693	326,594	308,236	307,809	370,269	405,000	9.4%	5.4%
41 Game Expenses	243,692	262,426	304,579	323,967	342,465	358,000	4.5%	8.0%
42 Fund Raising, Marketing, Promotion	168,456	130,733	108,336	166,561	196,093	198,000	1.0%	3.3%
43 Direct Facilities/Maint/Rentals	256,817	1,196,670	243,210	1,107,727	360,605	305,000	-15.4%	3.5%
44 Debt Service on Facilities	0	0	0	0	0	0		
45 Spirit Groups	57,628	0	0	0	0	0		-100.0%
46 Medical Expenses & Insurance	307,664	268,988	271,586	275,125	280,892	305,000	8.6%	-0.2%
47 Memberships & Dues	44,648	47,926	41,271	38,282	43,612	48,000	10.1%	1.5%
48 NCAA/Special Event/Bowls	3,240	30,314	23,789	15,735	0	0	#DIV/0!	-100.0%
49 Other Operating Expenses	635,043	724,547	628,896	528,959	658,191	741,986	12.7%	3.2%
50 Subtotal Operating Expenditures	8,460,007	9,456,493	8,964,232	9,774,045	9,513,882	9,868,698	3.7%	3.1%
51 Non-Cash Expenditures								
52 3rd Party Coaches Compensation	37,282	33,520	19,150	56,100	50,100	55,000	9.8%	8.1%
53 3rd Party Admin Staff Compensation	3,989	3,869	7,713	18,400	9,900	15,000	51.5%	30.3%
54 Indirect Facilities & Admin Support	0	0			300,000	300,000		
55 Non-Cash Expense	605,374	573,359	605,521	542,696	520,299	600,000	15.3%	-0.2%
56 Non-Resident Tuition Waivers	1,444,723	1,393,045	1,604,010	1,613,326	1,579,246	1,640,334	3.9%	2.6%
57 Subtotal Non-Cash Expenditures	2,091,368	2,003,793	2,236,394	2,230,522	2,459,545	2,610,334	6.1%	4.5%
58 Total Expenditures:	10,551,375	11,460,286	11,200,626	12,004,567	11,973,427	12,479,032	4.2%	3.4%
59 Net Income/(deficit)	56,743	(3,079)	100,308	5,294	35,114	0	-100.0%	
62 Ending Fund Balance 6/30	1,425,380	1,422,301	1,522,609	1,527,903	1,563,017	1,563,017	0.0%	
64 Sport Camps & Clinics								
65 Revenue	127,179	79,570	123,696	199,935	220,043	180,000	-18.2%	7.2%
66 Coach Compensation from Camp	65,387	37,109	30,300	76,250	109,384	72,000	-34.2%	1.9%
67 Camp Expenses	76,190	54,692	63,112	116,974	112,958	108,000	-4.4%	7.2%
68 Total Expenses	141,577	91,801	93,412	193,224	222,342	180,000	-19.0%	4.9%
69 Net Income from Camps	-14,398	-12,231	30,284	6,711	-2,299	0	-100.0%	-100.0%

College & Universities
Intercollegiate Athletics Report
Summary of Revenue and Expenditures
Idaho State University

		FY11 Act	FY12 Act	FY13 Act	FY14 Act	FY15 Act	FY16 Est	1 YR % Chg	Ave Ann % Chg
1 General Revenue:									
2	Student Fees	2,149,637	2,160,685	2,096,674	2,019,527	2,032,777	1,974,760	-2.9%	-1.7%
3	Contributions	379,301	359,422	406,803	434,592	278,228	492,951	77.2%	5.4%
4	State Support	2,214,700	2,214,700	2,424,400	2,515,800	2,671,900	2,752,200	3.0%	4.4%
5	Institutional Gender Equity	721,500	646,500	707,700	734,400	780,000	803,500	3.0%	2.2%
6	Institutional Support	424,628	485,100	516,700	568,900	852,200	879,700	3.2%	15.7%
7	NCAA / Conference	606,968	664,303	601,037	590,406	683,380	612,053	-10.4%	0.2%
8	TV / Radio / Internet	4,782	9,199	13,923	9,293	14,090	4,000	-71.6%	-3.5%
9	Concessions / program / etc.	17,000	17,000	17,000	17,000	17,000	17,000	0.0%	0.0%
10	Advertising / sponsorship / Royalty	499,071	767,784	410,155	538,712	489,341	500,000	2.2%	0.0%
11	Endowments	30,650	23,140	17,851	18,314	18,996	20,024	5.4%	-8.2%
12	NCAA / Bowl / World Series	3,240	36,458	11,670	18,130	0	0	#DIV/0!	-100.0%
13	Other	63,821	643,142	228,407	814,504	268,758	170,535	-36.5%	21.7%
14	Total General Revenue	7,115,298	8,027,433	7,452,320	8,279,578	8,106,670	8,226,723	1.5%	2.9%
15 Revenue By Sport:									
16 Men's Programs:									
17	Football								
18	Ticket Sales	106,830	152,189	119,480	124,668	178,793	177,389	-0.8%	10.7%
19	Game Guarantees	725,000	720,000	970,000	850,000	650,000	915,500	40.8%	4.8%
20	Other (Tourn/Bowl/Conf)	0	0	0	0	0	0		
21	Basketball								
22	Ticket Sales	77,955	86,292	64,367	72,511	62,055	52,000	-16.2%	-7.8%
23	Game Guarantees	368,000	328,000	322,200	325,000	410,000	375,000	-8.5%	0.4%
24	Other (Tourn/Bowl/Conf)	0	0	0	0	0	0		
25	Track & Field/Cross Country	3,348	3,041	2,788	4,070	1,706	2,000	17.2%	-9.8%
26	Total Men's Sport Revenue	1,281,133	1,289,522	1,478,835	1,376,249	1,302,554	1,521,889	16.8%	3.5%
27 Women's Programs									
28	Volleyball								
29	Ticket Sales	4,307	3,781	7,433	7,094	29,481	10,195	-65.4%	18.8%
30	Game Guarantees	2,000	6,000	6,000	9,000	11,000	7,000	-36.4%	28.5%
31	Other (Tourn/Bowl/Conf)	0	0	0	0	0	0		
32	Basketball								
33	Ticket Sales	22,812	76,425	31,107	28,446	27,150	25,500	-6.1%	2.3%
34	Game Guarantees	76,000	44,000	69,000	66,500	56,500	70,000	23.9%	-1.6%
35	Other (Tourn/Bowl/Conf)	0	0	0	0	0	0		
36	Track & Field/Cross Country	3,347	3,042	2,788	4,070	1,706	2,000	17.2%	-9.8%
37	Soccer	8,853	3,211	15,057	4,403	5,935	5,391	-9.2%	-9.4%
38	Softball	3,000	0	2,000	4,000	8,000	0	-100.0%	
39	Total Women's Sport Rev	120,319	136,459	133,385	123,513	139,772	120,086	-14.1%	0.0%
40 Total Revenue		8,516,750	9,453,414	9,064,540	9,779,339	9,548,996	9,868,698	3.3%	3.0%

**College & Universities
Intercollegiate Athletics Report
Summary of Revenue and Expenditures
Idaho State University**

Expenditures by Admin/Sport							1 YR	Ave Ann
							% Chg	% Chg
FY11 Act	FY12 Act	FY13 Act	FY14 Act	FY15 Act	FY16 Est			
41 Administrative and General								
42 Athletic Director Office	755,459	656,672	662,012	652,440	690,132	758,947	10.0%	0.1%
43 Fund Raising Office	190,175	199,881	202,266	199,423	202,336	224,459	10.9%	3.4%
44 Academics Support	251,903	241,055	225,644	232,721	275,549	231,570	-16.0%	-1.7%
45 Media Relations	191,580	181,473	170,857	184,726	193,012	191,610	-0.7%	0.0%
46 Marketing and Promotions	203,317	180,034	169,288	231,103	231,381	261,012	12.8%	5.1%
47 Ticket Office	0	0	0	0	0	0		
48 Athletic Training Room	276,060	267,815	264,165	289,745	305,815	320,334	4.7%	3.0%
49 Memberships and Dues	44,648	47,926	41,271	38,282	43,612	48,000	10.1%	1.5%
50 Facilities Mtn & Debt Service	85,000	85,000	85,000	85,000	85,000	85,000	0.0%	0.0%
51 Capital Improvements	0	0	0	0	0	0		
52 NCAA/Special Event/Bowls	0	30,314	23,789	15,735	0	0	#DIV/0!	
53 Other Miscellaneous	756,101	1,497,684	452,314	1,338,470	573,701	541,961	-5.5%	-6.4%
54 Total Admin & General	2,754,243	3,387,854	2,296,606	3,267,645	2,600,538	2,662,893	2.4%	-0.7%
55								
56 Men's Programs:								
57 Football	2,050,701	2,267,725	2,628,308	2,411,391	2,546,722	2,681,902	5.3%	5.5%
58 Basketball	907,169	867,162	858,299	930,597	955,680	962,691	0.7%	1.2%
59 Track & Field/Cross Country	276,797	308,489	306,057	327,114	356,759	380,860	6.8%	6.6%
60 Tennis	109,243	107,912	114,420	122,216	118,855	137,810	15.9%	4.8%
61 Golf	0	0	0	0	0	0		#NUM!
62 Total Men's Programs	3,343,910	3,551,288	3,907,084	3,791,318	3,978,016	4,163,263	4.7%	4.5%
63								
64 Women's Programs								
65 Volleyball	373,993	382,796	426,474	426,643	441,580	459,144	4.0%	4.2%
66 Basketball	631,067	703,770	787,033	744,981	850,469	814,629	-4.2%	5.2%
67 Track & Field/Cross Country	376,260	414,199	427,234	406,542	409,500	445,530	8.8%	3.4%
68 Tennis	132,909	138,800	163,441	178,699	176,808	199,071	12.6%	8.4%
69 Golf	108,037	120,128	134,937	99,068	127,268	139,004	9.2%	5.2%
70 Soccer	407,010	413,482	422,973	448,233	457,248	520,500	13.8%	5.0%
71 Softball	332,578	344,176	398,450	410,916	472,455	464,664	-1.6%	6.9%
72 Total Women's Programs	2,361,854	2,517,351	2,760,542	2,715,082	2,935,328	3,042,542	3.7%	5.2%
73								
74 Total Expenditures	8,460,007	9,456,493	8,964,232	9,774,045	9,513,882	9,868,698	3.7%	3.1%

**College & Universities
Intercollegiate Athletics Report
Summary of Revenue and Expenditures
Idaho State University**

Participants by Sport		FY11 Act	FY12 Act	FY13 Act	FY14 Act	FY15 Act	FY16 Est	1 YR % Chg	Ave Ann % Chg
75	Men's Programs:								
76	Football	84	81	88	83	85	85	0.0%	0.2%
77	Basketball	15	14	15	14	14	15	7.1%	0.0%
78	Track & Field/Cross Country	39	36	47	46	45	43	-4.4%	2.0%
79	Tennis	8	9	8	7	7	8	14.3%	0.0%
80	Total Male Participation	146	140	158	150	151	151	0.0%	0.7%
81	Women's Programs								
82	Volleyball	13	13	13	15	14	14	0.0%	1.5%
83	Basketball	13	16	15	16	16	15	-6.3%	2.9%
84	Track & Field/Cross Country	38	42	51	50	50	40	-20.0%	1.0%
85	Tennis	10	11	10	9	8	8	0.0%	-4.4%
86	Golf	7	8	9	5	9	9	0.0%	5.2%
87	Soccer	28	26	24	24	24	28	16.7%	0.0%
88	Softball	16	17	19	19	18	17	-5.6%	1.2%
89	Total Female Participation	125	133	141	138	139	131	-5.8%	0.9%
90	Total Participants	271	273	299	288	290	282	-2.8%	0.8%

**College & Universities
Intercollegiate Athletics Report
Summary of Revenue and Expenditures
Idaho State University**

		FY11 Act	FY12 Act	FY13 Act	FY14 Act	FY15 Act	FY16 Est	1 YR % Chg	Ave Ann % Chg
Full Ride Scholarships (Hdct)									
91	Men's Programs:								
92	Football	50.5	54.4	58.5	55.5	55.3	56.7	2.5%	2.3%
93	Basketball	13.0	10.5	11.0	12.0	12.5	13.0	4.0%	0.0%
94	Track & Field/Cross Country	2.0	1.0	0.0	0.0	0.0	0.0		-100.0%
95	Tennis	0.5	0.5	0.5	0.0	0.0	0.0		
96	Subtotal	66.0	66.4	70.0	67.5	67.8	69.7	2.8%	1.1%
97	Women's Programs								
98	Volleyball	12.0	12.0	12.0	12.0	12.0	12.0	0.0%	0.0%
99	Basketball	8.5	15.0	14.0	11.5	14.0	14.0	0.0%	10.5%
100	Track & Field/Cross Country	5.0	2.0	4.0	2.0	0.0	1.0	#DIV/0!	-27.5%
101	Tennis	4.0	3.0	5.0	5.5	6.0	5.0	-16.7%	4.6%
102	Golf	0.0	0.0	0.0	0.0	1.0	1.0		
103	Soccer	2.0	1.0	2.0	3.0	2.0	4.0	100.0%	14.9%
104	Softball	0.0	1.0	3.0	3.0	4.0	7.0	75.0%	
105	Subtotal	31.5	34.0	40.0	37.0	39.0	44.0	12.8%	6.9%
106	Total Scholarships	97.5	100.4	110.0	104.5	106.8	113.7	6.5%	3.1%
107	Partial Scholarships by Sport (FTE)								
108	Men's Programs:								
109	Football	3.44	4.66	8.35	7.19	6.29	4.30	-31.6%	4.6%
110	Basketball	0.00	0.00	0.00	0.00	0.00	0.00		#NUM!
111	Track & Field/Cross Country	8.54	11.14	12.49	11.85	12.30	11.85	-3.7%	6.8%
112	Tennis	3.53	3.31	3.87	3.94	3.38	4.04	19.5%	2.7%
113	Subtotal	15.51	19.11	24.71	22.98	21.97	20.19	-8.1%	5.4%
114	Women's Programs								
115	Volleyball	0.00	0.00	0.00	0.00	0.00	0.00		
116	Basketball	2.04	0.00	0.68	1.57	0.00	0.00	#DIV/0!	-100.0%
117	Track & Field/Cross Country	12.92	13.82	13.25	15.23	14.36	14.56	1.4%	2.4%
118	Tennis	1.87	3.53	1.66	1.73	1.10	2.45	122.7%	5.6%
119	Golf	3.31	4.08	3.76	2.29	3.18	3.65	14.8%	2.0%
120	Soccer	9.16	10.54	11.89	10.53	11.03	8.76	-20.6%	-0.9%
121	Softball	8.31	8.69	8.55	8.42	7.02	3.75	-46.6%	-14.7%
122	Subtotal	37.61	40.66	39.79	39.77	36.69	33.17	-9.6%	-2.5%
123	Total Scholarships	53.12	59.77	64.50	62.75	58.66	53.36	-9.0%	0.1%

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**College & Universities
Intercollegiate Athletics Report
Summary of Revenue and Expenditures
University of Idaho**

		FY11 Act	FY12 Act	FY13 Act	FY14 Act	FY15 Act	FY16 Est	1 YR % Chg	Ave Ann % Chg
Revenues/Expend/Fund Balance									
1 Revenue (Detail):									
2 Program Revenue:									
3 Ticket Sales		1,077,791	582,445	754,828	791,987	632,751	518,000	-18.1%	-13.6%
4 Game Guarantees		1,063,980	2,223,592	2,490,000	3,344,000	1,785,000	2,238,600	25.4%	16.0%
5 Contributions		2,084,036	3,122,067	968,869	2,354,911	3,173,170	2,300,000	-27.5%	2.0%
6 NCAA/Conference/Tournaments		2,004,216	1,531,635	3,983,478	834,318	1,531,933	1,914,700	25.0%	-0.9%
7 TV/Radio/Internet Rights		50,000	50,000	50,000	75,000	175,413	75,000	-57.2%	8.4%
8 Program/Novelty Sales, 9 Concessions, Parking		36,037	35,531	25,388	25,708	22,094	26,950	22.0%	-5.6%
10 Royalty, Advertisement, Sponsorship		385,041	716,948	602,221	736,100	416,690	735,000	76.4%	13.8%
11 Endowment/Investment Income		231,743	221,350	218,262	419,243	369,438	371,000	0.4%	9.9%
12 Other		297,993	367,527	449,381	251,019	279,998	280,000	0.0%	-1.2%
13 Total Program Revenue		7,230,837	8,851,095	9,542,427	8,832,286	8,386,487	8,459,250	0.9%	3.2%
14 Non-Program Revenue:									
15 NCAA/Bowl/World Series		0	0	0	0	0	0		
16 Student Activity Fees		2,317,147	2,330,453	2,261,190	2,269,389	2,158,920	2,201,850	2.0%	-1.0%
17 General Education Funds		2,214,700	2,214,700	2,424,400	2,515,800	2,671,900	2,752,200	3.0%	4.4%
18 GenEd Funds for Gender Eq.		1,632,885	846,560	926,660	961,600	1,021,300	1,172,000	14.8%	-6.4%
19 Institutional Funds		617,506	666,530	772,100	812,800	1,485,400	1,399,700	-5.8%	17.8%
20 Subtotal State/Inst. Support		4,465,091	3,727,790	4,123,160	4,290,200	5,178,600	5,323,900	2.8%	3.6%
21 Total Non-Program Revenue		6,782,238	6,058,243	6,384,350	6,559,589	7,337,520	7,525,750	2.6%	2.1%
22 Subtotal Operating Revenue:		14,013,075	14,909,338	15,926,777	15,391,875	15,724,007	15,985,000	1.7%	2.7%
23 Non-Cash Revenue									
24 Third Party Support		381,000	402,300	422,300	448,650	442,000	442,000	0.0%	3.0%
25 Indirect Institutional Support		354,418	394,510	448,831	495,585	620,205	620,000	0.0%	11.8%
26 Non-Cash Revenue		457,572	462,539	536,710	542,077	435,015	450,000	3.4%	-0.3%
27 Non-Resident Tuition Waivers		2,160,805	2,267,708	2,338,347	2,326,282	2,625,752	2,750,000	4.7%	4.9%
28 Subtotal Non-Cash Revenue		3,353,795	3,527,057	3,746,188	3,812,594	4,122,972	4,262,000	3.4%	4.9%
29 Total Revenue:		17,366,870	18,436,395	19,672,965	19,204,469	19,846,979	20,247,000	2.0%	3.1%
30 Expenditures:									
32 Operating Expenditures:									
33 Athletics Student Aid		2,956,509	3,138,547	3,267,270	3,169,167	3,321,334	3,661,829	10.3%	4.4%
34 Guarantees		313,905	275,132	318,099	807,373	220,492	482,200	118.7%	9.0%
35 Coaching Salary/Benefits		2,716,981	2,773,965	3,127,423	2,805,591	2,746,634	3,117,041	13.5%	2.8%
36 Admin Staff Salary/Benefits		1,887,726	1,842,975	2,100,144	2,016,005	2,124,220	2,240,004	5.5%	3.5%
37 Severance Payments		0	78,655	0	0	0	0		#NUM!
38 Recruiting		367,071	494,417	616,004	387,576	460,930	358,030	-22.3%	-0.5%
39 Team Travel		1,913,014	1,958,530	2,385,190	2,191,881	2,478,247	2,141,110	-13.6%	2.3%
40 Equipment, Uniforms and Supplies		446,713	528,876	635,019	556,167	627,871	543,891	-13.4%	4.0%
41 Game Expenses		590,233	602,474	626,400	650,815	644,768	641,056	-0.6%	1.7%
42 Fund Raising, Marketing, Promotion		231,482	300,925	515,422	385,136	233,858	244,136	4.4%	1.1%
43 Direct Facilities/Maint/Rentals		64,870	283,229	158,841	68,292	54,825	19,500	-64.4%	-21.4%
44 Debt Service on Facilities		0	0	0	0	59,051	0		
45 Spirit Groups		0	0	0	0	2,500	0		
46 Medical Expenses & Insurance		338,615	368,250	257,327	339,813	413,428	388,580	-6.0%	2.8%
47 Memberships & Dues		414,258	419,515	421,794	274,062	782,691	644,100	-17.7%	9.2%
48 NCAA/Special Event/Bowls		0	0				0		
49 Other Operating Expenses		1,556,252	1,614,008	1,766,173	2,080,750	1,459,909	1,503,523	3.0%	-0.7%
50 Subtotal Operating Expenditures		13,797,629	14,679,498	16,195,106	15,732,628	15,630,758	15,985,000	2.3%	3.0%
51 Non-Cash Expenditures									
52 3rd Party Coaches Compensation		363,500	384,800	404,800	433,650	427,000	427,000	0.0%	3.3%
53 3rd Party Admin Staff Compensation		17,500	17,500	17,500	15,000	15,000	15,000	0.0%	-3.0%
54 Indirect Facilities & Admin Support		354,418	394,510	448,831	495,585	620,205	620,000	0.0%	11.8%
55 Non-Cash Expense		457,572	462,539	315,001	439,631	435,015	450,000	3.4%	-0.3%
56 Non-Resident Tuition Waivers		2,160,805	2,267,708	2,338,347	2,326,282	2,625,752	2,750,000	4.7%	4.9%
57 Subtotal Non-Cash Expenditures		3,353,795	3,527,057	3,524,479	3,710,148	4,122,972	4,262,000	3.4%	4.9%
58 Total Expenditures:		17,151,424	18,206,555	19,719,585	19,442,776	19,753,730	20,247,000	2.5%	3.4%
59									
60 Net Income/(deficit)		215,446	229,840	(46,620)	(238,307)	93,249	0	-100.0%	
61									
62 Ending Fund Balance 6/30		93,284	323,124	276,504	38,197	131,446	131,446	0.0%	
63									
64 Sport Camps & Clinics									
65 Revenue		178,433	147,818	125,150	49,980	103,985	125,000	20.2%	-6.9%
66 Coach Compensation from Camp		31,275	50,165	12,149	19,727	22,115	25,000	13.0%	-4.4%
67 Camp Expenses		131,411	114,815	113,001	14,913	97,287	100,000	2.8%	-5.3%
68 Total Expenses		162,686	164,980	125,150	34,640	119,402	125,000	4.7%	-5.1%
69 Net Income from Camps		15,747	(17,162)	0	15,340	(15,417)	0	-100.0%	

**College & Universities
Intercollegiate Athletics Report
Summary of Revenue and Expenditures
University of Idaho**

	FY11 Act	FY12 Act	FY13 Act	FY14 Act	FY15 Act	FY16 Est	1 YR % Chg	Ave Ann % Chg
1 General Revenue:								
2 Student Fees	2,317,147	2,330,453	2,261,190	2,269,389	2,158,920	2,201,850	2.0%	-1.0%
3 Contributions	2,084,036	3,122,067	968,869	2,354,911	3,173,170	2,300,000	-27.5%	2.0%
4 State Support	2,214,700	2,214,700	2,424,400	2,515,800	2,671,900	2,752,200	3.0%	4.4%
5 Institutional Gender Equity	1,632,885	846,560	926,660	961,600	1,021,300	1,172,000	14.8%	-6.4%
6 Institutional Support	617,506	666,530	772,100	812,800	1,485,400	1,399,700	-5.8%	17.8%
7 NCAA/Conference	2,004,216	1,531,635	3,983,478	834,318	1,531,933	1,914,700	25.0%	-0.9%
8 TV/Radio/Internet	50,000	50,000	50,000	75,000	175,413	75,000	-57.2%	8.4%
9 Concessions/program/etc.	36,037	35,531	25,388	25,708	22,094	26,950	22.0%	-5.6%
10 Advertising/sponsorship/Royalty	385,041	716,948	602,221	736,100	416,690	735,000	76.4%	13.8%
11 Endowments	231,743	221,350	218,262	419,243	369,438	371,000	0.4%	9.9%
12 Special Events		0						
13 Other	297,993	367,527	449,381	251,019	279,998	280,000	0.0%	-1.2%
14 Total General Revenue	11,871,304	12,103,301	12,681,949	11,255,888	13,306,256	13,228,400	-0.6%	2.2%
15 Revenue By Sport:								
16 Men's Programs:								
17 Football								
18 Ticket Sales	998,844	489,788	706,748	704,355	534,199	450,000	-15.8%	-14.7%
19 Game Guarantees	950,000	2,075,000	2,350,000	3,135,000	1,680,000	2,100,000	25.0%	17.2%
20 Other (Tourn/Bowl/Conf)	0	0	0	0	0	0		
21 Basketball								
22 Ticket Sales	68,274	77,530	45,022	66,680	82,791	55,000	-33.6%	-4.2%
23 Game Guarantees	89,980	87,000	90,000	150,000	50,000	85,000	70.0%	-1.1%
24 Other (Tourn/Bowl/Conf)	0	0	0	0	0	0		
25 Track & Field/Cross Country	0	1,064	0	1,207	932	0		
26 Total Men's Sport Revenue	2,107,098	2,730,382	3,191,770	4,057,242	2,347,922	2,690,000	14.6%	5.0%
27 Women's Programs								
28 Volleyball								
29 Ticket Sales	4,789	6,233	2,171	7,444	5,488	5,000	-8.9%	0.9%
30 Game Guarantees	4,000	13,592	5,000	1,000	4,000	6,000	50.0%	8.4%
31 Other (Tourn/Bowl/Conf)	0	0	0	0	0	0		
32 Basketball								
33 Ticket Sales	5,884	6,740	887	11,093	8,409	8,000	-4.9%	6.3%
34 Game Guarantees	20,000	44,000	40,000	58,000	51,000	46,500	-8.8%	18.4%
35 Other (Tourn/Bowl/Conf)	0	0	0	0	0	0		
36 Track & Field/Cross Country	0	1,090	0	1,208	932	0	-100.0%	#NUM!
37 Soccer	0	4,000	5,000	0	0	1,100		
38 Total Women's Sport Rev	34,673	75,655	53,058	78,745	69,829	66,600	-4.6%	13.9%
39 Total Revenue	14,013,075	14,909,338	15,926,777	15,391,875	15,724,007	15,985,000	1.7%	2.7%

**College & Universities
Intercollegiate Athletics Report
Summary of Revenue and Expenditures
University of Idaho**

Expenditures by Admin/Sport		FY11 Act	FY12 Act	FY13 Act	FY14 Act	FY15 Act	FY16 Est	1 YR % Chg	Ave Ann % Chg
40	Administrative and General								
41	Athletic Director Office	969,157	912,330	1,145,896	1,113,183	617,676	659,305	6.7%	-7.4%
42	Fund Raising Office	316,086	313,800	373,729	363,056	293,669	324,149	10.4%	0.5%
43	Academics Support	139,842	125,552	165,344	160,622	167,320	209,278	25.1%	8.4%
44	Media Relations	187,655	192,102	221,877	215,540	173,183	204,559	18.1%	1.7%
45	Marketing and Promotions	157,666	206,379	186,419	181,095	242,363	258,185	6.5%	10.4%
46	Ticket Office	228,959	234,982	270,713	262,982	195,217	201,420	3.2%	-2.5%
47	Athletic Training Room	585,811	646,048	692,642	672,862	780,380	727,551	-6.8%	4.4%
48	Memberships and Dues	414,258	415,780	489,804	475,816	766,520	644,100	-16.0%	9.2%
49	Facilities Mtn & Debt Service	0	274,568	0	0	59,051	0		
50	Capital Improvements	37,321	20,789	44,125	42,864	0	0	#DIV/0!	-100.0%
51	NCAA/Special Event/Bowls	0	0	0	0	0	0		
52	Other Miscellaneous	661,496	604,904	782,129	759,794	1,090,478	920,053	-15.6%	6.8%
53	Total Admin & General	3,698,251	3,947,234	4,372,678	4,247,814	4,385,857	4,148,600	-5.4%	2.3%
54									
55	Men's Programs:								
56	Football	4,587,974	4,818,488	5,420,569	5,265,775	5,182,454	5,601,639	8.1%	4.1%
57	Basketball	1,377,144	1,432,234	1,627,059	1,580,595	1,391,772	1,392,677	0.1%	0.2%
58	Track & Field/Cross Country	396,216	445,082	468,119	454,751	416,946	442,354	6.1%	2.2%
59	Tennis	156,923	175,975	185,400	180,105	183,917	189,827	3.2%	3.9%
60	Golf	198,443	179,966	234,455	227,759	207,281	208,375	0.5%	1.0%
61	Total Men's Programs	6,716,700	7,051,745	7,935,602	7,708,985	7,382,370	7,834,872	6.1%	3.1%
62									
63	Women's Programs								
64	Volleyball	607,615	660,292	698,173	678,235	697,087	695,352	-0.2%	2.7%
65	Basketball	865,568	968,353	994,570	966,168	1,086,054	1,048,137	-3.5%	3.9%
66	Track & Field/Cross Country	443,724	507,956	509,856	495,296	511,118	546,611	6.9%	4.3%
67	Tennis	216,623	196,635	248,908	241,800	255,905	304,185	18.9%	7.0%
68	Golf	225,705	227,095	259,344	251,938	285,016	248,303	-12.9%	1.9%
69	Soccer	520,781	570,891	598,397	581,308	546,273	578,220	5.8%	2.1%
70	Swimming	502,662	549,297	577,578	561,084	481,078	580,720	20.7%	2.9%
71	Total Women's Programs	3,382,678	3,680,519	3,886,826	3,775,829	3,862,531	4,001,528	3.6%	3.4%
72									
73	Total Expenditures	13,797,629	14,679,498	16,195,106	15,732,628	15,630,758	15,985,000	2.3%	3.0%

**College & Universities
Intercollegiate Athletics Report
Summary of Revenue and Expenditures
University of Idaho**

Participants by Sport		FY11 Act	FY12 Act	FY13 Act	FY14 Act	FY15 Act	FY16 Est	1 YR % Chg	Ave Ann % Chg
74	Men's Programs:								
75	Football	112	112	108	91	101	100	-1.0%	-2.2%
76	Basketball	14	14	17	15	14	15	7.1%	1.4%
77	Track & Field/Cross Country	43	43	40	38	38	40	5.3%	-1.4%
78	Tennis	13	12	11	9	7	10	42.9%	-5.1%
79	Golf	8	11	10	9	10	10	0.0%	4.6%
80	Total Male Participation	190	192	186	162	170	175	2.9%	-1.6%
81	Women's Programs								
82	Volleyball	15	17	15	12	17	15	-11.8%	0.0%
83	Basketball	15	16	16	13	13	15	15.4%	0.0%
84	Track & Field/Cross Country	40	45	47	38	31	30	-3.2%	-5.6%
85	Tennis	12	10	9	8	8	10	25.0%	-3.6%
86	Golf	8	9	9	8	8	10	25.0%	4.6%
87	Soccer	20	26	25	26	25	25	0.0%	4.6%
88	Swimming	25	25	25	36	32	30	-6.3%	3.7%
89	Total Female Participation	135	148	146	141	134	135	0.7%	0.0%
90	Total Participants	325	340	332	303	304	310	2.0%	-0.9%

**College & Universities
Intercollegiate Athletics Report
Summary of Revenue and Expenditures
University of Idaho**

		FY11 Act	FY12 Act	FY13 Act	FY14 Act	FY15 Act	FY16 Est	1 YR % Chg	Ave Ann % Chg
Full Ride Scholarships (Hdct)									
91	Men's Programs:								
92	Football	66.0	62.0	61.0	61.0	71.0	70.0	-1.3%	1.2%
93	Basketball	11.0	11.0	10.0	12.0	12.7	13.0	2.7%	3.4%
94	Track & Field/Cross Country	6.0	4.0	5.0	5.0	7.0	5.0	-28.6%	-3.6%
95	Tennis	0.0	0.0	0.0	1.0	0.0	0.0		
96	Golf	1.0	0.0	0.0	0.0	0.0	0.0		-100.0%
97	Subtotal	84.0	77.0	76.0	79.0	90.6	88.0	-2.9%	0.9%
98	Women's Programs								
99	Volleyball	12.0	11.0	11.0	11.0	11.0	12.0	9.1%	0.0%
100	Basketball	13.0	13.0	12.0	12.0	12.9	14.0	8.9%	1.5%
101	Track & Field/Cross Country	8.0	9.0	7.0	7.0	8.0	4.0	-50.0%	-12.9%
102	Tennis	8.0	5.0	7.0	8.0	7.8	7.0	-10.5%	-2.6%
103	Golf	4.0	5.0	3.0	3.0	2.0	1.0	-50.0%	-24.2%
104	Soccer	2.0	2.0	1.0	0.0	0.0	1.0		-12.9%
105	Swimming	7.0	8.0	6.0	5.0	2.0	2.0	0.0%	-22.2%
106	Subtotal	54.0	53.0	47.0	46.0	43.7	41.0	-6.1%	-5.4%
107	Total Scholarships	138.0	130.0	123.0	125.0	134.3	129.0	-3.9%	-1.3%
108	Partial Scholarships by Sport (FTE)								
109	Men's Programs:								
110	Football	8.48	10.34	12.48	12.48	0.31	0.00	-100.0%	-100.0%
111	Basketball	0.74	0.00	2.15	0.56	0.00	0.00		-100.0%
112	Track & Field/Cross Country	5.19	7.98	7.09	7.08	4.81	8.00	66.3%	9.0%
113	Tennis	4.50	4.44	4.45	3.50	5.72	4.50	-21.3%	0.0%
114	Golf	3.51	3.70	3.12	4.25	4.00	4.50	12.5%	5.1%
115	Subtotal	22.42	26.46	29.29	27.87	14.84	17.00	14.6%	-5.4%
116	Women's Programs								
117	Volleyball	0.00	1.00	0.48	0.00	1.46	0.00	-100.0%	
118	Basketball	1.01	0.62	1.47	0.00	0.00	0.00		-100.0%
119	Track & Field/Cross Country	8.12	7.34	9.65	7.40	8.22	11.00	33.8%	6.3%
120	Tennis	0.00	3.00	0.50	0.00	0.59	0.00	-100.0%	
121	Golf	1.96	0.97	2.94	2.98	4.00	5.00	25.0%	20.6%
122	Soccer	10.38	10.77	12.57	12.51	11.22	11.00	-2.0%	1.2%
123	Swimming	6.47	4.04	6.34	7.25	8.83	11.00	24.6%	11.2%
124	Subtotal	27.94	27.74	33.95	30.14	34.32	38.00	10.7%	6.3%
125	Total Scholarships	50.36	54.20	63.24	58.01	49.16	55.00	11.9%	1.8%

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**College & Universities
Intercollegiate Athletics Report
Summary of Revenues and Expenditures
Lewis-Clark State College**

Revenues/Expend/Fund Balance	FY11 Act	FY12 Act	FY13 Act	FY14 Act	FY15 Act	FY16 Est	1 YR % Chg	Ave Ann % Chg
1 Revenue (Detail):								
2 Program Revenue:								
3 Ticket Sales	37,100	37,159	41,177	38,204	40,132	35,000	-12.8%	-1.2%
4 Game Guarantees								
5 Contributions	550,514	624,717	622,670	581,042	551,136	614,200	11.4%	2.2%
6 NCAA/Conference/Tournaments								
7 TV/Radio/Internet Rights	6,350	5,700	7,300	4,400	4,800	4,800	0.0%	-5.4%
8 Program/Novelty Sales,								
9 Concessions, Parking								
10 Royalty, Advertisement, Sponsorship								
11 Endowment/Investment Income								
12 Other								
13 Total Program Revenue	593,964	667,576	671,147	623,646	596,068	654,000	9.7%	1.9%
14 Non-Program Revenue:								
15 NCAA/Bowl/World Series	427,581	416,796	459,212	575,684	656,978	533,000	-18.9%	4.5%
16 Student Activity Fees	331,329	386,450	411,617	428,761	430,000	410,000	-4.7%	4.4%
17 General Education Funds **	783,656	762,186	836,221	905,307	1,073,391	1,125,500	4.9%	7.5%
18 GenEd Funds for Gender Eq.	* See Note	* See Note	* See Note	* See Note	* See Note	* See Note		
19 Institutional Funds **	126,500	126,500	126,500	126,500	129,900	179,000	37.8%	7.2%
20 Subtotal State/Inst. Support	910,156	888,686	962,721	1,031,807	1,203,291	1,304,500	8.4%	7.5%
21 Total Non-Program Revenue	1,669,066	1,691,932	1,833,549	2,036,252	2,290,269	2,247,500	-1.9%	6.1%
22 Subtotal Operating Revenue:	2,263,030	2,359,508	2,504,697	2,659,898	2,886,337	2,901,500	0.5%	5.1%
23 Non-Cash Revenue								
24 Third Party Support	25,550	29,250	32,100	35,600	37,000	37,000	0.0%	7.7%
25 Indirect Institutional Support	159,528	160,123	201,415	217,521	182,180	222,600	22.2%	6.9%
26 Non-Cash Revenue								
27 Non-Resident Tuition Waivers	1,030,456	1,077,904	1,234,194	1,273,674	1,285,465	1,331,000	3.5%	5.3%
28 Subtotal Non-Cash Revenue	1,215,534	1,267,277	1,467,709	1,526,795	1,504,645	1,590,600	5.7%	5.5%
29 Total Revenue:	3,478,564	3,626,785	3,972,406	4,186,693	4,390,982	4,492,100	2.3%	5.2%
* Institutional gender equity for FY2010 thru FY2015 is reflected in line 27 Non-Resident Tuition Waivers.								
** Reflects revised Gen Ed spending limit approved starting FY 2015.								
31 Expenditures:								
32 Operating Expenditures:								
33 Athletics Student Aid	478,700	460,623	522,750	501,450	579,751	617,000	6.4%	5.2%
34 Guarantees	36,963	37,555	25,183	38,484	43,360	47,500	9.5%	5.1%
35 Coaching Salary/Benefits	410,023	409,133	507,559	549,531	607,398	657,100	8.2%	9.9%
36 Admin Staff Salary/Benefits **	235,815	266,289	249,018	298,242	330,828	333,400	0.8%	7.2%
37 Severance Payments								
38 Recruiting	41,703	32,122	41,690	39,345	37,460	29,500	-21.2%	-6.7%
39 Team Travel	286,549	299,834	316,550	301,736	346,745	333,000	-4.0%	3.1%
40 Equipment, Uniforms and Supplies	178,779	154,149	196,940	186,081	196,576	185,700	-5.5%	0.8%
41 Game Expenses	62,707	66,101	87,410	89,618	103,104	96,100	-6.8%	8.9%
42 Fund Raising, Marketing, Promotion								
43 Direct Facilities/Maint/Rentals								
44 Debt Service on Facilities								
45 Spirit Groups								
46 Medical Expenses & Insurance	17,930	15,600	15,600	14,970	15,600	16,000	2.6%	-2.3%
47 Memberships & Dues								
48 NCAA/Bowls/World Series	458,361	429,826	422,574	523,930	631,111	533,000	-15.5%	3.1%
49 Other Operating Expenses	74,843	65,672	72,525	63,834	71,534	53,200	-25.6%	-6.6%
50 Subtotal Operating Expenditures	2,282,373	2,236,904	2,457,799	2,607,221	2,963,467	2,901,500	-2.1%	4.9%
51 Non-Cash Expenditures								
52 3rd Party Coaches Compensation								
53 3rd Party Admin Staff Compensation								
54 Indirect Facilities & Admin Support	159,528	160,123	201,415	217,521	182,180	222,600	22.2%	6.9%
55 Non-Cash Expense	25,550	29,250	32,100	35,600	37,000	37,000	0.0%	7.7%
56 Non-Resident Tuition Waivers	1,030,456	1,077,904	1,234,194	1,273,674	1,285,465	1,331,000	3.5%	5.3%
57 Subtotal Non-Cash Expenditures	1,215,534	1,267,277	1,467,709	1,526,795	1,504,645	1,590,600	5.7%	5.5%
58 Total Expenditures:	3,497,907	3,504,181	3,925,508	4,134,015	4,468,111	4,492,100	0.5%	5.1%
59								
60 Net Income/(deficit)	(19,343)	122,604	46,898	52,678	(77,129)	0	-100.0%	
61								
62 Ending Fund Balance 6/30	95,425	218,029	264,927	317,605	240,476	240,476	0.0%	20.3%
63								
64 Sport Camps & Clinics								
65 Camp Revenue	56,367	84,417	98,580	177,590	184,683	138,000	-25.3%	19.6%
66 Coach Compensation from Camp	15,500	24,296	35,158	47,234	43,635	30,000	-31.2%	14.1%
67 Camp Expenditures	29,922	27,096	39,800	43,091	33,733	40,000	18.6%	6.0%
68 Total Expenses	45,422	51,392	74,958	90,325	77,368	70,000	-9.5%	9.0%
69 Net Income from Camps	10,945	33,025	23,622	87,265	107,315	68,000	-36.6%	44.1%

**College & Universities
Intercollegiate Athletics Report
Summary of Revenues and Expenditures
Lewis-Clark State College**

		FY11 Act	FY12 Act	FY13 Act	FY14 Act	FY15 Act	FY16 Est	1 YR % Chg	Ave Ann % Chg
1	General Revenue:								
2	Student Fees	331,329	386,450	411,617	428,761	430,000	410,000	-4.7%	4.4%
3	Contributions	85,450	180,824	86,881	45,874	128,076	225,200	75.8%	21.4%
4	State Support **	783,656	762,186	836,221	905,307	1,073,391	1,125,500	4.9%	7.5%
5	Institutional Gender Equity	* See Note	* See Note	* See Note	* See Note	* See Note	* See Note		
6	Institutional Support **	126,500	126,500	126,500	126,500	129,900	179,000	37.8%	7.2%
7	NCAA/Conference /World Series	427,581	416,796	459,212	575,684	656,978	533,000	-18.9%	4.5%
8	TV/Radio/Internet	6,350	5,700	7,300	4,400	4,800	4,800	0.0%	-5.4%
9	Concessions/program/etc.								
10	Advertising/sponsorship/Royalty								
11	Endowments								
12	Special Events								
13	Other								
14	Total General Revenue	1,760,866	1,878,456	1,927,731	2,086,526	2,423,145	2,477,500	2.2%	7.1%
15	Revenue By Sport:								
16	Men's Programs:								
17	Basketball								
18	Ticket Sales	8,162	8,175	9,059	8,405	8,829	7,700	-12.8%	-1.2%
19	Game Guarantees								
20	Contributions (Fundraising)	76,569	57,921	91,579	137,819	52,333	40,000	-23.6%	-12.2%
21	Track & Field/Cross Country	24,997	27,536	28,351	29,508	31,762	38,000	19.6%	8.7%
22	Tennis	20,326	5,360	4,916	12,473	6,718	5,000	-25.6%	-24.5%
23	Baseball								
24	Ticket Sales	18,550	18,579	20,588	19,102	20,066	17,500	-12.8%	-1.2%
25	Contributions (Fundraising)	68,921	74,067	111,221	90,021	109,304	90,000	-17.7%	5.5%
26	Golf (Contributions & Fundraising)	15,840	16,385	35,268	25,171	32,981	30,000	-9.0%	13.6%
27	Total Men's Sport Revenue	233,365	208,023	300,982	322,500	261,994	228,200	-12.9%	-0.4%
28	Women's Programs								
29	Volleyball								
30	Ticket Sales	2,226	2,230	2,471	2,292	2,408	2,100	-12.8%	-1.2%
31	Game Guarantees								
32	Contributions (Fundraising)	43,445	45,317	43,850	47,508	44,970	50,000	11.2%	2.9%
33	Basketball								
34	Ticket Sales	8,162	8,175	9,059	8,405	8,829	7,700	-12.8%	-1.2%
35	Game Guarantees								
36	Contributions (Fundraising)	91,420	111,542	106,462	98,993	63,471	59,000	-7.0%	-8.4%
37	Track & Field/Cross Country	60,457	65,118	65,199	48,131	41,624	38,000	-8.7%	-8.9%
38	Tennis	30,337	10,491	5,642	16,132	7,428	6,000	-19.2%	-27.7%
39	Golf (Contributions & Fundraising)	32,752	30,156	43,301	29,411	32,469	33,000	1.6%	0.2%
40	Total Women's Sport Rev	268,799	273,029	275,984	250,872	201,199	195,800	-2.7%	-6.1%
41	Total Revenue	2,263,030	2,359,508	2,504,697	2,659,898	2,886,337	2,901,500	0.5%	5.1%

**College & Universities
Intercollegiate Athletics Report
Summary of Revenues and Expenditures
Lewis-Clark State College**

Expenditures by Admin/Sport		FY11 Act	FY12 Act	FY13 Act	FY14 Act	FY15 Act	FY16 Est	1 YR % Chg	Ave Ann % Chg
42	Administrative and General								
43	Athletic Director Office **	318,775	353,690	371,397	407,921	420,402	424,027	0.9%	5.9%
44	Fund Raising Office	174	188	1,280	1,134	393	1,500	281.7%	53.9%
45	Academic Support								
46	Media Relations								
47	Marketing and Promotions								
48	Ticket Office								
49	Athletic Training Room	29,232	33,677	40,521	40,050	40,638	41,467	2.0%	7.2%
50	Memberships and Dues								
51	Facilities Mtn & Debt Service								
52	Capital Improvements								
53	NCAA/Special Event/Bowls								
54	Other Miscellaneous/World Series	458,361	429,826	422,574	523,930	631,111	533,000	-15.5%	3.1%
55	Total Admin & General	806,542	817,381	835,772	973,035	1,092,544	999,994	-8.5%	4.4%
56									
57	Men's Programs:								
58	Basketball	268,385	226,151	205,771	218,869	269,952	263,552	-2.4%	-0.4%
59	Track & Field/Cross Country	59,036	57,959	59,363	71,277	155,509	167,009	7.4%	23.1%
60	Tennis	52,783	50,405	31,519	31,852	23,272	42,718	83.6%	-4.1%
61	Baseball	391,130	385,383	491,415	487,153	505,155	500,627	-0.9%	5.1%
62	Golf	46,833	38,348	64,972	62,115	75,706	74,460	-1.6%	9.7%
63	Total Men's Programs	818,167	758,246	853,040	871,265	1,029,593	1,048,366	1.8%	5.1%
64									
65	Women's Programs								
66	Volleyball	227,731	203,421	249,885	229,043	261,461	251,802	-3.7%	2.0%
67	Basketball	229,988	256,048	276,324	284,034	288,526	284,666	-1.3%	4.4%
68	Track & Field/Cross Country	86,496	101,571	124,008	138,880	171,012	178,314	4.3%	15.6%
69	Tennis	60,271	50,657	37,696	36,564	29,943	46,418	55.0%	-5.1%
70	Golf	53,178	49,580	81,074	74,401	90,389	91,940	1.7%	11.6%
71	Total Women's Programs	657,664	661,277	768,987	762,921	841,330	853,140	1.4%	5.3%
72									
73	Total Expenditures	2,282,373	2,236,904	2,457,799	2,607,221	2,963,467	2,901,500	-2.1%	4.9%

**College & Universities
Intercollegiate Athletics Report
Summary of Revenues and Expenditures
Lewis-Clark State College**

Participants by Sport		FY11 Act	FY12 Act	FY13 Act	FY14 Act	FY15 Act	FY16 Est	1 zR % Chg	Ave Ann % Chg
74	Men's Programs:								
75	Basketball	14	16	16	15	16	15	-6.3%	1.4%
76	Track & Field/Cross Country	14	24	22	25	26	35	34.6%	20.1%
77	Tennis	12	11	9	16	13	12	-7.7%	0.0%
78	Baseball	35	34	41	42	42	50	19.0%	7.4%
79	Golf	10	8	8	8	8	8	0.0%	-4.4%
80	Total Male Participation	85	93	96	106	105	120	14.3%	7.1%
81	Women's Programs								
82	Volleyball	17	17	16	15	19	16	-15.8%	-1.2%
83	Basketball	12	14	12	12	13	13	0.0%	1.6%
84	Track & Field/Cross Country	20	28	29	20	20	26	30.0%	5.4%
85	Tennis	12	11	13	14	15	12	-20.0%	0.0%
86	Golf	10	8	9	9	10	10	0.0%	0.0%
87	Total Female Participation	71	78	79	70	77	77	0.0%	1.6%
88	Total Participants	156	171	175	176	182	197	8.2%	4.8%

**College & Universities
Intercollegiate Athletics Report
Summary of Revenues and Expenditures
Lewis-Clark State College**

		FY11 Act	FY12 Act	FY13 Act	FY14 Act	FY15 Act	FY16 Est	1 YR % Chg	Ave Ann % Chg
Full Ride Scholarships (Hdct)									
89	Men's Programs:								
90	Basketball								
91	Track & Field/Cross Country								
92	Tennis								
93	Baseball								
94	Golf								
95	Subtotal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96	Women's Programs								
97	Volleyball								
98	Basketball								
99	Track & Field/Cross Country								
100	Tennis								
101	Golf								
102	Subtotal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103	Total Scholarships	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
104	Partial Scholarships by Sport (FTE)								
105	Men's Programs:								
106	Basketball	8.20	6.09	3.66	6.13	5.61	5.94	5.9%	-6.2%
107	Track & Field/Cross Country	2.84	7.26	3.59	3.69	6.06	4.69	-22.6%	10.6%
108	Tennis	0.70	1.59	1.66	2.37	0.41	1.35	229.3%	14.0%
109	Baseball	9.05	8.76	8.83	10.38	11.47	9.70	-15.4%	1.4%
110	Golf	2.80	2.28	1.76	1.88	1.70	2.08	22.4%	-5.8%
111	Subtotal	23.59	25.98	19.50	24.45	25.25	23.76	-5.9%	0.1%
112	Women's Programs								
113	Volleyball	2.70	2.65	4.30	5.10	6.48	4.25	-34.4%	9.5%
114	Basketball	3.61	4.57	4.01	2.49	3.06	3.55	16.0%	-0.3%
115	Track & Field/Cross Country	4.92	9.23	1.93	0.98	2.58	3.93	52.3%	-4.4%
116	Tennis	1.65	1.66	1.13	1.47	1.22	1.43	17.2%	-2.8%
117	Golf	1.81	2.36	2.72	2.11	2.03	2.21	8.9%	4.1%
118	Subtotal	14.69	20.47	14.09	12.15	15.37	15.37	0.0%	0.9%
119	Total Scholarships	38.28	46.45	33.59	36.60	40.62	39.13	-3.7%	0.4%

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BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

SUBJECT

Intercollegiate Athletics Department, Employee Compensation Report

APPLICABLE STATUTE, RULE OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section II.H.

BACKGROUND/ DISCUSSION

In FY 1997 the Board adopted an annual report on the compensation of the employees of the intercollegiate athletic departments. The attached reports include FY 2015 actual compensation and FY 2016 estimated compensation for each institution.

IMPACT

The report details the contracted salary received by administrators and coaches, including bonuses, supplemental compensation and perquisites, if applicable.

ATTACHMENTS

Attachment 1 - Boise State University	FY15 Actual FY16 Estimate	Pages 3-4 Pages 5-6
Attachment 2 - Idaho State University	FY15 Actual FY16 Estimate	Pages 7-8 Pages 9-10
Attachment 3 - University of Idaho	FY15 Actual FY16 Estimate	Pages 11-12 Pages 13-14
Attachment 4 - Lewis-Clark State College	FY15 Actual FY16 Estimate	Pages 15-16 Pages 17-18

STAFF COMMENTS AND RECOMMENDATIONS

The Board has delegated to the Chief Executive Officer of each institution the appointing authority for all athletic department positions, except multi-year contracts for head coaches and athletic directors.

BOARD ACTION

This item is for informational purposes only. Any action will be at the Board's discretion.

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Intercollegiate Athletics Compensation Report
Boise State University
FY2015 Actual Compensation

PCN	Depart/Name/Title	Athletic FTE	Compensation				Contract Bonus			Perks			Multi-Yr Contract	State Approp.	Funding	
			Base Salary	Camps/ Clinics	Media	Equip Co & Other	Academic Perform.	Winning Perform.	Other	Club Mbership	Car	Other			Program Revenue	All Other
	Athletic Administration															
3150	Aaron Juarez	Asst Sports Info Dir/Website Coord	1.000	40,020	0	0	500	0	0	0	No	No	No	No	40,020	- 500
3530	Adam Herman	Director, Sports Performance Coach	1.000	73,612	0	0	2,000	0	0	0	No	No	No	No	45,012	28,600 2,000
3502	Andy Atkinson	Director, Ath Info & Digital Tech	1.000	68,224	0	0	500	0	0	0	No	No	No	No		68,224 500
3149	Anita Guerricabettia	Asst AD - Tkt Operations	1.000	70,720	0	0	1,000	0	0	0	No	No	No	No		70,720 1,000
3167	Sarah Swanson	Director, Student Athlete Development	1.000	45,012	0	0	500	0	0	0	No	No	No	No	45,012	- 500
3592	* Bart Hendricks	Director, Development/Athletics	0.282	13,295	0	0	0	0	0	0	No	No	No	No		13,295 -
1725	Brandon Voigt	Asst Athletic Trainer	1.000	39,104	550	0	500	0	0	0	No	No	No	No	39,104	- 1,050
1770	Brayden Dunning	Asst Director, Development	1.000	35,610	0	0	500	0	0	0	No	No	No	No		35,610 500
3584	TBD	Director, Annual Giving & Premium Seating	1.000	46,343	0	0	500	0	0	0	No	No	No	No		46,343 500
1758	Benjamin Jaeger	Assistant Director, Sports Performance Coa	1.000	27,207	100	0	500	0	0	0	No	No	No	No		27,207 600
1768	Caleb Howard	Coordinator, Video Services	1.000	36,380	0	0	500	0	0	0	No	No	No	No		36,380 500
1717	Christina Van Tol	Sr. Assoc AD - SWA	1.000	113,527	0	0	2,500	0	0	0	No	Yes	No	No		113,527 2,500
1761	Kelly Lopez	Associate Director, Sports Performance Coa	1.000	36,504	0	0	500	0	0	0	No	No	No	No		36,504 500
3030	John Cunningham	Senior Associate Athletic Director, External	1.000	111,592	0	0	2,500	0	0	0	Yes	No	No	No		111,592 2,500
3549	Matt Brewer	Associate Athletic Director, Complince	1.000	85,010	0	0	0	0	0	0	No	No	No	No		85,010 -
3504	Cynthia Rice	Senior Business Manager	1.000	59,114	0	0	500	0	0	0	No	No	No	No	59,114	- 500
1752	Dale Holste	Dir, Athletic Equipment Operations	1.000	56,618	5,500	0	2,000	0	0	0	No	No	No	No		56,618 7,500
1766	Danielle Charters	Director-Compliance	1.000	45,948	0	0	500	0	0	0	No	No	No	No		45,948 500
1739	David (DJ) Giumento	Asst AD, Facility Operations	1.000	56,160	0	0	1,000	0	0	0	No	No	No	No		56,160 1,000
3190	Dustin Clements	Assoc Athletic Director, Development	0.248	22,364	0	0	0	0	0	0	No	Yes	No	No		22,364 -
5444	+ David Kinard	Assoc Athletic Director, Development	1.000	84,532	0	0	656	0	0	0	Yes	No	No	No		84,532 656
1727	Doug Link	Asst Sports Info Director	1.000	42,120	0	0	500	0	0	0	No	No	No	No		42,120 500
3563	Eric Kile	Director- Student Athl Learning Center	1.000	43,452	0	0	500	0	0	0	No	No	No	No	43,452	500
1742	Linsey Saras	Coordinator, Athletic Game Operations	1.000	40,456	0	0	500	0	0	0	No	No	No	No		40,456 500
3145	Gabe Rosenvall	Asst AD, Student Services	1.000	70,616	0	0	2,000	4,000	0	0	No	No	No	No	70,616	4,000 2,000
1700	Heather Berry	Director, Athletics HR & Student Insurance	1.000	47,320	0	0	500	0	0	0	No	No	No	No		47,320 500
1726	James Spooner	Asst Athletic Trainer	1.000	55,183	1,063	0	500	0	0	1,000	No	No	No	No	55,183	1,000 1,563
3153	Jeff Pitman	Head Coach, Strength	1.000	138,612	7,500	0	2,000	2,500	2,000	10,430	No	No	No	No		153,542 9,500
3132	Jennifer Bellomy	Assistant Athletic Director, Compliance	1.000	56,223	0	0	1,000	0	0	0	No	No	No	No		56,223 1,000
1741	Christopher Nichol	Academic Advisor	1.000	39,125	0	0	500	0	0	0	No	No	No	No	39,125	- 500
1767	John Perkins	Asst Director, Athletic Equipment Operations	1.000	35,984	0	0	500	0	0	0	No	No	No	No		35,984 500
1751	Jolenne Dimeo	Facility Operations Supervisor	1.000	54,434	0	0	500	0	0	0	No	No	No	No		54,434 500
3015	Joseph Nickell	Director, Sports Information	1.000	44,908	0	0	500	0	0	0	No	No	No	No		44,908 500
1771	Josh Borgman	Director, Creative Services	1.000	39,208	0	0	500	0	0	0	No	No	No	No		39,208 500
1764	Justin LaChapelle	Athletic Technical Support Specialist	1.000	36,380	0	0	500	0	0	0	No	No	No	No		36,380 500
1743	Keila Mintz	Accountant	1.000	40,831	0	0	500	0	0	0	No	No	No	No	40,831	- 500
1749	Keita Shimada	Asst Athletic Trainer	1.000	37,128	488	0	500	0	0	1,000	No	No	No	No		38,128 988
1732	Kevin Riley	Coordinator, Video Services	1.000	39,208	0	0	500	0	0	0	No	No	No	No		39,208 500
1760	Lauren Rodgers	Asst Athletic Trainer	1.000	36,380	0	0	500	0	0	1,000	No	No	No	No		37,380 500
1728	Tyson Gale	Assistant Coach, Strength & Conditioning	1.000	36,504	3,000	0	1,000	0	0	0	No	No	No	No		36,504 4,000
1772	Brandon Pringle	Assistant Coach, Strength & Conditioning/Fc	1.000	36,504	0	0	0	0	0	0	No	No	No	No		36,504 -
3950	Julie Rising	Coordinator, Athletic Events & Facilities	1.000	35,901	0	0	0	0	0	0	No	No	No	No		35,901 -
1711	Marc Paul	Asst AD/Athletic Trainer	1.000	74,984	0	0	2,000	0	0	2,000	No	No	No	No		76,984 2,000
1701	Mark Coyle	Executive Director, Athletics	1.000	334,839	0	0	1,000	15,000	35,000	30,000	Yes	Yes	No	Yes		414,839 1,000
3529	Mark Wheeler	Director of Compliance	1.000	45,948	0	0	500	0	0	0	No	No	No	No	45,948	- 500
3125	Matthew Thomas	Asst AD, Mktng & Promotions	1.000	60,008	0	0	1,000	0	0	0	No	No	No	No		60,008 1,000
3154	Matthieu Gaudry	Director, Fan Development & Strategies	1.000	41,268	0	0	500	0	0	0	No	No	No	No		41,268 500
1703	Max Corbet	Assoc Athletic Director, Communications	1.000	65,624	0	0	1,000	0	0	0	No	No	No	No		65,624 1,000
1763	Michael Walsh	Asst Sports Info Director & Web Coordinator	1.000	38,002	0	0	500	0	0	0	No	No	No	No		38,002 500
1755	Natalie Keffer	Director, Athletic Relations	1.000	76,066	0	0	500	0	0	0	No	No	No	No		76,066 500
3194	Nicole Gamez	Assoc AD, Finance	1.000	92,186	0	0	1,000	0	0	0	No	No	No	No		92,186 1,000
3023	Cody Smith	Asst Athletic Director, Event Operations	1.000	46,405	0	0	500	0	0	0	No	No	No	No		46,405 500
	* Rachel Bickerton	Dir, Trademark Lic/Enforcement	0.437	35,007	0	0	250	0	0	0	No	No	No	No		35,007 250
1753	Raul Ibarra	Director, Team Operations	1.000	42,516	0	0	500	0	0	0	No	No	No	No		42,516 500
1759	Rhonda McFarland	Senior Business Manager	1.000	67,372	0	0	500	0	0	0	No	No	No	No		67,372 500
1702	Robert Carney	Assoc AD, Facilities and Operations	1.000	81,994	0	0	2,500	0	0	0	No	No	No	No		81,994 2,500
3067	Sabrena Nottingham	Asst Ticket Manager	1.000	36,754	0	0	500	0	0	0	No	No	No	No		36,754 500
1754	Scott Duncan	Facility Maintenance Supervisor	1.000	41,060	0	0	500	0	0	0	No	No	No	No		41,060 500
3545	Shaela Priaulx-Soho	Ticket Manager	1.000	47,424	0	0	500	0	0	0	No	No	No	No		47,424 500
3110	Taryn Schutte	Academic Advisor	1.000	35,610	0	0	500	0	0	0	No	No	No	No	35,610	- 500
1736	Spencer Jahn	Athletic Multimedia Specialist	1.000	35,984	0	0	500	0	0	0	No	No	No	No		35,984 500
3188	Suzanne Goss	Director, Donor Relations Events	0.750	30,342	0	0	500	0	0	0	No	No	No	No		30,342 500
3970	Syringa Stark	Asst Athletic Trainer/ Insurnace Coor	1.000	36,380	0	0	500	0	0	0	No	No	No	No		36,380 500
3064	Taylor Little	Coordinator, Video Services	1.000	41,767	0	0	500	0	0	0	No	No	No	No		41,767 500
1735	Ashley Hudson	Asst Athletic Trainer	1.000	35,610	0	0	500	0	0	1,000	No	No	No	No	-	36,610 500
1724	Tobruk Everman Blaine	Head Dance Coach	1.000	45,948	0	0	500	0	0	0	No	No	No	No		45,948 500
1773	Paul Smith	Assistant Athletic Trainer	1.000	35,901	0	0	500	0	0	0	No	No	No	No		35,901 500
1715	Tyler Smith	Assoc Athletic Trainer	1.000	55,183	0	0	500	0	0	1,000	No	No	No	No	55,183	1,000 500
3947	Victoria Lewis	Assistant Business Manager	1.000	40,040	0	0	500	0	0	0	No	No	No	No		40,040 500

Intercollegiate Athletics Compensation Report
Boise State University
FY2015 Actual Compensation

PCN	Depart/Name/Title	Athletic FTE	Compensation				Contract Bonus			Perks			Multi-Yr Contract	State Approp.	Funding		
			Base Salary	Camps/ Clinics	Media	Equip Co & Other	Academic Perform.	Winning Perform.	Other	Club Mbership	Car	Other			Program Revenue	All Other	
Men's Sports																	
Football																	
1704	Bryan Harsin	Head Coach	1.000	800,010	0	0	3,000	50,000		Winning	Bowl/Other	Yes	Yes	No	Yes	1,012,885	3,000
3103	Elijah Drinkwitz	Offensive Coordinator	1.000	300,020	3,000	0	2,000	5,000	2,000		13,000	No	Yes	No	No	320,020	5,000
1708	Marcel Yates	Defensive Coordinator	1.000	330,013	3,000	0	2,000	5,000	2,000		33,750	No	Yes	No	Yes	370,763	5,000
3186	Kent Riddle	Assistant Coach	1.000	265,013	4,000	0	2,000	5,000	2,000		27,500	No	Yes	No	No	299,513	6,000
3160	Steve Caldwell	Assistant Coach	1.000	230,007	4,000	0	2,000	5,000	2,000		26,000	No	Yes	No	No	263,007	6,000
3162	Andy Avalos	Assistant Coach	1.000	225,015	4,500	0	2,000	5,000	2,000		23,000	No	Yes	No	No	255,015	6,500
1707	Scott Huff	Assistant Coach	1.000	270,005	4,000	0	2,000	5,000	2,000		29,000	No	Yes	No	No	306,005	6,000
3134	Lee Marks	Assistant Coach	1.000	125,008	5,000	0	2,000	0	0	0	0	No	Yes	No	No	125,008	7,000
1706	Alton Adams	Assistant Coach	1.000	185,016	5,000	0	2,000	5,000	2,000		13,000	No	Yes	No	No	205,016	7,000
1705	Julius Brown	Assistant Coach	1.000	175,012	5,000	0	2,000	5,000	2,000		13,000	No	Yes	No	No	195,012	7,000
1730	Brian Wilkinson	Director, Football Operations	1.000	76,503	7,500	0	2,000	5,000	2,000		3,825	No	No	No	No	87,328	9,500
1709	Taylor Tharp	Director, Player Personnel	1.000	45,012	4,500	0	2,000	5,000	2,000		2,250	No	No	No	No	54,262	6,500
1762	Antwon Murray	Director, Recruiting	1.000	50,004	4,500	0	750	5,000	2,000		2,500	No	No	No	No	59,504	5,250
1750	Brad Larrondo	Asst Athletic Director, Football	1.000	75,005	10,000	0	2,000	5,000	2,000		3,649	No	Yes	No	No	85,654	12,000
1765	Darren Uscher	Coordinator of Football Operations	1.000	35,610	1,000	0	500	0	2,000		1,780	No	No	No	No	39,390	1,500
Basketball																	
1710	Leon Rice	Head Coach	1.000	614,474	0	0	10,000	0	18,000		73,878	Yes	Yes	No	Yes	706,352	10,000
1714	Daniel Henderson	Assistant Coach, Men's Basketball	1.000	96,554	0	0	2,500	0	4,500		12,000	No	Yes	No	No	113,054	2,500
1712	Jeff Linder	Associate Head Coach, Men's Basketball	1.000	137,925	0	0	2,500	0	4,500		17,000	No	Yes	No	No	159,425	2,500
3133	John Rillie	Assistant Coach, Men's Basketball	1.000	109,928	0	0	2,500	0	4,500		14,000	No	No	No	No	128,428	2,500
1745	Isaac Williams	Director, Men's BB Operations	1.000	43,410	0	0	2,500	0	2,250		10,000	No	No	No	No	43,410	12,250
Wrestling																	
1713	Greg Randall	Head Coach	1.000	71,719	400	0	2,000	1,800	0	0	0	No	Yes	No	No	71,719	1,800
3182	Chris Owens	Assistant Coach	1.000	43,784	1,400	0	500	1,100	0	0	0	No	No	No	No	43,784	1,100
3180	Kirk White	Assistant Coach	1.000	31,866	0	0	500	0	0	0	0	No	No	No	No	31,866	500
Golf																	
3566	Dan Potter	Head Coach	1.000	45,012	0	0	2,000	3,000	0	0	0	Yes	Yes	No	No	48,012	2,000
Tennis																	
3151	Greg Patton	Head Coach	1.000	98,052	0	0	2,000	0	3,000	0	0	No	Yes	No	No	101,052	2,000
3178	Paluka Shields	Assistant Coach	1.000	31,928	1,192	0	500	0	1,000	0	0	No	No	No	No	31,928	1,000
Men/Women's Track & Field																	
2223	Corey Ihmels	Head Coach	1.000	78,760	0	0	4,000	18,000	19,750		20,000	No	No	No	Yes	136,510	4,000
1719	Grant (Charles) Wall	Assistant Coach	1.000	44,471	0	0	500	2,400	500		0	No	No	No	No	44,471	2,900
3177	Gavin O'Neal	Assistant Coach	1.000	44,471	0	0	500	2,400	1,250		0	No	No	No	No	44,471	3,650
1721	Travis Hartke	Assoc Head CC & Asst Track and Field Coa	1.000	44,471	0	0	500	3,600	4,000		0	No	No	No	No	44,471	7,600
Women's Sports																	
Basketball																	
2226	Gordon Presnell	Head Coach	1.000	189,135	500	0	7,500	7,500	23,000		0	No	No	No	Yes	219,635	8,000
3181	Sunny Smallwood	Assistant Coach	1.000	123,615	1,000	0	500	1,500	7,000		0	No	No	No	No	123,615	8,500
3129	Cody Butler	Assistant Coach	1.000	60,653	1,000	0	500	1,500	7,000		0	No	Yes	No	No	60,653	8,500
1720	Heather Sower	Assistant Coach	1.000	61,880	1,000	0	500	1,500	7,000		0	No	Yes	No	No	61,880	8,500
1744	Cariann Ramirez	Dir, Women's BB Operations	1.000	40,727	2,000	0	500	750	3,500		0	No	No	No	No	40,727	4,250
Soccer																	
1722	James Thomas	Head Coach	1.000	80,018	24,000	0	2,000	2,000	0		5,000	No	No	No	No	52,800	34,218
1723	Edward Moore	Assistant Coach	1.000	32,532	9,000	0	500	1,200	0		0	No	No	No	No	32,532	1,200
1748	Miren Zabala	Assistant Coach	1.000	30,015	10,500	0	500	0	0		0	No	No	No	No	30,015	11,000
Volleyball																	
1716	Shawn Garus	Head Coach	1.000	87,610	15,943	0	3,500	5,000	1,500		0	Yes	Yes	No	Yes	94,110	19,443
3176	Breann Crowell	Assistant Coach	1.000	24,295	10,000	0	500	1,200	750		0	No	No	No	No	26,245	10,500
3130	Candy Murphy	Assistant Coach	1.000	52,479	5,000	0	500	1,200	750		0	No	No	No	No	52,479	1,950
Gymnastics																	
1718	Neil Resnick	Co-Head Coach	1.000	76,505	0	0	2,000	2,000	2,000		2,000	No	Yes	No	Yes	76,505	6,000
3174	Tina Bird	Co-Head Coach	1.000	62,484	11,904	0	2,000	2,000	2,000		2,000	No	Yes	No	No	68,484	13,904
3164	Patti Murphy	Assistant Coach	1.000	36,400	0	0	500	1,200	1,000		1,000	No	No	No	No	36,400	3,200
Tennis																	
3163	Sherman Roghaar	Head Coach	1.000	52,437	2,079	0	2,000	4,000	0		0	No	No	No	Yes	52,437	4,000
3179	TBD	Assistant Coach	1.000	28,330	6,152	0	500	0	0		0	No	No	No	No	28,330	6,652
Golf																	
3127	Nicole Bird	Head Coach	1.000	44,533	0	0	2,000	3,000	0		0	Yes	Yes	No	No	44,533	3,000
Softball																	
1737	Cynthia Ball	Head Coach	1.000	70,013	5,157	0	2,000	0	0		0	No	No	No	No	70,013	7,157
1738	Taylor Smith	Assistant Coach	1.000	30,015	3,555	0	500	0	0		0	No	No	No	No	30,015	4,055
1747	Nathan Miller	Assistant Coach	1.000	30,015	3,555	0	500	0	0		0	No	No	No	No	30,015	4,055
Swimming																	
1731	Kristin Hill	Head Coach	1.000	75,001	623	0	2,000	0	3,000		0	No	Yes	No	Yes	75,001	3,000
1733	Eduardo Larios	Assistant Coach	1.000	38,210	1,825	0	500	0	0		0	No	No	No	No	38,210	2,325
1746	John Lynch	Diving Coach	1.000	44,720	0	0	500	0	0		0	No	No	No	No	44,720	500

Notes: 9,889,295
 * Employee works 1 FTE at the University. The FTE and Base Salary on this report reflect the amount of the employee's salary which is funded by Athletics.
 + Employee is on paid administrative leave.

Intercollegiate Athletics Compensation Report

Boise State University

FY2016 Estimated Compensation

PCN	Depart/Name/Title		Athletic FTE	Compensation				Contract Bonus			Perks			Multi-Yr Contract	State Approp.	Funding		Base Salary Annualized Change	Comments
				Base Salary	Camps/ Clinics	Media	Equip Co & Other	Academic Perform.	Winning Perform.	Other	Club Mbership	Car	Other			Program Revenue	All Other		
	Athletic Administration																		
3150	Aaron Juarez	Asst Sports Info Dir/Website Coord	1.000	40,623	0	0	500	0	0	0	No	No	No	No	40,623	-	500	2% CEC	
3530	Adam Herman	Director, Sports Performance Coach	1.000	75,816	0	0	2,000	0	0	0	No	No	No	No		75,816	2,000	3% CEC	
3502	Andy Atkinson	Director, Ath Info & Digital Tech	1.000	70,263	0	0	500	0	0	0	No	No	No	No		70,263	500	3% CEC	
3149	Anita Guerricabettia	Asst AD - Tkt Operations	1.000	71,781	0	0	1,000	0	0	0	No	No	No	No		71,781	1,000	2% CEC	
3167	Sarah Swanson	Director, Student Athlete Development	1.000	46,364	0	0	500	0	0	0	No	No	No	No	46,364	-	500	3% CEC	
3005	Natalie Keffer	Assistant Athletic Director, Development	1.000	63,316	0	0	0	0	0	0	No	No	No	No		63,316	-	-17% New Position	
3592	* Bart Hendricks	Director, Development/Athletics	0.282	13,560	0	0	0	0	0	0	No	No	No	No		13,560	-	2% CEC	
1725	Brandon Voigt	Asst Athletic Trainer	1.000	40,269	550	0	500	0	0	0	No	No	No	No	40,269	-	1,050	3% CEC	
1770	Brayden Dunning	Director, Premium Seating	1.000	40,103	0	0	500	0	0	0	No	No	No	No		40,103	500	13% Promotion	
3584	Christina Webster	Director, Annual Giving	1.000	40,103	0	0	500	0	0	0	No	No	No	No		40,103	500	New	
1758	Benjamin Jaeger	Assistant Director, Sports Performance Coa	1.000	30,930	100	0	500	0	0	0	No	No	No	No		30,930	600	14% Retention	
1768	Caleb Howard	Coordinator, Video Services	1.000	37,586	0	0	500	0	0	0	No	No	No	No		37,586	500	3% CEC	
1717	Christina Van Tol	Sr. Assoc AD /Internal/SWA	1.000	118,061	0	0	2,500	0	0	0	No	Yes	No	No		118,061	2,500	4% Equity	
1772	Brandon Pringle	Assistant Coach, Strength & Conditioning/Fc	1.000	36,504	0	0	500	0	0	0	No	No	No	No		36,504	500	0%	
1761	Kelly Lopez	Associate Director, Sports Performance Coa	1.000	42,245	0	0	500	0	0	0	No	No	No	No		42,245	500	16% Retention	
3030	Vacant	Senior Associate Athletic Director, External	1.000	116,064	0	0	2,500	0	0	0	Yes	No	No	No		116,064	2,500	New Vacant	
3549	Matt Brewer	Associate Athletic Director, Compliance	1.000	85,010	0	0	0	0	0	0	No	No	No	No		85,010	-	0%	
3504	Cynthia Rice	Assistant Athletic Director, Business Ops	1.000	67,704	0	0	500	0	0	0	No	No	No	No	67,704	-	500	15% Promotion	
1752	Dale Holste	Dir, Athletic Equipment Operations	1.000	57,471	5,500	0	2,000	0	0	0	No	No	No	No		57,471	7,500	2% CEC	
1766	Danielle Charters	Director-Compliance	1.000	47,320	0	0	500	0	0	0	No	No	No	No		47,320	500	3% CEC	
1739	David (DJ) Giumento	Asst AD, Facility Operations	1.000	57,845	0	0	1,000	0	0	0	No	No	No	No		57,845	1,000	3% CEC	
3190	* Dustin Clements	Assoc Athletic Director, Development	0.248	22,364	0	0	0	0	0	0	Yes	No	No	No		22,364	-	0%	
1727	Doug Link	Asst Sports Info Director	1.000	42,744	0	0	500	0	0	0	No	No	No	No		42,744	500	1% CEC	
3563	Eric Kile	Director, Student Athlete Learning Center	1.000	44,991	0	0	500	0	0	0	No	No	No	No	44,991	-	500	4% CEC	
1742	Linsey Saras	Coordinator, Athletic Game Operations	1.000	41,060	0	0	500	0	0	0	No	No	No	No		41,060	500	1% CEC	
3145	Gabe Rosenvall	Assoc AD, Student Athlete Development	1.000	73,445	0	0	2,000	4,000	0	0	No	No	No	No	73,445	4,000	2,000	4% CEC	
1700	Heather Berry	Assistant AD, Personnel	1.000	59,072	0	0	500	0	0	0	No	No	No	No		59,072	500	25% Promotion	
1726	James Spooner	Asst Athletic Trainer	1.000	56,847	1,063	0	500	0	0	0	No	No	No	No	56,847	-	1,563	3% CEC	
3153	Jeff Pitman	Head Coach, Strength	1.000	138,612	7,500	0	2,000	5,000	0	3,000	No	No	No	No		146,612	9,500	0%	
3132	Jennifer Bellomy	Assistant Athletic Director, Compliance	1.000	57,908	0	0	1,000	0	0	0	No	No	No	No		57,908	1,000	3% CEC	
1741	Chris Nichol	Academic Advisor	1.000	39,916	0	0	500	0	0	0	No	No	No	No	39,916	-	500	New	
1767	John Perkins	Asst Director, Athletic Equipment Operations	1.000	36,858	0	0	500	0	0	0	No	No	No	No		36,858	500	2% CEC	
1751	Jolenne Dimeo	Facility Operations Supervisor	1.000	55,245	0	0	500	0	0	0	No	No	No	No		55,245	500	1% CEC	
1774	Joseph Nickell	Assistant Athletic Director, Media Relations	1.000	57,512	0	0	500	0	0	0	No	No	No	No		57,512	500	28% New Position	
3015	Vacant	Director, Sports Information	1.000	46,260	0	0	500	0	0	0	No	No	No	No		46,260	500	New Vacant	
1771	Josh Borgman	Director, Creative Services	1.000	40,103	0	0	500	0	0	3,000	No	No	No	No		43,103	500	2% CEC	
1764	Justin LaChapelle	Athletic Technical Support Specialist	1.000	40,103	0	0	500	0	0	0	No	No	No	No		40,103	500	10% Equity	
1743	Keila Mintz	Accountant	1.000	42,058	0	0	500	0	0	0	No	No	No	No	42,058	-	500	3% CEC	
1776	Vacant	Accountant	1.000	40,103	0	0	500	0	0	0	No	No	No	No		40,103	500	New Vacant	
1749	Keita Shimada	Asst Athletic Trainer	1.000	38,917	488	0	500	0	0	0	No	No	No	No		38,917	988	5% CEC	
1732	Kevin Riley	Coordinator, Video Services	1.000	40,103	0	0	500	0	0	3,000	No	No	No	No		43,103	500	2% CEC	
1760	Lauren Rodgers	Asst Athletic Trainer	1.000	37,232	0	0	500	0	0	0	No	No	No	No		37,232	500	2% CEC	
1728	Tyson Gale	Assistant Coach, Strength & Conditioning	1.000	36,504	3,000	0	1,000	0	0	0	No	No	No	No		36,504	4,000	0%	
3950	Julie Rising	Coordinator, Athletic Events and Facilities	1.000	35,901	0	0	0	0	0	0	No	No	No	No		35,901	-	0%	
1711	Marc Paul	Asst AD/Athletic Trainer	1.000	76,108	0	0	2,000	0	0	0	No	No	No	No		76,108	2,000	1% CEC	
1701	Curt Apsey	Executive Director, Athletics	1.000	331,511	0	0	1,000	7,500	0	20,000	Yes	Yes	No	Yes		359,011	1,000	New	
3529	Gavin Boatright	Asst Director of Compliance	1.000	36,504	0	0	500	0	0	0	No	No	No	No	36,504	-	500	New	
3125	Matt Thomas	Asst AD, Mktng & Promotions	1.000	60,008	0	0	1,000	0	0	0	No	No	No	No		60,008	1,000	New	
3154	Spencer Jahn	Director, Marketing & Promotions	1.000	43,015	0	0	500	0	0	0	No	No	No	No		43,015	500	20% Promotion	
1703	Max Corbet	Assoc AD, Administration	1.000	66,602	0	0	1,000	0	0	0	No	No	No	No		66,602	1,000	1% CEC	
1763	Michael Walsh	Asst Sports Info Director & Web Coor	1.000	38,772	0	0	500	0	0	0	No	No	No	No		38,772	500	2% CEC	
1755	Vacant	Assistant Athletic Director, Administration	1.000	76,066	0	0	500	0	0	0	No	No	No	No		76,066	500	New Vacant	
3194	Nicole Gamez	Associate Athletic Director, Business Affairs	1.000	94,037	0	0	1,000	0	0	0	No	No	No	No		94,037	1,000	2% CEC	
3023	Cody Smith	Asst Athletic Director, Event Operations	1.000	47,092	0	0	500	0	0	0	No	No	No	No		47,092	500	1% CEC	
1773	Paul Smith	Asst Athletic Trainer	1.000	35,901	0	0	500	0	0	0	No	No	No	No		35,901	500	0%	
	* Rachel Bickerton	Dir, Trademark Lic/Enforcement	0.437	35,007	0	0	250	0	0	0	No	No	No	No		35,007	250	0%	
1753	Raul Ibarra	Assistant Director, Athletic Equipment Operz	1.000	43,160	0	0	500	0	0	0	No	No	No	No		43,160	500	2% CEC	
1759	Patricia Moran	Asst Athletic Director Finance	1.000	58,906	0	0	500	0	0	0	No	No	No	No		58,906	500	New	
1702	Robert Carney	Assoc AD, Facilities and Operations	1.000	84,448	0	0	2,500	0	0	0	No	No	No	No		84,448	2,500	3% CEC	
3067	Sabrena Nottingham	Asst Ticket Manager	1.000	37,856	0	0	500	0	0	0	No	No	No	No		37,856	500	3% CEC	
1754	Scott Duncan	Facility Maintenance Supervisor	1.000	48,714	0	0	500	0	0	0	No	No	No	No		48,714	500	19% Equity	
3545	Shaela Priaulx-Soho	Ticket Manager	1.000	48,132	0	0	500	0	0	0	No	No	No	No		48,132	500	1% CEC	
3110	Taryn Schutte	Academic Advisor	1.000	36,504	0	0	500	0	0	0	No	No	No	No	36,504	-	500	3% CEC	
1736	Cameron Howard	Asst Director, Marketing & Promotions	1.000	36,504	0	0	500	0	0	0	No	No	No	No		36,504	500	New	
3188	Vacant	Director, Donor Relations Events	0.750	30,795	0	0	500	0	0	0	No	No	No	No		30,795	500	New Vacant	
3970	Syringa Stark	Athletic Insurance Coordinator	1.000	37,045	0	0	500	0	0	0	No	No	No	No		37,045	500	2%	
3064	Taylor Little	Coordinator, Video Services	1.000	43,015	0	0	500	0	0	0	No	No	No	No		43,015	500	3% CEC	
1735	Ashley Hudson	Asst Athletic Trainer	1.000	36,504	0	0	500	0	0	0	No	No	No	No	-	36,504	500	3% CEC	
1724	Tobruk Everman Blaine	Head Cheer/Dance Coach	1.000	46,634	0	0	500	0	0	0	No	No	No	No		46,634	500	1% CEC	
1715	Tyler Smith	Assoc Athletic Trainer	1.000	56,847	0	0	500	0	0	0	No	No	No	No	56,847	-	500	3% CEC	
1769	TBD	Ticket Sales and Development Coordinator	1.000	40,914	0	0	0	0	0	0	No	No	No	No		40,914	-	New	
3947	Victoria Lewis	Assistant Business Manager	1.000	41,309	0	0	500	0	0	0	No	No	No	No		41,309	500	3% CEC	

Intercollegiate Athletics Compensation Report

Boise State University

FY2016 Estimated Compensation

PCN	Depart/Name/Title	Athletic FTE	Compensation				Contract Bonus			Perks			Multi-Yr Contract	State Approp.	Funding		Base Salary Annualized Change	Comments
			Base Salary	Camps/ Clinics	Media	Equip Co & Other	Academic Perform.	Winning Perform.	Other	Club Mbership	Car	Other			Program Revenue	All Other		
Men's Sports																		
Football																		
1704	Bryan Harsin	Head Coach	1.000	800,010	0	0	3,000	50,000	Winning	Bowl/Other	Yes	Yes	No	Yes		885,010	3,000	0%
3103	Vacant	Offensive Coordinator	1.000	300,020	3,000	0	2,000	0	0	0	No	Yes	No	No		300,020	5,000	New Vacant
1708	Marcel Yates	Defensive Coordinator	1.000	330,013	3,000	0	2,000	5,000	0	3,000	No	Yes	No	Yes		338,013	5,000	0%
3186	Kent Riddle	Assistant Coach	1.000	265,013	4,000	0	2,000	5,000	0	3,000	No	Yes	No	No		273,013	6,000	0%
3160	Steve Caldwell	Assistant Coach	1.000	230,007	4,000	0	2,000	5,000	0	3,000	No	Yes	No	No		238,007	6,000	0%
3162	Andy Avalos	Assistant Coach	1.000	225,015	4,500	0	2,000	5,000	0	3,000	No	Yes	No	No		233,015	6,500	0%
1707	Scott Huff	Assistant Coach	1.000	270,005	4,000	0	2,000	5,000	0	3,000	No	Yes	No	No		278,005	6,000	0%
3134	Lee Marks	Assistant Coach	1.000	125,008	5,000	0	2,000	5,000	0	3,000	No	Yes	No	No		133,008	7,000	0%
1706	Alton Adams	Assistant Coach	1.000	185,016	5,000	0	2,000	5,000	0	3,000	No	Yes	No	No		193,016	7,000	0%
1705	Julius Brown	Assistant Coach	1.000	175,012	5,000	0	2,000	5,000	0	3,000	No	Yes	No	No		183,012	7,000	0%
1730	Brian Wilkinson	Director, Football Operations	1.000	76,503	7,500	0	2,000	5,000	0	3,000	No	No	No	No		84,503	9,500	0%
1709	Taylor Tharp	Director, Player Personnel	1.000	45,012	4,500	0	2,000	5,000	0	3,000	No	No	No	No		53,012	6,500	0%
1762	Antwon Murray	Assistant Director, Player Personnel	1.000	50,004	4,500	0	750	5,000	0	3,000	No	No	No	No		58,004	5,250	0%
1750	Brad Larrondo	Asst Athletic Director, Football	1.000	75,005	10,000	0	2,000	5,000	0	3,000	No	Yes	No	No		83,005	12,000	0%
1765	Darren Uscher	Coordinator of Football Operations	1.000	36,504	1,000	0	500	0	0	3,000	No	No	No	No		39,504	1,500	3% CEC
Basketball																		
1710	Leon Rice	Head Coach	1.000	632,716	0	0	10,000	0	18,000	57,229	Yes	Yes	No	Yes		707,945	10,000	3% Contract
1714	Daniel Henderson	Assistant Coach, Men's Basketball	1.000	96,554	0	0	2,500	0	4,500	2,000	No	Yes	No	No		103,054	2,500	0%
1712	Jeff Linder	Associate Head Coach, Men's Basketball	1.000	137,925	0	0	2,500	0	4,500	2,000	No	Yes	No	No		144,425	2,500	0%
3133	John Rillie	Assistant Coach, Men's Basketball	1.000	109,928	0	0	2,500	0	4,500	2,000	No	No	No	No		116,428	2,500	0%
1745	Isaac Williams	Director, Men's BB Operations	1.000	43,410	0	0	2,500	0	2,250	1,000	No	No	No	No	43,410	3,250	2,500	0%
Wrestling																		
1713	Greg Randall	Head Coach	1.000	72,447	400	0	2,000	1,800	0	0	No	Yes	No	No	72,447	1,800	2,400	1% CEC
3182	Chris Owens	Assistant Coach	1.000	44,450	1,400	0	500	1,100	0	0	No	No	No	No	44,450	1,100	1,900	2% CEC
3180	Taylor Meeks	Assistant Coach	1.000	31,866	0	0	500	1,100	0	0	No	No	No	No	31,866	1,100	500	New
Golf																		
3566	Dan Potter	Head Coach	1.000	45,906	0	0	2,000	3,000	0	0	Yes	Yes	No	No		48,906	2,000	2% CEC
Tennis																		
3151	Greg Patton	Head Coach	1.000	98,052	0	0	2,000	0	3,000	0	No	Yes	No	No		101,052	2,000	0%
3178	Eric Diaz	Assistant Coach	1.000	32,573	1,192	0	500	0	1,000	0	No	No	No	No	32,573	1,000	1,692	New
Men/Women's Track & Field																		
2223	Corey Ihmels	Head Coach	1.000	82,701	0	0	4,000	18,000	17,250	2,500	No	No	No	Yes		120,451	4,000	5% Contract
1719	Grant (Charles) Wall	Assistant Coach	1.000	45,365	0	0	500	2,400	500	0	No	No	No	No	45,365	2,900	500	2% CEC
3177	Gavin O'Neal	Assistant Coach	1.000	45,365	0	0	500	2,400	1,250	0	No	No	No	No	45,365	3,650	500	2% CEC
1721	Travis Hartke	Assoc Head CC & Asst Track and Field Coa	1.000	45,365	0	0	500	3,600	3,250	750	No	No	No	No	45,365	7,600	500	2% CEC
Women's Sports																		
Basketball																		
2226	Gordon Presnell	Head Coach	1.000	194,813	500	0	7,500	7,500	4,000	0	No	No	No	Yes		206,313	8,000	3% CEC
3181	Sunny Smallwood	Assistant Coach	1.000	127,338	1,000	0	500	1,500	1,000	0	No	No	No	No	127,338	2,500	1,500	3% CEC
3129	Cody Butler	Assistant Coach	1.000	74,464	1,000	0	500	1,500	1,000	0	No	Yes	No	No	62,463	14,501	1,500	23% Promotion
1720	Heather Sower	Assistant Coach	1.000	75,733	1,000	0	500	1,500	1,000	0	No	Yes	No	No	63,732	14,501	1,500	22% Promotion
1744	Carriann Ramirez	Dir, Women's BB Operations	1.000	41,954	2,000	0	500	750	500	0	No	No	No	No	41,954	1,250	2,500	3% CEC
Soccer																		
1722	James Thomas	Head Coach	1.000	81,224	24,000	0	2,000	2,000	0	5,000	No	No	No	No	53,596	34,628	26,000	2% CEC
1723	Edward Moore	Assistant Coach	1.000	33,031	9,000	0	500	1,200	0	0	No	No	No	No	33,031	1,200	9,500	2% Promotion
1748	Miren Zabala	Assistant Coach	1.000	30,015	10,500	0	500	1,200	0	0	No	No	No	No		31,215	11,000	0%
Volleyball																		
1716	Shawn Garus	Head Coach	1.000	90,231	15,943	0	3,500	5,000	1,500	3,000	Yes	Yes	No	Yes		99,731	19,443	3% CEC
3176	Vacant	Assistant Coach	1.000	24,773	10,000	0	500	0	0	0	No	No	No	No		24,773	10,500	New Vacant
3130	Candy Murphy	Assistant Coach	1.000	53,540	5,000	0	500	1,200	750	0	No	No	No	No	53,540	1,950	5,500	2% CEC
Gymnastics																		
1718	Neil Resnick	Co-Head Coach	1.000	78,812	0	0	2,000	2,000	2,000	2,000	Yes	Yes	No	Yes	78,812	6,000	2,000	3% CEC
3174	Tina Bird	Co-Head Coach	1.000	64,356	11,904	0	2,000	2,000	2,000	2,000	No	Yes	No	Yes		70,356	13,904	3% CEC
3164	Patti Murphy	Assistant Coach	1.000	37,503	0	0	500	1,200	1,000	1,000	No	No	No	No	37,503	3,200	500	3% CEC
Tennis																		
3163	Sherman Roghaar	Head Coach	1.000	56,535	2,079	0	2,000	4,000	0	0	No	Yes	No	Yes	56,535	4,000	4,079	8% Promotion
3179	Kristian Widen	Assistant Coach	1.000	28,330	6,152	0	500	1,200	0	0	No	No	No	No	28,330	1,200	6,652	New
Golf																		
3127	Nicole Bird	Head Coach	1.000	45,864	0	0	2,000	3,000	0	0	Yes	No	No	No	45,864	3,000	2,000	3% CEC
Softball																		
1737	Cynthia Ball	Head Coach	1.000	70,720	5,157	0	2,000	0	0	0	No	No	No	No	70,720	-	7,157	1% CEC
1738	Bailey Wigness	Assistant Coach	1.000	28,018	3,555	0	500	0	0	0	No	No	No	No	28,018	-	4,055	New
1747	Nathan Miller	Assistant Coach	1.000	32,615	3,555	0	500	0	0	0	No	No	No	No		32,615	4,055	9% Promotion
Swimming																		
1731	Jeremy Kipp	Head Coach	1.000	80,018	623	0	2,000	3,000	3,000	0	No	Yes	No	Yes	80,018	6,000	2,623	New Contract
1733	Meghan Hawthorne	Assistant Coach	1.000	39,000	1,825	0	500	1,200	1,000	0	No	No	No	No	-	41,200	2,325	New
1746	Brandon Balisdell	Diving Coach	1.000	45,012	0	0	500	1,200	1,000	0	No	No	No	No	45,012	2,200	500	New

Notes:

10,177,375

* Employee works 1 FTE at the University. The FTE and Base Salary on this report reflect the amount of the employee's salary which is funded by Athletics.

+ Employee is on paid administrative leave.

Intercollegiate Athletics Compensation Report

Idaho State University

FY 2015 Actual Compensation

Depart/Name/Title		Compensation					Contract Bonuses			Perks			Multi-Yr Contract	Funding		
		Athletic FTE	Base Salary	One-Time Bonus	Camps/ Clinics	Media	Equip Co & Other	Academic Perform.	Winning Perform..	Other	Club Mbership	Car		Other	State Approp.	Program Revenue
Athletic Administration:																
Jeff Tingey	Athletic Director	1.00	115,430	2,122		7,500					Yes	Yes		Yes	117,551	7,500
Jim Kramer	Asst Athl Dir/ UBO	1.00	70,387	697										No	71,084	
Nancy Graziano	Assoc Athl Dir/Compliance	1.00	73,091	1,071										No	74,162	
Matthew Steuart	Dir Academic Services	1.00	45,406	666										No		46,072
Steve Schaack	Asst AD - Media Relations	1.00	52,874	780										No	53,654	
Jerek Wolcott	(A) Asst Dir Media Relations	0.22	9,627	177										No	9,804	
Matthew Gittins	(B) Asst Dir Media Relations	0.65	24,086												24,086	
Jodi Wotowey	Head Athletic Trainer	1.00	49,650	707	1,015									No	50,357	1,015
Brandon Payne	Asst Trainer	1.00	37,357	551	668									No	37,908	668
Daryl Finch	Asst Trainer	1.00	36,629	541	123									No	37,170	123
Rachel Geoghegan	Asst Trainer	1.00	37,086	541	666									No	37,627	666
Mark Campbell	Strength Coach	1.00	46,986	218										No	47,204	
Kalee Ralphs	Director of Marketing & Promos	1.00	39,208	562										No		39,770
Thomas Steiner	Asst AD/ Major Gifts	1.00	46,301	138										No		46,438
Tyson Munns	Athletic Equipment Manager	1.00	37,357	551										No	37,908	
Bengal Foundation																
Donna Hayes	Exec Dir Bengal Foundation	1.00	48,027	478										No		48,506
Men's Sports																
Football																
Mike Kramer	Hd Coach	0.91	138,855	634					9,456	6,500		Yes		Yes	139,489	15,956
Spencer Toone	Asst Coach/Defense Coordinator	1.00	50,480	478	5,250									No	50,958	5,250
Donald Bailey	(A) Offensive Coordinator/Quarterbacks	0.67	61,467	770								Yes		No	62,237	
Sheldon Cross	(B) Offensive Coordinator/Quarterbacks	0.31	16,928		5,575							Yes		No	16,928	5,575
Roger Cooper	Asst Head Coach - Defense	1.00	49,614	489	5,500									No	50,103	5,500
Braeden Clayson	Director of Football Operations	1.00	35,214	354										No	35,568	
Steven Filita	Asst Coach	1.00	39,155	385	5,250									No	39,540	5,250
Matthew Troxel	Asst Coach	1.00	44,502	416	10,000							Yes		No	44,918	10,000
Sheldon Cross	(A) Asst Coach	0.69	28,267	406										No	28,673	
Robert Phenicie	(B) Asst Coach	0.31	12,314		5,575									No	12,314	5,575
Stanley Franks	Asst Coach	1.00	34,922	322	5,000									No	35,244	5,000
Michael Ferriter	(A) Asst Coach	0.54	20,840	322										No	21,163	
Tevita Fiefia	(B) Asst Coach	0.31	12,314		5,250									No	12,314	5,250
Basketball																
William Evans	Hd Coach	0.95	100,095	927	1,225	20,000						Yes		Yes	101,021	20,000
Andrew Ward	Asst Coach	1.00	62,442	614	1,225							Yes		No	63,055	1,225
Jay Collins	Asst Coach	1.00	40,830	406	1,225									No	41,236	1,225
Tim Walsh	Asst Coach	1.00	41,662	416	1,225									No	42,078	1,225
Tennis																
Robert Goeltz	Hd Coach	0.42	24,405	242										No	24,647	
(A) = indicates previous coach / employee																
(B) = indicates current coach / employee																
Track & Field																
David Nielsen	Hd Coach	0.46	30,152	435										No	30,587	
Hillary Merkley	Asst Coach	0.50	14,602	276										No	14,877	
Cross Country																
Brian Janssen	Hd Coach	0.50	28,536	255										No	28,791	

Intercollegiate Athletics Compensation Report

Idaho State University

FY 2015 Actual Compensation

Depart/Name/Title		Athletic FTE	Compensation					Contract Bonuses			Perks			Multi-Yr Contract	Funding			
			Base Salary	One-Time Bonus	Camps/ Clinics	Media	Equip Co & Other	Academic Perform.	Winning Perform..	Other	Club Mbership	Car	Other		State Approp.	Program Revenue	All Other	
Women's Sports																		
Basketball																		
	Seton Sobolewski		Hd Coach	0.95	93,778	967	2,000	5,000			1,680		Yes		Yes	94,745	6,680	2,000
	Michael Trujillo		Asst Coach	1.00	45,011		1,600						Yes		No	45,011		1,600
	Ryan Johnson		Asst Coach	0.85	25,661		1,600								No	25,661		1,600
	Nkem Nkele	(A)	Asst Coach	0.12	2,868										No	2,868		
	Andrea Videbeck	(B)	Asst Coach	0.96	23,000		1,750								No	23,000		1,750
Volleyball																		
	Chad Teichert	(A)	Hd Coach	0.90	60,027	274	5,700	2,000		3,970			Yes		Yes	60,302	5,970	5,700
	Fredrick Reynolds	(B)	Hd Coach	0.09	6,025								Yes		Yes	6,025		
	Alison Gorny	(A)	Asst Coach	0.04	1,525										No	1,525		
	Keisha Fisher	(B)	Asst Coach	0.90	27,128		4,200								No	27,128		4,200
Tennis																		
	Robert Goeltz		Hd Coach	0.42	24,405	242									No	24,647		
Track & Field																		
	David Nielsen		Hd Coach	0.46	30,152	435									No	30,587		
	Hillary Merkley		Asst Coach	0.50	14,602	276									No	14,877		
Golf																		
	Kelly Hooper		Hd Coach	0.25	12,696										No	11,568	1,128	
Cross Country																		
	Brian Janssen		Hd Coach	0.50	28,536	255									No	28,791		
Soccer																		
	Allison Gibson		Hd Coach	1.00	63,960	634	14,500						Yes		Yes	64,594		14,500
	Cecilie Henriksen		Asst Coach	0.71	22,723		500								No	22,723		500
Softball																		
	Julia Wright		Hd Coach	1.00	59,846	1,092	3,000		4,000	2,090			Yes		Yes	60,938	6,090	3,000
	Jessica Moore		Asst Coach	1.00	27,040	520	4,600								No	27,560		4,600

(A) = indicates previous coach / employee

(B) = indicates current coach / employee

Game Guarantee Payments

Mike Kramer - \$6,500 (1% of the Gross Guarantee Payments)

Seton Sobolewski - \$1,680 (3% of the Gross Guarantee Payments)

(*) These coaches receive pay for their participation in off-campus clinics or events.

These earnings are not reflected in the Regular Salary payroll costs for Idaho State University.

If a coach has an agreement with an apparel company, cash payments (payroll) should be reported as compensation. Report the value of of clothes and equipment that you know coaches receive in the Perks--Other column. Payments from the foundation should be reported in the other column. Indicate "Yes" or "No" if department employees have an assigned car. If there has been turnover in a position, the FTE should reflect the percent of time employed.

Intercollegiate Athletics Compensation Report
Idaho State University
FY 2016 Estimated Compensation

Depart/Name/Title	Athletic FTE	Compensation				Contract Bonus			Perks			Multi-Yr Contract	Funding			Base Salary	Comments	
		Base Salary	Camps/ Clinics	Media	Equip Co & Other	Academic Perform.	Winning Perform.	Other	Club Mbership	Car	Other		State Approp.	Program Revenue	All Other	Annualized Change		
Athletic Administration:																		
Jeff Tingey		1.00	125,778		7,500		4,838		Yes	Yes		Yes	125,778	12,338		9% Merit + Sal incr.		
Nancy Graziano		1.00	76,024									No	76,024			4% Merit		
Jim Kramer		1.00	71,802									No	71,802			2% Merit		
Matthew Steuart		1.00	47,237									No		47,237		4% Merit		
Steve Schaack		1.00	54,995									No	54,995			4% Merit		
Jenna Galloway		0.90	32,449									No	32,449			New		
Jodi Wotowey		1.00	51,646	529								No	51,646		529	4% Merit		
Daryl Finch		1.00	38,106	660								No	38,106		660	4% Merit		
Brandon Payne		1.00	38,854									No	38,854			4% Merit		
Rachel Geoghegan	(A)	0.42	16,324	285								No	16,324		285	4% Merit		
Elizabeth Reinstein	(B)	0.51	18,929									No	18,929			New		
Kristin Shuman		0.96	42,320									No	42,320			New		
Kalee Ralphs		1.00	40,394									No		40,394		3% Merit		
Thomas Steiner	(A)	0.21	10,149						Yes			No		10,149		4% Merit		
Tyson Munns	(B)	0.73	35,082						Yes			No		35,082		New		
Tyson Munns	(A)	0.27	10,461									No	10,461			4% Merit		
Vacant	(B)	0.73	28,394									No	28,394			New		
Bengal Foundation																		
Donna Hayes		1.00	49,483						Yes			No		49,483		3% Merit		
Men's Sports																		
Football																		
Mike Kramer		0.91	149,720					7,500		Yes		Yes	149,720	7,500		8% Merit + Sal Incr.		
Stanley Franks		1.00	40,019									No	40,019			15% Sal Incr.		
Spencer Toone		1.00	55,016									No	55,016			9% Sal Incr.		
Sheldon Cross		1.00	55,016							Yes		No	55,016			0%		
Roger Cooper		1.00	50,003									No	50,003			1% Sal Incr.		
Braeden Clayson		1.00	36,629									No	36,629			4% Merit		
Steven Fifta		1.00	40,019									No	40,019			2% Sal Incr.		
Matthew Troxel		1.00	50,003							Yes		No	50,003			12% Sal Incr.		
Robert Phenicie		1.00	40,019									No	40,019			0%		
Tevita Fiefia		1.00	40,019									No	40,019			0%		
Basketball																		
William Evans		0.95	103,114	1,600	20,000		1,000		Yes			Yes	103,114	21,000	1,600	3% Merit		
Andrew Ward		1.00	63,710							Yes		No	63,710			2% Merit		
Jay Collins		1.00	41,662	1,600								No	41,662		1,600	2% Merit		
Tim Walsh		1.00	42,515	1,600								No	42,515		1,600	2% Merit		
Tennis																		
Robert Goeltz	(A)	0.08	4,898									No	4,898			3% Merit		
Gretchen Maloney	(B)	0.42	19,829									No	19,829			New		
Mark Rodel		0.33	16,000									No	16,000			New		
(A) = indicates previous coach / employee (B) = indicates current coach / employee																		
Track & Field																		
David Nielsen		0.46	31,061									No	31,061			3% Merit		
Hillary Merkley		0.50	15,049									No	15,049			3% Merit		
Cross Country																		
Nathan Houle		0.50	22,006									No	22,006			New		

Intercollegiate Athletics Compensation Report

Idaho State University

FY 2016 Estimated Compensation

Depart/Name/Title	Athletic FTE	Compensation				Contract Bonus			Perks			Multi-Yr Contract	Funding		All Other	Base Salary Annualized Change	Comments	
		Base Salary	Camps/ Clinics	Media	Equip Co & Other	Academic Perform.	Winning Perform.	Other	Club Mbership	Car	Other		State Approp.	Program Revenue				
Women's Sports																		
Basketball																		
Seton Sobolewski					5,000			2,100		Yes		Yes	96,599	7,100			3% Merit	
Michael Trujillo										Yes		Yes	46,363		1,535		3% Merit	
Ryan Johnson												No	30,950		1,535		2% Merit	
Andrea Videbeck												No	24,398		300		2% Merit	
Volleyball																		
Fredrick Reynolds										Yes		Yes	62,803				0%	
Keisha Fisher												No	30,618		4,000		2% Merit	
Tennis																		
Robert Goeltz	(A)											No	4,898				3% Merit	
Gretchen Maloney	(B)											No	19,829				New	
Mark Rodel												No	16,000				New	
Track & Field																		
David Nielsen												No	31,061				3% Merit	
Hillary Merkley												No	15,049				3% Merit	
Golf																		
Kelly Hooper												No	19,032				0%	
Cross Country																		
Nathan Houle												No	22,006				New	
Soccer																		
Allison Gibson										Yes		Yes	65,894		3,800		3% Merit	
Christopher Cogan												No	27,242				New	
Softball																		
Julia Wright	(A)									Yes		Yes	11,591				1% Merit	
Candi Letts	(B)									Yes		Yes	48,503				New	
Jessica Moore	(A)											No	2,858				4% Merit	
Lauren Cantillo	(B)											No	27,467				New	

(A) = indicates previous coach / employee

(B) = indicates current coach / employee

Game Guarantee Payments

Mike Kramer - \$7,500 (1% of the Gross Guarantee Payments)

Seton Sobolewski - \$2,100 (3% of the Gross Guarantee Payments)

(*) These coaches receive pay for their participation in off-campus clinics or events.

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If a coach has an agreement with an apparel company, cash payments (payroll) should be reported as compensation. Report the value of of clothes and equipment that you know coaches receive in the Perks--Other column. Payments from the foundation should be reported in the other column. Indicate "Yes" or "No" if department employees have an assigned car. If there has been turnover in a position, the FTE should reflect the percent of time employed.

Intercollegiate Athletics Compensation Report

University of Idaho

FY2015 Actual Compensation

Depart/Name/Title	Athletic FTE	Compensation				Contract Bonus			Other			Multi-Yr Contract	Funding		
		Base Salary	Camps/ Clinics	Media	Equip Co & Other^^	Academic Perform.	Winning Perform.	Other	Club Memb.	Car	Other		State Approp.	Program Revenue	All Other
Athletic Administration:															
Rob Spear	Athletic Director	1.00	178,246		15,000	1,080				yes		yes	177,366	16,960	
John Wallace	AssocAD/Internal Ops	1.00	76,985			1,080							74,080	3,985	
Thomas Zimmer	Business Manager, Athletics	1.00	1,847										1,847		
Margaret Henderson	Asst Business Manager, Athletics	1.00	40,491										30,900	9,591	
Amber Pittman	Administrative Coordinator	1.00	29,024											29,024	
Amy Schumaker	Administrative Coordinator	1.00	30,389											30,389	
Margaret Saylor	Administrative Assistant 1	1.00	26,087											26,087	
Damien Garnett	Dir. Equip Rm	1.00	50,963			480								51,443	
Anthony Castro	Asst Equip Rm	1.00	36,176			480								36,656	
Tim Jackson	Video Coord.	1.00	40,019											40,019	
Becky Paull	Dir. Med. Rel	1.00	51,961			360								52,321	
Seth Pringle	Asst. Med Rel	1.00	33,110			180								33,290	
Nick Heidelbergberger	Asst. Med Rel	1.00	9,025			60								9,085	
Megan Shiflett	Asst Trainer	1.00	41,942	1,775		480								42,422	1,775
Toby van Amerongen	Asst Trainer	1.00	41,942			480								42,422	
Barrie Steele	Hd Trainer	1.00	73,971	600		480								74,451	600
Margaret Eldrich	Student Insurance Coord	1.00	29,152											29,152	
Jake Scharnhorst	Strength Coach	1.00	54,902	250		300								55,202	250
Joe Herold	Asst Stren	1.00	38,514											38,514	
Tim Mooney	Assoc AD/External Ops	0.50	54,591	^		960				yes+				55,551	
Joe Church	Devl. Coord.	0.50	6,731	^		320								7,051	
Ryan Gerulf	Devl. Coord.	0.50	20,587	^		960								21,547	
Shelly Robson	Devl. Coord.	0.50	20,166	^		960				yes				21,126	
Emily Adams	Devl. Coord.	1.00	44,512			480								44,992	
Ryan Gilmore	Dir Marketing/Promotions	1.00	44,240			390								44,630	
Kelly Sharp	Asst Dir Marketing/Promotions	1.00	10,969			98								11,066	
Kaitlin Parsons	Asst Dir Marketing/Promotions	1.00	12,656											12,656	
Chris Apenbrink	Director of Ticket Ops	1.00	37,806			480								38,286	
Hardin, Glendon	Ticket Sales Manager	1.00	24,989											24,989	
Nick Jutila	Ticket Mgr	1.00	5,895											5,895	
Steele, Susan	Dir. Of Athl. Academics Services	1.00	46,702			480								47,182	
Irvin Stevens	Acad. Coord	1.00	23,520											23,520	
Fennell Marcis	Acad. Coord	1.00	10,080											10,080	
Amanda Groothuis	Acad. Coord	1.00	11,160											11,160	
Men's Sports															
Football															
Paul Petrino	Hd Coach	1.00	175,011		230,000	960				yes+		yes	175,011	230,960	
Kris Cinkovich	Assistant	1.00	146,273	300		960				yes			146,273	960	300
Michael Breske	Assistant	1.00	5,000										5,000	0	
Charles Molnar	Assistant	1.00	42,036		3,000	960				yes			41,586	3,960	450
Eric Brown	Assistant	1.00	53,000	2,000		960				yes+			53,000	960	2,000
Bryce Erickson	Assistant	1.00	71,353	700		960				yes			71,353	960	700
Kenneth Holmes	Assistant	1.00	23,332			400				yes			23,332	400	
Alfred Pupunu	Assistant	1.00	64,601	700		960				yes			64,601	960	700
Jason Shumaker	Assistant	1.00	76,445	700		960				yes			76,445	960	700
Aric Williams	Assistant	1.00	25,859			400							25,859	400	
Byron Hardmon	Assistant	1.00	46,425	600		560							46,425	560	600
Ashley Ambrose	Assistant	1.00	48,181	300		1,200							48,181	1,200	300
Ronnie Lee	Assistant	1.00	127,408	300		960							127,408	960	300
Mark Vaught	Dir. of FB Ops	1.00	19,942	1,000		480								20,422	1,000
Bobby Daly	Dir. of FB Ops	1.00	12,125			320								12,445	

Intercollegiate Athletics Compensation Report

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Depart/Name/Title	Athletic FTE	Compensation				Contract Bonus			Other			Multi-Yr Contract	Funding			
		Base Salary	Camps/ Clinics	Media	Equip Co & Other^^	Academic Perform.	Winning Perform.	Other	Club Memb.	Car	Other		State Approp.	Program Revenue	All Other	
Basketball																
Don Verlin		Hd Coach	1.00	162,872		60,000	960	5,000	5,000		yes		yes	162,872	70,960	
Tim Murphy	1.00	Assistant		64,972		15,000	960				yes+			64,972	15,960	
Kirk Earlywine	1.00	Assistant		40,779		10,000	960							40,779	10,960	
Chris Helbling	1.00	Assistant		30,594		14,500	960							30,594	15,460	
Milton Palacio	1.00	Dir Player Development		32,513										32,513		
Men's Track & XC																
Tim Cawley	0.50	Dir. Of T&F		28,820		4,000	960					yes			33,780	
Cathleen Cawley	0.50	Assistant		16,015											16,015	
Travis Floeck	0.50	Assistant		17,572			360								17,932	
Wayne Phipps - M	0.50	Dir. Of T&F		5,683											5,683	
Julie Taylor - M	0.50	Assistant		4,632											4,632	
Golf																
John Means	1.00	Hd Coach		37,093			960								38,053	
Tennis																
Jeff Beaman - M	1.00	Hd Coach		9,810			160		9,943						19,912	
Women's Sports																
Basketball																
Jon Newlee	1.00	Hd Coach		95,351		18,000	960		18,114	38,850 &		yes		yes	95,351	75,924
Christa Sanford	1.00	Assistant		59,074			960								59,074	960
Miranda Forry	1.00	Assistant		28,805			960								28,805	960
Kristi Zeller	1.00	Assistant		27,702		5,000	960								25,802	7,860
Women's Track & XC																
Tim Cawley	0.50	Dir. Of T&F		28,820		4,000							yes			32,820
Cathleen Cawley	0.50	Assistant		16,015			960								16,975	
Travis Floeck	0.50	Assistant		17,572			360								17,932	
Wayne Phipps - W	0.50	Dir. Of T&F		5,683											5,683	
Julie Taylor - W	0.50	Head		4,632			80								4,712	
Volleyball																
Debbie Buchanan	1.00	Hd Coach		86,318	3,000	15,000	960				yes		yes	86,318	15,960	3,000
Steve Whitaker	1.00	Assistant		40,384	4,500	5,000	960							40,384	5,960	4,500
Brian Lamppa	1.00	Assistant		35,354	5,500	5,000	960							35,354	5,960	5,500
Women's Soccer																
Derek Pittman	1.00	Hd Coach		40,019		15,000	960						yes	40,019	15,960	
Joshua Davis	1.00	Assistant		25,534			880							25,534	880	
Ashley O'Brien	1.00	Assistant		4,356										4,356		
Women's Golf																
Lisa Johnson	1.00	Hd Coach		43,668			960	1,000							45,628	
Tennis																
Mariana Cobra Muraca	1.00	Hd Coach		11,101			800								11,901	
Women's Swimming																
Mark Sowa	1.00	Hd Coach		51,982		16,500	960		1,000				yes	51,982	18,460	
Scott Cameron	1.00	Assistant		27,187		5,000	960							27,187	5,960	

^ .50 paid by Advancement

^^ cell phone stipend

yes+ receive a car stipend between \$200-\$400/month rather than a car; this amount not included in base salary

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Athletic Administration:																		
Rob Spear		Athletic Director	1.00	181,958		15,000	1,080				yes		yes	181,958	16,080	2%		
John Wallace		AssocAD/Internal Ops	1.00	19,651			270							19,651	270	2%		
Thomas Zimmer		Business Manager, Athletics	1.00	53,893			1,080								54,973	0%		
Margaret Henderson		Asst Business Manager, Athletics	1.00	39,125											39,125	2%		
Amber Pittman		Administrative Coordinator	1.00	30,992											30,992	7%		
Amy Schumaker		Administrative Coordinator	1.00	29,578											29,578	2%		
Margaret Sayler		Administrative Assistant 1	1.00	28,662											28,662	10%		
Damien Garnett		Dir. Equip Rm	1.00	53,019			480								53,499	4%		
Anthony Castro		Asst Equip Rm	1.00	29,162			480								29,642	2%		
Tim Jackson		Video Coor.	1.00	40,830											40,830	2%		
Becky Paull		Dir. Med. Rel	1.00	62,920			360								63,280	21%		
Seth Pringle		Asst. Med Rel	1.00	34,258			360								34,618	3%		
Joeseeph St. Pierre		Asst. Med Rel	1.00	28,371			360								28,731	New		
Erin Bierstedt		Asst Trainer	1.00	42,827			480								43,307	New		
Toby van Amerongen		Asst Trainer	1.00	42,827			480								43,307	2%		
Barrie Steele		Hd Trainer	1.00	75,525	600		480								76,005	600	2%	
Margaret Eldrich		Student Insurance Coord	1.00	29,827											29,827	2%		
Jake Scharnhorst		Strength Coach	1.00	58,365	400		600								58,965	400	6%	
Joe Herold		Asst Stren	1.00	40,102			360								40,462	2%		
Tim Mooney		Assoc AD/External Ops	0.50	55,723	^		960				yes				56,683	2%		
Samantha Parrott		Devl. Coor.	0.50	14,232	^										14,232	New		
Suzanne Stride		Devl. Coor.	0.50	14,232	^										14,232	New		
Shelly Robson		Devl. Coor.	0.50	22,474	^		960				yes				23,434	11%		
Brent Vicino		Asst AD, Annual Giving	0.25	8,614	^^		960								9,574	New		
Troy Nealey		Devl. Coor.	0.25	5,871	^^		960								6,831	New		
Emily Adams		Devl. Coor.	1.00	45,406			480								45,886	2%		
Ryan Gilmore		Dir Marketing/Promotions	1.00	46,946			540								47,486	6%		
Kaitlin Parsons		Asst Dir Marketing/Promotions	1.00	32,822			360								33,182	0%		
Chris Apenbrink		Director of Ticket Ops	1.00	40,123			480								40,603	6%		
Hardin, Glendon		Ticket Sales Manager	1.00	37,835			480								38,315	2%		
Steele, Susan		Dir. Of Athl. Academics Services	1.00	47,674			720								48,394	2%		
Irvin Stevens		Acad. Coor	1.00	30,867			480								31,347	6%		
Jessica Kylo		Acad. Coor	1.00	29,120											29,120	New		
Men's Sports																		
Football																		
Paul Petrino		Hd Coach	1.00	178,526		230,000	960	10,000			yes		yes	178,526	240,960	2%		
Kris Cinkovich		Assistant	1.00	149,677	1,000		960				yes			149,677	960	1,000	2%	
Michael Breske		Assistant	1.00	130,000	400		960				yes			130,000	960	400	0%	
Charles Molnar		Assistant	1.00	65,728	1,000	3,000	960				yes			65,728	3,960	1,000	8%	
Eric Brown		Assistant	1.00	54,101	2,000		960				yes			54,101	960	2,000	2%	
Bryce Erickson		Assistant	1.00	72,842	1,000		960				yes			72,842	960	1,000	2%	
Kenneth Holmes		Assistant	1.00	61,277	1,000		960				yes			61,277	960	1,000	0%	
Alfred Pupunu		Assistant	1.00	65,936	1,000		960				yes			65,936	960	1,000	2%	
Jason Shumaker		Assistant	1.00	78,042	1,000		960				yes			78,042	960	1,000	2%	
Aric Williams		Assistant	1.00	70,034	1,000		960							70,034	960	1,000	0%	
Bobby Daly		Dir. of FB Ops	1.00	37,170	2,000		960								38,130	2,000	2%	
Basketball																		
Don Verlin		Hd Coach	1.00	171,434	2,500	60,000	960	5,000	10,000	21,198 &		yes		yes	171,434	97,158	2,500	5%
Tim Murphy		Assistant	1.00	66,331		15,000	960					yes			66,331	15,960	2%	
Kirk Earlywine		Assistant	1.00	41,642		12,500	960					yes+			41,642	13,460	2%	
Zachary Claus		Assistant	1.00	43,306		7,000	960					yes			43,306	7,960	New	
Timothy Marrioon		Dir Player Development	1.00	21,653		3,000	960								21,653	3,960	New	

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		Base Salary	Camps/ Clinics	Media	Equip Co & Other^^	Academic Perform	Winning Perform.	Other	Club Memb.	Car	Other		State Approp.	Program Revenue	All Other		
Men's Track & XC																	
Tim Cawley	Dir. Of T&F	0.50	32,261		4,000	960						yes		37,221		2%	
Cathleen Cawley	Assistant	0.50	17,857											17,857		2%	
Travis Floeck	Assistant	0.50	22,963			480								23,443		2%	
Golf																	
John Means	Hd Coach	1.00	18,546			480		3,854						22,881		0%	
David Nuhn	Hd Coach	1.00	19,000											19,000		New	
Tennis																	
Abid Akbar	Hd Coach	1.00	28,501			720								29,221		New	
Women's Sports																	
Basketball																	
Jon Newlee	Hd Coach	1.00	100,027		18,000	960	1,500	6,000	35,000	&	yes		yes	100,027	61,460	5%	
Christa Sanford	Assistant	1.00	61,214			960								61,214	960	4%	
Jeri Jacobson	Assistant	1.00	32,011			960								32,011	960	New	
Kristi Zeller	Assistant	1.00	28,350		5,000	960								28,350	5,960	2%	
Women's Track & XC																	
Tim Cawley	Dir. Of T&F	0.50	32,261		4,000		2,000					yes		38,261		2%	
Cathleen Cawley	Assistant	0.50	17,857			960								18,817		2%	
Travis Floeck	Assistant	0.50	22,963			480								23,443		2%	
Volleyball																	
Debbie Buchanan	Hd Coach	1.00	88,130	3,000	15,000	960	1,500				yes		yes	88,130	17,460	3,000	2%
Kara Kiefer	Assistant	1.00	36,754		5,000									36,754	5,000	New	
Brian Lamppa	Assistant	1.00	42,016	3,235	5,000	960								42,016	5,960	3,235	19%
Women's Soccer																	
Derek Pittman	Hd Coach	1.00	40,830		15,000	960	1,000	4,000				yes		40,830	20,960		2%
Joshua Davis	Assistant	1.00	30,618			960								30,618	960		2%
Women's Golf																	
Lisa Johnson	Hd Coach	1.00	44,595			960	1,000							46,555			2%
Tennis																	
Mariana Cobra Muraca	Hd Coach	1.00	38,002			960								38,962			0%
Women's Swimming																	
Mark Sowa	Hd Coach	1.00	53,082		16,500	960	450	1,000				yes		53,082	18,910		2%
Kelsie Saxe	Assistant	1.00	25,501		5,000	960								25,501	5,960		New
																	New
																	New
																	New
																	New
																	New

^ 50% paid by Advancement

^^ 75% paid by Advancement

^^ cell phone stipend

yes+ receive a car stipend between \$200-\$400/month rather than a car; this amount not included in base salary

& share of game guarantee/gate per contract

**Intercollegiate Athletics Compensation Report
Lewis-Clark State College
FY2015 Actual Compensation**

Depart/Name/Title	FTE	Compensation				Contract Bonus			Other		Multi-Yr Contract	All Compensation		
		Base Salary	Camps/ Clinics	Media	Equip Co & Other	Grad Rate	Winning Perform.	Other	Club Memb.	Car		State Approp.	Program Revenue	All Other
Athletic Administration														
Gary Picone		Director, Athletics	1.00	73,270					No	Yes	No	65,211		8,059
Brooke Cushman		Asst. Director	1.00	57,361					No	Yes	No	22,371		34,990
Tracy Collins		Trainer	1.00	39,849	3,000				No	No	No	39,849	3,000	
Paul Thompson		Athl. Advancement	0.31	10,852					No	No	No	10,852		
Brian Adamowsky (Old)		Athletic Operations Manager	1.00	9,351					No	No	No	9,351		
Matt Breach (New)		Athletic Operations Manager	1.00	26,923					No	No	No	26,923		
Paula Hasfurther (Old)		Business Manager	1.00	31,142					No	No	No	31,142		
Kristina Keener (New)		Business Manager	1.00	5,048					No	No	No	1,716		3,332
Paula Hasfurther (Old)		Admin. Asst. 2	1.00	1,255					No	No	No	427		828
Alexandria Canfield (New)		Admin. Asst. 2	1.00	29,280					No	No	No	9,955		19,325
Men's Sports														
Basketball														
Brandon Rinta		Head Coach	1.00	48,188	20,000				No	Yes	No	48,188	20,000	
Austin Johnson		Asst. Coach	0.14	5,000	1,200				No	No	No		6,200	
Baseball														
Jeremiah Robbins		Head Coach	1.00	60,780					No	No	No	60,780		
Colby Hawk (Old)		Asst. Coach	1.00	24,256					No	No	No	24,256		
Kyle Blackwell (New)		Asst. Coach	1.00	16,154					No	No	No	16,154		
Allen Balmer		Asst. Coach	1.00	44,528					No	No	No	44,528		
Cross-Country														
Mike Collins		Head Coach	0.25	12,406	2,000				No	No	No	12,406	2,000	
Cyrus Hall		Asst. Coach	0.25	7,574					No	No	No	7,574		
Track														
Mike Collins		Head Coach	0.25	12,406					No	No	No	12,406		
Cyrus Hall		Asst. Coach	0.25	7,574					No	No	No	7,574		
Tennis														
Kai Fong		Head Coach	0.50	25,325					No	No	No	7,091		18,234
Golf														
Paul Thompson		Head Coach	0.23	8,062					No	No	No	8,062		
Clifford Carrick		Asst. Coach	0.09	3,000					No	No	No		3,000	
Fred Noland		Asst. Coach	0.02	750					No	No	No		750	

Intercollegiate Athletics Compensation Report
Lewis-Clark State College
FY2015 Actual Compensation
Page 2

Depart/Name/Title	FTE	Compensation				Contract Bonus			Perks		Multi-Yr Contract	All Compensation		
		Base Salary	Camps/ Clinics	Media	Equip Co & Other	Grad Rate	Winning Perform.	Other	Club Mbership	Car		State Approp.	Program Revenue	All Other
Women's Sports														
Basketball														
Brian Orr		Head Coach	1.00	51,650	4,275				No	Yes	No	51,650	4,275	
Mark Bial		Asst. Coach	0.10	3,333					No	No	No		3,333	
Cross-Country														
Mike Collins		Head Coach	0.25	12,406	2,000				No	No	No	12,406	2,000	
Cyrus Hall		Asst. Coach	0.25	7,573					No	No	No	7,573		
Track														
Mike Collins		Head Coach	0.25	12,406					No	No	No	12,406		
Cyrus Hall		Asst. Coach	0.25	7,573					No	No	No	7,573		
Volleyball														
Latoya Harris		Head Coach	1.00	45,080					No	Yes	No	45,080		
Tennis														
Kai Fong		Head Coach	0.50	25,325					No	No	No	7,091		18,234
Golf														
Paul Thompson		Head Coach	0.36	12,092					No	No	No	12,092		
Clifford Carrick		Asst. Coach	0.09	3,000					No	No	No		3,000	
Fred Noland		Asst. Coach	0.02	750					No	No	No		750	

**Intercollegiate Athletics Compensation Report
Lewis-Clark State College
FY2016 Estimated Compensation**

Depart/Name/Title	FTE	Compensation				Contract Bonus			Other		Multi-Yr Contract	All Compensation			Base Salary
		Base Salary	Camps/ Clinics	Media	Equip Co & Other	Grad Rate	Winning Perform.	Other	Club Memb.	Car		State Approp.	Program Revenue	All Other	Annualized Change
Athletic Administration															
Gary Picone		Director, Athletics	1.00	76,762					No	Yes	No	68,318		8,444	5%
Brooke Cushman		Assoc. Director	1.00	59,312					No	Yes	No	23,132		36,180	3%
Tracy Collins		Trainer	1.00	42,203	2,800				No	No	No	42,203	2,800		6%
Paul Thompson		Athl. Advancement	0.31	11,221					No	No	No	11,221			3%
Matt Breach (Old)		Athletic Operations Manager	1.00	8,463					No	No	No	8,463			Resigned
Alexandria Canfield (New)		Athletic Operations Manager	1.00	31,921					No	No	No	31,921			New
Kristina Keener		Business Manager	1.00	38,775					No	No	No	38,775			New
Alexandria Canfield (Old)		Admin. Asst. 2	1.00	4,973					No	No	No	1,691		3,282	Resigned
Deanne Shirley (New)		Admin. Asst. 2	1.00	26,107					No	No	No	8,876		17,231	New
Men's Sports															
Basketball															
Brandon Rinta		Head Coach	1.00	50,826	20,000			500	500	No	Yes	No	51,826	20,000	5%
Austin Johnson		Asst. Coach	0.14	5,000	5,175					No	No	No		10,175	0%
Baseball															
Jeremiah Robbins		Head Coach	1.00	62,846				1,500	500	No	Yes	No	64,846		3%
Kyle Blackwell (New)		Asst. Coach	1.00	35,901						No	No	No	35,901		New
Allen Balmer		Asst. Coach	1.00	45,908						No	No	No	45,908		3%
Cross-Country															
Mike Collins		Head Coach	0.25	12,828	2,100			500	250	No	No	No	13,578	2,100	3%
Cyrus Hall		Asst. Coach	0.25	9,048						No	No	No	9,048		New
Track															
Mike Collins		Head Coach	0.25	12,827				500		No	No	No	13,327		3%
Cyrus Hall		Asst. Coach	0.25	9,048						No	No	No	9,048		New
Tennis															
Kai Fong		Head Coach	0.50	26,186						No	No	No	7,332	18,854	3%
Golf															
Paul Thompson		Head Coach	0.23	8,336				500		No	No	No	8,836		3%
Fred Noland		Asst. Coach	0.07	2,500						No	No	No		2,500	New

Intercollegiate Athletics Compensation Report
Lewis-Clark State College
FY2016 Estimated Compensation
Page 2

Depart/Name/Title	FTE	Compensation				Contract Bonus			Perks		Multi-Yr Contract	All Compensation			Base Salary Annualized Change
		Base Salary	Camps/ Clinics	Media	Equip Co & Other	Grad Rate	Winning Perform.	Other	Club Mbership	Car		State Approp.	Program Revenue	All Other	
Women's Sports															
Basketball															
Brian Orr		1.00	53,406	8,250			500	500	No	Yes	No	54,406	8,250		3%
Aubree Callen		0.28	10,000						No	No	No		10,000		New
Cross-Country															
Mike Collins		0.25	12,828	2,100			500	250	No	No	No	13,578	2,100		3%
Cyrus Hall		0.25	9,047						No	No	No	9,047			New
Track															
Mike Collins		0.25	12,828				500		No	No	No	13,328			3%
Cyrus Hall		0.25	9,047						No	No	No	9,047			New
Volleyball															
LaToya Harris		1.00	46,477						No	Yes	No	46,477			3%
Vacant									No	No	No				Vacant
Tennis															
Kai Fong		0.50	26,186				500	500	No	No	No	8,332		18,854	3%
Golf															
Paul Thompson		0.36	12,504				1,000		No	No	No	13,504			3%
Fred Noland		0.07	2,500						No	No	No		2,500		New

BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

SUBJECT

Presentation by staff on progress of Outcomes-Based Funding (OBF) team

REFERENCE

October 2015	Discussions by the Business Affairs and Human Resources (BAHR) Committee with Financial Vice Presidents on formation of a team to explore the possibility of an Outcomes-Based Funding approach for possible implementation as part of FY2018 budget request.
December 2015	Official kick-off meeting of OBF team. Presentation by facilitator for National Center for Higher Education Management Systems (NCHEMS).
January 2016	OBF team meeting to discuss general approaches and possible models/methods for developing an OBF approach.

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section V.S.

BACKGROUND/DISCUSSION

The BAHR Committee invited Board staff to work with the institutions and community colleges to develop a proposal to replace the Enrollment Workload Adjustment process (described in Board Policy V.S.2) with an Outcomes-Based Funding (OBF) approach which might go into effect as part of the FY2018 annual budget request. An interdisciplinary team (consisting of financial and academic officers) from the colleges and universities has been formed, and early work is underway to determine approaches that might be used in developing an initial OBF request for the next Legislative session. Board staff will provide an overview of the preliminary work which has taken place to date.

The current Enrollment Workload Adjustment (EWA) process is relatively complex and has not always enjoyed full support by state policy makers during the annual appropriation process. Transitioning to an OBF system may provide a vehicle which may be better supported and understood by policy makers and participants, more closely linked to the Board's 60% goal, more effective as an incentive to encourage degree completion, and more acceptable to policy makers as a means of linking funding to performance.

IMPACT

The near-term objective of the OBF effort is to deploy a simple baseline proposal for FY2018 which, if approved by policy makers, could be refined to add additional dollars and incentives targeted at strategic programs and student groups in future budget years. This effort is still in the very early conceptual phase. The overview from staff will provide general information to the Board on efforts to date, and provide an opportunity for questions and discussion, if desired.

BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

STAFF COMMENTS AND RECOMMENDATIONS

This agenda item will consist of an informational presentation by Board staff on the progress of the OBF planning team to apprise Board members of work to date and to facilitate discussion.

BOARD ACTION

This item is for informational purposes only. Any action will be at the Board's discretion.

BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

SUBJECT

Board Policy V.R. – Establishment of Fees – first reading

REFERENCE

June 2010	Idaho State Board of Education (Board) considered first reading of a differential fee policy. Motion failed.
August 2010	Board considered first reading of a differential fee policy. Motion failed.
October 2010	Board considered first reading of a differential fee policy. Motion failed.
December 2014	Board approved second reading of amendments to Policy V.R. authorizing summer bridge program and online program fee.
December 2015	Idaho State Board of Education approved second reading of amendment to Policy V.R. authorizing in-service teacher educator fees, online program fees and established independent study fee.

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section V.R.

BACKGROUND/DISCUSSION

The Business Affairs and Human Resources (BAHR) Committee and Financial Vice Presidents have been considering the mechanics and possible merits of “differential” and/or “cost-based” fees for several years. The institutions were polled to determine if there were any programs which might be presented as candidates as test beds for more flexible pricing approaches for the upcoming academic year (2016-2017). Boise State University (BSU) is the only respondent at this point, and has asked for permission to present two differential fee programs for consideration. The proposed fee programs do not meet all of the criteria currently listed for “professional fee” programs in Policy V.R.

Staff has prepared an amendment to V.R. which, if approved, would enable tests of expanded application of two specific types of differential fees to be tested, on a case-by-case basis, while avoiding waivers to current Board policy. Two trial scenarios which would be permitted under the amended policy include:

- Specific programs within the engineering disciplines which meet all other criteria established within Board policy for “Professional Fee” eligibility with the exception of credentialing and/or licensing being a requirement to practice the profession.
- “High cost” programs which, absent the flexibility to generate additional fees, are constrained from hiring and retaining the skilled faculty needed to deliver a top quality program.

IMPACT

The proposed policy amendments would increase the flexibility of the current professional fee criteria to permit trial runs with two programs which represent two

**BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016**

aspects of pricing considerations for professional programs (specialized professional training for which licensure is not mandatory, and high cost programs which require additional funding to sustain top quality). Under the more flexible criteria, the Board will continue to have approval authority over any proposals for professional fees, the earliest of which is not anticipated until the April 2016 Board meeting.

ATTACHMENTS

Attachment 1 – Section V.R. – 1st Reading

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STAFF COMMENTS AND RECOMMENDATIONS

The proposed amendment would enable institutions to respond to the BAHHR Committee's invitation to forward any particularly worthy new candidates for differential/cost-based fees to the Board for consideration at the April tuition and fee setting meeting. This approach preserves the Board's current prerogative to approve special fee requests on a case-by-case basis. Staff recommends approval.

BOARD ACTION

I move to approve the first reading of proposed amendments to Board policy Section V.R., Establishment of Fees, as presented in Attachment 1.

Moved by_____ Seconded by_____ Carried Yes_____ No_____

1. Board Policy on Student Tuition and Fees

Consistent with the Statewide Plan for Higher Education in Idaho, the institutions shall maintain tuition and fees that provide for quality education and maintain access to educational programs for Idaho citizens. In setting fees, the Board will consider recommended fees as compared to fees at peer institutions, percent fee increases compared to inflationary factors, fees as a percent of per capita income and/or household income, and the share students pay of their education costs. Other criteria may be considered as is deemed appropriate at the time of a fee change. An institution cannot request more than a ten percent (10%) increase in the total full-time student fee unless otherwise authorized by the Board.

2. Tuition and Fee Setting Process – Board Approved Tuition and Fees

a. Initial Notice

A proposal to alter student tuition and fees covered by Subsection V.R.3. shall be formalized by initial notice of the chief executive officer of the institution at least six (6) weeks prior to the Board meeting at which a final decision is to be made.

Notice will consist of transmittal, in writing, to the student body president and to the recognized student newspaper during the months of publication of the proposal contained in the initial notice. The proposal will describe the amount of change, statement of purpose, and the amount of revenues to be collected.

The initial notice must include an invitation to the students to present oral or written testimony at the public hearing held by the institution to discuss the fee proposal. A record of the public hearing as well as a copy of the initial notice shall be made available to the Board.

b. Board Approval

Board approval for fees will be considered when appropriate or necessary. This approval will be timed to provide the institutions with sufficient time to prepare the subsequent fiscal year operating budget.

c. Effective Date

Any change in the rate of tuition and fees becomes effective on the date approved by the Board unless otherwise specified.

3. Definitions and Types of Tuition and Fees

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GOVERNING POLICIES AND PROCEDURES
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SUBSECTION: R. Establishment of Fees

~~December 2015~~ April 2016

The following definitions are applicable to tuition and fees charged to students at all of the state colleges and universities under the governance of the Board (the community colleges are included only as specified).

a. General and Professional-Technical Education Tuition and Fees

Tuition and fees approved by the State Board of Education. Revenues from these fees are deposited in the unrestricted fund.

i. Tuition – University of Idaho, Boise State University, Idaho State University, Lewis-Clark State College

Tuition is the amount charged for any and all educational costs at University of Idaho, Boise State University, Idaho State University, and Lewis-Clark State College. Tuition includes, but is not limited to, costs associated with academic services; instruction; the construction, maintenance, and operation of buildings and facilities; student services; or institutional support.

ii. Professional-Technical Education Fee

Professional-Technical Education fee is defined as the fee charged for educational costs for students enrolled in Professional-Technical Education pre-employment, preparatory programs.

iii. Part-time Credit Hour Fee

Part-time credit hour fee is defined as the fee per credit hour charged for educational costs for part-time students enrolled in any degree program.

iv. Graduate Fee

Graduate fee is defined as the additional fee charged for educational costs for full-time and part-time students enrolled in any post- baccalaureate degree-granting program.

v. Western Undergraduate Exchange (WUE) Fee

Western Undergraduate Exchange fee is defined as the additional fee for full-time students participating in this program and shall be equal to fifty percent (50%) of the total of tuition, facility fee, technology fee and activity fee.

vi. Employee/Spouse/Dependent Fee

The fee for eligible participants shall be set by each institution, subject to Board approval. Eligibility shall be determined by each institution. Employees,

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spouses and dependents at institutions and agencies under the jurisdiction of the Board may be eligible for this fee. Employees of the Office of the State Board of Education and the Division of Professional-Technical Education shall be treated as institution employees for purposes of eligibility. Special course fees may also be charged.

vii. Senior Citizen Fee

The fee for eligible participants shall be set by each institution, subject to Board approval. Eligibility shall be determined by each institution.

viii. In-Service Teacher Education Fee

This fee shall be applicable only to teacher education courses offered as teacher professional development. This fee is not intended for courses which count toward an institution's degree programs. Courses must be approved by the appropriate academic unit(s) at the institution. For purposes of this special fee only, "teacher" means any certificated staff (i.e. pupil services, instructional and administrative).

- a) The fee shall not exceed one-third of the part-time undergraduate credit hour fee or one-third of the graduate credit hour fee for Idaho teachers employed at an Idaho elementary or secondary school;
- b) The credit-granting institution may set a course fee up to the regular undergraduate or graduate credit hour fee for non-Idaho teachers, for teachers who are not employed at an Idaho elementary or secondary school, or in cases where the credit-granting institution bears all or part of the costs of delivering the course.

ix. Transcription Fee

A fee may be charged for processing and transcribing credits. The fee shall be \$10.00 per credit for academic year 2014-15 only, and set annually by the Board thereafter. This fee may be charged to students enrolled in a qualified Workforce Training course where the student elects to receive credit. The cost of delivering Workforce Training courses, which typically are for noncredit, is an additional fee since Workforce Training courses are self-supporting. The fees for delivering the courses are retained by the technical colleges. This fee may also be charged for transcribing demonstrable technical competencies.

x. Online Program Fee

- a) An online program fee may be charged for any fully online undergraduate, graduate, and certificate program. An online program fee shall be in lieu of

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resident or non-resident tuition (as defined in Idaho Code §33-3717B) and all other Board-approved fees. An online program is one in which all courses are offered and delivered via distance learning modalities (e.g. campus-supported learning management system, videoconferencing, etc.); provided however, that limited on-campus meetings may be allowed if necessary for accreditation purposes or to ensure the program is pedagogically sound.

- b) Nothing in this policy shall preclude pricing online programs at a market competitive rate which may be less or more than the current resident or non-resident per credit hour rates.

b. Institutional Local Fees – Approved by the Board

Institutional local fees are student fees that are approved by the State Board of Education and deposited into local institutional accounts. Local fees shall be expended for the purposes for which they were collected.

The facilities, activity and technology fees shall be displayed with the institution's tuition and fees when the Board approves tuition and fees.

i. Facilities Fee

Facilities fee is defined as the fee charged for capital improvement and building projects and for debt service required by these projects. Revenues collected from this fee may not be expended on the operating costs of the general education facilities.

ii. Activity Fee

Activity fee is defined as the fee charged for such activities as intercollegiate athletics, student health center, student union operations, the associated student body, financial aid, intramural and recreation, and other activities which directly benefit and involve students. The activity fee shall not be charged for educational costs or major capital improvement or building projects. Each institution shall develop a detailed definition and allocation proposal for each activity for internal management purposes.

iii. Technology Fee

Technology fee is defined as the fee charged for campus technology enhancements and operations directly related to services for student use and benefit (e.g., internet and web access, general computer facilities, electronic or online testing, and online media).

iv. Professional Fees

To designate a professional fee for a Board approved academic program, *all* of the following criteria must be met:

a) Credential or Licensure Requirement:

- 1) A professional fee may be charged for an academic professional program if graduates of the program obtain a specialized higher education degree that qualifies them to practice a professional service involving expert and specialized knowledge, including professional service— for which credentialing or licensing may be required. For purposes of this fee, “academic” means a systematic, usually sequential, grouping of courses that provide the student with the knowledge and competencies required for a baccalaureate, master’s, specialist or doctoral degree as defined in policy III.E.1.
- 2) The program leads to a degree ~~where the degree is~~ which provides at least the minimum capabilities required for entry to the practice of a profession.

b) Accreditation Requirement: The program:

- 1) is accredited,
- 2) is actively seeking accreditation if a new program, or
- 3) will be actively seeking accreditation after the first full year of existence if a new program by a regional or specialized accrediting agency.

c) Extraordinary Program Costs: Institutions will propose professional fees for Board approval based on the costs to deliver the program. An institution must provide clear and convincing documentation that the cost of delivering the professional program at an appropriate level of instructional quality significantly exceeds the cost to deliver non-professional programs at the institution. A reduction in appropriated funding in support of an existing program is not a sufficient basis alone upon which to make a claim of extraordinary program costs.

d) The program may include support from appropriated funds.

e) The program is consistent with traditional academic offerings of the institution serving a population that accesses the same activities, services, and features as regular full-time, tuition-paying students.

f) Upon the approval and establishment of a professional fee, course fees associated with the same program shall be prohibited.

g) Once a professional fee is initially approved by the Board, any subsequent increase in a professional fee shall require prior approval by the Board at the same meeting institutions submit proposals for tuition and fees.

v. Self-Support Academic Program Fees

- a) Self-support programs are academic degrees or certificates for which students are charged program fees, in lieu of tuition. For purposes of this fee, “academic” means a systematic, usually sequential, grouping of courses that provide the student with the knowledge and competencies required for an academic certificate, baccalaureate, master’s, specialist or doctoral degree. To bring a Self-support program fee to the Board for approval, the following criteria must be met:
 - 1) An institution shall follow the program approval guidelines set forth in policy III.G.
 - 2) The Self-support program shall be a defined set of specific courses that once successfully completed result in the awarding of an academic certificate or degree.
 - 3) The Self-support program shall be distinct from the traditional offerings of the institution by serving a population that does not access the same activities, services and features as full-time, tuition paying students, such as programs designed specifically for working professionals, programs offered off-campus, or programs delivered completely online.
 - 4) No appropriated funds may be used in support of Self-support programs. Self-support program fee revenue shall cover all direct costs of the program. In addition, Self-support program fee revenue shall cover all indirect costs of the program within two years of program start-up.
 - 5) Self-support program fees shall be segregated, tracked and accounted for separately from all other programs of the institution.
- b) If a Self-support program fee is requested for a new program, an institution may fund program start-up costs with appropriated or local funds, but all such funding shall be repaid to the institution from program revenue within a period not to exceed three years from program start-up.
- c) Once a Self-support program fee is initially approved by the Board, any subsequent increase in a Self-support program fee shall require prior approval by the Board.
- d) Institutions shall review Self-support academic programs every three (3) years to ensure that program revenue is paying for all program costs, direct and indirect, and that no appropriated funds are supporting the program.

- e) Students enrolled in self-support programs may take courses outside of the program so long as they pay the required tuition and fees for those courses.

vi. Contracts and Grants

Special fee arrangements are authorized by the Board for instructional programs provided by an institution pursuant to a grant or contract approved by the Board.

vii. Student Health Insurance Premiums or Room and Board Rates

Fees for student health insurance premiums paid either as part of the uniform student fee or separately by individual students, or charges for room and board at the dormitories or family housing units of the institutions. Changes in insurance premiums or room and board rates or family housing charges shall be approved by the Board no later than three (3) months prior to the semester the change is to become effective. The Board may delegate the approval of these premiums and rates to the chief executive officer.

viii. New Student Orientation Fee

This fee is defined as a mandatory fee charged to all first-time, full-time students who are registered and enrolled at an institution. The fee may only be used for costs of on-campus orientation programs such as materials, housing, food and student leader stipends, not otherwise covered in Board-approved tuition and fees.

ix. Dual Credit Fee

High school students who enroll in one or more dual credit courses delivered by high schools (including Idaho Digital Learning Academy), either face-to-face or online, are eligible to pay a reduced cost per credit which is approved at the Board's annual tuition and fee setting meeting. The term "dual credit" as used in this section is defined in Board Policy III.Y.

x. Summer Bridge Program Fee

This fee is defined as a fee charged to students recently graduated from high school, who are admitted into a summer bridge program at an institution the summer immediately following graduation from high school, and who will be enrolling in pre-determined college-level courses at the same institution the fall semester of the same year for the express purpose of acquiring knowledge and skills necessary to be successful in college. The bridge program fee shall be \$65 per credit for academic year 2014-15 only, and set annually by the Board thereafter.

xi. Independent Study in Idaho

A fee may be charged for courses offered through the Independent Study in Idaho (ISI) cooperative program. Complete degree programs shall not be offered through the ISI. Credits earned upon course completion shall transfer to any Idaho public college or university. The ISI program shall receive no appropriated or institutional funding, and shall operate alone on revenue generated through ISI student registration fees.

c. Institutional Local Fees and Charges Approved by Chief Executive Officer

The following local fees and charges are charged to support specific activities and are only charged to students that engage in these particular activities. Local fees and charges are deposited into local institutional accounts or the unrestricted fund and shall only be expended for the purposes for which they were collected. All local fees or changes to such local fees are established and become effective in the amount and at the time specified by the chief executive officer or provost of the institution. The chief executive officer is responsible for reporting these local fees to the Board upon request.

i. Continuing Education

Continuing education fee is defined as the additional fee to continuing education students which is charged on a per credit hour basis to support the costs of continuing education.

ii. Course Overload Fee

This fee may be charged to full-time students with excessive course loads as determined by each institution. Revenue from this fee is deposited in the unrestricted fund.

iii. Special Course Fees

A special course fee is an additive fee on top of the standard per credit hour fee which may be charged to students enrolled in a specific course for materials and/or activities required for that course. Special course fees, or changes to such fees, are established and become effective in the amount and at the time specified by the chief executive officer or provost, and must be prominently posted so as to be readily accessible and transparent to students, along with other required course cost information. These fees shall be reported to the Board upon request.

- a) Special course fees shall be directly related to academic programming. Likewise, special course fees for professional-technical courses shall be directly related to the skill or trade being taught.

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SUBSECTION: R. Establishment of Fees

~~December 2015~~ April 2016

- b) Special course fees may only be charged to cover the direct costs of the additional and necessary expenses that are unique to the course. This includes the costs for lab materials and supplies, specialized software, cost for distance and/or online delivery, and personnel costs for a lab manager. A special course fee shall not subsidize other courses, programs or institution operations.
- c) A special course fee shall not be used to pay a cost for which the institution would ordinarily budget including faculty, administrative support and supplies.
- d) Special course fees shall be separately accounted for and shall not be commingled with other funds; provided however, multiple course fees supporting a common special cost (e.g. language lab, science lab equipment, computer equipment/software, etc.) may be combined. The institution is responsible for managing these fees to ensure appropriate use (i.e. directly attributable to the associated courses) and that reserve balances are justified to ensure that fees charged are not excessive.
- e) The institution shall maintain a system of procedures and controls providing reasonable assurance that special course fees are properly approved and used in accordance with this policy, including an annual rolling review of one-third of the fees over a 3-year cycle.

iv. Processing Fees, Permits and Fines

- a) Processing fees may be charged for the provision of academic products or services to students (e.g. undergraduate application fee, graduate application fee, program application fee, graduation/diploma fee, and transcripts). Fees for permits (e.g. parking permit) may also be charged.
- b) Fines may be charged for the infraction of an institution policy (e.g., late fee, late drop, library fine, parking fine, lost card, returned check, or stop payment).

All processing fees, permit fees and fines are established and become effective in the amount and at the time specified by the chief executive officer, and shall be reported to the Board upon request.

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BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

BOISE STATE UNIVERSITY

SUBJECT

Purchase of City Center Office/Classroom Condo

REFERENCE

June 2014	The Idaho State Board of Education (Board) approved City Center Lease/Purchase Agreement.
October 2015	The Board approved purchase of tenant improvements.

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section V.I.2

BACKGROUND/DISCUSSION

In June 2014 the Board approved Boise State University's (BSU) Facility Lease and Purchase Agreement (Agreement) with Gardner Company (Gardner) for the City Center project wherein BSU's Computer Science (CS) program will share occupancy with industry partners including Clearwater Analytics. Placement of the CS program downtown will result in a premier academic experience and provide collaborative opportunities for both student and faculty research with multiple technology companies.

In October 2015 BSU requested and the Board approved Boise State's \$2.763 million acquisition of the facility's tenant improvements (TI). This action provided BSU reduced pricing as set forth in the First Amendment to the Agreement.

The Agreement provides for BSU's acquisition of the facility either by an initial payment equal to the negotiated purchase price, or by financing the acquisition through lease financing, where after 21 payments to Gardner BSU receives free and clear title to the facility, subject to the condominium association bylaws (see attached bylaws). BSU has evaluated the cost of each option and recommends proceeding with the purchase of the facility for the negotiated purchase price.

Amendment 3 to the Agreement provides the notice and terms for this acquisition. Following execution of the purchase the facility will be owned and operated by BSU, subject to the rules set forth in the condominium bylaws.

IMPACT

As detailed in the original Agreement and First Amendment, the reduced purchase price for the facility is \$6,422,667. This price is valid given the October 2015 Board approval to purchase the facility's tenant improvements.

BSU will use designated institutional reserves for this purchase; no new debt will be issued.

BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

BSU has performed a financial analysis and highly recommends the immediate purchase of the City Center facility. The sum of all estimated lease finance payments is over \$14 million, with a present value of about \$10 million; therefore, the initial purchase price of \$6.423 million is advantageous to BSU. The cost avoidance of lease financing payments results in an internal rate of return of 8.4% based on our purchase price.

ATTACHMENTS

Attachment 1 - Amendment 3, Purchase Option	Page 3
Attachment 2 - Amended and Restated Condominium Bylaws	Page 7
Attachment 3 - Amended and Restated Master Declaration	Page 17

STAFF COMMENTS AND RECOMMENDATIONS

Staff recommends approval.

BOARD ACTION

I move to approve the request by Boise State University to execute its purchase option for condominiums (currently identified as Suites 140, 150, 200 and 300 at 777 W. Main Street, Condo Units: 1D, 1E, 2A, 3A and 3B) within the Clearwater Building and Centre Building, as described in the Lease Agreement between City Center Plaza Education, LLC and the State of Idaho By and Through Idaho State Board of Education and hereby delegate to the Vice President for Finance and Administration the authority to execute the needed documents and payments for an amount not to exceed \$6,422,667.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

**THIRD AMENDMENT TO LEASE AGREEMENT; ELECTION TO PURCHASE; AND
WAIVER AND RELEASE OF CLAIMS**

THIS THIRD AMENDMENT TO THIS LEASE AGREEMENT AND ELECTION TO PURCHASE ("**Amendment**") is made and entered into as of this ____ day of February, 2016, by and between CITY CENTER PLAZA EDUCATION, LLC ("**Landlord**"), and IDAHO STATE BOARD OF EDUCATION BY AND THROUGH BOISE STATE UNIVERSITY ("**Tenant**").

RECITALS

WHEREAS, Landlord and Tenant entered into that certain Lease Agreement dated June 30, 2014 (the "**Lease**") pursuant to which Landlord agreed to lease to Tenant, and Tenant agreed to lease from Tenant, the Leased Premises (as defined in the Lease Agreement);

WHEREAS, Landlord and Tenant entered into that certain First Amendment to Lease Agreement dated December 19, 2014 ("**First Amendment**"), whereby they made certain amendments to Exhibit "C" to the Lease relating to Landlord contracting for architectural and engineering work;

WHEREAS, Landlord and Tenant entered into that certain Second Amendment to Lease Agreement dated _____, 2016 to finalize plans and specifications for the construction of the Leased Premises; to modify certain provisions of the Lease to reflect the actual configuration, size, and design of the Leased Premises; to provide for the definition of certain terms including "Cost of Finish Construction," "Finish Fee," and "Excess Tenant Finish Costs;" and to clarify Landlord's responsibilities in constructing Tenant's improvements ("**Second Amendment**"); and

WHEREAS, Tenant intends purchase the Leased Premises upon the completion of the construction of the tenant improvements and issuance of a certificate of occupancy for the Leased Premises in accordance with Sections 2.4 and 22.20 of the Lease and Annex A thereto, which provides for a purchase price of \$6,422,667 upon Tenant's election to fund the cost of construction of the tenant improvements and on the terms and conditions provided herein.

NOW THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant hereby agrees as follows:

AGREEMENT

1. Amendment to 22.20. Section 22.20 is hereby deleted in its entirety and amended as follows:

22.20 Option to Purchase upon Issuance of Certificate of Occupancy. Tenant shall purchase the Leased Premises upon receiving a certificate of occupancy for the Leased Premises. Within thirty days prior to the anticipated date of issuance

of the certificate of occupancy for the Leased Premises, Landlord and Tenant shall enter execute a purchase agreement on terms and conditions acceptable to both Tenant and Landlord, but otherwise consistent with the requirements of this Section 22.20. Neither party shall unreasonably condition, withhold, or delay their approval and execution of the purchase and sale agreement. Tenant's purchase of the Leased Premises shall be subject to all matters of record and any matters, which may be disclosed by an accurate survey of the Leased Premises. Tenant shall be required to pay all costs and expenses incurred in connection with the purchase of the Leased Premises, including, without limitation, all title, survey, escrow and recording costs. The Leased Premises will be conveyed from Landlord to Tenant pursuant to a special warranty deed. The purchase price for the Leased Premises shall be \$6,422,667 (the "Purchase Price"), which amount is in addition to the Cost of Finish Construction and the Finish Fee, payable in accordance with the Second Amendment in the aggregate amount of up to \$3,013,400, plus any additional Excess Tenant Finish Expenses approved in accordance with Exhibit "C". Landlord shall only be required to make such warranties as set forth in the Special Warranty Deed attached hereto as Exhibit "H" pursuant to which Landlord will convey the Leased Premises to Tenant.

2. Mutual Waiver and Release of Claims.

The Parties agree that the aggregate purchase price for the Leased Premises, including the Purchase Price, Cost of Finish Construction and the Finish Fee, shall not exceed 9,436,067 (the "Aggregate Purchase Price").

By executing this Third Amendment, and in consideration thereof and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Landlord, on its own behalf and on behalf of its predecessors, successors, governing bodies, affiliates, agents and assigns, and any person it represents, hereby waives and releases and shall be enjoined from prosecuting any Claims against Tenant or its predecessors, successors, governing bodies, affiliates, directors, officers, attorneys, employees, agents, insurers and assigns relating either directly or indirectly to the Aggregate Purchasing Price, including without limitation the Purchase Price of the Leased Premises, the payment amount for the Tenant Improvements or other payment amounts due for the construction or acquisition of the Leased Premises.

By execution of this Third Amendment, and in consideration thereof and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Tenant, on its own behalf and on behalf of its predecessors, successors, governing bodies, affiliates, agents and assigns, and any person it represents, hereby waives and releases and shall be enjoined from prosecuting any Claims against Landlord or its predecessors, successors, governing bodies, affiliates, directors, officers, attorneys, employees, agents, insurers and assigns either directly or indirectly relating to the Aggregate Purchasing Price, including without limitation the Purchase Price of the Leased Premises, the payment amount for the Tenant Improvements or other payment amounts due for the construction or acquisition of the Leased Premises.

For purposes of this section, "Claims" shall mean any and all claims, counterclaims, actions, rights, demands, suits, matters, issues, causes of actions, and demands of any kind and of whatever nature or character, whether currently known or unknown, whether asserted or unasserted, or whether accrued, actual, contingent, latent or otherwise, made or brought for the purpose of recovering damages or any other relief of any kind.

Notwithstanding the foregoing, in the event that there are any Excess Tenant Finish Costs, approved and incurred pursuant to the Second Amendment, Tenant shall remain liable for such Excess Tenant Finish Costs, regardless of its payment of the Aggregate Purchase Price and the mutual waiver and release set forth above.

3. Any and all other terms and provisions of the Lease are hereby amended and modified wherever necessary, and even though not specifically addressed herein, so as to conform to the amendments set forth in the preceding paragraph. Except as expressly modified and amended hereby, all other terms and conditions of the Lease shall continue in full force and effect.

4. This Amendment contains the entire understanding of Tenant and Landlord and supersedes all prior oral or written understandings relating to the subject matter set forth herein.

5. This Amendment may be executed in counterparts each of which shall be deemed an original. An executed counterpart of this Amendment transmitted by facsimile shall be equally as effective as a manually executed counterpart.

6. This Amendment shall inure for the benefit of and shall be binding on each of the parties hereto and their respective successors and/or assigns.

7. Each individual executing this Amendment does thereby represent and warrant to each other person so signing (and to each other entity for which such other person may be signing) that he or she has been duly authorized to deliver this Amendment in the capacity and for the entity set forth where she or he signs.

IN WITNESS WHEREOF, Landlord and Tenant have entered into this Amendment as of the date first set forth above.

LANDLORD:

CITY CENTER PLAZA EDUCATION, LLC, an
Idaho limited liability company, by its Manager

KC Gardner Company, L.C., a Utah limited
liability company

By: _____

Name:

Title:

TENANT:

IDAHO STATE BOARD OF EDUCATION BY
AND THROUGH BOISE STATE UNIVERSITY,
a governmental subdivision of the State of Idaho
and a body corporate with all the powers of a public
or quasi-public corporation

By: _____
Name:
Title:

**AMENDED AND RESTATED BYLAWS
OF
US BANK PLAZA CONDOMINIUM ASSOCIATION, INC.**

**ARTICLE I
PLAN OF UNIT OWNERSHIP**

SECTION 1.1 NAME AND LOCATION.

These are the Amended and Restated Bylaws of the US Bank Plaza Condominium Association, Inc. (hereinafter the “**Association**”). The US Bank Plaza Condominium project (hereinafter the “**Project**”) is located in the City of Boise, Ada County, Idaho. The location of the Project is more specifically described in the Declaration (hereinafter defined).

SECTION 1.2 PRINCIPAL OFFICE.

The principal office and place of business of the Association in the State of Idaho is and shall be located at 101 S. Capitol Boulevard, Suite 1700, Boise, Idaho 83702.

SECTION 1.3 PURPOSES.

This Association is formed to be the management body as permitted by the provisions of the Idaho Condominium Property Act, Chapter 15, Title 55, Idaho Code. The Association shall actively foster, promote and advance the interest of the Unit Owners within the Project.

**ARTICLE II
DIRECTORS**

SECTION 2.1 BOARD OF DIRECTORS.

The affairs of the Association shall be governed by a Board of Directors, which shall be composed initially of a minimum of three (3) directors from among the Owners, which number shall be increased consistent with Article VII of the Declaration.

SECTION 2.2 POWERS AND DUTIES.

The Board of Directors shall have the powers and duties necessary for the administration of the affairs of the Association and may do all such acts and things except those which by law or by the Declaration or by these Bylaws or by the Articles (hereinafter defined) may not be delegated to the Board of Directors by the Members. Such powers and duties of the Board of Directors shall include, but shall not be limited to the following:

(a) the operation, management, construction, replacement, alteration, care, upkeep and maintenance of the Common Area (except for such Limited Common Areas that are to be maintained by an Owner or some of the Owners pursuant to the Declaration) and other elements and areas common to all Units consistent with the Declaration;

(b) the provision of certain facilities, services and other benefits to the Owners consistent with the Declaration;

(c) the administration and enforcement of the covenants, conditions, restrictions, reservations and easements created by the Declaration and other instruments for the benefit of the Project consistent with the Declaration;

(d) the entering into agreements with other Persons, including, without limitation, easements, licenses, leases and other agreements with or without the vote or consent of the Owners, Mortgagees, insurers or guarantors of Mortgages, or of any other Person for facilities and services that serve the Association consistent with the Declaration;

(e) the determination of common expenses required for the affairs of the Association, including, without limitation, the operation, repair, management, alteration and maintenance of the Common Area consistent with the Declaration;

(f) the levy and collection of assessments from the Members, consistent with the Declaration;

(g) the employment and dismissal of the personnel necessary for the maintenance and operation of the Association and the Common Area consistent with the Declaration;

(h) the adoption and amendment of rules and regulations covering the details of the operation and the use of the Common Area and the common property of the Association consistent with the Declaration;

(i) the opening of a bank account on behalf of the Association and designation of the signatory required therefore, and making all payments hereafter, consistent with the Declaration;

(j) the purchasing and maintaining insurance covering the Common Area and other property owned, maintained or controlled by the Association consistent with the Declaration;

(k) the making of repairs, additions, restorations, maintenance or alterations to the Common Area after damage or destruction by fire or other cause or as a result of condemnation or eminent domain proceedings consistent with the Declaration;

(l) any action that it deems necessary or appropriate to protect the interests and general welfare of the Owners consistent with the Declaration;

(m) the execution and recordation, on behalf of all Owners, of any amendment to the Declaration or the Parcel Map which has been approved by the vote or consent necessary to authorize such amendment consistent with the Declaration; and

(n) the exercise of all of the powers and privileges necessary or appropriate to perform all duties of the Association which are to be assumed and performed by the management body as permitted by the Idaho Nonprofit Corporation Act, Chapter 3, Title 30, Idaho Code (“Act”), contemplated by the Articles and as permitted by and consistent with the Declaration.

SECTION 2.3 MANAGING AGENT AND MANAGER.

The Board of Directors may employ for the Association a person or entity at a level of compensation established by the Board of Directors to perform such duties and services as the Board of

**BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016**

ATTACHMENT 2

Directors shall authorize consistent with Article VIII of the Declaration, delegating such powers as may be reasonably necessary in performance of its duties.

SECTION 2.4 ELECTION AND APPOINTMENT OF DIRECTORS AND TERM OF OFFICE.

The number and manner of election or appointment of Directors, as well as their term of office shall occur consistent with Article VII of the Declaration.

SECTION 2.5 REMOVAL OF DIRECTORS.

The removal of Directors shall occur consistent with Article VII of the Declaration.

SECTION 2.6 VACANCIES.

Vacancies shall be filled consistent with Article VII of the Declaration.

SECTION 2.7 REGULAR MEETINGS OF THE BOARD OF DIRECTORS.

Regular meetings of the Board of Directors may be held at such time and place as shall be determined from time to time by a majority of the directors, but at least one (1) such meeting shall be held during each fiscal year. Notice of regular meetings of the Board of Directors shall be given to each director by personal service or by first class or registered mail no fewer than ten (10) days (or if notice is delivered by other than personal service or first class or registered mail, thirty (30) days) nor more than sixty (60) days before the day designated for such meeting. All meetings shall be held consistent with the Declaration.

SECTION 2.8 SPECIAL MEETINGS OF THE BOARD OF DIRECTORS.

Special meetings of the Board of Directors may be called by the president on no fewer than ten (10) days (or if notice is delivered by other than personal service or first class or registered mail, thirty (30) days) nor more than sixty (60) days' notice to each director, given personally or by first class or registered mail, which notice shall state the time and place and purpose of the meeting. The special meetings of the Board of Directors shall be called by the president or secretary in a like manner and on like notice on the written request of at least two (2) directors. All meetings shall be held consistent with the Declaration.

SECTION 2.9 WAIVER OF NOTICE.

Any director may, at any time, waive notice of any meeting of the Board of Directors in writing, and such waiver shall be deemed equivalent to the giving of such notice. Attendance by a director at any meeting of the Board of Directors shall constitute a waiver of notice by him or her of the time and place thereof. If all the directors are present at any meeting of the Board, no notice shall be required and any business may be transacted at such meeting.

SECTION 2.10 QUORUM OF BOARD OF DIRECTORS.

At all meetings of the Board of Directors, a majority of the directors shall constitute a quorum for the transaction of business, and the votes of a majority of the directors present at a meeting at which a quorum is present shall constitute the decision of the Board of Directors. If, at any meeting of the Board of Directors, there shall be less than a quorum present, a majority of those present may adjourn the

meeting from time to time. At any adjourned meeting at which a quorum is present, any business which might have been transacted at the meeting originally called may be transacted without further notice.

SECTION 2.11 COMPENSATION.

No compensation shall be paid to the Board of Directors except as may be established by the Members of the Association.

SECTION 2.12 LIABILITY AND INDEMNIFICATION OF DIRECTORS, OFFICERS, MANAGER AND MANAGING AGENT.

The directors and officers shall not be liable to the Association or the Unit Owners for any mistake of judgment, negligence, or otherwise, except for their own willful misconduct or bad faith. The Association shall indemnify and hold harmless each director and officer and the manager or managing agent, if any, against all contractual liability to others arising out of contracts made by the Board of Directors, officers, manager or managing agent on behalf of the Association unless any such contract shall have been made in bad faith or contrary to the provisions of the Declaration or of these Bylaws. Each director and officer and the manager or managing agent, if any, shall be indemnified by the Association against all expenses and liabilities, including attorneys' fees, reasonably incurred or imposed upon them in connection with any proceeding to which they may be a party, or which they may become involved, by reason of being or having been a director, officer, manager or managing agent and shall be indemnified upon any reasonable settlement thereof; provided, however, there shall be no indemnity if the director, officer, manager or managing agent is adjudged guilty of willful nonfeasance, misfeasance or malfeasance in the performance of his/her duties. The breadth and scope of this Section 2.12, shall be limited to the extent necessary to be consistent with the provisions of the Declaration.

**ARTICLE III
MEMBERSHIP**

SECTION 3.1 MEMBERSHIP.

Membership in the Association shall be as set forth in the Declaration

SECTION 3.2 RIGHTS OF MEMBERSHIP.

The Owners shall have all rights as Members as set forth in the Declaration. Otherwise, governance of the Association shall be exercised exclusively through the Board of Directors, consistent with the Declaration.

SECTION 3.3 VOTING RIGHTS.

Voting rights of Members shall be exercised consistent with Article VII of the Declaration.

SECTION 3.4 EXCLUSIVE RIGHTS OF THE DECLARANT.

Notwithstanding anything in the Declaration or these Bylaws to the contrary, during the Declarant Control Period, the Declarant shall have the right, power and authority set forth in the Declaration and to act consistent with the Declaration. This exclusive right shall expire automatically at the end of the Declarant Control Period.

SECTION 3.5 ANNUAL MEETING.

The annual meeting of Members shall be held on the 1st day of March of each year at 10 o'clock a.m. (Mountain Time), or at such other reasonable time as may be designated by the Board of Directors. At such meetings the Board of Directors shall be elected by a majority vote of the Members in accordance with the requirements of the Articles and these Bylaws. The Members may transact such other business at such meetings as may properly come before them.

SECTION 3.6 PLACE OF MEETINGS.

The meetings of the Members shall be held at the principal office of the Association or at such other suitable place convenient to the Members as may be designated by the Board of Directors.

SECTION 3.7 SPECIAL MEETINGS.

A special meeting of the Members may be called at any reasonable time and place by notice of the Board or by the Members having ten percent (10%) of the total votes and delivered to all other Members not less than fifteen (15) days prior to the date fixed for said meeting. The notice of any special meeting shall state the time and place of such meeting and the purpose thereof. No business shall be transacted at the special meeting except as stated in the notice.

SECTION 3.8 NOTICE OF MEETINGS.

It shall be the duty of the secretary to mail (or, in the case of a special meeting called by notice from the Members having ten percent (10%) of the total votes, it shall be the duty of those Members to mail), by first class mail, a notice of each annual or special meeting of the Members at least ten (10) days but not more than sixty (60) days prior to such meeting stating the purpose thereof as well as the time and place where it is to be held, to each Member of record, at the building or at such other address as such Member shall have designated by notice in writing to the secretary. The mailing of a notice of meeting in the manner provided in this section shall be considered service and notice.

SECTION 3.9 ADJOURNMENT OF MEETINGS.

If any meeting of the Members cannot be held because a quorum is not present, a majority of the Members who are present at such meeting, either in person or by proxy, may adjourn the meeting to a time not less than forty-eight (48) hours nor more than thirty (30) days from the time the original meeting was scheduled.

SECTION 3.10 ORDER OF BUSINESS.

The order of business at all meetings of the Association shall be as follows:

- (a) Roll call;
- (b) Proof of notice of meeting;
- (c) Reading of minutes of preceding meeting;
- (d) Report of officers;
- (e) Report of Board of Directors;
- (f) Report of committees;
- (g) Election of inspectors of election (when so required);
- (h) Unfinished business;
- (i) New business.

SECTION 3.11 VOTING.

All voting shall be undertaken consistent with the Declaration.

SECTION 3.12 QUORUM.

Except as otherwise required by law, the presence at any meeting, in person, by proxy, by mailed written ballot or by absentee ballot, of the authorized representative of the Member representing at least thirty-five percent (35%) of the total votes of all Members, shall constitute a quorum. If any meeting cannot be held because a quorum is not present, the Members present may adjourn the meeting.

SECTION 3.13 MAJORITY VOTE.

The affirmative vote of a majority of all votes represented at the meeting, in person or by proxy, and entitled to vote on the matter at a meeting at which a quorum is present shall be required for all decisions of the Members and shall be binding upon all Members for all purposes, unless the vote of a greater or lesser number is required by law, the Articles, the Declaration or these Bylaws.

**ARTICLE IV
OFFICERS**

SECTION 4.1 DESIGNATION.

The principal officers of the Association shall be the president, vice president, secretary and treasurer, all of whom shall be elected by the Board of Directors. The Board of Directors may appoint an assistant treasurer, and an assistant secretary, and such other officers as in its judgment may be necessary. All officers shall be members of the Board of Directors. Any two (2) or more offices may be held by the same person, except the offices of president and secretary.

SECTION 4.2 ELECTION OF OFFICERS.

The officers of the Association shall be elected annually by the Board of Directors at the organizational meeting of each new Board of Directors and shall hold office at the pleasure of the Board of Directors.

SECTION 4.3 REMOVAL OF OFFICERS.

Upon the affirmative vote of a majority of the directors, any officer may be removed, either with or without cause, and a successor may be elected at any regular meeting of the Board of Directors, or at any special meeting of the Board of Directors called for such purpose.

SECTION 4.4 PRESIDENT.

The president shall be the chief executive officer of the Association. He shall preside at all meetings of the Board of Directors. He shall have all of the general powers and duties which are incident to the office of president of a corporation organized under the Act, including, but not limited to, the power to appoint committees among the members from time to time as he may in his discretion decide is appropriate to assist in the conduct and affairs of the Association.

SECTION 4.5 VICE PRESIDENT.

The vice president shall take the place of the president and perform his duties whenever the president shall be absent or unable to act. If neither the president nor the vice president is able to act, the Board of Directors shall appoint some other director to act in the place of the president on an interim basis. The vice president shall also perform such other duties as from time to time may be imposed upon him by the Board of Directors or by the president.

SECTION 4.6 SECRETARY.

The secretary shall keep the minutes of all meetings of the members and of the Board of Directors; he shall have charge of such books and papers as the Board of Directors may direct; he shall authenticate records of the Association; and he shall, in general, perform all the duties incident to the office of secretary of a corporation organized under the Act.

SECTION 4.7 TREASURER.

The treasurer shall have the responsibility for Association funds and securities and shall be responsible for keeping full and accurate financial records and books of account showing all receipts and disbursements, and for the preparation of all required financial data. He shall be responsible for the deposit of all money and other valuable effects in the name of the Board of Directors, or the managing agent, in such deposit as may from time to time be designated by the Board of Directors, and he shall, in general, perform all the duties incident to the office of the treasurer of a corporation organized under the Act.

SECTION 4.8 AGREEMENTS, CONTRACTS, DEEDS, CHECKS, ETC.

All agreements, contracts, deeds, checks and other instruments of the Association shall be executed by the president and either the vice president, secretary or treasurer.

SECTION 4.9 COMPENSATION OF OFFICERS.

No officer shall receive any compensation from the Association for acting as such, except as may be established by the Board of Directors.

**ARTICLE V
OPERATION OF THE PROPERTIES**

SECTION 5.1 BUDGET AND PAYMENT OF ASSESSMENTS.

The Board of Directors shall prepare an estimated budget based upon the maintenance and management obligations as more specifically set forth in and consistent with the Declaration. Thereafter, the Board of Directors shall make such Assessments as are required under and consistent with the Declaration. All Members shall be obligated to pay the Assessments levied by the Board of Directors as more fully detailed in and consistent with the Declaration; and the Board of Directors is hereby empowered to take all of the steps and exercise all of the powers provided by and consistent with the Declaration regarding assessments.

SECTION 5.2 INSURANCE.

Consistent with the provisions of the Declaration, the Board of Directors shall obtain and maintain to the extent that they deem desirable any insurance upon any Common Area or other property owned by the Association, or otherwise, and in addition the Board of Directors shall be required to obtain and maintain workmen's compensation insurance if required for any employee of the Association.

SECTION 5.3 ABATEMENT AND ENJOINMENT OF VIOLATIONS OF MEMBERS.

The violation of any rule or regulation adopted by the Board of Directors, or the breach of any bylaw contained herein, or the breach of any of the rules, regulations and restrictions enacted in connection herewith or hereby ratified, or any violation of any provision of the Declaration, shall permit the Board of Directors to exercise all powers and rights it possesses consistent with the Declaration to permit it to abate, enjoin, or correct such.

SECTION 5.4 RIGHT TO ACCESS.

The right of Members to enter and access the Common Area shall be undertaken consistent with the Declaration (including the Limited Common Areas unless such Limited Common Area is designated for the Unit owned by such Member or where such Limited Common Area is designated for multiple Units). This right to access shall include the rights of ingress and egress to the Common Area; provided, however, that said right to access and ingress and egress shall not be exercised to the detriment of any other Member or to the Association.

SECTION 5.5 RULES AND REGULATIONS.

The Board of Directors may make such Rules and Regulations consistent with the Declaration.

SECTION 5.6 STATEMENT OF ACCOUNT.

Upon ten (10) days' written notice to the Board of Directors and the payment of a fee, if any, reasonably required by the Board, or the manager designated by the Board of Directors pursuant to Section 2.3 above, any Member requesting a statement of account shall be provided such a statement of account for the amount of any unpaid assessments or other charges due and owing from such Member.

SECTION 5.7 MAINTENANCE.

All Members shall utilize and maintain their Units, appurtenant Limited Common Area and the Common Area consistent with the Declaration.

**ARTICLE VI
AMENDMENT TO BYLAWS**

SECTION 6.1 AMENDMENT TO BYLAWS.

These Bylaws, and every part hereof, may from time to time and at any time be amended, altered, repealed, and new or additional Bylaws may be adopted by a eighty percent (80%) of vote of the Board of Directors; or by the affirmative vote of the Members holding at least eighty (80%) of the votes represented at the meeting and entitled to vote on the matter; provided, however, that (i) the Board of

Directors may not adopt a Bylaw or amendment hereto changing the authorized number of directors except as consistent with Article VII of the Declaration, or (ii) if the Members make, amend or repeal any Bylaw, the Board of Directors may not thereafter amend the same in such manner as to defeat or impair the object of the Members in taking such action. No amendment to the Bylaws shall be inconsistent with the Declaration

**ARTICLE VII
DECLARATION AND ARTICLES**

SECTION 7.1 DECLARATION AND ARTICLES.

When used herein, the term “**Declaration**” means and refers to that certain Amended and Restated Declaration of Covenants, Conditions and Restrictions for US Bank Plaza Condominiums dated _____, 20__ and recorded on _____, 20__ as Instrument No. _____, records of Ada County, Idaho, as the same may be amended from time to time. When used herein, the term “**Articles**” means the Articles of Incorporation of US Bank Plaza Condominium Association, Inc., filed of record with the office of the Secretary of State of the State of Idaho, as the same may be amended from time to time. Any capitalized terms herein shall have the same meaning and definition as set forth in the Declaration, unless specifically indicated to the contrary herein.

SECTION 7.2 ACTION WITHOUT A MEETING.

Any action which the Act, the Declaration or these Bylaws require or permit the Owners or directors to take at a meeting may be taken without a meeting if a consent in writing setting forth the action so taken is signed by all of the Owners or directors entitled to vote on the matter. The consent, which shall have the same effect as a unanimous vote of the Owners or directors, shall be filed in the records of Minutes of the Association.

SECTION 7.3 CONFLICTS.

These Bylaws are intended to comply with the Act and the Declaration and to implement the Declaration. In case of any irreconcilable conflict, the Act and the Declaration shall control over these Bylaws or any rules and regulations adopted hereunder. All operations of the Project and actions by the Association shall be undertaken consistent with the Declaration.

SECTION 7.4 INVALIDITY; NUMBER; CAPTIONS.

The invalidity (if any part of these Bylaws is declared invalid by a court of competent jurisdiction) shall not impair or affect in any manner the validity, enforceability or effect of the balance of these Bylaws. As used herein, the singular shall include the plural and the plural the singular. The masculine and neuter shall each include the masculine, feminine and neuter, as the context requires. All captions used herein are intended solely for convenience of reference and shall in no way limit any of the provisions of these Bylaws.

**BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016**

ATTACHMENT 2

DATED this ____ day of _____, 2016

Ryan Cleverley, Director

Holt Haga, Director

David Wali, Director

DIRECTORS

Recording Requested By and
When Recorded Return to:
KC GARDNER RIVERWOODS, L.C.
Attn: Geoffrey Wardle
101 S. Capitol Boulevard, Suite 1700
Boise, Idaho 83702

SPACE ABOVE THIS LINE FOR RECORDER'S USE ONLY

**AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS AND
RESTRICTIONS FOR US BANK PLAZA CONDOMINIUMS**

**ARTICLE I
DECLARATION OF INTENT**

KC GARDNER RIVERWOODS, L.C., ("**Riverwoods**"), a Utah limited liability company, and GARDNER PLAZA, LLC ("**Plaza**"), an Idaho limited liability company, together with their successors and assigns (collectively "**Declarant**"), make this Amended and Restated Declaration of Covenants, Conditions and Restrictions for US Bank Condominiums (as may be amended from time to time, the "**Declaration**"), which is further consented to by Valley Regional Transit, the regional public transportation authority organized under the laws of the state of Idaho for Ada and Canyon Counties ("**VRT**"), upon the basis of the following facts, understandings and intentions:

Section 1.1 Purpose for Amending and Restating Declaration. Riverwoods previously recorded the Plat Showing U.S. Bank Plaza Condominium on August 25, 2014, at Book 107 Pages 14862 through 14866, as Instrument No. 2014-069070, in the official records of Ada County, Idaho ("**Original Parcel Map**"), and also recorded the Master Declaration of Covenants, Conditions and Restrictions for U.S. Bank Plaza Condominium, recorded on August 25, 2014, as Instrument No. 2014-068941, in the official records of Ada County, Idaho ("**Original Declaration**"), which created two (2) condominium Units, identified as Unit A and Unit BB. Thereafter, Riverwoods conveyed Unit B to Plaza, retaining for itself Unit A. Riverwoods and Plaza now desire to amend and restate the Original Declaration, by amending it in its entirety (a) to annex into the US Bank Plaza Condominium certain subsurface parcels acquired by VRT from the Ada County Highway District ("**ACHD**") and the Capital City Development Corporation ("**CCDC**") ("**Subsurface Parcels**"), for construction of transit facilities (as described below); (b) to reflect the further division of Units A and B into additional Units; and (c) to provide a Declaration for the entirety of the Project, as defined below.

Section 1.2 Real Property; Project. Riverwoods, Plaza, and VRT own all the real property subject to this Declaration, all of which is located in the City of Boise, Ada County,

Idaho (the “**Real Property**”). The Real Property is more specifically described in Exhibits A-1, A-2, and A-3, attached hereto and incorporated herein. VRT has entered into a master development agreement with an affiliate of Riverwoods and Plaza (“**Declarant’s Affiliate**”) to construct a multimodal transit facility within a portion of the Real Property. Declarant’s Affiliate is currently constructing for Riverwoods, Plaza, and VRT a mixed-use commercial condominium development which consists of the following elements: (a) Unit A, which presently consists of an existing twenty story office building, and subsurface parking structure (“**US Bank Plaza**”); (b) Units B1, B2, and B3, which will include a multimodal transit center consisting of a subsurface transit facility, a surface access area, and certain other access easements (“**Multimodal Center**”); (c) Units 1A, 1B, 1C, 1D, 1E, 2A, 3A, 4A, 5A, 6A, 7A, 8A, 9A, and 10A which will include a nine story building and new retail outbuilding, with various units designated for retail, meeting, and office use (“**Clearwater Building**”); and (d) Units 1F, 1G, 1H, 1J, 1K, 1L, 2B, 2C, 3B, 3C, 4B, and 5B, which will include storage, vertical circulation, commercial kitchen, ballroom and meeting space, structured parking and retail elements (“**Centre Building**”). Collectively, US Bank Plaza, the Multimodal Center, the Clearwater Building, and the Centre Building are the “**Project**” and are referred to collectively as “City Center Plaza.” All improvements to the Real Property that are included within the Project are hereafter referred to as the “**Improvements**.”

Section 1.3 Declaration. The Real Property is subject to this Declaration. The purpose of this Declaration is to ensure that the Real Property is developed, managed and maintained consistent with the goals and objectives of Declarant and to create separate Units. This Declaration will be recorded to ensure that each Owner of a Unit participates in the maintenance and operation of the Common Area located upon the Real Property as set forth herein.

Section 1.4 Intention of Declarant. Declarant intends, subject to this Declaration (i) to create a condominium which shall include various Units and Common Areas as provided for in Chapter 15 of Title 55, Idaho Code (the “**Condominium Property Act**”); (ii) to operate and develop the Units thus created; (iii) to afford Declarant the flexibility in developing the Project and determining how the Project will be developed, marketed and maintained; and (iv) to allocate obligations for the various unique elements of the Project to the Owners within the Project for their respective Units. The utility and enjoyment of each Unit is dependent upon the establishment of easements and covenants for the common and joint government of the Common Area, Improvements, Real Property, and Project in a manner beneficial to all of the Units, all components thereof and all interests therein. Accordingly, Declarant desires to establish and create easements, covenants and restrictions to provide for the use, management, government and operation of the Units, as integral parts of a single architectural entity and as part of a common plan for the joint use and occupancy of each and every part of the Project and interest therein.

Section 1.5 Project Elements. The Project consists of construction on the Real Property of a mixed-use development consisting of multiple buildings and facilities identified above as the US Bank Plaza, the Centre Building, the Clearwater Building, and the Multimodal Center. To facilitate the development of the Project as envisioned by

Declarant, it is necessary to further identify the unique treatment of certain elements of the Project, which will be set forth in more detail herein.

Section 1.5.1 The Original Declaration and Original Parcel Map were necessary to create a developable parcel upon which a significant portion of the Project would be developed. This Declaration and the Parcel Map, attached hereto as Exhibit D, amend and replace in their entirety the Original Declaration and the Original Parcel Map.

Section 1.5.2 Certain Units will be owned by VRT and comprise the Multimodal Center, which includes surface and subsurface Units, appurtenant Limited Common Areas, and appurtenant access easements comprising the transit facility that will be owned and operated by VRT upon completion of construction subject to the provisions of this Declaration ("**VRT Units**").

Section 1.5.3 For purposes of this Declaration, and any subordinate declarations recorded in the future, Common Areas shall include all surface areas that are generally open without building improvements, provided, however, that pursuant to this Declaration, the VRT Units shall have no allocated interest in any of the surface Common Areas created hereunder. If the VRT Units were to have any interest in any portion of the Common Areas hereunder, then the maintenance and operation of the Common Areas potentially would be subject to additional governmental oversight and requirements. Accordingly, to the extent possible, those Common Areas that are appurtenant to the VRT Units and necessarily exclusive to the use and enjoyment of the VRT Units, shall be designated as Limited Common Area.

Section 1.5.4 Declarant recognizes that this Declaration, may have significant amount of overlap in the responsibilities delegated to the Association and Owners with an interest in or obligation for Limited Common Areas. This has been purposefully done by Declarant to ensure that all elements of the Project are integrated and functional. It is the intention of Declarant in developing the Property in the manner that it has, that the maintenance, operation and management of the Common Areas, the Association, and any Sub-Associations be done in the most cost effective manner possible so that no Unit will be subject to duplicative costs or expenses and that the efficiencies of managing the Project as a whole will benefit the Owners of the various Units. The Association and Sub-Associations created by this Declaration, as set forth in Article VII and Article X, and any future Sub-Associations created by a subordinate declaration shall coordinate their duties and responsibilities under any such instrument to ensure that such coordination occurs in a cost effective manner. Specific provisions regarding the maintenance and operation of the Project, including the Common Areas, Limited Common Areas, and unique shared service facilities are described in more detail below.

ARTICLE II ADDITIONAL DEFINITIONS

The following terms shall have the following meanings when used herein unless the context otherwise requires.

Section 2.1 **“Allocation of Insurance Obligation”** shall mean, for each Unit, the Allocated Insurance Obligation set forth on Exhibit E-1.

Section 2.2 **“Allocation of Ownership Interest in Common Areas”** shall mean, for each Unit, the Allocated Ownership Interest in Common Area set forth for such Unit on Exhibit E.

Section 2.3 **“Allocated Share”** shall mean the respective share of the Units in costs and expenses incurred by the Association, based either on the Allocation of Insurance Obligation or the Allocation of Ownership Interest in Common Areas, as allocated and determined in accordance with Article IX below, as required pursuant to Section 55-1505(c) of the Condominium Property Act, and as set forth for the Association in Exhibit E-1, and for the Sub-Associations in Exhibits E-2, E-3, and E-4.

Section 2.4 **“Articles”** shall mean the Articles of Incorporation of the Association, which have been filed in the office of the Secretary of State of the State of Idaho, a copy of which is attached hereto marked as Exhibit B and made a part hereof.

Section 2.5 **“Assessment”** shall mean a Periodic Assessment or Special Assessment levied and assessed pursuant to this Declaration.

Section 2.6 **“Association”** shall mean and refer to the US Bank Plaza Condominium Association, Inc., an Idaho nonprofit corporation formed to manage the interests of the Owners of the Units subject to this Declaration, and its successors and assigns.

Section 2.7 **“Association Documents”** shall mean and refer to this Declaration, the Parcel Map, the Articles, the Bylaws and the Rules and Regulations, as the same may be amended from time to time.

Section 2.8 **“Association Easements”** shall mean easements granted to Owners and the Association for the benefit of its Members.

Section 2.9 **“Board of Directors”** or **“Board”** shall mean and refer to the governing body of the Association.

Section 2.10 **“Bylaws”** shall mean or refer to the Bylaws of the Association, as amended from time to time, a copy of which is attached hereto marked as Exhibit C and made a part hereof.

Section 2.11 **“Centre Building Sub-Association”** shall mean and refer to the Centre Building Sub-Association, Inc., an Idaho nonprofit corporation formed to manage the interests of the Owners of the designated Units within the Centre Building as set forth in Article X subject to this Declaration, and its successors and assigns.

Section 2.12 **“Clearwater Building Sub-Association”** shall mean and refer to the Clearwater Building Sub-Association, Inc., an Idaho nonprofit corporation formed to

manage the interests of the Owners of the designated Units within the Clearwater Building as set forth in Article X subject to this Declaration, and its successors and assigns.

Section 2.13 “**Common Area**” shall mean, collectively, the entire Project, except the Units, as further limited by the provisions of Article I above. Common Area shall also include Limited Common Area, but such Common Areas shall be controlled and maintained as set forth herein.

Section 2.14 “**Condominium**” shall mean any Unit or all Units as meaning and context may require (collectively Units).

Section 2.15 “**Condominium Plan**” shall mean the Parcel Map for purposes of the Condominium Property Act, dividing the Project into a condominium regime.

Section 2.16 “**Declarant Control Period**” shall mean the period commencing as of the date of this Declaration and expiring on the earlier of (i) thirty (30) years following the recordation of this Declaration, or (ii) the date Declarant no longer retains a managing interest, directly or through a corporate affiliate, in a Unit in the Project.

Section 2.17 “**Default Interest Rate**” shall mean eighteen percent (18%) per annum.

Section 2.18 “**Designated Tenant**” shall mean any tenant of a Large Unit Member who has been designated by the Large Unit Member, to exercise the rights under this Declaration possessed by the Large Unit Member, including the right to appoint one Director under Section 7.4 below, as well as such other rights that are subject to execution by a Designated Tenant; provided however, that no tenant shall be qualified to be a Designated Tenant, unless both of the following qualifications are met: (a) such tenant occupies and leases Units created by this Declaration which Units have a total gross unit area of at least forty two thousand (42,000) square feet as set forth in Exhibit E-1 below, and (b) such tenant has been authorized by a Large Unit Member owning the Unit(s), in writing, to exercise the rights of the Large Unit Member, including those under Section 7.4. The power of a Large Unit Member to designate a Designated Tenant shall be exercised exclusively by the Owner that is a Large Unit Member and no tenant shall have any right to be a Designated Tenant without the written consent of an Owner that is a Large Unit Member. In designating a Designated Tenant, a Large Unit Member shall expressly identify any of its powers as an Owner that are not being conferred upon the Designated Tenant, and if such Large Unit Member fails to specifically identify retained powers but does designate a Designated Tenant, then it shall be deemed that the Large Unit Member has delegated all of its power and rights to the Designated Tenant, and such designation shall be recognized by the Association until such time as the Large Unit Member revokes such appointment by written notice to the Designated Tenant and Association. The Designated Tenant shall not have the power to consent to any amendment or modification to the Master Declaration, that being, to the extent required, a power reserved solely to the Large Unit Member as the Owner of the Unit.

Section 2.19 “**Eligible Mortgagee**” shall mean any Mortgagee of a Unit who has provided a written request to the Association (such request to state the name and address of such Eligible Mortgagee and the Unit to which its Mortgage relates), to be notified of any of the events listed in Section 17.2.

Section 2.20 “**First Mortgage**” shall mean any Mortgage that is not subordinate to any other monetary lien or encumbrance, except liens for taxes or other liens which are given priority by statute.

Section 2.21 “**First Mortgagee**” shall mean a Mortgagee under a First Mortgage.

Section 2.22 “**Further Divided Unit**” shall mean a Unit further divided pursuant to a Sub Declaration as set forth in Article IV.

Section 2.23 “**Improvements**” shall mean all of the improvements defined in Section 1.2.

Section 2.24 “**Large Unit Member**” shall mean the Owner of any Unit or Units in the Project, whose Unit or Units, in the aggregate, have a gross unit area of at least forty two thousand (42,000) square feet as set forth in Exhibit E-1 below.

Section 2.25 “**Limited Common Area**” shall mean any portion of the Common Area allocated by the Association Documents or by operation of law for the exclusive use, operation and maintenance of one or more, but fewer than all, of the Units.

Section 2.26 “**Member**” shall mean and refer to a member in the Association or Sub-Association as applicable.

Section 2.27 “**Mortgage**” shall mean any mortgage, deed of trust, or other security instrument by which a Unit or any part thereof is encumbered.

Section 2.28 “**Mortgagee**” shall mean any Person, partnership, corporation, trust, bank, savings and loan association, insurance company or other financial institution holding a recorded Mortgage securing payment of money other than this Declaration and liens for real estate taxes and assessments.

Section 2.29 “**Occupant**” shall mean the Owner of a Unit or interest therein and such Owner’s tenant or lessee.

Section 2.30 “**Owner**” or “**Owners**” shall mean or refer to the record holder or holders of title, if more than one, of a Unit or a portion thereof. This shall include any Person having title to any Unit, but shall not include contract sellers under an unrecorded installment land sale contract of any specific Unit. “Owner” shall not include Declarant unless Declarant otherwise qualifies as an “Owner” hereunder. If a Unit, or any portion thereof is sold under a recorded installment land sale contract to a purchaser, such contract purchaser, shall be considered the “Owner” for the purposes hereof. With respect to a Further Divided Unit, the term Owner shall mean the association of the

owners of the resultant new units created by the applicable Sub-Declaration and related documents. Notwithstanding any applicable theory relating to a mortgage, deed of trust, or like instrument, the term "Owner" shall not mean or include a Mortgagee or a beneficiary or trustee under a deed of trust unless and until such Person has acquired title pursuant to foreclosure or any arrangement or proceeding in lieu thereof.

Section 2.31 "**Parcel Map**" shall mean that certain Plat Showing Amended Plat for US Bank Plaza Condominiums filed at Book _____, Page _____ on _____, 20____, in the office of the County Recorder of Ada County, Idaho, a reduced copy of which is attached and marked as Exhibit D and made a part hereof, consisting of a plat of the Real Property showing a survey and legal description thereof, the location buildings with respect to the boundaries of the Real Property, together with the diagrammatic boundaries of each Unit, including horizontal and vertical locations and dimensions of all boundaries of each Unit and the Unit number identifying the Units, together with such other information as may be included therein in the discretion of Declarant.

Section 2.32 "**Parking Areas**" shall mean that portion of Unit A that is designated for parking and loading of vehicles by the Owner of Unit A.

Section 2.33 "**Parking Units**" shall mean Units 2C and 3C, which are constructed by Declarant for use as a parking garage within the Centre Building. The Parking Areas shall not be deemed to be Parking Units.

Section 2.34 "**Periodic Assessment**" is defined in Section 9.2.

Section 2.35 "**Person**" shall mean a natural Person, a corporation, a partnership, a limited liability company, an association, a trustee or other legal entity.

Section 2.36 "**Rules and Regulations**" shall mean the rules and regulations adopted by the Association, as may be supplemented and amended from time to time, for the regulation and management of the Project.

Section 2.37 "**Special Assessment**" is defined in Section 9.5.

Section 2.38 "**Special Declarant Rights**" shall mean all rights that Declarant reserves for itself in this Declaration.

Section 2.39 "**Sub-Association**" is an association governing any subordinate or distinct part of the Project, including (a) any Sub-Association provided for in Article X herein or (b) any Sub-Association created hereafter pursuant to a Sub-Declaration.

Section 2.40 "**Sub-Declaration**" is a declaration further dividing a Unit and creating a sub-association for the resulting newly created units that is subordinate to this Declaration consistent with the process defined in Section 4.18.4.

Section 2.41 **“Unit”** shall mean the separate ownership interest created pursuant to this Declaration as bounded by the interior surfaces of the perimeter walls, floors, ceilings, windows, and doors thereof, as shown and numbered on the Parcel Map, together with all fixtures and improvements therein contained. Notwithstanding the foregoing, the following are not part of a “Unit”: bearing walls, columns, floors, and roofs (except for the interior surfaces thereof within a Unit), foundations, shafts, central heating, ventilation and air conditioning systems, reservoirs, tanks, pumps, and other services used by more than one Unit, pipes, vents, ducts, flues, chutes, conduits, and wires, except the outlets thereof when located within the Unit. The foregoing may however, be designated as Limited Common Area appurtenant to a Unit, however, pursuant to Article IV. The interior surfaces of a perimeter window or door means at the points at which such surfaces are located when such windows or doors are closed; the physical windows and doors themselves are part of the Common Area as herein defined.

Section 2.42 **“Unit A Sub-Association”** shall mean and refer to the Unit A Sub-Association, Inc., an Idaho nonprofit corporation formed to manage the interests of the Owners of the designated Units within the US Bank Plaza as set forth in Article X subject to this Declaration, and its successors and assigns.

Section 2.43 **“User”** shall mean all Owners and Occupants of a Unit and all of their licensees, invitees, employees, independent contractors, customers and agents and any other Person who uses a Unit.

ARTICLE III STATEMENT OF INTENTION AND PURPOSE AND RESERVATION OF RIGHTS

Section 3.1 Declaration. Declarant hereby declares that the Project and every part thereof, is held and shall be held, conveyed, devised, leased, rented, encumbered, used, occupied, improved, and otherwise affected in any manner, subject to the provisions of this Declaration, each and all of which provisions are hereby declared to be in furtherance of the general plans and scheme of condominium ownership referred to in Article I and are further declared to be for the benefit of the Project and every part thereof and for the benefit of each Owner. All provisions hereof shall be deemed to run with the land as covenants running with the land or as equitable servitudes, as the case may be, and shall constitute benefits and burdens to Declarant and Declarant’s assigns and to all Persons hereafter acquiring or owning any interest in the Project, however such interest may be obtained, as part of a common plan to regulate and govern the joint use and occupancy of the Project to enhance the value thereof and for other beneficial purposes.

Section 3.2 Reservation of Rights. Declarant, for itself and its successors and assigns, hereby reserves the right, but not the obligation:

Section 3.2.1 To complete the Project and related improvements indicated on the Parcel Map without limitation or interference by any Owner, the Association, subject to the existing contractual obligations that Declarant has entered into;

Section 3.2.2 To modify the design and configuration of the Project, any Unit, or any portion of the Project or Unit as it determines is desirable, subject to the existing contractual obligations that Declarant has entered into;

Section 3.2.3 To develop the Project on a schedule determined and established by Declarant, subject to the existing contractual obligations that Declarant has entered into;

Section 3.2.4 To create one or more sub-condominiums by dividing a Unit into a Further Divided Unit and organizing such Sub-Associations as it deems necessary to manage any new common area resulting from that process that is wholly within a Unit that is sub-condominiumized, all of which shall be undertaken pursuant to a Sub-Declaration, as authorized herein, and which is subordinate to this Declaration;

Section 3.2.5 To create other entities governing any portion of the Project as it determines is desirable, and to subject such Sub-Declarations, Sub-Associations, or other entities to such rules, standards and declarations as it determines appropriate;

Section 3.2.6 To regulate and control signage within the Project, to designate portions of the Common Area for placement of signage; and to allocate signage as it may direct, consistent with Section 11.12;

Section 3.2.7 To appoint or remove members of the Board as set forth in Article VII; and

Section 3.2.8 To subject all or a portion of the Project to alternative ownership structures or leases.

Declarant acknowledges that its exercise of the foregoing rights shall not modify the use and enjoyment of any Unit or the Limited Common Area appurtenant thereto from and after the conveyance of such Unit to an Owner in the future or unreasonably limit or modify such Owner's use and enjoyment of the Common Areas without the written consent of the Owners of such Units. Each Owner, however, taking title to a Unit from and after the recording of this Declaration shall be deemed to have acknowledged and agreed that due to the complexity of the Project, its mixed-use nature, and the interrelated elements of the Project that it shall not unreasonably withhold, condition, or delay any consent required hereunder to effectuate a reasonably necessary modification to the Declaration as set forth herein.

For the duration of the Declarant Control Period, this Section 3.2 shall not be subject to amendment except upon the express written consent of Declarant.

ARTICLE IV NATURE AND INCIDENTS OF CONDOMINIUM OWNERSHIP

Section 4.1 Estates of an Owner. The Project is hereby divided into a Condominium consisting of thirty (30) Units, as described above in Article I, and Common

Areas which are depicted on the Parcel Map. Each Unit shall also consist of an undivided interest in common in the Common Area in accordance with the Allocation of Interest in Common Area set forth in Exhibit E-1. The percentage of ownership interest in the Common Area, which is to be allocated to each Unit for purposes of tax assessment under Section 55-1514 of the Condominium Property Act and for purposes of liability as, provided by Section 15-1515 of the Condominium Property Act shall be the Allocation of Ownership Interest in Common Areas set forth in Exhibit E-1. For the purpose of complying with Section 55-1505(c) of the Condominium Property Act, Declarant has determined that the best way to determine the value of each Unit is to base the allocated value upon the schedule set forth in Exhibit E-1. No Owner may alter its Unit, further divide or modify its Unit or relocate the boundaries between a Unit and an adjacent Unit, except as expressly provided by this Declaration and the Condominium Property Act. The Units are located within the real property described herein and within the easements and other interests ~~identified~~identified on the Parcel Map, including those Units, Common Area, and Limited Common Area, occupying air rights created and conveyed pursuant to that certain Declaration of Height Limitation, Encroachment Easement, Utility Easement, and Air Right Easement granting an easement for subsurface structural elements benefiting Unit B1 between Riverwoods and CCDC, recorded in the Official Records of Ada County, Idaho as Instrument No. 2014-060554 on July 29, 2014.

Section 4.2 Limited Common Area. In addition to the items set forth in Section 4.2.16 and Section 4.2.21, Limited Common Area shall consist of any portion of the Project, which is designed to be used exclusively by the Owners and Occupants of one or more particular Units but less than all Units. The Limited Common Area shall be used in connection with, and maintained separately by the Owner of such Unit to the exclusion of the use thereof by the other Owners except by invitation. Specific Limited Common Areas are further defined and addressed as follows:

Section 4.2.1 VRT Structure Limited Common Areas. Pursuant to Section 1.5 above, certain elements of the Project that constitute the physical structure creating the subsurface VRT Units and providing access thereto, have been constructed utilizing certain governmental funds that have resulted in additional governmental oversight for those elements of the Project. In recognition thereof, Declarant and VRT have determined that the shoring walls, shoring piles, demising walls, ceilings, floors, ramps and other facilities solely defining the VRT Units shall be Limited Common Area appurtenant to the VRT Units ("**VRT Structure Limited Common Area**"). Units B1, B2, and B3 will be owned by VRT and VRT shall be solely responsible for the maintenance, replacement, and repair of such VRT Structure Limited Common Areas, including any VRT Structure Limited Common Area, appurtenant to Units B1, B2, and B3, and subject to the easements created, rights granted, and property conveyed pursuant to the following agreements: (i) Cooperative Governmental Agreement between VRT and ACHD, recorded in the Official Records of Ada County, Idaho as Instrument No. 2014-75703 on September 16, 2014; (ii) Rampway Easement Agreement between VRT and ACHD, recorded in the Official Records of Ada County, Idaho as Instrument No. 2014-075701 on September 16, 2014; (iii) Access Easement Agreement between VRT and ACHD, recorded in the Official Records of Ada County, Idaho as Instrument No. 2014-075700 on

September 16, 2014; (iv) Quitclaim Deed, conveying property from ACHD to VRT, recorded in the Official Records of Ada County, Idaho as Instrument No. 2014-075699 on September 16, 2014; (v) Facility Easement Agreement between VRT and ACHD, recorded in the Official Records of Ada County, Idaho as Instrument No. 2015-116132 on December 22, 2015; (vi) Special Warranty Deed conveying property from CCDC to VRT, recorded in the Official Records of Ada County, Idaho as Instrument No. 2014-061159 on July 30, 2014; and (vii) Declaration of Height Limitation, Encroachment Easement, Utility Easement, and Air Right Easement granting an easement for subsurface structural elements benefiting Unit B1 between Riverwoods and CCDC, recorded in the Official Records of Ada County, Idaho as Instrument No. 2014-060554 on July 29, 2014. Additionally, whereas the surface areas above Units B2 and B3 will continue to be owned and maintained by ACHD and CCDC, the Project is being developed consistent with the requirements of the foregoing agreements, and VRT shall, upon completion of the Project, maintain Units B2 and B3 consistent with the foregoing agreements.

Section 4.2.2 VRT Exterior Facilities. Units B1, B2, and B3 are all benefited from exterior improvements, including the doors, plate glass windows, and signage at the ground level providing access to Unit B1 which would typically be Common Area (“**VRT Units Exterior Elements**”). For the reasons set forth in Section 1.5, the VRT Units Exterior Elements shall all be Limited Common Areas appurtenant to the VRT Units (“**VRT Units Exterior Elements Limited Common Areas**”). The adjoining VRT Unit shall be solely responsible for the maintenance, replacement, repair, and operation of the VRT Units Exterior Facilities Limited Common Area. This shall also include the maintenance of all ramps, retaining walls, and facilities adjacent to the VRT Units that are under the control of or responsibility of VRT pursuant to the agreements identified in Section 4.2.1.

Section 4.2.3 VRT and First Floor Units Shared Roof and Floor Deck. Furthermore as set forth in Section 4.2.1, the roof deck above the subsurface VRT Unit B1 is the floor of the surface Units and Common Area located above that Unit. In light of the unique elements and limitations related to such a shared structure, the deck constituting the roof of the VRT Unit B1 and the floor of the first floor Units and Common Area located above VRT Unit B1 shall be Limited Common Area allocable and appurtenant to those adjoining Units (“**Shared Roof and Floor Deck Limited Common Area**”). Unit B1 owned by VRT, and the Units in the Clearwater Building consisting of Units 1B, 1C, 1D, 1E, 2A, 3A, 4A, 5A, 6A, 7A, 8A, 9A, and 10A in the Clearwater Building and Units 1G, 1H, 1J of the Centre Building, shall be jointly responsible for the maintenance, replacement, and repair of such Shared Roof and Floor Deck Limited Common Areas.

Section 4.2.4 Fifth Floor Roof Patio. The rooftop area above the units connecting the Clearwater Building and the Centre Building is being constructed in such a manner that it may be utilized as a roof top patio for the benefit of and appurtenant to Unit 5A of the Clearwater Building (“**Unit 5A Roof Top Patio Limited Common Area**”). If the Unit 5A Roof Top Patio Limited Common Area is in fact developed and constructed as a roof top patio, then it shall be Limited Common Area appurtenant to Unit 5A. The

Owner of Unit 5A shall be solely responsible for the maintenance, replacement and repair of not only the Improvements comprising the Unit 5A Roof Top Patio Limited Common Area, but shall be responsible for the roof above Units 4A and 4B to ensure that the roof is maintained in a good and sound condition. The Owner of Unit 5A shall, at its sole cost, maintain the integrity of the roof above Units 4A and 4B, including from time to time making all repairs as are necessary to ensure that the roof under the Unit 5A Roof Top Patio Limited Common Area is waterproof and protects Units 4A and 4B. In the event that the Owner of Unit 5A fails to adequately maintain the Unit 5A Roof Top Patio Limited Common Area, after reasonable notice and opportunity to cure any identified maintenance deficiency, then the Owner of Units 4A and 4B shall have an easement over Unit 5A and the Unit 5A Roof Top Patio Limited Common Area to effectuate such maintenance and shall have the right to charge the Owner of Unit 5A for the reasonable cost of such maintenance, repair, and replacement of the roof. Before taking any such maintenance, repair, and replacement, the Owner of Units 4A or 4B shall send written notice to the record owner of Unit 5A as well as the Association, identifying all deficiencies in the maintenance and repair of the Unit 5A Roof Top Patio Limited Common Area, and shall provide ten (10) days prior to initiating maintenance, replacement, or repair thereof; provided, however that the Owner of Units 4A or 4B may take such action as is immediately and reasonably necessary to minimize the impact of any leak or damage to the roof in the event of immediate damage or threat of damage caused by any such leak in the roof.

Section 4.2.5 Balconies. Units 3A, 4A, 8A, 9A, and 10A all have adjacent and appurtenant to them, exterior balconies. These exterior balconies shall be Limited Common Areas appurtenant to the adjoining Unit from which access to the balcony is taken ("**Balcony Limited Common Areas**"). The adjoining Unit shall be solely responsible for the maintenance, replacement, repair, and operation of the adjoining Balcony Limited Common Area.

Section 4.2.6 Exterior Patios. Units 1A, 1B, 1C, and 1H all have adjacent and appurtenant to them, exterior patios. These exterior patios shall be Limited Common Areas appurtenant to the adjoining Unit ("**Patio Limited Common Areas**"). The design and configuration of the Patio Limited Common Area shall not be modified without prior approval of Declarant (if after the Declarant Control Period, then the Association), and the Owner of the Unit to which the Patio Limited Common Area is appurtenant. Furniture, shade structures, canopies, exterior heaters, and similar furnishings are anticipated to be placed upon the Patio Limited Common Area. The adjoining Unit shall be solely responsible for the maintenance, replacement, repair, and operation of the adjoining Patio Limited Common Area and furnishings.

Section 4.2.7 Sewer Ejectors. Units B1, B2, B3, 1A, 1B, 1C, 1H, 1J, 2C and 3C (comprising certain Units on the first, second, and third floors of the Clearwater Building, the Centre Building, and the VRT Units), all share certain sewage ejector pumps located within Unit B1 to enable all waste water in those Units to be pumped up and out to the existing sewer main ("**Sewer Ejector Limited Common Area**"). The Sewer Ejector Limited Common Area shall be Limited Common Area appurtenant to Units B1, B2, B3,

1A, 1B, 1C, ~~1F~~, 1H, ~~and 1J~~, 2C and 3C and such Units shall be jointly responsible for the collective maintenance, replacement, repair, and operation of the Sewer Ejector Limited Common Area. In the interest of efficiency of maintenance and operation, the Association may establish rules and regulations for the collective maintenance, replacement, repair, and operation of the Sewer Ejector and may allocate financial obligations among the Units utilizing the Sewer Ejector Limited Common Area based upon any allocation that it determines is commercially reasonable based upon the use and impact of such Unit's impact on same.

Section 4.2.8 Grease Interceptor. Units 1A, 1B, 1C, 1H, and 1J, all share a collective grease interceptor system, which is located within Common Area adjacent to Unit B1 and Unit A ("**Grease Interceptor Limited Common Area**"). The Grease Interceptor Limited Common Area shall be Limited Common Area and appurtenant to Units 1A, 1B, 1C, 1H, and 1J, and such Units shall be jointly responsible for the collective maintenance, replacement, repair, and operation of the grease interceptor. In the interest of efficiency of maintenance and operation, the Association shall establish rules and regulations for the collective maintenance and operation of the grease interceptor and allocate financial obligations among the Units utilizing the Grease Interceptor Limited Common Area based upon any allocation that it determines is commercially reasonable based upon the use and impact of such Unit's impact on same.

Section 4.2.9 Grease Containment and Collection System. Units 1A and 1J, all share a collective grease containment and collection system, which is located within the Common Area adjacent to and accessible from Unit B1. The Association may permit the Owners of Units 1A and 1J individually or jointly install and utilize grease containment and collection system for any grease generated in the frying of food. In the event that there are multiple Units that require a grease containment and collection system, the Association may require consolidation and joint operation thereof. Provided, however, if the Association requires consolidation of the grease containment and collection system and the Owner or Occupant of a Unit has already installed the same ("**Installing Owner**") then (a) the Installing Owner shall not be responsible for any costs related to the consolidation of the grease containment and collection system, including, without limitation, any reconfiguration thereof, and (b) any other Owner or Occupant utilizing the grease containment and collection system of the Installing Owner shall reimburse the Installing Owner for a proportionate share of the Installing Owner's cost and expense to purchase and install the same based on the other Owner or Occupant's use thereof and impact thereon. The maintenance and operation of the grease containment and collection system shall be subject to oversight by the Association who will establish and control access to the system for all disposal and cleaning thereof; provided, however, that any such access shall be subject to Section 4.17. All Units utilizing such collective grease containment and collection system collectively shall be jointly responsible for the cost of installing, maintaining, and operating the same. Any Unit that does not share a collective grease containment and collection system that requires grease containment and collection shall be solely responsible for the cost of installing, maintaining, and operating the same and shall be subject to the oversight by the Association consistent with the foregoing provisions.

Section 4.2.10 Sand and Oil Interceptor. Units B1, B2, and B3 all share a collective sand and oil interceptor, which is located within Unit B1 (“**Sand and Oil Interceptor Limited Common Area**”). The Sand and Oil Interceptor Limited Common Area shall be Limited Common Area and appurtenant to Units B1, B2, and B3 and such Units shall be jointly responsible for the collective maintenance, replacement, repair, and operation of the Sand and Oil Interceptor Limited Common Area. In the interest of efficiency of maintenance and operation, the Association may establish rules and regulations for the collective maintenance and operation of the Sand and Oil Interceptor Limited Common Area and may allocate financial obligations among the Units utilizing the Sand and Oil Interceptor Limited Common Area based upon any allocation that it determines is commercially reasonable based upon the use and impact of such Unit’s impact on same.

Section 4.2.11 Communication and Janitorial Limited Common Areas. Units 2A, 3A, 4A, 5A, 6A, 7A, 8A, and 9A each occupy an entire floor within the Clearwater Building and are served by dedicated communication and janitorial facilities (“**Communication and Janitorial Limited Common Areas**”). Communication and Janitorial Limited Common Areas are adjacent to and appurtenant to Units 2A, 3A, 4A, 5A, 6A, 7A, 8A, and 9A and such Units each shall be individually responsible for the maintenance, replacement, repair, and operation of the Communication and Janitorial Limited Common Areas appurtenant to their Units.

Section 4.2.12 US Bank Plaza Ramp Limited Common Area. The underground parking area within Unit A is served by a surface ramp at its entrance and a subsurface loading dock that is adjacent to and appurtenant to it, which also serves as loading facilities for certain other improvements described herein benefiting the Centre Building. The US Bank Plaza ramp shall be Limited Common Areas appurtenant to Units A, 1J, 1F, 2B, 4A, 4B and 5B (“**US Bank Plaza Ramp Limited Common Area**”). Units A, 1J, 1F, 2B, 4A, 4B and 5B shall be jointly responsible for the maintenance, replacement, repair, and operation of the US Bank Plaza Ramp Limited Common Area. The US Bank Plaza Ramp Limited Common Area shall only be appurtenant to Unit 4A for so long as Unit 4A and Unit 4B have the same User and the Owner of Unit 4B agrees to provide access through Unit 4B to Unit 4A.

Section 4.2.13 Clearwater Building Vertical Circulation Limited Common Area. The Clearwater Building is served by vertical circulation elements specifically for the operation of Units 2A, 3A, 4A, 5A, 6A, 7A, 8A, 9A, and 10A. These vertical circulation elements include (i) the elevators providing access to these Units and (ii) the elevator lobby for these elevators (“**Clearwater Building Vertical Circulation Limited Common Area**”). The Clearwater Building Vertical Circulation Limited Common Area shall be appurtenant to Units 2A, 3A, 4A, 5A, 6A, 7A, 8A, 9A, and 10A, and such Units shall be jointly responsible for the maintenance, replacement, repair, and operation of the Clearwater Building Vertical Circulation Limited Common Area.

Section 4.2.14 City Center Education Vertical Circulation Limited Common Area. The Units consisting of Units 1D, 1E, 2A, 3A and 3B is referenced as “**City Center Education Units**.” The City Center Education Units are served by vertical circulation elements that exclusively serve those Units. These vertical circulation elements include

(i) the elevator providing exclusive access to these Units and (ii) the stairwell providing access to these Units (“**City Center Education Vertical Circulation Limited Common Area**”). The City Center Education Vertical Circulation Limited Common Area shall be appurtenant to Units 1D, 1E, 2A, 3A and 3B, and such Units shall be jointly responsible for the maintenance, replacement, repair, and operation of the City Center Education Vertical Circulation Limited Common Area.

Section 4.2.15 Centre Building Vertical Circulation Limited Common Area. The Centre Building is served by a variety of vertical circulation elements specifically for the operation of Units 1F, 1G, 1J, 2B, 4A, 4B, and 5B. These vertical circulation elements include (i) the service elevator providing access to the underground loading dock within Unit A, which is separately subject to an easement benefiting elements of the Centre Building identified in Section 4.13.19; (ii) an adjacent service elevator that does not access Unit A but does provide service to Units 1J, 3C, 4B, and 5B; and (iii) certain other stair cases and elevators providing circulation between Units 1G, 2B, and 4B (“**Centre Building Vertical Circulation Limited Common Area**”). The ~~Center~~Centre Building Vertical Circulation Limited Common Area shall be appurtenant to Units 1F, 1G, 1J, 2B, 4A, 4B, and 5B, and such Units shall be jointly responsible for the maintenance, replacement, repair, and operation of the Centre Building Vertical Circulation Limited Common Area. The Centre Building Vertical Circulation Limited Common Area shall only be appurtenant to Unit 4A for so long as Unit 4A and Unit 4B have the same User and the Owner of Unit 4B agrees to provide access through Unit 4B to Unit 4A.

Section 4.2.16 Clearwater Building Public Restroom Limited Common Area. The lobby to the Clearwater Building which provides access to Units 1C, 2A, 3A, 4A, 5A, 6A, 7A, 8A, 9A, and 10A, contains therein a public restroom required by code, which will be accessible to and for the benefit of the Owners and Occupants of those Units (“**Clearwater Building Public Restroom Limited Common Area**”). The Clearwater Building Public Restroom Limited Common Area shall be appurtenant to Units 1C, 2A, 3A, 4A, 5A, 6A, 7A, 8A, 9A, and 10A, and such Units shall be jointly responsible for the maintenance, replacement, repair, and operation of the Clearwater Building Public Restroom Limited Common Area.

Section 4.2.17 Skybridge Limited Common Area. A skybridge connects Unit A with Unit 2C, and is accessible to Unit 3C by an elevator. The skybridge will be be accessible to and for the benefit of the Owners and Occupants of those Units (“**Skybridge Limited Common Area**”). The Skybridge Limited Common Area shall be appurtenant to Units A, 2C, and 3C, and such Units shall be jointly responsible for the maintenance, replacement, repair, and operation of the Skybridge Limited Common Area.

Section 4.2.18 Centre Concourse Limited Common Area. Unit 2B has been designed to permit future connection between Unit 2B and a concourse that will be constructed to connect other facilities that are owned by the Greater Boise Auditorium District. Declarant is not a party to the agreements to facilitate such construction of the concourse but desires to ensure that the Owner or User of Unit 2B may facilitate such a connection in the future. The physical connection from Unit 2B to the adjoining property and concourse shall be Limited Common Area appurtenant to Unit 2B and for the benefit

of the Owners and Occupants of Unit 2B ("Centre Concourse Limited Common Area") and the Owner of Unit 2B shall be responsible for the maintenance, replacement, repair, and operation of the Centre Concourse Limited Common Area.

~~Section 4.2.18~~ Section 4.2.19 Unit 1H Garbage Limited Common Area.

A garbage chute connects Unit 1H with Limited Common Area located adjacent Unit B1, which empties into a secure garbage facility from which garbage may be transported to the common garbage facilities ("**Unit 1H Garbage Limited Common Area**"). The Unit 1H Garbage Limited Common Area shall be appurtenant solely to Unit 1H, and such Unit shall be jointly responsible for the maintenance, replacement, repair, and operation of the Unit 1H Garbage Limited Common Area. The Unit 1H Garbage Limited Common Area shall further be subject to all of the provisions of Section 4.13.21 and to Section 4.17 below.

~~Section 4.2.19~~ Section 4.2.20 Centre Building Mechanical Limited

Common Area. The Centre Building is served by a variety of mechanical systems that are located within an area that is adjacent to Unit 5B, which specifically are for the benefit and operation of Units 1G, 1H, 1J, 1K, 1L, 1M, 1N, 2B, 4B, and 5B and their appurtenant. These mechanical system elements consist of the certain pumps, boilers, tanks and glycol systems that serve the Units identified in this Section, ("**Centre Building Mechanical Limited Common Area**"). The Center Building Mechanical Limited Common Area shall be appurtenant to Units 1G, 1H, 1J, 1K, 1L, 1M, 1N, 2B, 4B, and 5B, and such Units shall be jointly responsible for the maintenance, replacement, repair, and operation of the Centre Building Mechanical Limited Common Area.

~~Section 4.2.20~~ Section 4.2.21 Additional Limited Common Areas. Any

tanks, pumps, motors, ducts, chutes, flues, pipes, plumbing, wires, conduits, and other utility or life safety system, equipment, installation, or fixture serving one or more, but fewer than all, of the Units is Limited Common Area of such Unit(s). Any improvements, structures, facilities (including, without limitation, facilities for valet services or patio seating) or fixtures designed to serve one or more, but fewer than all, of the Units but which are located outside the appurtenant Unit's boundaries, are Limited Common Areas allocated exclusively to such Unit(s). For purposes of this Master Declaration and all subsequent Sub-Declarations including any portion of Unit A or Unit B, Limited Common Area may be designated to include all structures and improvements that provide lateral support to any portion of the Unit, or any demising structure dividing a portion of one unit from another Unit, that provides structural support for both Units. All such shared facilities or structures shall be deemed to be Limited Common Area appurtenant to any Unit adjoining such Limited Common Area.

~~Section 4.2.21~~ Section 4.2.22 Reallocation of Limited Common Area.

Limited Common Area may be reallocated between Units or Common Area reallocated as Limited Common Area or Limited Common Area may be incorporated into an existing Unit with the approval of the Owners by amendment of this Master Declaration as provided herein. The reallocation or incorporation shall be reflected in an amendment to the Declaration and Parcel Map. The Owner or Owners benefited thereby shall bear all

costs associated therewith in proportion to the relative benefits to each such Unit as determined by the Association.

Section 4.3 Title. Title to a Unit may be held or owned by any Person and in any manner in which title to any other real property may be legally held or owned in the State of Idaho.

Section 4.4 Inseparability. Subject only to the obligations identified in Section 4.7 below and any future allocation of responsibility to a Sub-Association, no part of a Unit or of the legal rights comprising ownership of that Unit may be separated from any other part of that Unit during the period of Unit ownership prescribed herein, so that each Unit and the undivided interest or share in the Common Area appurtenant or allocated to such Unit shall always be conveyed, devised, encumbered, and otherwise affected only as a complete Unit. Every gift, devise, bequest, transfer, encumbrance, conveyance, or other disposition of a Unit or any part thereof shall be presumed to be a gift, devise, request, transfer, encumbrance, or conveyance, respectively, of the entire Unit, together with all appurtenant rights created by law or by this Declaration.

Section 4.5 Partition Not Permitted. Subject only to the obligations identified in Section 4.7 below and any future allocation of responsibility to a Sub-Association, the Common Area shall be owned in common by all Owners, and no Owner may bring any action for partition thereof.

Section 4.6 Owner's Right to Common Area. Subject only to the obligations identified in Section 4.7 below, any future allocation of responsibility to a Sub-Association, and the limitations contained in this Declaration and to the Rules and Regulations, each Owner (and its Occupants and authorized Users) shall have (a) the nonexclusive right to use and enjoy the Common Area (less the Limited Common Areas); (b) the exclusive right to use and enjoy the Limited Common Area designated for the exclusive use by such Owner, and (c) the nonexclusive right to use and enjoy, along with some but not all of the Owners, the Limited Common Area designated for more than one, but not all, of the Units.

Section 4.7 Building Exterior and Structural Limited Common Areas. Due to the distinct elements within the Project, namely the exterior and structural elements of each building within the Project that serve, support, and benefit the Units enclosed thereby, for purposes of maintenance, repair, and replacement, the exterior and structural Common Area elements of each building shall be Limited Common Area appurtenant to the Units contained within such buildings ("**Building Exterior and Structural Limited Common Areas**"). Maintenance, repair, and replacement of the Building Exterior and Structural Limited Common Areas may be allocated to and delegated to the Sub-Association of such Units benefited thereby.

Section 4.8 Bicycle Storage and Parking. Due to the mixed-use nature of the Project and the requirements of the Owners, their Occupants, and Users, Declarant reserves unto itself the right and power, but not the obligation, to (a) designate Units that it retains an ownership interest in a Unit through a managing interest, directly or through

a corporate affiliate, or portions of the Common Areas exclusively for bicycle storage and parking; (b) install facilities for bicycle storage and parking within Units and upon portions of the Common Areas; and (c) establish and enforce rules and regulations related to the parking or storage of bicycles within the Project. To the extent that Declarant designates all or a portion of certain Units exclusively for enclosed bicycle parking and storage, Declarant shall have the right to exempt such Units from the calculation of Allocated Share, recognizing that such Units are providing a Common Area type amenity to the Project. Upon such Units ceasing to be utilized exclusively for bicycle storage and parking, they shall be included in the calculation of Allocated Share.

Section 4.9 Taxes and Assessments. Each Owner shall execute such instruments and take such actions as may reasonably be specified by the Association to obtain separate real property tax assessments of the interest of each Owner in each Unit. If any taxes or special district or other assessments may, in the opinion of the Association, nevertheless be a lien on the Project or any part thereof, the Association shall pay the same and assess the same to the Owner or Owners responsible therefor. Each Owner shall pay the taxes or assessments assessed against such Owner's Unit and Limited Common Area appurtenant to said Unit or interest therein, or such Owner's interest in the Common Area or any part thereof. Each Owner shall pay all taxes, rates, impositions, and assessments levied against the Project or any part of the Common Area in proportion to such Owner's interest in such Common Area, and such payment is to be made to the Association at least thirty (30) days prior to the delinquency of such tax or assessment. Each such unpaid tax or assessment shall bear interest at the Default Interest Rate from and after the time the same becomes payable by each Owner and shall be secured by the lien created pursuant to Section 9.6. The Association the Owners, including all Governmental Owners, as defined in Article XXI, shall cooperate to ensure that the Common Areas are assessed appropriately for purposes as property taxes and that Governmental Owners that may be exempt from taxes are treated appropriately and that the Owners of Units that are not Governmental Owners shall not have their Units disproportionately assessed or subject to disproportionately levied taxes on either their Units or upon the Common Area.

Section 4.10 Treatment of Subsurface Units. As noted above in Article I, it is intended that the VRT Units shall be utilized for the operation of a public transit facility and such other ancillary uses consistent with same. The only Common Area that will be allocable to the VRT Units herein shall be (i) the structural elements that support both the VRT Units and the surface Units constructed above and (ii) the egress stairwells shared with the surface Units. The VRT Units shall have an obligation for an allocated share of all Limited Common Areas appurtenant to the VRT Units. As such the VRT Units shall (i) pay its proportionate share of maintenance and operation of such Building Exterior and Structural Limited Common Area elements and (ii) pay its proportionate share of the premiums for required insurance as set forth herein or in any Sub-Declaration allocable to the VRT Units. The purpose of this Section is to clarify and establish that it is the intent of Declarant that the VRT Units be treated as functionally independent as reasonably possible due to the additional federal requirements associated with the operation of a federally funded transit facility as part of the Project. VRT acknowledges hereby that the

consequence of such an allocation shall be that VRT may be required to undertake significant obligations set forth herein, independent of the Association or the remainder of the Project; that facilities that may typically be treated as Common Areas have been identified and designated as Limited Common Areas that are exclusive to or shared by VRT and some but not all other Units; and that VRT may be required to undertake additional maintenance and operation responsibilities for the VRT Structure Limited Common Areas, and those specified improvements outside of the Project pursuant to the provisions of the agreements identified in Section 4.2.1. Declarant acknowledges further that to the extent that VRT Units are required to participate in the management, maintenance, repair and replacement of any Common Area or Limited Common Area appurtenant thereto, the Owner of the VRT Units and the Association shall work together jointly to ensure compliance with any and all applicable procurement or other regulations applicable to such. Finally, to the extent that the VRT Units impose additional security measures and expenses on the remainder of the Units of the Projects, such expenses shall be allocable to the entirety of the Common Area and to all Units, including the VRT Units, in a manner consistent with the Allocated Ownership Interest in Common Area set forth on Exhibit E-1.

Section 4.11 Owner's Rights with Respect to Interiors. Each Owner shall have the exclusive right to paint, repaint, tile, and paper, or otherwise maintain, refinish and decorate the interior surfaces of the walls, ceilings, floors, and doors and to clean the interior surfaces of windows, all of which form the boundaries of that Owner's Unit and all walls, ceilings, floors, and doors within such boundaries. Owners shall have the absolute and exclusive obligation to maintain all Limited Common Area appurtenant to their Unit.

Section 4.12 Windows. The cleaning of exterior surfaces of windows (except for those windows between a Unit and that Unit's Limited Common Area) is expressly reserved to the Association, provided, however, the Association may require the Owners of all Units to clean the exterior surfaces of all windows located within their Unit regardless of the fact that such exterior surfaces are not actually part of the Owner's Unit. No Owner may, without the consent of the Association, place anything in or on the Unit windows that is in variance with the general appearance of windows of similar Units.

Section 4.13 Easements. Due to the complexity of and integrated nature of the Common Areas, Limited Common Areas, and Units within the Project, and the various uses and Improvements that are provided for therein, this Declaration and the Parcel Map include grants of easements for various systems, elements, improvements, and facilities within the Project ("**Easements**"). These Easements are integral to the operation of the Project and are for the benefit of various Units and Common Areas therein. To further define and clarify the nature of these Easements, Declarant does hereby reserve, create, grant, convey, and declare the Easements set forth below. All such Easements shall include all such rights and purposes incident to the use, development, maintenance, and operation of the Easements and the Project and access thereto.

Section 4.13.1 Easements Depicted on the Parcel Map. There is hereby reserved, created, granted, conveyed, and declared all easements as depicted or created on the Parcel Map for the use and benefit of Declarant, the use and benefit of each Unit,

the use and benefit of such Unit's Owner or Occupant, and the use and benefit of the Association, and their successors and assigns, an easement for the purposes incident to such use, development and maintenance of the Project.

Section 4.13.2 Easements Deemed Created. All conveyances of Units, whether by Declarant or otherwise, shall be construed to grant and reserve such reciprocal easements as shall give effect to this Article, even though no specific reference to such easements or to this Article in any such conveyance.

Section 4.13.3 General Easements for Encroachments. If any part of the Common Area encroaches or shall hereafter encroach upon a Unit, an easement for such encroachment and for the maintenance of the same shall and does exist. This shall include the encroachment of any elevator shaft into any Unit as depicted on the Parcel Map. If any part of a Unit encroaches or shall hereafter encroach upon the Common Area or upon an adjoining Unit, an easement for such encroachment and for the maintenance of the same shall and does exist. Such encroachments shall not be considered to be encumbrances either on the Common Area or the Unit. Encroachments referred to herein include, but are not limited to, encroachments caused by settling, rising, or shifting of the earth or by changes in position caused by repair or reconstruction of the Project or any part thereof.

Section 4.13.4 Limited Common Area Easements. In creating and specifying the existence of any Limited Common Area set forth herein that serves more than one Unit, the Declarant hereby grants and reserves such easements as are necessary in favor of all Units specified herein or on the Parcel Map as being appurtenant to or sharing certain Limited Common Area for (a) the common use and enjoyment of such Limited Common Areas, and (b) for the common maintenance, repair, operation, and replacement of such Limited Common Area.

Section 4.13.5 General Easement for Penetrations. Declarant hereby reserves to itself the absolute right to convey and grant easements for penetrations through Common Areas and Units, provided that the Owner of the otherwise affected Units consent to the penetration and execute a recordable instrument evidencing such. The fact that an easement penetrates through or impacts Common Areas shall not require any action by the Association, nor shall the Association have any right to consent to the same to effectuate the creation of such an easement. Declarant anticipates that such easements for penetrations will be necessary for various service facilities constructed in conjunction with the Centre Building, the Clearwater Building, and the Multimodal Center and the associated Sub-Associations. Upon the expiration of the Declarant Control Period, the exercise of the right and authority reserved under this Section 4.13.4 shall pass to the Association, which shall grant easements from time to time as necessary or approve requests by Owners, Occupants, or Persons for the placement and attachment of signage and telecommunications equipment on the Common Area as requested same.

Section 4.13.6 General Easements of Access for Repair, Maintenance, and Emergencies. Some of the Common Area is or may be located within the Unit or may be conveniently accessible only through the Units. The Owners shall have the

irrevocable right, to be exercised exclusively by the Association as their agent, to have access to all parts of the Project from time to time during such reasonable hours as may be necessary, and with such notice as may be specified in tenant leases, if any, except in cases of emergency, for the maintenance, repair, or replacement of any of the Common Area located therein or accessible therefrom or for making emergency repairs therein necessary to prevent damage to the Project. (As used herein “**emergency repairs**” means repair, maintenance, or replacement, which is required to rectify or mitigate any condition that imposes a real and immediate risk of injury to a Person, or serious and irreparable damage to property). The Association shall also have such right independent of any agency relationship. Damage to the interior of any part of a Unit resulting from the maintenance, repair, emergency repair, or replacement of any of the Common Area or as a result of emergency repairs within another Unit at the insistence of the Association or of Owners shall be apportioned among all Owners of Units based on their respective Allocation of Ownership Interest in Common Areas; provided however, if such damage is the result of negligence of the Owner of a Unit, then such Owner shall be financially responsible for all of such damage. Amounts owing by Owners pursuant to this Section shall be collected by the Association by assessment pursuant to Article IX below.

Section 4.13.7 General Easement for Signage and Telecommunications Equipment. Declarant hereby reserves to itself the absolute right to convey and grant easements for placement and attachment of signage and telecommunications equipment, including satellite dishes, on the Common Area, including on the roof of any of the buildings subject to this Declaration. The fact that an easement penetrates through or impacts Common Areas shall not require any action by the Association, nor shall the Association have any right to consent to the same to effectuate the creation of such an easement. Upon the expiration of the Declarant Control Period, the exercise of the power and authority reserved under this Section 4.13.7 shall pass to the Association, which shall grant easements from time to time as necessary or approve requests by Owners, Occupants, or Persons for the placement and attachment of signage and telecommunications equipment on the Common Area as requested same.

Section 4.13.8 Owner’s Right to Ingress, Egress and Support. Each Owner shall have the right to ingress and egress over, upon, and across the Common Area reasonably necessary for access to such Owner’s Unit, any parking space or spaces and any storage space or spaces which such Owner has the right to use and to the Limited Common Area designated for use in connection with such Owner’s Unit and shall have the right to the horizontal and lateral support of such Owner’s Unit, and such rights shall be appurtenant to and pass with the title to each Unit.

Section 4.13.9 Easement for Association’s Right to Use of Common Area. The Association shall have a nonexclusive easement to make such use of the Common Area as may be necessary or appropriate to perform the duties and functions which the Association is obligated or permitted to perform pursuant to this Declaration, including the right to construct and maintain in the Common Area maintenance and storage facilities for use by the Association. The Association’s right shall include those arising upon the expiration of the Declarant Control Period.

Section 4.13.10 Easement for Utilities for Units. In order to adequately serve each Unit, utility facilities may be constructed and may encroach on Common Area or Units. An easement for such encroachment and for the maintenance of the same shall and does exist; provided that the easement does not materially interfere with the use of the Common Area or Units.

Section 4.13.11 Sewer System Easements. There is hereby reserved for the use and benefit of Declarant and granted for the use and benefit of each Unit, and for the use and benefit of such Unit's Owner or Occupant, and for the use and benefit of the Association, and their successors and assigns, an easement for the purposes incident to such use, development and maintenance of the Project, an easement for sewer system facilities, whether previously granted by an easement or by license, as depicted on Exhibit F ("**Sewer System Easements**"). The Sewer System Easements includes an easement for the placement of equipment and piping within the Common Area and Units, whether it be in designated service rooms, service panels, conduit, pipes, or attached to the surface of the Common Area and Units. Maintenance and operation of the Sewer System Easements within the VRT Units shall be pursuant to Section 4.17 below.

Section 4.13.12 Easement Associated with Sewer Ejector Limited Common Area. There is hereby reserved for the use and benefit of Declarant and granted for the use and benefit of each Unit to which the Sewer Ejector Limited Common Area is appurtenant, and for the use and benefit of such Unit's Owner or Occupant, and for the use and benefit of the Association, and their successors and assigns, an easement over the Unit within which the Sewer Ejector Limited Common Area is located for the purposes incident to the collective maintenance, replacement, repair and operation of the Sewer Ejector Limited Common Area. Maintenance and operation of the Sewer Ejector Limited Common Area within the VRT Units shall be pursuant to Section 4.17 below.

Section 4.13.13 Easement Associated with Grease Interceptor Limited Common Area. There is hereby reserved for the use and benefit of Declarant and granted for the use and benefit of each Unit to which the Grease Interceptor Limited Common Area is appurtenant, and for the use and benefit of such Unit's Owner or Occupant, and for the use and benefit of the Association, and their successors and assigns, an easement for the purposes incident to the collective maintenance, replacement, repair and operation of the Grease Interceptor Limited Common Area. Maintenance and operation of the Grease Interceptor Limited Common Area within the VRT Units shall be pursuant to Section 4.17 below.

Section 4.13.14 Easement Associated with Grease Containment and Collection Limited Common Area. There is hereby reserved for the use and benefit of Declarant and granted for the use and benefit of each Unit to which the Grease Containment and Collection Limited Common Area is appurtenant, and for the use and benefit of such Unit's Owner or Occupant, and for the use and benefit of the Association, and their successors and assigns, an easement for the purposes incident to the collective maintenance, replacement, repair and operation of the Grease Containment and Collection Limited Common Area. Maintenance and operation of the Grease Containment and

Collection Limited Common Area within the VRT Units shall be pursuant to Section 4.17 below.

Section 4.13.15 Easement Associated with Sand and Oil Interceptor Limited Common Area. There is hereby reserved for the use and benefit of Declarant and granted for the use and benefit of each Unit to which the Sand and Oil Interceptor Limited Common Area is appurtenant, and for the use and benefit of such Unit's Owner or Occupant, and for the use and benefit of the Association, and their successors and assigns, an easement for the purposes incident to the collective maintenance, replacement, repair and operation of the Sand and Oil Interceptor Limited Common Area. Maintenance and operation of the Sand and Oil Interceptor Limited Common Area within the VRT Units shall be pursuant to Section 4.17 below.

Section 4.13.16 Telecommunication System Easements. There is hereby reserved for the use and benefit of Declarant and granted for the use and benefit of each Unit, and for the use and benefit of such Unit's Owner or Occupant, and for the use and benefit of the Association, and their successors and assigns, an easement for the purposes incident to such use, development and maintenance of the Project, an easement for telecommunication facilities, whether previously granted by an easement or by license, as depicted on Exhibit F ("**Telecommunication System Easements**"). The Telecommunication System Easements includes an easement for the placement of equipment and cabling within the Common Area and Units, whether it be in designated service rooms, service panels, conduit, racks, or attached to the surface of the Common Area and Units. Maintenance and operation of the Telecommunication System Easements within the VRT Units shall be pursuant to Section 4.17 below.

Section 4.13.17 Natural Gas System Easements. There is hereby reserved for the use and benefit of Declarant and granted for the use and benefit of each Unit, and for the use and benefit of such Unit's Owner or Occupant, and for the use and benefit of the Association, and their successors and assigns, an easement for the purposes incident to such use, development and maintenance of the Project, an easement for natural gas facilities, whether previously granted by an easement or by license, as depicted on Exhibit F ("**Natural Gas System Easements**"). The Natural Gas System Easements includes an easement for the placement of equipment and piping within the Common Area and Units, whether it be in designated service rooms, service panels, conduit, pipes, or attached to the surface of the Common Area and Units. Maintenance and operation of the Natural Gas System Easements within the Multimodal Center shall be pursuant to Section 4.17 below.

Section 4.13.18 Water System Easements. There is hereby reserved for the use and benefit of Declarant and granted for the use and benefit of each Unit, and for the use and benefit of such Unit's Owner or Occupant, and for the use and benefit of the Association, and their successors and assigns, an easement for the purposes incident to such use, development and maintenance of the Project, an easement for water system facilities, whether previously granted by an easement or by license, as depicted on Exhibit F ("**Water System Easements**"). The Water System Easements includes an easement for the placement of equipment and piping within the Common Area and Units, whether

it be in designated service rooms, service panels, conduit, pipes, or attached to the surface of the Common Area and Units. Maintenance and operation of the Water System Easements within the VRT Units shall be pursuant to Section 4.17 below.

Section 4.13.19 Easement for Electrical Service Created by Declarant in Favor of Idaho Power. There is hereby reserved for the use and benefit of Declarant and granted for the use and benefit of each Unit, and for the use and benefit of such Unit's Owner or Occupant, and for the use and benefit of the Association, and their successors and assigns, an easement for the purposes incident to such use, development and maintenance of the Project, all easements as depicted or created in that document executed by Declarant in favor of Idaho Power, recorded in the Official Records of Ada County, Idaho as Instrument No. 2015-106545 on November 20, 2015 ("**Electrical Service Easement**"). Maintenance and operation of the Electrical Service Easement shall be as set forth in the Electrical Service Easement..

Section 4.13.20 Easement for Unit A Service Elevators and Service Facilities. There has been separately created certain easements related to the maintenance and operation of the certain service elevators and service facilities located within Unit A for the benefit of certain other Units in the Project as set forth in that certain Declaration of Easements for Service Elevators and Service Facilities executed by Declarant and other parties and recorded contemporaneously herewith ("Service Elevators and Service Facilities Easement"). Declarant incorporates the Service Elevators and Service Facilities Easement therein to provide notice to the future owners of the Units so encumbered thereby.

Section 4.13.21 Garbage Facilities Easements. There is hereby reserved for the use and benefit of Declarant and granted for the use and benefit of each Unit, and for the use and benefit of such Unit's Owner or Occupant, and for the use and benefit of the Association, and their successors and assigns, an easement for the purposes incident to such use, development and maintenance of the Project, an easement for garbage and recycling facilities within chutes and collection areas in the Common Area, which are accessible through the VRT Units and other Units in the Project ("**Garbage Facilities Easements**"). The Garbage Facilities Easements shall also include such easements as are necessary to serve the Unit 1H Garbage Facility. The Garbage Facilities Easements includes an easement for the placement of equipment within the Common Area and an easement within the VRT Units to collect garbage and recycling for the Project. In all events, the Garbage Facilities Easements will be kept in an orderly, clean and uncluttered condition. Maintenance and operation of the Garbage Facilities Easements within the VRT Units shall be pursuant to Section 4.17 below.

Section 4.13.22 Mechanical, Electric, and Plumbing Facilities Easements. There is hereby reserved for the use and benefit of Declarant and granted for the use and benefit of each Unit, and for the use and benefit of such Unit's Owner or Occupant, and for the use and benefit of the Association, and their successors and assigns, an easement for the purposes incident to such use, development and maintenance of the Project, an easement for the mechanical, electric, and plumbing facilities that are located in the Common Area, including those which are accessible through the VRT Units

and other Units in the Project (“**MEP Systems Easements**”). The MEP Systems Easements shall include an easement for the placement of equipment within the Common Area and an easement within the VRT Units to access the MEP Systems Easements, to the extent that such are accessible through the VRT Units. In all events, the MEP Systems Easements will be kept in an orderly, clean and uncluttered condition. Maintenance and operation of the MEP Systems Easements, to the extent that such are accessible through the VRT Units, shall be pursuant to Section 4.17 below.

Section 4.13.23 Easement Associated with ACHD Rampway Easement Agreement. There is hereby reserved for the use and benefit of Declarant and granted by VRT over the VRT Units, an easement in favor of Declarant and Association to access that portion of the ACHD Rampway Easement previously granted in favor of VRT by ACHD, which comprises a service and storage room located in the southwest portion of the ACHD Rampway Easement approximately six hundred and fifty (650) square feet (“**Undersidewalk Service Room**”), which has been designed as a service and utility room for the placement of utilities, services, and storage benefiting the VRT Units and the Project. The use of this easement to access and utilize the Undersidewalk Service Room shall be pursuant to Section 4.17 below.

Section 4.13.24 Other Easements Created by Declarant. There is hereby reserved for the use and benefit of Declarant and granted for the use and benefit of each Unit, and for the use and benefit of such Unit’s Owner or Occupant, and for the use and benefit of the Association, and their successors and assigns, an easement for the purposes incident to such use, development and maintenance of the Project, any and all easements as depicted, granted, or created in any document executed by Declarant and subsequently recorded prior to the date of first conveyance of any Unit or that was made pursuant to Section 16.2 set forth below.

Section 4.14 Special Provisions Relating to Unit 10A. Unit 10A is a Unit with an appurtenant ~~limited common area~~ Limited Common Area balcony. Declarant has created Unit 10A at the request of the User of Unit 9A. The User of Unit 9A has indicated a potential desire to have Unit 10A conveyed to its affiliate in the future. The User of Unit 9A and Unit 10A have been informed and are aware that Unit 10A has limited access to the Common Area and to the Clearwater Building Vertical Circulation Limited Common. Access to Unit 10A is solely through either Unit 9A or a secured emergency staircase that is part of the Clearwater Building Vertical Circulation Limited Common Area. No easement in favor of Unit 10A for access through Unit 9A is created or granted hereby, nor is any easement created by implication, estoppel, or any other mechanism for the creation of an easement. If Units 9A and 10A are not owned or controlled by the same Owner or occupied by the same User and if the Owner of Unit 10A desires access other than via the emergency staircase that is part of the Clearwater Building Vertical Circulation Limited Common Area, then the Owner of Unit 10A shall be solely responsible for obtaining an easement or license through Unit 9A from the Owner of Unit 9A on such terms as the Owner and User of Unit 9A may require in their sole and absolute discretion, which may include, but not be limited to the Owner and User of Unit 10A complying with all of the security requirements of the Owner and User of Unit 9A, or the Owner and User

of Unit 10A accessing Unit 10A solely from the adjacent stairwell that is part of the Clearwater Building Vertical Circulation Limited Common Area that is solely accessible from Unit 9A, or the Owner and User of Unit 10A funding modifications to Unit 9A to facilitate access to Unit 10A. Nothing herein shall require the Owner or User of Unit 9A to grant any such easement or license. To the extent that approval of the Association is required to facilitate the foregoing, the Association shall defer to the requirements of the Owner of Unit 9A. All Owners taking title to Unit 10A from and after the recording of this Declaration shall be deemed by accepting such title to Unit 10A, to have acknowledged and agreed to the limitations set forth herein regarding access to Unit 10A, and further such Owners of Unit 10A shall release, indemnify, and hold harmless the Declarant, the Association, the Clearwater Building Sub-Association, and the Owner and User of Unit 9A from any and all claims arising from the limited access to Unit 10A, the requirements imposed upon Unit 10A to obtain access through Unit 9A, or any other injury arising from accessing Unit 10A by the Owner or Occupant of Unit 10A. ~~The~~ All Owners taking title to Unit 9A from and after the recording of this Declaration shall be deemed by accepting such title to Unit 9A, that the Owner and User of Unit 9A shall also release, indemnify, and hold harmless the Declarant, the Association, and the Clearwater Building Sub-Association from any and all claims arising from claims arising from the limited access to Unit 10A, the requirements imposed upon Unit 10A to obtain access through Unit 9A by any prior Owner of Unit 9A, or any other injury to Unit 9A arising from accessing Unit 10A by the Owner or Occupant of Unit 10A.

Section 4.15 Declarant's Right Incident to Construction. Declarant shall have the absolute right to and does hereby reserve an easement and right-of-way for ingress and egress over, upon, under, through and across the Common Area and the right to store materials thereon and to make such other use thereof as may be reasonably necessary incident to Declarant's development of the Project.

Section 4.16 Operation, Maintenance and Management of Common Area. The Association may hire an outside building management company, building manager or maintenance company, which shall be instructed to act prudently and diligently to manage, control and maintain the Common Area in a manner compatible with good business practices and for the benefit of all Owners. Maintenance of the Common Area shall be an expense of all Owners in accordance with each Owner's Allocation of Ownership Interest in Common Area Maintenance of the Limited Common Area shall be an expense of the Owner(s) of the Unit(s) to which such Limited Common Area is appurtenant. The Association shall have the right to reasonably regulate the Owners' use of the Common Area as well as the Limited Common Area so as to ensure that no Owner unreasonably burdens the other Owners or the Association through its use of the same.

Section 4.17 Additional Obligations Related to Common Areas, Limited Common Areas, and Easements within the Multimodal Center.

Section 4.17.1 To the extent that any system, facility, equipment, Easement, Improvement, Common Area, or Limited Common Area is within or requires access through or over the Units comprising the Multimodal Center ("**Multimodal Service Areas**"), whether created by license, easement, this Declaration, or by use, the

Association as the manager of the Common Area, the Owners of the Units appurtenant to such Limited Common Area, every other Owner, Occupant, and User of any Unit in the Project, and their designated representatives, shall acknowledge that the Multimodal Service Areas may be located within or require access through the VRT Units. Access by the Owners, Occupants, Users, Association, or their designated representatives to access, maintain, replace, and repair such Multimodal Service Areas ("**Multimodal Service Areas Accessing Party**") shall require prior notice to and consent from VRT, which consent shall not be unreasonably withheld, delayed, or conditioned.

Section 4.17.2 The Multimodal Service Areas Accessing Party seeking access to the Multimodal Service Areas shall have the obligation to (a) contact the designated operations employee for both VRT and the Association in the event that the Multimodal Service Areas Accessing Party needs to access, modify or maintain its Multimodal Service Area; (b) coordinate performance of such work with both VRT and the Association so that the Multimodal Service Areas Accessing Party does not interfere with operations within the Multimodal Center; (c) comply with the reasonable requirements of both VRT and the Association; and (d) to the extent reasonably possible provide a complete time line for expected work and its scope to both VRT and Association.

Section 4.17.3 In no event will access to the Multimodal Service Areas by the Multimodal Service Areas Access Parties interrupt, impede, halt, delay or otherwise interfere with VRT's provision of transit services or use of the Multimodal Center unless such interruption, impediment, or interference is approved by VRT in writing prior to the interruption, impediment, or interference; provided, however, that this requirement shall not apply in the case of emergency repairs as defined in Section 4.13.6.

Section 4.17.4 The Multimodal Service Areas Access Parties, at their sole cost and expense, shall repair, restore, remediate, or otherwise cure any damage, disturbance, or other modification of the Multimodal Center, which occurs as a result of the Multimodal Service Areas Access Parties' exercise of the rights granted under this Section.

Section 4.17.5 To the fullest extent permitted by law, each Multimodal Service Areas Accessing Party accessing the Multimodal Center shall release, indemnify and hold harmless VRT, VRT's officers, directors, board members, members, consultants, agents, and employees ("**VRT Indemnified Parties**") from all claims for bodily injury and property damage, including reasonable attorneys' fees, costs, and expenses that may arise from the Multimodal Service Areas Accessing Party's exercise of the rights granted under this Section, but only to the extent caused by the negligent or intentional acts or omissions of the Multimodal Service Areas Accessing Party or anyone employed directly or indirectly by the Multimodal Service Areas Accessing Party or by anyone for whose acts the Multimodal Service Areas Accessing Party may be liable. This indemnification shall not require any Multimodal Service Areas Accessing Party or anyone employed directly or indirectly by the Multimodal Service Areas Accessing Party to indemnify the VRT Indemnified Parties from any claims for bodily injury and property damage as set forth above arising from the negligence or intentional acts of the VRT Indemnified Parties.

Section 4.17.6 VRT and the Association may require the Multimodal Service Areas Accessing Party, or its contractors and agents to obtain and provide evidence of such commercial general liability insurance, in amounts, and with deductibles that are commercially reasonable and common, with VRT and the Association being appropriately designated.

Section 4.17.7 In maintaining and operating the VRT Units, VRT shall not maintain or operate the VRT Units and appurtenant Limited Common Area in any manner that would adversely affect access to or use of the Multimodal Service Areas.

Section 4.17.8 The Association shall manage and control operation of the systems operated pursuant to the Easements identified herein within the Multimodal Service Areas, creating reasonable rules and regulations as necessary, with the input and approval of VRT, regarding the maintenance and operation of the same. To the extent that the maintenance and operation of the Multimodal Service Areas necessitate additional security measures and expenses, such security measures and expenses shall be expenses allocable to the entirety of the Common Area and to all Units, including the VRT Units.

Section 4.18 Additional Rights. Notwithstanding anything to the contrary contained in this Declaration:

Section 4.18.1 Nothing shall prevent or limit Declarant's exercise or enjoyment of any Special Declarant Right.

Section 4.18.2 An Owner may construct partitions within its Unit and lease separate portions of its Unit to one or more lessees if otherwise permitted by the Association Documents, Condominium Property Act and applicable law; provided, however, the Owner of a Unit may not assign all or any portion of the voting rights allocated to its Unit to any lessee to whom the Owner leases all or a portion of its Unit, except as permitted to a Designated Tenant consistent with the provisions of this Declaration, including, but not limited to Section 2.18 and Section 7.4.

Section 4.18.3 An Owner may grant its rights to use any Common Area or any Limited Common Area appurtenant to the Owner's Unit to its Occupants, its Users, or to the owners of the resultant new units created by the applicable Sub-Declaration and related documents duly recorded in accordance with the provisions of this Declaration.

Section 4.18.4 One or more Owners of Units, shall have the power and rights to separately undertake shared maintenance and operation of Limited Common Areas or other common services and facilities within the Common Area, and upon notice to the Association, equitable adjustment may be made to their respective Assessments due to their individual or mutual undertakings. The Association shall, however, require prior review and approval of such undertakings to ensure that there is no interference with the use of such areas or services by other Owners, Occupants, or Users.

~~Section 4.18.4~~ Section 4.18.5 An Owner or Owners of a Units or Units may subject all, but not part, of such Unit[s] to a separate condominium declaration (a "**Sub-Declaration**") applicable to such Unit[s] only for the purposes of further dividing the Unit[s] into Common Areas and various smaller units capable of separate ownership subject to the following instructions and limitations, and subordinate to this Declaration:

(a) The submission of such Unit[s] to a Sub-Declaration shall comply with all applicable laws, ordinances, codes, rules and regulations of all governmental or quasi-governmental bodies with jurisdiction, and each Sub-Declaration and the rights of any owners and any association of such owners of such Further Divided Units thereunder shall be expressly subject to and subordinate to this Declaration;

(b) The Sub-Declaration for such Further Divided Unit[s] shall provide that the owners of the resultant new units created thereby shall have no vote in the Association or any other right to participate in the government and affairs of the Association; provided, however, that the association of the owners of the resultant new units created by the applicable Sub-Declaration and related documents may vote the votes assigned to the said Further Divided Unit[s] from and after the date the owner of the said Further Divided Unit has prepared, executed and recorded the required Sub-Declaration and record of survey map as required by the Condominium Property Act in order to effect the further division of the said Unit[s]. Except as the same may be limited by the Sub-Declaration for the applicable Unit[s], each owner of a resultant new units created thereby shall have the right to use the Common Areas and Limited Common Areas designated for the use of the Further Divided Unit to the same extent as an Owner of the Unit prior to such further division; provided, however, that any rights pertaining to the installation of utilities or similar facilities and accompanying easements granted hereby shall, to the extent that they impact the Common Areas or any other Unit, be exercised by the association of the owners of the resultant new units created thereby only, and may not be exercised by any owner individually; and

(c) Such power and authority shall be exercised on one occasion only, such that upon the division of a Unit or Units, the Further Divided Unit[s] shall not be further divided again except pursuant to the terms of the Sub-Declaration authorizing such further division.

ARTICLE V DESCRIPTION OF A UNIT

Section 5.1 Description of Unit. Every contract for the sale of a Unit and every other instrument affecting title to a Unit shall describe the Unit as set forth on the Parcel Map and as set forth in this Declaration as each appear on the records of the County Recorder of Ada County, Idaho in the following fashion:

Unit as shown on the Plat Showing Amended Plat for U.S.
Bank Plaza Condominiums recorded in the Records of Ada
County, Idaho at Book _____, Page
_____ (as may have been heretofore amended or

supplemented) and as defined and described in that Amended and Restated Declaration of Covenants, Conditions and Restrictions for US Bank Plaza Condominiums recorded in the Records of Ada County, Idaho as Instrument No. _____ (as may have been heretofore amended or supplements).

Such description shall be construed to describe the Unit together with the appurtenant undivided interest in the appropriate Common Area, and to incorporate all the rights incident to ownership of a Unit and all the limitations on such ownership as described in this Declaration.

ARTICLE VI MECHANIC'S LIEN RIGHTS

Section 6.1 Labor. No labor performed or services or materials furnished with the consent or at the request of an Owner or such Owner's agent, contractor, or subcontractor shall be the basis for the filing of a lien against the Real Property, the Common Area or the Unit of any other Owner, unless the Association or such other Owner has expressly consented to or requested the performance of such labor or furnishing of such materials or services. Such express consent shall be deemed to have been given by the Owner of any Unit in the case of emergency repairs thereto. Labor performed or services or materials furnished for the Project, if duly authorized by the Association, shall be deemed to be performed or furnished with the express consent of each Owner. Any Owner may remove such Owner's Unit from a lien against two or more Units or any part thereof by payment to the holder of the lien of the fraction of the total sum secured by such lien, which is attributable to such Owner's Unit.

ARTICLE VII ASSOCIATION

Section 7.1 Membership. The Articles and Bylaws, copies of which are attached hereto, are made a part of this Declaration. Each Owner of a Unit (including Declarant) shall be a Member of the Association and shall be entitled to one membership for each Unit owned, which membership shall be considered appurtenant to that Owner's Unit. The membership of the Association at all times shall consist exclusively of the Owners. Membership in the Association shall be mandatory. Ownership of a Unit shall be the sole qualification for membership in the Association. A membership shall not be transferred in any way except (a) the rights of an Owner may be exercised by its Designated Tenant, and (b) upon the transfer of title to the Unit and then only to the transferee of title to the Unit. Any attempt to make a prohibited transfer shall be void. Any transfer of title to a Unit shall operate automatically to transfer the membership in the Association to the new Owner. A Mortgagee does not have membership rights until it becomes an Owner by foreclosure or any arrangement or proceeding in lieu thereof.

Section 7.2 Rights of Membership. Except as specifically provided otherwise herein, Owners, as Members of the Association, have the right to appoint and remove

members of the Board of Directors pursuant to Section 7.4; modify the Condominium for reason of obsolescence pursuant to Article XIV, amend or terminate the Declaration as set forth in Section 16.1; and vote on such matters as may be put before them. Otherwise, governance of the Association shall be exercised exclusively through the Board of Directors.

Section 7.3 Voting Rights. Subject to the limitations set forth below in Section 7.4, each Owner shall be entitled to the number of votes allocated to each Owner's Unit, as identified on Exhibit E-1. When more than one (1) Person is the Owner of any Unit, all such Owners shall be Members, but all such Members shall only be entitled to the number of votes established for such Unit. If the Owners of a Unit cannot agree among themselves as to how to cast their votes on a particular matter, they shall lose their right to vote on such matter. If any Owner casts a vote representing a particular Unit, it will thereafter be presumed for all purposes that the Owner was acting with the authority and consent of all other Owners with whom such Owner shares the Unit, unless objection thereto is made by another Owner of that Unit to the Person presiding over the meeting at the time the vote is cast. If more than the number of allocated votes is cast for any particular Unit, none of such votes shall be counted and all of such votes shall be deemed null and void other than to determine whether a quorum exists. No owner of any portion of a Further Divided Unit less than the entirety of such Unit shall be deemed an Owner, nor shall any such owner have the right to participate directly in any matter requiring a vote of the Owners except as shall be in compliance with Section 4.18.4.

Section 7.4 Selection of Directors. During the Declarant Control Period, all Directors shall be appointed as set forth herein by the Declarant and the Large Unit Members; and each Large Unit Member shall have the right to appoint one Director to serve on the Board of Directors. Following the Declarant Control Period, Directors not otherwise subject to appointment as set forth herein shall be elected. Directors shall serve for a term of one (1) year regardless of whether they are appointed or ~~reelected~~, but may serve consecutive terms. Each year at the annual meeting of the Association, the Large Unit Members and Declarant shall confirm to the Association their appointments of Directors. Following the Declarant Control Period, each year at the annual meeting of the Association the Large Unit Members shall confirm to the Association their appointments of Directors and an election of Directors for the remaining seats shall occur. In the event that any of the Directors are elected, then in any election of ~~the such~~ Directors, the candidates receiving the highest number of votes ~~upare elected~~ to the ~~number of Directors to be elected shall be deemed elected.~~ Director seats being elected. Cumulative voting for Directors shall be prohibited. Any Director may be removed from office by the Declarant, if appointed by the Declarant, or may be removed from office by the Large Unit Member that appointed said Director or, if elected, then by a vote of the majority of the Members entitled to vote at an election of Directors. If any or all Directors are so removed, new Directors shall be elected or appointed at the same meeting. Notwithstanding anything contrary herein, or in the Articles or the Bylaws, commencing as of the date of this Declaration and continuing for all time periods set forth herein, the number of Directors shall be adjusted from time to time during the Declarant Control Period so that Declarant shall always maintain the majority of the seats on the Board of Directors. The

total number of Directors serving on the Board of the Association shall be at least three (3), but shall be increased as necessary to provide for the number of Directors appointed by Large Unit Members while reserving to the Declarant the appointment of the majority of the Directors serving as members of the Board of Directors as set forth herein. The number of Directors serving as members on the Board of Directors shall be established as follows: the total number of Directors being the number of Large Unit Members multiplied by two plus one $[(2 \times \text{Large Unit Members}) + 1]$. The number of Directors shall not change solely due to the expiration of the Declarant Control Period. By way of example, if the number of Large Unit Members is four (4) then the total number of Directors serving as members of the Board of Directors is nine (9) with each of the Large Unit Members appointing one (1) Director for a total of four (4) Directors and Declarant appointing five (5) Directors. After the expiration of the Declarant Control Period when an election is held, if a Large Unit Member exercises its right to appoint a Director, then the appointment of such shall be deemed to be the exercise of said Large Unit Member's voting rights and such Large Unit Member shall have no further right to vote in the election of Directors. A Large Unit Member may waive its right to appoint a Director and participate in the election of the Directors, but shall do so in writing with notice to the Association prior to the occurrence of such election. If a Large Unit Member has a Designated Tenant, then the Designated Tenant shall exercise the rights of the Large Unit Member until such time as the designation is terminated as set forth in Section 2.18. VRT as the Owner of Units B1, B2, and B3 shall be a Large Unit Member entitled to the rights associated therewith, including the appointment of one Director. So long as Boise State University is the Designated Tenant or Owner of Units 1D, 1E, 2A, 3B, and 3A, and those Units collectively qualify it as a Large Unit Member, Boise State University shall be a Large Unit Member entitled to the rights associated therewith, including the appointment of one Director. So long as the Greater Boise Auditorium District is the Designated Tenant or Owner of some or all of Units 1G, 1J, 1F, 2B, 4A, 4B, and 5B, ~~and those such~~ Units collectively qualify it as a Large Unit Member, the Greater Boise Auditorium District shall be a Large Unit Member entitled to the rights associated therewith, including the appointment of one Director.

Section 7.5 Selection of Directors for a Sub-Association. For purposes of Article X regarding Sub-Associations, Directors shall be appointed or elected as follows:

Section 7.5.1 For the Centre Building Sub-Association, the Directors for that Sub-Association shall be appointed as follows: the Owner or Designated Tenant of Units 1G, 1J, 2B, 4B, and 5B, provided that such Units are held in common ownership shall appoint four (4) Directors; the Owner of Units 2C and 3C, provided that such Units are held in common ownership, shall appoint one (1) Director; the Owner of Unit 1H shall appoint one (1) Director; and the Owner or Designated Tenant of Unit 3B shall appoint one (1) Director. Notwithstanding the appointment of the Directors as set forth herein, ~~if~~ and the designation of Units ~~identified~~ herein as having appointment rights, ~~then~~ the Directors from ~~that any~~ class of Units to be elected shall be elected based upon the vote of all Units within the specified class based upon the allocated interests set forth in Exhibit E-3. The ratio and manner of appointment of Directors for the Centre Building Sub-Association shall in no way modify or affect the voting power of the Owners of the Units

located therein in accordance with Exhibit E-3. So long as Boise State University is the Designated Tenant or Owner of Unit 3B, Boise State University shall exercise the rights of the Owner or Designated Tenant of Unit 3B set forth above.

Section 7.5.2 For the Clearwater Building Sub-Association the same appointment and election provisions set forth in Section 7.4 shall apply to that Sub-Association; the Directors for the Clearwater Building Sub-Association shall be appointed and elected using this same formula: the total number of Directors in a Clearwater Building Sub-Association being the number of Large Unit Members within the building comprising the Clearwater Building Sub-Association multiplied by two plus one $[(2 \times \text{Large Unit Members}) + 1]$; and a Large Unit Member for the Association shall also be a Large Unit Member for the Clearwater Building Sub-Association assuming that it owns a Unit within the Clearwater Building Sub-Association, regardless of the gross unit area of the Units located within the Clearwater Building Sub-Association. The ratio and manner of appointment of Directors for the Centre Building Sub-Association shall in no way modify or affect the voting power of the Owners of the Units located therein in accordance with Exhibit E-2.

Section 7.5.3 For the Unit A Sub-Association, the Directors for that Sub-Association shall exclusively be appointed by the Owner of Unit A in the exercise of its absolute discretion.

Section 7.6 Amplification. The provisions of this Article are amplified by the Articles and by the Bylaws; provided, however, no present or future provision of such Articles or Bylaws shall substantially alter or amend any of the rights or obligations of the Owners set forth herein.

Section 7.7 Voting and Approvals. The affirmative vote of a majority of all votes represented at the meeting, in person or by proxy, and entitled to vote on the matter at a meeting at which a quorum is present shall be required for all decisions of the Members and shall be binding upon all Members for all purposes, unless the vote of a greater or lesser number is required by law, this Declaration, the Articles, or the Bylaws.

ARTICLE VIII CERTAIN RIGHTS AND OBLIGATIONS OF THE ASSOCIATION

Section 8.1 The Management Body. The Association is hereby designated to be the “**Management Body**” as provided in Sections 55-1503 and 55-1506 of the Condominium Property Act and shall administer the Project in accordance with the Condominium Property Act and the provisions of the Association Documents. The Association shall have the power and authority to contract with third parties to perform any and all of the Association’s duties and obligations under the Association Documents.

Section 8.2 The Common Area. The Association, subject to the rights of the Owners set forth in Article IV hereof, shall be responsible for the exclusive management and control of the Common Area and all improvements thereon (including furnishings and equipment related thereto) and shall keep the same in good, clean, attractive and sanitary

condition, order and repair; provided, however, that each Owner shall keep the Limited Common Area designated for use in connection with such Owner's Unit in a clean, sanitary, and attractive condition and shall maintain and repair the heating, ventilation and air conditioning equipment and hot water heater, and any other equipment servicing such Owner's Unit exclusively. The Association shall prepare appropriate budgets related to the performance of its obligations hereunder as the Management Body, in consultation with the Large Unit Members or their Designated Tenants, including any that is a Governmental Owner as defined in Article XXI, to coordinate the performance of the Association's obligations hereunder as well as the Association's levying of all assessments authorized hereunder consistent with the legal power of such Governmental Owners. The Association shall have the right to apportion the costs associated with services and maintenance of certain Common Area facilities to those Units actually utilizing such, provided, that the Association has reasonably determined that an allocation of such costs to some, but not all of the Units, is equitable and appropriate. The foregoing is intended to grant the Association power to make determinations regarding certain Common Area expenses, such as garbage, where other reasonable alternative arrangements exist for the operation of such. All Large Unit Members, their Designated Tenants, and Governmental Owners shall cooperate with the Association in the foregoing to maintain adequate reserves and undertake necessary and appropriate maintenance of the Common Area in conformance with this Declaration.

Section 8.3 Miscellaneous Services. From time to time, the Association may obtain and pay for the services of any Person to manage the Association's affairs, or any part thereof, to the extent the Association deems advisable, as well as such other personnel as the Association shall determine to be necessary or desirable for the proper operation of the Project, whether such personnel are furnished or employed directly by the Association or by any Person with whom or which the Association contracts. The Association may obtain and pay for legal and accounting services necessary or desirable in connection with the operation of the Project or the enforcement of this Declaration. The Association may arrange with others to furnish electrical, water, sewer, trash collection, and other common services to each Unit.

Section 8.4 Personal Property for Common Use. The Association may acquire and hold for the use and benefit of all Owners tangible and intangible personal property and may dispose of the same by sale or otherwise, and the beneficial interest in any such property shall be deemed to be owned by the Owners in the same proportion as the Allocation of Ownership Interest in Common Areas. Such interest shall not be transferable except with the transfer of a Unit. A transfer of a Unit shall transfer to the transferee ownership of transferor's beneficial interest in such property without any reference thereto. Each Owner may use such property in accordance with the purpose for which it is intended, without hindering or encroaching upon the lawful rights of other Owners. The transfer of title to a Unit under the foreclosure of a lien thereon shall entitle the purchaser to the interest in such personal property associated with the foreclosed Unit.

Section 8.5 Rules and Regulations. The Association may adopt Rules and Regulations governing the use of the Units and of the Common Area, which Rules and Regulations shall be consistent with the rights and duties established in this Declaration. The Association may suspend any Owner's voting rights in the Association during any period or periods during which such Owner, its Occupants, or its Users fail to comply with such Rules and Regulations or with any other obligations of such Owner under this Declaration. The Association may also take judicial action, including, without limitation, injunctive action against any Owner to enforce compliance with such Rules and Regulations, or other obligations or to obtain damages for noncompliance, all to the extent permitted by law. The Association is hereby appointed as the Owners' representative for the purpose of enforcing compliance with such Rules and Regulations. Any outside building management company or building manager hired by the Association under Section 4.16 may also be appointed by the Association to serve as such Owner's representative, so long as the Association provides adequate supervision of the activities of such company or manager.

Section 8.6 Implied Rights. The Association may exercise any other right or privilege given to the Association expressly by this Declaration or by law, and every other right or privilege reasonably to be implied from the existence of any right or privilege given to the Association herein or reasonably necessary to effectuate any such right or privilege.

Section 8.7 Association Property. The Association may accept and exercise jurisdiction over all property, real and personal, conveyed free and clear of all liens and encumbrances to the Association by Declarant, including (a) easements for operation and maintenance purposes over any portion of the Project and (b) the Association Easements. For purposes of this Section, a nonexclusive easement, license or other contractual right to use in favor of the permitted users or any of them shall not be deemed a lien or encumbrance.

Section 8.8 Title to Property Upon Dissolution. The Association may convey, upon dissolution of the Association, the assets of the Association to an appropriate public agency or agencies to be used for purposes similar to those for which the Association was created, or to a nonprofit corporation, association, trust or other organization organized and operated for such similar purposes, provided however, that the ownership, use, management and operation of such assets which constitute any portion of the Project shall be subject to the terms of this Declaration.

ARTICLE IX ASSESSMENTS

Section 9.1 Agreement to Pay Assessment. Declarant, for each Unit owned by Declarant within the Project and for and as the developer of the Project and every part thereof, hereby covenants, and each Owner of any Unit by the acceptance of a deed, whether or not it be so expressed in the deed, shall be deemed to covenant and agree with each other and with the Association to pay to the Association those Periodic Assessments (defined below) levied by the Association for the purposes provided in this Declaration and Special Assessments for capital improvements and other matters as

provided in this Declaration. In the case of joint or co-ownerships this liability shall be joint and several. Such Assessments shall be fixed, established, and collected from time to time in the manner provided in this Article.

Section 9.2 Amount of Total Periodic Assessments. The total periodic assessments (“**Periodic Assessments**”) against all Units shall be based upon advance estimates of cash requirements by the Association to provide for the payment of all estimated expenses connected with the maintenance, operation, repair, improvement, replacement, management and operation of the Common Area and the Project, and the furnishing of electrical, water, sewer, trash collection, and other common services to each Unit, to the extent not separately metered or billed to a specific Unit, which estimates may include, among other things, expenses of management, taxes and special assessments, premiums for all insurance which the Association is required or permitted to maintain pursuant hereto, landscaping and care of grounds, common lighting, common heating, ventilation and air conditioning, water charges, trash collection, sewer service charges, repairs and maintenance, wages for the Association employees, reasonable legal and accounting fees, any deficit remaining from a previous period, the creation of a reasonable contingency reserve, surplus, or sinking fund, the provision of facilities, services and benefits to the Owners, the costs and expenses incurred by the Association pursuant to any declaration, easement or other matter of record encumbering the Common Area and/or the Project, and the administration and enforcement of the covenants, restrictions, reservations and easement created or set forth in the Association Documents, the operation of the Association, the levy and collection of the Assessments, the regulation and management of the Project, and any other expenses and liabilities which may be incurred by the Association for the benefit of the Owners under or by reason of this Declaration. In the event that the Association determines that an Owner’s use of the Common Area places an excessive and unreasonable burden on the other Owners and the Association in terms of the expenses set forth herein, the Association shall have the power to impose a Special Assessment against that Owner as set forth below.

Section 9.3 Apportionment of Periodic Assessments. The expenses incurred by the Association attributable to all of the Units shall be apportioned among all Owners of Units based on their respective Allocation of Ownership Interest in Common Areas.

Section 9.4 Notice of Periodic Assessments and Time Payment Thereof. The Association shall make Periodic Assessments, which Periodic Assessments shall be annually, quarterly, or monthly, as the Association shall from time to time determine. The Association may, in the Association’s discretion, send notice of Periodic Assessments to each Owner, which notice shall specify the amount of the Periodic Assessment and the date or dates of payment of the same. No payment shall be due less than fifteen (15) days after the said written notice has been given. Each Periodic Assessment shall bear interest at the rate equal to the Default Interest Rate from the date it becomes due and payable if not paid within thirty (30) days after such date and shall be subject to an automatic late charge of Fifty Dollars (\$50.00). Failure of the Association to give notice of the Periodic Assessment shall not affect the liability of any Owner for such Periodic

Assessment, but the date when payment shall become due in such a case shall be deferred to a date fifteen (15) days after such notice shall have been given.

Section 9.5 Special Assessments. In addition to the Periodic Assessments authorized by this Article, the Association may, at any time, levy a special assessment ("**Special Assessment**"). Special Assessments shall be authorized (a) to defray in whole or in part the cost of any construction or reconstruction, unexpected repair or replacement of the Project or any part thereof, or any other expense incurred or to be incurred as provided in this Declaration; or (b) where the Association has exercised its power (i) to incur expenses for maintenance and repair of any Unit or its appurtenant Limited Common Area if such maintenance or repair is necessary, in the opinion of the Association to protect the Common Area, or any other portion of the Project, (ii) to address an Owner's use of the Common Area in such a manner as to unreasonably cause the Association or the other Owners to incur costs and expenses that exceed their Allocated Share of the same or to cause them to subsidize the Owner's use of the Common Area, or (iii) to maintain or repair its Unit or appurtenant Limited Common Area if the Owner of said Unit have failed or refused to perform said within a reasonable time after written notice of the necessity of said maintenance or repair has been delivered by the Association to said Owner. Special Assessments pursuant to subsection (b) shall be levied against the Owner of any such Unit to pay for the cost of such maintenance and repair and any other costs or expenses arising out of or incident to such maintenance and repair and the Special Assessment therefor. A Special Assessment shall bear interest at the rate equal to the Default Interest Rate from the date it becomes due and payable if not paid within thirty (30) days after such date and shall be subject to an automatic late charge of Fifty Dollars (\$50.00).

Section 9.6 Lien for Assessments.

(a) All sums assessed to any Unit pursuant to this Article, together with interest thereon as provided herein, shall be secured by a lien on such Unit in favor of the Association upon recordation of a notice of assessment lien as herein provided. Such lien shall be superior to all other liens and encumbrances on such Unit except only for: (a) valid tax and special assessment liens on the Unit in favor of any governmental assessing authority; (b) to the extent required by law, a lien for all sums unpaid on any Mortgage which encumbers such Unit and which has been duly recorded in Ada County, Idaho, real estate records prior to the recordation of a notice of lien with respect to such Unit, including all unpaid obligatory advances to be made pursuant to such Mortgages and secured by the lien thereof in accordance with the terms of such instrument, to the extent required by law; and (c) labor or materialmen's liens, to the extent required by law. All other lien holders acquiring liens on any Unit after this Declaration shall have been recorded in said records shall be deemed to consent that such liens shall be inferior liens to future liens for Assessments as provided herein, whether or not such consent be specifically set forth in the instruments creating such liens.

(b) To create a lien for sums assessed pursuant to this Article, the Association may prepare a written notice of the assessment lien setting forth the amount of the Assessment, giving rise to the lien, the date due, the amount remaining

unpaid, the name of the record Owner of the Unit and a description of the Unit. Such notice shall be signed by the Association and may be recorded in the office of the Ada County Recorder of Ada County, Idaho. No notice of an assessment lien shall be recorded until there is a delinquency in payment of the Assessment. Such lien may be enforced by sale by the Association after failure of the Owner to pay such an Assessment in accordance with its terms, such sale to be conducted in the manner permitted by law in Idaho for the exercise of power of sale in deeds of trust or in any other manner permitted by law, including, without limitation, judicial foreclosure. The Owner shall be required to pay the costs and expenses of such proceeding, the costs and expenses of preparing and filing of the notice of assessment lien and all costs and expenses related thereto, including, without limitation, reasonable attorney fees. All such costs and expenses shall be secured by the lien being foreclosed. The Owner shall also be required to pay to the Association any Assessments against the Unit, which shall become due during the period of foreclosure. The Association shall have the right and power to bid at the foreclosure sale or other legal sale and to acquire, hold, convey, lease, rent, encumber, use, and otherwise deal with the same as the Owner thereof.

(c) A further notice stating the satisfaction and release of any such lien shall be executed by the Association and recorded in the Ada County, Idaho real estate records upon payment of all sums secured by a lien, which has been made the subject of a recorded notice of assessment lien.

(d) Any Person holding a lien on a Unit may pay, but shall not be required to pay, any amounts secured by the lien created by this Section, and upon such payment such Person shall be subrogated to all rights of the Association with respect to such lien, including priority.

(e) Without imposing any liability upon the Association for its failure to do so, the Association shall be entitled to report any unpaid Assessment remaining unpaid for longer than sixty (60) days after the same shall have become due to any encumbrancer of a Unit; provided, however, such encumbrancer first shall have furnished written notice of such encumbrance to the Association.

Section 9.7 Personal Obligation of Owner. The amount of any Periodic Assessment or Special Assessment against any Unit shall be the personal obligation of the Owner thereof to the Association. If permitted under applicable law, legal proceedings to recover a money judgment for such personal obligation shall be maintainable by the Association without foreclosure or waiver of the lien securing the same. No Owner may avoid or diminish such personal obligation by waiver of the use and enjoyment of any of the Common Area or by abandonment of the Owner's Unit.

Section 9.8 Statement of Account. Upon payment of a reasonable fee, not to exceed Fifty Dollars (\$50.00), and upon written request of any Owner, Mortgagee, prospective Mortgagee, or prospective purchaser of a Unit, the Association shall issue a written statement setting forth the amount of the unpaid Assessments, if any, with respect to such Unit, the amount of the current periodic Assessment, the date that such Assessment becomes or became due, and credit for advanced payments or prepaid

items, including, but not limited to, an Owner's share of prepaid insurance premiums, which statement shall be conclusive upon the Association in favor of Persons who rely thereon in good faith.

Section 9.9 Personal Liability of Purchaser for Assessments. Subject to the provisions of Section 9.8, a purchaser of a Unit shall be jointly and severally liable with the seller for all unpaid Assessments against the Unit up to the time of the grant or conveyance, without prejudice to the purchaser's right to recover from the seller the amount paid by the purchaser for such Assessments.

ARTICLE X SUB-ASSOCIATIONS

Section 10.1 Purpose of Sub-Associations. In recognition of the complex operational elements of the Project as set forth above, at the outset of the operation of the Project, Declarant does hereby create and organize certain Sub-Associations for the purposes of more accurately and effectively allocating responsibility for such Project elements. Additionally, in the event of the dividing of a Unit pursuant to a Sub-Declaration, a Sub-Association shall also be formed thereunder.

Section 10.2 Formation of Project Element Specific Sub-Associations. In furtherance of Section 1.5.4 above, Declarant does hereby organize the following Sub-Associations at the outset of the creation of the condominium:

Section 10.2.1 Centre Building Sub-Association. The Centre Building Sub-Association shall have as its Members, the Owners of Units 1F, 1G, 1H, 1J, 1K, 1L, 2B, 2C, 3B, 3C 4B, and 5B, or their Designated Tenants, to the extent that (a) a qualifying Designated Tenant exists and (b) the Owner has so delegated its rights as a Member to same. The Allocation of Interest in Common Area for the Centre Building Sub-Association shall be as set forth in Exhibit E-2, to the extent that such an allocation is required for purposes of tax assessment under Section 55-1514 of the Condominium Property Act and for purposes of liability as, provided by Section 15-1515 of the Condominium Property Act. For the purpose of complying with Section 55-1505(c) of the Condominium Property Act, Declarant has determined that the best way to determine the value of each Unit is to base it upon the schedule set forth in Exhibit E-2. Each Owner that is a Member of the Centre Building Sub-Association shall be entitled to the number of votes allocated to each Owner's Unit, as identified on Exhibit E-2.

Section 10.2.2 Clearwater Building Sub-Association. The Clearwater Building Sub-Association shall have as its Members, the Owners of Units 1A, 1B, 1C, 1D, 1E, 1F, 2A, 3A, 4A, 5A, 6A, 7A, 8A, 9A, and 10A, or their Designated Tenants, to the extent that (a) a qualifying Designated Tenant exists and (b) the Owner has so delegated its rights as a Member to same. The Allocation of Interest in Common Area for the Clearwater Building Sub-Association shall be as set forth in Exhibit E-3, to the extent that such an allocation is required for purposes of tax assessment under Section 55-1514 of the Condominium Property Act and for purposes of liability as, provided by Section 15-1515 of the Condominium Property Act. For the purpose of complying with Section 55-

1505(c) of the Condominium Property Act, Declarant has determined that the best way to determine the value of each Unit is to base it upon the schedule set forth in Exhibit E-3. Each Owner that is a Member of the Clearwater Building Sub-Association shall be entitled to the number of votes allocated to each Owner's Unit, as identified on Exhibit E-3.

Section 10.2.3 Unit A Sub-Association. The Unit A Sub-Association shall have as its Members, the Owners of Unit A, or its Designated Tenants, to the extent that (a) a qualifying Designated Tenant exists and (b) the Owner has so delegated its rights as a Member to same. The Allocation of Interest in Common Area for the US Bank Building Sub-Association shall be as set forth in Exhibit E-4, to the extent that such an allocation is required for purposes of tax assessment under Section 55-1514 of the Condominium Property Act and for purposes of liability as, provided by Section 15-1515 of the Condominium Property Act. For the purpose of complying with Section 55-1505(c) of the Condominium Property Act, Declarant has determined that the best way to determine the value of each Unit is to base it upon the schedule set forth in Exhibit E-4. Each Owner that is a Member of the Clearwater Building Sub-Association shall be entitled to the number of votes allocated to each Owner's Unit, as identified on Exhibit E-4.

Section 10.3 Powers of the Sub-Associations. The Centre Building Sub-Association, Clearwater Building Sub-Association, and the Unit A Sub-Association shall have all of the duties, rights and powers of the Association, in managing the interests of their respective Members for the portions of the Project so administered by the Association. The Sub-Associations shall, however, be at all times subordinate to the Association. In managing and operating the Sub-Associations, all provisions related to the governance of the Association shall be applicable to the Sub-Associations, and each Sub-Association shall perform its duties as if it were the Association. The Association shall coordinate with and delegate power to the Sub-Associations consistent with Section 1.5.4 above, provided, however, that the Association shall have the absolute discretion to assume power previously delegated to a Sub-Association in the event that the Sub-Association's performance materially threatens the maintenance, operation, and preservation of the Project.

Section 10.3.1 The Association may specifically delegate to the Sub-Association (a) responsibility for the maintenance and repair of the Common Area appurtenant to the Units that comprise the Sub-Association; (b) responsibility for insuring the Units that comprise the Sub-Association; and (c) any other power or responsibility which can reasonably be carried out by the Sub-Association without adversely impacting the Project.

Section 10.3.2 Subject to the limitation set forth below, the Sub-Associations shall be expressly delegated the following duties:

(a) The Sub-Associations shall have the right to exercise the powers set forth in Article XIII associated with Casualty Damage or Destruction as to the Units that comprise the Sub-Association;

(b) The Sub-Associations shall have the right to exercise the powers set forth in Article XIV associated with Obsolescence as to the Units that comprise the Sub-Association;

(c) The Sub-Associations shall have the right to exercise the powers granted the Association in the event of a partial condemnation of Units that comprise the Sub-Association pursuant to Article XV;

(d) The Sub-Associations shall have the obligation to maintain those Common Areas appurtenant to the Units that compromise the Sub-Association as well as Common Building Exterior and Structural Limited Common Areas appurtenant to the Units that compromise the Sub-Association as set forth in Section 4.7, provided, however, that the exterior surface plaza and walkway areas that are Common Areas, shall not be subject to maintenance by the Sub-Association, and shall always be maintained by the Association.

The powers and obligations conferred upon the Sub-Associations in this Section shall only be exercised by the Sub-Association to the extent these powers and obligations are solely applicable to the Units comprising the Sub-Association. The Association may withdraw the conferral of powers and obligations set forth herein, having given a Sub-Association notice of its deficiencies in performance and at least fifteen (15) day opportunity to cure such deficiencies if (a) any of the events or obligations set forth above affect Units in more than a single Sub-Association; (b) a Sub-Association fails to exercise the powers or fulfill the obligations conferred herein in a commercially reasonable manner consistent with similar properties in Boise, Idaho, to the detriment of other Units within the Project; or (c) the Association demonstrates that certain powers and obligations can be performed by the Association in a more cost effective manner. Prior to withdrawing any of the foregoing powers and obligations the Association shall provide reasonable notice to the Sub-Association and shall afford the Sub-Association a reasonable opportunity to address and rectify its deficiencies in the performance of its powers and obligations.

ARTICLE XI COVENANTS, CONDITIONS AND RESTRICTIONS

Section 11.1 Use of Units. The uses that are permitted of the Units shall be consistent with the provisions of this Declaration and any Sub-Declarations.

Section 11.2 Multimodal Center Use. The Multimodal Center will be operated within the VRT Units and appurtenant easements. As such, nothing in this Section or elsewhere in this Declaration shall limit or restrict the ability of the Owner of the VRT Units to operate a public transit facility within the VRT Units or appurtenant easements and nothing contained herein shall apply with the respect to noise emanating from the Multimodal Center in its operation as a transit center. The operation of the Multimodal Center shall be exclusively at the discretion of the Owner of the VRT Units, with access to the Multimodal Service Areas by the Multimodal Service Areas Accessing Parties occurring pursuant to the provisions of this Declaration, including the reservation of

easements and designation of Limited Common Areas as required to facilitate the integrated, yet separate operation of the Multimodal Center within the larger Project. Notwithstanding anything in this Declaration or elsewhere to the contrary, neither this Section, nor any other provision of this Declaration that would limit or restrict the ability of the Owner of the VRT Units to so operate a public transit facility may be amended or revised in any manner without the express written consent of the Owner of the VRT Units.

Section 11.3 Vehicles and Parking.

Section 11.3.1 No motor vehicle classed by manufacturer rating as exceeding three-quarter ton and no mobile home, trailer, detached camper or camper shell, boat or other similar equipment or vehicle may be kept or parked within the Parking Units or the Parking Areas, except such delivery and service trucks as are temporarily parked in locations designated by the Association for such purposes.

Section 11.3.2 No motor vehicle shall be constructed, repaired or serviced at the Project, except on a short-term emergency basis where such repairs are necessary to affect the removal of a disabled vehicle.

Section 11.3.3 Users shall have no right to use, any parking space located in the Project within the Parking Units or the Parking Areas, except by separate agreement or license with the Owner of same.

Section 11.3.4 No vehicle shall be parked or left on the Project subject to this Declaration other than designated parking spaces which shall be used for parking operable vehicles only and shall not be converted for living, recreational or business purposes, nor shall anything be stored in any parking area so as to prevent the parking of a motor vehicle thereon.

Section 11.4 Use of Common Area. Except as specifically set forth with respect to Limited Common Area, there shall be no obstruction of the Common Area, nor shall anything be stored on any part of the Common Area without the prior written consent of the Association. The Owners, their Occupants, and their Users may not use any Common Area in any manner that unreasonably interferes with, hinders or encroaches upon the rights of other Owners in and to the Common Areas.

Section 11.5 Prohibition of Damage and Certain Activities. Nothing shall be done or kept in any part of the Project which would result in the cancellation of the insurance on the Project or any part thereof or increase the rate of insurance on the Project or any part thereof over what the Association or any Owner would pay, but for such activity, without the prior written consent of the Association and each Owner. Nothing shall be done or kept in any part of the Project that would be in violation of any statute, rule, ordinance, regulation, permit, or other validly imposed requirement of any governmental body. No damage to or waste of the Common Area or any part thereof shall be committed by any Owner or any of Owner's Occupants or Users, and each Owner shall release the Association and indemnify and hold the Association and the other Owners harmless against all loss resulting from any such damage or waste caused by such Owner or such

Owner's Occupants or Users. No noxious, illegal, destructive, dangerous or offensive activity shall be carried on in any part of the Project. No Owner or such Owner's Occupants or Users shall create or permit a nuisance to exist on any portion of the Project within the ownership or control of same. Provided, however, that notwithstanding the foregoing no use or activity otherwise permitted by the City of Boise Zoning Ordinance shall be prohibited within the Project. The load on each floor shall not exceed the load specified in the original plans and specifications for the Project.

Section 11.6 Rules and Regulations. No Owner shall violate the Rules and Regulations for the use of that portion of the Project to which such Rules and Regulations apply. Any violation of any state, municipal or local law, ordinance or regulation pertaining to ownership, occupation or use of any property within the Project is hereby declared to be a violation of a restriction in this Declaration and subject to any or all of the enforcement procedures set forth below.

Section 11.7 Maintenance of Interiors. Consistent with Section 4.11 and Section 4.12 above, each Owner or Occupant shall keep the interior of such Owner's or Occupant's Unit, including, without limitations interior walls, windows, glass, ceilings, floors, and permanent fixtures and appurtenances thereto and the Limited Common Areas designated exclusively therefor, if any, in a clean, sanitary, and attractive condition and good state of repair. If certain Limited Common Areas are designated for use by multiple Units, then such Owners shall collectively maintain, clean, repair and generally keep in good order and operating condition the Limited Common Areas serving such Units.

Section 11.8 Alterations.

Section 11.8.1 Except as otherwise expressly provided in this Declaration, an Owner may not make (i) any improvement or alteration to a Common Area, or (ii) any improvement or alteration to its Unit that affects any Common Area or any other Unit, without the prior written consent of the Association and Owner of any affected Unit. No Owner shall do any work or make any alterations or changes that would jeopardize the soundness or safety of the Project without obtaining the prior written consent of the Association. No Owner shall do any work or make any alterations or changes which would reduce the value of the Project or impair any easement or hereditament, without in every case first obtaining the prior written consent of the Association. Without limiting the generality of the foregoing, an Owner may not, without the prior written consent of the Association, install or erect any improvement, mechanical system or fixture that either: protrudes beyond the boundaries of the Owner's Unit; or is located wholly outside the Owner's Unit (even if located within a Limited Common Area that is assigned to solely the Owner's Unit).

Section 11.8.2 Notwithstanding Section 11.8.1 above, initial construction of the Project may be carried out by Declarant or any Owner responsible for such initial construction without obtaining the prior written consent of the Association; provided, however, that all such initial construction shall be accomplished in accordance with plans

and specifications approved by Declarant prior to the commencement of such construction.

Section 11.9 Construction Work Generally. All Construction Work as defined below shall be conducted as follows:

Section 11.9.1 All construction, alteration, replacement or repair work undertaken upon any portion of a Unit or the Project ("**Construction Work**"), shall be accomplished in the most expeditious, diligent and speedy manner possible. Any Person undertaking Construction Work shall take all necessary measures to minimize any damage, disruption or inconvenience caused by the Construction Work to the Owner, Owner's Occupant, or Users of any affected Unit or the Project, and shall make adequate provisions for the safety and convenience of all Occupants and Users of the Project. Specifically, from and after the initial occupancy of any Unit, any Construction Work shall be conducted in a manner and during restricted hours so as to avoid interference with ingress and egress to and the quiet use and enjoyment of the Occupants and Users of the Project. An Owner shall coordinate and schedule any Construction Work with the Owner and the Owner's Occupant of any Unit that will be potentially impacted by such Construction Work to minimize such impact and not unreasonably interfere with or limit the operations of any such affected Unit. Notwithstanding the foregoing each Owner, however, taking title to a Unit from and after the recording of this Declaration shall be deemed to have acknowledged and agreed that due to the complexity of the Project, its mixed-use nature, and the interrelated elements of the Project that it shall reasonably coordinate with other Owners and their Occupants in the performance of Construction Work and that no Owner shall unreasonably object to or limit the performance of such Construction Work.

Section 11.9.2 Any Owner, Owner's Occupant, or User undertaking Construction Work shall promptly repair, at its own cost and expense, any and all damage caused thereby and shall restore the affected portion of the improvements upon which the Construction Work is performed to a condition equal or superior to the condition existing prior to beginning the Construction Work and shall pay all costs and expenses associated therewith and shall indemnify and hold all Owners, Occupants and Users harmless from any and all loss, cost, damages, liability, injury or expense (including, but without limitation, claims of lien for work or labor performed, and materials or supplies furnished in connection with Construction Work or the voiding or terminating of any existing warranty applicable to any item or element installed in the Project) caused by or arising out of the performance of the Construction Work. The foregoing limitation shall not, however, apply to the obligation to promptly repair, at its own cost and expense, any and all damage caused by the Owner as set forth above in the manner specified above.

Section 11.9.3 Except in the event of an emergency, Construction Work shall be undertaken only after giving the Association thirty (30) days' prior written notice of the Construction Work to be undertaken, the scope, nature and extent of the Construction Work, the duration of the work period, and the area in which the Construction Work is to be performed. Such notice shall include copies of any plans and specifications for the Construction Work to be undertaken.

Section 11.9.4 All Construction Work shall comply with the plans and specifications therefor approved under this Declaration, and with all applicable laws, ordinances, rules, regulations and other requirements of all governmental authorities, public bodies and other authorities having jurisdiction (such as public utilities), including, without limitation, environmental and zoning laws and building codes. The Person performing the Construction Work shall also secure all licenses and permits required therefor by said authorities. All Construction Work shall be performed in accordance with rules and regulations from time to time promulgated by the Association.

Section 11.10 Emergency Work. Notwithstanding any requirement for prior notice or approval contained in this Declaration, in the event of an emergency condition, any Occupant or User may undertake the necessary Construction Work to remedy any emergency condition, provided that such Occupant or User does so in good faith, gives notice thereof to the Association upon the occurrence of the emergency condition or as soon thereafter as possible, and otherwise conforms to the applicable provisions of this Article, to the extent feasible under the circumstances.

Section 11.11 Enforcement Responsibility. Without limitation upon its general powers, the Association shall be responsible for enforcement of all of the covenants of this Article with respect to all Construction Work performed within the Project.

Section 11.12 Signage. In the initial approval of the Project, Declarant obtained approval for a master sign plan for the Project ("**Project Sign Plan**"). Each Owner shall have the right to erect identification signs or similar signage identifying the business or names of the Occupants conducting business in the Unit on or within its Unit consistent with the Project Sign Plan, except that any sign(s) or signage constructed in or on a Unit which are visible from any Common Area must be approved by the City of Boise and the Association in writing prior to erecting such identification sign(s) or signage to ensure consistency with the Project Sign Plan. Without limiting the foregoing, no "For Sale" or For Rent" or similar signs which are visible from any Common Area shall not be displayed unless approved by the Association. Additionally, the Association may approve placement of signage upon the Common Area, including upon the exterior of the buildings on such terms and conditions as it may elect to impose upon the Association's exercise of its discretion in implementation of the Project Sign Plan. All placement of signage upon the Common Area including all exterior signage shall occur only upon the Association's review and approval and upon compliance with all governmental requirements and the Project Sign Plan. Notwithstanding the foregoing, each Owner by accepting a deed to a Unit herein is deemed to acknowledge that (a) at the time of approval for the Project, the entirety of the Project was within a district that imposed significant limitations and restrictions to the size, location, and number of signs for various elements of the Project; (b) the original Project Sign Plan was approved on December 1, 2014 by the City of Boise pursuant to a variance application, CVA14-00059, approving the Project signage plan; (c) any modification to the Project Sign Plan for any Unit will likely necessitate modification to CVA14-00059 from the City of Boise; and (d) that the Association may withhold approval of any future modification of the approved signage for any Unit, if the approval

of the same would adversely affect, limit, or modify any previously approved Project Sign Plan pursuant to CVA14-00059. Any Owner seeking such modification to the Project Sign Plan shall confer first with Declarant and the Association, and shall be solely responsible for obtaining approval of its signage and the manufacturing and installation of the same.

Section 11.13 Nuisances. No rubbish or debris of any kind shall be placed or permitted to accumulate, and no odors shall be permitted to arise from the Project or any Unit so as to render any portion of the Project unsanitary, unsightly, offensive, or detrimental to any other portion of the Project, any Unit, or to any Occupants. No noise or other nuisance shall be permitted to exist or operate upon any portion of the Project or any Unit so as to be offensive or detrimental to any other portion of the Project, any Unit or any Occupants. Without limiting the generality of any of the following provisions, no exterior speakers, horns, whistles, bells, or other sound devices (other than security systems used exclusively for security purposes) shall be located, used, or placed on any such portion of the Project or any Unit without the prior written approval of the Association. Provided, however, that notwithstanding the foregoing no use or activity otherwise permitted by the City of Boise Zoning Ordinance or any agreement between Declarant and the City of Boise shall be deemed to be a nuisance or shall be prohibited on the Project.

Section 11.14 Exterior Installations. Except as set forth in Section 4.13.7, no telecommunications equipment, television antennas, wiring, or installation of HVAC equipment, unless properly screened from view or contained within roof wells as part of the original construction of the Project, shall be installed on the exterior or roof of any building for the use of any Unit or be allowed to protrude through the walls, windows, or roof of any Building for the use of any Unit unless the prior written approval of the Association, which approval shall not be unreasonably withheld, delayed, or conditioned is secured, provided, however, that the Association may reasonably require Owners to share such exterior installations and the Association shall have no obligation to permit the placement of any exterior installation that unreasonably interferes with the Common Area or would have an adverse impact on the structure or mechanical systems serving the Project.

Section 11.15 Limitations on Noise and Amplification. In addition to the general provisions of Section 11.13 and Section 11.14 applicable to the operation of the various patios, balconies, and decks developed within the Project, as identified in Section 4.2.4, Section 4.2.5, and Section 4.2.6, and the specific provisions related to the operation of the Multimodal Center in Section 11.2, there shall be additional limitations on noise and amplification as set forth in this Section. No Owner, Owner's Occupant, or User shall permit noise from its Unit, patio, balcony, or deck, whether ambient or amplified, to unreasonably limit or interfere with the use and enjoyment of any adjacent Unit, Limited Common Area, or Common Area. It is recognized that as a mixed-use development, the Project has included a variety of uses and Units that will utilize amplified sound within Units as well as amplified sound on adjacent patios, balconies and decks. The Owners, Owner's Occupants and Users shall take such appropriate action as to minimize the impact of such noise emanating from such areas, including reducing the volume of such

noise, modifying the amplification systems, or improving sound insulation between adjacent Unit, Limited Common Area, or Common Area, as circumstances may dictate.

Section 11.16 Enforcement of Violations. No violation of the Declaration and/or the Rules and Regulations, inclusive of those items described above, shall be allowed. If any Owner, Owner's Occupants, or Users authorized by the Owner commits such violation, the Association may, in addition to any other legal remedies it may have, impose a Special Assessment upon such Owner of not more than Fifty Dollars (\$50.00) for each such violation for each day that such violation continues. Before invoking such Special Assessment, the Association shall give such Owner sixty (60) days' written notice to cure such violation and/or to be heard by the Association regarding the violation and any potential Special Assessment. If such violation is of a nature that it cannot be remedied within sixty (60) days, no Special Assessment shall be invoked so long as the Owner submits a remediation plan to the Association to remedy the violation within a reasonable time and such Owner diligently pursues such plan to completion. If an Owner violates the Rules and Regulation more than twice within any three (3) year period, regardless of whether such Rule and Regulation that has been violated is the same, the accrual of such Special Assessment shall begin three (3) days after the Association gives notice of such violation rather than sixty (60) days after such notice. Such additional Special Assessments may be collected and enforced in the same manner as any other Special Assessment under Article IX. Each remedy provided in this Declaration or by law shall be cumulative and not exclusive. The failure to enforce any of the provisions of this Declaration at any time shall not constitute a waiver of the right to enforce such provision thereafter.

Section 11.17 Owner's Responsibility for Acts of Others. Each Owner shall be responsible for compliance with, and any violation of, the provisions of the Association Documents and the resolutions of the Association, by its Occupants and Users.

Section 11.18 Indemnification. Each Owner shall be liable to the remaining Owners, Declarant and the Association for any damage to the Common Area or the Units of the other Owners that may be caused by the Owner, its Occupants and Users to the extent any such damage is not covered by insurance. Each Owner shall indemnify, defend and hold harmless each of the other Owners, Declarant and the Association from and against any claim of any person for personal injury or property damage occurring within the Unit of the indemnifying Owner, unless the injury or damage to which such indemnity would apply occurred by reason of the active negligence or willful misconduct of the party claiming indemnification. In the event of damage that does is not fully indemnified due to the limitation set forth above, the Association shall have the power to levy an Assessment as authorized pursuant to Article IX, as reasonably necessary to compensate for any unindemnified injury.

Section 11.19 Notice of Conveyance, Assignment or Encumbrance. Promptly after a conveyance of a fee simple interest in a Unit or portion thereof, the grantee shall furnish a copy of the conveyance deed to the Association. Promptly after an encumbrance of a fee simple interest in a Unit or portion thereof, the Owner shall furnish the Association with a copy of the Mortgage creating the encumbrance.

Section 11.20 Deliveries, Trash Removal and Other Services. By acceptance of a deed to a Unit, an Owner agrees that all deliveries and all trash removal services, and other such services to that Owner or its Unit other than removal of shredded sensitive paper and other storage devices shall be effected at a location or locations designated by the Association from time to time for such purposes. Unless otherwise directed by the Association, Owners of all Units and their Users shall place all trash and other waste from the Units in receptacles which are located in the Project and designated for that purpose. Owners shall not, and shall not permit their Users to litter. No burning of trash, garbage or other waste materials will be permitted at the Project.

Section 11.21 Exterior Storage. No Owner shall store any materials or items on or in any Common Area, other than those Common Areas designed for that purpose, such as storage lockers, and then only in strict accordance with the terms and conditions of the Rules and Regulations.

Section 11.22 Animals. No animals, livestock or poultry of any kind shall be raised, bred, or kept in or on the Property or in any Unit, except in accordance with the Rules and Regulations. Provided, however, that nothing contained herein shall prohibit service animals within this Project, as such term is defined in the American with Disabilities Act.

Section 11.23 Solid-Fuel Burning Devices. No solid-fuel burning devices, such as charcoal grills and wood burning stoves or fireplaces shall be used, kept or stored on the Project, without the prior approval of Declarant, or if after the Declarant Control Period, then the Association and the installation of appropriate air scrubbers to ensure that there is no damage to or additional maintenance of the Project as a result of such.

Section 11.24 Disclosures Regarding Rentals. The Association may regulate, limit, or prohibit rentals of Units to tenants whose use would violate any provision of this Declaration, result in a violation of applicable laws, ordinances, regulations and rules of governmental and quasi-governmental authorities with jurisdiction, or likely result in objectionable noise, odors, or nuisances that would impact other occupants of the Project. All such regulations, limitations or prohibits shall be applied in a nondiscriminatory manner.

Section 11.24.1 The Owner shall require its tenant to comply with all of the terms and conditions of the Declaration and Bylaws;

Section 11.24.2 The Owner shall require its tenant to not allow or commit any nuisance, waste, unlawful or illegal act upon the Project; and

Section 11.24.3 The Owner shall require its tenant to abate any nuisance, waste, unlawful or illegal activity upon the premises as identified on the Association and the Owner shall acknowledge that the Association shall be entitled to exercise all of the Owner's rights and remedies under the lease agreement to do so.

Section 11.24.4 Owners of a Unit shall from time to time, upon request by Declarant and/or the Association provide the name, address, and telephone number of all Occupants, or subtenants, as well as a copy of the written lease agreement between the Owner and its Occupant, and any subtenants. The Association shall have the right and the obligation to enforce compliance with the Declaration and the Bylaws against any Owner and/or Occupant, or any subtenant, and shall have available to it all rights and remedies available in law or equity to enforce this Declaration, including any right or remedy as a third party beneficiary under any lease agreement, to enforce such compliance.

ARTICLE XII INSURANCE

Section 12.1 Types of Insurance. The Association shall obtain and keep in full force and effect at all times the following insurance coverage provided by companies duly authorized to do business in Idaho. The provisions of this Article shall not be construed to limit the power of authority of the Association to obtain and maintain insurance coverage in addition to any insurance coverage required hereunder in such amounts and in such forms as the Association may deem appropriate from time to time. In order to facilitate the providing and maintaining of adequate and proper insurance, it is contemplated that Declarant may contract for blanket insurance coverage covering the Project as contemplated by this Article prior to or concurrently with the first conveyance of a Unit. Any obligation or commitment for the payment of premiums or expenses otherwise incurred by Declarant under any such blanket policy or coverage, whether or not the same is also a personal obligation of the purchaser or purchasers of any Unit, shall become an obligation of the Association and shall be paid for out of Association funds.

Section 12.1.1 Property/Casualty Insurance. The Association shall obtain insurance on the Project to provide coverage in the event of damage or destruction from the casualty against which such insurance is obtained, together with an agreed amount or similar endorsement sufficient to remove any coinsurance requirement in the Property coverage, all in the manner reasonably deemed appropriate by the Association. Such insurance shall be in an amount of the full replacement value of: (a) the Common Area; (b) the "shell" finish of any unit including all demising walls and storefronts, all doors, locks, plumbing and electrical fixtures and HVAC equipment and fixtures (but without floor, wall or window coverings, paint, or finish, without built-in fixtures such as cabinets or file systems, and without special equipment used by the Occupant and wiring, plumbing and HVAC systems required to support such special equipment); (c) utilities to the core of the Common Area on the floor; and (d) an amount equal to forty dollars (\$40.00) per rentable square foot (as increased by the Association at its reasonable judgment from time to time to reflect increases in costs) to finish interior fixtures, utility and HVAC systems and other improvements within the Units. Such insurance must be all risk coverage or include express coverage for fire and extended coverages, including vandalism and malicious mischief; war risk insurance and earthquake coverage shall be added by endorsement or separate policy if available and if deemed appropriate by the

Association and can be obtained at rates deemed reasonable by the Association and/or the applicable Mortgagee, and such other risks and hazards against which the Association shall deem it appropriate to provide insurance protection. The Association may comply with the above requirements by the purchase of blanket coverage and may elect such "deductible" provisions as in the Association's opinion are consistent with good business practice.

Section 12.1.2 Public Liability and Property Damage Insurance. The Association shall purchase broad-form, commercial general liability coverage in such amounts and in such forms as the Association deems advisable to provide adequate protection identifying (1) as a named insured the Association, any Mortgagee with a lien on a majority of the Units in the Condominium or a majority of the square footage of a building and insuring each Mortgagee with a secured lien on the Units as an additional insured without their having to be named in the coverage; (2) as named insureds, the Owners of all Units and their Designated Tenants; and (3) as additional insureds Ada County Highway District, Capital City Development Corporation, and the owners of certain adjoining and subsurface properties that are the subject of additional agreements imposing mutual ongoing obligations. The amount of such commercial General Liability Coverage shall be at least Two Million Dollars per occurrence and Five Million Dollars in the aggregate. Coverage shall include, without limitation, liability for personal injuries, operation of automobiles on behalf of the Association, and activities in connection with the ownership, operation, maintenance, and other use of the Project. All liability coverages shall expressly waive all contributory negligence or acts by the Association or its members from limiting or invalidating any coverage.

Section 12.1.3 Worker's Compensation and Employer's Liability Insurance. The Association shall purchase worker's compensation and employer's liability insurance and all other similar insurance in respect to employees of the Association in the amounts and in the forms now or hereafter required by law.

Section 12.1.4 Fidelity Insurance. The Association shall purchase, in such amounts and in such forms as the Association shall deem appropriate, coverage against dishonesty of employees, destruction or disappearance of money or securities, and forgery. Such coverage limits shall be equal to not less than nine (9) months of Association Assessments to the Unit Owners for said period.

Section 12.1.5 Other. The Association may obtain insurance against such other risks of a similar or dissimilar nature as the Association shall deem appropriate with respect to the Project, including any personal property of the Association located thereon.

Section 12.1.6 Coordination of Coverage. All insurance coverage under this Declaration and any Sub-Declaration shall be coordinated by the Association and any Sub-Associations to ensure that the purposes of this Section are fully satisfied, providing the coverages required hereunder, while doing so in as cost effective a manner for the benefit of the Association, the Sub-Associations, the Owners of all Units, and the identified additional insureds and named insureds. It is the intention of Declarant in creating and imposing these rights that adequate insurance be maintained as set forth

herein, in a cost effective manner, in a comprehensive insurance regime for the entirety of the Project, including parcels that may be assembled and incorporated hereafter.

Section 12.2 Form. Property/Casualty insurance shall be carried in a form or forms naming the Association as trustee for the Owners, which policy or policies shall specify the interest of each Unit Owner (Owner's name, Unit number and the appurtenant undivided interest and/or share in the Common Area), and which policy or policies shall provide a standard loss payable clause providing for payment of insurance proceeds to the Association as trustee for the Owners and for the respective First Mortgagees which from time to time shall give notice to the Association of such First Mortgage, such proceeds to be used in accordance with this Declaration. Upon written request, the Association shall furnish to each Owner any First Mortgagee with a secured lien on a majority of the Units and to Declarant a true copy of such policy, together with a certificate identifying the interest of the Owner and said First Mortgagee. All policies of insurance obtained by the Association shall provide for a waiver of subrogation by the insurers as to claims against the Association, the Board of Directors, Declarant, employees and agents of the Association, and each Mortgagee of any Unit and shall provide that any "no other insurance" clause in the insurance policy shall exclude any policies of insurance maintained by any Owner or Mortgagee and that the insurance policy shall not be brought into contribution with insurance maintained by any Owner or Mortgagee.

Public liability and property damage insurance shall name the Association as the insured, as trustee for the Owners, and shall protect each Owner against liability for acts of the Association in connection with the ownership, operation, maintenance, or other use of the Project.

Section 12.3 Insurance Proceeds. Pursuant to the Deed of Trust to secure the construction loan for the Project, such Mortgagee will receive, hold and administer all property-casualty-insurance proceeds during the term of said loan. Thereafter, the Association shall receive the proceeds of any casualty insurance payments received under policies obtained and maintained pursuant to this Article. The Association shall apportion the proceeds to the portions of the Project, which have been damaged and shall determine the amount of the proceeds attributable to damage to the Common Area. To the extent that reconstruction is required herein, the proceeds shall be used for such purpose. To the extent that reconstruction is not required herein and there is a determination that the Project shall not be rebuilt, the proceeds shall be distributed in the same manner herein provided in the event of sale of obsolete Units. Each Owner and each Mortgagee shall be bound by the appointments of damage and of the insurance proceeds made by the Association pursuant hereto.

Section 12.4 Owner's Own Insurance. Each Owner shall obtain insurance at the Owner's own expense providing coverage upon the Owner's Unit for all floor, wall or window coverings or built-in fixtures such as cabinets or file systems, the Owner's personal property, furniture and furnishings located in the Owner's Unit, for the Owner's personal liability, and covering such other risks as the Owner may deem appropriate, but each such policy shall provide that it does not diminish the insurance carrier's coverage for liability arising under insurance policies which the Association obtains pursuant to this

Article. If any Owner violates this provision, any diminution in insurance proceeds otherwise payable under the policies, described in this Section that results from the existence of such other insurance will be chargeable to the Owner who acquired such other insurance, and the Owner shall be liable to the Association to the extent of any such diminution. In addition, any improvements made by an Owner within such Owner's Unit may be separately insured by the Owner, but such insurance shall be limited to the type commonly known as "tenant's improvements" insurance.

ARTICLE XIII CASUALTY DAMAGE OR DESTRUCTION

Section 13.1 Affects Title. Title to each Unit is hereby made subject to the terms and conditions hereof which bind Declarant and all subsequent Owners, whether or not it is so expressed in the deed by which any Owner acquires such Owner's Unit.

Section 13.2 Association as Agent. All of the Owners irrevocably constitute and appoint the Association by and through the Association's elected officers as the Owners' true and lawful attorney-in-fact in the Owner's name, place, and stead for the purpose of dealing with the Project upon its damage or destruction as hereinafter provided. Acceptance by any grantee of a deed from Declarant or from any Owner shall constitute such appointment.

Section 13.3 General Authority of the Association. As attorney-in-fact, the Association by and through the Association's elected officers shall have full and complete authorization, right and power to make, execute, and deliver any contract, deed or other instrument with respect to the interest of an Owner which may be necessary or appropriate to exercise the powers herein granted to the Association. Repair and reconstruction of the Project as used in the succeeding Sections mean restoring the Project to substantially the same vertical and horizontal boundaries as before. Except upon the occurrence of the circumstances set forth in Section 13.8, the proceeds of any insurance collected shall be utilized by the Association to repair and reconstruct the Project.

Section 13.4 Estimate of Costs. As soon as practicable after an event causing damage to or destruction of any part of the Project, the Association shall obtain estimates that the Association deems reliable and complete of the costs of repair or reconstruction of that part of the Project damaged or destroyed.

Section 13.5 Repair or Reconstruction. As soon as practicable after receiving the estimates, the Association shall diligently pursue to completion the repair or reconstruction of that part of the Project damaged or destroyed. The Association may take all necessary or appropriate action to effect repair or reconstruction, as attorney-in-fact for the Owners, and no consent or other action by any Owner shall be necessary in connection therewith. Such repair or reconstruction shall be in accordance with the original plans and specifications of the Project or may be in accordance with any other plans and specifications the Association may approve; provided, however, in such latter event in the absence of the consent of each affected Owner, the number of cubic feet and

the number of square feet of any Unit may not vary by more than five percent (5%) from the number of cubic feet and the number of square feet for such Unit, as originally constructed pursuant to such original plans and specifications for the Project, and the Project shall be substantially the same as prior to damage or destruction.

Section 13.6 Funds for Reconstruction. The proceeds of any insurance collected shall be available to the Association for the purpose of repair or reconstruction. If the proceeds of the insurance are insufficient to pay the estimated or actual cost of such repair or reconstruction, the Association, pursuant to Article IX hereof, may levy in advance a Special Assessment sufficient to provide funds to pay such estimated or actual costs of repair or reconstruction. Such Special Assessment shall be allocated and collected as provided in Article IX. Further levies may be made in like manner if the amounts collected prove insufficient to complete the repair or reconstruction.

Section 13.7 Disbursement of Funds for Repair or Reconstruction. The insurance proceeds held by the Association and the amounts received from the Special Assessments provided for in Section 13.6 constitute a fund for the payment of cost or repair and reconstruction after casualty. It shall be deemed that the first money disbursed in payment for the cost of repair or reconstruction shall be made from insurance proceeds; if there is a balance after payment of all costs of such repair or reconstruction, such balance shall be distributed to the Owners in proportion to the contributions by each Owner pursuant to the Special Assessments by the Association under Section 13.6 of this Declaration.

Section 13.8 Decision Not to Rebuild. If the Owners representing eighty percent (80%) of the votes, agree not to rebuild as provided herein within one hundred (100) days after the casualty, the Project shall be sold and the proceeds distributed to the Owners according to their respective Allocation of Ownership Interest in Common Areas.

Section 13.9 Casualty to a Unit. To the extent that the Association is not obligated to make any such repairs or replacements, each Owner shall repair or replace any damage to or destruction to the interior of its Unit, as soon as is reasonably practical after such damage or destruction occurs.

ARTICLE XIV OBSCOLESCENCE

Section 14.1 Adoption of a Plan. The Owners may agree that the Project is obsolete and adopt a written plan for renewal and reconstruction. Written notice of adoption of such plan shall be given to all Owners. Such plan shall be recorded in the Ada County, Idaho, real estate records. Any agreement pursuant to this Section shall require the vote of eighty percent (80%) of the votes of the Owners of Units that then exist.

Section 14.2 Payment of Renewal and Reconstruction. The expense of renewal or reconstruction shall be payable by all of the Owners as Assessments against their respective Units. These Assessments shall be levied in advance pursuant to Article IX,

hereof, and shall be allocated and collected as provided in that Article. Further levies may be made in like manner if the amounts collected prove insufficient to complete the renewal and reconstruction.

Section 14.3 Sale of Obsolete Units. The Owners may agree that the Units are obsolete and that the Project should be sold. In such instance, the Association shall forthwith record a notice setting forth such fact or facts, and mailing the same to each Owner of a Unit and to each First Mortgagee by receipted delivery (either overnight courier or certified US Mail) and upon the recording of such notice by the Association, the Project shall be sold by the Association as attorney-in-fact for all the Owners free and clear of the provisions contained in this Declaration, the Parcel Map and the Bylaws. The sale proceeds shall be apportioned among the Owners in proportion to their respective Allocation of Ownership Interest in Common Areas and such apportioned proceeds shall be paid into separate accounts, each account representing one (1) Unit. Each such account shall remain in the name of the Association and shall be further identified by the Unit designation and the name of the Owner. From each separate account, the Association, as attorney-in-fact, shall use and disburse the total amount of such accounts without contribution from one account to the other, first to Mortgagees and other liens, and the balance remaining to each respective Owner. Any agreement pursuant to this Section shall require the vote of eighty percent (80%) of the votes of the Owners of Units that then exist.

Section 14.4 Distribution of Excess. In the event amounts collected pursuant to Section 14.1 are in excess of the amounts required for renewal and reconstruction, the excess shall be returned to the Owners by the Association by a distribution to each Owner in an amount proportionate to the respective amount collected from each such Owner.

ARTICLE XV CONDEMNATION

Section 15.1 Consequences of Condemnation. If, at any time or times during the continuance of the Unit ownership pursuant to this Declaration, or any part of the Project shall be taken or condemned by any public authority or sold or otherwise disposed of in lieu of or in avoidance thereof, the following provisions shall apply.

Section 15.2 Proceeds. All compensation, damages or other proceeds therefrom, the sum of which is hereinafter called the “**condemnation award**,” shall be payable to the Association.

Section 15.3 Complete Taking. In the event that the entire Project is taken or condemned, or sold or otherwise disposed of in lieu of or in avoidance thereof, the Unit ownership pursuant hereto shall terminate. The condemnation award shall be apportioned among the Owners in proportion to the respective Allocation of Ownership Interest in Common Areas as set forth in Exhibit E-1; provided that if a standard different from the value of the Project as a whole is employed to measure the condemnation award in the negotiation, judicial decree or otherwise, then in determining such shares the same standard shall be employed to the extent it is relevant and applicable, and each Owner

shall have the right to seek alternative judicial apportionment of such proceeds through a declaratory judgment proceeding upon demonstration of a more equitable allocation of the values of the Units.

On the basis of the principal set forth in the last preceding paragraph, the Association shall as soon as practicable determine the share of the condemnation award to which each Owner is entitled. Such shares shall be paid into separate accounts and disbursed as soon as practicable in the same manner provided in Section 14.3 of this Declaration.

Section 15.4 Partial Taking. In the event that less than the entire Project is taken or condemned, or sold, or otherwise disposed of in lieu of or in avoidance thereof, the Unit ownership and Condominium regime hereunder shall not terminate. Each Owner shall be entitled to a share of the condemnation award to be determined in the following manner: as soon as practicable, the Association shall, reasonably and in good faith, allocate the condemnation award between compensation, damages or other proceeds, and shall apportion the amounts so allocated among the Owners as follows: (a) the total amount allocated to taking of or injury to the Common Area shall be apportioned equally among the Owners; (b) the total amount allocated to severance damages shall be apportioned to those Units which were not taken or condemned or only partially taken; (c) the respective amounts allocated to the taking of or injury to a particular Unit or the taking of an entire Unit and/or improvements an Owner has made within its own Unit shall be apportioned to the particular Unit involved; and (d) the total amount allocated to consequential damages and any other takings or injuries shall be apportioned as the Association determined to be equitable in the circumstances and to assure as much as possible that the Project is restored to a useable condition. If an allocation of the condemnation award is already established in negotiation, judicial decree, or otherwise, then in allocating the condemnation award the Association shall employ such allocation to the extent it is relevant and applicable. Distribution of apportioned proceeds shall be made in the same manner provided in Section 14.3 of this Declaration.

Section 15.5 Reorganization. In the event a partial taking results in the taking of a complete Unit, the Owner thereof automatically shall cease to be a Member of the Association. Thereafter, the Association shall reallocate the Allocation of Ownership Interests in Common Areas, Allocation of Insurance Obligations and voting rights determined in accordance with this Declaration according to the same principles employed in this Declaration at its inception, and shall submit such reallocation to the Owners of the remaining Units for amendment of this Declaration as provided herein.

Section 15.6 Reconstruction and Repair. Any reconstruction and repair necessitated by condemnation shall be governed by the procedures specified in Article XIII above.

**ARTICLE XVI
REVOCATION AND AMENDMENT**

Section 16.1 Revocation or Amendment. Except where specifically provided for a higher percentage, this Declaration shall not be revoked, nor shall any of the provisions herein be amended, except upon the affirmative vote or consent of Declarant, during the Declarant Control Period and the Owners holding at least eighty percent (80%) of the votes. Any such revocation or amendment shall be binding upon every Owner and every Unit whether the burdens thereon are increased or decreased by any such amendment and whether or not the Owner of each and every Unit consents thereto. No revocation or amendment shall be effective unless and until the same is recorded in the official records of Ada County, Idaho.

Section 16.2 Power of Attorney for Purposes of Amendment of Parcel Map, Declaration, and Exhibits. All of Owners hereby irrevocably constitute and appoint Declarant through Declarant's authorized officer as the Owners' true and lawful attorney-in-fact in the Owner's name, place, and stead for the purpose of amending the Parcel Map and this Declaration to conform it to the actual configuration of the Project and the Units upon completion of construction of the Project, including amendment to depict easements within the Project, amendment of this Declaration to modify Exhibit D (Parcel Map) and amendment of this Declaration to modify Exhibits E-1, E-2, E-3, or E-4 to reflect the Improvements actually constructed (Allocation of Ownership Interest in Common Area and voting rights for the Association and designated Sub-Associations) attached hereto. Acceptance by any grantee of a deed from Declarant or from any Owner shall constitute such appointment. As attorney-in-fact, Declarant by and through its authorized officer shall have full and complete authorization, right and power to make, execute, and deliver any contract, deed or other instrument with respect to the interest of an Owner which may be necessary or appropriate to exercise the powers herein granted to Declarant. This power of attorney shall terminate upon the tenth (10th) anniversary of the recording of this Declaration.

Section 16.3 Limitation on Amendment. No amendment of this Declaration shall be effective to limit the use of any Unit under any commercial lease absent the affirmative consent of the Owner of such Unit or to otherwise prohibit a lawful use of said Unit. Notwithstanding the foregoing, any amendment approved pursuant to Section 16.1 for any purpose other than the use of a Unit, shall be binding upon every Owner and every Unit, whether the burdens thereon are increased or decreased thereby, and whether or not the Owner of each and every Unit consents thereto.

Section 16.4 Impact of Reversion on Unit B2. Unit B2 consists of subsurface property previously acquired by VRT from ACHD. Unit B2 is subject to certain reversionary rights retained by ACHD. If the reversionary interests retained by ACHD are triggered and ACHD reenters and takes possession of Unit B2 and desires that Unit B2 revert to its prior use and condition, then Unit B2 shall be severed from the Condominium with out any further action and shall be deemed to be no longer part of the Condominium. The Association and the Owner of Unit B1 shall work with ACHD to ensure that appropriate demarcation and demising occurs between Units B2 and B1. Declarant

hereby reserves the rights to effectuate the provisions of this Section and further reserves and declares in favor of the Association, Unit B2 and Unit B1 the easements necessary to effectuate this.

ARTICLE XVII MORTGAGEE PROTECTIONS

Section 17.1 Benefit of Mortgagees. This Article establishes certain standards and covenants which are for the benefit of Mortgagees. This Article is supplemental to, and not in substitution of, any other provisions of this Declaration, but in the case of any conflict, this Article shall control.

Section 17.2 Notice of Actions. If requested in writing to do so, the Association shall endeavor to give, (but in no event shall be liable for failure to do so) prompt written notice of the following to each Eligible Mortgagee:

(a) any condemnation loss or any casualty loss which affects a material element or portion of the Common Areas or any Unit in which an interest is held by the Eligible Mortgagee;

(b) any delinquency in the payment of Assessments which remains uncured for sixty (60) days by an Owner whose Unit is encumbered by a Eligible Mortgage held by such Eligible Mortgagee;

(c) any lapse, cancellation, or material modification of any insurance policy or fidelity bond maintained by the Association;

(d) any proposed action which would require the consent of First Mortgagees as set forth in this Article or otherwise in this Declaration; and

(e) any judgment rendered against the Association; and

(f) any determination or vote involving obsolescence of any portion of the Project, including any building within the Project, or any matter pursuant to Article XIV of this Declaration, or any vote to terminate or alter the ownership structure of the Association or the Condominium regime.

Section 17.3 Consent Required. Notwithstanding anything to the contrary contained in this Declaration, each Eligible Mortgagee may object to any action for which it is entitled to receive notice pursuant to Section 17.2 above if the collateral secured by its lien has been damaged or impaired unless such Eligible Mortgagee grants its written consent or its lien is paid off in full; and the Association may not take any of the following actions without the consent of First Mortgagees holding liens on not less than sixty-seven percent (67%) of the Units in the Condominium (based on the Allocated Interest in Common Area attributable to each Unit covered by a First Mortgage):

(a) by act or omission seek to abandon or terminate the Project, Condominium or Association except after condemnation or substantial casualty in which the lien of each Eligible Mortgagee is paid in full;

(b) except as provided herein for condemnation, casualty and the exercise of Special Declarant Rights, change the Allocation of Ownership Interest in Common Areas, Allocated Shares or votes in the Association of any Unit;

(c) further divide or modify, partition, or relocate the boundaries of any Unit, except as permitted with respect to Special Declarant Rights or pursuant to Section 4.18.4;

(d) abandon, divide, partition, encumber, sell, or transfer the Common Areas (the granting of easements for public utilities or for other purposes provided for in this Declaration shall not be deemed transfers so long as the location of the easement or use does not materially limit or eliminate the use of the space by the Association or the Unit Owner, as the case may be);

(e) use property insurance proceeds for losses to any portion of the Common Areas for other than repair, replacement, or reconstruction of such Common Areas, except as provided by this Declaration; or

(f) merge the Project with any other common interest community.

Section 17.4 Notice of Objection. Unless an Eligible Mortgagee or First Mortgagee provides the Association with written notice of its objection, if any, to any proposed amendment or action requiring notice to or approval of such Eligible Mortgagees or First Mortgagees, as the case may be, within sixty (60) days following the receipt of notice of such proposed amendment or action, the First Mortgagee will be deemed conclusively to have consented to or approved the proposed amendment or action.

Section 17.5 First Mortgagee's Rights.

(a) First Mortgagees, jointly or singly, may pay taxes or other charges which are in default and which may or have become a charge against any of the Common Areas or improvements thereon, and may pay overdue premiums on hazard insurance policies, for the Common Areas. First Mortgagees making such payment shall be owed immediate reimbursement from the Association.

(b) A First Mortgagee shall be entitled to cure any delinquency of the Owner of a Unit encumbered by its First Mortgage in the payment of Assessments. In that event, the First Mortgagee shall be entitled to obtain a release from the lien imposed or perfected by reason of such delinquency.

Section 17.6 Limitations on First Mortgagee's Rights. No requirement for approval or consent by a First Mortgagee provided in this Article shall operate to: (a) deny or

delegate control over the general administrative affairs of the Association by the Owners; (b) prevent the Association from commencing, intervening and/or settling any legal proceeding; or (c) prevent any insurance trustee or the Association from receiving and distributing any insurance proceeds in accordance with the requirements of the Article XIII above.

Section 17.7 Declarant Rights. No provision or requirement of this Article shall apply to any Special Declarant Rights or other rights or options reserved to Declarant in this Declaration.

ARTICLE XVIII ENFORCEMENT AND REMEDIES

Section 18.1 Enforcement.

Section 18.1.1 Each provision of this Declaration with respect to the Association or the Common Areas or the consent and approval of any applicable Eligible Mortgagee or First Mortgagee, as the case may be, shall be enforceable by Declarant or by any Owner or by the applicable Mortgagee by a proceeding for injunctive relief.

Section 18.1.2 Each provision of this Declaration with respect to an Owner or a Unit shall be enforceable by Declarant or by the Association by: (i) a proceeding for injunctive relief; (ii) a suit or action to recover damages; or (iii) in the discretion of the Association, for so long as any Owner fails to comply with any such provisions, exclusion of such Owner and its Occupants from the use of any Common Areas and from participation in any Association affairs.

Section 18.1.3 In addition to the rights and remedies described in Section 18.1.2 above, if an Owner fails to strictly perform or observe any covenant or condition to be performed or observed by such Owner under this Declaration or any other Association Document, the Association shall have the following rights and remedies:

(i) The Association may, but is not obligated to, cure such failure to comply at the Owner's sole cost and expense. If the Association cures any such failure to comply, the Owner shall pay to the Association the amount of all costs incurred by the Association in connection therewith within thirty (30) days after the Owner receives a written invoice therefor from the Association.

(ii) The Association may, after notice and an opportunity to be heard, fine the Owner, as a Special Assessment, in accordance with Section 9.5 above.

(iii) With respect to an Owner's failure to pay an installment of any Assessment, the Association may accelerate the due date for the payment of the full amount of the Assessment.

(iv) The Association shall have all other rights and remedies available to it under this Declaration, at law or in equity.

Section 18.1.4 All rights and remedies of the Association shall be cumulative and the exercise of one right or remedy shall not preclude the exercise of any other right or remedy.

Section 18.2 Attorneys' Fees. In the event of any dispute under or with respect to this Declaration or any other Association Document, the prevailing party shall be entitled to recover from the non-prevailing party all of its costs and expenses in connection therewith, including, without limitation, the fees and disbursements of any attorneys, accountants, engineers, appraisers or other professionals engaged by the prevailing party.

Section 18.3 Non-Waiver. Failure by Declarant, the Association or any Owner to enforce any covenant, condition, restriction, reservation, easement, Assessment, charge, lien or other provision of this Declaration or any other Association Document shall in no way be deemed to be a waiver of the right to do so thereafter.

ARTICLE XIX SPECIAL DECLARANT RIGHTS

Section 19.1 Special Declarant Rights. Declarant reserves to itself the rights set forth in Article III as well as those additional rights set forth as follows in this Article XIX.

Section 19.2 Improvements. Declarant hereby reserves for itself, its successors and assigns the right, but is not obligated, to construct: any Improvements shown on the Parcel Map and any other buildings, structures or improvements that Declarant desires to construct on the Real Property, or any other real estate owned by Declarant, regardless of whether the same ever become part of the Project. Provided, however, that if Declarant does undertake such additional construction of Improvements, it shall accordingly adjust the Allocated Share of the Units as necessary.

Section 19.3 Development Rights. Subject to the terms of this Declaration, Declarant hereby reserves for itself and its successors and assigns the right to create easements, permits, licenses and other property rights and reservations as in connection with the development of the Project, provided that Declarant will not materially modify the visibility of or public access to any Unit from the rest of the Project, provided, however, that all Owners by accepting a deed to a Unit shall be deemed to acknowledge that the property immediately adjoining the Project commonly known as 8th Street and the Grove Plaza are currently owned by certain other entities over which Declarant has no control and may be subject to future modifications, changes and development.

Section 19.4 Sales Offices and Models. Notwithstanding anything in the Declaration to the contrary, during the Declarant Control Period, Declarant shall have the following rights in furtherance of any sales, promotional, or other activities designed to accomplish or facilitate the sale or leasing of all Units owned or to be owned by Declarant:

Section 19.4.1 Declarant shall have the right to maintain a reasonable number of promotional, advertising, and/or signs, banners, or similar devices at any place or places on the Project, but any such device shall be of a size and in a location as is reasonable and customary.

Section 19.4.2 Declarant shall have the right from time to time to locate or relocate any signs, banners, or similar devices, but in connection with such location or relocation shall observe the limitations imposed by the preceding portion of this Section. Within a reasonable period after the end of the Declarant Control Period, Declarant shall have the right to remove from the Project any signs, banners, or similar devices and any separate structure or facility that was placed on a portion of the Real Property for the purpose of aiding Declarant's sales efforts. Any signs, banners, or similar devices, and any separate structure or facility for aiding Declarant's sales efforts shall comply with applicable zoning ordinances.

Section 19.5 Exercising Special Declarant Rights. Declarant may exercise its Special Declarant Rights at any time prior to the expiration of the Declarant Control Period. Declarant may exercise its Special Declarant Rights in any order, and no assurance is given as to the order in which Declarant will exercise its Special Declarant Rights. If Declarant exercises any Special Declarant Right with respect to any portion of the Project, Declarant may, but is not obligated to, exercise that Special Declarant Right with respect to any other portion of the Project. Notwithstanding anything to the contrary contained in this Declaration, Declarant may exercise any Special Declarant Right described in this Article and any other right reserved to Declarant in this Declaration, without the consent of the Association or any of the Owners.

Section 19.6 Interference with Special Declarant Rights. Neither the Association nor any Owner may take any action or adopt any Rules and Regulations that interferes with or diminishes any Special Declarant Right, without Declarant's prior written consent. Any action taken in violation of this Section shall be null and void and have no force or effect.

Section 19.7 Rights Transferable. Declarant may transfer any Special Declarant Right reserved to it under this Article or under any other provision of this Declaration in accordance with the terms and conditions of the Condominium Property Act and any such transferred Special Declarant Right may be exercised at any time prior to expiration of the Declarant Control Period.

ARTICLE XX DURATION

The Condominium structure created hereunder shall continue until this Declaration is revoked in the manner provided in Article XVI of this Declaration.

**ARTICLE XXI
GOVERNMENTAL OWNERS**

If an Owner is a governmental entity ("**Governmental Owner**") that is restricted by law or the limits of its insurance policy, to perform an obligation under this Declaration (such as, by way of example and not limitation, to blanket indemnify, to subrogate its interests, or to add a third party as an additional named insured), then such obligation shall not apply to the Governmental Owner to the extent necessary for the Governmental Owner to be in compliance with such restriction; provided, however, that any mutual or reciprocal similar obligation shall equally not apply as between the Governmental Owner and Declarant, another Owner and/or the Association, as the case may be. Further, if the liability of a Governmental Owner is limited by the Idaho Tort Claims Act (Idaho Code §§ 6-901 et seq.) ("**Act**"), nothing in this Declaration shall extend any indemnification or other obligation of the Governmental Owner beyond the liability of the Governmental Owner provided by the Act. Notwithstanding the foregoing, the Association shall have the right and power to maintain such insurance as the Association deems to be necessary and appropriate pursuant to Article XII on behalf of the Owners and to assess them for the costs associated with such as set forth herein. Additionally, the Association and all Governmental Owners shall work together to ensure ~~that in~~ the process of developing budgets for the various Common Area elements of the Project, and establishing the resulting Assessments, shall be in accordance with Section 8.2 above.

**ARTICLE XXII
MISCELLANEOUS**

Section 22.1 Compliance with Provisions of Declaration and Bylaws of the Association. Each Owner shall comply with the provisions of the Association Documents and the decisions and resolutions of the Association adopted pursuant thereto as the same may be lawfully amended from time to time. Failure to comply with any of the same shall be grounds for an action to recover sums due and for damages or injunctive relief, or both, maintainable by the Association on behalf of the Owners, in a proper case, by an aggrieved Owner.

Section 22.2 Registration of Mailing Address. Each Owner shall register such Owner's mailing address with the Association. All notices or demands intended to be served upon any Owner shall be sent by either registered or certified mail, postage prepaid, addressed in the name of the Owner at such registered mailing address. All notices or demands intended to be served upon the Association shall be given by registered or certified mail, postage prepaid, to the address of the Association as designated in the Bylaws of the Association. All notices or demands to be served on Eligible Mortgagees pursuant thereto shall be sent by either registered or certified mail, postage prepaid, addressed in the name of the Eligible Mortgagee at such address as the Eligible Mortgagee may have furnished to the Association in writing. Unless the Eligible Mortgagee furnishes the Association such address, the Eligible Mortgagee shall be entitled to receive none of the notices provided for in this Declaration. Any notice referred to in this Section shall be deemed given when deposited in the United States mail in the form provided for in this Section.

Section 22.3 Owner's Obligations Continue. All obligations of an Owner under and by virtue of the provisions contained in this Declaration shall continue, notwithstanding that an Owner may have leased or rented said interest as provided herein, but the Owner of a Unit shall have no obligation for expenses or other obligations accruing after the Owner conveys such Unit.

Section 22.4 Number and Gender. Whenever used herein, unless the context shall otherwise provide, the singular number shall include the plural, the plural the singular, and the use of any gender shall include all genders.

Section 22.5 Severability. If any of the provisions of this Declaration or any clause, paragraph, section, sentence, phrase, or word or the application thereof in any circumstance shall be invalidated, such invalidity shall not affect the validity of the remainder of the Declaration, and the application of any such provision, paragraph, section, sentence, clause, phrase, or word in any other circumstance shall not be affected thereby.

Section 22.6 Consent to Record. The undersigned, who are the record owners of the Real Property, consents to the recordation of this Declaration and Parcel Map in the official land records of Ada County, Idaho.

Section 22.7 Naming Constructs. To identify certain elements of the Project, Declarant has utilized certain names, references, and phrases such as "US Bank Plaza", "Multimodal Center", "Clearwater Building", and "Centre Building" both out of convenience and pursuant to certain other contractual agreements that Declarant, or its affiliates have previously entered into. In the future, it is anticipated that for various economic or contractual reasons, these elements may utilize different names, references or phrases. In the event of such changes, it shall not be necessary or required to amend this Declaration, all successors to Declarant and all future Owners acknowledging that the naming of the various elements is not material as such are used solely for convenience and in satisfaction of certain contractual requirements. Moreover, for example only, and not limitation, there is no "Unit 1I" as that would be typographically confusing. Additionally, due to (i) nuanced and varied interpretations of Idaho law; (ii) current contractual requirements; (iii) requests by other parties; and (iv) the complexity of developing the Project together without assurance about how and when lenders, approving authorities, and other future users of the Project would come together in agreement, the Parcel Map and the Association are referenced as "U.S. Bank Plaza". The use of the phrase "U.S. Bank Plaza," or any derivative thereof, shall not be interpreted to constitute any ownership of US Bank or any control by US Bank. Neither the Parcel Map, nor this Declaration, nor the name of the Association shall be required to be amended in the event US Bank, VRT, Clearwater Analytics, or the Greater Boise Auditorium District, cease to occupy any portion of the Project. The use of the respective names is immaterial, and taking ownership of the Units created by this Declaration evidences the conclusive agreement of the Owner to the foregoing.

This Declaration is executed on this _____ day of _____, 20____ by
Declarant and consenting owner:

KC GARDNER RIVERWOODS, L.C., a Utah
limited liability company, by its Manager

KC GARDNER COMPANY, L.C., a Utah
limited liability company

By: _____

Name: _____

Its: Manager

STATE OF IDAHO)
) ss.
County of Ada)

On this _____ day of _____, 20____, before me,
_____, a Notary Public in and for said State, personally
appeared _____, known or identified to me to be one of the managers
of KC Gardner Company, L.C., a Utah limited liability company, a manager of KC Gardner
Riverwoods, L.C., a Utah limited liability company, who subscribed said company's name
to the foregoing instrument, and acknowledged to me that he executed the same in said
company's name.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal
the day and year in this certificate first above written.

Notary Public for Idaho

Residing at

My Commission expires:

GARDNER PLAZA, LLC,
an Idaho limited liability company

KC GARDNER COMPANY, L.C., a Utah
limited liability company

By: _____

Name: _____

Its: Manager

STATE OF IDAHO)
) ss.
County of Ada)

On this _____ day of _____, 20____, before me,
_____, a Notary Public in and for said State, personally
appeared _____, known or identified to me to be one of the managers
of KC Gardner Company, L.C., a Utah limited liability company, a manager of Gardner
Plaza, LLC, an Idaho limited liability company, who subscribed said company's name to
the foregoing instrument, and acknowledged to me that he executed the same in said
company's name.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal
the day and year in this certificate first above written.

Notary Public for Idaho

Residing at

My Commission expires:

VALLEY REGIONAL TRANSIT

BY:

By: _____
Kelli Fairless
Executive Director

Attest: _____
Secretary

STATE OF IDAHO)
) ss:
County of Ada)

On this _____ day of _____, ~~2014~~2016, before me, the undersigned notary public for said state, personally appeared _____, known or identified to me (or proven on the basis of satisfactory evidence) to be the _____ of Valley Regional Transit, a political subdivision of the state of Idaho, and the person that executed the within instrument on its behalf, and acknowledged to me that the State of Idaho executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Notary Public
Residing at _____
Comm. Expires _____

Consent to Condominiumization of US Bank Plaza by US Bank

US Bank is the owner and holder of the indebtedness secured by, and the beneficiary under those certain deeds of trust encumbering portions of the property described in the attached Exhibit A, consisting of (i) that Deed of Trust recorded on August 23, 2013 in the official records of Ada County, Idaho as Instrument No. 113096808, and (ii) that Construction Deed of Trust, Assignment of Rents, Security Agreement and Fixture Filing recorded on November 12, 2014, in the official records of Ada County, Idaho as Instrument No. 2014-092244 (collectively the "**Deed of Trust**"), and hereby consents pursuant to the requirements of Idaho Code § 55-1504(c)(iii) to the recording of the Declaration of Covenants, Conditions and Restrictions for US Bank Plaza Condominiums, and the Final Plat for US Bank Plaza Condominiums both of which are recorded contemporaneously, herewith; and further agrees to subordinate the Deed of Trust and all right, title and interest of the present and all future holders of the indebtedness secured thereby to the Declaration and Final Plat, and acknowledges that the easements, rights and obligations set forth in the Declaration and Final Plat are superior to the Deed of Trust.

EXECUTED as of the _____ day of _____, ~~2015~~2016.

By: _____

Its: _____

STATE OF UTAH)
) ss.
County of Salt Lake)

On this _____ day of _____, ~~2015~~2016, before me personally appeared _____, known or identified to me to be the _____ of US Bank, the person who executed the instrument on behalf of said entity, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Notary Public for _____
Residing at _____
My commission expires _____

**EXHIBIT A-1
TO
AMENDED AND RESTATED MASTER DECLARATION OF COVENANTS,
CONDITIONS AND RESTRICTIONS FOR
US BANK PLAZA CONDOMINIUMS**

Legal Description of the Real Property Owned by Riverwoods

Unit A as depicted on the Plat Showing U.S. Bank Plaza Condominium recorded on August 25, 2014, at Book 107 Pages 14862 through 14866, as Instrument No. 2014-069070, in the official records of Ada County, Idaho and as further defined in the Master Declaration of Covenants, Conditions and Restrictions for U.S. Bank Plaza Condominium, recorded on August 25, 2014, as Instrument No. 2014-068941, in the official records of Ada County, Idaho.

**EXHIBIT A-2
TO
AMENDED AND RESTATED MASTER DECLARATION OF COVENANTS,
CONDITIONS AND RESTRICTIONS FOR
US BANK PLAZA CONDOMINIUMS**

Legal Description of the Real Property Owned by Plaza

Unit B as depicted on the Plat Showing U.S. Bank Plaza Condominium recorded on August 25, 2014, at Book 107 Pages 14862 through 14866, as Instrument No. 2014-069070, in the official records of Ada County, Idaho and as further defined in the Master Declaration of Covenants, Conditions and Restrictions for U.S. Bank Plaza Condominium, recorded on August 25, 2014, as Instrument No. 2014-068941, in the official records of Ada County, Idaho.

**EXHIBIT A-3
TO
AMENDED AND RESTATED MASTER DECLARATION OF COVENANTS,
CONDITIONS AND RESTRICTIONS FOR
US BANK PLAZA CONDOMINIUMS**

Legal Description of the Real Property Owned by VRT

Beginning at a point which is 20.00 feet S.54°47'55"E. and 232.22 feet S.35°13'45"W. from the monument at West Main Street and North Eighth Street of BOISE CITY ORIGINAL TOWNSITE (said monument being 3092.04 feet N.60°31'39"W. from the East ¼ corner of Section 10, Township 3 North, Range 2 East, Boise Meridian); and running thence southerly 136.79 feet along the arc of a 100.00 foot radius non-tangent curve to the right, (chord bears S.04°02'51"E. 126.37 feet); thence S.35°13'45"W. 25.03 feet; thence N.54°47'21"W. 38.65 feet; thence N.35°15'06"E. 20.78 feet; thence N.18°13'20"W. 37.54 feet; thence N.08°42'10"E. 28.15 feet; thence N.35°15'06"E. 54.54 feet; thence S.54°44'54"E. 1.35 feet to the point of beginning.

This parcel shall consist only of subsurface rights. Elevations above mean sea level for the top of the parcel shall be understood to control the elevation of ownership. The top of the concrete surface that will be constructed as part of the roofing slab over the underground transit facility, varying in elevation from 2698.58 to 2700.50 will define the area of the parcel.

The above described part of an entire tract contains 6362 square feet in area or 0.146 acres.

And

Beginning at a point which is 17.76 feet S.54°47'55"E. and 40.00 feet S.35°13'45"W. from the monument at West Main Street and North Eighth Street of BOISE CITY ORIGINAL TOWNSITE (said monument being 3092.04 feet N.60°31'39"W. from the East ¼ corner of Section 10, Township 3 North, Range 2 East, Boise Meridian); and running thence N.35°12'05"E. 48.64 feet; thence S.54°55'25"E. 129.47 feet; thence S.35°31'30"W. 48.93 feet; thence N.54°47'55"W. 129.19 feet to the point of beginning.

This parcel shall consist only of subsurface rights. Elevations above mean sea level for the top of the parcel shall be understood to control the elevation of ownership. The top of the concrete surface that will be constructed as part of the roofing slab over the underground transit facility, varying in elevation from 2700.67 to 2701.50 will define the area of the parcel.

The above described part of an entire tract contains 6309 square feet in area or 0.145 acres.

**EXHIBIT B
TO
AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS AND
RESTRICTIONS FOR
US BANK PLAZA CONDOMINIUMS**

Articles of Incorporation of the Association

[See Attached]

attach previously filed Articles

EXHIBIT C
TO
DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR
US BANK PLAZA CONDOMINIUMS

[Amended and Restated](#) Bylaws of the Association

[See Attached]

~~Insert Amended and Restated Bylaws~~

**EXHIBIT D
TO
AMENDED AND RESTATED MASTER DECLARATION OF COVENANTS,
CONDITIONS AND RESTRICTIONS FOR
US BANK PLAZA CONDOMINIUMS**

Reduced Copy of the Parcel Map

[See Attached]

**EXHIBIT E-1
TO
DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR
US BANK PLAZA CONDOMINIUMS**

Allocation of Ownership Interest in Common Areas and Votes in Association

Unit Number	Gross Unit Area	Allocation of Ownership Interest in Common Area	Number of Votes in Association
A	378990	55.025%	5502.46
B1	33785	4.905%	490.52
B2	5414	0.786%	78.60
B3	5680	0.825%	82.47
1A	5466	0.794%	79.36
1B	4472	0.649%	64.93
1C	2465	0.358%	35.79
1D	633	0.092%	9.19
1E	802	0.116%	11.64
1F	521	0.076%	7.56
1G	1062	0.154%	15.42
1H	5783	0.840%	83.96
1J	5560	0.807%	80.72
1K*	335	0.049%	4.86
1L*	1030	0.150%	14.95
2A	20251	2.940%	294.02
2B	5141	0.746%	74.64
2C	16666	2.420%	241.97
3A	19987	2.902%	290.19
3B	1732	0.251%	25.15
3C	16640	2.416%	241.59
4A	21209	3.079%	307.93
4B	27683	4.019%	401.92
5A	21403	3.107%	310.74
5B	7068	1.026%	102.62
6A	21384	3.105%	310.47
7A	21385	3.105%	310.48
8A	17696	2.569%	256.92
9A	17513	2.543%	254.27
10A	1009	0.146%	14.65
Total	688765	100.000%	10000.00
Note, there is no Unit 1I		Units 1K and 1L are exclusively bicycle storage	

**EXHIBIT E-2
TO
DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR
US BANK PLAZA CONDOMINIUMS**

Allocation of Ownership Interest in Common Areas and Votes in Clearwater Building

Sub-Association

Unit Number	Gross Unit Area	Allocation of Ownership Interest in Sub-Association Common Area	Number of Votes in Sub-Association
1A	5466	3.111%	311.14
1B	4472	2.546%	254.56
1C	2465	1.403%	140.32
1D	633	0.360%	36.03
1E	802	0.457%	45.65
2A	20251	11.528%	1152.75
3A	19987	11.377%	1137.73
4A	21209	12.073%	1207.29
5A	21403	12.183%	1218.33
6A	21384	12.172%	1217.25
7A	21385	12.173%	1217.30
8A	17696	10.073%	1007.31
9A	17513	9.969%	996.90
10A	1009	0.574%	57.44
Total	175675	100.000%	10000.00

EXHIBIT E-3

TO

**DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR
US BANK PLAZA CONDOMINIUMS**

Allocation of Ownership Interest in Common Areas and Number of Votes for Centre

Building Sub-Association

Unit Number	Gross Unit Area	Allocation of Ownership Interest in Sub-Association Common Area	Number of Votes in Sub-Association
1F	521	0.584%	58.39
1G	1062	1.190%	119.03
1H	5783	6.482%	648.17
1J	5560	6.232%	623.17
1K*	335	0.375%	37.55
1L*	1030	1.154%	115.44
2B	5141	5.762%	576.21
2C	16666	18.679%	1867.95
3B	1732	1.941%	194.12
3C	16640	18.650%	1865.03
4B	27683	31.027%	3102.74
5B	7068	7.922%	792.19
Total	89221	100.000%	10000.00

Units 1K and 1L are exclusively bicycle storage

EXHIBIT E-4

TO

**DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR
US BANK PLAZA CONDOMINIUMS**

Allocation of Ownership Interest in Common Areas and Number of Votes for Unit A Sub-
Association

Unit Number	Gross Unit Area	Allocation of Ownership Interest in Common Area	Number of Votes in Sub - Association
A	378990	100%	10000

**EXHIBIT F
TO
DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR
US BANK PLAZA CONDOMINIUMS**

Easement Depictions

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BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

BOISE STATE UNIVERSITY

SUBJECT

Release of Reservation in Grant Deed on Real Property Previously Conveyed by Idaho State Board of Education (Board) as Board of Trustees for Boise State University (BSU) to the College of Western Idaho (CWI).

REFERENCE

June 26, 2009

Grant Deed from Board/BSU to CWI. BSU previously executed a Grant Deed conveying certain real property in Nampa, Idaho to CWI for the CWI Nampa campus.

APPLICABLE STATUTE, RULE OR POLICY

Idaho State Board of Education Governing Policies and Procedures, Section V.I.5.b.ii and iii

BACKGROUND/DISCUSSION

In 2009, BSU conveyed the CWI Nampa Campus to CWI via the Grant Deed (Attachment 1). The Grant Deed contained the following reservation in favor of BSU (Reservation):

RESERVATION OF GRANTOR. It is hereby understood and stipulated that this property must forever be used for public educational purposes and whenever the property hereby conveyed ceases to be used exclusively for public community college, or education-related auxiliary purposes, by Grantee, its successors and assigns, that said property and all improvements then situate on such property shall automatically revert to Grantors, its successors and assigns, without cost, charge or payment of any kind as fully and effectually as if this deed had not been made or executed.

Idaho Power Company (Idaho Power) owns a parcel of land which is approximately 8.8 acres on the corner of Cherry Lane and Idaho Center Boulevard in Nampa, Idaho (Idaho Power Exchange Parcel) as depicted on Attachment 3. Idaho Power originally intended to construct its Can-Ada Substation power substation on the Idaho Power Exchange Parcel. The CWI Nampa Campus is located south of the Idaho Power Exchange Parcel and is adjacent to and parallel with Idaho Center Boulevard as depicted on Attachment 3. If Idaho Power constructs the Can-Ada Substation on the Idaho Power Exchange Parcel, Idaho Power must install high voltage power lines along Idaho Center Boulevard and within the utility easement located on the CWI Nampa Campus.

BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

Rather than constructing the Can-Ada Substation on the Idaho Power Exchange Parcel, and installing high voltage power lines along Idaho Center Boulevard within the utility easement on the CWI Nampa Campus, Idaho Power proposed to CWI that CWI convey approximately 2.08 acres of the CWI Nampa Campus (CWI Exchange Parcel) to Idaho Power as depicted on Attachment 3 and as legally described on Attachment 4. In exchange, Idaho Power would convey the Idaho Power Exchange Parcel to CWI. As part of the conveyance of the CWI Exchange Parcel to Idaho Power, Idaho Power requires that CWI grant Idaho Power an access easement to the CWI Exchange Parcel and certain power line easements over portions of the CWI Nampa Campus.

IMPACT

Idaho Power's use of the CWI Exchange Parcel is for the construction of the Can-Ada Substation, and will not be used for public educational purposes. Accordingly, upon the conveyance of the CWI Exchange Parcel to Idaho Power, such property will cease to be used exclusively for public community college, or education-related auxiliary purposes which is required by the Grant Deed, and the Reservation will apply per its terms, so that the ownership of the CWI Exchange Parcel, and theoretically, the ownership of the entire CWI Nampa Campus would revert to BSU. BSU does not need the CWI Exchange Parcel or any of the remainder of the CWI Nampa Campus at this time, to further its educational purposes.

Additionally, and in consideration of BSU's release of the Reservation, Idaho Power has agreed to install underground (rather than above-ground) power lines from the Can-Ada Substation to BSU's property (BSU Parcel) as depicted on Attachment 3 in order to preserve the development potential of the property for a BSU west campus.

Because the easement serves to encumber the BSU property upon which the Advanced Technology Service Center, or the "TeCenter" was developed through a federal grant opportunity, BSU has sought and received consent for the power transmission line easement from the US Department of Education (Economic Development Administration).

ATTACHMENTS

Attachment 1:	Grant Deed	Page 5
Attachment 2:	Release of Reservation in Grant Deed	Page 15
Attachment 3:	Depiction of Idaho Power Exchange Parcel, CWI Nampa Campus, CWI Exchange Parcel and BSU Parcel	Page 23
Attachment 4:	Non-Exclusive Underground Power Line Easement	Page 25
Attachment 5:	Temporary Construction Easement	Page 29
Attachment 6:	Legal Description of CWI Exchange Parcel	Page 35

STAFF COMMENTS AND RECOMMENDATIONS

BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

This is a request by BSU to a) release its reservation interest in 2.08 acres of the CWI Nampa Campus, and b) provide a ten foot wide underground power transmission line easement to Idaho Power along the southern boundary of the BSU Parcel.

As noted under the Impact statement, the Release of Reservation in Grant Deed affects only 2.08 acres of the CWI Nampa Campus and in executing the Release of Reservation in Grant Deed; the BSU Parcel will receive underground, rather than above-ground, power lines set forth in Attachment 5.

Staff recommends approval.

BOARD ACTION

I move to approve the request by Boise State University to execute the Release of Reservation in Grant Deed (Attachment 2).

Moved by _____ Seconded by _____ Carried Yes _____ No _____

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FEBRUARY 18, 2016

ATTACHMENT 1

2009032928

RECORDED

2009 JUN 30 PM 4 41

WILLIAM H. HURST

CANYON CNTY RECORDER

AP
M. McLaughlin

PIONEER TITLE COMPANY

REQUEST

APPROVED
FEE \$12.00RECORDING REQUESTED BY AND
WHEN RECORDED RETURN TO:College of Western Idaho
Attn.: Cheryl Wright
5500 East University Way
Nampa, Idaho 83687

200804105

(Space Above For Recorder's Use)

GRANT DEED

For good and valuable consideration, the receipt of which is hereby acknowledged, the **STATE OF IDAHO acting by and through the STATE BOARD OF EDUCATION as the Board of Trustees for BOISE STATE UNIVERSITY**, ("Grantor"), grants, transfers, conveys and assigns to the **COLLEGE OF WESTERN IDAHO** ("Grantee"), whose current address is 5500 East University Way, Nampa, Idaho 83687, and its successors and assigns forever, the following described real property:

SEE EXHIBIT "A" attached hereto and incorporated by this reference

SUBJECT TO all existing easements, rights-of-way, reservations, restrictions and encumbrances of record, to any existing tenancies, to all zoning laws and ordinances, and to any state of facts an accurate survey or inspection of the premises would show and to the restriction on Grantee's use of the Property as set forth herein.

SUBJECT FURTHER TO the Site Lease recorded August 12, 2003 as Instrument Number 200349973, records of Canyon County, Idaho.

AND, RESERVING UNTO GRANTOR, a perpetual non-exclusive easement on, over, across and through the Property for ingress and egress for vehicular and pedestrian traffic, and for utility lines and improvements, and the maintenance of such utility lines and improvements, for the benefit of Grantor's retained property, more particularly described on Exhibit "B," attached hereto and incorporated by this reference, and any future development or use of said retained property, which easement shall be located within the existing roadways, including curb, gutter, and sidewalks, currently named East University Way, Terra Linda Way, and Bronco Way, and the existing utility and infrastructure corridors or as such may be reasonably relocated in the future by Grantor or Grantee, with the

relocating party bearing all expense of such relocation. Grantor also further reserves a permanent non-exclusive easement for the location of reasonably sized entry signs at the North Can Ada Road entry points to the Property and reasonably sized directional signs at reasonable intersection locations of the existing or future roadways.

This conveyance shall include any and all estate, right, title, interest, appurtenances, tenements, hereditaments, reversions, remainders, easements, rents, issues, profits, rights-of-way and water rights in anywise appertaining to the property herein described as well in law as in equity.

RESERVATION OF GRANTOR. It is hereby understood and stipulated that this property must forever be used for public educational purposes and whenever the property hereby conveyed ceases to be used exclusively for public community college, or education-related auxiliary purposes, by Grantee, its successors or assigns, that said property and all improvements then situate on such property shall automatically revert to Grantor, its successors or assigns, without cost, charge or payment of any kind as fully and effectually as if this deed had not been made or executed.

IN WITNESS WHEREOF, the Grantor has hereunto subscribed its name to this instrument this 26 day of June, 2009.

GRANTOR:

IDAHO STATE BOARD OF
EDUCATION, as the Board of Trustees for
BOISE STATE UNIVERSITY

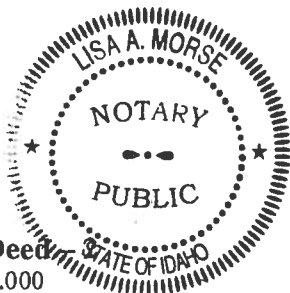
By: [Signature]

Its: PRESIDENT

STATE OF IDAHO)
County of Latah) ss.

On this 26th day of June, 2009, before me, the undersigned, a Notary Public, personally appeared Paul Agidius, known or identified to me to be the President of the Idaho State Board of Education, the Board of Trustees for Boise State University, and the agency that executed the foregoing instrument or the person who executed the instrument on behalf the Idaho State Board of Education, and acknowledged to me that such agency executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.



Grant Deed
00181363.000

[Signature]
NOTARY PUBLIC FOR IDAHO
Residing at Moscow, ID
My Commission Expires 4/3/15

Exhibit A to Grant Deed

This parcel consists of a portion of the NW $\frac{1}{4}$ and of the SW $\frac{1}{4}$ of Section 7, Township 3 North, Range 1 West of the Boise Meridian, Canyon County, Idaho and is more particularly described as follows:

BEGINNING at the Southwest corner of said NW $\frac{1}{4}$ (W $\frac{1}{4}$ Corner Section 7), a found brass cap monument;

thence North $0^{\circ} 38' 38''$ East along the west boundary of said Section 7 a distance of 1326.68 feet to the northwest corner (N $\frac{1}{16}$ W Corner Section 7) of the S $\frac{1}{2}$ NW $\frac{1}{4}$, a found aluminum cap monument;

thence South $89^{\circ} 19' 01''$ East along the north boundary of the S $\frac{1}{2}$ NW $\frac{1}{4}$ a distance of 2531.76 feet to the northeast corner (CN $\frac{1}{16}$ Corner Section 7) of said S $\frac{1}{2}$ NW $\frac{1}{4}$, witnessed by a $\frac{5}{8}$ x 30 inch rebar set with a plastic cap stamped L.S. 3627 bearing South $0^{\circ} 19' 41''$ West a distance of 25.00 feet;

thence South $0^{\circ} 19' 41''$ West along the east boundary of said S $\frac{1}{2}$ NW $\frac{1}{4}$ a distance of 1328.55 feet to the northeast corner of the SW $\frac{1}{4}$ (C $\frac{1}{4}$ Corner Section 7), a $\frac{5}{8}$ x 30 inch rebar set with an aluminum cap stamped L.S. 3627;

thence North $89^{\circ} 16' 31''$ West along the north boundary of said SW $\frac{1}{4}$ a distance of 876.03 feet to a $\frac{5}{8}$ x 30 inch rebar set with a plastic cap stamped L.S. 3627;

thence South $0^{\circ} 19' 41''$ West parallel with the East boundary of said SW $\frac{1}{4}$ a distance of 614.57 feet to a point on the northerly right-of-way of the Boise Main Line O.S.L.R.R., a $\frac{5}{8}$ x 30 inch rebar set with a plastic cap stamped L.S. 3627;

thence North $88^{\circ} 16' 56''$ West along said right-of-way a distance of 1666.73 feet to a point on the west boundary of said SW $\frac{1}{4}$, witnessed by a found $\frac{5}{8}$ inch diameter rebar bearing South $88^{\circ} 16' 56''$ East a distance of 40.01 feet;

thence North $0^{\circ} 38' 38''$ East along said west boundary a distance of 585.67 feet to the **POINT OF BEGINNING**, containing 100.208 acres, more or less, and being subject to all easements and rights-of-way of record or implied.

Exhibit B to Grant Deed

This parcel consists of a portion of the SE $\frac{1}{4}$ and of the SW $\frac{1}{4}$ of Section 7, Township 3 North, Range 1 West of the Boise Meridian, Canyon County, Idaho and is more particularly described as follows:

COMMENCING at the Northwest corner of said SW $\frac{1}{4}$ (W $\frac{1}{4}$ Corner Section 7), a found brass cap monument;

thence South $89^{\circ} 16' 31''$ East along the north boundary of the SW $\frac{1}{4}$ a distance of 1663.05 feet to the **TRUE POINT OF BEGINNING**, a $\frac{5}{8}$ x 30 inch rebar set with a plastic cap stamped L.S. 3627;

thence continuing South $89^{\circ} 16' 31''$ East a distance of 876.03 feet to the northwest corner of said SE $\frac{1}{4}$ (C $\frac{1}{4}$ Corner Section 7), a $\frac{5}{8}$ x 30 inch rebar set with an aluminum cap stamped L.S. 3627:

thence continuing South $89^{\circ} 16' 31''$ East along the north boundary of said SE $\frac{1}{4}$ a distance of 2213.26 feet to a point which lies on a line 435.60 feet westerly from and parallel with the east boundary of said SE $\frac{1}{4}$, said point being witnessed by a found $\frac{5}{8}$ inch diameter rebar bearing South $0^{\circ} 16' 03''$ West a distance of 20.00 feet;

thence South $0^{\circ} 16' 03''$ West along said parallel line a distance of 200.00 feet to a found $\frac{5}{8}$ inch diameter rebar;

thence South $89^{\circ} 16' 31''$ East parallel with the north boundary of said SE $\frac{1}{4}$ a distance of 435.60 feet to a point on the east boundary of said SE $\frac{1}{4}$ witnessed by a found $\frac{5}{8}$ inch diameter rebar bearing North $89^{\circ} 16' 31''$ West a distance of 40.00 feet;

thence South $0^{\circ} 16' 03''$ West along the east boundary of said SE $\frac{1}{4}$ a distance of 475.70 feet to a point on the northerly right-of-way of the Boise Main Line O.S.L.R.R. witnessed by a found $\frac{5}{8}$ inch diameter rebar bearing North $88^{\circ} 16' 56''$ West a distance of 40.01 feet;

thence North $88^{\circ} 16' 56''$ West along said right-of-way a distance of 3526.56 feet to a $\frac{5}{8}$ x 30 inch rebar set with a plastic cap stamped L.S. 3627;

thence North $0^{\circ} 19' 41''$ East parallel with the east boundary of said SW $\frac{1}{4}$ a distance of 614.57 feet to the **TRUE POINT OF BEGINNING**, containing 50.208 acres, more or less, and being subject to all easements and rights-of-way of record or implied.

Form 1402.06.A
Alta Owner's Policy (6-17-06)
1100302PO50600

First American Title Insurance Company
3 First American Way
Santa Ana California 92707

First American Title Insurance Company

OWNER'S POLICY

SCHEDULE A

<u>File No.:</u>	<u>Policy No:</u>	<u>Date of Policy:</u>	<u>Amt of Insurance:</u>	<u>Premium Amt:</u>
200804105	J-1011648	June 30, 2009 at 4:41:00 PM	\$500,000.00	\$1,820.00
Total Premium:				\$1,820.00

The Policy Number shown on this schedule must agree with the preprinted number on the cover sheet.

1. Name of Insured:

College of Western Idaho

2. The estate or interest in the land which is covered by this policy is:

Fee Simple

3. Title to the estate or interest in the land is vested in:

College of Western Idaho

4. The land referred to in this policy is described as follows:

SEE ATTACHED EXHIBIT A

Pioneer Title Company of Canyon County

By: 
Authorized Officer or Agent

ALTA Owner's Policy 6/17/06

This Policy is invalid unless the cover sheet and Schedule B are attached.

Schedule A consists of 2 page(s)

Form 1402.06.A
Alta Owner's Policy (6-17-06)
1100302PO50600

First American Title Insurance Company
3 First American Way
Santa Ana California 92707

First American Title Insurance Company

OWNER'S POLICY

SCHEDULE A

EXHIBIT A

This parcel consists of a portion of the Northwest Quarter and of the Southwest Quarter of Section 7, Township 3 North, Range 1 West of the Boise Meridian, Canyon County, Idaho and is more particularly described as follows:

BEGINNING at the Southwest corner of said Northwest Quarter (W 1/4 Corner Section 7), a found brass cap monument; thence

North 0°38'38" East along the West boundary of said Section 7 a distance of 1326.68 feet to the Northwest corner (N 1/16 W Corner Section 7) of the South Half of the Northwest Quarter, a found aluminum cap monument; thence

South 89°19'01" East along the North boundary of the South Half of the Northwest Quarter a distance of 2531.76 feet to the Northeast corner (CN 1/16 Corner Section 7) of said South Half of the Northwest Quarter, witnessed by a 5/8 x 30 inch rebar set with a plastic cap stamped L.S. 3627 bearing South 0°19'41" West a distance of 25.00 feet; thence

South 0°19'41" West along the East boundary of said South Half of the Northwest Quarter a distance of 1328.55 feet to the Northeast corner of the Southwest Quarter (C 1/4 Corner Section 7), a 5/8 x 30 inch rebar set with an aluminum cap stamped L.S. 3627; thence

North 89°16'31" West along the North boundary of said Southwest Quarter a distance of 876.03 feet to a 5/8 x 30 inch rebar set with a plastic cap stamped L.S. 3627; thence

South 0°19'41" West parallel with the East boundary of said Southwest Quarter a distance of 614.57 feet to a point on the Northerly right-of-way of the Boise Main Line O.S.L.R.R., a 5/8 x 30 inch rebar set with a plastic cap stamped L.S. 3627; thence

North 88°16'56" West along said right-of-way a distance of 1666.73 feet to a point on the West boundary of said Southwest Quarter, witnessed by a found 5/8 inch diameter rebar bearing South 88°16'56" East a distance of 40.01 feet; thence

North 0°38'38" East along said West boundary a distance of 585.67 feet to the POINT OF BEGINNING.

(Shown as Parcel 1 on Record of Survey recorded august 11, 2008 as Instrument No. 2008043732)

This Policy is invalid unless the cover sheet and Schedule B are attached.

Schedule A consists of 2 page(s)

First American Title Insurance Company

OWNER'S POLICY**SCHEDULE B****Exceptions from Coverage****File Number:**
200804105**Date of Policy:**
June 30, 2009 at 4:41:00 PM**Policy Number:**
J-1011648

The Policy Number shown on this schedule must agree with the preprinted number on the cover sheet.

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interest, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances that are not shown by the public records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the title including discrepancies, conflicts in boundary lines, shortage in area, or any other facts that would be disclosed by an accurate and complete land survey of the land, and that are not shown in the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the public records.
6. Any liens, or rights to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

Special Exceptions

1. Said real property is presently assessed as exempt from taxation. Any change in the status thereof either in ownership or otherwise, shall cause a re-assessment of said premises as more fully set forth in Section 63-105S of the Idaho Code. R30408000 0
Affects said premises and other lands
2. Liens and assessments of the Nampa Municipal Irrigation System for the Nampa Meridian Irrigation District, and the rights and powers of said district as by law provided.
3. Liens and assessments of the Nampa Municipal Irrigation System for Pioneer Irrigation District, and the rights and powers of said district as by law provided.
4. Sewerage charges and special assessment powers for the City of Nampa.

ALTA Owner's Policy Form B 1987 (Amended 6/17/06)

This Policy is invalid unless the cover sheet and Schedule A are attached.

Schedule B consists of 3 page(s)

First American Title Insurance Company

OWNER'S POLICY

SCHEDULE B

Exceptions from Coverage

5. Rights of way for irrigation and drainage ditches and canals and roads, including but not limited to, Idaho Center Blvd. Along Westerly boundary, and Purdum Gulch Drain, Phyllis Canal, as disclosed by County Assessor's map.
6. Power Line Easement as granted to IDAHO POWER COMPANY, a corporation, by instrument recorded June 5, 1978 as Instrument No. 832660, records of Canyon County, Idaho...including the right from time to time to cut, trim and remove trees, brush, overhanging branches and other obstructions which may injure or interfere with the Grantee's use, occupation or enjoyment of this easement and the operation, maintenance and repair of Grantee's electrical system. (Government Lot 2 and the Southeast Quarter Northwest Quarter.
7. Easement for utility right of way granted to City of Nampa, State of Idaho, recorded November 13, 1996 as Instrument No. 9636855. Affects a portion of Government Lot 3(Northwest Quarter of the Southwest Quarter) and Government Lot 2(Southwest Quarter of the Northwest Quarter)
8. All matters, covenants, conditions, restrictions, easements and any rights, interests or claims which may exist by reason thereof, disclosed by Record of Survey recorded February 11, 1999 as Instrument No. 9905375, but deleting any covenant, condition or restriction indicating a preference, limitation or discrimination based on race, color, religion, sex, handicap, familial status, or national origin to the extent such covenants, conditions or restrictions violate 42 USC 3604(c).
9. Crossing Agreement upon the terms, conditions and provisions contained therein:
Parties: PIONEER IRRIGATION DISTRICT and BOISE STATE UNIVERSITY
Recorded: December 13, 1999 as Instrument No. 9948393
10. Covenant of Purpose, Use and Ownership recorded May 23, 2002 as Instrument No. 200223645, records of Canyon County, Idaho, but omitting any covenant, condition or restriction based on race, color, religion, sex, handicap, familial status, or national origin to the extent that such covenants, conditions or restrictions violate 42 USC 3604(c).

Amendment to said Covenants recorded July 10, 2002 as Instrument No. 200230951, records of Canyon County, Idaho.

Second Amended Covenant of Purpose, Use and Ownership recorded February 9, 2009 as Instrument No. 2009006077.

continued...

ALTA Owner's Policy Form B 1987 (Amended 6/17/06)

This Policy is invalid unless the cover sheet and Schedule A are attached.

Schedule B consists of 3 page(s)

First American Title Insurance Company

OWNER'S POLICY

SCHEDULE B

Exceptions from Coverage

11. All matters, covenants, conditions, restrictions, easements and any rights, interests or claims which may exist by reason thereof, disclosed by Record of Survey recorded August 5, 2002 as Instrument No. 200235693, but deleting any covenant, condition or restriction indicating a preference, limitation or discrimination based on race, color, religion, sex, handicap, familial status, or national origin to the extent such covenants, conditions or restrictions violate 42 USC 3604(c).
12. The leasehold estate created by the lease from The STATE of IDAHO acting by and through the STATE BOARD OF EDUCATION as the Board of Trustees for IDAHO STATE UNIVERSITY, lessor, to IDAHO STATE BUILDING AUTHORITY, lessee, dated July 17, 2003, recorded August 12, 2003 as Instrument No. 200349973, said lease having a term of 35 years from July 17, 2003.
(Affects: a portion of the South Half of the Northwest Quarter of Section 7 as shown on a survey by Toothman-Orton Engineering marked WCAMPUS.DWG, dated 04/09/03, job 03024.)
13. All matters, covenants, conditions, restrictions, easements and any rights, interests or claims which may exist by reason thereof, disclosed by Record of Survey recorded August 11, 2008, as instrument no. 2008043732, records of Canyon County, Idaho, but deleting any covenant, condition or restriction indicating a preference, limitation or discrimination based on race, color, religion, sex, handicap, familial status or national origin to the extent such covenants, conditions or restrictions violate 42 USC 3604(c).
14. An Easement for the purpose shown below and rights incidental thereto as reserved in a document
Purpose: Ingress and egress for vehicular and pedestrian traffic and for utility lines
Recorded: June 30, 2009 as Instrument No. 2009032928, records of Canyon County, Idaho. See copy attached.

END OF EXCEPTIONS

ALTA Owner's Policy Form B 1987 (Amended 6/17/06)

This Policy is invalid unless the cover sheet and Schedule A are attached.

Schedule B consists of 3 page(s)

NO. 1008043732

N 1/4 Corner
Section 7
CP&F Inst. No.
200237049

NW Section Corner
Section 7
CP&F Inst. No.
9734375

S89°21'32"E

Ustick Road

2524.44'

N0°38'38"E
1326.68'

1328.55'
N01°9'41"E

NW1/4

S89°19'01"E

2531.76'

NE1/4 Corner
Section 7
25'
W.C.

NE1/4 Corner
Section 7
CP&F Inst. No.
200233188

SUBJECT
PROPERTY

Parcel 1
100.208 Acres

N0°38'38"E 2653.36'

BASIS OF BEARING

N0°38'38"E
1326.68'

1328.55'
S01°9'41"W

W 1/4 Corner
Section 7
CP&F Inst. No.
200233188

POB 1

S89°16'31"E 2539.08'

1663.05'

TPOB 2

N89°18'31"W

876.03'

SE 1/4
Section 7
CP&F Inst. No.
8401

TPOB 4

SUBJECT
PROPERTY

S01°9'41"W

614.57'

1668.73'

N88°18'56"W

Centennial Boise Main Line O.S.L.R.R.

N0°38'38"E 2653.43'

2067.76'

SW1/4

N01°9'41"E 2657.21'

2027.45'

**BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016**

**ATTACHMENT 2
DRAFT FOR DISCUSSION PURPOSES
PREPARED BY HAWLEY TROXELL 12.4.2015**

Recording Requested By and
When Recorded Return to:

Boise State University
Office of the General Counsel
University Plaza
960 Broadway, Suite 250
Boise, ID 83725-1002

SPACE ABOVE THIS LINE FOR RECORDER'S USE ONLY

RELEASE OF RESERVATION IN GRANT DEED

THIS RELEASE OF RESERVATION IN GRANT DEED ("**Release**") is made this _____ day of _____, 20____, by the State of Idaho acting by and through the State Board of Education as the Board of Trustees for Boise State University ("**BSU**").

WITNESSETH

WHEREAS, pursuant to that certain Grant Deed dated June 26, 2009, which was recorded on June 30, 2009, as Instrument No. 2009032928, records of Canyon County, Idaho ("**Deed**"), BSU conveyed to the College of Western Idaho, a community college organized under the laws of the State of Idaho ("**CWI**") that certain real property located in Canyon County, Idaho which is more particularly described on **Exhibit A** attached hereto and incorporated herein by this reference (the "**Property**");

WHEREAS, the Deed contained the following reservation:

RESERVATION OF GRANTOR. It is hereby understood and stipulated that this property must forever be used for public educational purposes and whenever the property hereby conveyed ceases to be used exclusively for public community college, or education-related auxiliary purposes, by Grantee, its successors and assigns, that said property and all improvements then situate on such property shall automatically revert to Grantors, its successors and assigns, without cost, charge or payment of any kind as fully and effectually as if this deed had not been made or executed

(the "**Reservation**").

**BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016**

ATTACHMENT 2

**DRAFT FOR DISCUSSION PURPOSES
PREPARED BY HAWLEY TROXELL 12.4.2015**

WHEREAS, CWI has requested that a portion of the Property more particularly described on **Exhibit B** attached hereto and incorporated herein (the “**Released Property**”), and as generally depicted, along with the Property, on **Exhibit C** attached hereto, be released from the Reservation of Grantor as described in the Deed.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency are hereby acknowledged, BSU hereby declares (i) that the Reservation is released and terminated as an encumbrance of record against the Released Property or any portion thereof; and (ii) that the Reservation as to the Released Property is null and void, of no further force or effect and shall no longer run with or bind the Released Property or any portion thereof.

Executed effective as of the day and year first above written.

IDAHO STATE BOARD OF EDUCATION, as the
Board of Trustees for BOISE STATE
UNIVERSITY

By: _____
Its: _____

STATE OF IDAHO)
) ss.
County of _____)

On this _____ day of _____, 20____, before me, the undersigned, a Notary Public, personally appeared _____, known or identified to me to be the _____ of the IDAHO STATE BOARD OF EDUCATION, as the Board of Trustees for BOISE STATE UNIVERSITY, and the agency that executed the foregoing instrument or the person who executed the instrument on behalf of the IDAHO STATE BOARD OF EDUCATION, and acknowledged to me that such agency executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Notary Public for Idaho
Residing at _____
My commission expires _____

EXHIBIT A

Legal Description of the Property

This parcel consists of a portion of the NW $\frac{1}{4}$ and of the SW $\frac{1}{4}$ of Section 7, Township 3 North, Range 1 West of the Boise Meridian, Canyon County, Idaho and is more particularly described as follows:

BEGINNING at the Southwest corner of said NW $\frac{1}{4}$ (W $\frac{1}{4}$ Corner Section 7), a found brass cap monument;

thence North $0^{\circ} 38' 38''$ East along the west boundary of said Section 7 a distance of 1326.68 feet to the northwest corner (N $\frac{1}{16}$ W Corner Section 7) of the S $\frac{1}{2}$ NW $\frac{1}{4}$, a found aluminum cap monument;

thence South $89^{\circ} 19' 01''$ East along the north boundary of the S $\frac{1}{2}$ NW $\frac{1}{4}$ a distance of 2531.76 feet to the northeast corner (CN $\frac{1}{16}$ Corner Section 7) of said S $\frac{1}{2}$ NW $\frac{1}{4}$, witnessed by a $\frac{5}{8}$ x 30 inch rebar set with a plastic cap stamped L.S. 3627 bearing South $0^{\circ} 19' 41''$ West a distance of 25.00 feet;

thence South $0^{\circ} 19' 41''$ West along the east boundary of said S $\frac{1}{2}$ NW $\frac{1}{4}$ a distance of 1328.55 feet to the northeast corner of the SW $\frac{1}{4}$ (C $\frac{1}{4}$ Corner Section 7), a $\frac{5}{8}$ x 30 inch rebar set with an aluminum cap stamped L.S. 3627;

thence North $89^{\circ} 16' 31''$ West along the north boundary of said SW $\frac{1}{4}$ a distance of 876.03 feet to a $\frac{5}{8}$ x 30 inch rebar set with a plastic cap stamped L.S. 3627;

thence South $0^{\circ} 19' 41''$ West parallel with the East boundary of said SW $\frac{1}{4}$ a distance of 614.57 feet to a point on the northerly right-of-way of the Boise Main Line O.S.L.R.R., a $\frac{5}{8}$ x 30 inch rebar set with a plastic cap stamped L.S. 3627;

thence North $88^{\circ} 16' 56''$ West along said right-of-way a distance of 1666.73 feet to a point on the west boundary of said SW $\frac{1}{4}$, witnessed by a found $\frac{5}{8}$ inch diameter rebar bearing South $88^{\circ} 16' 56''$ East a distance of 40.01 feet;

thence North $0^{\circ} 38' 38''$ East along said west boundary a distance of 585.67 feet to the **POINT OF BEGINNING**, containing 100.208 acres, more or less, and being subject to all easements and rights-of-way of record or implied.

EXHIBIT B

Legal Description of the Released Property

DRAFT

EXHIBIT C

Depiction of the Property and the Released Property

DRAFT

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Sharp & Smith, Inc.

Consulting Engineers and Surveyors

327 North 27th Street ○ Boise, ID 83702 ○ Telephone (208) 344-0676

www.j.sharp@sitestar.net

EXHIBIT B

Idaho Power Company

Can Ada Substation Parcel Description

A parcel of land for an electric power substation situate in the northwest quarter of the southwest quarter of Section 7, Township 3 North Range 1 West from the Boise Meridian, Canyon County, Idaho. The parcel is located on the south side of the College of Western Idaho Property, and is more particularly described as follows, to wit:

Commencing at the southwest corner of said Section 7, thence N0°38'27"E a distance 2067.58 feet on the west line of said Section 7 to the northerly line of the Union Pacific Railroad Right of Way; thence S88°17'05"E along said northerly right of way line a distance of 217.44 feet to the Real Point of Beginning;

Thence N1°53'34"E a distance 197.45 feet;

Thence N15°51'05"E a distance 54.85 feet;

Thence N60°51'05"E a distance 177.10 feet;

Thence S74°08'55"E a distance 54.85 feet;

Thence S29°08'55"E a distance 202.43 feet;

Thence S1°53'34"W a distance 154.33 feet to the northerly right of way line for said Railroad;

Thence along said northerly right of way line, N88°17'05"W a distance of 322.59 feet back to the point of beginning

Said parcel contains 2.087 acre, more or less.

Bearings are grid, based on the Idaho coordinate system of 1983, west zone. Mean correction to true bearing is 0°31'35" counter clockwise.

December 11, 2015

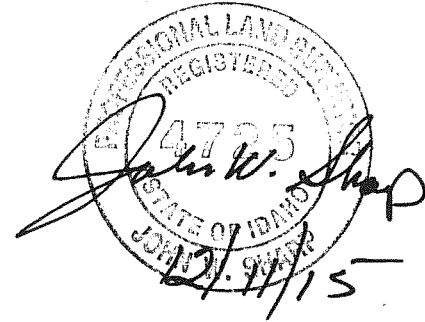


EXHIBIT C

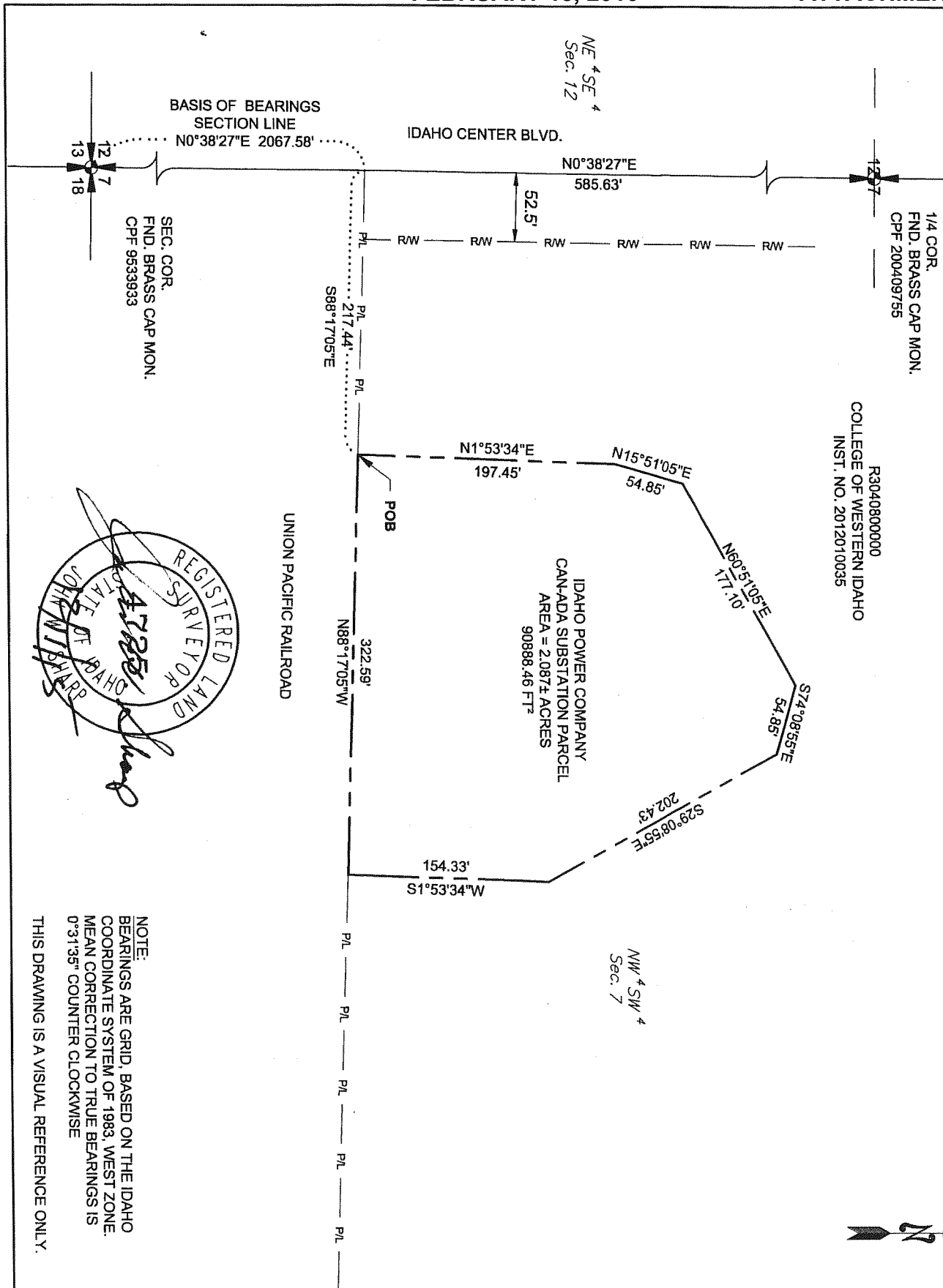
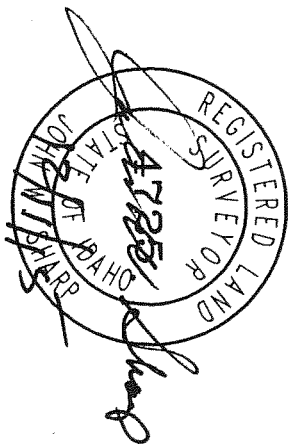


**IDAHO POWER COMPANY PARCEL
SURVEY MAP FOR CAN-ADA SUBSTATION
CANYON COUNTY, IDAHO SEC.7, T.3N, R.1W, B.M.**

DS.XXX	SCALE: 1"=100'	DATE: 12/10/2015
DR.DAA	SHT. 3/3	WO No. ##
SV.JWS		

NOTE:
BEARINGS ARE GRID, BASED ON THE IDAHO
COORDINATE SYSTEM OF 1983. WEST ZONE.
MEAN CORRECTION TO TRUE BEARINGS IS
0°31'35" COUNTER CLOCKWISE

THIS DRAWING IS A VISUAL REFERENCE ONLY.



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**Prepared by, and
after recording return to:**

Idaho Power Company
Corporate Real Estate – Land Acquisition
Attn: Laura Bishop
P.O. Box 70
Boise, Idaho 83707

(Space above reserved for County Recorder's Use Only)

Non-Exclusive Power Line Easement

The Idaho State Board of Education, by and through Boise State University, “**Grantor(s)**”, of Ada County, State of Idaho, does hereby grant and convey to IDAHO POWER COMPANY, a Corporation, with its principal office located at 1221 W. Idaho Street, Boise, Idaho, 83702 (P.O. Box 70, Boise, ID 83707), its licensees, successors, and assigns, (collectively, “**Grantee**”), for One Dollar and other valuable considerations, the receipt and sufficiency of which are hereby acknowledged, a permanent and perpetual easement and right of way for the installation, erection, continued operation, maintenance, repair, alteration, inspection, and/or replacement of the following:

Underground electrical power line or lines and related facilities and equipment, generally including, but not limited to, buried power lines and wires, cables, conduits, communication lines, including fiber optics, and also including related above-ground equipment such as pad-mounted transformers, junction boxes, and other above-ground equipment, and all related appurtenances, to be located within the easement premises as determined by Grantee at Grantee's sole and absolute discretion (all of the above collectively being referred to as the “**Facilities**”) together with the right to permit the installation of the wires, fixtures, cables and conduits of other companies or parties (all of the same being included within the definition of “**Facilities**”), on, over, through, under, and across the following easement premises belonging to Grantor(s) in Canyon County, State of Idaho:

**See Exhibit ‘A’ Legal Description and as shown on Exhibit ‘B’ Survey Map
attached hereto and made a part hereof.**

Grantee is hereby also granted the perpetual right of ingress and egress for the full and complete use, occupation, and enjoyment of the easement hereby granted, and together with all rights and privileges incident thereto, including, but not limited to, (i) the right, at Grantee's expense, to excavate and refill ditches and trenches for the location of the Facilities, (ii) the right, at Grantee's expense, to cut, trim, and remove trees, brush, bushes, sod, flowers, shrubbery, overhanging branches and other obstructions and improvements which may injure or interfere with Grantee's use, occupation, or enjoyment of this easement, and (iii) the right, at Grantee's expense, to install, construct, operate, inspect, alter, maintain, replace, improve and repair any and all aspects of Grantee's Facilities over, through, under and across the lands subject to this easement.

**BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016**

ATTACHMENT 4

Grantor shall not alter the grade or elevation of the land within the easement premises as existing on the date hereof through excavations, grading, installation of berms, or other activities without the prior written approval of Grantee. Grantor shall not place nor build any structure(s) within the easement premises except fences and except as otherwise approved by Grantee in writing.

This Easement shall run with the land and be binding upon the parties' successors and assigns.

Executed and delivered this _____ day of _____,
20____.

GRANTOR:

**Idaho State Board of Education,
by and through Boise State University**

By: _____

Print Name: _____

Title: _____

Date: _____

List of Exhibits:

**Exhibit A – Legal Description
Exhibit B – Survey Map**

CORPORATE NOTARY ACKNOWLEDGMENT

STATE OF IDAHO)
) ss.
COUNTY OF _____)

I, _____ (*Notary's Name*), a Notary Public, do hereby
certify that on this _____ day of _____, 20____, personally
appeared before me _____ (*Individual's Name and Title*) and
_____ (*Individual's Name and Title*), who, known or
proved to me that he/she/they are respectively the duly authorized person(s) of
_____ (*Organization Name*), that
he/she/they signed the foregoing document, and acknowledged to me that he/she/they executed the
same as the free act and deed of said organization.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and
year in this certificate first above written.

(NOTARY SEAL)

Notary Public

My Commission Expires on: _____

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TEMPORARY CONSTRUCTION EASEMENT
UNDERGROUND POWER LINE ON BOISE STATE UNIVERSITY PROPERTY

IDAHO POWER COMPANY

This Grant of a Temporary Construction Easement ("**Temporary Easement**") is made as of this ____ day of _____, 20____ ("**Effective Date**"), by and between _____ ("**Grantor**") and **Idaho Power Company**, an Idaho corporation ("**Grantee**").

WITNESSETH:

For good and sufficient consideration, it is agreed:

1. Grantor's Property. Grantor owns real property located in Canyon County, Idaho, which is more particularly described on **Exhibit 'A'** attached hereto and made a part hereof ("**Grantor's Property**").

2. Grant of Temporary Easement. Grantor hereby grants to Grantee a non-exclusive and Temporary Easement upon, over and across that portion of Grantor's Property described and depicted in **Exhibit 'B'** attached hereto and made a part hereof, for the sole purpose of installation of an underground power line ("**Power Line**") to be located within an underground power line easement on Grantor's property ("**Power Line Easement**").

3. Use. Grantee shall have the right to make such improvements as it deems reasonably necessary for the operation and use of the Temporary Easement, including but not limited to staking, installation of temporary structures and facilities, trenching, boring, earth movement, leveling, and removal of turf.

4. Access. Grantor also grants to Grantee a non-exclusive right to use the existing roads over Grantor's Property and to develop temporary roads as necessary (collectively referred to herein as "**Access Roads**") for access to the Temporary Easement with vehicles and equipment during the term of this Temporary Easement.

5. Removal and Restoration. At such time as Grantee has completed installation of the underground Power Line, Grantee shall remove all temporary improvements, Access Roads, structures and facilities placed upon or within the Temporary Easement by Grantee and shall restore Grantor's Property to the same condition, to the extent reasonably practical, as existed as of the Effective Date of this Temporary Easement.

6. Compliance with Laws. Grantee shall comply with all federal, state, county, and municipal laws, ordinances, and/or regulations now or hereinafter in effect from time to time and will obtain all necessary permits or licenses which are applicable to Grantee's use of the Temporary Easement.

7. No Liens. Grantee shall, at all times, keep the Temporary Easement free and clear of all liens and encumbrances (including without limitation mechanics', contractor's subcontractors', materialmens' liens and similar liens) relating to any work, materials or labor by Grantee or Grantee's Agents on the Temporary Easement and shall indemnify, defend and hold Grantor harmless from and against any of the same.

8. Indemnification. Each party agrees to indemnify defend and hold harmless the other from and against any and all suits, claims, demands, actions, proceedings, judgments, personal property damage, penalties, liabilities, damages, injuries, losses, costs or expenses of any kind or nature whatsoever including without limitation attorneys fees and related costs (all of the foregoing collectively being referred to herein as "**Claims**") arising directly or indirectly, in whole or in part, out of any of the following: (a) any breach of this Temporary Easement by the indemnifying party or its agents, contractors, licensees, invitees or guests (collectively, "**Agents**"); or (b) any negligence or willful misconduct by the indemnifying party or its Agents.

In addition, each party shall indemnify, defend and hold the other harmless from and against any and all Claims relating to any violation by the indemnifying party or its Agents of any laws relating to the use, generation, transportation, storage and/or release of any hazardous or toxic materials, including petroleum products.

This Section 8 shall be limited by and subject to the limits of liability specified in applicable law, including but not limited to the Idaho Tort Claims Act (Idaho Code § 6-901 through § 6-929 inclusive; nothing contained herein shall be deemed to serve as a limit upon or a waiver of the Grantor's sovereign immunity, which is hereby expressly retained.

9. Term. The term of this Temporary Easement shall be from the Effective Date through the date Grantee has completed the installation of the Power Line and all removal and restoration efforts.

10. Successors and Assigns. This Temporary Easement and the covenants and agreements made herein shall, for the Term contemplated herein, inure to the benefit of and be binding upon Grantor and Grantee and their respective successors and assigns.

11. Notices. All notices given pursuant to this Temporary Easement shall be in writing and shall be given by personal delivery, by United States Mail Certified, Return Receipt Requested, or other established express delivery service (such as Federal Express), postage or delivery charge prepaid, addressed to the appropriate party at the address set forth below.

**BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016**

ATTACHMENT 5

If to Grantor:

Boise State University:

Phone No.: (208) ____ - ____

If to Grantee:

Idaho Power Company
Corporate Real Estate
Laura Bishop
P.O. Box 70 (83707)
1221 W. Idaho Street
Boise, ID 83702
Phone No. : (208) 388-5272

The above addresses for the Parties shall be effective unless and until changed by written notice given to the other Party. The Parties acknowledge and agree that the phone numbers provided above are for convenience purposes only but that notices hereunder must be personally delivered or mailed as provided above.

IN WITNESS WHEREOF, the undersigned have caused this Temporary Construction Easement to be executed effective the day and year first set forth above.

Grantor:

Boise State University

Grantee:

**Idaho Power Company,
an Idaho Corporation**

By: _____

Print
Name: _____

Date: _____

By: _____

Lonnie Krawl
Vice President of Human Resources,
Administrative Services and Chief
Information Officer

Date: _____

LIST OF EXHIBITS:

Exhibit 'A' – Grantor's Property
Exhibit 'B' – Temporary Easement

EXHIBIT A

Grantor's Property

EXHIBIT B

Temporary Easement

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FEBRUARY 18, 2016

ATTACHMENT 6

Sharp & Smith, Inc.

Consulting Engineers and Surveyors

327 North 27th Street ○ Boise, ID 83702 ○ Telephone (208) 344-0676

www.j.sharp@sitestar.net

TRACT I
EXHIBIT BIdaho Power Company
Can Ada Substation Parcel Description

A parcel of land for an electric power substation situate in the northwest quarter of the southwest quarter of Section 7, Township 3 North Range 1 West from the Boise Meridian, Canyon County, Idaho. The parcel is located on the south side of the College of Western Idaho Property, and is more particularly described as follows, to wit:

Commencing at the southwest corner of said Section 7, thence N0°38'27"E a distance 2067.58 feet on the west line of said Section 7 to the northerly line of the Union Pacific Railroad Right of Way; thence S88°17'05"E along said northerly right of way line a distance of 217.44 feet to the Real Point of Beginning;

Thence N1°53'34"E a distance 197.45 feet;

Thence N15°51'05"E a distance 54.85 feet;

Thence N60°51'05"E a distance 177.10 feet;

Thence S74°08'55"E a distance 54.85 feet;

Thence S29°08'55"E a distance 202.43 feet;

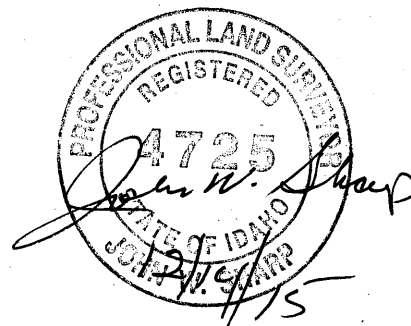
Thence S1°53'34"W a distance 154.33 feet to the northerly right of way line for said Railroad;

Thence along said northerly right of way line, N88°17'05"W a distance of 322.59 feet back to the point of beginning

Said parcel contains 2.087 acre, more or less.

Bearings are grid, based on the Idaho coordinate system of 1983, west zone. Mean correction to true bearing is 0°31'35" counter clockwise.

December 14, 2015



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IDAHO STATE UNIVERSITY

SUBJECT

Remodel Turner Dining Hall

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section V.K.1.

BACKGROUND/DISCUSSION

Idaho State University (ISU) is requesting Idaho State Board of Education (Board) approval to proceed with a design-build construction project to allow Chartwells, the contractor who holds the current dining contract with ISU, to remodel the Turner/Garrison Dining Hall Facility. The project would be accomplished with non-state funds in the amount of \$1,175,000.

Included in this project are a new pizza station, grill and serving areas. Additionally, this project includes new ceiling and lighting in areas over the serving counter/stations, new entry control point for card swipes for all-you-can-eat dining, a new wall system, resilient tile and stone flooring, painting, wall coverings, specialty equipment, casework, upgrades to the existing HVAC, plumbing, electrical and fire suppression systems, and a banquette for directing traffic in and out of the facility and maintaining control for paying customers.

The entire project is being accomplished by Chartwells in-house team of design professionals and contractors. This project is similar to the work that was done at the Pond Student Union Dining Facility several years ago and is in alignment with the Chartwells contract with Idaho State University.

This is not an academic space project; rather, an upgrade to an auxiliary function for dining near the Turner Dormitory Building. The current Chartwells contract is in place until 2021. At that time, ISU has the option to renew or terminate the contract. All improvements to the dining facility will be left in place in either case.

IMPACT

This construction project will be 100% funded by Chartwells in the amount of \$1,175,000.

ATTACHMENTS

Attachment 1 – Capital Project Tracking Sheet

Page 3

STAFF COMMENTS AND RECOMMENDATIONS

The proposed project, which would be carried out with funding provided by a non-State entity, will also need to be reviewed and approved by the Permanent Building Fund Advisory Council, if the Board approves the project. Staff recommends approval.

BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

BOARD ACTION

I move to approve the request by Idaho State University to proceed with a design-build projection project to remodel Turner Dining Hall. The project would be accomplished with Non-State Funds in the amount of \$1,175,000.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

As of: 1/15/2016

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BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

IDAHO STATE UNIVERSITY

SUBJECT

Authorization for issuance of general revenue refunding bonds.

REFERENCE

September 2004	The Idaho State Board of Education (Board) approved issuance of general revenue bonds to finance the acquisition of the land and improvements comprising University Place in Idaho Falls.
August 2007	The Board approved issuance of general revenue bonds to finance construction of an addition to Reed Gym complex and to purchase and renovate a building in Meridian formerly owned by the Meridian School District for ISU's use.

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section V.F.
Idaho Code, Section 33-3804

BACKGROUND/DISCUSSION

Idaho State University (ISU) is seeking approval to refinance certain outstanding bonds. The Series 2016 Bonds would be issued by ISU to (i) refund certain outstanding bonds of ISU to achieve debt service savings and (ii) pay the costs of issuance of the Series 2016 Bonds. The Series 2016 Bonds would be issued solely for refinancing purposes; there are no new capital projects or other new funding related to the Series 2016 Bonds.

IMPACT

The refunding of the Series 2004B and Series 2007 in the aggregate principal amount of approximately \$13,695,000 would result in a debt service net present value savings in the amount of approximately \$1,433,000.

ATTACHMENTS

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Attachment 2 – Preliminary Office Statement	Page 31
Attachment 3 – Escrow Agreement	Page 93
Attachment 4 – Bond Purchase Agreement	Page 107
Attachment 5 – Moody's Rating Agency Report	Page 131
Attachment 6 – Debt Service Schedules-Savings Projections	Page 137

STAFF COMMENTS AND RECOMMENDATIONS

Attachment 1 includes the proposed supplemental resolution and supporting exhibits and schedules. Final documents are anticipated to be presented to the

BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

Board for review and execution not later than the date of the Board meeting. Staff recommends approval.

BOARD ACTION

I move to approve a Supplemental Resolution for the Series 2016 Bonds, the title of which is as follows:

A SUPPLEMENTAL RESOLUTION of the Board of Trustees of Idaho State University authorizing the issuance of General Revenue Refunding Bonds, Series 2016, delegating authority to approve the terms and provisions of the Bonds, in the principal amount of up to \$14,500,000; authorizing the execution and delivery of a Bond Purchase Agreement upon sale of the Bonds, and providing for other matters relating to the authorization, issuance, sale and payment of the Series 2016 Bonds.

Roll call vote is required.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

THE BOARD OF TRUSTEES OF IDAHO STATE UNIVERSITY

Supplemental Resolution Authorizing the
Issuance and Sale of

up to \$14,500,000
General Revenue Refunding Bonds
Series 2016

Adopted February 18, 2016

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SUPPLEMENTAL RESOLUTION

A SUPPLEMENTAL RESOLUTION of the Board of Trustees of Idaho State University authorizing the issuance and sale of General Revenue Refunding Bonds, Series 2016, in the principal amount of up to \$14,500,000 (the "Series 2016 Bonds"), authorizing the execution and delivery of a Bond Purchase Agreement, Escrow Agreement, Continuing Disclosure Agreement, and other documents, and providing for other matters relating to the authorization, issuance, sale and payment of the Series 2016 Bonds.

WHEREAS, Idaho State University (the "University") is a state institution of higher education and body politic and corporate organized and existing under and pursuant to the Constitution and laws of the State of Idaho; and

WHEREAS, the Board of Trustees of the University (the "Board") is authorized, pursuant to the Educational Institutions Act of 1935, the same being Title 33, Chapter 38, Idaho Code (the "Act"), and the Constitution of the State of Idaho, to issue bonds for "projects" as defined in the Act and under Section 57-504 Idaho Code to issue bonds to refinance projects; and

WHEREAS, on September 17, 1992, the Board adopted a Resolution (the "1992 Resolution") relating to the issuance and sale of \$10,000,000 Student Facilities Fee Revenue Bonds, Series 1992 (the "Series 1992 Bonds"), and providing, among other things, for the issuance of additional Student Facilities Fee Revenue Bonds for future projects ("Additional Bonds"); and

WHEREAS, the University is authorized under the provisions of Article VII of the 1992 Resolution to issue Additional Bonds for refunding purposes upon compliance with the requirements of Section 7.3 of the Resolution; and

WHEREAS, pursuant to supplemental resolutions which have amended and supplemented the 1992 Resolution, the Board has authorized the issuance of the University's (i) Student Facilities Fee Revenue Bonds, Series 1993 (the "Series 1993 Bonds"), (ii) Student Facilities Fee Refunding and Improvement Revenue Bonds, Series 1998 (the "Series 1998 Bonds"), (iii) General Refunding and Improvement Revenue Bonds, Series 2003 (the "Series 2003 Bonds"), (iv) General Revenue Bonds, Series 2004A (the "Series 2004A Bonds"), (v) General Revenue Bonds, Series 2004B (the "Series 2004B Bonds"), (vi) General Revenue Bonds (Taxable), Series 2004C (the "Series 2004C Bonds"), (vii) General System Revenue Bonds (Federally Taxable), Series 2006 (the "Series 2006 Bonds"), (viii) General Revenue Bonds, Series 2007 (the "Series 2007 Bonds"), (ix) General Revenue Refunding Bonds, Series 2012 (the "Series 2012 Bonds"), and (x) General Revenue Refunding Bonds, Series 2013 (the "Series 2013 Bonds"); and

WHEREAS, the Board has determined that all or a portion of the Series 2004B Bonds and Series 2007 Bonds currently outstanding (collectively, the "Refunded Bonds"), can be refunded in accordance with the Act to achieve a debt service savings that the Board

finds to be beneficial to the University in accordance with the Act and Section 57-504 Idaho Code;

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF IDAHO STATE UNIVERSITY AS FOLLOWS:

ARTICLE I

DEFINITIONS

Section 1.1 Definitions.

(a) Except as provided in subparagraph (b) of this Section, all defined terms contained in this Supplemental Resolution shall have the same meanings as set forth in the Resolution.

(b) As used in this Supplemental Resolution, unless the context shall otherwise require, the following terms shall have the following meanings:

“Authorized Denominations” means \$5,000 or any integral multiple thereof.

“Bond Purchase Agreement” means the Bond Purchase Agreement between the Board and the Underwriter pursuant to which the Series 2016 Bonds are to be sold.

“Bond Register” means the registration records of the University, maintained by the Trustee, on which shall appear the names and addresses of the Registered Owners of the Series 2016 Bonds.

“Code” means the Internal Revenue Code of 1986, as amended.

“Continuing Disclosure Agreement” means the Continuing Disclosure Agreement between the Board and the Trustee, with respect to the Series 2016 Bonds.

“Escrow Agent” means U.S. Bank National Association, or its successors in function, as now or hereafter designated, as escrow agent under the Escrow Agreement.

“Escrow Agreement” means the agreement between the University and the Escrow Agent, dated the date of delivery of the Series 2016 Bonds, providing for an Escrow Account for deposit of the Refunding Proceeds.

“Issue Date” means, with respect to any Series 2016 Bonds, the date on which such Series 2016 Bonds are first delivered to the purchasers thereof.

“1992 Resolution” means the resolution adopted by the Board on September 17, 1992.

“Nominee” means Cede & Co., as nominee of DTC, the initial Securities Depository for the Series 2016 Bonds, and any successor nominee of DTC and, if another

Securities Depository replaces DTC as Securities Depository hereunder, any nominee of such substitute Securities Depository.

“Parameters” means the maximum or, in some cases, minimum terms established hereby for the Series 2016 Bonds, within which the terms of the Series 2016 Bonds may be established in the Terms Certificate, such Parameters being set in Exhibit C attached hereto.

“Payment Date” means each April 1 and October 1, commencing on the date specified in the Terms Certificate.

“Preliminary Official Statement” means the Preliminary Official Statement of the Board with respect to the Series 2016 Bonds.

“Principal Office” of the Trustee means the corporate trust office of the Trustee designated in writing to the University or such other office designated by the Trustee from time to time.

“Refunded Bonds” means that portion, if any, of the Series 2004B Bonds and Series 2007 Bonds as specified in the Terms Certificate.

“Refunding Proceeds” means the portion of the proceeds of the Series 2016 Bonds to be used for purposes of refunding the Refunded Bonds.

“Resolution” means collectively, the 1992 Resolution, as previously amended and supplemented, and as further amended and supplemented by this Supplemental Resolution, including the Restatement.

“Restatement” means the restatement of the 1992 Resolution, as amended and supplemented by supplemental resolutions, which Restatement was adopted by the Board on August 12, 2004.

“Series 2016 Bondholder,” “Holder” and “Bondholder” mean the registered owner of any Series 2016 Bond.

“Series 2016 Costs of Issuance” means the Costs of Issuance incurred in connection with the issuance, sale and delivery of the Series 2016 Bonds.

“Series 2016 Costs of Issuance Fund” means the fund established pursuant to Section 3.1 hereof into which shall be deposited the portion of the proceeds of the Series 2016 Bonds necessary to pay the Series 2016 Costs of Issuance, as further provided in Article III hereof.

“Series 2016 Bonds” means the General Revenue Refunding Bonds, Series 2016, of the Board authorized by this Supplemental Resolution.

“Supplemental Resolution” means this Supplemental Resolution adopted by the Board on February 18, 2016, authorizing the Series 2016 Bonds.

“Terms Certificate” means one or more certificates of the Board signed by the Vice President for Finance and Administration and Bursar, or his or her authorized designee, in substantially the form of Exhibit B attached hereto, specifying certain terms of the Series 2016 Bonds.

“Trustee” means U.S. Bank National Association, and its successors and permitted assigns under the Resolution.

“Underwriter” means the underwriter to be specified in the Terms Certificate, or its successor in function, as the original purchaser of the Series 2016 Bonds.

Section 1.2 Authority for Supplemental Resolution; References to University. This Supplemental Resolution is adopted pursuant to the provisions of the Act, Section 57-504 Idaho Code and the Resolution. References herein to the “University” shall be deemed to refer to the Board or other appropriate authority thereof pursuant to the Act and other applicable laws.

ARTICLE II

AUTHORIZATION, TERMS AND ISSUANCE OF SERIES 2016 BONDS

Section 2.1 Authorization of Series 2016 Bonds, Confirmation of Pledged Revenues. The Series 2016 Bonds are hereby authorized for issuance, to be sold at a price not less than par and subject to the Parameters, in order to provide sufficient funds for (i) the refunding of the Refunded Bonds and (ii) paying costs of issuance, and in accordance with and subject to the terms, conditions and limitations established in the Resolution, as previously amended and as amended by this Supplemental Resolution. The Series 2016 Bonds shall be issued only in fully registered form, without coupons, in Authorized Denominations. The Series 2016 Bonds are secured by the pledge of the Pledged Revenues under Section 5.1 of the Resolution equally and ratably with all Outstanding Bonds issued under the Resolution.

Section 2.2 Finding and Purpose. The Board hereby finds, determines and declares:

(a) pursuant to Section 33-3804(i) and Section 57-504, Idaho Code, the Refunded Bonds can be refunded with a debt service savings and to the benefit and advantage of the University;

(b) pursuant to Section 33-3809, Idaho Code, this Supplemental Resolution does not contract a debt on behalf of, or in any way obligate the State of Idaho, or pledge, assign or encumber in any way, or permit the pledging, assigning or encumbering in any way of, appropriations made by the Legislature, or revenue derived from the investment of the proceeds of the sale, and from the rental of such lands as have been set aside by the Idaho Admission Bill approved July 3, 1890, or other legislative enactments of the United States, for the use and benefit of the respective state educational institutions;

(c) pursuant to Section 33-3810, Idaho Code, the Series 2016 Bonds shall be exclusively obligations of the University, payable only in accordance with the terms thereof and shall not be obligations general, special or otherwise of the State of Idaho; and

(d) the requirements of Section 7.3 of the Resolution, as amended, will have been complied with upon the delivery of the Series 2016 Bonds, in that the Debt Service on the Series 2016 Bonds in each year does not exceed by more than \$25,000 the Debt Service on the Refunded Bonds in such years.

Section 2.3 Issue Date. The Series 2016 Bonds shall be dated the date of their initial delivery.

Section 2.4 Series 2016 Bonds.

(a) The Series 2016 Bonds shall be limited to the aggregate principal amount specified in the Terms Certificate, but within the Parameters, and shall be designated "General Revenue Refunding Bonds, Series 2016" or such other designation as the University may determine upon the issuance of the Series 2016 Bonds. The Series 2016 Bonds may have serial or other maturities, may be initially sold at a premium, and may have separate bonds with different interest rates but the same maturity, all within the Parameters and as specified in the Terms Certificate.

(b) The Series 2016 Bonds shall bear interest at the rates and mature on the dates and in the principal amounts in each year as specified in the Terms Certificate. The Series 2016 Bonds shall bear interest from the date of original delivery, payable on the payment dates as specified in the Terms Certificate. Interest on the Series 2016 Bonds shall be computed upon the basis of a 360-day year, consisting of twelve 30-day months.

Section 2.5 Sale of Series 2016 Bonds.

(a) The Series 2016 Bonds authorized to be issued herein are hereby authorized for sale to the Underwriter to be specified in the Terms Certificate in a principal amount (plus any original issue premium) in compliance with the Parameters and as specified in the Terms Certificate. The Series 2016 Bonds may be sold with an Underwriter's discount or fee (but without a net reoffering discount) not exceeding the Parameters and as specified in the Terms Certificate, on the terms and conditions set forth in the Bond Purchase Agreement.

(b) To evidence the acceptance of the Bond Purchase Agreement, the Vice President for Finance and Administration and Bursar is hereby authorized to execute and deliver the Bond Purchase Agreement in substantially the form presented at this meeting and with such final rates and terms for the Series 2016 Bonds as are within the Parameters.

(c) The Preliminary Official Statement of the University prepared in connection with the offering of the Series 2016 Bonds, in substantially the form

presented at this meeting, with such changes, omissions, insertions and revisions as the Vice President for Finance and Administration and Bursar shall approve, is hereby authorized for use by the Underwriter for distribution to prospective purchasers of the Series 2016 Bonds and other interested persons. The Vice President for Finance and Administration and Bursar or authorized designee is hereby authorized to “deem final” the Preliminary Official Statement pursuant to SEC Rule 15c2-12 in connection with the offering of the Series 2016 Bonds.

In order to comply with subsection (b)(5) of SEC Rule 15c2-12, the University shall execute and deliver the Continuing Disclosure Agreement and the same is hereby approved in all respects in substantially the form presented to the Board with such changes, omissions, insertions and revisions as the Vice President for Finance and Administration and Bursar shall approve, and the Vice President for Finance and Administration and Bursar or authorized designee is hereby authorized to execute and deliver the Continuing Disclosure Agreement with respect to the Series 2016 Bonds.

The Vice President for Finance and Administration and Bursar of the University and Secretary of the Board, and any authorized designee of the same, are, and each of them is, hereby authorized to do or perform all such acts as may be necessary or advisable to comply with this Supplemental Resolution and/or the Bond Purchase Agreement and to carry the same into effect.

The final Official Statement of the University for the sale of the Series 2016 Bonds, in substantially the form of the Preliminary Official Statement presented at this meeting, with such changes, omissions, insertions and revisions as the Vice President for Finance and Administration and Bursar shall approve, is hereby authorized, and the Vice President for Finance and Administration and Bursar shall sign such final Official Statement and deliver such final Official Statement to the Underwriter for distribution to prospective purchasers of the Series 2016 Bonds and other interested persons, which signature shall evidence such approval.

(d) The University may elect to privately place the Series 2016 Bonds, similar to what was done by the University in 2013, with or without the use of an Official Statement.

Section 2.6 Delivery of Series 2016 Bonds. The Series 2016 Bonds shall be delivered to the Underwriter upon compliance with the provisions of the Resolution, at such times and places as provided in, and subject to, the provisions of the Bond Purchase Agreement. The Series 2016 Bonds shall be executed as provided in Section 3.2 of the Resolution.

Section 2.7 Redemption of Series 2016 Bonds.

(a) *Optional Redemption.* The Series 2016 Bonds may be subject to optional redemption as described in the Terms Certificate.

(b) *Mandatory Sinking Fund Redemption.* The Series 2016 Bonds may be subject to mandatory sinking fund redemption as described in the Terms Certificate.

(c) Notice of Redemption. When the Series 2016 Bonds are called for redemption, notice must be sent by the Trustee, postage prepaid, by first-class mail not less than thirty (30) nor more than sixty (60) days prior to the redemption date to the registered owners of the Series 2016 Bonds to be redeemed at the address shown on the Bond Register. The Trustee shall give further notice of redemption at the same time as notice to Registered Owners by posting the notice to the Municipal Securities Rulemaking Board's EMMA website; provided, however that no defect in such further notice or failure to give all or any portion of such further notice will in any manner defeat the effectiveness of a call for redemption.

(d) Conditional Notice of Redemption. In addition to the items required by the Resolution, each notice of redemption may further state, in the case of optional redemption, that such redemption shall be conditioned upon the receipt by the Trustee on or prior to the date fixed for such redemption of moneys sufficient to pay the principal of and interest on such Series 2016 Bonds to be redeemed and that if such moneys shall not have been so received said notice shall be of no force and effect and such Series 2016 Bonds shall not be required to be redeemed. In the event that such notice of redemption contains such a condition and such moneys are not so received, the redemption shall not be made and the Trustee shall within a reasonable time thereafter give notice, one time, in the same manner in which the notice of redemption was given, that such moneys were not so received.

Section 2.8 Form of Series 2016 Bonds. The form of the Series 2016 Bonds is attached to this Supplemental Resolution as Exhibit A and is incorporated herein by this reference.

Section 2.9 Book-Entry Only System.

(a) The Series 2016 Bonds shall initially be registered on the Bond Register in the name of Cede & Co., the nominee for the Securities Depository, and no Beneficial Owner will receive certificates representing their respective interests in the Series 2016 Bonds, except in the event the Trustee issues Replacement Bonds as provided below. It is anticipated that during the term of the Series 2016 Bonds, the Securities Depository will make book-entry transfers among the DTC Participants and receive and transmit payments of principal of and interest on the Series 2016 Bonds until and unless the Trustee authenticates and delivers Replacement Bonds to the Beneficial Owners as described below. So long as any of the Series 2016 Bonds are registered in the name of Cede & Co, as nominee of the DTC, all payments with respect to principal of, premium, if any, and interest on the Series 2016 Bonds and all notices with respect to the Series 2016 Bonds shall be made and given in the manner provided in the Representations Letter.

(b) If the Securities Depository determines to discontinue providing its services with respect to the Series 2016 Bonds and the University cannot obtain a qualified successor Securities Depository, or if the University determines not to use the Book-Entry System of the Securities Depository, the University shall execute and the Trustee shall authenticate and deliver one or more Series 2016 Bond certificates (the "Replacement Bonds") to the DTC Participants in principal amounts and maturities corresponding to the identifiable Beneficial Owners' interests in the Series 2016 Bonds, with such adjustments as the Trustee may find necessary or appropriate as to accrued interest and previous calls for redemption, if any. In such event, all references to the Securities Depository herein shall relate to the period of time when the Securities Depository has possession of at least one Series 2016 Bond. Upon the issuance of Replacement Bonds, all references herein to obligations imposed upon or to be performed by the Securities Depository shall be deemed to be imposed upon and performed by the Trustee, to the extent applicable with respect to such Replacement Bonds.

(c) With respect to Series 2016 Bonds registered in the name of Cede & Co. as nominee for the Securities Depository, neither the University nor the Trustee shall have any responsibility to any Beneficial Owner with respect to:

(i) the sending of transaction statements, or maintenance, supervision, or review of records of the Securities Depository;

(ii) the accuracy of the records of the Securities Depository or Cede & Co. with respect to any ownership interest in the Series 2016 Bonds;

(iii) the payment to any Beneficial Owner, or any person other than the Securities Depository, of any amount with respect to principal of, interest on, or redemption premium, if any, on the Series 2016 Bonds; or

(iv) any consent given or other action taken by the Securities Depository or Cede & Co. as owner of the Series 2016 Bonds.

(d) The University has executed and delivered to DTC the Representations Letter with respect to Bonds issued under the Resolution. Such Representations Letter is for the purpose of effectuating the initial Book-Entry System for the Series 2016 Bonds through DTC as Securities Depository and shall not be deemed to amend, supersede or supplement the terms of this Resolution which are intended to be complete without reference to the Representations Letter. In the event of any conflict between the terms of the Representations Letter and the terms of this Supplemental Resolution, the terms of this Supplemental Resolution shall control. The Securities Depository may exercise the rights of a Registered Owner hereunder only in accordance with the terms hereof applicable to the exercise of such rights.

Section 2.10 Successor Securities Depository. In the event the Securities Depository resigns, is unable to properly discharge its responsibilities or is no longer

qualified to act as a securities depository and registered clearing agency under the Securities and Exchange Act of 1934, as amended, or other applicable state or federal statute or regulation, the Trustee, with the written consent of the University, may appoint a successor Securities Depository, provided the Trustee receives written evidence satisfactory to the Trustee with respect to the ability of the successor Securities Depository to discharge its responsibilities. Any such successor Securities Depository shall be a securities depository which is a registered clearing agency under the Securities and Exchange Act of 1934, as amended, or other applicable state or federal statute or regulation. Upon the appointment of a successor Securities Depository, the Trustee shall cause the authentication and delivery of Series 2016 Bonds to the successor Securities Depository in appropriate denominations and form as provided herein.

Section 2.11 Further Authority. The Vice President for Finance and Administration and Bursar or any authorized designee thereof and such other officers of the Board or University as may be required, are hereby authorized and directed to execute all such certificates, documents and other instruments as may be necessary or advisable to provide for the issuance, sale, registration and delivery of the Series 2016 Bonds, including, without limitation, the Official Statement and the Terms Certificate. The Vice President for Finance and Administration and Bursar may also determine whether to have the Series 2016 Bonds insured and to include in the Terms Certificate the provisions needed to implement such insurance.

Section 2.12 Tax Exemption of Bonds.

(a) The University's Vice President for Finance and Administration and Bursar is hereby authorized and directed to execute such Tax Certificates as shall be necessary to establish that (i) the Series 2016 Bonds are not "arbitrage bonds" within the meaning of Section 148 of the Code and the Regulations, (ii) the Series 2016 Bonds are not and will not become "private activity bonds" within the meaning of Section 141 of the Code, (iii) all applicable requirements of Section 149 of the Code are and will be met, (iv) the covenants of the University contained in this Section 2.12 will be complied with and (v) interest on the Series 2016 Bonds is not and will not become includible in gross income for federal income tax purposes under the Code and applicable Regulations.

(b) The Board and the University covenant and certify to and for the benefit of the Series 2016 Bondholders from time to time of the Series 2016 Bonds that:

(i) the University will at all times comply with the provisions of any Tax Certificates;

(ii) the University will at all times comply with the rebate requirements contained in Section 148(f) of the Code, including, without limitation, the entering into any necessary rebate calculation agreement to provide for the calculations of amounts required to be rebated to the United States, the keeping of records necessary to enable such calculations to be

made and the timely payment to the United States, of all amounts, including any applicable penalties and interest, required to be rebated;

(iii) no use will be made of the proceeds of the issue and sale of the Series 2016 Bonds, or any funds or accounts of the University which may be deemed to be proceeds of the Series 2016 Bonds, pursuant to Section 148 of the Code and applicable Regulations, which use, if it had been reasonably expected on the date of issuance of the Series 2016 Bonds, would have caused the Series 2016 Bonds to be classified as “arbitrage bonds” within the meaning of Section 148 of the Code;

(iv) the University will not use or permit the use of any of its facilities or properties in such manner that such use would cause the Series 2016 Bonds to be “private activity bonds” described in Section 141 of the Code;

(v) no bonds or other evidences of indebtedness of the University that are reasonably expected to be paid out of substantially the same source of funds as the Series 2016 Bonds have been or will be issued, sold or delivered within a period beginning 15 days prior to the sale of the Series 2016 Bonds and ending 15 days following the delivery of the Series 2016 Bonds, other than the Series 2016 Bonds; and

(vi) the University will not take any action that would cause interest on the Series 2016 Bonds to be or to become ineligible for the exclusion from gross income of the Series 2016 Bondholders of the Series 2016 Bonds as provided in Section 103 of the Code, nor will it omit to take or cause to be taken, in timely manner, any action, which omission would cause interest on the Series 2016 Bonds to be or to become ineligible for the exclusion from gross income of the Series 2016 Bondholders of the Series 2016 Bonds as provided in Section 103 of the Code.

Pursuant to these covenants, the Board and the University obligate themselves to comply throughout the term of the issue of the Series 2016 Bonds with the requirements of Section 103 of the Code and the Regulations proposed or promulgated thereunder.

The Board has previously adopted tax compliance procedures relating to tax-exempt bonds.

ARTICLE III

CREATION OF ACCOUNTS; APPLICATION OF SERIES 2016 BOND PROCEEDS

Section 3.1 Creation of Funds and Accounts. In connection with the issuance of the Series 2016 Bonds, there is hereby established a “Series 2016 Costs of Issuance Fund”, to be held by the University.

Section 3.2 Application of Proceeds of Series 2016 Bonds. Proceeds of the sale of the Series 2016 Bonds shall be applied as follows:

(a) The Refunding Proceeds, in the amount specified in the Terms Certificate, shall be transferred to the Escrow Agent for investment as contemplated by the Escrow Agreement (as hereinafter approved) and in accordance with the provisions of Section 57-504 Idaho Code (except for any amount to be retained as cash), and the obligations in which such proceeds are so invested and any remaining cash shall be deposited in trust by the Escrow Agent as required by the Escrow Agent.

(b) The amount necessary to pay the Series 2016 Costs of Issuance, in the amount specified in the Terms Certificate, shall be deposited to the Series 2016 Costs of Issuance Fund held by the University. Any balance remaining in the Series 2016 Costs of Issuance Fund after payment of the Costs of Issuance, and no later than 30 days after the issuance of the Series 2016 Bonds, shall be transferred to the University and the Series 2016 Cost of Issuance Fund shall be closed.

ARTICLE IV

PLAN OF REFUNDING

Section 4.1 Defeasance of Refunded Bonds. In accordance with the provisions of the Resolution, it is hereby found and determined that pursuant to the Escrow Agreement, moneys and Defeasance Securities permitted under the Act and under the Resolution, the principal and interest on which, when due, will provide moneys which shall be sufficient to pay, when due, the principal or redemption price as provided therein, and interest due and to become due on the Refunded Bonds on and prior to the applicable redemption dates or maturity thereof will have been deposited with the Escrow Agent, and that upon compliance with the provisions of the Resolution, as provided for in the Escrow Agreement, all Refunded Bonds shall be deemed to have been paid within the meaning and with the effect expressed in the Resolution. After all the Refunded Bonds shall have become due and payable upon maturity or pursuant to call for redemption, any investments remaining in the Escrow Account shall be liquidated and any proceeds of liquidation over and above the amount necessary to be retained for the payment of Refunded Bonds not yet presented for payment, including interest due and payable, shall be paid over to the Trustee for deposit into the Bond Fund. As contemplated by Section 12.1 of the Resolution, none of the Refunded Bonds are payable from amounts drawn under credit enhancement as provided in Section 57-231 of the Idaho Code.

Section 4.2 Redemption of Refunded Bonds. The Refunded Bonds shall be irrevocably called for redemption pursuant to the Escrow Agreement, and notice of redemption shall be given as provided in the Escrow Agreement.

Section 4.3 Approval of Escrow Agreement; Deposits Into Escrow Account. The Escrow Agreement, in substantially the form presented at this meeting, with such changes, omissions, insertions and revisions as the Vice President for Finance and

Administration and Bursar shall approve, is hereby authorized, and the Vice President for Finance and Administration and Bursar shall sign such Escrow Agreement, which signature shall evidence such approval. The Vice President for Finance and Administration and Bursar is hereby authorized to do or perform all such acts as may be necessary or advisable to comply with the Escrow Agreement and to carry the same into effect.

ARTICLE V

MISCELLANEOUS

Section 5.1 Governing Law. By the acceptance of the Series 2016 Bonds, the Holders of the Series 2016 Bonds shall be deemed to agree that the rights of the Holders of the Series 2016 Bonds shall be governed by the laws of the State of Idaho.

Section 5.2 Partial Invalidity. If any one or more of the covenants or agreements, or portions thereof, provided in this Supplemental Resolution on the part of the University (or of the Trustee or of any paying agent) to be performed should be contrary to law, then such covenant or covenants, such agreement or agreements, or such portions thereof, shall be null and void and shall be deemed separable from the remaining covenants and agreements or portions thereof and shall in no way affect the validity of this Supplemental Resolution or of the Series 2016 Bonds; but the Holders of the Series 2016 Bonds shall retain all the rights and benefits accorded to them under the Act or any other applicable provisions of law.

Section 5.3 Beneficiaries. This Supplemental Resolution shall be deemed to be a contract between the Board, the Trustee, and the Holders of the Series 2016 Bonds.

Section 5.4 Savings Clause. Except as amended by this Supplemental Resolution, the Resolution shall remain in full force and effect.

Section 5.5 Conflicting Resolutions. All resolutions or parts thereof in conflict herewith are, to the extent of such conflict, hereby repealed.

Section 5.6 Perfection of Security Interest.

(a) The Resolution creates a valid and binding pledge and assignment of security interest in all of the Pledged Revenues under the Resolution as security for payment of the Series 2016 Bonds, enforceable by the Trustee in accordance with the terms thereof.

(b) Under the laws of the State of Idaho, such pledge and assignment and security interest is automatically perfected by Section 57-234 Idaho Code, as amended, and is and shall have priority as against all parties having claims of any kind in tort, contract, or otherwise hereafter imposed on the Pledged Revenues.

[The next page is the signature page.]

ADOPTED AND APPROVED this 18th day of February, 2016.

THE BOARD OF TRUSTEES OF IDAHO
STATE UNIVERSITY

President

ATTEST:

Secretary

EXHIBIT A

FORM OF SERIES 2016 BOND

Unless this certificate is presented by an authorized representative of The Depository Trust Company (55 Water Street, New York, New York) to the issuer or its agent for registration of transfer, exchange or payment, and any certificate issued is registered in the name of Cede & Co. or such other name as requested by an authorized representative of The Depository Trust Company and any payment is made to Cede & Co., ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL since the registered owner hereof, Cede & Co., has an interest herein.

R-_____ \$_____

UNITED STATES OF AMERICA
STATE OF IDAHO
IDAHO STATE UNIVERSITY
GENERAL REVENUE REFUNDING BONDS
SERIES 2016

Interest Rate Maturity Date Dated Date CUSIP

Registered Owner: CEDE & CO.

Principal Amount: _____ DOLLARS*****

KNOW ALL MEN BY THESE PRESENTS that Idaho State University, a body politic and corporate and an institution of higher education of the State of Idaho (the "University"), for value received, hereby promises to pay, from the Bond Fund hereinafter defined, to the registered owner identified above, or registered assigns, on the maturity date specified above, the principal sum indicated above, and to pay interest thereon from the Bond Fund from the dated date hereof, or the most recent date to which interest has been paid or duly provided for, at the rate per annum specified above, payable on October 1, 2016, and semiannually on each April 1 and October 1 thereafter, until the date of maturity or prior redemption of this Bond. Interest shall be calculated on the basis of a 360-day year and twelve 30-day months.

This Bond is an obligation of the University payable solely in accordance with the terms hereof and is not an obligation, general, special, or otherwise of the State of Idaho, does not constitute a debt, legal, moral, or otherwise, of the State of Idaho, and is not enforceable against the State, nor shall payment hereof be enforceable out of any funds of the University other than the revenues, fees, and charges pledged thereto in the Resolution (defined herein). Pursuant to the Resolution, certain revenues have been pledged and will be set aside into the Bond Fund (as defined in the Resolution) to provide for the prompt payment of the principal of, interest on, and redemption price of the Bonds of which this

Bond is a part. For a more particular description of the Bond Fund, the revenues to be deposited therein, and the nature and extent of the security afforded thereby, reference is made to the provisions of the Resolution.

The principal of, premium, if any, and interest on this Bond are payable in lawful money of the United States of America to the registered owner hereof whose name and address shall appear on the registration books of the University (the "Bond Register") maintained by the Corporate Trust Department of U.S. Bank National Association (the "Trustee"). Interest shall be paid to the registered owner whose name appears on the Bond Register on the fifteenth day of the calendar month next preceding the interest payment date, at the address appearing on the Bond Register, and shall be paid by check or draft of the Trustee mailed to such registered owner on the due date at the address appearing on the Bond Register, or at such other address as may be furnished in writing by such registered owner to the Trustee. Principal shall be paid to the registered owner upon presentation and surrender of this Bond at the Principal Office trust office of the Trustee, on or after the date of maturity or prior redemption.

This Bond is one of a duly authorized issue of Bonds of like date, tenor, and effect, except for variations required to state numbers, denominations, rates of interest, and dates of maturity, aggregating \$_____ in principal amount. The Bonds are issued pursuant to and in full compliance with the Constitution and statutes of the State of Idaho, particularly Chapter 38, Title 33 and Section 57-504, Idaho Code, and proceedings duly adopted and authorized by the Board on behalf of the University, more particularly the Resolution adopted by the Board on September 17, 1992, as previously amended, supplemented, and restated from time to time, including with respect to the Bonds by a Supplemental Resolution adopted by the Board on February 18, 2016, authorizing the issuance of the Bonds (collectively, the "Resolution"). All capitalized terms used but not herein defined shall have the meanings ascribed to them in the Resolution.

This Bond is one of the General Revenue Refunding Bonds, Series 2016, of the University (the "Series 2016 Bonds") issued under the provisions of Chapter 38, Title 33 and Section 57-504, Idaho Code, for the purpose of providing funds with which to (i) refund certain outstanding bonds of the University (the "Refunded Bonds") and (ii) pay issuance expenses properly incident thereto. The principal of, interest on, and redemption price of the Series 2016 Bonds are payable from revenues and funds of the University pledged therefor and certain other fees and revenues, as more particularly set forth in the Resolution.

The Series 2016 Bonds are issuable as fully registered bonds without coupons in Authorized Denominations of \$5,000 or any integral multiple in excess thereof. Subject to the limitations and upon payment of the charges, if any, provided in the Resolution, Bonds may be exchanged at the Principal Office of the Trustee for a like aggregate principal amount of Series 2016 Bonds of other Authorized Denominations.

This Series 2016 Bond is transferable by the Holder hereof, in person, or by its attorney duly authorized in writing, at the Principal Office of the Trustee, but only in the manner, subject to the limitations and upon payment of the charges provided in the

Resolution, and upon surrender and cancellation of this Series 2016 Bond. Upon such transfer a new fully registered Bond or Bonds of like tenor in Authorized Denominations, for the same aggregate principal amount, will be issued to the transferee in exchange herefor.

Each Bond shall bear interest from the interest payment date to which interest has been paid as of the date on which it is authenticated or, if it is authenticated on or before the first interest payment date, from the Issue Date; provided, however, that if, at the time of authentication of any Bond, interest is in default on Outstanding Bonds, such Bond shall bear interest from the interest payment date to which interest has previously been paid or made available for payment on the Outstanding Bonds. Both the principal of and premium, if any, on the Series 2016 Bonds shall be payable upon surrender thereof at the Principal Office of the Trustee.

Interest on the Series 2016 Bonds will be paid on each interest payment date provided that if any interest payment date is not a Business Day, such interest shall be paid as provided above on the next succeeding Business Day with the same effect as if made on the day such payment was due. Interest on the Series 2016 Bonds shall bear interest from and including the Issue Date until payment of the principal or redemption price thereof has been made or provided for on the due date thereof, whether at maturity, upon redemption or otherwise.

[Optional Redemption:

The Series 2016 Bonds maturing on and after _____ are subject to redemption prior to maturity at the option of the Board in whole or in part on any date on and after _____, from such maturities or parts thereof as shall be selected by the University and by lot within a Maturity, at a redemption price equal to 100% of the principal amount of the Series 2016 Bonds to be redeemed plus accrued interest to the date of redemption.]

[Mandatory Sinking Fund Redemption:

The Series 2016 Bonds are subject to mandatory sinking fund redemption as described below:

Mandatory Redemption Date (_____)	Mandatory Redemption <u>Amount</u> \$
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Upon redemption of any Series 2016 Bonds other than by application of such mandatory sinking fund redemption, an amount equal to the principal amount so redeemed will be credited toward a part or all of any one or more of such mandatory sinking fund

redemption amounts, if any, for the Series 2016 Bonds in such order of mandatory sinking fund date as shall be directed by the University.]

The Series 2016 Bonds shall not be transferable or exchangeable except as set forth in the Resolution.

This Bond is transferable by the registered owner hereof in person or by his attorney duly authorized in writing upon presentation and surrender of this Bond at the Principal Office of the Trustee. Upon such transfer, a new Bond, of the same denomination, maturity, and interest rate will be issued to the transferee in exchange therefor.

Reference is hereby made to the Resolution for the covenants and declarations of the University and other terms and conditions under which this Bond and the Series 2016 Bonds of this issue have been issued. The covenants contained herein and in the Resolution may be discharged by making provisions at any time for the payment of the principal of and interest on this Bond in the manner provided in the Resolution.

This Bond shall not be valid or become obligatory for any purpose or be entitled to any security or benefit under the Resolution until the Certificate of Authentication hereon shall have been manually signed by the Trustee.

IT IS HEREBY CERTIFIED AND DECLARED that all acts, conditions, and things required by the Constitution and statutes of the State of Idaho to exist, to have happened, been done, and performed precedent to and in the issuance of this Bond have happened, been done, and performed, and that the issuance of this Bond and the Series 2016 Bonds of this issue does not violate any Constitutional, statutory, or other limitation upon the amount of bonded indebtedness that the University may incur.

IN WITNESS WHEREOF, the Board of Trustees of Idaho State University (the "Board"), has caused this Bond to be executed by the manual or facsimile signature of the President of the Board and of the Vice President for Finance and Administration and Bursar of the University and attested by the manual or facsimile signature of the Secretary of the Board, and a facsimile or original of the official seal of the University to be imprinted hereon, as of the dated date set forth above.

IDAHO STATE UNIVERSITY

By: _____
President of the Board of Trustees
of Idaho State University

COUNTERSIGNED:

(SEAL)

By: _____
Vice President for Finance and
Administration and Bursar

ATTEST:

By: _____
Secretary of the Board of Trustees
of Idaho State University

CERTIFICATE OF AUTHENTICATION

This Bond is one of the General Revenue Refunding Bonds, Series 2016, of Idaho State University, described in the within-mentioned Resolution.

U.S. BANK NATIONAL ASSOCIATION,
as Trustee

By: _____
Authorized Signature

Date of Authentication: _____

ASSIGNMENT

FOR VALUE RECEIVED, _____,
the undersigned sells, assigns and transfers unto:

(Social Security or Other Identifying Number of Assignee)

(Please Print or Typewrite Name and Address of Assignee)

the within Bond and hereby irrevocably constitutes and appoints
_____ of _____ to transfer the said bond
on the books kept for registration thereof with full power of substitution in the premises.

Dated: _____

Signature: _____

NOTICE: The signature on this assignment must correspond with the name(s) of the Registered owner as it appears upon the face of the within Bond in every particular without alteration or enlargement or any change whatsoever.

SIGNATURE GUARANTEED:

NOTICE: Signature(s) must be guaranteed by an "eligible guarantor institution" that is a member of or a participant in a "signature guarantee program" (e.g., the Securities Transfer Agents Medallion Program, the Stock Exchange Medallion Program or the New York Stock Exchange, Inc. Medallion Signature Program).

EXHIBIT B

TERMS CERTIFICATE

In connection with a Supplemental Resolution of the Board of Trustees (the "Board") of Idaho State University (the "University") adopted on February 18, 2016 (the "2016 Supplemental Resolution") authorizing the issuance and sale of the University's General Revenue Refunding Bonds, Series 2016 (the "Series 2016 Bonds"), the undersigned hereby executes and delivers this Terms Certificate (as such term is defined in the 2016 Supplemental Resolution) specifying certain terms of the Series 2016 Bonds:

1. Principal amount: \$_____;
2. Issue Date: _____, 2016, or such other date agreed upon by the Underwriter and the University;
3. The aggregate price to be paid by the Underwriter for the Series 2016 Bonds shall be \$_____ (representing the par amount of the Series 2016 Bonds, plus a reoffering premium of \$_____, less an underwriter's discount of \$_____);
4. Underwriter's discount or fee of \$_____ (\$_____ per \$1,000 of par amount [plus any reoffering premium], as more fully described in Bond Purchase Agreement);
5. The maturity dates, principal amounts, and interest rates for the Series 2016 Bonds set forth in Schedule A attached hereto;
6. The final redemption provisions for the Series 2016 Bonds are as set forth in Schedule B attached hereto;
7. Application of Series 2016 Bond proceeds:
Of the \$_____ received as the purchase price for the Series 2016 Bonds, \$_____ shall be deposited in the Escrow Account and used to effect the refunding of the Refunded Bonds, as described in the Escrow Agreement and the remaining \$_____ shall be deposited in the Series 2016 Costs of Issuance Fund. Any balance remaining after payment of the Costs of Issuance, and no later than 30 days after the issuance of the Series 2016 Bonds, shall be transferred to the University and the Series 2016 Cost of Issuance Fund shall be closed;
8. The Refunded Bonds are finally determined to be as set forth in Schedule C attached hereto;
9. Payment Date shall mean each April 1 and October 1, commencing on October 1, 2016;
10. The Underwriter for the Series 2016 Bonds is Piper Jaffray & Co.; and
11. [The Series 2016 Bonds will be insured by _____.]

Executed and delivered this _____, 2016 on behalf of the Board pursuant to the 2016 Supplemental Resolution.

IDAHO STATE UNIVERSITY

By: _____
Vice President for Finance and
Administration and Bursar

SCHEDULE A

IDAHO STATE UNIVERSITY
\$
GENERAL REVENUE REFUNDING BONDS,
SERIES 2016

Maturity Date
()

Coupon

Principal Amount

SCHEDULE B

REDEMPTION PROVISIONS

[Optional Redemption:

The Series 2016 Bonds maturing on and after _____ are subject to redemption prior to maturity at the option of the Board in whole or in part on any date on and after _____, from such maturities or parts thereof as shall be selected by the University at a redemption price equal to 100% of the principal amount of the Series 2016 Bonds to be redeemed plus accrued interest to the date of redemption.]

[Mandatory Sinking Fund Redemption:

The Series 2016 Bonds are subject to mandatory sinking fund redemption as described below:

Mandatory Redemption Date (_____)	Mandatory Redemption <u>Amount</u> \$
---	--

Upon redemption of any Series 2016 Bonds other than by application of such mandatory sinking fund redemption, an amount equal to the principal amount so redeemed will be credited toward a part or all of any one or more of such mandatory sinking fund redemption amounts, if any, for the Series 2016 Bonds in such order of mandatory sinking fund date as shall be directed by the University.]

SCHEDULE C

REFUNDED BONDS

SERIES 2004B BONDS

Maturity Date
(_____)

Coupon

Principal Amount

SERIES 2007 BONDS

Maturity Date
(_____)

Coupon

Principal Amount

EXHIBIT C

PARAMETERS

Purchase Price not less than the aggregate Principal amount.

Principal amount not to exceed \$14,500,000.

Interest Rate not to exceed 5.50% per annum. Effective true interest cost (TIC) not to exceed 3.65% per annum.

Net Present Value (NPV) savings shall not be less than 3.0% of the Refunded Bonds par amount.

Underwriter's Discount or fee not to exceed 0.6% of the principal amount of the Series 2016 Bonds plus any reoffering premium, as more fully described in the Bond Purchase Agreement.

Final Maturity not to exceed 18.25 years from date of issuance.

The Series 2016 Bonds may be made non-callable or subject to redemption as determined at the time of the sale thereof.

NEW ISSUE – Issued in Book-Entry-Only Form

Rating: Moody's “___”
(See “Rating” herein)

In the opinion of Ballard Spahr LLP, Bond Counsel to Idaho State University, (the “University”), interest on the Series 2016 Bonds is excludable from gross income for purposes of federal income tax under existing laws as enacted and construed on the date of initial delivery of the Series 2016 Bonds, assuming the accuracy of the certifications of the University and continuing compliance by the University with the requirements of the Internal Revenue Code of 1986. Interest on the Series 2016 Bonds is not a preference item for purposes of either individual or corporate federal alternative minimum tax; however, interest paid to corporate holders of the Series 2016 Bonds may be indirectly subject to AMT under circumstances described under “TAX MATTERS” herein. Bond Counsel is also of the opinion that, under currently existing laws, interest on the Series 2016 Bonds is exempt from State of Idaho income taxes. See “TAX MATTERS” herein.



\$ _____
IDAHO STATE UNIVERSITY
GENERAL REVENUE REFUNDING BONDS, SERIES 2016

Dated: Date of Delivery

Due: April 1, as shown on the inside cover

The \$ _____ * Idaho State University General Revenue Refunding Bonds, Series 2016 (the “Series 2016 Bonds”), are issued as fully registered bonds and, when delivered, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York (“DTC”). DTC will act as securities depository for the Series 2016 Bonds. Ownership interests in the Series 2016 Bonds will be in minimum denominations of \$5,000 and multiples thereof. Beneficial Owners of the Series 2016 Bonds will not receive physical bonds, but will receive a credit balance on the books of the nominees of such purchasers. Interest on the Series 2016 Bonds is payable on April 1 and October 1 of each year, commencing October 1, 2016. Principal, prepayment premium, if any, and interest due with respect to the Series 2016 Bonds will be payable by U.S. Bank National Association, as Trustee, to DTC, which will, in turn, remit such principal, prepayment premium, if any, and interest due with respect to the Series 2016 Bonds.

The Series 2016 Bonds are subject to optional redemption prior to maturity as described herein.

The Series 2016 Bonds are being issued by the University to (i) refund certain outstanding bonds of the University to achieve debt service savings, and (ii) pay the costs of issuance of the Series 2016 Bonds.

The State Board of Education, acting as the Board of Trustees for Idaho State University (the “Board”) serves as the governing body for the University. Under Idaho law, the Board is a body politic and corporate and an independent instrumentality of the State of Idaho. The Series 2016 Bonds are being issued under a supplemental bond resolution (the “Supplemental Resolution”) adopted by the Board on February 18, 2016. The Series 2016 Bonds are being issued as “Additional Bonds” pursuant to a Resolution adopted by the Board on September 17, 1992, providing for the issuance of revenue bonds, as amended and restated (the “Original Resolution”). The Original Resolution provided for the issuance of an initial series of revenue bonds and authorized the issuance of additional series of revenue bonds pursuant to Supplemental Resolutions, if certain conditions are met. See “SECURITY FOR THE SERIES 2016 BONDS” herein. The Original Resolution, as previously amended and supplemented and as amended and supplemented by the Supplemental Resolution, is referred to herein as the “Resolution.” The revenue bonds issued pursuant to the Resolution, including the Series 2016 Bonds, are collectively referred to herein as the “Bonds.” The Bonds are secured by a pledge of the Board to levy and collect certain student fees known as the Student Facilities Fee/Facilities and the Tuition Fee (formerly referred to as the Matriculation Fee), plus Revenues of the Housing System and CAES Base Rent (each as defined in the Resolution), and certain other revenues. See “SECURITY FOR THE SERIES 2016 BONDS” herein.

The Series 2016 Bonds are limited obligations of the Board and do not constitute a debt or liability of the State of Idaho, its Legislature, or any of its political subdivisions or agencies other than the University and then only to the extent herein described. The University is not authorized to levy or collect any taxes or assessments other than the revenues and fees described herein to pay the Series 2016 Bonds. The University has no taxing power.

The Series 2016 Bonds are offered when, as and if issued and accepted by the Underwriter, subject to prior sale and to the delivery of an approving opinion by Ballard Spahr LLP, as Bond Counsel, and to other conditions. Certain legal matters will be passed upon for the University by University Counsel, Joanne Hirase-Stacey, Esq. Certain legal matters will be passed upon for the Underwriter by its counsel Kutak Rock LLP. It is expected that the Series 2016 Bonds will be available for delivery on or about _____, 2016.

This cover page contains certain information for quick reference only. It is not a summary of this issue. Investors must read the entire Official Statement to obtain information essential to the making of an informed investment decision.

This Official Statement is dated _____, 2016, and the information contained herein speaks only as of that date.

Piper Jaffray & Co.

* Preliminary; subject to change.

\$ _____ *

**IDAHO STATE UNIVERSITY
GENERAL REVENUE REFUNDING BONDS, SERIES 2016**

MATURITIES, AMOUNTS, INTEREST RATES AND YIELDS

<u>Due (April 1)</u>	<u>Principal Amount*</u>	<u>Interest Rate</u>	<u>Yield</u>	<u>CUSIP⁽¹⁾</u>
2017				451470 ____
2018				451470 ____
2019				451470 ____
2020				451470 ____
2021				451470 ____
2022				451470 ____
2023				451470 ____
2024				451470 ____
2025				451470 ____
2026				451470 ____
2027				451470 ____
2028				451470 ____
2029				451470 ____
2030				451470 ____
2031				451470 ____
2032				451470 ____
2033				451470 ____
2034				451470 ____

* Preliminary; subject to change

⁽¹⁾ CUSIP data contained herein is provided by Standard & Poor's, CUSIP Service Bureau, a division of The McGraw Hill Companies, Inc. CUSIP numbers have been assigned by an independent company not affiliated with the University or the Underwriter, and are included solely for the convenience of the holders of the Series 2016 Bonds. Neither the Board nor the University is responsible for the use of CUSIP numbers, nor is a representation made as to the accuracy of the CUSIP numbers. The CUSIP numbers are contained herein solely for the convenience of the readers of this Official Statement.

No dealer, broker, salesperson or other person has been authorized by the Board, the University or by the Underwriter to give any information or to make any representations, other than as contained in this Official Statement, and if given or made, such other information or representations must not be relied upon as having been authorized by the Board, the University or the Underwriter. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy the Series 2016 Bonds, nor shall there be any sale of the Series 2016 Bonds by any person in any jurisdiction in which it is unlawful for such persons to make such offer, solicitation or sale.

The information set forth herein has been furnished by the Board, the University, DTC and certain other sources that are believed to be reliable but is not guaranteed as to accuracy or completeness by, and is not to be construed as a representation by, the Underwriter. The information and expressions of opinion contained herein are subject to change without notice. Any statements made in this Official Statement involving matters of opinion or estimates or forecasts, whether or not so expressly stated, are set forth as such and not as representations of fact or representations that estimates will be realized.

IN CONNECTION WITH THIS OFFERING, THE UNDERWRITER MAY ENGAGE IN TRANSACTIONS THAT STABILIZE, MAINTAIN OR OTHERWISE AFFECT THE MARKET PRICES OF THE SERIES 2016 BONDS. SUCH TRANSACTIONS MAY INCLUDE OVERALLOTMENTS IN CONNECTION WITH THE UNDERWRITING, THE PURCHASE OF SERIES 2016 BONDS TO STABILIZE THEIR MARKET PRICES, THE PURCHASE OF SERIES 2016 BONDS TO COVER UNDERWRITER SHORT POSITIONS AND THE IMPOSITION OF PENALTY BIDS. SUCH TRANSACTIONS, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

Neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the Board or the University since the date hereof.

This Official Statement is not to be construed as a contract with the purchasers of the Series 2016 Bonds.

The Underwriter has provided the following sentence for inclusion in this Official Statement. The Underwriter has reviewed the information in this Official Statement in accordance with, and as part of, its responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriter does not guarantee the accuracy or completeness of such information.

THE SECURITIES OFFERED HEREBY HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION, NOR HAS THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS OFFICIAL STATEMENT. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENCE.

This Official Statement contains “forward-looking statements” that are based upon the University’s current expectations and its projections about future events. When used in this Official Statement, the words “project,” “estimate,” “intend,” “expect,” “scheduled,” “pro forma” and similar words identify forward-looking statements. Forward-looking statements are subject to known and unknown risks, uncertainties and factors that are outside of the control of the University. Actual results could differ materially from those contemplated by the forward-looking statements. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. The University has no plans to issue any updates or revise these forward-looking statements based on future events.

This Preliminary Official Statement has been “deemed final” by the University, pursuant to Rule 15c2-12 promulgated by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as amended, except for information which is permitted to be excluded from this Preliminary Official Statement under said Rule 15c2-12. The University has undertaken to provide continuing disclosure on certain matters, including annual financial information and specific events, as more fully described herein. (See “COMMITMENT TO PROVIDE CONTINUING DISCLOSURE.”)

§ _____ *

IDAHO STATE UNIVERSITY

GENERAL REVENUE REFUNDING BONDS, SERIES 2016

THE IDAHO STATE BOARD OF EDUCATION AND
THE BOARD OF TRUSTEES OF IDAHO STATE UNIVERSITY

Don Soltman President
 Emma Atchley Vice President
 Bill Goesling Secretary
 Debbie Critchfield Board Member
 Linda Clark Board Member
 David Hill Board Member
 Richard Westerberg Board Member
 Sherri Ybarra Superintendent of Public Instruction

UNIVERSITY OFFICIALS

Arthur C. Vailas President
 Laura Woodworth-Ney Provost and Vice President for Academic Affairs
 James A. Fletcher Vice President for Finance and Administration
 Kent Tingey Vice President for University Advancement
 Cornelis J. Van der Schyf Vice President for Research
 Patricia Terrell Vice President for Student Affairs
 Joanne Hirase-Stacey, Esq. University Counsel
 Adam R. Jacobsmeyer Executive Director, Treasury, Procurement, Policies, & Business Services

BOND COUNSEL

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 (801) 531-3001 (Fax)

TRUSTEE, PAYING AGENT AND REGISTRAR

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 Salt Lake City, Utah 84101
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 (801) 534-6013 (Fax)

FINANCIAL ADVISOR

Blue Rose Capital Advisors
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 Minneapolis, Minnesota 55344
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 (952) 460-5776 (Fax)

IDAHO STATE UNIVERSITY

Executive Director, Treasury, Procurement,
 Policies, & Business Services
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 (208) 282-4725 (Fax)

UNDERWRITER

Piper Jaffray & Company
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 Boise, ID 83702
 (208) 344-8561 Office

UNDERWRITER'S COUNSEL

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 Cutter Tower
 510 West Riverside Avenue, Suite 800
 Spokane, WA 99201
 (509) 747-4040

* Preliminary; subject to change.

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OFFICIAL STATEMENT**RELATING TO**

§ _____ *

IDAHO STATE UNIVERSITY**GENERAL REVENUE REFUNDING BONDS, SERIES 2016****INTRODUCTION**

The descriptions and summaries of various documents hereinafter set forth do not purport to be comprehensive or definitive, and reference should be made to each document for the complete details of all terms and conditions. All statements herein are qualified in their entirety by reference to each document. See “APPENDIX A” for definitions of certain words and terms used herein. See “APPENDIX B” for a summary of certain provisions of the Resolution (as defined below).

The attached Appendices are integral parts of this Official Statement and should be read in their entirety: “APPENDIX A—GLOSSARY OF CERTAIN TERMS USED IN THE RESOLUTION AND OFFICIAL STATEMENT”; “APPENDIX B—SUMMARY OF THE RESOLUTION”; “APPENDIX C—STUDENT FEE AND TUITION SCHEDULE”; “APPENDIX D—FINANCIAL STATEMENTS OF THE UNIVERSITY FOR THE YEARS ENDED JUNE 30, 2014 AND 2015 AND INDEPENDENT AUDITOR’S REPORT”; “APPENDIX E—FORM OF OPINION OF BOND COUNSEL”; “APPENDIX F—PROVISIONS REGARDING BOOK-ENTRY-ONLY SYSTEM”; and “APPENDIX G—FORM OF CONTINUING DISCLOSURE AGREEMENT.”

Idaho State University

Idaho State University (the “University”) is a publicly supported multi-disciplinary institution of higher education located in Pocatello, Idaho. It has served the citizens of the State of Idaho (the “State”) since 1901, when it was first established as the Academy of Idaho. It was renamed the Idaho Technical Institute in 1915 and reorganized as the Southern Branch of the University of Idaho in 1927. It became Idaho State College in 1947, and was established as Idaho State University in 1963. The University is governed by the State Board of Education, whose members serve as the Board of Trustees for the University (the “Board”). In addition to the University Place campus in Idaho Falls, the University operates outreach centers in Meridian and Twin Falls.

Authorization and Purpose of the Official Statement

This Official Statement, including the cover page and the financial and other information contained in the Appendices hereto, is furnished in connection with the offering of the University’s General Revenue Refunding Bonds, Series 2016 (the “Series 2016 Bonds”). The University is authorized by the Educational Institutions Act of 1935, Chapter 38, Title 33 Idaho Code, together with Section 57-504 of the Idaho Code, as amended (together, the “Act”), to issue bonds to refund bonds previously issued by the University. The Series 2016 Bonds are being issued pursuant to such statutory authorization and pursuant to the supplemental resolution (the “Supplemental Resolution”) adopted by the Board on February 18, 2016. The Series 2016 Bonds are being issued as “Additional Bonds” under a bond resolution adopted September 17, 1992, as amended and restated on August 12, 2004 (the “Original Resolution”). The Original Resolution, together with the Supplemental Resolution and the previous supplemental resolutions authorizing the issuance of Additional Bonds, are referred to collectively herein as the “Resolution.”

* Preliminary; subject to change.

Purpose of the Series 2016 Bonds

The Series 2016 Bonds are being issued by the University to (i) refund certain outstanding bonds of the University to achieve debt service savings and (ii) pay the costs of issuance of the Series 2016 Bonds. See “PLAN OF REFUNDING” herein.

Outstanding Parity Bonds

Pursuant to the Original Resolution, to provide funds to finance and refinance certain projects, the University has previously issued various series of bonds, a portion of which are currently outstanding (collectively, the “Outstanding Parity Bonds”). The Series 2016 Bonds will be issued on a parity with the Outstanding Parity Bonds and any additional bonds, notes or other obligations that may be issued from time to time under the Original Resolution (the “Additional Bonds”), such that the Series 2016 Bonds, Outstanding Parity Bonds and Additional Bonds will be payable from and secured by an equal lien pledge of the Pledged Revenues (defined herein). See “SECURITY FOR THE SERIES 2016 BONDS” herein. The Series 2016 Bonds, the Outstanding Parity Bonds and any Additional Bonds are collectively referred to herein as the “Bonds.”

Payment and Security for the Series 2016 Bonds

The Series 2016 Bonds are secured on a parity with the Outstanding Parity Bonds by a pledge of the Pledged Revenues, as designated by the Board, including the University’s Tuition Fee, formerly referred to as the Matriculation Fee (the “Tuition Fee”), the Student Facilities Fee/Facilities (the “Student Facilities Fee/Facilities”), Revenues of the Housing System and CAES Base Rent, (as defined in the Resolution), all investment income derived from the Revenue Fund and the Bond Fund, and proceeds from the sale of a series of bonds and money and investment earnings thereon. Hereinafter, the Tuition Fee and the Student Facilities Fee/Facilities are referred to collectively as the “Pledged Fees.” See “SECURITY FOR THE SERIES 2016 BONDS” herein.

Redemption

The Series 2016 Bonds are subject to optional redemption as described under the caption “THE SERIES 2016 BONDS—Redemption” herein.

Bondowners’ Risks

The purchase of the Series 2016 Bonds involves investment risks, certain of which are described in this Official Statement.

Registration, Manner of Payment

The Series 2016 Bonds are issuable only as fully registered bonds without coupons and, when issued, will be registered in the name of Cede & Co., as nominee for The Depository Trust Company, New York, New York (“DTC”), which will act as initial securities depository of the Series 2016 Bonds. Purchases of the Series 2016 Bonds will be made in book-entry form only, through brokers and dealers who are, or who act through, DTC Participants. Beneficial Owners of the Series 2016 Bonds will not be entitled to receive physical delivery of bond certificates so long as DTC or a successor securities depository acts as the securities depository with respect to the Series 2016 Bonds.

Principal and purchase price (as applicable) of, premium, if any, and interest on the Series 2016 Bonds are payable through U.S. Bank National Association, as Paying Agent and Registrar, to DTC, which will in turn be responsible to remit such principal and interest to its Participants, for subsequent disbursements to the Beneficial Owners of the Series 2016 Bonds, as described under the caption “APPENDIX F—PROVISIONS REGARDING BOOK-ENTRY-ONLY SYSTEM” hereto.

Conditions of Delivery, Anticipated Date, Manner and Place of Delivery

The Series 2016 Bonds are offered, subject to prior sale, when, as and if issued and received by the Underwriter subject to the approval of legality by Ballard Spahr LLP, as Bond Counsel to the University, and certain other conditions. Certain legal matters will be passed upon for the University by University Counsel, Joanne Hirase-Stacey, Esq. Certain legal matters will be passed upon for the Underwriter by its counsel Kutak Rock LLP, Spokane, Washington. It is expected that the Series 2016 Bonds, in book-entry form, will be available for delivery to DTC or its agent on or about _____, 2016.

Continuing Disclosure

The University, for the benefit of the owners and Beneficial Owners of the Series 2016 Bonds, has covenanted to provide certain annual information and notice of the occurrence of certain events in order to enable the Underwriter to make the determinations required by Rule 15c2-12 of the Securities and Exchange Commission (the “Rule”). See “CONTINUING DISCLOSURE” herein and “APPENDIX G—FORM OF CONTINUING DISCLOSURE AGREEMENT” attached hereto.

Contact Persons

The chief contact person for the University concerning the Series 2016 Bonds is:

Mr. Adam R. Jacobsmeyer
Executive Director
Treasury, Procurement, Policies, & Business Services
Idaho State University
921 South 8th Avenue, Stop 8219
Pocatello, Idaho 83209-8219
Telephone: (208) 282-2512
Fax: (208) 282-4725
E-mail: jacoada2@isu.edu

The chief contact person for the Financial Advisor concerning the Series 2016 Bonds is:

Mr. John R. Wendling
Vice President
Blue Rose Capital Advisors
6400 Flying Cloud Drive, Suite 212
Minneapolis, Minnesota 55344
Telephone: (952) 746-6050
Fax: (952) 460-5776
E-mail: jwendling@blueroseadvisors.com

Other Matters

The descriptions and summaries of the Resolution, the Series 2016 Bonds and various other documents herein set forth do not purport to be comprehensive or definitive, and reference is made to each document for the complete details of its terms and conditions. All statements herein are qualified in their entirety by reference to such documents. Capitalized terms used, but not otherwise defined, herein have the same meaning as ascribed to them in the Resolution. Descriptions of the Resolution and the Series 2016 Bonds are qualified by reference to bankruptcy laws affecting the remedies for the enforcement of the rights and security provided therein and the effect of the exercise of the police power by any entity having jurisdiction. See “APPENDIX B—SUMMARY OF THE RESOLUTION” herein.

THE SERIES 2016 BONDS**Description of the Series 2016 Bonds**

The Series 2016 Bonds will be dated the date of their delivery and are issuable in fully registered form, book-entry-only, in the aggregate principal amount of \$ _____.^{*} The Series 2016 Bonds bear interest from the date of issuance, payable semiannually on April 1 and October 1 of each year, commencing October 1, 2016. Payment will be made to Beneficial Owners through the Book-Entry-Only System described below. For a further description of certain terms of the Resolution authorizing the issuance of the Series 2016 Bonds, please refer to "APPENDIX B—SUMMARY OF THE RESOLUTION."

Redemption

Optional Redemption. The Series 2016 Bonds maturing on or prior to April 1, ____, are not subject to redemption prior to their stated dates of maturity. The Series 2016 Bonds maturing on or after April 1, ____, are subject to redemption prior to maturity at the option of the University in whole or in part on any date on and after April 1, ____, and if in part, in such order of maturity as may be directed by the University at a redemption price equal to 100% of the principal amount of the Series 2016 Bonds to be redeemed plus accrued interest to the date of redemption.

Notice of Redemption

When the Series 2016 Bonds are called for redemption notice must be sent by the Trustee, postage prepaid, by first-class mail not less than thirty-five (35) nor more than sixty (60) days prior to the redemption date to the registered owners of the Series 2016 Bonds to be redeemed at the address shown on the Bond Register. As provided in the Resolution, the Trustee may give further notice of redemption at least thirty-five (35) days before the redemption date by registered or certified mail or overnight delivery service to certain registered national securities depositories and national information services; provided, however that no defect in such further notice or failure to give all or any portion of such further notice will in any manner defeat the effectiveness of a call for redemption.

Each notice of redemption may further state, in the case of optional redemption, that such redemption shall be conditioned upon the receipt by the Trustee on or prior to the date fixed for such redemption of moneys sufficient to pay the principal of and interest on such Series 2016 Bonds to be redeemed and that if such moneys shall not have been so received said notice shall be of no force and effect and such Series 2016 Bonds shall not be required to be redeemed. In the event that such notice of redemption contains such a condition and such moneys are not so received, the redemption shall not be made and the Trustee shall within a reasonable time thereafter give notice, one time, in the same manner in which the notice of redemption was given, that such moneys were not so received.

Book-Entry-Only System

The Series 2016 Bonds will be available only in book-entry-only form in the principal amounts shown on the inside cover page of this Official Statement. DTC will act as Securities Depository for the Series 2016 Bonds. The ownership of one fully registered Series 2016 Bond for each maturity as set forth on the inside cover page of this Official Statement, in the aggregate principal amount of each maturity of the Series 2016 Bonds, will be registered in the name of Cede & Co., as nominee for DTC. See "APPENDIX F—PROVISIONS REGARDING BOOK-ENTRY-ONLY SYSTEM."

Funds and Accounts Created under the Resolution

The Revenue Fund. The Resolution creates the Revenue Fund to be held by the University into which Pledged Revenues shall be deposited. Monies in the Revenue Fund shall be disbursed in the following order of priority:

^{*} Preliminary; subject to change.

1. To transfer to the Trustee for deposit in the Debt Service Account of the Bond Fund for payment of any interest, principal or redemption premium, if any, coming due on the Bonds;

2. Amounts remaining in the Revenue Fund in excess of the amounts necessary to make payments required by subsection (1) above may be applied by the University, free and clear of the lien of the Resolution, for any other lawful purpose of the University.

The Bond Fund. The Resolution creates a Bond Fund consisting of a Debt Service Account held by the Trustee to be used for paying the principal of, premium, if any, and interest on the Bonds.

The Construction Fund. The Resolution provides for a Construction Fund to be held, disbursed and invested by the University, into which proceeds from any series of Bonds issued to fund Projects being built or acquired with a series of Bonds issued under the Resolution are deposited. Upon completion of a Project, any unexpended monies held in the Construction Fund will be transferred to the Debt Service Account of the Bond Fund.

The Series 2016 Bonds Cost of Issuance Fund. The Supplemental Resolution creates the Series 2016 Bonds Cost of Issuance Fund to be held by the University to pay costs of issuance of the Series 2016 Bonds.

The Rebate Fund. The Resolution creates a Rebate Fund to be held and administered by the University, separate and apart from other funds and accounts of the University. The University shall make deposits into the Rebate Fund of all amounts necessary to make payments to the United States required under the Code.

Additional Bonds

The Resolution currently provides that Additional Bonds (such as the Series 2016 Bonds) secured by Pledged Revenues may be issued by the University upon the satisfaction of various conditions specified therein. The amount of Additional Bonds that may be issued is not limited by law.

The Resolution provides for the issuance of Additional Bonds to finance Projects or to refund the Bonds or Additional Bonds issued under the Resolution upon satisfaction of certain conditions.

In connection with the issuance of Additional Bonds to finance Projects, the University is required to file, among other things, the following documents with the Trustee:

1. a copy of the Supplemental Resolution authorizing such Additional Bonds;
2. a certificate of the University to the effect that, upon the delivery of the Additional Bonds, the University will not be in default in the performance of any of the covenants, conditions, agreements, terms or provisions of the Resolution or any of the Bonds;
3. a Written Certificate of the University signed by an Authorized Officer of the University, setting forth the then estimated completion date and the then estimated cost of construction of the Project(s), if any, being financed by the Additional Bonds;
4. either (a) an Accountant's Certificate which demonstrates that, for any twelve-month period in the preceding twenty-four months, Revenues Available for Debt Service shall have equaled at least 110% of the Maximum Annual Debt Service for all Bonds then Outstanding and any Additional Bonds proposed to be issued; or
 - (b) a Written Certificate of the University showing that Estimated Revenues Available for Debt Service (assuming completion of the proposed Project on its then estimated Completion Date) will equal at least 110% of the Maximum Annual Debt Service on all Bonds then Outstanding and the Additional Bonds proposed to be issued for (i) each of the fiscal years of the University during which any of the Bonds will be Outstanding following the estimated completion date of the Project being financed by the Additional Bonds, if interest during construction of the Project being financed by the Additional Bonds is capitalized; or (ii) the University's current fiscal year and any succeeding fiscal year during which any of the Bonds will be Outstanding, if interest during construction of the Project being financed by the Additional Bonds is not capitalized.

In addition to Additional Bonds issued to finance Projects as described above, the University may issue Additional Bonds (such as the Series 2016 Bonds) for the purpose of refunding any Outstanding Parity Bonds, provided that the Debt Service in each year on the refunding bonds does not exceed by more than \$25,000 the Debt Service on the Bonds to be refunded.

Payment Agreements

As described in “APPENDIX B” hereto, under the caption “Payment Agreements,” the University is permitted under the Resolution to enter into swaps and other derivatives (as described in the definition of Payment Agreements contained therein) under requirements substantially similar to those for the issuance of Additional Bonds and taking into account the payments and receipts expected with respect to the Payment Agreement. The University currently has no Payment Agreements outstanding and currently has no intent of entering into a Payment Agreement within the foreseeable future.

SECURITY FOR THE SERIES 2016 BONDS

The Series 2016 Bonds are secured by Pledged Revenues pursuant to the Resolution on a parity with all Bonds issued under the Resolution. Pledged Revenues include: (i) Pledged Fees; (ii) Revenues of the Housing System and CAES Base Rent; (iii) other revenues of other University enterprises or sources of funds as shall be designated by the Board; (iv) any investment income derived from the Revenue Fund and the Bond Fund; and (v) proceeds from the sale of a series of Bonds and money and investment earnings thereon. In addition, the University has covenanted that Revenues Available for Debt Service will equal 110% of Annual Debt Service on a year by year basis. See also “HISTORICAL PLEDGED REVENUES AND DEBT SERVICE” herein. Pledged Revenues do not include State appropriations, which by law cannot be pledged.

Pledged Fees

The Board is empowered to establish and collect tuition charges for students attending the University and to establish and collect student fees from both resident and non-resident students. The Pledged Fees consist of the University’s two largest fees, the Tuition Fee, formerly referred to as the Matriculation Fee (the “Tuition Fee”) and the Student Facilities Fee/Facilities (the “Student Facilities Fee/Facilities”). Student fees and tuition charges are not subject to a referendum by students or approval by any other governmental entity. The Board has established a policy that the University may not request more than a 10% annual increase in the total full-time student fees unless otherwise authorized by the Board. Although Board policy provides that fee changes will be considered when appropriate or necessary, the Board has traditionally adjusted fees annually, with fee adjustments effective for the subsequent fall term each year. The 2015-2016 fee schedule, which was approved by the Board at the June 18, 2015 Board meeting, is attached as “APPENDIX C—STUDENT FEE AND TUITION SCHEDULE.” See “SOURCES OF FUNDING FOR THE UNIVERSITY—Fees and Tuition” for a comparison of full-time fees over the fiscal years 2011 through 2015.

Tuition. Tuition is an existing fee charged to full-time and part-time students attending the University and is pledged under the Resolution. The Tuition Fee was previously referred to (including in the Resolution) as the Matriculation Fee. This fee is used to provide general operating revenues for the University. For the 2014-15 academic year, the Tuition fee was \$2,454.51 per semester for each full-time student and \$279.96 per semester-hour for part-time and summer-session students. The Tuition fee for the 2015-2016 academic year was \$2,552.53 per semester for each full-time student and \$ 290.00 per semester-hour for part-time and summer-session students. The University received \$81,234,000 in Revenues from Tuition in the fiscal year ended June 30, 2015, and expects to receive approximately \$82,234,000 in the fiscal year ending June 30, 2016.

Student Facilities Fee/Facilities. The Student Facilities Fee/Facilities is an existing student fee charged to full-time students established by the Board and constitutes a portion of Pledged Revenues under the Resolution. For the fiscal years 2015 and 2016, the Student Facilities Fee/Facilities rate is \$255.00 per student, per semester for full-time students, and produced revenue of \$4,105,412 for the fiscal year ending June 30, 2015, and is expected to produce \$4,100,000 for the fiscal year ending June 30, 2016.

Revenues of the Housing System

The University owns and operates all student housing facilities on the Pocatello campus. See “THE UNIVERSITY—Student Housing” herein. Housing fees for residence hall residents for the 2015-2016 academic year range from \$1,330.00 to \$2,100.00 per semester per student. Meal plans, in which freshmen and sophomore housing residents are required to participate range from \$1,501.00 to \$1,945.00 per semester. Revenues of the Housing System for the fiscal years ending June 30, 2014 and June 30, 2015 were \$6,013,914 and \$6,294,932 respectively, and are expected to be approximately \$6,350,000 for the fiscal year ending June 30, 2016. As the Resolution provides for a pledge of the Revenues of the Housing System for payment of debt service prior to the payment of operation and maintenance costs of the Housing System, these numbers reflect gross revenues of the Housing System. The Housing System has shown increasing profits on a net revenue basis for each of the past four fiscal years (fiscal years 2012-2015) and is on schedule to maintain this trend for fiscal year 2016.

CAES Project and CAES Lease Payments

In 2006, the University issued its General Revenue Bonds (Federally Taxable), Series 2006 (the “Series 2006 Bonds”) to finance the construction of a facility to house the Center for Advanced Energy Studies at the Idaho Falls Center for Higher Education Campus (the “CAES Project”), which jointly occupied by a consortium of the three Idaho research universities and Battelle Energy Alliance, LLC (“BEA”). Pursuant to a Lease Agreement dated as of October 23, 2006 between the University and BEA (the “CAES Lease”), the University has leased to BEA approximately 70% of the CAES Project and BEA has agreed to pay lease payments (the “CAES Lease Payments”) which are intended to equal the payments of principal and interest on the Series 2006 Bonds. Under certain circumstances, payment of the CAES Lease Payments under the CAES Lease is guaranteed by Battelle Memorial Institute and the Washington Group International. The consortium remains in place with all members intact. The CAES Lease Payments have, to date, been made as scheduled. For the 2015 fiscal year, the CAES Lease Payments total approximately \$850,000 and are expected to total \$850,000 for the 2016 fiscal year.

Use of Pledged Revenues and Other Revenues Not Otherwise Obligated

After the University has made the payments and deposits required under the Resolution, amounts remaining in the Revenue Fund in excess of the amounts necessary to make the required payments thereunder may be used for any legal purpose of the University, including the redemption or purchase of the Bonds, subject to policies adopted by the Board.

Limited Obligation

The Series 2016 Bonds are limited obligations of the Board and do not constitute a debt or liability of the State of Idaho, its Legislature, or any of its political subdivisions or agencies other than the University and then only to the extent herein described. The University is not authorized to levy or collect any taxes or assessments other than the revenues and fees described herein to pay the Series 2016 Bonds. The University has no taxing power.

PLAN OF REFUNDING

A portion of the proceeds from the sale of the Series 2016 Bonds is being used to provide funds sufficient to refund certain outstanding bonds of the University to achieve debt service savings. See “ESTIMATED SOURCES AND USES OF FUNDS” set forth below.

The Supplemental Resolution provides for the current refunding of all of the remaining \$3,040,000* principal amount of the University’s General Revenue Bonds, Series 2004B with maturity dates, principal amounts and interest rates as shown below (the “Series 2004B Refunded Bonds”). The Series 2004B Bonds are expected to be redeemed on _____, 2016.

* Preliminary; subject to change.

The Series 2004B Refunded Bonds

Maturity (April 1)	Principal	Interest Rate
2024	\$220,000	4.625%
2025	230,000	4.625
2026	240,000	4.625
2028	510,000	4.500
2034	1,570,000	4.750

The Supplemental Resolution also provides for the advance refunding of \$10,655,000* principal amount of the University's General Revenue Bonds, Series 2007, with maturity dates with maturity dates, principal amounts and interest rates as shown below (the "Series 2007 Refunded Bonds"). The Series 2007 Refunded Bonds are expected to be redeemed on April 1, 2017.

The Series 2007 Refunded Bonds

Maturity (April 1)	Principal	Interest Rate
2021	\$3,000,000	5.000%
2027	5,695,000	4.500
2032	1,960,000	4.625

The Series 2004B Refunded Bonds and the Series 2007 Refunded Bonds are collectively referred to herein as the "Refunded Bonds."

The Supplemental Resolution authorizing the Series 2016 Bonds authorizes the University to enter into an Escrow Agreement with respect to the Refunded Bonds (the "Escrow Agreement") with U.S. Bank National Association, as escrow agent. A portion of the proceeds of the Series 2016 Bonds will be deposited into the escrow account created under the Escrow Agreement for the Refunded Bonds (the "Escrow Account"). The amounts so deposited in the Escrow Account will be held in cash or invested in governmental obligations of the United States of America or obligations whose principal and interest are unconditionally guaranteed by the United States of America maturing in amounts and at rates sufficient to pay, when due, the principal of and interest on all of the Refunded Bonds through the redemption thereof.

Certain mathematical computations regarding the sufficiency of and the yield on the investments held in the Escrow Account will be verified by Robert Thomas CPA, LLC. See "ESCROW VERIFICATION" herein.

ESTIMATED SOURCES AND USES OF FUNDS

The estimated sources and uses of funds for the Series 2016 Bonds are as follows:

Sources

Par Amount of Series 2016 Bonds\$ _____
Plus [net] original issue premium..... _____
Total.....\$ _____

Uses

Deposit to Escrow Account/Redemption of Refunded Bonds.....\$ _____
Costs of Issuance⁽¹⁾..... _____
Total.....\$ _____

⁽¹⁾ Including underwriter's discount, legal fees, trustee fees, escrow agent fees, escrow verification fees, rating agency fees, printing fees and other miscellaneous costs of issuance.

DEBT SERVICE SCHEDULE

The following table sets forth the Annual Debt Service Requirements for the Outstanding Parity Bonds and the Series 2016 Bonds:

<u>Series 2016 Bonds</u>				
<u>Fiscal Year</u>	<u>Principal*</u>	<u>Interest⁽¹⁾</u>	<u>Outstanding Parity Bonds^(1, 2)</u>	<u>Total Debt Service⁽¹⁾</u>
2017	-		6,204,099	
2018	\$660,000		5,557,060	
2019	680,000		4,867,083	
2020	715,000		4,871,373	
2021	740,000		4,337,339	
2022	770,000		4,395,114	
2023	805,000		4,390,786	
2024	1,040,000		4,452,876	
2025	1,095,000		846,464	
2026	1,145,000		847,011	
2027	1,200,00		845,717	
2028	510,000		847,582	
2029	540,000		847,343	
2030	560,000		-	
2031	595,000		-	
2032	625,000		-	
2033	285,000		-	
2034	<u>295,000</u>		-	
Total	<u>\$12,260,000</u>		<u>\$43,309,847</u>	

* Preliminary; subject to change.

(1) Amounts are rounded to the nearest dollar.

(2) Excludes debt service on the Refunded Bonds. See “SOURCES OF FUNDING FOR THE UNIVERSITY—University Debt.”

HISTORICAL PLEDGED REVENUES AND DEBT SERVICE

The following table shows the amounts of revenues pledged under the Resolution on a historical basis. The table also presents Debt Service on all Bonds secured by Pledged Revenues for the fiscal years ended June 30, 2011-2015. The information presented is derived from the University's internal records used to prepare its financial statements and may differ slightly from the audited financial statements.

<u>Revenues⁽¹⁾</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Housing System Revenues	\$ 5,104,221	\$ 5,709,462	\$ 5,978,179	\$ 6,013,914	\$ 6,294,932
Pledged Fees:					
Tuition	42,600,426	49,177,627	49,373,663	50,438,053	52,693,194
Student Facilities Fee/Facilities	4,189,215	4,210,346	4,241,734	4,083,643	4,124,892
CAES Lease Payment	<u>850,104</u>	<u>850,104</u>	<u>850,104</u>	<u>850,104</u>	<u>850,104</u>
Total Revenues Available for Debt Service	<u>\$52,743,966</u>	<u>\$56,222,336</u>	<u>\$56,667,890</u>	<u>\$61,385,714</u>	<u>\$63,963,122</u>
Total Debt Service Requirements	6,690,048	5,558,290	6,298,781	6,204,012	6,204,099

(1) Amounts have been rounded.

THE UNIVERSITY

Idaho State University, a Carnegie-classified doctoral research and teaching institution founded in 1901, attracts students from around the world to its Idaho campuses. At the main campus in Pocatello, Idaho and at locations in Meridian, Idaho Falls and Twin Falls, the University offers access to high-quality education and training in more than 280 programs. Approximately 18,070 students attend the University throughout the academic year with 13,569 enrolled as of fall 2015 end of term.¹ The University is housed in approximately 100 buildings on 1,140 acres in the city of Pocatello, which serves as an economic center for the southeastern part of the State.

The University serves a diverse population that includes traditional students entering the University directly from high school, non-traditional students who have delayed their university education, working professionals and senior citizens. The University provides both general education and specialized programs in the arts, humanities, sciences, the professions and technologies. Bachelor's and master's degrees are awarded in a variety of fields by the Colleges of Arts and Letters, Business, Education, Science and Engineering, Technology, as well as the Graduate School and the Division of Health Professions. Terminal degrees offered include: Master of Business Administration; Master of Fine Arts; Doctor of Pharmacy; Doctor of Philosophy; Doctor of Arts; and Doctor of Education. Through its programs in pharmacy, health professions and the Family Practice Medical Residency, the University is a center for education in the health professions. The University also has the first Dental Residency Program and the first and only Dentistry Degree Program in the State.

¹ Total unique student enrollments of approximately 18,070 for all terms for the entire fiscal year includes part-time students, as well as, students enrolled in non-traditional programs such as high school dual enrollment, work-force training, and less-than-semester-length programs. The fall 2015 end of term headcount of 13,569 students represents an increase of 486 students from the fall 2015 10th day headcount noted in the Five-Year Historical Enrollment Summary below due to continuing education and Early College Program students who enroll after the 10th day.

Student Body

The University admits all Idaho residents who graduate from accredited high schools in the State with an overall grade point average of at least 2.5, or who received a math score of at least 18 on the ACT or 490 on the SAT, an English score of at least 18 on the ACT or 500 on the SAT writing exam, and who have successfully met all Idaho Core Requirements and statewide admission standards established by the Board. Approximately 81% of the University's end of term fall 2015 student body were residents of Idaho. The table below sets out certain statistics concerning the University's enrollment for the fall terms of the years indicated. The majority of the University's students attend its main Pocatello campus; approximately 80% of fall 2015 enrollment, measured by head count, were located on the Pocatello campus. The remaining 20% are located on the Idaho Falls, Meridian, and Twin Falls campuses.

While the University's main campus in southeast Idaho serves students with a wide variety of programs in many locations through a variety of traditional and technological strategies, the University provides educational services to students in communities throughout the State. Many students take courses in more than one location; for example, they might complete general education requirements with the University in the Snake River Valley or Magic Valley, before completing a program on the main campus in Pocatello. Most off-site students are traditional, full-time undergraduate students, but many are mid-career professionals seeking new skills or other educational fulfillment by taking individual courses.

The University's Early College Program offers academic enrichment opportunities for qualified high school students. Dual or concurrent enrollment allows high school students to enroll in college level courses while continuing their high school courses and activities.

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Five-Year Historical Enrollment Summary

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Students	<u>Fall Semester, 10th Day of Class</u>				
Full Time Equivalents (FTE)	10,827	11,187	10,714	10,858	10,480
Head Count	12,587	14,209	13,845	13,804	13,133
Undergraduate Students					
FTE	9,204	9,597	9,156	9,302	8,966
Head Count	10,526	12,143	11,788	11,792	11,243
Graduate Students					
FTE	1,623	1,590	1,558	1,556	1,514
Head Count	2,051	2,066	2,057	2,012	1,890
<u>No. of Freshmen</u>	<u>Freshman Class Statistics, Fall Semester</u>				
Applying	3,253	3,348	2,647	3,276	2,940
Accepted	3,036	3,084	2,510	3,209	2,894
Enrolled	1,828	1,722	1,555	1,832	1,577
Average ACT Score	21	21	21	22	22
Average High School GPA	3.16	3.22	3.21	3.18	3.23
Percentage graduating in the top 25% of their high school class	28%	28%	27%	31%	30%

(Source: The University.)

As the preceding information illustrates, full-time undergraduate enrollment at the University, based upon full-time equivalents (FTE), has declined 347 FTE from fall 2011 to fall 2015. The University has experienced notable increases in enrollment categories where fees tend to be higher such as international students. International student enrollment increased by 921 students from fall 2011 enrollment of 502 to fall 2015 enrollment of 1,423.

To improve enrollment numbers, the University has implemented ongoing enhanced recruitment, retention and student success efforts. Following are brief descriptions of some of the University's most important efforts in this area:

- Idaho State University named Scott Scholes as the Associate Vice President of Enrollment Management effective April 1, 2015. Formerly the dean of students at the College of Southern Idaho (CSI). Mr. Scholes is responsible for leading the University's new undergraduate enrollment management units and strategies. This new Enrollment Management unit brings together Admissions, Advising, Financial Aid, Registration and Records, Scholarships and other services to streamline student recruitment and retention. One of the first initiatives is to implement a new Customer Relations Management system (CRM) to increase enrollment.
- The Early College Program, which offers college credit courses to high school students, launched a new era at the University with a presence on Facebook and Twitter and is exploring additional delivery methods for dual enrollment courses, including online and teleconferencing. These developments, along with an increased focus on articulation agreements with high schools in southeast Idaho, have resulted in increases in Early College Program end of term headcount enrollment by 21% for fall 2015 (1,565 students in fall 2012 to 1,887 students in fall 2015).

- The new Career Path Internship program, which targets campus employment opportunities to student career paths, has been vastly expanded from \$300,000 in fiscal year 2011, to \$2.3 million in fiscal year 2016. The program currently has over 800 student interns.
- Additional initiatives include new credit-transfer and online articulation tools that provide online access to specific transfer credit and course information. A new transfer evaluation system provides a faster and streamlined process for transfer evaluation, facilitating transfer of credits from other schools. The University Veterans Sanctuary assists veterans with program selection and course registration, GI Bill educational benefits, and the transition from military to campus life. The University has developed targeting recruiting efforts to veterans nationwide.
- The University also shares its story through various media outlets. In addition to commercial advertising, the University publishes the *Idaho State University Magazine*. The University is the only university in the State to produce a television show that airs statewide on a major network. "Idaho State of Mind," a weekly 30-minute broadcast over Idaho Public Television, features the faculty and events at the University. The University also markets through the radio on a monthly program, "First Monday Forum," which showcases the best events and expertise at the University. The University is also growing its social media presence and it currently connects to nearly 7,000 alumni, students and friends through Facebook.
- The University purchased a new Content Management System (CMS) to upgrade its existing website and improve marketing, outreach, and student recruitment. Migration to the new CMS began in fall 2015, and the first 2,000 pages will go "live" in late February 2016. The CMS allows the University to update content in a timely manner and follow brand guidelines. CMS trainings and workshops began last year, and additional department trainings will continue over the next 12 months. The cost of the CMS, including consultancy fees, totaled \$95,000.

The University's fall-to-fall retention rates for first-time, degree-seeking undergraduates has continued to improve from 62.0% in fiscal year 2012 to 71.3% in fiscal year 2015. Increases in student retention have occurred because of the efforts of Central Advising and the Student Success Center.

Degrees Conferred

The University anticipates awarding approximately 2,300 total degrees in 2016 and has awarded the following degrees in the preceding five years:

<u>Degree Awarded</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Technical Certificates	204	192	219	167	199
Associate	340	334	354	393	363
Bachelor	1,064	1,118	1,136	1,181	1,123
Master	404	480	480	474	438
Doctorate	<u>143</u>	<u>155</u>	<u>154</u>	<u>146</u>	<u>160</u>
Total	2,155	2,279	2,343	2,361	2,283

Student Housing

The University operates a dormitory system consisting of six traditional residence halls accommodating up to 855 students, most of whom are undergraduates. The residence halls include traditional dormitory style rooms (555 beds) and suite-style residences (300 beds, grouped in 78 3- and 4-bedroom units). The residence halls are intended primarily for freshmen and sophomores and offer a strong community atmosphere and student interaction through educational, social, and cultural programming. The University's residency hall charges are adjusted annually to an amount deemed necessary by University officials to pay operation, maintenance and debt amortization expenses.

Meal plans are required for all freshmen and sophomores living in the residence halls. Meal plans are optional for juniors, seniors and graduate students, as well as for all students 21 years and older. Students can use their meal

plan at the Garrison-Turner Dining Hall, Rendezvous Food Court, and the Pond Student Union. The food service operations are provided through a management contract with Chartwells.

The University currently has six on-campus apartment complexes, with a total of 319 rental units (including approximately 1,500 beds). These apartments consist of a mix of efficiency, studio, one and two bedroom rental units. Apartments are available to non-traditional students and students who have already completed their first year at the University. Rental charges are collected monthly and continuing students are allowed to remain in the apartments during the summer term, even if the student does not attend summer sessions. Rental rates are reviewed and adjusted at the end of each fiscal year.

For the past five years the average occupancy rate for the residence halls is 81% and for the on-campus apartments is 93%.

All of the dormitory and apartment facilities of the University are professionally maintained and kept in a sound state of repair. The University has no current plans to construct additional housing facilities.

Employees

During the 2014-2015 academic term, the University had 594 full-time faculty, 476 full-time non-classified professionals, 559 full-time classified employees and 32 full-time health residents, for a grand total of 1,661 full-time employees. The University is not a party to any collective bargaining agreement, although there are employee associations that bring issues and concerns to the attention of the University. The University considers its relations with its employees to be good.

Employee Retirement Benefits

All benefit eligible employees, which consist of employees who work 20 or more hours per week for five consecutive months, must enroll in one of two retirement plans—the State’s “Public Employees’ Retirement System of Idaho” (“PERSI”) or the “Optional Retirement Program” (“ORP”), which is a plan offered to faculty and non-classified staff effective 1990 and thereafter.

PERSI The University’s classified employees, including faculty hired prior to July 1, 1990, are covered under PERSI. Additionally, new faculty and professional staff who are vested in PERSI have the option of remaining in or returning to PERSI with written affirmation of this decision within 60 days of employment. PERSI is the administrator of a multiple-employer cost-sharing defined benefit public employee retirement system. A retirement board (the “PERSI Board”), appointed by the governor and confirmed by the legislature, manages the system, including by selecting investment managers to direct the investment, exchange and liquidation of assets in the managed accounts and establishing policies for asset allocation and other investment guidelines. The PERSI Board is charged with the fiduciary responsibility of administering the plan.

On July 1, 2015, PERSI had 67,008 active members, 29,827 inactive members (of which 11,859 are entitled to vested benefits), and 42,657 annuitants. PERSI collects contributions from employees and employers to fund retirement, disability, death and separation benefits, as provided by Chapter 13, Title 59, Idaho Code. As of July 1, 2015, there were 139,492 Idaho public employees, retirees or beneficiaries who were PERSI members.

As of July 1, 2015, PERSI’s actuarial value of assets totaled \$13,956,700,000 and the actuarial liabilities funded by PERSI totaled \$15,446,900,000. This means that, as of July 1, 2015, PERSI was 90.4% funded. GASB Statement 25 (Reporting Standards for Defined Benefit Pension Plans) has replaced Projected Benefits Obligations (“PBO”) as the measure of pension plan funding status. As required by GASB Statement 25, the PERSI Schedule of Funding Progress shows a funded ratio of 119.4% of the PERSI Base Plan. The funded ratio includes the effect of a mandated cost of living adjustment (COLA), but not the additional discretionary COLA. The Schedule of Employer Contributions shows that PERSI employers have contributed at least 100% of the Actuarially Required Contributions (ARC).

For general members of PERSI, as of July 1, 2015, the employer contribution rate in effect is 11.32% of pay and the employee contribution rate is 6.79%.

The University's required and paid contributions to PERSI for the fiscal year ended June 30, 2015 was \$2,897,140.

PERSI issues a publicly available financial report that includes financial statements and required supplementary information. That report may be obtained at www.persi.idaho.gov/documents/investments/FY15/AR-FY2015.pdf. No representation is made herein as to the accuracy of this report.

ORP. Faculty and non-classified staff hired on or after July 1, 1990 have been enrolled in ORP, and faculty and staff hired before that date were offered a one-time opportunity in 1990 to withdraw from PERSI and join the ORP. The ORP is a portable, multiple-employer, defined contribution retirement plan with options offered by Teachers' Insurance and Annuity Association/College Retirement Equities Fund (TIAA/CREF) and Variable Annuity Life Insurance Company (VALIC). The total contribution rate is the same for all employees, with a portion of the employer's contribution for ORP members being credited to the employee's account and a portion to the PERSI unfunded liability until 2025.

Contribution requirements for the ORP are based on a percentage of total payroll. The University's contribution rate for the fiscal year ending June 30, 2015 is 9.24% of covered payroll, which is the same contribution rate for fiscal years ended June 30, 2013 and 2014.

For the fiscal years ended June 30, 2013 through 2015, the University's required and paid contributions to ORP were \$5,913,986, \$5,964,369, and \$6,264,020, respectively. The employee contribution rate for the current fiscal year is 6.96% of covered payroll, which is the same as the contribution rate for the fiscal years ended June 30, 2014 and 2015. These employer and employee contributions, in addition to earnings from investments, fund the ORP benefits. The University has no additional obligation to fund ORP benefits once it makes the required contributions at the applicable rate. The University has made all contributions that it is required to make to ORP to date.

For a further discussion of the University's retirement plans and certain other employment obligations, see "APPENDIX D—FINANCIAL STATEMENTS OF THE UNIVERSITY FOR THE YEARS ENDED JUNE 30, 2014 AND 2015 AND INDEPENDENT AUDITOR'S REPORT—Footnote 10. Optional Retirement Plans and Termination Payments" and Footnote 11. Pension Plan."

The effect of GASB 68 on the net position of the University is stated in Footnote #2 of the attached ISU FY15 Financial Statements in Appendix D.

Other Post-Employment Benefits

The University participates in other post-employment benefit plans relating to health and disability that are administered by the State of Idaho as agent, and it participates in a single-employer defined benefit life insurance plan. Idaho Code establishes the benefits and contribution obligations relating to these plans. The most recent actuarial valuation relating to these benefits is as of June 30, 2014. At June 30, 2015, the University had approximately \$18,507,000 in unfunded accrued liability. The University's annual required contribution for the fiscal year ending June 30, 2015, was approximately \$1,796,000 of which the University contributed approximately \$689,000. The University has not set aside any assets to pay future benefits; the University funds these benefits on a pay-as-you-go basis. Additional details regarding these benefits can be found in APPENDIX D—FINANCIAL STATEMENTS OF THE UNIVERSITY FOR THE YEARS ENDED JUNE 30, 2014 AND 2015 AND INDEPENDENT AUDITOR'S REPORT—Note 12. Postemployment Benefits Other Than Pensions."

Insurance

Through the State of Idaho Risk Management Program, the University maintains liability and property, and employee fidelity insurance in amounts deemed adequate by State and University officials. The University has a risk management staff that coordinates insurance coverage and claims with the State of Idaho Risk Management Program

officials, and reviews the adequacy of such coverage and verifies the University's compliance with applicable agreements. As of April 30, 2015, the total insured replacement value of the University's buildings, contents and improvements was approximately \$98,920,202.

Budget Process

The University operates on an annual budget system. Its fiscal year begins July 1 of each year. The budget process, as well as the administration of the expenditures authorized through the process, is administered through the office of the President and Vice President for Finance and Administration, in collaboration with the departmental faculty and administrative officers. The internal budget process begins with a general budget proposal for the following fiscal year being submitted in consolidated form by the University Administration to the Board in August of each year.

The University's operating budget is approved by the Board prior to the commencement of the fiscal year, usually at its June meeting. At that meeting, the Board, serving also as the governing boards for the other institutions of higher education, approves the annual budgets for those institutions, as well.

SOURCES OF FUNDING FOR THE UNIVERSITY

The University relies on a number of sources of funding to achieve its educational and research missions. The principal sources of revenues are: direct appropriation of State revenues by the Idaho Legislature, the fees and tuition it charges its students, federal government appropriations, grants and contracts, gifts to the University, revenues derived from investments and property holdings of the University, and the revenues derived from the sale of certain products and services managed or owned by the University. These revenue sources are more fully discussed below.

State Appropriations

Legislatively approved State general account and State endowment appropriations represent approximately 40% of the University's total revenues for fiscal year 2016. Such revenues are not pledged as security for the Bonds. The Legislature meets in the beginning of January of each calendar year and sets budgets and appropriations for all agencies and departments of State government for the fiscal year, beginning the following July. The Legislature may also make adjustments to budgets and appropriations for the fiscal year during which the Legislature is meeting. If in the course of a fiscal year prior to the commencement of the legislative session, the Governor determines that the expenditures authorized by the Legislature for the current fiscal year exceed anticipated revenues expected to be available to meet those expenditures, the Governor by executive order may reduce ("Holdback") the spending authority on file in the office of the Division of Financial Management for any department, agency or institution of the State or request a reversion ("Reversion") of appropriations back to the State to balance the State budget. The most recent Holdbacks occurred during fiscal year 2012; there were no Reversions for that year. There have been no Holdbacks or Reversions since fiscal year 2012. The table below sets forth the legislative appropriations from the State General Fund for all higher education institutions and for the University, net of one-time funding, Reversions and Holdbacks.

Schedule of State General Account Appropriations

<u>Fiscal Year</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
All Higher Education	\$217,510,800	\$209,828,300	\$227,950,500	\$236,504,600	\$251,223,200
Idaho State University	59,071,300	57,150,200	61,799,700	65,261,000	68,005,400
University's percentage increase (decrease) over prior year	(2.6)%	0.1%	8.1%	5.6%	4.2%

Source: The University; based on legislative appropriations (excluding State endowments) for the years 2011-2015.

As shown in the preceding chart, State appropriations have declined largely as a result of the economic downturn the State and nation as a whole have experienced. From the expenditure perspective, the University developed a financial plan to actively pare down costs, streamline processes, and implement new approaches and controls to monitor and address the budget reductions. All of these initiatives remain in place and are active. From the revenue perspective, the University, out of necessity, has increased tuition and fees, while moving to impact students as little as possible. The University continues to leverage other revenue sources as well, including research and partnering activities, more self-support programs, auxiliaries, and fundraising. As a result of these efforts, even in the face of the budget declines, the University has experienced solid increases in net assets over the past several years (see financial statements in APPENDIX D).

Tuition and Fees

A major component of funding for the University is student tuition and fees, which, for the academic year 2015-2016 are \$3,392.00 total per semester for full-time undergraduate, resident students (of this amount, only the tuition portion (\$2,552.53) and the Student Facilities Fee/Facilities (\$255.00) are Pledged Fees). Non-resident students pay per-semester non-resident tuition of \$6,699.00 in addition to the undergraduate tuition and fees (this additional tuition is not a Pledged Fee). Additional dedicated fees are charged to students enrolled in graduate programs, pharmacy, physical and occupational therapy, graduate level nursing, graduate level counseling, and the Idaho Dental Education program.

The University expects tuition and fees for all students and additional tuition for non-resident students to increase in the future in response to generally higher costs of operating the University.

The University assesses and collects a variety of fees from students enrolled at the University. Board approval for most of these student fees is required, but the Board has delegated to the University President approval of certain institutional student fees. The Board may assess fees at any time during the year, and has authority to establish the fees unilaterally, without review or approval by the students, the State, or any other governmental or regulatory body. In practice, however, the Board sets the Board-approved student fees annually. Prior to the Board meeting at which fees are set, public hearings concerning the fees are held and student participation is actively solicited.

The following table shows per semester full-time fees from fiscal year 2012 through fiscal year 2016. Pledged Fees are shown in bold.

<u>Full-Time Semester Fees⁽¹⁾</u>	<u>2011-2012</u>	<u>2012-2013⁽²⁾</u>	<u>2013 -2014</u>	<u>2014-2015</u>	<u>2015-2016</u>
Tuition	\$2,090	\$2,209	\$2,344	\$2,455	\$2,553
Student Facilities Fee	\$243	\$255	255	255	255
Campus Technology Fee	83	83	83	83	83
Dedicated Activity Fees	<u>482</u>	<u>488</u>	<u>490</u>	<u>490</u>	<u>501</u>
Total Tuition and Fees	2,898	3,035	3,172	3,283	3,392
Graduate Fee (<i>additional fee</i>)	514	540	564	584	613
Non-Resident Tuition (<i>additional fee</i>)	5,618	5,900	6,166	6,380	6,699

(1) Amounts have been rounded.

(2) Budgeted amounts approved by the Board in its June 2015 meeting.

Financial Aid

Direct financial aid to students, primarily in the form of student loans, scholarships, grants, student employment, awards, tuition waivers, fee reductions and waivers, and deferred payments, is available. The University believes that the amount of available financial aid, which totaled approximately \$101,874,550 in the fiscal year ended June 30, 2015, is adequate to enable students who desire to attend the opportunity to do so. During the 2014-2015

fiscal year, the direct financial aid to students in the form of scholarships and grants was approximately \$38,430,735 and in the form of loans was \$63,443,815.

The following table shows financial aid for students from fiscal year 2011 through 2015

<u>Financial Aid</u>	<u>2010-2011</u>	<u>2011-2012</u>	<u>2012-2013</u>	<u>2013-2014</u>	<u>2014-2015</u>
Direct Financial Aid (Scholarships and Grants)	\$45,889,011	\$45,734,466	\$	\$38,761,783	\$38,430,735
Loans	\$78,053,641	\$77,394,649	\$	\$67,460,485	\$63,443,815
Total	\$123,942,652	\$123,129,115	\$	\$106,222,268	\$101,874,550

Grants and Contracts

The United States government and various other public and private sponsoring agencies, through various grant and contract programs, provide a substantial percentage of the University's current fund revenues. The use of such funds is usually restricted to specific projects and is not included in the budget for the University. Such revenues include grants and contracts for research, public service, instruction and training programs, fellowships, scholarships, endowment scholarship programs, student aid programs, and grants for construction projects. The University believes it has complied with all material conditions and requirements of these various grants and contracts. Such revenues are not pledged as security for the Bonds.

Auxiliary Enterprises

Auxiliary enterprise sales and services revenues represents income earned by the University on its income-producing operations such as the University's bookstore, housing, student health center, food service, athletic facility, student union and certain other operations. A portion of these revenues (specifically, revenues of the Housing System) are pledged as security for the Bonds. See "HISTORICAL PLEDGED REVENUES AND DEBT SERVICE" above.

Sales and Services

Various University departments provide services and products to the student body and, in some instances, to the community for which payment is received. Such revenues are not pledged as security for the Bonds.

Idaho State University Foundation, Inc.

The ISU Foundation is a nonprofit corporation organized under Idaho law in 1967. Its purpose is to receive, manage and otherwise deal in property and apply the income, principal and proceeds of such property for the benefit of the University. A 25-member board of directors manages the ISU Foundation. William M. Eames, William Eames and Associates, serves as President of the ISU Foundation.

Financial information concerning the ISU Foundation is contained in Note 14 to the University's financial statements included in "APPENDIX D" hereto. The total fair value of the Foundation's investments at June 30, 2015 was \$53,918,842, of which \$38,967,296 represent Permanent Endowments.

The ISU Foundation issued its Multi-Mode Variable Rate Revenue Bonds on May 30, 2001 (the "ISU Foundation Bonds") in the amount of \$22,170,000 for the construction, furnishing, equipping and improving of certain real and personal property comprising the L.E. and Thelma Stephens Performing Arts Center. The ISU Bonds have a final maturity date of May 1, 2021 and are secured by donations, pledges and other funds held under the bond indenture relating to these bonds. The total interest expense on the ISU Foundation Bonds during 2015 was \$98,505. The outstanding balance on these bonds as of June 30, 2015 was \$5,600,000. The revenues pledged to the payment of the ISU Foundation Bonds are not pledged as security for the Bonds and the Revenues securing the Bonds are not pledged under the indenture securing the ISU Foundation Bonds.

Future Capital Plans

The University has an on-going capital improvement program of new construction and the renovation of existing facilities. Capital improvement projects are expected to be funded from a variety of sources, including gifts, state appropriations, and University funds. The University currently has no plans to incur additional indebtedness or undertake any major capital projects in the next 24 to 36 months.] The University may not undertake any capital project or long-term financing without prior Board approval.

University Debt

Prior to the issuance of the Series 2016 Bonds, the University had \$49,082,000 of indebtedness, including \$49,082,000 of Bonds outstanding secured by Pledged Revenues and \$1,287,044 in a note payable as of June 30, 2015. Set forth below is the University's schedule of outstanding indebtedness as of June 30, 2015 and a proforma of Bonds outstanding, assuming the issuance of the Series 2016 Bonds and the refunding of the Refunded Bonds.

<u>Outstanding Bonds</u>	<u>Final Maturity Date</u>	<u>Amount of Original Indebtedness</u>	<u>Amount of Debt Outstanding as of June 30, 2015</u>	<u>Pro Forma Debt Outstanding as of April ___, 2016</u>
General Revenue Bonds, Series 2004A	2016	\$ 4,980,000	\$ 285,000	\$ _____
General Revenue Bonds, Series 2004B ⁽¹⁾	2034 ⁽¹⁾	3,305,000	3,040,000	-
General Revenue Bonds (Taxable), Series 2004C	2022	2,305,000	1,155,000	1,005,000
General System Revenue Bonds (Federally Taxable), Series 2006	2028	10,000,000	7,820,000	7,385,000
General Revenue Bonds, Series 2007 ⁽¹⁾	2032, 2017 ⁽¹⁾	16,120,000	11,970,000	670,000
General Revenue Refunding Bonds, Series 2012	2023	27,530,000	23,005,000	20,655,000
General Revenue Refunding Bonds, Series 2013	2020	3,810,000	1,807,000	1,466,000
General Revenue Refunding Bonds, Series 2016	2034	_____	-	_____
Total Bonded Indebtedness			<u>\$49,082,000</u>	<u>\$ _____</u>

⁽¹⁾ All or a portion of the Refunded Bonds will be refunded with proceeds of the Series 2016 Bonds. Final maturity date reflects pre- and post-refunding years and is stated as of June 30, 2015 and April ___, 2016, respectively. (Source: The University.)

The University also has a note payable in the amount \$1,287,044, which is scheduled to be paid in full on Sept 1, 2016.

Other Obligations

The University implemented an enterprise resource planning ("ERP") system in order to provide increased integration and functionality for the University. Koch Financial Corporation was selected as the financing institution based on its expertise in financing information system installations and comparisons with other vendors.

UNIVERSITY GOVERNANCE AND ADMINISTRATION

The responsibility for overall management and determination of University policy and standards is vested with the Board of Trustees of Idaho State University who also serve as the Idaho State Board of Education and simultaneously, among other duties, as the Regents of the University of Idaho, the Trustees for Boise State University

and Lewis-Clark State College in Lewiston and as the State Board for Professional-Technical Education. The Governor appoints seven of the members to the Board for five-year terms. The elected State Superintendent of Public Instruction serves ex officio as the eighth member of the Board for a four-year term. The membership, terms, residences and occupations of the current board members are listed below.

The Board of Trustees of Idaho State University and The State Board of Education

<u>Name</u>	<u>Residence</u>	<u>Occupation</u>	<u>Term Expires</u>
Don Soltman (President)	Twin Lakes	Retired Hospital Executive	06/30/2019
Emma Atchley (Vice President)	Ashton	Community Leader	06/30/2020*
Bill Goesling (Secretary)	Moscow	Retired Financial Consultant and Naval Aviator	06/30/2016
Linda Clark	Meridian	Dr. Clark has completed her 43 rd year as an educator in Idaho	06/30/2020
Debbie Critchfield	Oakley	A member of the Cassia County Republican Central Committee and an active community education leader	06/30/2018
David Hill	Boise	Dr. Hill is a retired Deputy Director for Science and Technology at the Idaho National laboratory	06/30/2017
Richard Westerberg	Preston	PacifiCorp Officer (retired)	06/30/2019
Sherri Ybarra*	Mountain Home	Idaho Superintendent of Public Instruction	

*Pending re-appointment. Prior term expired June 30, 2015.

**Ms. Ybarra serves ex-officio to the State Board of Education in her capacity as State Superintendent of Public Instruction, which is a statewide elective office.

The State Board of Education has a full time professional staff of approximately 21 individuals and is headed by Matt Freeman, Executive Director. Mr. Freeman was appointed Executive Director in 2015.

University Officers

The affairs of the University are managed by the President of the University and the staff. The President is appointed by, reports to, and serves at the pleasure of the Board. Following is a brief biographical resume of President Vailas and his cabinet:

Arthur C. Vailas, President. Dr. Vailas assumed the position of President of Idaho State University on July 1, 2006. Dr. Vailas previously was vice chancellor of all five University of Houston (UH) System campuses, and vice president for research and intellectual property management at the UH main campus. He joined the University of Houston in 1995 as vice provost for graduate studies, and professor and distinguished chair in biology and biochemistry. From 1988 to 1994, he held numerous positions at the University of Wisconsin–Madison. They included associate dean for research and development in the School of Education; professor of surgery, division of orthopedic surgery, College of Medicine; professor of kinesiology, School of Education; professor, department of poultry science, College of Agriculture; and professor and director of the Biodynamics Laboratory. His Ph.D. degree is from the University of Iowa with an area of emphasis in connective tissue physiology.

Laura Woodworth-Ney, Provost and Vice President for Academic Affairs. Dr. Woodworth-Ney was appointed as Provost and Vice President for Academic Affairs in June of 2013. She oversees all academic aspects of the University. She works with University leadership and the State Board of Education to advance campus initiatives-

leading to excellence in pursuing the University's mission. She is the University Accreditation Liaison to the Northwest Commission on Colleges and University's mission.

James A. Fletcher, Vice President for Finance and Administration. Mr. Fletcher was appointed to the position of Vice President for Finance and Administration in July, 2007. Mr. Fletcher most recently served as the Vice Chancellor of Administration at the Texas A&M System in College Station, Texas. He has also previously served at Howard University, University of Colorado, and Morehouse College. Prior to that, he worked in senior financial administration positions at the IBM and Unisys Corporations.

Kent M. Tingey, Vice President for University Advancement. Dr. Tingey was appointed to the position of Vice President for University Advancement in 1998. Dr. Tingey joined the University as Director of University Relations in 1989, after having served as Executive Assistant to U.S. Congressman Wayne Owens in Washington, D.C. Prior to that, he served as Director of Public Relations at Dixie College in St. George, Utah, and BYU-Hawaii Campus.

Cornelius Van der Schyf, Vice President for Research. Dr. Van der Schyf, BPharm, MSc, DSc (PhD), joined the faculty at ISU and in 2015 was appointed as Vice President for Research and Dean of the Graduate School at Idaho State University. Before joining ISU, Van der Schyf was Associate Dean for Research & Graduate Studies, Founding Chair and Professor of Pharmaceutical Sciences, and Professor of Neurobiology at Northeast Ohio Medical University (NEOMED). He has received several "Teacher of the Year" and "Most Cited Paper" awards, the APSSA Upjohn Achievement Award and South Africa's highest honor in drug discovery research, the FARMOVS Prize for Pharmacology and Drug Development, as well as the 2010 Olson/Blair Award for Administrative Excellence.

Patricia Smith Terrell, Vice President of Student Affairs. Dr. Terrell was appointed Vice President for Student Affairs in July 2011. She is responsible for co-curricular services, activities and programs that enhance the quality of student life, facilitate and advance learning, and contribute to the University's mission to develop global citizens who provide leadership to enrich a diverse society. She previously served as the chief student affairs officer at the University of Kentucky and Utah State University and in student affairs administrative roles at Southern Methodist University and the University of Louisville.

Mr. Adam R. Jacobsmeyer, Executive Director, Treasury, Procurement, Policies, & Business Services. Mr. Jacobsmeyer oversees ISU's treasury services group, as well as, procurement, policy development, tax, and real estate. Mr. Jacobsmeyer most recently served as the Director of Compliance and Internal Audit Services on the Brigham Young University-Hawaii campus. Prior to choosing to work in higher education, he spent eight years at public accounting firms as an IT Auditor for Ernst & Young in Utah, California, and Colorado and a regional accounting firm in Denver, CO.

TAX MATTERS

Federal Income Tax. In the opinion of Ballard Spahr LLP, Bond Counsel to the University, interest on the Series 2016 Bonds is excludable from gross income for purposes of federal income tax under existing laws as enacted and construed on the date of initial delivery of the Series 2016 Bonds, assuming the accuracy of the certifications of the University and continuing compliance by the University with the requirements of the Internal Revenue Code of 1986. Interest on the Series 2016 Bonds is not an item of tax preference for purposes of either individual or corporate federal alternative minimum tax ("AMT"); however, interest on Series 2016 Bonds held by a corporation (other than an S corporation, regulated investment company, or real estate investment trust) may be indirectly subject to federal AMT because of its inclusion in the adjusted current earnings of a corporate holder.

Original Issue Premium. Certain of the Series 2016 Bonds may be offered at a premium ("original issue premium") over their principal amount. For federal income tax purposes, original issue premium is amortizable periodically over the term of a Series 2016 Bond through reductions in the holder's tax basis for the Series 2016 Bond for determining taxable gain or loss from sale or from redemption prior to maturity. Amortization of premium does not create a deductible expense or loss. Holders should consult their tax advisers for an explanation of the amortization rules.

Original Issue Discount. Certain of the Series 2016 Bonds may be offered at a discount (“original issue discount”) equal generally to the difference between public offering price and principal amount. Original issue discount on a Series 2016 Bond accrues as tax-exempt interest periodically over the term of the Series 2016 Bond. The accrual of original issue discount increases the holder’s tax basis in the Series 2016 Bond for determining taxable gain or loss from sale or from redemption prior to maturity. Series 2016 Bondholders should consult their tax advisors for an explanation of the accrual rules.

State of Idaho Income Tax. Bond Counsel is also of the opinion that interest on the Series 2016 Bonds is exempt from State of Idaho income taxes under currently existing law.

No Further Opinion. Bond Counsel expresses no opinion regarding any other tax consequences relating to ownership or disposition of, or the accrual or receipt of interest on, the Series 2016 Bonds.

Changes in Federal and State Tax Laws. From time to time, there are Presidential proposals, proposals of various federal committees, and legislative proposals in the Congress and in the states that, if enacted, could alter or amend the federal and state tax matters referred to herein or adversely affect the marketability or market value of the Series 2016 Bonds or otherwise prevent holders of the Series 2016 Bonds from realizing the full benefit of the tax exemption of interest on the Series 2016 Bonds. Further, such proposals may impact the marketability or market value of the Series 2016 Bonds simply by being proposed. It cannot be predicted whether or in what form any such proposal might be enacted or whether if enacted it would apply to Series 2016 Bonds issued prior to enactment. In addition, regulatory actions are from time to time announced or proposed and litigation is threatened or commenced which, if implemented or concluded in a particular manner, could adversely affect the market value, marketability or tax status of the Series 2016 Bonds. It cannot be predicted whether any such regulatory action will be implemented, how any particular litigation or judicial action will be resolved, or whether the Series 2016 Bonds would be impacted thereby.

Purchasers of the Series 2016 Bonds should consult their tax advisors regarding any pending or proposed legislation, regulatory initiatives or litigation. The opinions expressed by Bond Counsel are based upon existing legislation and regulations as interpreted by relevant judicial and regulatory authorities as of the date of issuance and delivery of the Series 2016 Bonds, and Bond Counsel has expressed no opinion as of any date subsequent thereto or with respect to any proposed or pending legislation, regulatory initiatives or litigation.

UNDERWRITING

Piper Jaffray & Co. (the “Underwriter”), has agreed, subject to certain conditions, to purchase all of the Series 2016 Bonds from the University at a purchase price of \$_____ being the par amount thereof plus original issuance premium of \$_____ and less an underwriting discount of \$_____. The Underwriter has advised the University that the Series 2016 Bonds may be offered and sold to certain dealers (including dealers depositing the Series 2016 Bonds into investment trusts) at prices lower than the initial public offering prices reflected on the cover page of this Official Statement and that such public offering prices may be changed from time to time.

Piper Jaffray & Co. has entered into a distribution agreement with Charles Schwab & Co., Inc. (“CS&Co”) for the retail distribution of certain securities offerings at the original issue price less a negotiated portion of the selling concession applicable to any Series 2016 Bonds that CS&Co sells.

RATING

Moody’s Investors Service (“Moody’s”) has assigned their municipal bond ratings of “A1” with a “stable outlook” to the Series 2016 Bonds.

Such rating reflect only the view of Moody’s. Any explanation of the significance of the rating may only be obtained from Moody’s. The above rating is not a recommendation to buy, sell or hold the Series 2016 Bonds.

There is no assurance such rating will continue for any given period of time or that such rating will not be revised downward or withdrawn entirely by Moody’s, if in the judgment of such rating agency, circumstances so

warrant. Any such downward revision or withdrawal of such ratings may have an adverse effect on the market price of the Series 2016 Bonds.

The University has other issues of General Revenue Bonds outstanding which are rated by other rating agencies. No application has been made to any other rating agency for a rating on the Series 2016 Bonds. See “University Debt” for a description of other General Revenue Bonds issued by the University.

TRUSTEE

By appointment of the University, U.S. Bank National Association, Salt Lake City, Utah, shall act as the trustee, bond registrar, authenticating agent, paying agent and transfer agent with respect to the Series 2016 Bonds.

The Trustee is to carry out those duties assignable to it under the Resolution. Except for the contents of this section, the Trustee has not reviewed or participated in the preparation of this Official Statement and assumes no responsibility for the nature, content, accuracy or completeness of the information set forth in this Official Statement or for the recitals contained in the Resolution or the Series 2016 Bonds, or for the validity, sufficiency, or legal effect of any of such documents.

Furthermore, the Trustee has no oversight responsibility, and is not accountable, for the use or application by the University of any of the Series 2016 Bonds authenticated or delivered pursuant to the Resolution or for the use or application of the proceeds of such Series 2016 Bonds by the University. The Trustee has not evaluated the risks, benefits, or propriety of any investment in the Series 2016 Bonds and makes no representation, and has reached no conclusions, regarding the value or condition of any assets or revenues pledged or assigned as security for the Series 2016 Bonds or the investment quality of the Series 2016 Bonds, about all of which the Trustee expresses no opinion and expressly disclaims the expertise to evaluate.

CONTINUING DISCLOSURE

General

The University and the Trustee are expected to enter into a “Continuing Disclosure Agreement” (in substantially the form attached hereto as APPENDIX G) pursuant to which the University will provide to the Trustee within 180 days following the end of its fiscal year a copy of its annual audited financial statements and such other financial, statistical and operating data for such fiscal year in form and scope similar to the financial, statistical and operating data included in this Official Statement as described in the agreement. The University also has agreed to deliver to the Trustee notice of the events described in paragraph (b)(5)(i)(C) of Rule 15c2-12 as promulgated by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as amended (the “Rule”). The Trustee has agreed to deliver the information and the notices described in the preceding two sentences upon receipt thereof from the University to the Municipal Securities Rulemaking Board, and to deliver any notice of an event described in paragraph (b)(5)(i)(C) of Rule 15c2-12. The Trustee also agrees that if it has knowledge that the University has not delivered its annual audited financial statements or has not provided the financial, statistical and operating data as described above or if it has knowledge of the occurrence of material events described in Rule 15c2-12, it will directly notify the MSRB of the University’s failure to deliver such information or the occurrence of such event. See “APPENDIX G—FORM OF CONTINUING DISCLOSURE AGREEMENT.”

A failure by the University to comply with the Disclosure Agreement will entitle any Bondholder (including any Beneficial Owner) to bring an action for specific performance and to take such other remedies as are provided in the Disclosure Agreement.

A failure by the University to comply with the Disclosure Agreement must be reported in accordance with the Rule and must be considered by any broker, dealer or municipal securities dealer before recommending the purchase or sale of the Series 2016 Bonds in the secondary market. Consequently, such a failure may adversely affect the transferability and liquidity of the Series 2016 Bonds and their market price.

Prior Compliance with Continuing Disclosure Obligations

The University has entered into prior undertakings under the Rule.

On February __, 2016, the University filed an event notice with EMMA containing information it failed to file in a timely manner. The notice regarded the University's failure to file: (1) information regarding student tuition and fee schedules, historical revenue and debt service coverage and five year historical enrollment summaries with respect to its Series 1998 Bonds; (2) information regarding student tuition and fee schedules with respect to its Series 2003 Bonds; (3) complete information regarding the security for its Series 2004A Bonds, Series 2004B Bonds, Series 2004C Bonds, Series 2006 Bonds, Series 2007 Bonds and Series 2012 Bonds; and (5) information regarding sources of funding for the University and student tuition and fee schedules with respect to the Series 2012 Bonds. The University filed its fiscal year 2014 Audited Financial Statements on December 17, 2014. However, due to a clerical error, the Audited Financial Statements were not filed with respect to the Series 2012 Bonds. On February __, 2016, the University filed with EMMA its fiscal year 2014 Audited Financial Statements with respect to the undertaking regarding the Series 2012 Bonds.

The University has adopted written Disclosure Policies and Procedures to assure current and future compliance with its undertakings.

LITIGATION

The University has reported as of the date hereof that there is no litigation pending or threatened that, if decided adversely to the interests of the University, would have a materially adverse effect on the operations or financial position of the University. There is no litigation of any nature now pending or threatened restraining or enjoining the issuance, sale, execution or delivery of the Series 2016 Bonds or in any way contesting or affecting the validity of, or having a material adverse effect on, the Series 2016 Bonds, the pledge and application of Pledged Revenues or the existence or powers of the University.

LEGAL MATTERS

All legal matters incident to the authorization and issuance of the Series 2016 Bonds are subject to the approval of Ballard Spahr LLP, as Bond Counsel to the University whose approving opinions will be delivered with the Series 2016 Bonds. Certain legal matters will be passed upon for the University by its University Counsel, Joanne Hirase-Stacey, Esq., Pocatello, Idaho. Certain legal matters will be passed on for the Board and the University by the office of the Attorney General of the State. Certain legal matters will be passed upon for the Underwriter by its counsel Kutak Rock LLP, Spokane, Washington. A copy of the opinion of Bond Counsel in substantially the form set forth in "APPENDIX E" of this Official Statement will be available from the University upon request.

Other than the form of such opinion, Bond Counsel has not assumed responsibility for any of the remaining material in the Official Statement and has not undertaken to review or independently verify the information set out therein. In addition, Bond Counsel has not assumed responsibility for any agreement, representation, offering circulars or other material of any kind not mentioned in this paragraph, relating to the offering of the Series 2016 Bonds for sale.

FINANCIAL ADVISOR

Blue Rose Capital Advisors, LLC (the "Financial Advisor"), has been retained by the University to provide certain financial advisory services in connection with the issuance of the Series 2016 Bonds. The Financial Advisor has not been engaged, nor has it undertaken, to independently verify the accuracy of the information set forth in this Official Statement. The Financial Advisor is not a public accounting firm and has not been engaged by the Board to compile, review, examine or audit any information in this Official Statement in accordance with accounting standards. The Financial Advisor is an independent advisory firm and is not engaged in the business of underwriting, trading or distributing municipal securities or other public securities and therefore will not participate in the underwriting of the Bonds.

INDEPENDENT AUDITORS

The audited financial statements of the University as of and for the fiscal years ended June 30, 2014, and June 30, 2015, included in this Official Statement as Appendix D, have been audited by Moss Adams LLP, independent auditor, as stated in their report appearing therein. These financial statements are the most recent audited financial statements of the University. Moss Adams has not been engaged to perform and has not performed, since the date of the report included herein, any procedures on the financial statements addressed in that report. Moss Adams also has not performed any procedures relating to this Official Statement and has not consented to the use of the financial statements of the University in this Official Statement.

NO DEFAULTED BONDS

The University has never failed to pay principal and interest when due on its bonded indebtedness or other obligations.

MISCELLANEOUS

The Appendices are integral parts of this Official Statement and must be read together with all other parts of this Official Statement. The references herein to the Resolution, the Series 2016 Bonds and the Act, are brief outlines of certain provisions thereof. Such outlines do not purport to be complete and reference is made to such documents and Act for full and complete statements of their provisions. Copies of these documents and Act are available for inspection at the principal corporate trust office of the Trustee in Salt Lake City, Utah and during the offering period for the Series 2016 Bonds from the Underwriter.

Any statements in this Official Statement involving matters of opinion or of estimates, whether or not so expressly stated, are set forth as such and not as representations of fact, and no representation is made that any estimates will be realized.

This Preliminary Official Statement is in a form “deemed final” by the University for purposes of Rule 15c2-12 of the Securities and Exchange Commission.

This Official Statement and its distribution and use by the Underwriter have been duly authorized by the Board and the University.

IDAHO STATE UNIVERSITY

By: _____/s/
Vice President for Finance and
Administration

APPENDIX A

**GLOSSARY OF CERTAIN TERMS USED IN THE
RESOLUTION AND OFFICIAL STATEMENT**

The following terms are used as defined terms in the Resolution and the Official Statement. The defined terms should be read in conjunction with APPENDIX B—SUMMARY OF THE RESOLUTION.

“Accountant’s Certificate” shall mean a certificate signed by an independent certified public accountant of recognized standing or a firm of independent public accountants of recognized standing, selected by the University and acceptable to the Trustee (which acceptance shall not be unreasonably withheld), who may be the accountant or firm of accountants who regularly audit the books of the University, provided that, if the Trustee shall fail to so accept, it shall deliver to the University a statement of its reasons for such non-acceptance.

“Act” shall mean the Educational Institutions Act of 1935, codified in Title 33, Chapter 38, Idaho Code, as the same shall be amended from time to time.

“Additional Bonds” shall mean Bonds issued pursuant to Article VII of the Resolution secured by Pledged Revenues.

“Authorized Officer of the University” shall mean the Bursar or a representative designated by the Bursar.

“Board” shall mean the Board of Trustees of the Idaho State University.

“Bond Fund” shall mean the fund referred to in the Bond Resolution, consisting of the Debt Service Account.

“Bond Register” shall mean the registration records of the University, maintained by the Trustee, on which shall appear the names and addresses of the Registered Owners of the Bonds.

“Bond Resolution” or “Resolution” shall mean the Bond Resolution, adopted by the Board on September 17, 1992, providing for the issuance of General Revenue Bonds, as restated on August 12, 2004 and as from time to time supplemented by Supplemental Resolutions.

“Bond Year” means the one-year period (or, in the case of the first Bond Year, the shorter period from the date of issue of the Bonds) selected by the University. If no date is selected by the University within five years of the date of delivery of a series of Bonds, each Bond Year shall end at the close of business on the date preceding the anniversary of the date of delivery of a series of Bonds.

“Bonds” shall mean the initial bonds issued under the Resolution and any Additional Bonds.

“Bursar” means the officer so designated by the University as chief financial officer of the University, currently the Vice President for Finance and Administration of the University, including any acting Bursar designated by the University.

“Business Day” shall mean a day, other than Saturday or Sunday, on which banks located in the states of Idaho, Minnesota, Utah and Washington, or in the city where the principal corporate trust office of the Trustee is located, are open for the purpose of conducting commercial banking business.

“CAES Base Rent” shall mean the base rent payable by Battelle Energy Alliance, LLC a Delaware limited liability company under its Lease Agreement No. 00049377 with the University.

“Code” shall mean the Internal Revenue Code of 1986, as amended and supplemented from time to time, and the regulations promulgated thereunder.

“Construction Fund” shall mean the special account created by the Bond Resolution, from which the Cost of Acquisition and Construction of a Project shall be paid.

“Cost of Acquisition and Construction,” with respect to a Project, shall include together with any other proper item of cost not specifically mentioned therein, the cost of demolition, the cost of acquisition and construction of the Project and the financing thereof, the cost, whether incurred by the University or another, of field surveys and advance planning undertaken in connection with the Project, and the cost of acquisition of any land or interest therein required as the sites thereof or for use in connection therewith, the cost of preparation of the sites thereof and of any land to be used in connection therewith, the cost of any indemnity and surety bonds and insurance premiums, allocable administrative and general expenses of the University, allocable portions of inspection expenses, financing charges, legal fees, and fees and expenses of financial advisors and consultants in connection therewith, cost of audits, the cost of all machinery, apparatus and equipment, cost of engineering, the cost of utilities, architectural services, design, plans, specifications and surveys, estimates of cost, the payment of any notes of the University (including any interest and redemption premiums) issued to temporarily finance the payment of any item or items of cost of the Project and payable from the proceeds of the Bonds, and all other expenses necessary or incident to determining the feasibility or practicability of the Project, and such other expenses not specified herein as may be necessary or incident to the construction and acquisition of the Project, the financing thereof and the placing of the same in use and operation.

“Cost(s) of Issuance” shall mean printing, rating agency fees, legal fees, underwriting fees, fees and expenses of the Trustee, bond insurance premiums, if any, and all other fees, charges, and expenses with respect to or incurred in connection with the issuance, sale, and delivery of a series of Bonds.

“Cross-over Date” means with respect to Cross-over Refunding Bonds the date on which the principal portion of the related Cross-over Refunded Bonds is to be paid or redeemed from the proceeds of such Cross-over Refunding Bonds.

“Cross-over Refunded Bonds” means Bonds refunded by Cross-over Refunding Bonds.

“Cross-over Refunding Bonds” means Bonds issued for the purpose of refunding Bonds if the proceeds of such Cross-over Refunding Bonds are irrevocably deposited in escrow in satisfaction of the requirements of Section 57-504, Idaho Code, to secure the payment on an applicable redemption date or maturity date of the Cross-over Refunded Bonds (subject to possible use to pay principal of the Cross-over Refunding Bonds under certain circumstances) and the earnings on such escrow deposit are required to be applied to pay interest on the Cross-over Refunding Bonds until the Cross-over Date.

“Debt Service” for any period shall mean, as of any date of calculation, an amount equal to the Principal Installment and interest accruing during such period on the Bonds, plus any Payment due under a Parity Payment Agreement as defined in the Resolution. Such Debt Service on the Bonds shall be calculated on the assumption that no portion of the Bonds Outstanding at the date of calculation will cease to be Outstanding except by reason of the payment of the Principal Installment on the Bonds on the due date thereof. For any series of Variable Rate Bonds bearing interest at a variable rate which cannot be ascertained for any particular fiscal year, it shall be assumed that such series of Variable Rate Bonds will bear interest at a fixed rate equal to the higher of (i) the average of the variable rates applicable to such series of Variable Rate Bonds during any twenty-four month period ending within thirty (30) days prior to the date of computation, or (ii) 110% of the Bond Buyer 25 Revenue Bond Index most recently published prior to the computation date but bearing interest at a fixed rate. There shall be excluded from “Debt Service” (i) interest on Bonds (whether Cross-over Refunding Bonds or Cross-over Refunded Bonds) to the extent that Escrowed Interest is available to pay such interest, and (ii) principal on Cross-over Refunded Bonds to the extent that the proceeds of Cross-over Refunding Bonds are on deposit in an irrevocable escrow in satisfaction of the requirements of Section 57-504, Idaho Code, and such proceeds or the earnings thereon are required to be applied to pay such principal (subject to the possible use to pay the principal of the Cross-over Refunding Bonds under certain circumstances) and such amounts so required to be applied are sufficient to pay such principal.

“Debt Service Account” shall mean the account of that name created within the Bond Fund by the Bond Resolution.

“Defeasance Securities” shall mean and include any of the following securities:

1. Cash.
2. U.S. Treasury Certificates, Notes and Bonds (including State and Local Government Series - (SLGs)).
3. Direct obligations of the U.S. Treasury which have been stripped by the U.S. Treasury itself.
4. Resolution Funding Corp. ("REFCORP"). Only the interest component of REFCORP strips which have been stripped by request to the Federal Reserve Bank of New York in book entry form are acceptable.
5. Pre-refunded municipal bonds rated "Aaa" by Moody's and "AAA" by S&P. If, however, the issue is only rated by S&P (i.e., there is no Moody's rating) then the pre-refunded bonds must have been pre-refunded with cash, direct U.S. or U.S. guaranteed obligations, or AAA rated pre-refunded municipals to satisfy this condition.
6. Obligations issued by the following agencies which are backed by the full faith and credit of the U.S.:
 - a. *U.S. Export-Import Bank (Eximbank)*
Direct obligations or fully guaranteed certificates of beneficial ownership
 - b. *Farmers Home Administration (FmHA)*
 - c. *Federal Financing Bank*
 - d. *General Services Administration*
Participation Certificates
 - e. *U.S. Maritime Administration*
Guaranteed Title XI financing
 - f. U.S. Department of Housing and Urban Development (HUD)

Project Notes
Local Authority Bonds
New Communities Debentures – U.S. government guaranteed debentures
 - g. *U.S. Public Housing Notes and Bonds – U.S. government guaranteed public housing notes and bonds*

"Escrowed Interest" means (i) amounts irrevocably deposited in escrow in accordance with the requirements of Section 57-504, Idaho Code, in connection with the issuance of Bonds or Cross-over Refunding Bonds or earnings on such amounts which are required to be applied to pay interest on such Cross-over Refunding Bonds or the related Cross-over Refunded Bonds, and (ii) amounts required by the Resolution to be deposited to pay interest on Bonds for a Project.

"Estimated Pledged Revenues" means, for any year, the Estimated Pledged Revenues for such year, based upon estimates prepared by the Bursar and approved in accordance with procedures established by the Board. In computing Estimated Pledged Revenues, Pledged Revenues may be adjusted as necessary to reflect any changed schedule of fees or other charges adopted and to become effective not later than the next succeeding fiscal year of the University and any estimated gain in enrollments of students subject to payment of fees in the academic year next succeeding the delivery of a series of bonds in connection with which an estimate is made. The estimated Operation

and Maintenance Expenses shall not be considered in computing Estimated Pledged Revenues unless Operation and Maintenance Expenses are expected to be paid from Pledged Revenues.

“Estimated Revenues Available for Debt Service” shall mean, for any year, the Revenues Available for Debt Service for such year, based upon estimates prepared by the Bursar and approved in accordance with procedures established by the Board. In computing Estimated Revenues Available for Debt Service, Pledged Revenues may be adjusted as necessary to reflect any changed schedule of fees or other charges adopted and to become effective not later than the next succeeding fiscal year of the University and any estimated gain in enrollments of students subject to payment of fees in the academic year next succeeding the delivery of a series of bonds in connection with which an estimate is made.

“Event of Default” shall mean one or more of the events enumerated in the Bond Resolution.

“Facilities” means (i) the Holt Arena stadium facility, (ii) the Reed Gymnasium, (iii) the Student Union Buildings, (iv) the CAES Project, (v) the Meridian Project, (vi) the Recreation Project and (vii) any Project financed with the proceeds of the Bonds, together with all appurtenances, equipment and related facilities useful or necessary to the operation of such Facilities.

“Fiscal Year” shall mean the annual accounting period of the University, beginning July 1 in a year and ending June 30 of the following year.

“Generally Accepted Accounting Principles” shall mean those accounting principles applicable in the preparation of financial statements of business corporations as promulgated by the Financial Accounting Standards Board or such other body recognized as authoritative by the American Institute of Certified Public Accountants.

“Housing System” shall mean the University’s system of (i) student housing facilities and related facilities, including family student housing and apartments; (ii) the University’s on-campus residence hall housing facilities, food service and dining facilities and related and subordinate facilities; and (iii) additions and improvements thereto.

“Investment Securities” shall mean and include any securities authorized to be acquired by the Treasurer of the State of Idaho pursuant to Section 67-1210 and 67-1210A, Idaho Code, or any successor Code section specifying legal investments.

“Mandatory Redemption Amount(s)” shall mean the mandatory deposits so designated in a Supplemental Resolution. The portion of any Mandatory Redemption Amount remaining after the deduction of any amounts credited pursuant to the Resolution (or the original amount of any such Mandatory Redemption Amount if no such amounts shall have been credited toward the same) shall constitute the unsatisfied balance of such Mandatory Redemption Amount for the purpose of calculation of Mandatory Redemption Amounts due on a future date.

“Matriculation Fee(s)” shall mean the student matriculation fee established by the Board for maintenance and operation of physical plant, student services, and institutional support for full-time students enrolled in academic credit courses and vocational pre-employment, preparatory programs at the University, as said fee now exists and may hereafter be revised by the Board. The Matriculation Fee shall include general education fees for part-time and summer students which are currently designated by the Board as the “Part-time Educational Fee” and “Summer School Fee.” The Matriculation Fee is also referred to as the “Tuition Fee.”

“Maximum Annual Debt Service” shall mean an amount equal to the greatest annual Debt Service with respect to the Bonds for the current or any future Bond Year.

“Meridian Project” means the acquisition and renovation of a portion of a building in Meridian, Idaho to be used for instructional purposes.

“Moody’s” shall mean Moody’s Investors Service, a corporation organized and existing under the laws of the State of Delaware, its successors and assigns.

“Net Proceeds,” when used with reference to any series of Bonds, shall mean the aggregate principal amount of the series of Bonds, less the Costs of Issuance.

“Net Revenues of the Housing System” shall mean the Revenues of the Housing System, less Operation and Maintenance Expenses.

“Operation and Maintenance Expenses” with respect to the Housing System shall mean all actual operation and maintenance expenses incurred by the University in any particular fiscal year or period to which said term is applicable or charges made therefor during such fiscal year or period, but only if such charges are made in conformity with Generally Accepted Accounting Principles.

Operation and Maintenance Expenses include, but are not limited to, costs for ordinary repairs, renewals and replacements of the Housing System, for salaries and wages, employees’ health, hospitalization, pension and retirement expenses, fees for services, materials and supplies, rents, administrative and general expenses, insurance expenses, legal, engineering, accounting and financial advisory fees and expenses and costs of other consulting and technical services, fees and charges of financial, banking or other institutions for letters of credit, standby credit facilities, reimbursement agreements and remarketing, indexing and tender agent agreements to secure any series of Bonds, training of personnel, taxes and other governmental charges imposed by other than the University, fuel costs, and any other current expenses or obligations required to be paid by the University under the provisions of the Resolution or by law, all to the extent properly allocable to the Housing System.

Notwithstanding the first sentence of this definition, Operation and Maintenance Expenses do not include depreciation or obsolescence charges or reserves therefor; amortization of intangibles or other bookkeeping entries of a similar nature; interest charges and charges for the payment or amortization of principal of bonded or other indebtedness of the University; costs or charges which under Generally Accepted Accounting Principles are properly chargeable to the capital account or the reserve for depreciation and do not include losses from the sale, abandonment, reclassification, revaluation or other disposition of any part of the Housing System or such property items which are capitalized pursuant to the then existing accounting practice of the University.

“Outstanding,” when used with reference to the Bonds, as of any particular date, shall mean the Bonds which have been issued, sold and delivered under the Bond Resolution, except (i) the Bonds (or portion thereof) cancelled because of payment or redemption prior to their stated date of maturity, and (ii) the Bonds (or portion thereof) for the payment or redemption of which there has been separately set aside and held money for the payment thereof.

“Payment Date” shall mean the date upon which a payment of Debt Service on the Bonds shall be due and payable.

“Pledged Revenues” shall include (i) the Student Facilities Fee/Facilities, (ii) the Matriculation Fee (also referred to as the Tuition Fee) and other fees as shall be designated by the Board as Pledged Revenues; (iii) Revenues of the Housing System and CAES Base Rent, (iv) other revenues of other University enterprises or sources of funds as shall be designated by the Board as Pledged Revenues, (v) any investment income deposited from the Revenue Fund and the Debt Service Fund; and (vi) proceeds from the sale of a series of Bonds and moneys and investment earnings thereon, except as otherwise provided in the Bond Resolution or a Supplemental Resolution. Upon approval of the annual budget by the Board, the amounts of fees and other revenues so approved by the Board shall become Pledged Revenues and, when deposited into the Revenue Fund, shall become available for payment into the Bond Fund for payment of Debt Service in accordance with the Bond Resolution.

“Principal Installment” shall mean, as of any date of calculation and with respect to any series of Bonds then Outstanding, (A) the principal amount of Bonds of such series due on a certain future date for which no Mandatory Redemption Amounts have been established, or (B) the unsatisfied balance (determined as provided in the definition of Mandatory Redemption Amount in this section) of any Mandatory Redemption Amount due on a certain future date for Bonds of such series, plus the amount of the mandatory redemption premiums, if any, which would be applicable upon redemption of such Bonds on such future date in a principal amount equal to such unsatisfied balance of such Mandatory Redemption Amount, or (C) if such future dates coincide as to different Bonds of such series, the sum of such principal amount of Bonds and of such unsatisfied balance of such Mandatory Redemption Amount due on such future date plus such applicable redemption premiums.

“Project” shall mean any “project” as defined in the Act that is financed with the proceeds of Bonds issued under the Resolution.

“Project Account” shall mean an account established by the University within the Construction Fund for a Project.

“Rebate Fund” means the fund by that name established by the Resolution.

“Record Date” shall mean the 15th day of the calendar month next preceding any interest payment date, as provided in the Resolution.

“Recreation Project” means the construction and equipping of additions to an existing recreation facility.

“Registered Owner” or “Owner(s)” shall mean the person or persons in whose name or names the Bonds shall be registered in the Bond Register maintained by the Trustee in accordance with the terms of the Bond Resolution.

“Revenue Fund” shall mean the Revenue Fund established by the Bond Resolution.

“Revenues Available for Debt Service” shall mean revenues in clauses (i), (ii), (v) and (vi) of the definition of Pledged Revenues, plus Net Revenues of the Housing System, plus revenues described in clause (iv) of the definition of Pledged Revenues less Operation and Maintenance Expenses of any University enterprises the revenues of which have been included in Pledged Revenues by virtue of such clause (iv).

“Revenues of the Housing System” shall mean all rentals, revenues, fees, tolls, charges, income, receipts and profits derived by the University from or attributable to the Housing System including, without limitation, all revenues derived from or attributable to any lease or other contractual arrangement with respect to the use or occupancy of the Housing System or the services, output or capacity thereof, or from the sale of any property of the Housing System permitted under the Resolution, and the proceeds of any insurance covering business interruption loss relating to the Housing System, all as determined in accordance with Generally Accepted Accounting Principles.

“S&P” shall mean Standard & Poor’s Corporation, a corporation organized and existing under the laws of the State of New York, its successors and assigns.

“Series 1998 Bonds” means the original \$12,400,000 principal amount of Student Facilities Fee Refunding and Improvement Revenue Bonds, Series 1998, of the University authorized by the Series 1998 Supplemental Resolution.

“Series 1998 Supplemental Resolution” means the Supplemental Resolution of the University adopted on February 19, 1998, authorizing the Series 1998 Bonds.

“Series 2003 Bonds” means the \$35,895,000 General Refunding and Improvement Revenue Bonds, Series 2003, of the University authorized by the Series 2003 Supplemental Resolution.

“Series 2003 Supplemental Resolution” means the Supplemental Resolution of the University adopted on June 26, 2003, authorizing the Series 2003 Bonds.

“Series 2004A Bonds” means the \$4,980,000 General Revenue Bonds, Series 2004A, of the University authorized by the Series 2004A Supplemental Resolution.

“Series 2004A Supplemental Resolution” means the Supplemental Resolution of the University adopted on August 12, 2004, authorizing the Series 2004A Bonds.

“Series 2004B Bonds” means the \$3,305,000 General Revenue Bonds, Series 2004B, of the University authorized by the Series 2004B-C Supplemental Resolution.

“Series 2004B-C Bonds” means collectively, the Series 2004B Bonds and the Series 2004C Bonds.

“Series 2004C Bonds” means the \$2,305,000 General Revenue Bonds (Taxable), Series 2004C, of the University authorized by the Series 2004B-C Supplemental Resolution.

“Series 2004B-C Supplemental Resolution” means the Supplemental Resolution of the University adopted on October 21, 2004, authorizing the Series 2004B-C Bonds.

“Series 2006 Bonds” means the \$10,000,000 principal amount of General Revenue Bonds (Taxable), Series 2006 of the University authorized by the Series 2006 Supplemental Resolution.

“Series 2006 Supplemental Resolution” means the Supplemental Resolution of the University adopted on November 30, 2006, authorizing the Series 2006 Bonds.

“Series 2007 Bonds” means the \$16,120,000 principal amount of General Revenue Bonds, Series 2007, of the University authorized by the Series 2007 Supplemental Resolution.

“Series 2007 Supplemental Resolution” means the Supplemental Resolution of the University adopted on August 9, 2007, authorizing the Series 2007 Bonds.

“Series 2012 Bonds” means the \$27,530,000 principal amount of General Revenue Refunding Bonds, Series 2012 of the University authorized by the Series 2012 Supplemental Resolution.

“Series 2012 Supplemental Resolution” means the Supplemental Resolution of the University adopted on June 21, 2012, authorizing the Series 2012 Bonds.

“Series 2013 Bonds” means the \$3,810,000 principal amount of General Revenue Refunding Bonds, Series 2013, of the University authorized by the Series 2013 Supplemental Resolution.

“Series 2013 Supplemental Resolution” means the Supplemental Resolution of the University adopted on June 20, 2013, authorizing the Series 2013 Bonds.

“Series 2016 Bonds” means the \$_____ principal amount of General Revenue Refunding Bonds, Series 2016, of the University authorized by the Series 2016 Supplemental Resolution.

“Series 2016 Cost of Issuance Fund” means the special account created by the Series 2016 Supplemental Resolution, from which the Costs of Issuance of the Series 2016 Bonds shall be paid.

“Series 2016 Supplemental Resolution” means the Supplemental Resolution of the University adopted on February 18, 2016, authorizing the Series 2016 Bonds.

“Student Facilities Fee/Facilities” shall mean the student facilities fee/facilities established by the Board and pledged as Pledged Revenues for payment of Additional Bonds, as said fee now exists and as may hereafter be revised by the Board.

“Supplemental Resolution” means any resolution amending or supplementing the terms of the Resolution in full force and effect which has been duly adopted and approved by the University under the Act; but only if and to the extent that such Supplemental Resolution is adopted in accordance with the provisions of the Resolution.

“Trustee” shall mean U.S. Bank National Association, which shall also act as bond registrar, authenticating agent, paying agent and transfer agent with respect to the Bonds, or its successors in functions, as now or hereafter designated.

“2004B/2004C Insurer” means Financial Security Assurance Inc., as insurer of the Series 2004B-C Bonds.

“2004B/2004C Policy” means the municipal bond insurance policy issued by the 2004B/2004C Insurer guaranteeing the scheduled payment of principal and interest on the Series 2004B-C Bonds when due.

“University” means Idaho State University, at Pocatello, Idaho, a body politic and corporate pursuant to the provisions of Section 33-3001, Idaho Code.

“Variable Rate Bonds” means as of any date of calculation, Bonds, the terms of which on such date of calculation are such that interest thereon for any future period of time is expressed to be calculated at a rate which is not susceptible of precise determination.

“Written Certificate of the University” means an instrument in writing signed on behalf of the University by a duly authorized officer thereof. Every Written Certificate of the University, and every certificate or opinion of counsel, consultants, accountants or engineers provided for herein shall include: (A) a statement that the person making such certificate, request, statement or opinion has read the pertinent provisions of the Bond Resolution to which such certificate, request, statement or opinion relates; (B) a brief statement as to the nature and scope of the examination or investigation upon which the certificate, request, statement or opinion is based; (C) a statement that, in the opinion of such person, he has made such examination or investigation as is necessary to enable him to express an informed opinion with respect to the subject matter referred to in the instrument to which his signature is affixed; and (D) with respect to any statement relating to compliance with any provision hereof, a statement whether or not, in the opinion of such person, such provision has been complied with.

APPENDIX B**SUMMARY OF THE RESOLUTION**

Capitalized terms used herein and not otherwise defined are used as defined in “APPENDIX A—GLOSSARY OF CERTAIN TERMS USED IN THE RESOLUTION AND OFFICIAL STATEMENT.”

The following is a summary of certain provisions of the Resolution and is not to be considered a full statement thereof. The Resolution and all supplements thereto, are on file at the University, c/o Vice President for Finance and Administration, ISU Financial Services, [921 South 8th Avenue, Stop 8219, Building #10, 2nd Floor, Pocatello, Idaho 83209 - verify]; or at the office of the Trustee, U.S. Bank National Association, 170 South Main Street, Suite 200, Salt Lake City, Utah 84101.

GENERAL PROVISIONS RELATING TO THE BONDS**Authorization of Bonds**

Bonds designated as “General Revenue Bonds” are authorized to be issued by the University under the Resolution. The maximum principal amount of the Bonds which may be issued under the Resolution is not limited; provided, however, that the University reserves the right to limit or restrict the aggregate principal amount of the Bonds which may at any time be issued or Outstanding under the Resolution. Bonds may be issued in such series as from time to time shall be established and authorized by the University subject to the provisions of the Resolution. The Bonds may be issued in one or more series pursuant to one or more Supplemental Resolutions. The designation of the Bonds shall include, in addition to the name “General Revenue Bonds,” such further appropriate particular designation added to or incorporated in such title for the Bonds of any particular series as the University may determine. Each Bond shall bear upon its face the designation so determined for the series to which it belongs. Each Bond shall recite in substance that it is payable from and secured by the Pledged Revenues of the University pledged for the payment thereof.

Terms of Bonds

The principal of and interest on, and the redemption price of the Bonds shall be payable in lawful money of the United States of America at the principal corporate trust office of the Trustee or of any Paying Agent at the option of a Registered Owner. Payment of interest on any fully registered Bond shall be (i) made to the Registered Owner thereof and shall be paid by check or draft mailed to the Registered Owner thereof as of the close of business on the Record Date at his address as it appears on the registration books of the Trustee or at such other address as is furnished to the Trustee in writing by such Registered Owner, or (ii) with respect to units of \$500,000 or more of Bonds, made by wire transfer to the Registered Owner as of the close of business on the Record Date next preceding the interest payment date if such Registered Owner shall provide written notice to the Trustee not less than 15 days prior to such interest payment date at such wire transfer address as such Registered Owner shall specify, except, in each case, that, if and to the extent that there shall be a default in the payment of the interest due on any interest payment date, such defaulted interest shall be paid to the Registered Owners in whose name any such Bond is registered at the close of business on the fifth Business Day next preceding the date of payment of such defaulted interest.

The Bonds of any series may be issued only in fully registered form without coupons in authorized denominations.

Transfer or Exchange of Bonds

Any Bond shall be transferable by the Registered Owner thereof in person, or by his attorney duly authorized in writing, upon presentation and surrender of such Bond at the principal corporate trust office of the Trustee for cancellation and issuance of a new Bond registered in the name of the transferee, in exchange therefor. Provided, however, that the Trustee shall not be required to transfer the Bonds within 15 calendar days of a principal or interest payment.

Lost, Stolen, Mutilated or Destroyed Bonds

In case any Bond shall be lost, stolen, mutilated or destroyed, the Trustee may authenticate and deliver a new Bond or Bonds of like date, denomination, interest rate, maturity, number, tenor and effect to the Registered Owner thereof upon the Registered Owner's paying the expenses and charges of the University and the Trustee in connection therewith and upon his filing with the University and the Trustee evidence satisfactory to the University and the Trustee of his ownership thereof, and upon furnishing the University and the Trustee with indemnity satisfactory to the University and the Trustee.

Notice of Redemption

A. Notice of Redemption. Notice of any redemption of Bonds shall be sent by the Trustee by first-class mail, postage prepaid, not less than thirty-five (35) nor more than sixty (60) days prior to the date fixed for redemption, to the Registered Owner of each Bond to be redeemed at the address shown on the Bond Register. This requirement shall be deemed to be complied with when notice is mailed as herein provided, regardless of whether or not it is actually received by the Registered Owner of any Bond to be redeemed.

B. Effect of Redemption. When so called for redemption, such Bonds shall cease to accrue interest on the specified redemption date, provided funds for redemption are on deposit at the place of payment at that time, and such Bonds shall not be deemed to be Outstanding as of such redemption date.

C. Open Market Purchase. The University reserves the right to purchase the Bonds on the open market at a price equal to or less than par. In the event the University shall purchase Bonds at a price (exclusive of accrued interest) of less than the principal amount thereof, the Bonds so purchased shall be credited at the par amount thereof against the Debt Service requirement next becoming due. In the event the University shall purchase term Bonds at a price (exclusive of accrued interest) of less than the principal amount thereof, the term Bonds so purchased shall be credited against the Mandatory Redemption Amounts next becoming due. All Bonds so purchased shall be cancelled.

Additional Bonds

The University reserves the right to issue Additional Bonds, including the Series 2016 Bonds, secured equally and ratably with outstanding Bonds under the Resolution by a pledge of (i) Pledged Revenues and (ii) the funds established by the Resolution, upon the conditions set forth in Article VII of the Resolution and as described in the Official Statement.

Payment Agreements

For purposes of this Payment Agreements Section, the following words have the following definitions:

(1) "Payment" means any payment required to be made by or on behalf of the University under a Payment Agreement and which is determined according to a formula set forth in the Payment Agreement.

(2) "Parity Payment Agreement" means a Payment Agreement under which the University's payment obligations are expressly stated to be secured by a pledge of and lien on Pledged Revenues on an equal and ratable basis with the Pledged Revenues required to be paid into the Bond Fund to pay and secure the payment of the principal of and interest on Outstanding Bonds.

(3) "Payment Agreement" means a written agreement, for the purpose of managing or reducing the University's exposure to fluctuations or levels of interest rates, currencies or commodities or for other interest rate, investment, asset or liability management purposes, entered into on either a current or forward basis by the University and a Qualified Counterparty, all as authorized by any applicable laws of the State, such agreement may or may not be characterized by a structure of reciprocity of payment.

(4) "Payment Agreement Payment Date" means any date specified in the Payment Agreement on which a Payment or Receipt is due and payable under the Payment Agreement.

(5) “Receipt” means any payment (designated as such by a resolution) to be made to, or for the benefit of, the University under a Payment Agreement by the Payor.

(6) “Payor” means a Qualified Counterparty to a Payment Agreement that is obligated to make one or more payments thereunder.

(7) “Qualified Counterparty” means a party (other than the University or a party related to the University) who is the other party to a Payment Agreement that has or whose obligations are unconditionally guaranteed by a party that has at least an investment grade rating from Moody’s and S&P and who is otherwise qualified to act as the other party to a Payment Agreement under any applicable laws of the State.

A Payment Agreement Payment made under a Payment Agreement may be on a parity of lien with the payment of the Bonds if the Payment Agreement satisfies the requirements for Additional Bonds as described in the Resolution, taking into consideration regularly scheduled Payment Agreement Payments and Receipts (if any) under the Payment Agreement.

The Payment Agreement may oblige the University to pay, on one or more scheduled and specified Payment Agreement Payment Dates, the Payments in exchange for the Payor’s obligation to pay or to cause to be paid to the University, on scheduled and specified Payment Agreement Payment Dates, the Receipts. The University may also enter into Payment Agreements that are not reciprocated by the other party to the agreement.

If the University enters into a Parity Payment Agreement, Payments shall be made from the Debt Service Account and annual Debt Service shall include any regularly scheduled University Payments adjusted by any regularly scheduled Receipts during a fiscal year. Receipts shall be paid directly into the Debt Service Account. Obligations to make unscheduled payments, such a termination payments, may not be entered into on a parity with the Bonds. To the extent that a Parity Payment Agreement has been designated as a hedge of the interest rate features of either fixed rate bonds or Bonds bearing variable rates of interest, annual Debt Service during the term of such Parity Payment Agreement shall be modified to reflect such Parity Payment Agreement.

The University is not precluded from entering into Payment Agreements with a claim on Pledged Revenues junior to that of the Bonds or from entering into obligations on a parity with the Bonds in connection with the use of Payment Agreements or similar instruments if the University obtains an opinion of Bond Counsel that the obligations of the University thereunder are consistent with the Resolution.

PLEDGE OF REVENUES; ESTABLISHMENT OF FUNDS AND ACCOUNTS; INVESTMENT OF FUNDS

Pledge of Pledged Revenues

In the Resolution, the University pledges for the payment of the Bonds, equally and ratably, the Pledged Revenues and all money in the Bond Fund. The Pledged Revenues and other money in the Revenue Fund and the Bond Fund, if any, shall not, except as provided in the Resolution, be used for any other purpose while any of the Bonds remain Outstanding. This pledge shall constitute a first and exclusive lien on the Pledged Revenues and such other moneys in the Revenue Fund and the Bond Fund, if any, for the payment of the Bonds in accordance with the terms of the Resolution.

Confirmation and Establishment of Funds

The following Funds are established under the Resolution:

- A. Revenue Fund to be held by the University;
- B. Construction Fund to be held by the University;
- C. Bond Fund, consisting of a Debt Service Account to be held by the Trustee;

- D. Cost of Issuance Fund to be held by the University; and
- E. Rebate Fund to be held by the University.

The Trustee may establish one or more separate and segregated sub-accounts within the Accounts and Funds from time to time as shall be necessary. The Series 2016 Supplemental Resolution creates a "Series 2016 Cost of Issuance Fund" to be held by the University from which the expenses of issuing the Series 2016 Bonds shall be paid.

Revenue Fund; Bond Fund; Flow of Funds

A. Required Deposits. The University shall deposit as received all Pledged Revenues into the Revenue Fund. The University shall deposit into the Debt Service Account in the Bond Fund the accrued interest, if any, received from the sale of a series of Bonds to the initial purchasers thereof. The University shall also deposit into the Debt Service Account the portion, if any, of the Net Proceeds designated as capitalized interest on a series of Bonds.

B. Permitted Deposits. At any time the University may deposit into the Revenue Fund or the Bond Fund such other funds and revenues that do not constitute Pledged Revenues, as the University may in its discretion determine.

C. Required Transfers. Moneys in the Revenue Fund shall first be transferred to the Trustee for deposit in the Debt Service Account in the Bond Fund not later than five (5) days before any Payment Date, an amount equal to Debt Service coming due on such Payment Date. There may be credited against the foregoing transfer, however, any moneys deposited in the Debt Service Account which are available to pay Debt Service on the Bonds and which have not previously been taken as a credit against the required transfers.

The Trustee shall pay out of the Debt Service Account to the Registered Owners of the Bonds entitled to such payment on or before each Payment Date the amount of Debt Service payable on such date.

Amounts remaining in the Revenue Fund at any time in excess of the amounts necessary to make the payments required above may be applied by the University, free and clear of the lien of the Resolution, to the extent permitted by law, (i) to the redemption of Bonds, or (ii) for any other lawful purpose of the University.

Construction Fund

There shall be paid into the Construction Fund the amounts required to be so paid by the provisions of the Resolution or any Supplemental Resolution.

The University may establish within the Construction Fund separate Project Accounts and may establish one or more subaccounts in each Project Account. Income received from the investment of moneys in the Project Account in the Construction Fund shall be credited to the Project Account. Upon completion of the Project, the Project Account shall be closed, and all remaining amounts in the Project Account shall be transferred to the Debt Service Account in the Bond Fund.

Before any payment is made from the Project Account in the Construction Fund, the University shall execute a Written Certificate showing with respect to each payment to be made the name of the person to whom payment is due and the amount to be paid and certifying that the obligation to be paid was incurred and is a proper charge against the Project Account in the Construction Fund and in a reasonable amount against the Project Account in the Construction Fund and has not been theretofore included in a prior Written Certificate, and that insofar as any such obligation was incurred for work, materials, equipment or supplies, such work was actually performed, or such materials, equipment or supplies were actually installed in furtherance of the acquisition of the Project or delivered at the site of the Project for that purpose or delivered for storage or fabrication or as a progress payment due on equipment being fabricated to order.

Investment of Funds

Moneys held in any fund or account shall be invested and reinvested by the University or the Trustee to the fullest extent practicable in Investment Securities which mature not later than such times as shall be necessary to provide moneys when needed for payments to be made from such fund or account.

The Trustee shall make investments only in accordance with instructions received from an Authorized Officer of the University. Except as provided to the contrary in the Resolution, income received from the investment of moneys in any fund or account shall be credited to such fund or account.

COVENANTS OF THE UNIVERSITY

So long as any Bonds are Outstanding, the University covenants as follows:

Punctual Payment of Bonds

The University will punctually pay or cause to be paid the principal or redemption price and the interest to become due in respect of all the Bonds, in strict conformity with the terms of the Bonds and of the Resolution.

Covenant Regarding Pledged Revenues

The University shall establish and maintain the Pledged Revenues sufficient, together with other revenues available or to be available in the Debt Service Account to pay Debt Service for the fiscal year, to produce Revenues Available for Debt Service in each fiscal year equal to not less than 110% of the Debt Service on the Bonds Outstanding for each such fiscal year.

Existence of University

The University will maintain its corporate identity and shall make no attempt to cause its corporate existence to be abolished.

Accounts and Reports

A. The University will at all times keep, or cause to be kept, proper books of record and accounts in accordance with generally accepted accounting principles in which complete and accurate entries shall be made of all transactions relating to the Operation and Maintenance Expenses of the Facilities, the allocation and application of the Pledged Revenues. Such books of record and accounts shall at all times during business hours be subject to the inspection of the Trustee or the Registered Owners of not less than five percent of the Bonds then Outstanding, or their representatives authorized in writing.

B. The University will place on file with the Trustee promptly upon the receipt thereof by the University and in any event annually within six (6) months after the close of each fiscal year, a copy of its annual audit report covering the operations of the University and certified by a Certified Public Accountant. Such report shall provide such information as is necessary to evidence compliance with applicable agreements and covenants made by the University in the Resolution.

C. The reports, statements, and other documents required to be furnished to the Trustee pursuant to any provisions of the Resolution shall be available for the inspection of Registered Owners at the principal trust office of the Trustee and shall be mailed to each Registered Owner, investment banker, security dealer, or other person interested in the Bonds who shall file a written request therefor with the University.

D. The University shall file with the Trustee (i) forthwith upon becoming aware of any Event of Default under the Resolution, a Written Certificate of the University specifying such Event of Default; and (ii) no later than five months following the end of each fiscal year a Written Certificate of the University stating that, to the best of the knowledge and belief of the authorized officer of the University executing such Written Certificate, except for any

Event of Default then existing which shall have been specified in the Written Certificate of the University referred to in (i) above, the University has kept, observed, performed, and fulfilled each and every one of its covenants and obligations contained in the Resolution, and there does not exist at the date of such Written Certificate any Event of Default by the University under the Resolution or other event which, with the lapse of time specified in the Resolution, would become an Event of Default under Article XI of the Resolution, or, if any such Event of Default under Article XI of the Resolution or other event shall so exist, specifying the same and the nature and status thereof.

Compliance With the Resolution

The University will not issue, or permit to be issued, any Bonds in any manner other than in accordance with the provisions of the Resolution and will not suffer or permit any default to the Resolution, but will faithfully observe and perform all the covenants, conditions, and requirements thereof. The University will make, execute, and deliver any and all such further resolutions, instruments, and assurances as may be reasonably necessary or proper to carry out the intention or facilitate the performance of the Resolution, and for better assuring and confirming unto the registered Owners of the Bonds of the rights, benefits, and security provided in the Resolution. The University for itself, its successors and assigns, represents, covenants, and agrees with the Registered Owners of the Bonds, as a material inducement to the purchase of the Bonds, that so long as any of the Bonds shall remain Outstanding and the principal or redemption price thereof or interest thereon shall be unpaid or unprovided for, it will faithfully perform all of the covenants and agreements contained in the Resolution and the Bonds.

Power to Issue Bonds and to Pledge Pledged Revenues and Other Funds

The University is duly authorized under all applicable laws to issue the Bonds and to adopt the Resolution and to pledge the Pledged Revenues and other moneys, securities, and funds purported to be pledged by the Resolution in the manner and to the extent provided in the Resolution. The Bonds and the provisions of the Resolution are and will be the valid and legally enforceable obligations of the University in accordance with their terms and the terms of the Resolution. The University shall at all times, to the extent permitted by law, defend, preserve, and protect the pledge of the Pledged Revenues and other moneys, securities, and funds pledged under the Resolution and all the rights of the Registered Owners under the Resolution against all claims and demands of all persons whomsoever.

Power to Own and Operate the Facilities and Collect Fees

The University has, and will have so long as any Bonds are Outstanding, good right and lawful power to own and operate the Housing System and to fix and collect the Pledged Revenues.

MODIFICATION OR AMENDMENT OF RESOLUTION

The Resolution or any Supplemental Resolution and the rights and obligations of the University and of the Registered Owners of the Bonds may be modified or amended at any time by a Supplemental Resolution and pursuant to the affirmative vote at a meeting of Registered Owners, or with the written consent without a meeting, (1) of the Registered Owners of at least sixty percent (60%) in aggregate principal amount of the Bonds then Outstanding, (2) in case less than all of the several series of Bonds then Outstanding are affected by the modification or amendment, of the Registered Owners of at least sixty percent (60%) in principal amount of the Bonds of each series so affected and then Outstanding, and (3) in case the modification or amendment changes the terms of any Mandatory Redemption Amounts, of the Registered Owners of at least sixty percent (60%) in principal amount of the Bonds of the particular series and maturity entitled to such Mandatory Redemption Amounts and then Outstanding; provided, however, that if such modification or amendment will, by its terms, not take effect so long as any Bonds of any specified series remain Outstanding, the consent of the Registered Owners of Bonds of such series shall not be required and Bonds of such series shall not be deemed to be Outstanding for the purpose of any calculation of Outstanding Bonds under this section. No such modification of amendment shall (x) extend the fixed maturity of any Bond, or reduce the principal amount or redemption price thereof, or reduce the rate or extend the time of payment of interest thereon, without the consent of the Registered Owner of each Bond so affected, or (y) reduce the aforesaid percentage of Bonds required for the affirmative vote or written consent to an amendment or modification of the Resolution, without the consent of the Registered Owners of all of the Bonds then Outstanding, or (z) without its written consent thereto, modify any of the rights or obligations of the Trustee.

The Resolution or any Supplemental Resolution and the rights and obligations of the University and of the Registered Owners of the Bonds may also be modified or amended at any time by a Supplemental Resolution, without the consent of any Registered Owners, but only to the extent permitted by law and only for any one or more of the following purposes:

- (1) to add to the covenants and agreements of the University in the Resolution contained, other covenants and agreements thereafter to be observed, or to surrender any right or power reserved to or conferred upon the University;
- (2) to make such provisions for the purpose of curing any ambiguity, or of curing or correcting any defective provision contained in the Resolution, or in regard to questions arising under the Resolution, as the University may deem necessary or desirable, and which shall not adversely affect the interests of the Trustee or the Registered Owners of the Bonds;
- (3) to provide for the issuance of a series of Bonds, and to provide the terms and conditions under which such series of Bonds may be issued, subject to and in accordance with the provisions of Article VII of the Resolution;
- (4) to provide for the issuance of the Bonds pursuant to a book-entry system or as uncertificated public obligations pursuant to the provisions of the Registered Public Obligations Act, chapter 9 of Title 57, Idaho Code; and
- (5) during the term of any credit enhancement agreements (including, without limitation, standby bond purchase agreements and letters of credit) permitted in Section 57-231, Idaho Code, to amend any provisions of the Resolution which is intended solely to be for the benefit of the issuer of the credit enhancement agreement.

Such Supplemental Resolution shall become effective as of the date of its adoption or such later date as shall be specified in such Supplemental Resolution.

EVENTS OF DEFAULT AND REMEDIES OF REGISTERED OWNERS

Events of Default

If any one or more of the following Events of Default shall occur, it is an “event of default” under the Resolution:

- (1) failure to make the due and punctual payment of any Principal Installment of a Bond when and as the same shall become due and payable, whether at maturity, by call for redemption, or declaration or otherwise;
- (2) failure to make the due and punctual payment of any installment of interest on any Bond or any Mandatory Redemption Amount, when and as such interest installment or any Mandatory Redemption Amount shall become due and payable;
- (3) failure by the University to perform or observe any other of the covenants, agreements, or conditions on its part in the Resolution or in the Bonds contained, and such default shall continue for a period of thirty (30) days after written notice thereof to the University by the Trustee specifying such failure and requiring the same to be remedied;
- (4) a judgment for the payment of money shall be rendered against the University, and any such judgment shall not be discharged within one hundred twenty (120) days of the entry thereof, or an appeal shall not be taken therefrom or from the order, decree of process upon which or pursuant to which such judgment shall have been granted or entered, in such manner as to set aside or stay the execution of or levy under such judgment, or order, decree or process or the enforcement thereof;

(5) dissolution or liquidation of the University or the filing by the University of a voluntary petition in bankruptcy, or the commission by the University of any act of bankruptcy, or adjudication of the University as a bankrupt, or assignment by the University for the benefit of its creditors, or the entry by the University into an agreement of composition with its creditors, or the approval by a court of competent jurisdiction of a petition applicable to the University in any proceeding for its reorganization instituted under the provisions of the federal bankruptcy act, as amended, or under any similar act in any jurisdiction which may now be in effect or which may hereafter be enacted;

(6) if an order or decree shall be entered, with the consent or acquiescence of the University, appointing a receiver or receivers of a Project, or any part thereof, or if such order or decree, having been entered without the consent and acquiescence of the University, shall not be vacated or discharged or stayed within ninety (90) days after the entry thereof;

(7) any event of default specified in a Supplemental Resolution,

the Trustee (by thirty (30) days' written notice to the University), or the Registered Owners of not less than twenty-five percent (25%) of the Bonds then Outstanding (by notice in writing to the University and the Trustee) may (subject to limitations imposed by bond insurers) declare the Bonds then Outstanding, and the interest accrued thereon, to be due and payable immediately, and upon any such declaration the same shall become and be immediately due and payable, anything in the Resolution or in the Bonds contained to the contrary notwithstanding.

Application of Funds and Moneys in Event of Default

A. If an Event of Default shall happen and shall not have been remedied, the University, upon demand of the Trustee, shall pay over or cause to be paid over to the Trustee (i) forthwith, all moneys, securities, and funds then held by the University in any Fund under the Bond Resolution, and (ii) all Pledged Revenues as promptly as practicable after receipt thereof.

B. During the continuance of an Event of Default, the Trustee shall apply all moneys, securities, funds and Pledged Revenues received by the Trustee pursuant to any right given or action taken under the provisions of this Section as follows and in the following order:

(1) To the payment of the reasonable and proper compensation, charges, expenses and liabilities of the Trustee;

(2) To the payment of the amounts required for reasonable and necessary Operation and Maintenance Expenses as necessary, in the judgment of the Trustee, to prevent deterioration of the Project or loss of Pledged Revenues therefrom. For this purpose the books or record and accounts of the University relating to the Project shall at all times be subject to the inspection of the Trustee and its representatives and agents during the continuance of such Event of Default;

(3) To the payment of the interest and principal or redemption price then due on the Bonds as indicated in the Resolution.

C. If and whenever all overdue installments of interest on the Bonds, together with the reasonable and proper charge, expenses and liabilities of the Trustee, and all other sums payable by the University under this Bond Resolution, including the principal and redemption price of and accrued unpaid interest on the Bonds which shall then be payable by declaration or otherwise, shall either be paid by the Trustee for the account of the University, or provision satisfactory to the Trustee shall be made for such payment, and all Events of Default under this Bond Resolution shall be made good or secured to the satisfaction of the Trustee or provision deemed by the Trustee to be adequate shall be made therefor, the University and the Trustee shall be restored, respectively, to their former positions and rights under this Bond Resolution. No such restoration of the University and the Trustee in their former positions and rights shall extend to or affect any subsequent Events of Default under this Bond Resolution or impair any right consequent thereon.

Rights and Remedies of Registered Owners

A. No Registered Owner of any Bond shall have any right to institute any proceeding, judicial or otherwise, with respect to the Resolution, or for the appointment of a receiver or trustee, or for any other remedy thereunder, unless

(1) such Registered Owner has previously given written notice to the Trustee of a continuing Event of Default;

(2) the Registered Owners of not less than twenty-five percent (25%) in principal amount of the Bonds shall have made written request to the Trustee

(3) to institute proceedings in respect of such Event of Default in its own name as Trustee;

(4) such Registered Owners have offered to the Trustee reasonable indemnity against the costs, expenses, and liabilities to be incurred in compliance with such request;

(5) the Trustee for sixty (60) days after its receipt of such notice, request, and offer of indemnity has failed to institute any such proceedings; and

(6) no direction inconsistent with such written request has been given to the Trustee during such sixty-day period by the Registered Owners of a majority in principal amount of the Bonds; it being understood and intended that no one or more Registered Owner of Bond shall have any right in any manner whatever by virtue of, or by availing of, any provision of the Resolution to affect, disturb, or prejudice the rights of any other Registered Owner of Bonds, or to obtain or to seek to obtain priority or preference over any other Registered Owner, or to enforce any right under the Resolution, except in the manner therein provided and for the equal and ratable benefit of all the Registered Owners of Bonds.

B. The Registered Owners of a majority in principal amount of the Outstanding Bonds shall have the right to direct the time, method, and place of conducting any proceeding for any remedy available to the Trustee or exercising any trust or power conferred on the Trustee, provided that:

(1) such direction shall not be in conflict with any rule of law or the Resolution,

(2) the Trustee shall not determine that the action so directed would be unjustly prejudicial to the Registered Owners not taking part in such direction, and

(3) the Trustee may take any other action deemed proper by the Trustee which is not inconsistent with such direction.

DEFEASANCE**Discharge of Indebtedness**

A. If the University shall pay or cause to be paid, or there shall otherwise be paid, to the Registered Owners of all Bonds the principal of or redemption price, if applicable, and interest due or to become due thereon, if applicable, at the times and in the manner stipulated therein and in the Resolution, or such Bonds shall have been deemed to have been paid as provided in the Supplemental Resolution authorizing a series of Bonds, then the pledge of any Pledged Revenues, and other moneys, securities and funds pledged under the Resolution and all covenants, agreements and other obligations of the University to the Registered Owners, shall thereupon cease, terminate and become void and be discharged and satisfied. In such event, the Trustee shall cause an accounting for such period or periods as shall be requested by the University to be prepared and filed with the University and, upon the request of the University, shall execute and deliver to the University all such instruments as may be desirable to evidence such discharge and satisfaction, and the Trustee shall pay over or deliver to the University all moneys or securities held by

it pursuant to the Resolution which are not required for the payment of principal or redemption price, if applicable, on Bonds.

B. Bonds or interest installments the payment or redemption of which moneys shall have been set aside and shall be held in trust by the Trustee (through deposit by the University of funds for such payment or redemption or otherwise) at the maturity or redemption date thereof shall be deemed to have been paid within the meaning and with the effect expressed in subsection (A) of this section. All Outstanding Bonds of any series shall prior to the maturity or redemption date thereof be deemed to have been paid within the meaning and with the effect expressed in subsection (A) of this section if (1) in case any of said Bonds are to be redeemed on any date prior to their maturity, the University shall have given to the Trustee, in form satisfactory to it, irrevocable instructions to mail to the Registered Owners of such Bonds, notice of redemption of such Bonds on said date, (2) there shall have been deposited with the Trustee either moneys in an amount which shall be sufficient, or Defeasance Securities the principal of and the interest on which when due will provide moneys which, together with the moneys, if any, deposited with the Trustee at the same time, shall be sufficient, to pay when due the principal or redemption price, as applicable, and interest due and to become due, if applicable, on said Bonds on and prior to the redemption date or maturity date thereof, as the case may be, without adversely affecting the tax-exempt status of the interest (if any) on said Bonds taxable under the Code, and (3) in the event said Bonds are not by their terms subject to redemption within the next succeeding sixty (60) days, the University shall have given the Trustee in form satisfactory to it irrevocable instructions to mail, first class postage prepaid, a notice to the Registered Owners of such Bonds that the deposit required by (2) above has been made with the Trustee and that said Bonds are deemed to have been paid in accordance with this section and stating such maturity or redemption date upon which moneys are to be available for the payment of the principal, or redemption price, as applicable and interest due and to become due if applicable on said Bonds.

APPENDIX C

STUDENT FEE AND TUITION SCHEDULE

The 2015-2016 fee schedule reflected an approximately 3.3 % overall increase to student fees from the 2014-2015 academic year, including an approximately 4.0% increase to Tuition. The 2015-2016 fee schedule reflects an approximately 4.7% overall increase to student fees from the 2014-2015 academic year, including an approximately 5.7% increase to Tuition.

The University bases the Estimated Annual Revenue to be collected from each of the fees on budgeting assumptions of the student fees approved for the current academic year (2015-2016 with the exception of fees from the summer session, which are based on the 2014-2015 fee schedule), and the number of full-time and part-time students for the previous academic year (2013-2014). The number of students obtained by dividing the Estimated Annual Revenue line items for full-time students on the fee schedules is less than the full-time equivalents and fall semester full-time enrollees for fall 2015 shown under the heading “THE UNIVERSITY—Five-Year Historical Enrollment Summary.” This is consistent with historic budgeting assumptions, including consideration of the University’s policy to provide fee waivers or discounts to certain scholarship recipients and to certain employees and spouses of certain employees. The University’s estimates include certain assumptions concerning refunds, late fees and other variables in individual fees, such that the annual estimated revenues of each fee are not the numerical product of the fee rates times a constant number for students paying such fees, but nonetheless represent the University’s best estimate of fee revenues.

As more fully discussed under the heading “THE UNIVERSITY—Five-Year Historical Enrollment Summary,” the University’s enrollment has remained relatively stable for the past three years. While the University is empowered to set fees and tuition, it cannot control the number of students enrolled in any year and continued, significant declines in enrollment could impact the ability of the University to collect sufficient Pledged Revenues to pay principal and interest on the Bonds. Pledged Fees are shown in bold on the following table.

Full-time undergraduate fees are charged to undergraduate students taking 12 or more credit hours. Full-time graduate fees are charged to graduate students taking nine or more credit hours. Part-time credit hour fees are charged to students taking fewer than full-time credit hours. For summer, the part-time credit hour fee is charged regardless of the number of credits.

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ACADEMIC YEAR 2015-2016

	Full-Time Fees		Part-Time Fees		
	Fall and Spring	Annual Estimated Revenue	Rate Per Credit Hour Fall and Spring & Summer	Annual Estimated Revenue	Total Annual Estimated Revenue
FACILITY FEES					
Student Facilities Fee	\$255.00	\$4,042,260	–	–	\$4,042,260
Campus Technology	83.40	1,322,057	\$6.15	\$276,000	1,604,957
GENERAL EDUCATION					
Tuition	2552.53	40,564,566	290.00	13,226,205	53,790,771
ACTIVITY FEES					
Intercollegiate Athletics	119.02	1,886,705	3.37	155,020	2,041,725
Student Health Center	64.51	1,022,613	5.46	251,160	1,273,773
Student Union	133.39	2,114,498	7.05	324,300	2,438,798
ASISU Activities	56.72	899,125	3.71	170,660	1,069,785
Student ID Card	5.36	84,967	0.84	38,640	123,607
Childcare Services	16.45	260,765	2.25	103,500	364,265
Gender Resource Center	5.16	81,796	0.85	39,100	120,896
Leadership and Counselor Training	3.04	48,190	0.65	29,900	78,090
Marching Band	7.20	114,134	0.90	41,400	155,534
Debate Team	4.95	78,467	–	–	78,467
Intramural/Recreation	45.75	725,229	4.79	220,340	945,569
Student Band/Choir	5.22	82,747	–	–	89,784
Student Support	7.26	115,086	0.77	35,420	150,506
Alumni Activities	2.45	38,837	–	–	38,837
Scholarships	16.73	265,204	–	–	265,204
Stadium Operations	–	–	10.00	460,000	460,000
Outreach Program	–	–	1.47	67,620	67,620
Wellness Program	4.72	74,821	0.74	34,040	108,861
CW HOG	<u>3.14</u>	<u>49,775</u>	<u>–</u>		<u>49,775</u>
Subtotal Activity Fees	<u>501.07</u>		<u>381.85</u>		
Subtotal Student Fees	3,392.00				
OTHER FEES/TUITION					
Graduate/Professional (Full Time)	4,060.00	1,135,276	62.00	384,390	1,519,666
In-Service Grad			131.00	862,200	862,200
Non-Resident Tuition	6,699.00	9,059,663	217.00	347,200	<u>9,406,863</u>
TOTAL ALL FEES					<u>\$81,147,816</u>
Total Estimated Pledged Revenues from Pledged Fees					<u><u>\$57,833,031</u></u>

APPENDIX D

**FINANCIAL STATEMENTS OF THE UNIVERSITY
FOR THE YEARS ENDED JUNE 30, 2010 AND 2011
AND INDEPENDENT AUDITOR'S REPORT**

APPENDIX E

FORM OF OPINION OF BOND COUNSEL

Upon the issuance of the Series 2016 Bonds, Ballard Spahr LLP, Bond Counsel to the University, proposes to issue its opinion in substantially the following form:

We have acted as bond counsel to Idaho State University (the “University”) in connection with the issuance by the University of its General Revenue Refunding Bonds, Series 2016 in the aggregate principal amount of \$ _____ (the “Series 2016 Bonds”). The Series 2016 Bonds are being issued pursuant to (i) Title 33, Chapter 38, and Section 57-504 of the Idaho Code, as amended; and (ii) a Resolution, adopted by the Board of Trustees of the University (the “Board”) on September 17, 1992 and restated by the Board on August 12, 2004, as heretofore supplemented and amended and as further supplemented and amended by a supplemental resolution of the Board adopted on February 18, 2016 (collectively, the “Resolution”). The Series 2016 Bonds are being issued for the purpose of (i) refunding certain outstanding bonds of the University, and (ii) paying costs of issuance of the Series 2016 Bonds. Capitalized terms not otherwise defined herein shall have the meanings set forth in the Resolution.

Our services as bond counsel have been limited to the preparation of the legal proceedings and supporting certificates authorizing the issuance of the Series 2016 Bonds under the applicable laws of the State of Idaho and to a review of the transcript of such proceedings and certificates. As to questions of fact material to our opinion, we have relied upon the certified proceedings and other certifications of public officials furnished to us without undertaking to verify the same by independent investigation. Our examination has been limited to the foregoing as they exist or are in effect as of the date hereof. Our opinion is limited to the matters expressly set forth herein, and we express no opinion concerning any other matters.

Based on our examination and the foregoing, we are of the opinion as of the date hereof and under existing laws as follows:

5. The Resolution has been duly adopted by the Board and constitutes a valid and binding obligation of the University enforceable upon the University.

6. The Resolution creates a valid lien on the amounts pledged thereunder for the security of the Series 2016 Bonds.

7. The Series 2016 Bonds are valid and binding limited obligations of the University, payable solely from the Pledged Revenues and other amounts pledged therefor under the Resolution.

8. Interest on the Series 2016 Bonds is excludable from gross income for purposes of federal income tax under existing laws as enacted and construed on the date of initial delivery of the Series 2016 Bonds, assuming the accuracy of the certifications of the Board and the University and continuing compliance by the Board and the University with the requirements of the Internal Revenue Code of 1986. Interest on the Series 2016 Bonds is not an item of tax preference for purposes of either individual or corporate federal alternative minimum tax (“AMT”); however, interest on Series 2016 Bonds held by a corporation (other than an S corporation, regulated investment company, or real estate investment trust) may be indirectly subject to federal AMT because of its inclusion in the adjusted current earnings of a corporate holder.

9. Interest on the Series 2016 Bonds is exempt from State of Idaho income taxes.

In rendering our opinion, we wish to advise you that:

(a) The rights of the Owners of the Series 2016 Bonds and the enforceability thereof and of the Indenture may be subject to bankruptcy, insolvency, reorganization, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors’ rights heretofore or hereafter enacted to the extent constitutionally applicable, and their enforcement may also be subject to the application of equitable principles and the exercise of judicial discretion in appropriate cases;

(b) We express no opinion herein as to the accuracy, adequacy, or completeness of the Official Statement or any other offering material relating to the Series 2016 Bonds; and

(c) Except as set forth above, we express no opinion regarding any other tax consequences relating to the ownership or disposition of, or the accrual or receipt of interest on, the Series 2016 Bonds.

Respectfully Submitted,

APPENDIX F

PROVISIONS REGARDING BOOK-ENTRY-ONLY SYSTEM

DTC will act as securities depository for the Series 2016 Bonds. The Series 2016 Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully registered Bond certificate will be issued for each maturity of the Series 2016 Bonds, each in the aggregate principal amount of such maturity, and will be deposited with DTC.

DTC, the world's largest depository, is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations. DTC is a wholly owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). DTC has Standard & Poor's rating of AA+. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

Purchases of Series 2016 Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series 2016 Bonds on DTC's records. The ownership interest of each actual purchaser of each Bond ("Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Series 2016 Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in Series 2016 Bonds, except in the event that use of the book-entry system for the Series 2016 Bonds is discontinued.

To facilitate subsequent transfers, all Series 2016 Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of Series 2016 Bonds with DTC and their registration in the name of Cede & Co. or such other nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Series 2016 Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Series 2016 Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of Series 2016 Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Series 2016 Bonds, such as redemptions, tenders, defaults, and proposed amendments to the Bond documents. For example, Beneficial Owners of Series 2016 Bonds may wish to ascertain that the nominee holding the Series 2016 Bonds for their benefit has agreed to obtain and transmit notices to Beneficial

Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the Series 2016 Bonds within an issue are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to Series 2016 Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the University as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts Series 2016 Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Redemption proceeds, distributions, and dividend payments on the Series 2016 Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the University or the Paying Agent, on payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Paying Agent, or the University, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds, distributions, and interest payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the University or the Paying Agent, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the Series 2016 Bonds at any time by giving reasonable notice to the University or the Paying Agent. Under such circumstances, in the event that a successor depository is not obtained, Bond certificates are required to be printed and delivered.

The University may decide to discontinue use of the system of book-entry-only transfers through DTC (or a successor securities depository). In that event, Bond certificates will be printed and delivered to DTC.

The information in this section concerning DTC and DTC's book-entry system has been obtained from sources that the University believes to be reliable, but the University takes no responsibility for the accuracy thereof.

APPENDIX G

FORM OF CONTINUING DISCLOSURE AGREEMENT

This Continuing Disclosure Agreement (the “Disclosure Agreement”) is executed and delivered by Idaho State University (the “Issuer”), in connection with the issuance by the Issuer of its \$_____ General Revenue Refunding Bonds, Series 2016 (the “Bonds”). The Bonds are being issued pursuant to a resolution adopted by the Board of Trustees of the Issuer on September 17, 1992, as supplemented, amended and restated, and a Supplemental Resolution adopted February 18, 2016 (collectively, the “Resolution”), which provides for the issuance of the Bonds and names U.S. Bank National Association, as trustee (the “Trustee”).

The Issuer hereby acknowledges that it is an “obligated person” within the meaning of the hereinafter defined Rule and the only “obligated person” with respect to the Bonds. In connection with the aforementioned transactions, the Issuer and the Trustee covenant and agree as follows:

Section 1. Purpose of the Disclosure Agreement. This Disclosure Agreement is being executed and delivered by the Issuer and the Trustee for the benefit of the Bondholders and Beneficial Owners of the Bonds and in order to assist the Participating Underwriters in complying with the Rule (each as defined herein).

Section 2. Definitions. In addition to the definitions set forth in the Resolution or parenthetically defined herein, which apply to any capitalized term used in this Disclosure Agreement unless otherwise defined in this Section, the following capitalized terms shall have the following meanings:

“Annual Report of the Issuer” means the Annual Report of the Issuer provided by the Issuer pursuant to, and as described in Sections 3 and 4 of this Disclosure Agreement.

“Beneficial Owner” shall mean any person which has the power, directly or indirectly, to vote or consent with respect to, or to dispose of ownership of, any Bonds (including persons holding Bonds through nominees, depositories or other intermediaries).

“Dissemination Agent” shall mean the Trustee, acting in its capacity as Dissemination Agent hereunder, or any of its successors or assigns.

“EMMA” means the MSRB’s Electronic Municipal Market Access System (“EMMA”) at <http://emma.msrb.org>, or such other nationally recognized municipal securities information repository recognized by the Securities Exchange Commission from time to time pursuant to Rule 15c2-12.

“Listed Events” shall mean any of the events listed in Section 5(a) or 5(b) of this Disclosure Agreement.

“MSRB” shall mean the Municipal Securities Rulemaking Board, the address of which is currently 1900 Duke Street, Suite 600, Alexandria, Virginia 22314; Telephone (703) 797-6600; Fax (703) 797-6700; and the Internet address of which is www.msrb.org.

“Official Statement” shall mean the Official Statement of the Issuer dated _____, 2016, relating to the Bonds.

“Participating Underwriter” shall mean each broker, dealer, or municipal securities dealer acting as an underwriter in the primary offering of the Bonds.

“Rule” shall mean Rule 15c2-12(b)(5) adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as the same may be amended from time to time.

Section 3. Provision of Annual Reports.

(a) The Issuer shall prepare an Annual Report of the Issuer and shall, or shall cause the Dissemination Agent to, not later than one hundred eighty (180) days after the end of each fiscal year of the Issuer (presently June 30), commencing with the fiscal year ended June 30, 2016, provide to the MSRB, the Annual Report of the Issuer which is consistent with the requirements of Section 4 of this Disclosure Agreement. Not later than fifteen (15) Business Days prior to said date, the Issuer shall provide the Annual Report of the Issuer to the Dissemination Agent. In each case, the Annual Report of the Issuer may be submitted as a single document or as separate documents comprising a package, and may include by reference other information as provided in Section 4 of this Disclosure Agreement; provided that the audited financial statements of the Issuer may be submitted separately from the balance of the Annual Report, and later than the date required above for the filing of the Annual Report if they are not available by that date. If the Issuer's fiscal year changes, it shall give notice of such change in the same manner as for Listed Event under Section 5(f).

(b) If by fifteen (15) Business Days prior to the date specified in Section 3(a) for providing the Annual Report of the Issuer to the MSRB, the Dissemination Agent has not received a copy of the Annual Report of the Issuer, the Dissemination Agent shall contact the Issuer to determine if the Issuer is in compliance with Section 3(a).

(c) If the Dissemination Agent is unable to verify that the Annual Report of the Issuer has been provided to the MSRB by the dates required in Section 3(a), the Dissemination Agent shall, in a timely manner, send a notice of a failure to file the Annual Report to the MSRB in an electronic format.

(d) The Dissemination Agent shall:

(i) determine each year prior to the dates for providing the Annual Report of the Issuer, the website address to which the MSRB directs the Annual Report to be submitted; and

(ii) file reports with the Issuer, as appropriate, certifying that their Annual Report has been provided pursuant to this Disclosure Agreement, stating the date it was provided and listing the website address to which it was provided.

Section 4. Content of Annual Reports. The Annual Report of the Issuer shall contain or incorporate by reference the following:

(a) A copy of its annual financial statements prepared in accordance with generally accepted accounting principles and audited by a certified public accountant or a firm of certified public accountants. If the Issuer's audited annual financial statements are not available by the time specified in Section 3(a) above, unaudited financial statements will be provided as part of the Annual Report of the Issuer and audited financial statements will be provided when and if available.

(b) An update of the financial and operating information in the Official Statement relating to the Issuer of the type contained in "SECURITY FOR THE SERIES 2016 BONDS," "HISTORICAL PLEDGED REVENUES AND DEBT SERVICE," "THE UNIVERSITY—Five Year Historical Enrollment Summary" "SOURCES OF FUNDING FOR THE UNIVERSITY," and "APPENDIX C—STUDENT FEE AND TUITION SCHEDULE" and, in the event the Bonds are called, the financial data contained in "DEBT SERVICE SCHEDULE" of the Issuer's Official Statement.

Any or all of the items listed above may be included by specific reference to other documents, including Official Statements of debt issues of the Issuer, as appropriate or related public entities, which have been submitted to the MSRB or the Securities and Exchange Commission. If the document included by reference is a final Official Statement, it must be available from the MSRB. The Issuer, as appropriate, shall clearly identify each such other document so incorporated by the reference.

The Issuer hereby covenants that it will disseminate, or cause to be disseminated, its Annual Reports to the MSRB in such manner and format and accompanied by identifying information as prescribed by the MSRB or the

Securities Exchange Commission at the time of delivery of such information and by such time so that such entities receive the information by the dates specified. MSRB Rule G-32 requires all EMMA filings to be in word searchable PDF format. This requirement extends to all documents to be filed with EMMA, including financial statements and other externally prepared reports.

Section 5. Reporting of Significant Events.

(a) Pursuant to the provisions of this Section 5(a), the Issuer shall give or cause to be given, notice of the occurrence of any of the following Listed Events with respect to the Bonds in a timely manner but not more than ten (10) Business Days after the Listed Event:

- (i) Principal and interest payment delinquencies;
- (ii) Unscheduled draws on debt service reserves reflecting financial difficulties;
- (iii) Unscheduled draws on credit enhancements reflecting financial difficulties;
- (iv) Substitution of credit or liquidity providers, or their failure to perform;
- (v) Adverse tax opinions or the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Bonds, or other material events affecting the tax status of the security;
- (vi) Defeasances;
- (vii) Tender offers;
- (viii) Bankruptcy, insolvency, receivership or similar proceedings;¹ or
- (ix) Rating changes.

(b) Pursuant to the provisions of this Section 5(b), the Issuer shall give or cause to be given, notice of the occurrence of any of the following Listed Events with respect to the Bonds in a timely manner not more than ten (10) Business Days after the Listed Event, if material:

- (i) The consummation of a merger, consolidation, or acquisition involving an obligated person or the sale of all or substantially all of the assets of the obligated person, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms;
- (ii) Appointment of a successor or additional trustee or the change of the name of a trustee;

¹ For the purposes of the event identified in paragraph (a)(viii) above, the event is considered to occur when any of the following occur: The appointment of a receiver, fiscal agent or similar officer for an obligated person in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the obligated person, or if such jurisdiction has been assumed by leaving the existing governing body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the obligated person.

- (iii) Non-payment related defaults;
- (iv) Modifications to the rights of the owners of the Bonds;
- (v) Bond calls; or
- (vi) Release, substitution or sale of property securing repayment of the Bonds.

(c) Whenever the Issuer obtains knowledge of the occurrence of a Listed Event under Section 5(b), whether because of a notice from the Trustee or otherwise, the Issuer shall as soon as possible determine if such event would be material under applicable federal securities laws.

(d) If the Issuer has determined that knowledge of the occurrence of a Listed Event under Section 5(b) would be material under applicable federal securities laws, the Issuer shall promptly notify the Dissemination Agent in writing. Such notice shall instruct the Dissemination Agent to report the occurrence pursuant to subsection (f).

(e) If the Issuer determines that the Listed Event under Section 5(b) would not be material under applicable federal securities laws, the Issuer shall so notify the Dissemination Agent in writing and instruct the Dissemination Agent not to report the occurrence pursuant to subsection (f).

(f) If the Dissemination Agent has been instructed by the Issuer to report the occurrence of a Listed Event, the Dissemination Agent shall file a notice of such occurrence with the MSRB in an electronic format in a timely manner not more than ten (10) Business Days after the Listed Event.

The Issuer hereby covenants that it will disseminate, or cause to be disseminated, its Listed Events information to the MSRB in a timely manner (not in excess of ten (10) Business Days after occurrence of the Listed Event) to the MSRB in such manner as prescribed by the MSRB or the Securities Exchange Commission at the time of delivery of such information. MSRB Rule G-32 requires all EMMA filings to be in word searchable PDF format. This requirement extends to all documents to be filed with EMMA, including financial statements and other externally prepared reports.

Section 6. Termination of Reporting Obligation. The Issuer's obligations under this Disclosure Agreement shall terminate upon the legal defeasance, prior redemption or payment in full of all of the Bonds. If such termination occurs prior to the final maturity of the Bonds, the Issuer shall give notice of such termination in the same manner as for a Listed Event under Section 5(f).

Section 7. Dissemination Agent. The Issuer may, from time to time, appoint or engage a Dissemination Agent to assist it in carrying out its obligations under this Disclosure Agreement, and may discharge any such Dissemination Agent, with or without appointing a successor Dissemination Agent. The Issuer hereby appoints the Trustee as Dissemination Agent under this Disclosure Agreement.

Section 8. Amendment; Waiver. Notwithstanding any other provision of this Disclosure Agreement, the Issuer may amend this Disclosure Agreement and any provision of this Disclosure Agreement may be waived, provided that the following conditions are satisfied:

- (a) If the amendment or waiver relates to the provisions of Sections 3(a), 4, 5(a) or 5(b), it may only be made in connection with a change in circumstances that arises from a change in legal requirements, change in law, or change in the identity, nature or status of an "obligated person" (as defined in the Rule) with respect to the Bonds, or the type of business conducted;
- (b) The Disclosure Agreement, as amended or taking into account such waiver, would, in the opinion of nationally recognized bond counsel, have complied with the requirements of the Rule at the time of the original issuance of the Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and

(c) The amendment or waiver either (i) is approved by the Holders of the Bonds in the same manner as provided in the Resolution for amendments to the Resolution with the consent of Holders, or (ii) does not, in the opinion of nationally recognized bond counsel, materially impair the interests of the Holders or Beneficial Owners of the Bonds.

In the event of any amendment or waiver of a provision of this Disclosure Agreement, the Issuer shall describe such amendment in the next Annual Report of the Issuer, and shall include, as applicable, a narrative explanation of the reason for the amendment or waiver and its impact on the type (or in the case of a change of accounting principles, on the presentation) of financial information or operating data being presented by the Issuer, as applicable. In addition, if the amendment relates to the accounting principles to be followed in preparing financial statements, (i) notice of such change shall be given in the same manner as for a Listed Event under Section 5(f), and (ii) the Annual Report for the year in which the change is made should present a comparison (in narrative form and also, if feasible, in quantitative form) between the financial statements as prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles.

Section 9. Additional Information. Nothing in this Disclosure Agreement shall be deemed to prevent the Issuer from disseminating any other information, using the means of dissemination set forth in this Disclosure Agreement or any other means of communication, or including any other information in any Annual Report or notice of occurrence of a Listed Event, in addition to that which is required by this Disclosure Agreement. If the Issuer chooses to include any information in any Annual Report or notice of occurrence of a Listed Event in addition to that which is specifically required by this Disclosure Agreement, the Issuer shall have no obligation under this Disclosure Agreement to update such information or include it in any future Annual Report or notice of occurrence of a Listed Event.

Section 10. Default. In the event of a failure of the Issuer or the Dissemination Agent to comply with any provision of this Disclosure Agreement, any Bondholder or Beneficial Owner of the Bonds may take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the Issuer or Dissemination Agent, as the case may be, to comply with its obligations under this Disclosure Agreement. A default under this Disclosure Agreement shall not be deemed an "event of default" under the Resolution, and the sole remedy under this Disclosure Agreement in the event of any failure of the Issuer or the Dissemination Agent to comply with this Disclosure Agreement shall be an action to compel performance.

Section 11. Duties Immunities and Liabilities of Dissemination Agent. The Dissemination Agent shall have only such duties as are specifically set forth in this Disclosure Agreement, and the Issuer agrees to indemnify and save the Dissemination Agent, its officers, directors, employees and agents, harmless against any loss, expense and liabilities which it may incur arising out of or in the exercise or performance of its powers and duties hereunder, including the costs and expenses (including attorneys fees) of defending against any claim of liability, but excluding liabilities due to the Dissemination Agent's gross negligence or willful misconduct. The obligations of the Issuer under this Section shall survive resignation or removal of the Dissemination Agent and payment of the Bonds.

Section 12. Beneficiaries. This Disclosure Agreement shall inure solely to the benefit of the Issuer, the Dissemination Agent, the Participating Underwriter and the Holders and Beneficial Owners from time to time of the Bonds, and shall create no rights in any other person or entity.

Section 13. Counterparts. This Disclosure Agreement may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

Date: _____, 2016.

IDAHO STATE UNIVERSITY

By: _____
Vice President for Finance and Administration

U.S. BANK NATIONAL ASSOCIATION

By: _____
Its: _____

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ESCROW DEPOSIT AGREEMENT

THIS ESCROW DEPOSIT AGREEMENT, entered into as of March 1, 2016 (the “Agreement”), between Idaho State University (the “Issuer”), and U.S. Bank National Association, as escrow agent (the “Escrow Agent”),

WITNESSETH:

WHEREAS, the Issuer has been duly created and validly exists as an institution of higher education of the State of Idaho organized under the laws of the State of Idaho; and

WHEREAS, the Escrow Agent is a national banking association organized and existing under the laws of the United States; and

WHEREAS, the Issuer has previously issued its (i) General Revenue Bonds, Series 2004B (the “Series 2004B Bonds”) and its (ii) General Revenue Bonds, Series 2007 (the “Series 2007 Bonds”); and

WHEREAS, the Issuer desires to redeem all of the outstanding Series 2004B Bonds (the “Series 2004B Refunded Bonds”) on April __, 2016 (the “Series 2004B Refunded Bonds Redemption Date”); and

WHEREAS, the Issuer desires to refund certain of the outstanding Series 2007 Bonds as described below (the “Series 2007 Refunded Bonds”) and to redeem the Series 2007 Refunded Bonds on April 1, 2017 (the “Series 2007 Refunded Bonds Redemption Date”):

Maturity (<u>April 1</u>)	<u>Principal</u>	Interest <u>Rate</u>
2021	\$3,000,000	5.000%
2027	5,695,000	4.500
2032	1,960,000	4.625

; and

WHEREAS, the Issuer has determined to refund the Series 2004B Refunded Bonds and the Series 2007 Refunded Bonds (collectively, the “Refunded Bonds”) by issuing \$_____ aggregate principal amount of its General Revenue Refunding Bonds, Series 2016 (the “Series 2016 Bonds”) to be issued pursuant to a Resolution adopted by the Issuer on September 17, 1992, as amended and restated on August 12, 2004, and as supplemented by a Supplemental Resolution of the Issuer adopted on February 18, 2016 (collectively, the “Resolution”); and

WHEREAS, the refunding of the Refunded Bonds will be accomplished by causing to be deposited with the Escrow Agent proceeds of the Series 2016 Bonds in the amount of \$_____, and Issuer funds in the amount of \$_____ which together, along with earnings thereon, are sufficient to pay when due, the principal of and interest on all of: (i) the Series 2004B Refunded Bonds through the redemption thereof on the Series

2004B Refunded Bonds Redemption Date and (ii) the Series 2007 Refunded Bonds through the redemption thereof on the Series 2007 Refunded Bonds Redemption Date; and

WHEREAS, the Issuer and the Escrow Agent, acting in its capacity as escrow agent, desire to enter into this Agreement to provide for the taking of certain actions so as to accomplish the refunding of the Refunded Bonds;

NOW THEREFORE, in consideration of the mutual covenants herein contained, the parties hereto, intending to be legally bound hereby, covenant and agree as follows:

Section 1. The Escrow Agent hereby accepts the Escrow Fund (hereinafter described) created hereunder and acknowledges receipt from the Issuer of the sum of \$_____ from proceeds of the Series 2016 Bonds and \$_____ of Issuer funds, \$_____ of which shall be used to purchase obligations of the United States of America—State and Local Government Series (the “Government Obligations,” described in Exhibit A hereto) and the remaining \$_____ to be deposited as a cash deposit. The Government Obligations and cash shall be deposited in the Escrow Fund hereinafter defined, in accordance with the terms of the Resolution.

Section 2. There is hereby created and established with the Escrow Agent a special and irrevocable escrow fund designated the “Idaho State University General Revenue Refunding Bonds, Series 2016, Escrow Fund” (the “Escrow Fund”) to be held by the Escrow Agent, acting as escrow agent, as a trust fund for the benefit of the holders of the Refunded Bonds. The Escrow Fund shall be held by the Escrow Agent separate and apart from other funds of the Issuer or the Escrow Agent.

Section 3. All costs and expenses related to the issuance of the Series 2016 Bonds and the refunding of the Refunded Bonds shall be paid by the Issuer as provided in the Resolution.

Section 4. The Escrow Agent, acting in its capacity as escrow agent, agrees that the total Government Obligations and cash will be held in trust for the holders of the Refunded Bonds and irrevocably agrees to apply the amounts derived therefrom to the payment of the principal, premium, if any, and interest requirements on the Refunded Bonds through their final maturities or prior redemption dates.

Section 5.

(a) The Escrow Agent agrees to transfer funds to the paying agent(s) of the Refunded Bonds to pay principal of and interest on the Refunded Bonds as aforesaid notwithstanding any failure by the Issuer to pay when due any further fees or expenses of the Escrow Agent or any Paying Agent relating to the Refunded Bonds. It is expressly understood that any such fees or expenses incurred by the Escrow Agent acting as escrow agent will be reimbursed by the Issuer as provided in this Section 5 and in Section 11 hereof.

(b) The Issuer agrees to pay to the Escrow Agent upon the execution and delivery of this Agreement such amounts as may be necessary to pay the fees and expenses of the Escrow Agent acting as escrow agent.

Section 6. Except as provided in Section 7 hereof, the Escrow Agent shall not have power or duty to invest any funds held under this Agreement or to sell, transfer, or otherwise dispose of or make substitutions of the Government Obligations.

Section 7.

(a) This Agreement may be amended or supplemented, the Government Obligations or any portion thereof or proceeds thereof sold, redeemed, invested, or reinvested, or proceeds thereof disbursed, in any manner (any such amendment, supplement, or direction to sell, redeem, invest, or disburse to be referred to as a "Subsequent Action"), upon submission to the Escrow Agent of each of the following:

(i) A certified copy of the proceedings of the Issuer authorizing the Subsequent Action and a copy of the document effecting the Subsequent Action signed by duly designated officers of the Issuer.

(ii) An opinion of bond counsel or tax counsel nationally recognized as having an expertise in the area of tax-exempt municipal bonds to the effect that the Subsequent Action will not cause the interest on the Series 2016 Bonds or Refunded Bonds to become taxable under the laws of the United States of America providing for taxation of income nor violate the covenants of the Issuer nor to cause the Series 2016 Bonds or the Refunded Bonds to become "arbitrage bonds" under Section 148 of the Internal Revenue Code of 1986, as amended, and that the Subsequent Action does not materially adversely affect the legal rights of the holders of the Series 2016 Bonds or the Refunded Bonds.

(iii) An independent report to the effect that the amounts (which will consist of cash or deposits on demand held in trust or receipts from direct full faith and credit obligations of the United States of America, not callable or redeemable at the option of the issuer thereof), available or to be available for payment of the Refunded Bonds will remain sufficient to pay when due all principal of and interest on the Refunded Bonds after the taking of the Subsequent Action.

(b) Except as provided in Paragraph (a) hereof, all of the rights, powers, duties, and obligations of the Escrow Agent hereunder shall be irrevocable and shall not be subject to amendment by the Escrow Agent and shall be binding on any successor to the Escrow Agent during the term of this Agreement.

(c) Except as provided in Paragraph (a) hereof, all of the rights, powers, duties, and obligations of the Issuer hereunder shall be irrevocable and shall not be subject to amendment by the Issuer and shall be binding on any successor to the

officials now comprising the members of the Issuer during the term of this Agreement.

Section 8. The Issuer hereby irrevocably instructs the Escrow Agent to direct the paying agent for the Series 2007 Refunded Bonds to mail a notice in substantially the form attached hereto as Exhibit B, to the holders of the Series 2007 Refunded Bonds, the Municipal Securities Rulemaking Board (electronically), (“MSRB”) and the Bond Insurer for the Refunded Bonds, as applicable, that provisions for the retirement of all of the 2007 Refunded Bonds have been made as provided in this Agreement. Such notice shall be mailed by said paying agent as required and in accordance with the provisions of the proceedings which authorized the issuance of the Series 2007 Refunded Bonds as soon as practicable after the execution and delivery hereof.

Section 9. The Issuer hereby irrevocably elects that the Refunded Bonds be called for redemption on their respective Redemption Dates, at a redemption price of one hundred percent (100%) of the principal amount thereof to be redeemed plus accrued interest to the date of redemption.

The Issuer hereby irrevocably directs the Escrow Agent to instruct the paying agent for the Refunded Bonds on behalf of the Issuer, to mail notice of redemption of the Refunded Bonds as provided in the Resolution to the requested Owners of the Refunded Bonds and the Bond Insurer for the Refunded Bonds and to electronically post it to the MSRB. All moneys on deposit in the Escrow Fund shall be transferred by the Escrow Agent to the paying agent of the Refunded Bonds to effectuate such redemption. Thereafter, all remaining moneys and securities in the Escrow Fund shall be transferred by the Escrow Agent to the Issuer. The Escrow Agent shall not invest or reinvest any of the funds or securities so transferred.

The notice of redemption shall be substantially the form set forth as Exhibit C hereto.

Section 10. The Escrow Fund created hereby shall be irrevocable and the holders of the Refunded Bonds shall have an express lien on and security interest in all amounts deposited in the Escrow Fund, including all amounts representing principal and all amounts representing interest on the Government Obligations in the Escrow Fund until used and applied in accordance herewith.

Section 11.

(a) The Escrow Agent shall be compensated for its reasonable fees, expenses, and disbursements, including legal fees, incurred with respect to services rendered hereunder, based upon itemized invoices submitted to the Issuer for payment. This right to receive compensation notwithstanding, the Escrow Agent acknowledges that it has no claim for any such payment under the Resolution, and that it has no lien on the moneys in the Escrow Fund for any such payment.

(b) The Escrow Agent may act in reliance upon any signature believed by it to be genuine, and may assume that any person purporting to give any notice

or receipt of advice or make any statements in connection with the provisions hereof has been duly authorized to do so.

(c) The Escrow Agent may act relative hereto in reliance upon advice of nationally recognized bond counsel in reference to any matter connected herewith, and shall not be liable for any mistake of fact or error of judgment, or for any acts or omissions of any kind, unless caused by its willful misconduct or gross negligence.

(d) The Escrow Agent may resign and be discharged of its duties hereunder provided that: (i) it has given thirty (30) days written notice to the Issuer of such resignation; (ii) the Issuer has appointed a successor to the Escrow Agent hereunder; (iii) the Escrow Agent and the Issuer have received an instrument of acceptance executed by the successor to the Escrow Agent hereunder; and (iv) the Escrow Agent has delivered to its successor hereunder all of the escrowed documents, Government Obligations, moneys and investments held by the Escrow Agent in the Escrow Fund. Such resignation shall take effect only upon the occurrence of all of the events listed in clauses (i) through (iv) above. Upon receipt by the Issuer of the written notice described in clause (i) above, the Issuer shall use its best efforts to obtain a successor to the Escrow Agent hereunder as soon as possible.

(e) If at any time the Escrow Agent or its legal successor or successors should become unable, through operation of law or otherwise, to act as escrow agent hereunder, or if its property and affairs shall be taken under the control of any state or federal court or administrative body because of insolvency or bankruptcy or for any other reason, a vacancy shall forthwith exist in the office of Escrow Agent hereunder. In such event, the Issuer, by appropriate action, promptly shall appoint an Escrow Agent to fill such vacancy. If no successor Escrow Agent shall have been appointed by the Issuer within sixty (60) days, a successor may be appointed by the owners of a majority in principal amount of the Refunded Bonds then outstanding by an instrument or instruments in writing filed with the Issuer, signed by such owners or by their duly authorized attorneys-in-fact. If, in a proper case, no appointment of a successor Escrow Agent shall be made pursuant to the foregoing provisions of this section within three months after a vacancy shall have occurred, the owner of any Refunded Bond may apply to any court of competent jurisdiction to appoint a successor Escrow Agent. Such court may thereupon, after such notice, if any, as it may deem proper, prescribe and appoint a successor Escrow Agent.

Any successor Escrow Agent shall be a corporation organized and doing business under the laws of the United States or the State of Idaho, authorized under such laws to exercise corporate trust powers, having a combined capital and surplus of at least \$25,000,000 and subject to the supervision or examination by federal or state authority.

Any successor Escrow Agent shall execute, acknowledge, and deliver to the Issuer and the Escrow Agent an instrument accepting such appointment hereunder, and the

Escrow Agent shall execute and deliver an instrument transferring to such successor Escrow Agent, subject to the terms of this Agreement, all the rights, powers, and trusts of the Escrow Agent hereunder. Upon the request of any such successor Escrow Agent, the Issuer shall execute any and all instruments in writing for more fully and certainly vesting in and confirming to such successor Escrow Agent all such rights, powers, and duties.

The obligations assumed by the Escrow Agent pursuant to this Agreement may be transferred by the Escrow Agent to a successor Escrow Agent if: (i) the requirements of this Section 11(e) are satisfied; (ii) the successor Escrow Agent has assumed all the obligations of the Escrow Agent under this Agreement; and (iii) all of the Government Obligations and money held by the Escrow Agent pursuant to this Agreement have been duly transferred to such successor Escrow Agent.

Section 12. The liability of the Escrow Agent to transfer funds for the payment of the principal of and interest on the Refunded Bonds shall be limited to the proceeds of the Government Obligations and the cash balances from time to time on deposit in the Escrow Fund. Notwithstanding any provision contained herein to the contrary, the Escrow Agent shall have no liability whatsoever for the insufficiency of funds from time to time in the Escrow Fund or any failure of the obligors of the Government Obligations to make timely payment thereon, except for the obligation to notify the Issuer promptly of any such occurrence.

The recitals herein and in the proceedings authorizing the Series 2016 Bonds shall be taken as the statements of the Issuer and shall not be considered as made by, or imposing any obligation or liability upon, the Escrow Agent.

The Escrow Agent makes no representations as to the value, conditions, or sufficiency of the Escrow Fund, or any part thereof, or as to the title of the Issuer thereto, or as to the security afforded thereby or hereby, and the Escrow Agent shall not incur any liability or responsibility in respect to any of such matters.

It is the intention of the parties hereto that the Escrow Agent shall never be required to use or advance its own funds or otherwise incur personal financial liability in the performance of any of its duties or the exercise of any of its rights and powers hereunder.

The Escrow Agent shall not be liable for any action taken or neglected to be taken by it in good faith in any exercise of reasonable care and believed by it to be within the discretion or power conferred upon it by this Agreement, nor shall the Escrow Agent be responsible for the consequences of any error of judgment; and the Escrow Agent shall not be answerable except for its own action, neglect, or default, nor for any loss unless the same shall have been through its negligence or want of good faith.

Unless it is specifically otherwise provided herein, the Escrow Agent has no duty to determine or inquire into the happening or occurrence of any event or contingency or the performance or failure of performance of the Issuer with respect to arrangements or contracts with others, with the Escrow Agent's sole duty hereunder being to safeguard the Escrow Fund, to dispose of and deliver the same in accordance with this Agreement. If,

however, the Escrow Agent is called upon by the terms of this Agreement to determine the occurrence of any event or contingency, the Escrow Agent shall be obligated, in making diligence, and in event of error in making such determination the Escrow Agent shall be liable only for its own willful misconduct or its gross negligence. In determining the occurrence of any such event or contingency the Escrow Agent may request from the Issuer or any other person such reasonable additional evidence as the Escrow Agent in its discretion may deem necessary to determine any fact relating to the occurrence of such event or contingency, and in this connection may make inquiries of, and consult with, among others, the Issuer at any time.

Section 13. This Agreement shall terminate when the principal of and interest and redemption premium, if any, on all Refunded Bonds has been paid; provided, that moneys held by the Escrow Agent in the Escrow Fund for the payment and discharge of any of the Refunded Bonds which remain unclaimed for four (4) years after the date when all of the Refunded Bonds shall have become due and payable, either at their stated maturity dates or by call for earlier redemption, shall, at the written request of the Issuer, be repaid by the Escrow Agent to the Issuer as its absolute property and free from the trust created by this Agreement. After the redemption of the final Refunded Bonds on April 1, 2017, any remaining funds shall be remitted to the Issuer by the Escrow Agent. The Escrow Agent shall thereupon be released and discharged with respect thereto and hereto.

Section 14. Except as otherwise provided in Section 7 hereof, this Agreement shall not be repealed, revoked, rescinded, altered, amended, or supplemented in whole or in part without (i) the written consent of the holders of one hundred percent (100%) in principal amount of the unpaid Refunded Bonds at the time such action is made, and (ii) the written consent of the Escrow Agent; provided, however, that the Issuer and the Escrow Agent may, without the consent of, or notice to the holders of the unpaid Refunded Bonds enter into such agreements supplemental to this Agreement as shall not adversely affect the rights of such holders hereunder and shall not be inconsistent with the terms and provisions of this Agreement, for any one or more of the following purposes:

(a) to cure any ambiguity or formal defect or omission in this Agreement; or

(b) to grant to or confer upon the Escrow Agent for the benefit of the holders of the Refunded Bonds, any additional rights, remedies, powers, or authority that may lawfully be granted to or conferred upon the Escrow Agent.

The Escrow Agent shall be entitled to rely exclusively upon an unqualified opinion of nationally recognized bond counsel with respect to compliance with this Section 14, including the extent, if any, to which any change, modification, addition, or elimination affects the rights of such holders of the Refunded Bonds or that any instrument executed hereunder complies with the conditions or provisions of this Section 14.

Section 15. This Agreement may be simultaneously executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

IN WITNESS WHEREOF, the parties hereto have each caused this Agreement to be executed by their duly authorized officers and their corporate seals to be hereunto affixed and attested as of the date first above written.

IDAHO STATE UNIVERSITY

By: _____
Vice President for Finance and
Administration and Bursar

U.S. BANK NATIONAL ASSOCIATION,
as Escrow Agent

By: _____
Authorized Officer

EXHIBIT A

GOVERNMENT OBLIGATIONS

Principal Amount

Interest Rate

Maturity Date

EXHIBIT B

FORM OF NOTICE OF REFUNDING

IDAHO STATE UNIVERSITY
GENERAL REVENUE BONDS, SERIES 2007

Maturing as follows:

Maturity Date (_____)	<u>Principal Amount</u>	<u>Interest Rate</u>
--------------------------	-------------------------	----------------------

NOTICE IS HEREBY GIVEN that for the payment of the principal and premium, if any, and the interest on the outstanding bonds of the above-designated series and maturity date and amounts (the "Bonds"), there have been deposited in escrow with U.S. Bank National Association (the "Escrow Agent"), moneys which, except to the extent maintained in cash, have been invested in United States Treasury Obligations which are direct obligations of the United States of America. The projected principal payments to be received from such Treasury Obligations and the projected interest income therefrom and such cash have been calculated to be sufficient to pay the interest requirements on the Bonds when due through and including the prior redemption date of the Bonds on April 1, 2017 (the "Redemption Date"), the date on which Idaho State University (the "Issuer") has elected to redeem the Bonds then outstanding at a redemption price of 100% of the principal amount of the Bonds to be redeemed, plus accrued interest thereon to the Redemption Date.

In accordance with the terms of a Resolution adopted by the Issuer on September 17, 1992, as amended and restated on August 12, 2004, and as supplemented by a Supplemental Resolution of the Issuer adopted on August 9, 2007, pursuant to which the Bonds were issued, the Bonds are deemed to have been paid.

DATED this _____, 2016.

U.S. BANK NATIONAL ASSOCIATION,
as Escrow Agent

By: _____

Its: _____

EXHIBIT C

NOTICE OF REDEMPTION

IDAHO STATE UNIVERSITY
 [GENERAL REVENUE BONDS, SERIES 2004B]
 [GENERAL REVENUE BONDS, SERIES 2007]

Mailing Date: _____, 20__

CUSIP NO. _____

Notice is hereby given that pursuant to a Resolution adopted by Idaho State University (the "Issuer") on September 17, 1992, as amended and restated on August 12, 2004, and as supplemented by a Supplemental Resolution of the Issuer adopted on February 18, 2016, the Issuer has called and does hereby call for redemption on _____ (the "date fixed for redemption"), its _____, maturing on the dates and in the amounts shown below (the "Bonds"), at the redemption price of one hundred percent (100%) of the principal amount thereof, plus accrued interest on the Bonds to the date fixed for redemption.

The Bonds to be redeemed were originally scheduled to mature on the dates and in the amounts, and bear interest at the rates as follows:

Maturity Date (_____)	<u>Principal Amount</u>	<u>Interest Rate</u>
--------------------------	-------------------------	----------------------

The principal amount of each Bond shall be paid on or after the date fixed for redemption upon surrender of such Bond as set forth below.

Payment of interest on any Bond shall be made to the registered owner thereof and shall be paid by check or draft mailed to such registered owner at such owner's address as it appears in the registration books of the Issuer.

Bonds shall be surrendered to the Paying Agent, at the following address:

If surrendered by mail: _____

If surrendered by hand: _____

Notice is further given that (i) the Issuer has caused to be deposited in escrow with U.S. Bank National Association, as escrow agent, certain moneys and U.S. Treasury Securities, the maturing principal amount of which and interest on such obligations are sufficient along with such moneys to pay the redemption price of the Bonds, and (ii) on the date fixed for redemption the redemption price will become due and payable upon the Bonds and the Bonds shall cease to bear interest from and after the date fixed for redemption.

Under the Interest and Dividend Tax Compliance Act of 1983, the Trustee may be required to withhold a specified percentage of any gross payments made to certain owners who fail to provide the Trustee with, and certify under penalties of perjury, a correct taxpayer identification number (employer identification number or Social Security number, as appropriate) or an exemption certificate on or before the date the Bonds are presented for payment. Each Bondholder should provide the appropriate certification when presenting Bonds for payment, unless the appropriate certificate has previously been provided.

Given by order of the Issuer this _____ day of _____.

_____, as Paying Agent

By: _____

Title: _____

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BOND PURCHASE AGREEMENT

Idaho State University

General Revenue Refunding Bonds, Series 2016

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BOND PURCHASE AGREEMENT**1. Parties and Relevant Dates**

Issuer: Idaho State University

Underwriter: Piper Jaffray & Co.

Securities: \$[] General Revenue Refunding Bonds, Series 2016

Acceptance Deadline: _____, 2016, __: __] a.m./p.m.(Mountain Time).

Closing Date: March 24, 2016 [TBD]

2. Defined Terms

All capitalized terms used in this Agreement and not otherwise defined are used as defined in the Authorizing Resolution or the Official Statement:

Acceptance Deadline: The date set forth in Section 1, being the date and time by which the Issuer must accept this Agreement.

Accountants: Moss Adams LLP, Eugene, Oregon the public accountants for the Issuer and/or any entity whose audited financial statements are included in the Preliminary Official Statement and the Official Statement.

Act: Educational Institutions Act of 1935, Chapter 38, Title 33 Idaho Code, together with Section 57-504 of the Idaho Code, as amended.

Agreement: This Bond Purchase Agreement, dated the Effective Date, including **Schedule I** attached hereto.

Authorizing Resolution: The Resolution adopted by the Issuer's Board of Trustee's on [include the general resolution, as restated] and as supplemented by Resolution adopted on February 18, 2016, authorizing the issuance of the Securities, as amended and supplemented to the Closing Date.

Bond Counsel: Ballard Spahr LLP, Salt Lake City, Utah.

Bond Insurer: The insurer of the Policy, if any, identified in the Agreement and Acceptance.

Closing Date: The date set forth in Section 1 of this Agreement, being the date of the issuance and delivery of the Securities.

Continuing Disclosure Undertaking: The continuing disclosure undertaking or agreement, if any, entered into by the Issuer with respect to the Securities in accordance with Rule 15c2-12

(which may be a separate document or may be included in the Authorizing Resolution or another Issuer Document).

Creditors' Rights Laws: Limitations on enforceability as may result from bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting creditors' rights generally from time to time in effect and from the application of general principles of equity and from public policy limitations on the exercise of any rights to indemnification and contribution.

Disclosure Counsel: Ballard Spahr LLP, Salt Lake City, Utah.

DTC: The Depository Trust Company.

Effective Date and Time: The date and time that this Agreement is effective, as set forth in Section 1 of this Agreement.

End of the Underwriting Period: The later of (i) the Closing Date or (ii) when the Underwriter no longer retains an unsold balance of the Securities.[need to limit the time on this and give notice to ISU]

Exchange Act: The Securities Exchange Act of 1934, as amended.

Excluded Sections: For purposes of the representations and warranties of the Issuer set forth in Section 8(a)(viii), and the opinions of Issuer's Counsel required pursuant to Section 12, the "Excluded Sections" of the Preliminary Official Statement and the Official Statement shall be: (i) the section describing DTC and its book-entry-only procedures, (ii) any information provided by the Bond Insurer or Support Facility Provider, if any, expressly for use in the Official Statement, and (iii) the section captioned "Underwriting" if provided in writing by the Underwriter.

Issuer: Idaho State University.

Issuer Documents: All financing documents to which the Issuer is a party relating to the issuance of and security for the Securities, as such documents are amended and supplemented to the Closing Date, including, but not limited to:

- (i) this Agreement,
- (ii) any Continuing Disclosure Undertaking, if contained separately or in the Authorizing Resolution,
- (iii) other applicable financing or operative documents to which the Issuer is a party, as such documents are amended and supplemented to the Closing Date, including any trust indenture, loan agreement, security instrument, remarketing agreement and any agreement with the Bond Insurer or Support Facility Provider, if any, as set forth below:

[none?]

MSRB: Municipal Securities Rulemaking Board.

Policy: A municipal bond insurance policy, if any, issued by the Bond Insurer, insuring the payment when due of principal of and interest on the Securities (or certain specified series or maturities), as identified in the Agreement and Acceptance.

Preliminary Official Statement: Preliminary Official Statement dated February ___, 2016, relating to the Securities, together with all appendices or exhibits, any materials incorporated by reference therein and any amendments or supplements thereto.

Primary Offering Disclosure Period: The period commencing with the first submission to an underwriter of an order for the purchase of the Securities or the purchase of such Securities from the Issuer, whichever first occurs, and ending 25 days after the final delivery by the Issuer or its agent of all Securities to or through the underwriting syndicate or sole underwriter.

Purchase Price: The amount specified in Section 5 as the Purchase Price to be paid by the Underwriter at the Closing for the purchase of the Securities on the Closing Date.

Rule 15c2-12: Rule 15c2-12 promulgated by the SEC under the Exchange Act.

SEC: Securities and Exchange Commission of the United States.

Securities: The Securities identified in Section 1 on the first page of this Agreement, as more specifically described in **Schedule I**.

Securities Act: The Securities Act of 1933, as amended.

State: Idaho.

Support Facility: A third-party credit enhancement or liquidity facility (other than a Policy), if any, provided by the Support Facility Provider, supporting payments with respect to the Securities (or certain specified series), as identified in this Agreement.

Support Facility Provider: The provider of the Support Facility, if any, identified in this Agreement.

Trustee: U.S. Bank National Association acting as trustee and paying agent for the Securities.

Trust Estate: The Pledged Revenues (as defined in the Authorizing Resolution) and/or other funds pledged or otherwise identified by the Issuer as security or the source of payment for the Securities as set forth in the Issuer Documents.

Trust Indenture Act: Trust Indenture Act of 1939, as amended.

Underwriter: Piper Jaffray & Co., Boise, Idaho.

Underwriter's Counsel: Kutak Rock LLP, Spokane, Washington.

3. Offer to Purchase the Securities; Execution of Terms and Acceptance

The Issuer and the Underwriter are entering into this Bond Purchase Agreement (the “*Agreement*”), to provide for the purchase and sale of the Securities. The Securities are further described in **Schedule I**.

The Underwriter hereby offers to purchase all (but not less than all) of the Securities from, and to enter into this Agreement with, the Issuer. This offer is subject to acceptance by the Issuer by the Acceptance Deadline and, if not so accepted, will be subject to withdrawal by the Underwriter by written notice delivered to the Issuer at any time prior to acceptance. The Issuer shall accept this Agreement by its execution hereof. Upon such execution, the Agreement will be binding upon the Underwriter and the Issuer. This Agreement is effective as of the Effective Date and Time.

4. Purchase of the Securities

The Underwriter shall purchase from the Issuer, and the Issuer shall sell to the Underwriter, all (but not less than all) of the Securities on the Closing Date at the aggregate Purchase Price set forth below, plus accrued interest, if any. The Securities shall bear interest at the rates per annum, mature on the dates, be sold to the public at the prices and be subject to optional and mandatory sinking fund redemption prior to maturity and to such other terms and provisions, all as set forth in **Schedule I**. The Securities otherwise shall be as described in the Official Statement, the Authorizing Resolution and the Issuer Documents. The Underwriter’s agreement to purchase the Securities from the Issuer is made in reliance upon the Issuer’s representations, covenants and warranties and on the terms and conditions set forth in this Agreement.

The Issuer acknowledges and agrees that: (i) the primary role of Piper Jaffray & Co., as an underwriter, is to purchase securities for resale to investors in an arms-length commercial transaction between the Issuer and Piper Jaffray & Co. and that Piper Jaffray & Co. has financial and other interests that differ from those of the Issuer; (ii) Piper Jaffray & Co. is not acting as a municipal advisor, financial advisor or fiduciary to the Issuer or any other person or entity and has not assumed any advisory or fiduciary responsibility to the Issuer with respect to the transaction contemplated hereby and the discussions, undertakings and proceedings leading thereto (irrespective of whether Piper Jaffray & Co. has provided other services or is currently providing other services to the Issuer on other matters); (iii) the only obligations Piper Jaffray & Co. has to the Issuer with respect to the transaction contemplated hereby expressly are set forth in this Agreement; and (iv) the Issuer has consulted its own legal, accounting, tax, financial and other advisors, as applicable, to the extent it has deemed appropriate in connection with the transaction contemplated herein.

5. Purchase Price

The Purchase Price of the Securities is \$_____ (representing the principal amount of the Securities, less an Underwriter’s discount of \$_____, and plus an original issue premium of \$_____), plus accrued interest, if any, to the Closing Date. The Purchase Price shall be payable on the Closing Date by the Underwriter to or as directed by the Issuer by wire transfer in immediately available funds or as otherwise agreed by the Issuer and the Underwriter.

6. Public Offering

The Underwriter agrees to make a bona fide initial public offering of all the Securities in compliance with federal and state securities laws, at a price not in excess of the initial offering price set forth in the Official Statement. The Underwriter may change the initial offering price or prices as they deem necessary in connection with the offering of the Securities without any requirement of prior notice, and may offer and sell the Securities to certain institutions at prices lower than those stated in the Official Statement. Upon the request of Bond Counsel, the Underwriter shall execute and deliver prior to the Closing an issue price certificate or similar certificate in form and substance reasonably satisfactory to Bond Counsel and the Underwriter.

7. Official Statement

The Issuer hereby consents to and ratifies the use and distribution by the Underwriter of the Official Statement in connection with the public offering and sale of the Securities by the Underwriter. The Issuer hereby represents and warrants that the Preliminary Official Statement previously furnished to the Underwriter was “deemed final” by the Issuer as of its date for purposes of Rule 15c2-12.

- (a) The Issuer, at its cost, shall provide, or cause to be provided, to the Underwriter within seven business days after the date of this Agreement (or within such shorter period as may be approved by the Underwriter or required by applicable rule) such number of copies of a final Official Statement as reasonably requested by the Underwriter, but in sufficient quantity to permit the Underwriter to comply with paragraph (b)(4) of Rule 15c2-12, and Rule G-32 and any other applicable rules of the SEC and the MSRB.[do they need printed books?]
- (b) The Issuer authorizes the Underwriter to file, to the extent required by any applicable SEC or MSRB rule, and the Underwriter agrees to so file, the Official Statement with the MSRB or its designee. If an amended Official Statement is prepared during the “primary offering disclosure period,” and if required by any applicable SEC or MSRB rule, the Underwriter also shall make the required filings of the amended Official Statement. The Preliminary Official Statement and the Official Statement may be delivered in printed and a “designated electronic format” as defined in the MSRB’s Rule G-32 and as may be agreed by the Issuer and the Underwriter. If the Official Statement has been prepared in electronic form, the Issuer hereby confirms that it does not object to distribution of the Official Statement in electronic form.
- (c) The Issuer shall not supplement or amend the Official Statement or cause the Official Statement to be supplemented or amended without the prior written consent of the Underwriter. The Issuer covenants to notify the Underwriter promptly if, on or prior to the 25th day after the End of the Underwriting Period, (or such other period as may be agreed to by the Issuer and the Underwriter) any event shall occur, or information comes to the attention of the Issuer, that is reasonably likely to cause the Official Statement (whether or not previously supplemented or amended) to contain any untrue statement of a material fact or to omit to state a material fact

necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, and if in the opinion of the Underwriter such event requires the preparation and distribution of a supplement or amendment to the Official Statement, to prepare and furnish to the Underwriter, at the Issuer's expense, such number of copies of the supplement or amendment to the Official Statement, in (i) a "designated electronic format" consistent with the requirements of the MSRB's Rule G-32 and (ii) a printed format form in substance mutually agreed upon by the Issuer and the Underwriter, as the Underwriter may reasonably request. If such notification shall be given subsequent to the Closing Date, the Issuer also shall furnish, or cause to be furnished, such additional legal opinions, certificates, instruments and other documents as the Underwriter may reasonably deem necessary to evidence the truth and accuracy of any such supplement or amendment to the Official Statement.

8. Representations and Warranties

- (a) Representations and Warranties of the Issuer. The Issuer hereby agrees with, and makes the following representations and warranties to, the Underwriter, as of the date hereof and as of the Closing Date, which representations and warranties shall survive the Closing:
- (i) The Issuer is duly created and existing under the constitution and laws of the State and has full legal right, power and authority under the constitution and laws of the State, including the Act, to adopt the Authorizing Resolution, to execute and deliver the Issuer Documents and the Official Statement, to issue, sell and deliver the Securities as provided herein, and to carry out and to consummate the transactions contemplated by the Authorizing Resolution, the Issuer Documents and the Official Statement.
 - (ii) By all necessary official action of the Issuer prior to or concurrently with the acceptance hereof, the Issuer has duly authorized and approved (A) the distribution of the Preliminary Official Statement and the execution, delivery and distribution of the Official Statement for use by the Underwriter in connection with the public offering of the Securities, (B) the issuance and sale of the Securities upon the terms set forth herein and as contemplated by the Authorizing Resolution, the Issuer Documents and the Official Statement and (C) the execution and delivery of, and the performance by the Issuer of the obligations on its part contained in, the Securities, the Authorizing Resolution and the Issuer Documents.
 - (iii) The Securities will be issued in conformity with and entitled to the benefit and security of the Authorizing Resolution and the Issuer Documents, including the pledge or application thereunder of the Trust Estate.
 - (iv) This Agreement constitutes a legal, valid and binding obligation of the Issuer enforceable in accordance with its terms; the other Issuer Documents, when duly executed and delivered, will constitute the legal, valid and

binding obligations of the Issuer enforceable in accordance with their respective terms; and the Securities, when issued, authenticated and delivered in accordance with the Issuer Documents and sold to the Underwriter as provided herein, will be the legal, valid and binding obligations of the Issuer enforceable in accordance with their terms; in all cases, except as the enforceability of this Agreement, the other Issuer Documents and the Securities may be limited by application of Creditors' Rights Laws.

- (v) Except as may be described in the Preliminary Official Statement or the Official Statement, the Issuer is not in breach of or default in any material respect under (if applicable) its charter documents, its articles of incorporation or its bylaws or under any applicable constitutional provision, law or administrative regulation of the State or the United States or any applicable judgment or decree or any loan agreement, indenture, bond, note, resolution, agreement or other instrument to which the Issuer is a party or to which the Issuer is or any of its property or assets are otherwise subject, and no event has occurred and is continuing which constitutes or with the passage of time or the giving of notice, or both, would constitute a material default or event of default by the Issuer under any of the foregoing.
- (vi) The adoption, execution and delivery of the Securities, the Authorizing Resolution and the Issuer Documents, and compliance with the provisions on the Issuer's part contained therein, will not conflict with or constitute a breach of or default under any constitutional provision, law, administrative regulation, judgment, decree, loan agreement, indenture, bond, note, resolution, agreement or other instrument to which the Issuer is a party or to which the Issuer or any of its property or assets are otherwise subject, and such adoption, execution, delivery or compliance will not result in the creation or imposition of any lien, charge or other security interest or encumbrance of any nature upon the Trust Estate or the property or assets, if any, of the Issuer to be pledged to secure the Securities or under the terms of any such law, regulation or instrument, except as provided by the Securities, the Authorizing Resolution and the Issuer Documents.
- (vii) All authorizations, approvals, consents and orders of any governmental authority, legislative body, board, agency or commission having jurisdiction which are required for the due authorization of, which would constitute a condition precedent to, or the absence of which would materially adversely affect, the issuance of the Securities or the due performance by the Issuer of its obligations under the Authorizing Resolution, the Issuer Documents and the Securities have been duly obtained or will be obtained by the Issuer prior to the Closing.
- (viii) The Preliminary Official Statement as of its date did not, and the Official Statement as of its date does not and as of the Closing Date will not, contain any untrue statement of a material fact or omit to state a material fact

necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided that, the Issuer makes no statement as to the Excluded Sections of the Preliminary Official Statement or the Official Statement.

- (ix) The financial statements of the Issuer contained in the Preliminary Official Statement and the Official Statement fairly present the financial position and results of operations of the Issuer as of the dates and for the periods therein set forth in accordance with generally accepted accounting principles consistently applied, and, since the date thereof, there has been no material adverse change in the financial position or results of operations of the Issuer, except as noted in the POS/OS.
- (x) There is no action, suit, proceeding, inquiry or investigation, at law or in equity, before or by any court, agency, public board or body, pending or, to the knowledge of the Issuer, threatened against the Issuer: (A) affecting the existence of the Issuer or the titles of its officers to their respective offices, (B) seeking to prohibit, restrain or enjoin the issuance, sale or delivery of the Securities or the pledge or collection by the Issuer of the Trust Estate or the making of any other required deposits with respect to the Securities, (C) in any way contesting or affecting the validity or enforceability of, or the power or authority of the Issuer to issue, adopt or to enter into (as applicable), the Securities, the Authorizing Resolution or the Issuer Documents, (D) contesting in any way the completeness or accuracy of the Preliminary Official Statement or the Official Statement, or any amendment or supplement thereto, (E) except as disclosed in the Official Statement, wherein an unfavorable decision, ruling or finding would materially adversely affect the financial position or condition of the Issuer or would result in any material adverse change in the ability of the Issuer to pledge or apply the Trust Estate or to pay debt service on the Securities, or (F) contesting the status of the interest on the Securities as excludable from gross income for federal income tax purposes or as exempt from any applicable State income tax, in each case as described in the Official Statement.
- (xi) The Issuer has received all licenses, permits or other regulatory approvals required, if any, for the pledge, collection and/or application by the Issuer of the Trust Estate and the Issuer is not in material default, and no event has occurred which would constitute or result in a material default, under any such licenses, permits or approvals.
- (xii) If required in accordance with Rule 15c2-12, the Issuer has entered or will enter into the Continuing Disclosure Undertaking and, unless otherwise described in the Official Statement, the Issuer has not failed during the previous five years to comply in all material respects with any previous undertakings in a written continuing disclosure contract or agreement under Rule 15c2-12.

- (xiii) The Authorizing Resolution, the Issuer Documents and the Securities conform to the description thereof contained in the Official Statement.
- (xiv) The Issuer has the legal authority to apply proceeds of the Securities for the purposes contemplated by the Authorizing Resolution and the Issuer Documents, including for the payment or reimbursement of incidental expenses in connection with the marketing, issuance and delivery of the Securities to the extent required by this Agreement and in compliance with applicable law.
- (xv) Any certificate, signed by any official of the Issuer authorized to do so in connection with the transactions described in this Agreement, shall be deemed a representation and warranty by the Issuer to the Underwriter as to the statements made therein.

(b) Covenants of the Issuer.

The Issuer hereby covenants with the Underwriter that:

- (i) Prior to the Closing Date, except as otherwise contemplated by the Official Statement, the Issuer shall not create, assume or guarantee any indebtedness payable from, or pledge or otherwise encumber, the Trust Estate or other assets, properties, funds or interests that will be pledged as security for the Securities pursuant to the the Issuer Documents.
- (ii) The Issuer shall cooperate with the Underwriter in the qualification of the Securities for offering and sale and the determination of their eligibility for investment under the laws of such jurisdictions, to the extent applicable, as the Underwriter may request; provided that the Issuer shall not be required to qualify as a foreign corporation in, or submit to the general jurisdiction of, any other state or to file any general or special consents to service of process under the laws of any jurisdiction.
- (iii) Unless the Securities are being issued as taxable Securities, the Issuer shall not knowingly take or omit to take any action that, under existing law, may adversely affect the exclusion from gross income for federal income tax purposes, or the exemption from any applicable Sstate income tax, of the interest on the Securities.

(c) Representations and Warranties of the Underwriter. The Underwriter hereby agrees with, and makes the following representations and warranties to, the Issuer, as of the date hereof and as of the Closing Date, which representations and warranties shall survive the Closing:

- (i) The Underwriter is an entity duly organized, validly existing and in good standing under the laws of the jurisdiction of its organization.

- (ii) This Agreement has been duly authorized, executed and delivered by the Underwriter and, assuming the due authorization, execution and delivery by the Issuer, is the legal, valid and binding obligation of the Underwriter enforceable in accordance with its terms, except as the enforceability of this Agreement may be limited by application of Creditors' Rights Laws.
- (iii) The Underwriter represents that it is licensed by and registered with the Financial Industry Regulatory Authority as a broker-dealer and the MSRB as a municipal securities dealer.

9. Third-Party Credit Enhancement or Support

No Policy or Support Facility will be provided with respect to the Securities.

10. Ratings

The following ratings on the Securities shall be in effect on the Closing Date:

- (a) Moody's:

11. Closing

- (a) The delivery of and payment for the Securities shall be the "Closing" for the Securities and shall occur at or prior to 1:00 p.m., New York City time, on the Closing Date, or at such other time or on such other date as may be mutually agreed by the Underwriter and the Issuer. The location of the Closing shall be Salt Lake City, Utah.
- (b) At the Closing, the Issuer shall deliver or cause to be delivered the Securities to DTC or to the Trustee or Paying Agent on behalf of the Underwriter, as further described in paragraph (c) below. The Securities shall be delivered in definitive form, duly executed by the Issuer and authenticated by the Trustee or Paying Agent, together with the other documents identified in Section 12. Subject to satisfaction of the conditions contained in this Agreement, the Underwriter will accept delivery of the Securities as described above and pay the Purchase Price, plus accrued interest, if any, on the Securities from their dated date to, but not including, the Closing Date, in immediately available funds, payable to the order of the Trustee or as otherwise directed by the Issuer. If as set forth in **Schedule I** the Underwriter is to be paid an underwriting commission (in lieu of receiving an underwriting discount), the Issuer shall pay the underwriting commission to the Underwriter in immediately available funds on the Closing Date.
- (c) Delivery of the definitive Securities shall be made through the facilities of DTC's book-entry-only system in New York, New York, or at such other location as may be designated by the Underwriter prior to the Closing. The Securities will be delivered as fully-registered bonds, bearing CUSIP numbers, with a single bond for each maturity of each series of the Securities (or, if so provided in **Schedule I**, for each separate interest rate within a maturity), and registered in the name of Cede &

Co., as nominee of DTC, which will act as securities depository for the Securities. Unless otherwise requested by the Underwriter, the Securities will be delivered under DTC's FAST delivery system.

12. Closing Conditions

The Underwriter shall receive on the Closing Date, in form and substance satisfactory to Bond Counsel and to the Underwriter, each item specified below, unless waived by the Underwriter:

- (a) The approving opinion of Bond Counsel, addressed to the Underwriter (or addressed to the Issuer with a reliance letter addressed to the Underwriter), dated the Closing Date in substantially the form included as an appendix to the Official Statement, [covered by the reference to OS]; [moved to below] and.
- (b) The opinion of Issuer's Counsel, if any, addressed to the Underwriter and the Issuer, dated the Closing Date, to the effect that: [here is what they have said in the past]
 - (i)
 - (ii)
 - 1. The University is an institution of higher education and a body politic of the State of Idaho, duly and validly created and existing pursuant to the laws of the State of Idaho, with full legal right, power, and authority (i) to issue bonds of the University pursuant to the Resolution; (ii) to adopt the Resolution; (iii) to enter into the Purchase Agreement, the Escrow Agreement, and the Continuing Disclosure Agreement; (iv) to pledge the Pledged Revenues (as defined in the Resolution) to secure the payment of the principal of and interest on the Bonds; and (v) to carry out and consummate the transactions contemplated by the Resolution, the Purchase Agreement, the Escrow Agreement, and the Continuing Disclosure Agreement.
 - (iii)
 - 2. The meeting of the Board on February 18, 2016, at which the Supplemental Resolution was duly adopted by the Board, was called and held pursuant to law, all public notices required by law were given, and the actions taken at the meeting, insofar as such actions relate to the Bonds, were legally and validly taken.
 - (iv)
 - 3. The adoption of the Resolution by the Board, the execution and delivery of the Purchase Agreement, the Escrow Agreement, and the Continuing Disclosure Agreement, and the performance by the University of the transactions contemplated thereby will not conflict with or constitute a breach of, or default under, any commitment, note, agreement or other instrument to which the University is a party or by which it or any of its property is bound, or any provision of the Idaho Constitution or laws or any existing law, rule, regulation, ordinance, judgment, order or decree to which the University or the Board is subject.

- (v) 4. Based upon conferences with, and representations of officials of, the University, the statements in the Preliminary Official Statement and the Official Statement under the captions, "INTRODUCTION–Idaho State University," "SECURITY FOR THE SERIES 2012 BONDS," "HISTORICAL PLEDGED REVENUES AND DEBT SERVICE," "THE UNIVERSITY," "SOURCES OF FUNDING FOR THE UNIVERSITY," "UNIVERSITY GOVERNANCE AND ADMINISTRATION," "LITIGATION," and "APPENDIX C—STUDENT FEE AND TUITION TABLE" are true and correct in all material respects and did not, as of their respective dates, and do not contain an untrue statement or omission of a material fact (other than, with respect to the Preliminary Official Statement, any information that is permitted to be omitted from the Preliminary Official Statement pursuant to the Rule), it being understood that, in rendering this opinion, I am not expressing an opinion with respect to financial, statistical or operating data contained under these captions of the Preliminary Official Statement and the Official Statement.
- (vi) 5. Except as described in the Official Statement, there is no action, suit, proceeding, official inquiry or investigation, at law or in equity, pending which (i) questions the existence or powers of the Board or the University or the title to office of any present official of the Board or the University; (ii) seeks to prohibit, restrain or enjoin the sale, issuance or delivery of any of the Bonds or the execution and delivery of the Purchase Agreement, the Escrow Agreement, or the Continuing Disclosure Agreement; (iii) affects the collection of the Pledged Revenues pledged or to be pledged to pay the principal of and interest on the Bonds, or the pledge of the revenues and other funds and accounts under the Resolution; (iv) contests the completeness or accuracy of the Preliminary Official Statement or the Official Statement; or (v) contests any authority for the issuance of the Bonds, and the adoption of the Resolution, or the execution and delivery of the Purchase Agreement, the Escrow Agreement, and the Continuing Disclosure Agreement, or the validity of any proceedings taken by the University in connection with the issuance or sale of the Bonds.
- (c) The opinion of Underwriter's Counsel, addressed to the Underwriter, dated the Closing Date, to the effect that: (A) the Securities are exempt from registration under the Securities Act and the Authorizing Resolution and any related trust indenture are exempt from qualification under the Trust Indenture Act and (B) the Continuing Disclosure Undertaking meets the requirements of Rule 15c2-12. In addition, such counsel shall state in its letter containing the foregoing opinion or in a separate letter addressed to the Underwriter that, without having undertaken to determine independently, or to assume responsibility for, the accuracy, completeness or fairness thereof, and based solely on their participation in meetings and telephone conferences at which representatives of the Issuer, Bond Counsel and the Underwriter were at various times present, nothing has come to the attention of such counsel that would lead them to believe that the information and statements in the Preliminary Official Statement as of its date and the Official Statement, as of

its date and as of the date of such letter, contained or contain any untrue statement of a material fact or omitted or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided that, no view need be expressed as to the financial statements of the Issuer, any other financial, forecast, technical or statistical data, and any information in the Preliminary Official Statement as of its date and the Official Statement respecting the Bond Insurer, if any, the Support Facility Provider, if any, or DTC.

- (d) The opinion of Disclosure Counsel, if any, addressed to the Underwriter and the Issuer, dated the Closing Date, to the effect that the descriptions of the Securities and the Authorizing Resolution in the official statement are true and correct in all material respects (or a substantially similar statement); and (v) the securities are exempt from the registration requirements of the Securities Act of 1933, as amended (the "Securities Act"); and the Authorizing Resolution is exempt from qualification under the Trust Indenture Act of 1939, as amended (the "Trust Indenture Act"), and nothing has come to the attention of such counsel that would lead them to believe that the information and statements in the Preliminary Official Statement as of its date and the Official Statement, as of its date and as of the date of such opinion, contained or contain any untrue statement of a material fact or omitted or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided that no view need be expressed as to the financial statements of the Issuer, any other financial, forecast, technical or statistical data or as to the Excluded Sections of the Preliminary Statement as of its date and the Official Statement [reserve to be specific here on excluded sections].
- (e) A certificate dated the Closing Date of an authorized officer of the Issuer to the effect that:
 - (i) the representations and warranties of the Issuer contained in this Agreement are true and correct in all material respects on and as of the Closing Date with the same effect as if made on the Closing Date;
 - (ii) the Issuer has complied with all of the agreements and satisfied all of the conditions on its part to be performed or satisfied at or prior to the Closing;
 - (iii) no event affecting the Issuer has occurred since the date of the Official Statement which either makes untrue or incorrect in any material respect as of the Closing Date any statement or information contained in the Preliminary Official Statement or the Official Statement or is not reflected in the Official Statement but should be reflected therein in order to make the statements and information therein not misleading in any material respect; and
 - (iv) there is no action, suit, proceeding or investigation before or by any court or public board or body pending or threatened against the Issuer to restrain

or enjoin the issuance, execution or delivery of the Securities or in any manner questioning the proceedings or authority for the issuance of the Securities or affecting directly or indirectly the validity of the Securities or of any provisions made or authorized for their payment or contesting the existence of the Issuer or the title of any of its officers to their respective offices.

- (f) Written evidence that the rating(s) on the Securities by the applicable rating services, as set forth in Section 10, are in effect as of the Closing Date.
- (g) A certificate of an officer of the Trustee, acceptable to the Underwriter, dated the Closing Date, to the effect that the Issuer Documents and other financing or operative documents relating to the Securities to which the Trustee is a party have been duly authorized, executed and delivered by the Trustee and, assuming due authorization, execution and delivery thereof by the Issuer and the other parties thereto, constitute valid and binding agreements of the Trustee enforceable against the Trustee in accordance with their terms, and the Securities have been authenticated in accordance with the Authorizing Resolution and the Issuer Documents by a duly authorized officer or signatory of the Trustee; and an incumbency certificate of the Trustee, in form and content acceptable to the Underwriter and Bond Counsel, dated the Closing Date, with respect to the officers or other signatories of the Trustee who have executed, authenticated and delivered the Securities, the Issuer Documents to which the Trustee is a party, and all other financing or operative documents relating to the Securities to be signed by the Trustee.
- (h) A tax certificate or tax regulatory agreement, executed by a duly authorized officer of the Issuer, in form and substance satisfactory to Bond Counsel, setting forth, among other things, in the manner permitted by the Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder, the reasonable expectations of the Issuer as of the Closing Date as to the use of proceeds of the Securities and of any other funds of the Issuer expected to be used to pay debt service on the Securities and the facts and estimates on which such expectations are based, and stating that, to the best of knowledge and belief of such certifying officer, the expectations set forth therein are reasonable.
- (i) An Information Return for Tax-Exempt Bond Issues (Internal Revenue Service Form 8038-G), in a form satisfactory to Bond Counsel for filing, executed by a duly authorized officer of the Issuer.
- (j) A copy of the Blanket Letter of Representations to DTC relating to the Securities signed by the Issuer.
- (k) True and complete copies of all opinions, certificates and other documents delivered to the Trustee under the Authorizing Resolution and the Issuer Documents; and such additional legal opinions, certificates, instruments and other documents as the Underwriter or Bond Counsel reasonably may request, in form

and substance satisfactory to the Underwriter or Bond Counsel, as the case may be, to evidence (A) compliance by the Issuer with legal requirements reasonably relating to the transactions contemplated by the Official Statement and this Agreement, (B) the truth and completeness, as of the date thereof, of the statements and information contained in the Preliminary Official Statement, (C) the truth and completeness, as of the date thereof and as of the time of the Closing, of the statements and information contained in the Official Statement, (D) the truth and completeness, as of the time of the Closing, of the representations and warranties of the Issuer contained in this Agreement and the certificates and other documents referred to in this Agreement, and (E) the due performance or satisfaction by the Issuer at or prior to the Closing of all agreements then to be satisfied.

13. Issue Price Certificate

Upon request of Bond Counsel, the Underwriter shall execute and deliver on the Closing Date an issue price or similar certificate pursuant to this Section, Section 6 and Section 12, in form and substance reasonably satisfactory to the Issuer, Bond Counsel and the Underwriter.

14. Accountants' Letter

No Accountants' letters will be delivered in connection with issuance of the Securities.

15. Termination

The Underwriter shall have the right to cancel its obligation to purchase the Securities and to terminate this Agreement by written notice to the Issuer if, between the Effective Date to and including the Closing Date, in the Underwriter's sole and reasonable judgment any of the following events shall occur (each a "Termination Event"):

- (a) the market price or marketability of the Securities, or the ability of the Underwriters to enforce contracts for the sale of the Securities, shall be materially adversely affected by any of the following events:
 - (i) legislation shall have been enacted by the Congress of the United States or the legislature of the State or shall have been favorably reported out of committee of either body or be pending in committee of either body, or shall have been recommended to the Congress for passage by the President of the United States or a member of the President's Cabinet, or a decision shall have been rendered by a court of the United States or the State or the Tax Court of the United States, or a ruling, resolution, regulation or temporary regulation, release or announcement shall have been made or shall have been proposed to be made by the Treasury Department of the United States or the Internal Revenue Service, or other federal or state authority with appropriate jurisdiction, with respect to federal or state taxation upon interest received on obligations of the general character of the Securities, provided that this paragraph (a) (i) shall not apply if the Securities are being issued as taxable Securities; or

- (ii) there shall have occurred (1) an outbreak or escalation of hostilities or the declaration by the United States of a national emergency or war or (2) any other calamity or crisis in the financial markets of the United States or elsewhere; or
- (iii) a general suspension of trading on the New York Stock Exchange or other major exchange shall be in force, or minimum or maximum prices for trading shall have been fixed and be in force, or maximum ranges for prices for securities shall have been required and be in force on any such exchange, whether by virtue of determination by that exchange or by order of the SEC or any other governmental authority having jurisdiction; or
- (iv) legislation shall have been enacted by the Congress of the United States or shall have been favorably reported out of committee or be pending in committee, or shall have been recommended to the Congress for passage by the President of the United States or a member of the President's Cabinet, or a decision by a court of the United States shall be rendered, or a ruling, regulation, proposed regulation or statement by or on behalf of the SEC or other governmental agency having jurisdiction of the subject matter shall be made, to the effect that any obligations of the general character of the Securities, the Bond Legislation or the Issuer Documents, or any comparable securities of the Issuer, are not exempt from the registration, qualification or other requirements of the Securities Act or the Trust Indenture Act or otherwise, or would be in violation of any provision of the federal securities laws; or
- (v) except as disclosed in or contemplated by the Official Statement, any material adverse change in the affairs of the Issuer shall have occurred; or
- (vi) any rating on:
 - (A) securities of the Issuer which are secured by a pledge or application of the Trust Estate on a parity with the Securities or
 - (B) if the Securities (or any portion thereof) are insured by a Policy or supported by a Support Facility, the Bond Insurer or the Support Facility Provider is reduced or withdrawn or placed on credit watch with negative outlook by any major credit rating agency (including any rating to be accorded the Securities); or
- (b) any event or circumstance shall exist that either makes untrue or incorrect in any material respect any statement or information in the Official Statement (other than any statement provided by the Underwriters) or is not reflected in the Official Statement but should be reflected therein in order to make the statements therein, in the light of the circumstances under which they were made, not misleading and, in either such event, the Issuer refuses to permit the Official Statement to be supplemented to supply such statement or information, or the effect of the Official Statement as so supplemented is to materially adversely affect the market price or

marketability of the Securities or the ability of the Underwriters to enforce contracts for the sale of the Securities; or

- (c) a general banking moratorium shall have been declared by federal or State authorities having jurisdiction and be in force; or
- (d) a material disruption in securities settlement, payment or clearance services affecting the Securities shall have occurred; or
- (e) any new restriction on transactions in securities materially affecting the market for securities (including the imposition of any limitation on interest rates) or the extension of credit by, or a charge to the net capital requirements of, underwriters shall have been established by the New York Stock Exchange, the SEC, any other federal or State agency or the Congress of the United States, or by Executive Order; or
- (f) a decision by a court of the United States shall be rendered, or a stop order, release, regulation or no-action letter by or on behalf of the SEC or any other governmental agency having jurisdiction of the subject matter shall have been issued or made, to the effect that the issuance, offering or sale of the Securities, including the underlying obligations as contemplated by this Agreement or by the Official Statement, or any document relating to the issuance, offering or sale of the Securities, is or would be in violation of any provision of the federal securities laws at the Closing Date, including the Securities Act, the Exchange Act and the Trust Indenture Act.

Upon the occurrence of a Termination Event and the termination of this Agreement by the Underwriters, all obligations of the Issuer and the Underwriters under this Agreement shall terminate, without further liability, except that: the Issuer and the Underwriters shall pay their respective expenses as set forth in Section 17 of the this Agreement.

16. Payment of Expenses

- (a) The Underwriter shall be under no obligation to pay, and the Issuer shall pay from available funds or direct the Trustee under the Authorizing Resolution and the Issuer Documents to pay from the proceeds of the Securities (to the extent permitted under applicable law) or from other funds of the Issuer, all expenses that are incidental to the performance of the Issuer's obligations under this Agreement, including but not limited to: all expenses in connection with the printing of the Preliminary Official Statement, the Official Statement and any amendment or supplement to either; all expenses in connection with the printing, issuance and delivery of the Securities; the fees and expenses of Bond Counsel, Issuer's Counsel and Disclosure Counsel, if any; the fees and expenses of the Issuer's financial advisors, accountants, any verification consultant and all other consultants; the fees and disbursements of any Trustee, any Paying Agent and any escrow agent, and their respective counsel; all expenses in connection with obtaining a rating or ratings for the Securities; all expenses of the Issuer in connection with the

preparation, printing, execution and delivery, and any recording or filing, of the Authorizing Resolution, any Issuer Document or any other instrument; the fees associated with Continuing Disclosure Undertaking; and all other expenses and costs of the Issuer incident to its obligations in connection with the authorization, issuance, sale and distribution of the Securities. Unless the Issuer and the Underwriter otherwise agree, the Issuer shall pay for all incidental costs (including, but not limited to, transportation, lodging, meals and entertainment of Issuer personnel) incurred by or on behalf of the Issuer in connection with the marketing, issuance and delivery of the Securities.

- (b) The Underwriter shall pay the costs of qualifying the Securities for sale in the various states chosen by the Underwriter and all advertising expenses in connection with the public offering of the Securities.

17. Notices

Any notice or other communication to be given to the Issuer under this Agreement may be given by certified mail or by delivering the same in writing to the Issuer at the address shown above, Attention: James Fletcher, Vice President for Finance and Administration, Idaho State University, 921 South 8th Avenue, Stop 8219, Pocatello, Idaho 83209, and any notice or other communication to be given to the Underwriter under this Purchase Agreement may be given by delivering the same in writing to the Underwriter, Attention: Eric Heringer, Piper Jaffray, 101 South Capitol Blvd., Suite 603, Boise, Idaho, or to such other addresses as one party shall furnish the other in writing for receipt of notice.

18. Governing Law

This Agreement shall be governed by the laws of the State of Idaho.

19. Miscellaneous

This Agreement is made solely for the benefit of the signatories hereto (including the Underwriter and its successors or assigns) and no other person shall acquire or have any right hereunder or by virtue hereof. Neither the Issuer nor the Underwriter may assign this Agreement. The term “successor” shall not include any holder of any Securities merely by virtue of such holding. All representations, warranties, agreement agreements and indemnities contained in this Agreement shall remain operative and in full force and effect, regardless of any investigation made by or on behalf of the Underwriter, and shall survive the delivery of and payment for the Securities and any termination of this Agreement. Section headings have been included in this Agreement as a matter of convenience of reference only and are not to be used in the interpretation of any provisions of this Agreement. If any provision of this Agreement is, or is held or deemed to be, invalid, inoperative or unenforceable as applied in any particular case in any jurisdiction or jurisdictions, because it conflicts with any provisions of any constitution, statute, rule of public policy or for any other reason, such circumstances shall not make the provision in question invalid, inoperative or unenforceable in any other case or circumstance, or make any other provision or provisions of this Agreement invalid, inoperative or unenforceable to any extent whatever.

20. Counterparts

This Agreement may be executed in one or more counterparts with the same force and effect as if all signatures appeared on a single instrument.

21. Signatures

Upon execution by the Issuer and the Underwriter, this Agreement shall be binding upon the Issuer and the Underwriter as of the Effective Date and Time.

[Remainder of this page intentionally left blank.]

ACCEPTED AND AGREED:

ISSUER: IDAHO STATE UNIVERSITY

By: _____

Name: _____ Fill in Jim's name and

Title _____

Title: _____

Effective Date and Time of Formal Award:

[, 20 , :] a.m./p.m. ([time]).

PIPER JAFFRAY & CO.

By: _____

Name: Eric Heringer

Title: Managing Director

Schedule I
Terms of the Securities

<u>Principal</u> <u>Amount</u>	<u>Maturity</u> <u>()</u>	<u>Interest</u> <u>Rate</u>	<u>Offering</u> <u>Price</u> <u>or Yield</u>
---	---	--	---

Mandatory Sinking Fund Schedule:

Securities Maturing on _____, _____:

<u>Date</u> <u>()</u>	<u>Principal</u> <u>Amount</u>
---	---

Securities Maturing on _____, _____:

<u>Date</u> <u>()</u>	<u>Principal</u> <u>Amount</u>
---	---

Optional Redemption:



CREDIT OPINION

12 February 2016

New Issue

Contacts

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Idaho State University, ID

New Issue - Moody's assigns A1 to Idaho State University's Series 2016; outlook stable

Summary Rating Rationale

Moody's Investors Service has assigned an A1 rating to Idaho State University's Series 2016 bonds. The rating favorably incorporates the university's consistently healthy operating performance, solid financial resource coverage of debt and operations, and strong coverage of pledged revenue to debt service. These strengths are countered by softening enrollment, high reliance on government appropriations given historic funding fluctuation and weak state capital support, and limited ability to increase tuition revenue with a challenging student market and the state's emphasis on affordability.

Credit Strengths

- » Strong operating performance, with FY 2015 operating cash flow margin of 17%, providing six times debt service coverage
- » Solid unrestricted monthly liquidity, with 231 monthly days cash on hand compared to a FY 2014 median of 139 days for A1-rated peers
- » Good spendable cash and investment coverage of debt and operations, at 2.6 times and 0.7 times
- » Designation as Idaho's lead institution in health professions and medical education

Credit Challenges

- » Challenging student market and softening enrollment, evidenced by decreasing full-time equivalent enrollment and weakening selectivity and matriculation
- » High reliance on fluctuating government support, at 36% relative to the FY 2014 median for A1-rated peers of 23%
- » Limited state support for capital, leading to high deferred maintenance of estimated \$350 million

Rating Outlook

The stable outlook reflects expectations of continued strong operating performance and resource growth as well as generally stable enrollment.

Factors that Could Lead to an Upgrade

- » Extended growth of financial resources
- » Stable to growing enrollment, including improved matriculation
- » Increased philanthropic support and research funding to broaden revenue diversity

Factors that Could Lead to a Downgrade

- » Weakened student demand resulting in flat to declining net tuition revenue
- » Significant deterioration in operations or reduction in state support without ability to increase other revenue

Key Indicators

Exhibit 1

IDAHO STATE UNIVERSITY, ID					
	2011	2012	2013	2014	2015
Total FTE Enrollment	10,725	11,186	10,715	10,857	10,481
Operating Revenue (\$000)	215,313	217,752	225,058	230,245	247,556
Annual Change in Operating Revenue (%)	5.0	1.1	3.4	2.3	7.5
Total Cash & Investments (\$000)	120,552	133,115	147,912	176,718	187,562
Total Debt (\$000)	76,161	71,639	66,093	61,301	56,327
Spendable Cash & Investments to Total Debt (x)	1.2	1.4	1.7	2.3	2.6
Spendable Cash & Investments to Operating Expenses (x)	0.5	0.5	0.6	0.7	0.7
Monthly Days Cash on Hand (x)	153	171	190	232	231
Operating Cash Flow Margin (%)	16.8	12.8	13.8	15.9	17.3
Total Debt to Cash Flow (x)	2.1	2.6	2.1	1.7	1.3

Source: Moody's Investors Service

Recent Developments

The current plan of finance will current refund Series 2004B bonds and advance refund Series 2007 bonds to achieve economic savings. The refunding will achieve uniform annual savings on a matched maturity basis.

Detailed Rating Considerations

Market Profile: Stable Position and Slowing Net Tuition Revenue Growth in Competitive Environment

While the university will maintain its stable market position and continue to strengthen its emphasis on health professions and STEM disciplines as Idaho's lead institution in health professions and medical education, the market environment will remain pressured. ISU competes for students with four-year universities in Idaho and surrounding states as well as with community colleges.

The challenging market is evidenced by continued softening in total full-time enrollment, down approximately 6% from a peak of over 11,000 students in fall 2012, and weakened selectivity and matriculation, at 98% and 54%, respectively, for fall 2015. This slowed growth aligns with industry trends, as non-traditional and community college enrollment is countercyclical to the economic environment, increasing as the economy struggles and tightening as job prospects improve. Countering these trends, ISU has successfully increased its non-resident market share of students, jumping from 7% in fall 2010 to a high of 26% in fall 2014 before a decline to a still-solid 19% in fall 2015.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moody's.com for the most updated credit rating action information and rating history.

While ISU will continue to grow net tuition revenue despite recent volatility in freshmen enrollment and a challenging student market, future growth will be muted given the state's challenging goals of increasing degree achievement while keeping tuition increases low or flat. Net tuition per student increased a solid 8% in FY 2015 and 12% in FY 2014 after slowed performance of 0.3% in FY 2013. Fall 2015's tuition increase of just 3.3% was the lowest in 27 years, and pricing remains competitive with peer institutions.

Operating Performance: Consistent Strong Operating Margins Underpin A1 Rating

Consistently strong operating performance anchors ISU at the A1 rating and will continue given the university's focus on conservative budgeting and resource growth. Fiscal year 2015's 17% operating cash flow margin was strong relative to the FY 2014 median of 12% for A1-rated peers and provided solid coverage of debt service at 6.2 times.

ISU's implementation of performance-based budgeting beginning in FY 2018 will contribute to positive operating results through expense management, strategic allocation of resources, and aggressive paydown of debt. Half of current debt will be paid off in 2021.

An improved state funding environment will also contribute to solid margins, though increased support for operations remains lower than historic highs. Current state budget proposals for FY 2017 indicate a potential increase in support for Idaho's public schools, including potential increases for higher education well above inflation.

With 80% of revenue from student charges and state support, broadened revenue diversity through increased research funding and philanthropic support, which is not a significant contributor to revenue for ISU, would be credit positive.

Wealth and Liquidity: Solid Financial Resource Growth Countered by High Deferred Maintenance

Sustained operating surpluses will continue to build spendable cash and investments, which have grown 64% since FY 2011 to \$149 million for FY 2015. However, financial resource growth is at the expense of investment in plant. ISU estimates that it has over \$350 million in deferred maintenance, and age of plant has climbed to over 15 years in FY 2015 from 13 years in FY 2011. ISU will make modest capital investment of approximately \$20 million in FYs 2016 and 2017, with \$13 million coming from its own resources. State capital support remains weak, contributing just \$7 million over the same period, though a proposed increase may improve capital support.

The university has no plans for additional debt at this time and is focused on growing resources, continued capital investment, and decreasing debt.

LIQUIDITY

Liquidity is good for the rating category, with unrestricted monthly liquidity of \$131 million at the end of FY 2015, providing 231 monthly days of cash on hand.

Leverage: Low Debt with Very Strong Covenant Coverage

ISU has low debt relative to peers, with debt to operating revenue of 0.2 times, compared to 0.7 times for A1-rated peers. The university's leverage position will continue to improve with aggressive debt paydown.

DEBT STRUCTURE

All rated parity debt is fixed-rate. The unrated variable rate debt, backed by a letter of credit, at ISU's component foundation comprises 11% of total debt. The university has covenanted that pledged revenues available for debt service will equal 110% of annual debt service on a year by year basis. As of FYE 2015, ISU had very generous headroom over this covenant, at 1031%.

DEBT-RELATED DERIVATIVES

There are no debt-related derivatives.

PENSIONS AND OPEB

The university's contributions to a defined contribution retirement plan, a cost-sharing multiple-employer defined benefit pension plan, and a post-retirement health benefit plan (OPEB) remain manageable within the scope of its operations (combined 5% of total expenses in FY 2015), but are expected to continue to grow in the next few years.

From a balance sheet perspective, ISU's three-year Moody's Adjusted Net Pension Liability is substantial at \$62 million (FYs 2013 - 2015), but manageable given the university's resource growth, declining debt levels and a fairly strong adjusted funded ratio of

69%. For FY 2015, the university also had a small OPEB liability of \$8.3 million. The post-retirement health benefit plan is closed to employees hired after June 30, 2009, limiting the long-term growth of this obligation.

Governance and Management: Prudent Fiscal and Operational Management Yield Consistent Solid Performance

ISU demonstrates conservative budgeting and operational management, which will continue to yield solid operating performance. Leadership is proactive in supporting student needs resulting from economic and cultural changes, such as addressing cultural shifts resulting from increased international enrollment and financial pressures facing upperclassmen.

Legal Security

The Series 2004A, 2004B, 2004C, 2006, 2007, 2012, 2013 and anticipated 2016 bonds (which will refund the 2004B bonds and the Series 2007 bonds with maturities beyond 2017) are secured by pledged revenues, comprised of tuition and student facilities fees (totaling \$56.8 million in FY 2015) as well as revenues of the student housing system (\$6.3 million in FY 2015) and lease payments from the Center for Advanced Energy Studies (CAES) at the Idaho Falls location (\$0.85 million in FY 2015).

Use of Proceeds

Proceeds will be used to refund the Series 2004B bonds and Series 2007 bonds with maturities beyond 2017 and to pay costs of issuance.

Obligor Profile

Idaho State University is a public teaching institution with approximately 10,500 full-time equivalent students in fall 2015 and operating revenue of \$248 million for FY 2015. The main campus is located in Pocatello, Idaho, with additional locations in Meridian, Idaho Falls, and Twin Falls. The university is Idaho's designated lead institution in health professions and medical education.

Methodology

The principal methodology used in this rating was Global Higher Education published in November 2015. Please see the Ratings Methodologies page on www.moody.com for a copy of this methodology.

Ratings

Exhibit 3

IDAHO STATE UNIVERSITY, ID

Issue	Rating
General Revenue Refunding Bonds, Series 2016	A1
Rating Type	Underlying LT
Sale Amount	\$12,500,000
Expected Sale Date	03/01/2016
Rating Description	Revenue: Public University Broad Pledge

Source: Moody's Investors Service

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REPORT NUMBER 1016207

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**IDAHO STATE UNIVERSITY
GENERAL REVENUE REFUNDING BONDS, SERIES 2016**

**Summary of Financing Results
Rates as of 2/11/2016**

	Refunding of Series 2004B	Refunding of Series 2007	Total
Par Amount of Refunding Bonds	\$2,605,000	\$9,695,000	\$12,300,000
All-in TIC	2.96%	2.23%	2.45%
Escrow Yield (SLGS)	0.25%	0.44%	0.43%
Refunded Par Amount	\$3,040,000	\$10,655,000	\$13,695,000
Maturities Refunded	2024-2034	2018-2032	
Savings Structure	Uniform	Uniform	
Gross Savings	\$756,971	\$1,690,702	\$2,447,674
PV Savings *	\$589,130	\$1,464,262	\$2,053,392
PV Savings % **	19.38%	13.74%	14.99%

* Present value savings calculated to closing date of 4/7/2016 at the arbitrage yield for each refunding series.

** Present value savings % of refunded par.

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LEWIS-CLARK STATE COLLEGE

SUBJECT

Proposed Summer Session Fee Discount

REFERENCE

April 2015

Idaho State Board of Education (Board) Approved
Fiscal Year 2016 Student Tuition & Fee Rates
(Academic Year 2016-2017).

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section V.R.2.b.

BACKGROUND/DISCUSSION

For the 2016 Summer Session, Lewis-Clark State College (LCSC) plans to propose a discount for Summer Session fees of up to 25% of the per credit rate which was approved by the Board in April, 2015. The proposed discount will reduce the approved per credit cost from \$307 to approximately \$230 per credit. Through the LCSC program prioritization process, Summer Session was identified as a program in need of significant restructuring. It is the intent of LCSC to offer an expanded and focused Summer Session that allows students the opportunity to meet graduation requirements and promote on time or accelerated degree completion. Historically, the institution has experienced summer session activity between 1800 and 1900 credit hours. As a result of the planned changes which would be made in summer course offerings and a reduced credit hour price, the College anticipates enrollment levels to 2400-2500 credit hours.

Benefits of the Summer Session proposal:

- provides an incentive for students to attend a summer session class at a lower cost alternative to the traditional (fall and spring semester) sessions;
- allows participating students to accelerate required credit attainment toward degree completion; and
- makes better use of College facilities during the summer months that have historically been times of low activity on campus.

A formal proposal for Board approval will be brought to the April 2016 Board meeting.

IMPACT

The impact of this proposal will be to increase student participation in Summer School offerings. This will provide for more activity on campus and, if successful, generate additional student credit hours necessary to meet the variable costs of

BUSINESS AFFAIRS AND HUMAN RESOURCES
FEBRUARY 18, 2016

operating the program in addition to contributing to the fixed costs the College now has with under-used facilities.

STAFF COMMENTS AND RECOMMENDATIONS

This initiative emerged from ongoing BAHR Committee and Financial Vice President discussions on possible new approaches to program and course pricing which might lead to improved student access, pipeline output/efficiency, and marketability of academic program offerings. The proposed discounted pricing trial, if successful, might later be adopted more widely by LCSC or by other institutions. This item serves as an early notification of the formal summer session discounted fee request which is expected to be presented to the Board at the April fee setting session.

BOARD ACTION

This item is for informational purposes only. Any action will be at the Board's discretion.

**STATE DEPARTMENT OF EDUCATION
FEBRUARY 18, 2016**

TAB	DESCRIPTION	ACTION
1	SUPERINTENDENT’S UPDATE	Information Item
2	TEMPORARY RULE - IDAPA 08.02.02.111- BULLYING, HARASSMENT, AND INTIMIDATION PREVENTION AND RESPONSE	Motion to Approve
3	PROFESSIONAL STANDARDS COMMISSION ANNUAL REPORT	Motion to Approve
4	SMARTER BALANCED REPORTS PRESENTATION	Information Item

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**STATE DEPARTMENT OF EDUCATION
FEBRUARY 18, 2016**

SUBJECT

Superintendent of Public Instruction Update to the State Board of Education

BACKGROUND/DISCUSSION

Superintendent of Public Instruction, Sherri Ybarra, will provide an update on the State Department of Education.

BOARD ACTION

This item is for informational purposes only. Any action will be at the Board's discretion.

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**STATE DEPARTMENT OF EDUCATION
FEBRUARY 18, 2016**

SUBJECT

Temporary Rule - IDAPA 08.02.02.111, Rules Governing Uniformity, Bullying, Harassment and Intimidation Prevention and Response.

REFERENCE

August 2015

Board approved proposed rule regarding bullying, intimidation, and harassment. The Proposed rule was not submitted for publication by the Department and the rulemaking was vacated.

APPLICABLE STATUTE, RULE, OR POLICY

Section 33-1631, Idaho Code

BACKGROUND/DISCUSSION

Section 33-1631, Idaho Code requires school districts and public charter schools to implement measures intended to prevent, identify and respond to bullying, harassment and intimidation. The requirements include:

- School districts and charter schools annually disseminate information to school personnel, parents and students information on harassment, intimidation and bullying;
- Ongoing professional development to school staff to prevent, identify and respond to bullying, harassment and intimidation;
- Requirement that district policies include graduated consequences for these types of incidences; and,
- Requirements that school districts and charter schools report annually regarding these incidences.

Additionally, the statute requires the Board establish the provision of ongoing professional development, district policy guidelines, and the manner in which bullying incidents are to be reported to the State Department of Education through the promulgation of administrative rules.

ATTACHMENTS

Attachment 1 - Temporary Rule – Bullying, Harassment, and Intimidation Prevention and Response

Page 3

STAFF COMMENTS AND RECOMMENDATIONS

Section 33-1630 [33-1631], Idaho Code requires school districts and charter schools to “undertake reasonable efforts to ensure that information on harassment, intimidation and bullying of students is disseminated annually to all school personnel, parents and students, including an affirmation that school personnel are authorized and expected to intervene or facilitate intervention on behalf of students facing harassment, intimidation or bullying” and provide ongoing professional development to all staff members to prevent, identify and respond to harassment, intimidation and bullying.”

**STATE DEPARTMENT OF EDUCATION
FEBRUARY 18, 2016**

Temporary rules go into effect at the time of Board approval unless an alternative effective date is specified by Board action. To qualify as a temporary rule, the rule must meet one of three criteria: provides protection of the public health, safety, or welfare; or is to come into compliance with deadlines in amendments to governing law or federal programs; or is conferring a benefit. This rule qualifies as temporary rules as it brings Administrative Code in compliance with Section 33-1630, Idaho Code.

This rule will need to be followed-up with a proposed rule after the close of the legislative session. The proposed rule will need to go through the negotiated rulemaking process and will be brought back to the Board for approval at a later date. Staff recommends approval.

BOARD ACTION

I move to approve the Temporary Rule amendment to IDAPA 08.02.02, creating a new section 111, Rules Governing Uniformity - Bullying, Harassment and Intimidation Prevention.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

**STATE DEPARTMENT OF EDUCATION
FEBRUARY 18, 2016**

**IDAPA 08
TITLE 02
CHAPTER 02**

08.02.02 - RULES GOVERNING UNIFORMITY

111. BULLYING, HARASSMENT AND INTIMIDATION PREVENTION AND RESPONSE. ()

01. School districts and charter schools shall make reasonable efforts to ensure that information on harassment, intimidation and bullying of students is disseminated annually to all school personnel, parents and students. ()
02. The content of ongoing professional development for school staff related to bullying, harassment and intimidation shall include: ()
 - a. School philosophy regarding school climate and student behavior expectations. ()
 - b. Definitions of bullying, harassment, and intimidation. ()
 - c. School prevention strategies or programs including the identification of materials to be distributed annually to students and parents. ()
 - d. Expectations of staff intervention for bullying, harassment, and intimidation. ()
 - e. School process for responding to bullying, harassment, and intimidation including the reporting process for students and staff, investigation protocol, the involvement of law enforcement, related student support services and parental involvement. ()
 - f. Other topics as determined appropriate by the school district or charter school. ()
03. Graduated consequences for a student who commits acts of bullying, harassment, and intimidation shall include a series of measures proportional to the act(s) committed and appropriate to the severity of the violation as determined by the school board of trustees, school administrators, or designated personnel depending upon the level of discipline. Graduated consequences should be in accordance with the nature of the behavior, the developmental age of the student, and the student's history of problem behaviors and performance. ()
 - a. Graduated consequences may include, but are not limited to: ()
 - i. Meeting with the school counselor; ()
 - ii. Meeting with the school principal and student's parents or guardian; ()
 - iii. Detention, suspension or special programs; and, ()
 - iv. Expulsion. ()
 - b. The graduated consequences are not intended to prevent or prohibit the referral of a student who commits acts of harassment, intimidation or bullying to available outside counseling services, and/or to law enforcement pursuant to section 18-917A, Idaho Code. ()
 - c. Students with disabilities may be afforded additional protections under the Individuals with Disabilities Education Act (IDEA) and Section 504 of the Rehabilitation Act; school districts and charter schools

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shall comply with applicable state and federal law when disciplining students with individualized education programs (IEPs) or 504 plans for committing acts of bullying, harassment, and intimidation.
_____ ()

04. School district and charter school employees are authorized and expected to intervene or facilitate intervention on behalf of students facing harassment, intimidation, and bullying. Intervention shall be reasonably calculated to: _____ ()
- a. Correct the problem behavior; _____ ()
 - b. Prevent another occurrence of the problem; _____ ()
 - c. Protect and provide support for the victim of the act; and _____ ()
 - d. Take corrective action for documented systemic problems related to harassment, intimidation, or bullying. _____ ()
05. Annual reporting will occur at the end of the school year through an aggregate report identifying the total number of bullying incidents by school districts and charter schools, grade level, gender, and repeat offenders. The State Department of Education shall provide school districts and charter schools with the guidelines and forms for reporting. _____ ()

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SUBJECT

Professional Standards Commission 2014-2015 Annual Report.

APPLICABLE STATUTE, RULE, OR POLICY

Sections 33-1208, 33-1209, 33-1251, 33-1252, 33-1253, 33-1254, and 33-1258, Idaho Code

BACKGROUND/DISCUSSION

In 1972, the Idaho Legislature established the Professional Standards Commission which combined the Professional Practices Commission, established by the State Legislature in 1969, with the Professional Standards Board, an advisory board appointed by the State Board of Education.

The Professional Standards Commission was thereby created as a commission appointed by the State Board of Education and housed in the Department of Education. The Commission consists of 18 constituency members comprised of seven (7) teachers, four (4) school administrators, three (3) public higher education personnel, plus one (1) representative each of private higher education institutions, the State Department of Education, the Division of Professional-Technical Education, and the State School Boards Association. Members are appointed or reappointed for terms of three (3) years.

The Professional Standards Commission publishes an annual report following the conclusion of each fiscal year to advise the State Board of Education regarding the accomplishments of the commission.

IMPACT

This report advises the State Board of Education regarding the accomplishments of the Professional Standards Commission at the conclusion of each fiscal year.

ATTACHMENTS

Attachment 1 – 2014-2015 Annual Report
Attachment 2 – PSC Current Membership

Page 3
Page 19

STAFF COMMENTS AND RECOMMENDATIONS

Section 33-1252, Idaho Code, created the Professional Standards Commission. The commission is made up of 18 members appointed by the State Board of Education. Membership is made up of individuals representing the teaching profession in Idaho, including a staff person from the Department of Education and the Division of Professional-Technical Education. No less than seven members must be certificated classroom teachers, of which at least one must be a teacher of exceptional children and one must serve in pupil personnel services. In addition to making recommendations regarding professional codes and standards of ethics to the State Board of Education, the Commission investigates complaints regarding the violation of such standards and makes

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recommendations to the Board in areas of teacher education, teacher certification and teaching standards.

Due to agenda material production timelines there is one sentence on page 7 of the report regarding "approval" of due process hearings that is in error. Board staff has worked with Department staff to amend the reference going forward. Section 33-1208, Idaho Code, states "Any person whose certificate may be or has been revoked, suspended or denied under the provisions of this section shall be afforded a hearing according the provisions of Section 33-1209, Idaho Code," there is not an "approval" requirement.

BOARD ACTION

I move to accept the Professional Standards Commission 2014-2015 Annual Report.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

PROFESSIONAL STANDARDS COMMISSION

ANNUAL REPORT

2014-2015

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INTRODUCTION

The Professional Standards Commission was established by the legislature as provided in Sections 33-1251 through 33-1258, Idaho Code. It is an 18-member body comprised of 7 teachers, 4 school administrators, 3 public higher education personnel, plus 1 representative each of private higher education institutions, the State Department of Education, the Division of Professional-Technical Education, and the Idaho School Boards Association.

Under Idaho Code, the Professional Standards Commission is charged with the three basic categories of responsibility listed below. 1) The Commission adopts professional codes and standards of ethics, conduct, and professional practices applicable to certificated employees; 2) it inquires into and, if warranted, provides hearings on charges of improper conduct; and 3) it makes recommendations concerning teacher education, teacher certification, and standards. Items 1) and 3) are subject to final approval by the State Board of Education.

During the 2014-2015 academic year, the following persons served as members of the Professional Standards Commission:

- | | | |
|-----|---------------------------|--|
| 1. | Clara Allred | Twin Falls SD #411 |
| 2. | Margaret Chipman | Weiser SD #431 |
| 3. | Kristi Enger | State Professional-Technical Education |
| 4. | Dr. Deborah Hedeem | Idaho State University |
| 5. | Esther Henry, Chair | Jefferson County Joint SD #251 |
| 6. | Dr. Paula Kellerer | Northwest Nazarene University |
| 7. | Pete Koehler | State Department of Education |
| 8. | Angie Lakey-Campbell | Cambridge Joint SD #432 |
| 9. | Charlotte McKinney | Mountain View SD #244 |
| 10. | Dr. Becky Meyer | Lake Pend Oreille SD #84 |
| 11. | Kim Mikolajczyk | Moscow SD #281 |
| 12. | Dr. Laural Nelson | Idaho Digital Learning Academy |
| 13. | Mikki Nuckols, Vice Chair | Bonneville Joint SD #93 |
| 14. | Dr. Tony Roark | Boise State University |
| 15. | Elisa Saffle | Bonneville Joint SD #93 |
| 16. | Donna Sulfridge | Mountain Home SD #193 |
| 17. | Dr. Heather Van Mullem | Lewis-Clark State College |
| 18. | Virginia Welton | Coeur d'Alene SD #271 |

Dr. Taylor Raney served as Administrator for the Commission from July 1, 2014, to June 21, 2015; Lisa Colón served as Administrator for the Commission from June 22, 2015, to June 30, 2015.

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INTERNAL OPERATION OF THE COMMISSION

The Professional Standards Commission met five times during the 2014-2015 academic year in August, October, January, March, and May. Five standing committees and one standing subcommittee functioned throughout the year.

<u>STANDING COMMITTEES</u>	<u>FUNCTION</u>
LEADERSHIP TEAM (Consists of Chair, Vice Chair, and four chairpersons from other standing committees/subcommittees.)	Troubleshoots. Tracks Commission tasks. Manages the Commission strategic plan.
AUTHORIZATIONS	Reviews district requests for approval of Alternative Certification authorizations.
STANDARDS	Reviews Certification standards. Recommends changes to Commission.
EXECUTIVE	Makes recommendations to the Commission regarding disciplinary actions and policy revision.
PROFESSIONAL DEVELOPMENT	Reviews professional development issues.

<u>STANDING SUBCOMMITTEE</u>	<u>FUNCTION</u>
BUDGET	Monitors/makes recommended revisions to annual budget. Develops yearly budget with recommendations for Commission approval.

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PROFESSIONAL PRACTICES ACTIVITIES

Under Section 33-1208, Idaho Code, the Professional Standards Commission has the ultimate responsibility for suspending or revoking certificates for educator misconduct. The Professional Standards Commission, under 33-1209, Idaho Code, is charged with the responsibility of securing compliance with standards of ethical conduct. The chief certification officer of the State Department of Education/administrator of the Professional Standards Commission advises the Commission Executive Committee of the circumstances of a case, suggesting a possible need for action to be taken against a certificate. If a due process hearing is requested, the State Superintendent of Public Instruction grants approval for a hearing to be held.

During the 2014-2015 academic year time period, the Professional Standards Commission opened 54 cases of educator ethical misconduct. The administrator also provided technical assistance to districts in which educator misconduct or related problems were an issue, with a consistent recommendation that districts use legal counsel to help determine a course of action. During that same time period, the following cases were disposed of as indicated:

<u>CASE</u>	<u>CAUSE</u>	<u>DISPOSITION</u>
21210	Violation of Code	Decision Made to Not Pursue Any Disciplinary Action
21216	Violation of Code	Indefinite Suspension; Ethics Course; Anger Management Counseling; Classroom Management Course; 5-Page Book Review
21220	Violation of Code	Revocation (Default)
21221	Violation of Code Violation of State Law; Conviction	Indefinite Suspension
21224	Violation of Code	Revocation (Default)
21305	Violation of Code	Conditional Certificate with Classroom Management Course, Restraint Training or MANDT Training Course, and Ethics Course – All to Be Completed Within 1 Year
21308	Violation of Code Violation of State Law; Conviction	Permanent Revocation
21315	Violation of Code	Revocation (Default)
21316	Violation of Code	Revocation (Default)
21318	Violation of Code	Approval of 5-Page Paper; Certificate Reinstatement

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21324	Violation of Code	Revocation (Default)
21325	Violation of Code	Revocation (Default)
21326	Violation of Code	Indefinite Suspension
21330	Violation of Code	Certificate Reinstatement
21337	Violation of Code	Letter of Reprimand; Ethics Course; Professional Boundaries Course; 5-7 Page Research Paper on Subject of Appropriate Teacher-Student Boundaries with at Least 5 Sources; Status Reports from Principal for 5 Years
21342	Violation of Code	Letter of Reprimand
21401	Violation of Code	Letter of Reprimand; Ethics Course Within 6 Months
21404	Violation of Code Violation of State Law; Conviction	Permanent Revocation
21407	Violation of Code	Revocation (Default)
21408	Violation of Code	Case Closed Due to Inability to Prosecute Under Idaho Code 33-512B
21409	Violation of Code	Letter of Reprimand; Ethics Course; Creation of Professional Development Presentation
21411	Violation of Code	Revocation (Default)
21412	Violation of Code	Indefinite Suspension; Ethics Course; Classroom Management Course; Professional Boundaries Course
21413	Violation of Code	Letter of Reprimand; Ethics Course; Anger Management Course
21415	Violation of Code	Revocation (Default)
21417	Violation of Code	Case Closed by PSC Administrator
21418	Violation of Code	Case Closed by PSC Administrator
21419	Violation of Code	No Probable Cause
21420	Violation of Code	Indefinite Suspension; Ethics Course; Professional Boundaries Course;

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		4-Page Essay on Each Course Referencing at Least 2 Professional Journal Articles
21421	Violation of Code	Revocation (Voluntary Surrender of Certificate)
21422	Violation of Code	No Probable Cause
21423	Violation of Code	No Probable Cause
21425	Violation of Code	Revocation (Voluntary Surrender of Certificate)
21426	Violation of Code	No Probable Cause
21427	Violation of Code	Letter of Reprimand; Ethics Course; 5- Page Paper Using 5 Sources on How FERPA and HIPA Laws Apply to Respondent's Job and Responsibilities
21433	Violation of Code	Letter of Reprimand; Ethics Course
21439	Violation of Code	Letter of Reprimand
21446	Violation of Code	Case Closed by PSC Administrator and Deputy Attorney General
21451	Violation of Code	Case Closed by PSC Administrator and Deputy Attorney General
21523	Violation of Code	Case Closed by PSC Administrator

REQUESTS FOR PROVISIONAL AUTHORIZATIONS

There were 149 Provisional Authorizations with 159 total endorsements/ assignments issued during the 2014-2015 school year. Those Provisional Authorizations by subject area during that same time period are as follows:

- Agricultural Science and Technology 6/12 - 2
- All Subjects K/8 – 25
- Biological Science 6/12 – 4
- Birth-Grade 3 - 1
- Business Technology Education 6/12 – 3
- Chemistry 6/12 – 1
- Chinese K/12 - 1
- Communication 6/12 – 2
- Counselor K/12 – 2
- Director of Special Education and Related Services Pre-K/12 - 1
- Earth Science 6/12 - 1
- Economics 6/12 – 1
- English 6/12 – 12
- English as a New Language K/12 - 2
- Family and Consumer Sciences 6/12 – 3
- Generalist K/12 – 22
- Geography 6/12 – 1
- German 6/12 - 1
- Health 6/12 – 5
- Health Occupations 6/12 – 1
- History 6/12 – 3
- Mathematics 6/12 – 20
- Music 6/9 - 1
- Music 6/12 – 4
- Natural Science 6/12 – 8
- Physical Education 6/12 – 5
- Physical Education K/12 - 3
- Physical Science 6/12 – 4
- Physics 6/12 - 4
- School Nurse - 2
- School Principal Pre-K/12 - 2
- Social Studies 6/12 – 1
- Spanish 6/12 – 3
- Spanish K/12 – 2
- Speech-Language Pathologist – 1
- Sports Medicine/Athletic Trainer 6/12 - 1
- Superintendent – 1
- Teacher Librarian K/12 – 1
- Technology Education 6/12 – 2

REQUESTS FOR TEACHER TO NEW CERTIFICATION AUTHORIZATIONS

There were 230 Teacher to New Certification Authorizations with 244 total endorsements/assignments issued during the 2014-2015 school year. Those Teacher to New Certification Authorizations by subject area during that same time period are as follows:

Agriculture Science and Technology 6/12 - 1
All Subjects K/8 – 7
American Government/Political Science 6/12 – 3
Art 6/12 – 2
Bilingual Education K/12 - 3
Biological Science 6/12 – 6
Birth to Grade 3 – 5
Business Technology Education 6/12 - 2
Chemistry 6/12 – 4
Counselor K/12 - 4
Director of Special Education and Related Services Pre-K/12 – 6
Early Childhood Special Education Pre-K/3 - 5
Earth Science 6/12 – 1
Earth Science 6/9 - 1
Economics 6/12 – 4
English 6/12 – 8
English 6/9 - 1
English as a New Language K/12 – 8
Family and Consumer Sciences 6/12 – 4
French 6/12 – 2
Generalist K/12 – 48
German 6/12 - 1
Gifted and Talented K/12 – 11
Health 6/12 – 11
Health K/12 – 2
Hearing Impaired K/12 - 1
History 6/12 – 2
Literacy K/12 - 1
Mathematics – Basic 6/12 – 8
Mathematics 6/12 – 18
Mathematics 6/9 - 2
Music K/12 - 4
Natural Science 6/12 – 10
Natural Science 6/9 - 1
Physical Education 6/12 - 6
Physical Education K/12 - 4
Physical Science 6/12 – 2
Physical Science 6/9 - 1

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Physics 6/12 - 2
School Principal Pre-K/12 – 8
School Psychologist - 2
Social Studies 6/12 – 3
Spanish 6/12 – 1
Spanish K/12 – 1
Special Education Consulting Teacher - 2
Superintendent – 7
Teacher Librarian K/12 - 8

REQUESTS FOR CONTENT SPECIALIST AUTHORIZATIONS

There were 56 Content Specialist Authorizations with 64 total endorsements/assignments issued during the 2014-2015 school year. Those Content Specialist Authorizations by subject area during that same time period are as follows:

All Subjects K/8 – 16
American Government/Political Science 6/12 – 2
American Sign Language K/12 - 1
Art 6/12 – 2
Biological Science 6/12 – 4
Business Technology Education 6/12 – 1
Chemistry 6/12 – 1
Communication 6/12 - 1
Counselor K/12 – 2
French 6/12 - 1
Generalist K/12 – 9
Health 6/12 – 1
Health Occupations 6/12 – 1
History 6/12 - 1
Latin K/12 - 1
Mathematics 6/12 – 3
Music 6/12 – 1
Music K/12 – 3
Natural Science 6/12 – 1
Philosophy 6/12 - 1
Physical Education 6/12 – 1
Physical Science 6/12 - 1
Psychology 6/12 – 1
School Social Worker – 1
Social Studies 6/12 – 2
Spanish 6/12 – 5

REQUESTS FOR PUPIL PERSONNEL SERVICES AUTHORIZATIONS

There were 3 Pupil Personnel Services Authorizations with 3 total endorsements/assignments issued during the 2014-2015 school year. Those Pupil Personnel Services Authorizations by subject area during that same time period are as follows:

Counselor K/12 – 3

**REQUESTS FOR ABCTE (AMERICAN BOARD FOR CERTIFICATION
OF TEACHER EXCELLENCE) NON-TRADITIONAL AUTHORIZATIONS**

There were 103 ABCTE Authorizations with 127 total endorsements/assignments issued during the 2014-2015 school year. Those ABCTE Authorizations by subject area during that same time period are as follows:

All Subjects K/8 – 52
Biological Science 6/12 – 6
Chemistry 6/12 – 2
English 6/12 – 13
Generalist K/12 – 20
History 6/12 – 8
Mathematics 6/12 – 18
Natural Science 6/12 – 6
Physics 6/12 – 2

STATE/NATIONAL APPROVAL OF EDUCATOR PREPARATION PROGRAMS

The State Board of Education requires all educator preparation programs to be evaluated on a seven-year cycle. This evaluation occurs through a concurrent on-site visit by a CAEP (Council for the Accreditation of Educator Preparation) team and a state team. The CAEP team evaluates the unit, and the state team evaluates respective content area disciplines.

Under the direction of the administrator of the Professional Standards Commission, the state evaluation team utilizes the CAEP/Idaho protocol and conducts educator preparation program evaluations. While all educator preparation programs are subject to a state evaluation, CAEP evaluations are optional. All Idaho educator preparation institutions, except The College of Idaho and BYU-Idaho, choose to undergo a CAEP program evaluation. All Idaho educator preparation programs, however, must address both state and CAEP standards when preparing for on-site educator preparation program reviews.

The official vehicle for the approval of existing educator preparation programs in Idaho is the CAEP/Idaho partnership agreement. State standards for evaluating educator preparation programs are those approved by the State Board of Education effective July 1, 2013, and found in the Idaho Standards for Initial Certification of Professional School Personnel manual.

Northwest Nazarene University

A state/CAEP on-site program review visit was held at Northwest Nazarene University on February 28 – March 3, 2015. The team reports from that on-site visit were subsequently submitted for Commission and State Board of Education approval consideration sometime after the 2014-2015 academic year.

COMMITTEE WORK

1. Commission members were kept informed of the status of work (participation of triads; implementation of Individualized Professional Learning Plans or IPLPs and Common Summative Assessments; number of pre-service educators on whom data was collected, etc.) associated with the Network for Transforming Educator Preparation (NTEP) grant to Idaho for the state to participate in a two-year pilot that focused on transforming educator preparation and entry systems to the profession.
2. In order to ensure consistency among institutions, the Commission, through its Standards Committee, received the following clarification of the process for higher education institutions to add endorsements to Idaho teaching certificates:

If an individual is currently certified and wishes to add an endorsement in a new content area, the institution can work with the individual to provide evidence of content, pedagogy, and performance. For endorsements only, the institution can do so regardless of whether it has a Department of Education-approved program in the new content area or not. (For initial certification, the institution must have a Department of Education-approved program in the content area.) If the individual is currently employed in the new content area, the school district and the higher education institution can work on a plan for alternative certification, and the district is required to provide supervision. A higher education institution can accept this as evidence of performance if it deems the evidence as appropriate.

3. During the academic year, the Commission was updated on The Hub (Department of Education website component that directed educators to any professional development program/service provided by the department); Family Advocates (a private, independent, non-profit agency serving ten counties in southwest Idaho to protect and enrich the lives of youth through working to strengthen families and keep youth safe by empowering everyday people); the ProEthica Program (educator ethics training and assessment tool) of Educational Testing Service (ETS); the moral and ethical work of teaching and teacher education (research conducted by two Idaho higher education faculty members); and addiction intervention and recovery services offered by the Idaho Board of Nursing for nursing professionals.
4. The Commission passed the Standards Committee's recommendation to conditionally approve the newly proposed Boise State University Master's in Teaching (MIT) in Special Education program.
5. The Commission funded the participation of various Commission staff members in the National Association of State Directors of Teacher Education and

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Certification (NASDTEC) Professional Practices Institute (PPI); the NASDTEC Winter Symposium; the NASDTEC Annual Conference; and the Idaho State Prevention and Support Conference.

6. Commission staff conducted one ethics hearing during the 2014-2015 academic year.
7. The Commission paid \$2,259.12 for contracted investigative services during the 2014-2015 academic year.
8. The Commission approved revisions to the *Professional Standards Commission Procedures Manual*.
9. The Commission passed the Standards Committee's recommendation to approve the Computer Science standards.
10. The Commission passed the Standards Committee's recommendation to approve the Engineering standards.
11. The Commission passed the Standards Committee's recommendation to conditionally approve the Boise State University newly proposed STEM Engineering endorsement program.
12. The Commission passed the Standards Committee's recommendation to conditionally approve the Boise State University newly proposed Master's in STEM: Computer Science endorsement program.
13. The Commission passed the Standards Committee's recommendation to approve the Communication Arts Foundation Standards as proposed/revised.
14. The Commission funded Idaho's annual \$4,000 membership in NASDTEC and Idaho's \$3,977 membership in CAEP.
15. The Commission passed the Standards Committee's recommendation to approve the Speech and Debate Standards as proposed/revised.
16. The Commission passed the Standards Committee's recommendation to approve the Journalism Standards as proposed/revised.
17. The Commission passed the Standards Committee's recommendation to approve the Deaf/Hard of Hearing Standards as proposed/revised.
18. The Commission passed the Standards Committee's recommendation to approve the revised School Social Worker Standards with one substantive modification of changing the word "challenges" to "considers" in Standard 8, Performance 1.

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19. The Commission passed the Standards Committee's recommendation to conditionally approve the Boise State University newly proposed Master's in Teaching (MIT) Early Childhood program.
20. The Commission passed the Standards Committee's recommendation to conditionally approve the Idaho State University newly proposed Math Consulting Teacher endorsement program.
21. The Commission passed the Standards Committee's recommendation to conditionally approve the Lewis-Clark State College Online Teacher endorsement program.
22. The Commission passed the Standards Committee's recommendation to approve the Health Standards as proposed/revised.
23. The Commission passed the Standards Committee's recommendation to approve the Physical Education Standards as proposed/revised with the following recommended substantive changes: Standard 5, Performance 4: change "stimulates" to "fosters"; Standard 5, Performance 6: change "demonstrate personal competence and effective performance" to "facilitates technical demonstration and effective performance."
24. The Commission passed the Standards Committee's recommendation to approve revisions to the Blind/Visually Impaired and the Deaf/Hard of Hearing Standards as submitted by the standards review teams.
25. The Commission funded regional career fairs in Nampa, Coeur d'Alene, and Moscow; the fairs provided an opportunity where teacher education candidates could meet with district superintendents who were seeking to fill teaching positions within their districts.
26. The Commission passed the Standards Committee's recommendation to approve the adoption of the American Sign Language, Latin, and Mandarin Chinese Praxis II tests and their multi-state standard cut scores as additional avenues for candidates to demonstrate expertise for the World Languages endorsement.
27. The Supervisor/Coordinator of Special Education endorsement, with legislative approval, was eliminated; there were no standards for the endorsement or defined roles and responsibilities differentiating the position from the Special Education Director or Special Education Consulting Teacher.
28. In a ballot election for 2015-2016 Commission officers, Esther Henry was elected chair and Mikki Nuckols was elected vice-chair.

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PSC Revenue/Expense details FY 2015							Index Code 2003		(Budget: Approved 5-30-2014)						
	Jul 14	Aug 14	Sept 14	Oct 14	Nov 14	Dec 14	Jan 15	Feb 15	Mar 15	Apr 15	May 15	June 15			
Revenue (actual)	\$57,916	\$62,320	\$25,065	\$18,653	\$6,579	\$10,124	\$25,681	\$23,035	\$24,117	\$25,848	\$42,841	\$62,024	\$384,202		
													Actual FY15	Est.	
PERSONNEL															
Salaries, benefits	\$20,050	\$26,798	\$18,924	\$18,671	\$18,830	\$18,338	\$25,181	\$18,972	\$18,748	\$18,842	\$17,311	\$17,487	\$238,152	\$205,000	
OPERATING															
PSC-Commission Work															
PSC Mtg Travel/meals	\$87	\$3,507	\$3,161	\$5,095	\$1,504	\$295	\$9	\$6,287	\$2,478	\$4,024	\$706	\$6,223	\$33,375	\$39,000	
Public relations/hearings													\$0	\$0	
Commission Prof Dev & Training													\$0	\$2,500	
Governmental Overhead													\$0	\$13,000	
Legal Services													\$0	\$0	
Committee Work															
Leadership Team													\$0	\$0	
Strategic Planning													\$0	\$0	
SBOE Meetings													\$0	\$0	
Exec. - Printing (brochure/poster)													\$0	\$0	
Investigations/hearings/training	\$1,198	\$1,887	\$40	\$71									\$3,197	\$6,000	
Contract investigative services							\$2,259						\$2,259	\$20,000	
NASDTEC Professional Pract.			\$2,866	\$55	\$1,417	\$2,293							\$6,631	\$7,500	
NASDTEC Dues										\$4,000			\$4,000	\$4,000	
Authorizations													\$0	\$0	
Alternate Routes													\$0	\$0	
Teacher Licensure/Comp													\$0	\$0	
Standards													\$0	\$0	
Standards Maintenance		\$151	\$1,429	\$6,569	\$3,940	\$1,415	\$247	\$6,066					\$19,817	\$11,000	
Praxis													\$0	\$0	
Prep Program Review Re-write													\$0	\$0	
Prep Program Review & Focus visits (PPR) & Training							\$568		\$3,214				\$3,782	\$10,500	
CAEP (NCATE) Partnership dues												\$3,977	\$3,977	\$4,000	
Prof Development Committee													\$0	\$0	
Communication	\$270	\$245	\$230	\$174	\$191	\$316	\$162	\$264	\$109	\$292	\$102	\$254	\$2,609	\$3,000	
Employee Development													\$0	\$500	
Prof. Services-Consultant													\$0	\$0	
Repairs and Maintenance Svcs.& supplies										\$100			\$100	\$750	
Admin. services	\$92	\$142	\$153	\$855	\$53	\$257	\$150	\$229	\$136	\$94	\$93	\$64	\$2,319	\$2,000	
Computer services													\$0	\$250	
Employee Travel Costs				\$142	\$54	\$38		\$40	\$184	\$484	\$400	\$762	\$2,104	\$7,500	
Admin. Supplies (Office supplies)			\$270	\$14			\$15			\$43	\$19	\$11	\$371	\$2,500	
Computer Supplies													\$0	\$250	
Insurance	\$407												\$407	\$500	
Rentals & operating leases			\$2,924					\$2,791					\$5,716	\$5,000	
Payroll/Accounting		\$1,115											\$1,115	\$1,400	
CAPITAL															
Computer equipment	\$253												\$253	\$1,000	
Office equipment	\$257												\$257	\$600	
TOTALS	\$22,613	\$33,844	\$29,999	\$31,646	\$25,989	\$22,952	\$28,591	\$34,649	\$24,869	\$27,879	\$18,630	\$28,779	\$330,440	\$347,750	
Revenue less expenses	\$35,303	\$28,476	(\$4,935)	(\$12,993)	(\$19,410)	(\$12,829)	(\$2,910)	(\$11,614)	(\$752)	(\$2,030)	\$24,211	\$33,245	\$53,762	\$17,310	

Professional Standards Commission Members – 2015-2016

(Updated August 2015)

Clara Allred
Special Education Administrator
Twin Falls SD #411

Margaret Chipman
School Board Member
Weiser SD #431

Kristi Enger
Profession-Technical Education
Division of Professional-Technical Education

Deb Hedeon
Public Higher Education
Idaho State University

Esther Henry, Chair
Secondary Classroom Teacher
Jefferson County Joint SD #251

Dana Johnson
Private Higher Education
Brigham Young University - Idaho

Pete Koehler
State Department of Education
Idaho Department of Education
"

M~~to~~ "Zeyde
Secondary Classroom Teacher
West Ada SD #2

Charlotte McKinney
Secondary Classroom Teacher
Mountain View SD #244

Becky Meyer
Secondary School Principal
Lake Pend Oreille SD #84

Kim Mikolajczyk
School Counselor
Moscow SD #281

Laural Nelson
School Superintendent
Idaho Digital Learning Academy

Mikki Nuckols, Vice Chair
Secondary Classroom Teacher
Bonneville Joint SD #93

Tony Roark
Public Higher Education – Letters and Sciences
Boise State University

Elisa Saffle
Elementary School Principal
Bonneville Joint SD #93

Donna Sulfridge
Elementary Classroom Teacher
Mountain Home SD #193

Heather Van Mullem
Public Higher Education
Lewis-Clark State College

Ginny Welton
Exceptional Child Education
Coeur d'Alene SD #271

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**STATE DEPARTMENT OF EDUCATION
FEBRUARY 18, 2016**

SUBJECT

Utilization of Smarter Balanced® reports from the ISAT

REFERENCE

December 18, 2014

Board approved the Idaho Academic Achievement Standards

December 10, 2015

Board members requested a presentation of what the teacher reports look like from Smarter Balanced® so they could better understand the amount and type of data that are provided.

APPLICABLE STATUTE, RULE, OR POLICY

IDAPA Rule 08.02.03.111.06 - Rules Governing Thoroughness, Idaho Comprehensive Assessment System

BACKGROUND/DISCUSSION

The Idaho State Department of Education - Division of Assessment will present the requested demonstration of the Smarter Balanced reports from the ISAT and how teachers can utilize them to understand where their students are in their learning.

ATTACHMENTS

Attachment 1 - ISAT by Smarter Balanced® Reports
PowerPoint Presentation

Page 3

STAFF COMMENTS AND RECOMMENDATIONS

The Board office and the Department have been contacted by HCS Strategists (Be A Learning Hero) regarding resources that are available for parents to increase their understanding of the statewide assessment as well as resources for making improvements to Idaho's score report that goes out to parents. Erica Felker of HCM Strategists has been working with other states to conduct research around parent score reports for either of the assessments developed by the Smarter Balanced Assessment Consortium (SBAC) or the Partnership for Assessment of Readiness for College and Careers (PARCC) group and has volunteered to help Idaho in conducting parent groups to gather feedback on potential changes to Idaho's Parent Score Report. Board and Department staff have been in conversations with Ms. Felker on how we might be able to use their assistance in Idaho. Her group has provided state specific research for a number of other states that has helped them to enhance their parent score reports, making them more meaningful to parents. Some of their work may be viewed at the Be A Learning Hero website located here: <http://bealearninghero.org/family-guide-smarter-balanced>. Any assistance would be at no charge to Idaho as the research is funded through grants that her organization has received.

**STATE DEPARTMENT OF EDUCATION
FEBRUARY 18, 2016**

BOARD ACTION

This item is for informational purposes only. Any action will be at the Board's discretion.

[illegible]

Interim block reports

Student ID	Student Name	Date of Birth	Gender	Ethnicity	Current
1	John Smith	12/12/2000	M	White	Yellow Triangle
2	Jane Doe	11/11/2000	F	Black	Yellow Triangle
3	Michael Brown	10/10/2000	M	Asian	Yellow Triangle
4	Emily White	09/09/2000	F	White	Yellow Triangle
5	David Black	08/08/2000	M	Black	Yellow Triangle
6	Sarah Green	07/07/2000	F	White	Yellow Triangle
7	James Red	06/06/2000	M	White	Yellow Triangle
8	Olivia Blue	05/05/2000	F	White	Yellow Triangle
9	Benjamin Yellow	04/04/2000	M	White	Yellow Triangle
10	Mia Purple	03/03/2000	F	White	Yellow Triangle
11	Ethan Grey	02/02/2000	M	White	Yellow Triangle
12	Ava Silver	01/01/2000	F	White	Yellow Triangle
13	Noah Gold	31/12/1999	M	White	Yellow Triangle
14	Isabella Bronze	30/12/1999	F	White	Yellow Triangle
15	Liam Copper	29/12/1999	M	White	Yellow Triangle
16	Zoe Nickel	28/12/1999	F	White	Yellow Triangle
17	Lucas Zinc	27/12/1999	M	White	Yellow Triangle
18	Grace Iron	26/12/1999	F	White	Yellow Triangle
19	Henry Steel	25/12/1999	M	White	Yellow Triangle
20	Charlotte Lead	24/12/1999	F	White	Yellow Triangle
21	William Tin	23/12/1999	M	White	Yellow Triangle
22	Amelia Silver	22/12/1999	F	White	Yellow Triangle
23	James Gold	21/12/1999	M	White	Yellow Triangle
24	Isabella Bronze	20/12/1999	F	White	Yellow Triangle
25	Benjamin Copper	19/12/1999	M	White	Yellow Triangle
26	Mia Nickel	18/12/1999	F	White	Yellow Triangle
27	Ethan Zinc	17/12/1999	M	White	Yellow Triangle
28	Ava Iron	16/12/1999	F	White	Yellow Triangle
29	Noah Steel	15/12/1999	M	White	Yellow Triangle
30	Zoe Lead	14/12/1999	F	White	Yellow Triangle
31	Lucas Tin	13/12/1999	M	White	Yellow Triangle
32	Grace Silver	12/12/1999	F	White	Yellow Triangle
33	Henry Gold	11/12/1999	M	White	Yellow Triangle
34	Charlotte Bronze	10/12/1999	F	White	Yellow Triangle
35	William Copper	09/12/1999	M	White	Yellow Triangle
36	Amelia Nickel	08/12/1999	F	White	Yellow Triangle
37	James Zinc	07/12/1999	M	White	Yellow Triangle
38	Isabella Iron	06/12/1999	F	White	Yellow Triangle
39	Benjamin Steel	05/12/1999	M	White	Yellow Triangle
40	Mia Lead	04/12/1999	F	White	Yellow Triangle
41	Ethan Tin	03/12/1999	M	White	Yellow Triangle
42	Ava Silver	02/12/1999	F	White	Yellow Triangle
43	Noah Gold	01/12/1999	M	White	Yellow Triangle
44	Zoe Bronze	31/11/1999	F	White	Yellow Triangle
45	Lucas Copper	30/11/1999	M	White	Yellow Triangle
46	Grace Nickel	29/11/1999	F	White	Yellow Triangle
47	Henry Zinc	28/11/1999	M	White	Yellow Triangle
48	Charlotte Iron	27/11/1999	F	White	Yellow Triangle
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65	James Copper	10/11/1999	M	White	Yellow Triangle
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Individual student report

