## Idaho State Board of Education 2017 Teacher Pipeline Report

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### **Introduction**

As part of the Governor's Task Force for Improving Education (2013) and the subsequent work done by the State Board of Education (Board) in implementing the recommendations regarding tiered certification and a teacher pay "Career Ladder", some discrepancies were revealed regarding certain certification requirements. At the August 2015 Board meeting the Board discussed possible solutions for these issues and heard reports from school districts regarding the difficulty to fill certain positions. The Board reviewed data and reports on educator supply and demand in December of 2015 and then again in August 2016. As a result, Board staff were directed to bring together a broad group of education stakeholders to make recommendations on ways to increase and strengthen the educator pipeline.

The initial meeting of the workgroup was held on February 8, 2017, followed by three subgroup convenings from April 27 through May 3, 2017. The group then formalized early recommendations sent to the Board on April 20, 2017. Areas considered by the workgroup included attracting and retaining candidates in teacher preparation programs, recruiting individuals into the profession through traditional, non-traditional, and alternate pathways, incentivizing and attracting educators to teach in our rural and underserved areas, and recruiting and retaining educators for hard-to-fill subject areas such as special education. On June 6, 2017, and then again on October 12, 2017, the full committee reconvened to further define recommendations identified as critical to developing Idaho's Educator Pipeline. Final recommendations at the conclusion of this report fall into the following three categories:

- 1. Develop an *Idaho Teacher Supply and Demand Report* consisting of multiple data points to determine if, where, and why a teacher shortage exists in Idaho
- 2. Begin developing a coherent policy dialogue

### 3. Further explore workgroup proposals outlined below:

- a. Attract/Recruit: Openly promote teaching as a profession to boost public perception ; Continue to support higher salaries and compensation packages
- b. **Prepare/Certify:** Expand options in preparation and certification to include mastery-based preparation programs that account for experiential credit; closer alignment between secondary and postsecondary education to expedite preparation for high school students interested in teaching
- c. **Retain:** Development and support for teachers including induction programs and greater teacher-leader opportunities; emphasize evaluation for the purpose of professional growth and measurable outcomes that are teacher driven

### **Discussion**

Producing an Idaho Teacher Supply and Demand Report that consists of multiple data points is critical to discovering trends over time and creating a cohesive, statewide dialogue about teacher shortages. The goal for this initial report was to collect baseline data from multiple sources to: 1) begin building consensus around the most meaningful and relevant indicators of supply and demand for Idaho; 2) precisely characterize each of the indicators; 3) define what we expect to learn from the indicators and how they will guide policy, and; 4) determine measurable goals. What follows is an overview of the information the workgroup agreed would be a most useful to begin defining and annual supply and demand report:

- What patterns exist in teacher staffing over the last three years? What are the areas of shortage and surplus in teacher certification? Do these patterns vary by region of the state?
- Are there differences in the teacher shortage areas in charter schools, rural schools, and urban schools?
- What K-12 public school enrollment trends are expected for the next three to five years?
- How do district leaders perceive teacher shortage areas in their own districts?

Regarding the final bullet in this list, Pipeline Workgroup members had access to, and approved, replication of the district leader perception survey utilized in the Minnesota Teacher Supply and Demand Report. At the final meeting held in October 2017, however, a vocal segment of the members indicated concern about the instrument and consequently, the results. For that reason, the perceptions of district leaders regarding teacher shortages in their schools are not officially included in the body of this report. The survey instrument will be revised for future use, and a summary overview of the data originally intended for this report appears as Attachment 3.

Final sources of data used to compile this report include the Teacher Certification Database, School Staffing Reports, Title II Reports and information supplied by the Idaho Department of Labor. Due to multiple adjustments over time affecting the consistency of the Teacher Certification Database, no information collected prior to FY14 was analyzed for inclusion in this report.

All of the information that follows is based upon instructional staff certifications, including CTE, and excluding certificates with **only** Administrator or Pupil Personnel Services endorsements. See Appendix I located in *Attachment 2- Idaho Pipeline Report Detail* for a list of endorsements included, and how they were classified for the purpose of this report. Additionally, to distinguish between urban and rural districts, the NCES Urban-Centric Locale Definitions were used throughout. Those definitions and the classification for each Idaho district is included here as Attachment 4.

### **Findings**

The primary task of the teacher pipeline workgroup was identify to what degree Idaho is experiencing a teaching shortage, drawing upon all available information; anecdotal evidence, survey data, and state reports. As noted in "A Coming Crisis in Teaching?" (Sutcher, Darling-Hammond,& Carver-Thomas, 2016), the term "teacher shortage" is often narrowly defined as an insufficient production of new teachers in light of the size of student enrollments and teacher retirements. However, "teacher staffing problems are driven by a myriad of factors, including not only production of new teachers in various fields, but also teacher turnover, changes in educational programs and pupil-teacher ratios, and the attractiveness of teaching generally and in specific locations" (Sutcher, et al., 2016, p.10). This report will explore a number of characteristics that contribute to shortages in Idaho, and begin to identify where policy can have the greatest impact. Among the findings in this report:

- Approximately 1,873 Idaho instructional certificates are issued annually; of those certificated individuals, approximately 33% do not serve in an Idaho public school
- The attrition rate for Idaho teachers remains at a steady 10% annually, compared to approximately 8% nationally
- Approximately 76% of Idaho's attrition rate is made up of teachers leaving the teaching workforce before reaching retirement age, compared to 66% of teachers nationally

The following report will provide a foundation for understanding the issues facing Idaho's teacher pipeline, and attempt to align the workgroup's recommendations for Board consideration.

### Part One: Teacher Supply in Idaho

This section of the report will explore the number of teachers being produced by Idaho's universities and colleges that may be eligible for certification, and provide an overview of Idaho's existing supply of teachers and their content area endorsements.

Detail on candidates *enrolled* in Idaho's educator preparation programs and information on the content area emphasis in which they are being prepared has been inconsistent, and therefore is not included in this report. Definitions of enrollment and content area have now been defined for use by all institutions, and this data will be collected for the 2016-17 academic year and beyond. Title II information on those *completing* Idaho's programs is consistent and reliable only for the two years included below.

Year	Completers by Program							Totals
	Boise	BYU	Idaho	College of	LCSC	NNU	U of	
	State	Idaho	State	Idaho			Idaho	
2014-15	196	320	83	12	48	54	108	821
2015-16	172	384	92	20	49	56	99	872

		1 11	4 144 1 1 1	1 4	
Table 1: Potential new teachers (	Completers)	produced by	y traditional Idano	educator pre	paration programs

In summary, while we do not have enough accurate data to determine a trend, in the last two years Idaho institutions of higher education have annually produced approximately 846 completers who are generally eligible for certification. Beginning with data from FY17, the content areas in which these candidates are being prepared will be closely followed. Some of Idaho's institutions have made concerted efforts to increase the number of candidates qualified for certification in Special Education and STEM fields.

The following is a breakdown of the approximately 15,000 active instructional staff by content area endorsement. Total certificates issued include teachers receiving full certification as well as interim certification. Interim certification is temporary, and can only be utilized for a maximum of three years while a candidate is meeting the state's requirements for full certification (with the exception of the Provisional and Alternate Authorization to Endorsement). Interim certification that is renewable for up to three years encompasses all Board-approved alternative pathways. Alternative pathways include American Board Certified Teachers of Excellence (ABCTE), Teach for America (TFA), Content-Specialist Alternative Authorization, and Teacher to New Certificate. Alternative Authorization to Endorsement and Provisional certificate routes are valid for a period of one year.

Table 2: Number receiving Idano certifications issued with Special Education endorseme	receiving Idaho certifications issued with Special Education endor	rsement
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Year	Total SpEd certificates issued
2013-2014	260
2014-2015	237
2015-2016	282
2016-2017	292

Note: A teacher that received more than one certification would only appear once in this tally.

Table 3: Number receiving Idaho certifications issued with Career Technical endorsement

Year	Total CTE certificates issued
2013-2014	33
2014-2015	51
2015-2016	61
2016-2017	56

Note: A teacher that received more than one certification would only appear once in this tally.

#### Table 4: Idaho certifications issued for content endorsements, by area of assignment

STEM Content Areas						
	Mathematics	Life and Physical Science	Computer and Informational Systems			
2013-2014	187	142	19			
2014-2015	150	138	21			
2015-2016	172	171	19			
2016-2017	207	184	14			

	English						
	Language and						
	Literature	World Language	Humanities				
2013-2014	436	74	568				
2014-2015	380	68	500				
2015-2016	407	48	485				
2016-2017	416	63	488				

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Other			
	Social Science	Fine and Performing Arts	Physical, Health, and Safety
2013-2014	213	247	97
2014-2015	192	194	75
2015-2016	168	200	75
2016-2017	187	173	86

Note: Area of assignment was determined by using the crosswalk between endorsements and assignments provided by SDE in the 2016-17 Assignment Credential Manual. See appendix found in Attachment A for a list of which endorsements are counted in each category. A teacher that received more than one endorsement would appear more than once in these tables; duplicated across content areas but not within.

In general, while the number of teachers certified to teach STEM courses has increased, the number of teachers certified to teach other subjects has decreased.

The following table illustrates the total number of individuals issued an initial certificate to teach in Idaho, including the percentages of those who were issued a certificate but did not choose to teach in an Idaho public school.

		Certifica	Certificates issued to those who were employed in Idaho				
		Academic Certificates				employed	
Certification						as	
period is						instructional	
from Sept 1-	Total					staff in an	
August 31	Total		State of fi	rst certification		Dublic	
	issued	Total	Idaho	Other state	CTF Certificates	School	
	155000	Total	Idailo	Other state	CTL certificates	Bellool	
2013-2014	1,932	1,249	828	421	33	35%	
2014-2015	1,720	1,180	782	398	51	31%	
2015-2016	1,889	1,298	909	389	61	31%	
2016-2017	1,952	1,234	821	413	56	37%	

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Lable 5:	Number receiving r	iew idano cern	neamons (non-	annncatea). W	ith instructional	endorsements
I able et	riumber recering r	ten ruuno cere	nearions (non	auplicatea), "	in mor accional	chaor semenes

Notes: Certification period is from Sept 1-August 31. Excludes certifications with only Administration or Pupil Personnel Services endorsements. A teacher that received more than one certification would only appear once in this tally. Total certificates issued includes certificates issued to teachers who never had a teaching assignment in Idaho. State of first certification is not available for these teachers. CTE Certificates are those certificates with only CTE endorsements. Teachers with both academic and CTE endorsements would be included in the Academic certificates group

It is significant to note that approximately *one third* of the teachers who become certified in Idaho each year are not employed in Idaho as teachers. This critical finding must be further studied. Are these potential Idaho teachers using their teaching certificates in border states? Are they choosing other professions within the state? Are these potential educators choosing to stay home with their families rather than teach and, if so, could they be enticed into the classroom with part-time opportunities and job sharing? Or, are these teachers unable to find jobs in the content area in which they were prepared, or the geographic locations they desire?

Future reports will track the subject areas held by this pool of teachers to further understand the population. If it can be determined why approximately 700 new teachers choose not to (or are unable to) teach in Idaho public schools every year, state policymakers would have critical information to shape future education policy.

### Part Two: Teacher Demand in Idaho

### **Growth Projections**

The Idaho Department of Labor projects the average increase in demand for teachers to average 1.5% annually over time.



## Figure 1. Teacher Demand Projections 2014-2024

Idaho Department of Labor Long Term Projections

The number of instructional staff working in Idaho's public schools averages 15,530 each year. After accounting for Idaho's steady attrition rate that results in the loss of approximately 1,553

teachers annually, an additional 233 must be hired in various districts across the state to counter growth of student populations. The following tables illustrate attrition patterns of teachers with instructional teaching assignments.

### Attrition of Idaho Teachers Statewide

According to national statistics, teacher attrition compared to other professions is high, and averages 8% annually (Sutcher, et al., 2016,). In the following table, Idaho's attrition rates are examined according to a number of factors; age, years of experience, by cohort, and by region. A teacher is counted as leaving if that teacher had an instructional assignment in one year and did not have an instructional assignment in the next year.

 Table 6: Number of teachers with instructional assignments <u>who have</u> instructional assignments in the next school year

senoor year					
	Number with instructional assignment	Number with instructional assignment in next year	Attrition Rate	Number without instructional assignment but with Administrative assignment	Share who leave to become only Administrators
2013-2014	15,322	13,814	10%	108	1%
2014-2015	15,507	13,922	10%	98	1%
2015-2016	15,767	14,116	10%	114	1%

In summary, approximately ten percent of teachers with instructional assignments in one year do not have instructional assignments in the next year. Of those, only one percent left to become full-time administrators.

	Attritio assignmen assig	Attrition Rate - Share with an assignment in base year but without assignment in next year					
	2013-2014	2013-2014 2014-2015 2015-201					
Age 24 or younger	16%	18%	18%				
Age 25 to 29	11%	13%	14%				
Age 30 to 34	10%	9%	11%				
Age 35 to 39	7%	8%	7%				
Age 40 to 44	7%	6%	6%				
Age 45 to 49	5%	6%	7%				
Age 50 to 54	6%	7%	6%				
Age 55 to 59	13%	13%	14%				
Age 60 to 64	23%	28%	24%				
Age 65 and older	31%	35%	36%				
-							
Overall	10%	11%	10%				

 Table 7: Number of teachers with instructional assignments who do not have instructional assignments in the next school year, by age

Note: Age is measured as of base year. Rates higher than the overall rate are highlighted.

In summary, attrition rates in the Idaho teaching population are highest for those under the age of 35 and those over the age of 54. Of the 10% who leave the profession annually, those teachers aged 55 years or older account for 24% of Idaho's annual attrition on average, with 76% clearly leaving for reasons other than retirement. Nationally, pre-retirement attrition accounts for 66% of overall teacher attrition (Sutcher, et al., 2016, p. 3). Considering that Idaho's average annual rate of attrition is equal to approximately 1,500 teachers lost, it can be estimated that 360 retire *with 1,140 leaving teaching each year due to other compelling factors*. It is clear that Idaho is losing teachers for reasons other than retirement at a rate that is higher than the national average. This is an area that demands further research.

 Table 8: Number of teachers with instructional assignments who do not have instructional assignments in the next school year, by years of experience

Attrition Rate - Share with an assignment in base year but without assignment in next year							
2013-2014	2014-2015	2015-2016					
14%	17%	15%					
10%	12%	11%					
10%	9%	11%					
7%	8%	8%					
10%	10%	10%					
10%	11%	10%					
	Attrition Rate - Shan year but without ass 2013-2014 14% 10% 10% 7% 10%	Attrition Rate - Share with an assign year but without assignment in next         2013-2014       2014-2015         14%       17%         10%       12%         10%       9%         7%       8%         10%       10%					

Note: Experience is measured as of base year. Attrition rates higher than the overall rate are highlighted. Years of experience only includes years of teaching K-12 in Idaho.

Approximately 15 percent of new teachers leave after the first year of teaching. This is also an important statistic for further research. Do the bulk of those leaving hold interim certificates or full certificates? Are they exiting voluntarily or not?

What about beyond the first year? National estimates have suggested that "new teachers leave at rates of somewhere between 19% and 30% over their first five years of teaching" (Sutcher, et al., 2016, p.7). Using available data to follow two cohorts of new Idaho teachers, similar patterns are revealed.







Table 9 Detail	2013-2014			
	(Base Year)	2014-2015	2015-2016	2016-2017
Had instructional assignment	1,399	1,207	1,065	963
Returned from break in service			17	14
Did not have instructional assignment		192	317	422
	2014-2015			
	(Base Year)	2015-2016	2016-2017	
Had instructional assignment	1,363	1,131	1,002	
Returned from break in service			28	
Did not have instructional assignment		232	333	

Note: This only includes teachers with 0 years of teaching experience in the base year.

In summary, approximately thirty percent of teachers who started teaching in 2013-2014 exited from teaching in an Idaho public school by 2016-2017. The trends look similar for teachers who started teaching in 2014-2015.

To give greater context to these statistics, it should be noted that one way to characterize the first three years of a teacher's experience is based upon the type of contract issued by the employing district:

- Category I Contract 1 year contract Non-renewable and generally signed *after August* 1st
- Category II Contract 1st or 2nd year contract Renewable and generally signed before August 1st
- Category III Contract 3rd year of employment *or staff who have not been recommended for professional endorsement/status*
- Renewable Contract 4th year and beyond met professional endorsement/status

In the first three years of certification, dismissing a teacher can be done easily at the discretion of the district. Recently, evaluation reviews of teacher performance conducted through the State Board of Education have provided evidence that districts are diligently working to either

remediate or release teachers who are not proficient prior to issuing a renewable contract in the fourth year.

As noted earlier, it will be critical to understand the percentage of teachers exiting the profession voluntarily compared to those being dismissed within each new teaching cohort. In either scenario, voluntary or not, a strong case can be made for induction programs and mentor support. Countless studies have concluded that a robust induction program with well-trained, effective mentors will decrease the attrition of new teachers. "Each time a teacher leaves a district, it not only increases demand but also imposes replacement costs on districts. A decade ago, replacement costs for teachers were estimated to range from around \$4,400 in a small rural district to nearly \$18,000 in a large urban district for every teacher who leaves" (Sutcher, et al., 2016, p.5).

Referring to Table 9 below, an average of 1,553 teachers leave Idaho public schools each year. Using the lowest replacement cost estimate of \$4,400 per teacher (*from a decade ago*), we can conclude that Idaho districts spend \$6,833,200.00 every year replacing teachers lost to attrition. The actual cost is likely two to three times higher.

Statewide, between attrition (which includes retiring teachers) and student population growth, nearly 2,000 teachers are needed each year to meet the demands of Idaho school districts:

	Number with instructional assignment	Number of hires needed to account for 10% attrition annually	Number of hires needed to account for projected growth annually	TOTAL ANNUAL HIRES OF INSTRUCTIONAL STAFF NEEDED TO STAFF IDAHO SCHOOLS
2013-2014	15,322	1,532	230	1,762
2014-2015	15,507	1,551	233	1,784
2015-2016	15,767	1,577	236	1,813

Table 10: Number of instructional staff hires needed annually to address attrition and growth

If we were to use the narrow definition of "teacher shortage", characterized by a demand comprised only of replacements for retiring teachers and new teachers needed to cover growth in enrollments, Idaho should not have an issue. With Idaho's traditional educator preparation programs steadily producing an average of 846 teachers annually, and almost 400 teachers from out of state becoming certificated in Idaho (Table 5) there should be more than enough newly certified teachers annually to replace the average 360 teachers who retire each year and the 233 needed annually to address student population growth. In fact, there would be a surplus of teachers certificated every year. However, statewide data from multiple sources indicates steady, preretirement age attrition to be the greatest contributor to Idaho's teacher shortage; and a critical issue we must further explore to define the specific causes.

### Attrition of Idaho Teachers by District Type and Region

This section of the report examines attrition patterns of teachers with instructional teaching assignments by district type and region. As in previous tables, a teacher is counted as leaving if that teacher had an instructional assignment in one year in a district and did not have an instructional assignment in the next

year in that same district. Therefore, this measures attrition both from the profession as well as from the individual district.

The number of teachers with a teaching assignment in each group is tabulated, as well as the number of teachers from that group who left the district. Some teachers appear in more than one district. For instance, in the 2013-2014 school year, 906 teachers appeared in more than one district. Of those, 861 were in 2 districts, 33 were in 3 districts, 2 were in 4 districts, 1 was in 5 districts, and 9 were in 6 districts. Therefore the total teachers in each school year will not match the total teachers in earlier graphs and figures.

#### Table 11: District-level attrition rates by locale

	2013-201	4	2014-201	5	2015-2016		
	Number of	District-	Number of	District-	Number of	District-	
	teachers with	level	teachers with	level	teachers with	level	
	instructional	Attrition	instructional	Attrition	instructional	Attrition	
	assignments	Rate	assignments	Rate	assignments	Rate	
Urban	12,732	13%	12,981	14%	13,047	13%	
Rural, Fringe &							
Distant	2,059	17%	2,026	18%	2,057	16%	
Rural, Remote	1,079	16%	1,070	15%	1,075	16%	
Virtual	412	12%	453	10%	484	11%	

Note: Locale was determined using categories defined by the National Center for Education Statistics (NCES).

In summary, districts in rural locales have more turnover than districts in urban locales.

	2013-201	4	2014-2015		2015-201	16	
	Number of	District-	Number of	District-	Number of	District-	
	teachers with	level	teachers with	level	teachers with	level	
	instructional	Attrition	instructional	Attrition	instructional	Attrition	
Region	assignments	Rate	assignments	Rate	assignments	Rate	
1	1,736	12%	1,764	13%	1,779	13%	
2	977	11%	927	11%	940	13%	
3	6,867	14%	6,964	14%	7,058	13%	
4	2,268	14%	2,307	17%	2,310	15%	
5	1,438	8%	1,480	17%	1,438	13%	
6	2,584	16%	2,635	16%	2,654	16%	
Virtual	412	12%	453	10%	484	11%	

#### Table 12: District-level attrition rates by region

In summary, Regions 4 and 6 consistently have among the highest district-level attrition rates although there is not a lot of variation between regions.

	2013-2	014	2014-2	015	2015-2016		
	Number of		Number of		Number of		
	first-year		first-year		first-year		
	teachers	District-	teachers	District-	teachers	District-	
	with	level	with	level	with	level	
	instructional	Attrition	instructional	Attrition	instructional	Attrition	
	assignments	Rate	assignments	Rate	assignments	Rate	
Urban	1,090	22%	1,120	24%	1,232	19%	
Rural, Fringe &							
Distant	223	21%	207	20%	181	33%	
Rural, Remote	124	27%	90	23%	89	20%	
Virtual	58	14%	27	26%	31	19%	

#### Table 13: One-year district-level attrition for first-year teachers

Note: This measures attrition following the first-year of teaching for teachers with instructional assignments.

In summary, there is not a clear pattern of differences in district-level attrition for first-year teachers by locale.

#### Prevalence of Alternative Pathways to Certification

This section of the report examines the number of instructional staff working on interim certificates while pursuing full state certification. Pathways represented below encompass both traditional and non-traditional preparation programs.

It is important to note that pathways to certification recorded below are based upon information supplied by the Teacher Certification Database through FY16, but do not reflect current practice. Effective March 25, 2016, the *Teacher to New* designation was split into two markedly different routes in order to align with changes made in IDAPA 08.02.02.021.02 and 08.02.02.042.01. Rule now defines a clear distinction between a fully certified teacher pursuing another certificate type (either pupil personnel or administrative) and a fully certified teacher pursuing another area of endorsement. The *Teacher to New* alternative pathway to a new certificate may be granted for a maximum of three years. The *Alternative Authorization to Endorsement* is only valid for one year, but provides three different options by which to pursue the endorsement.

Because it appears that at this point the Teacher Certification Database has not yet been updated to provide data that represents the above changes, effective FY17, Board staff will work closely with the department to ensure future data is captured in detail to reflect this important distinction.

2013-2014	ABCTE	Content Specialist		Prov Auth	Teacher to New	TFA	Share of teachers	
Region 1			5	4		16		2%
Region 2			3	4		29		4%
Region 3	38		14	57		79		3%
Region 4	19		11	17		42		4%
Region 5	17		3	22		29		5%
Region 6	25		3	43		27		4%

Table 14:	Types and	Numbers	of Alter	native Pa	thwavs to	Certification	. by Region
I GOIC I II	L J PCD unu	1 (annoer o	or reneers	incite i u	chi way b co	Cer mication	, of megion

Charter schools	15		3	16		20			6%
Total	114		42	163		242			
2014-2015	ABCTE	Content Specialist		Prov Auth	Teacher to New		TFA	Share of teachers	
Region 1			1	6		24			2%
Region 2	1		5	3		16			3%
Region 3	28		23	41		84			3%
Region 4	9		10	35		37			4%
Region 5	4		9	15		21			4%
Region 6	12		7	36		32			4%
Charter schools	11		5	23		30			7%
Total	65		60	159		244			
		Content		Prov	Teacher to			Share of	
2015-2016	ABCTE	Specialist		Auth	New		TFA	teachers	
Region 1	2		22			29			3%
Region 2			16			22			5%
Region 3	41		106			72	14		4%
Region 4	26		102			38			8%
Region 5	7		50			24			6%
Region 6	30		57			34			5%
Charter schools	13		46			23			8%
Total	119		399	0		242	14		

2013-2014	ABCTE	Content Specialist	Prov Auth	Teacher to New	TFA	Share of instructional teachers
Urban	85	31	108	136		3%
Rural, Fringe & Distant	7	5	16	42		4%
Rural, Remote	7	3	23	44		8%
Total	114	42	163	242		
2014-2015	ABCTE	Content Specialist	Prov Auth	Teacher to New	TFA	Share of instructional teachers
Urban	41	43	102	135		3%
Rural, Fringe &						
Distant	7	5	21	48		5%
Rural, Remote	6	7	13	31		6%
Total	65	60	159	244		
2015-2016	ABCTE	Content Specialist	Prov Auth	Teacher to New	TFA	Share of instructional teachers
Urban	88	251		129	14	4%

Total	119	399	0	242	14	970
Rural Remote	7	45		36		9%
Rural, Fringe & Distant	11	57		54		7%

Note: Information on teaching pathways was included only for assignments in public schools. All Public Charter School Commission-authorized charter schools should have been identified. However, district-authorized charter schools may or may not have been identified depending on how the district name was entered in the report.

Though alternative pathways to certification (alternative authorizations) are sometimes used to bring in teachers with unique skill sets for particular types of programs, these authorizations generally denote a district trying to meet a hard-to-fill position due to either a scarcity of teachers in a particular content area or difficulty in drawing candidates to a geographic location. From the above tables, it is clear that the percentage of teachers on some form of interim certificate has increased in every region over the last two years, but particularly in Region 4 where the number of alternative authorizations doubled in 2015-16. It also appears that the gap between fully certified staff vs. interim staff is widening between urban districts and all types of rural districts; fringe, distant, and remote. Not surprisingly, Rural Remote districts consistently struggle with staffing issues.

While the precise data from last year was not yet available to incorporate into this report, according to the Department of Education the trend continues. The number of approvals for alternative authorizations granted in FY17 was 931, a 17% increase over FY16, which signifies that nearly 5% of Idaho's teacher population is not fully certificated. To put this in context, in one out of every twenty Idaho classrooms, a teacher who has not fully met the state's minimal certification requirements is responsible for our students' learning.

### **Recommendations**

The following recommendations to the Board are consistent with the early recommendations presented at the April 2017 Board Meeting,

- 1. Establish a format for a standardized Teacher Supply and Demand Report for the purpose of gauging measurable goals. Using the information collected for this report as a starting point, develop a format for all future Teacher Supply and Demand reports. Begin building consensus around the most meaningful and relevant indicators of supply and demand for Idaho and precisely characterize each. Partnership with the State Department of Education is essential to ensure that indicators are well-defined, and that data can be consistently captured without further burdening school districts with additional reporting requirements. It is recommended a small committee convenes to further define what we expect to learn from the indicators, how those indicators might inform current and future policy, and set measurable goals to alleviate holes in the teacher pipeline.
- 2. Establish a process to ensure alignment between policy recommendations and critical teacher pipeline data. Using this report to begin developing a consistent policy dialogue, only Pipeline Workgroup recommendations supported by current data will be prioritized for action. A process for vetting teacher pipeline data against proposed policy should be developed to ensure consistency and efficacy in addressing Idaho's teacher pipeline issues over time.

**3.** In the coming year, begin to implement workgroup recommendations that are supported by the data provided regarding Idaho's teacher pipeline. The following are the specific, actionable recommendations created by the Pipeline Workgroup over the course of the last ten months. At the October 12, 2017 meeting, workgroup members voted on ten specific recommendations. Twenty-three of the thirty-seven members participated. All of the recommendations were unanimously supported with the exception of six "no" votes regarding the establishment of a mastery-based pathway to certification. Once it was agreed that Idaho's colleges and universities would work together to quickly establish a single mastery pathway before seeking outside providers, the recommendation received full support.

Each recommendation is listed below. Though work group members had access to preliminary data, the information presented in this report was not yet available at the October meeting. From the first convening in February 2017, the intention of the workgroup was to propose action items grounded in fact and best practices. Of the ten initial recommendations, only those supported by current data are being proposed for immediate action. All others are categorized as items for future consideration. Additionally, if a recommendation has been cited as a "top idea" by the Education Policy Center of the American Institutes for Research (AIR), it is noted here with references to which other states are engaged in similar work.

#### a) Attract/Recruit: Attracting talent and creating incentives to teach

According to information drawn from the Department of Education's Teacher Certification Database, maintaining our current teaching workforce must be Idaho's highest priority, not necessarily attracting new talent and incentivizing teaching; the exception being districts designated within the rural categories. Incentives to teacher should be targeted to support rural districts, but statewide the priority must be focused on retaining the current teacher workforce. For these reasons the following two action items are recommended for immediate action:

- i. Explore incentives to teach in rural districts: Loan forgiveness, housing options, hiring bonuses, and scholarships for candidates committing to district the district for a specified period of time
- ii. Continue to support higher salaries and compensation packages / Fund the third rung of the Career Ladder (Cited by AIR referencing work being done in Nevada, Arizona, Minnesota, New Mexico, Tennessee, and Louisiana)

Recommendations for future consideration include:

- iii. Develop a public service announcement campaign uniquely focused on the Idaho lifestyle and Idaho schools to attract new teachers
- iv. Explore statewide incentives to pursue teaching
- v. Create opportunities for scholarships to support full-time student teachers

#### b) Prepare/Certify: Alternate routes and "Grow Your Own" strategies

Based upon the increasing number of Alternative Authorizations being issued, both recommendations in this category are being prioritized. In November 2017, the Board acted proactively in approving a mastery-based route to teaching that will embrace the same rigor and utilize the same performance assessments as traditional routes to teacher preparation, but be noticeably more affordable than current routes. The length of time it generally takes to get a teacher fully certified through the current pathways is also significantly decreased in this mastery-based model. While policymakers strive to address the issues at the core of our "leaking" teacher pipeline, vacancies throughout the state must be filled with competent candidates that will be well-supported, and more likely to remain in those teaching positions for the long run. Additionally, a dual credit program must be developed to assist interested high school students in pursuing teaching. This is especially critical for districts located in rural remote areas to grow their own teaching force. The program must be affordable and expedient.

- vi. Develop a Mastery-based Content Specialist program to supplement the current alternative authorizations
- vii. Closer alignment between secondary and postsecondary education courses and increase specific dual credit opportunities to expedite preparation for high school students interested in teaching
- c) Retain: Development and support for all teachers, including induction programs, evaluation feedback, and teacher leadership opportunities It is clear that this area, retaining Idaho's teachers, must be the area of greatest focus and immediate attention. Further research is critical to determine the key issues that are compelling Idaho teachers to leave the classroom. In the meantime, however, work group recommendations mirror best practices in teacher retention nationally.
  - viii. Support mentor program standards and explore a variety of innovative mentoring models, training supports, resources (Cited by AIR referencing work being done to develop robust induction programs and mentoring in Arizona, New Mexico, Louisiana, Michigan, Colorado, Connecticut, Delaware, New Jersey, Oregon, and Massachusetts)
  - ix. Emphasize evaluation practices that balance accountability and teacher driven professional growth with measurable outcomes (Cited by AIR referencing evaluation measures that encourage professional growth implemented in Kentucky, Washington, and New York)
  - x. Explore option for a "Teacher Backpack" through reallocation of a percentage of PD money to support teachers in individualizing their professional growth opportunities and pursuing leadership roles according to their Individualized Professional Learning Plan (Cited by AIR referencing work being done to develop professional learning opportunities resulting in greater leadership roles for teachers in New

Mexico, Louisiana, Michigan, Delaware, Oregon, New Mexico, North Dakota, Minnesota, Tennessee, and Nevada)

### **Conclusion**

Retention is clearly the primary issue facing Idaho's supply of highly effective teachers. Because 76% of the 1,550 teachers who leave the profession every year exit prior to retirement age, Idaho's rate of preretirement teacher attrition is 10% higher than the national average. Idaho's traditional educator preparation programs are steadily producing an average of 846 teachers annually and Idaho issues approximately 400 certificates to teachers from other states; this should be more than enough newly certified teachers to replace the average 360 teachers who retire and the 233 needed annually to address student population growth. Until Idaho's leaky pipeline is addressed, however, teacher shortages will have a constant presence in our education landscape.

Idaho policymakers may want to consider creating a research agenda that follows cohorts of teachers from preparation through their first five years of teaching, comparing attrition rates between those who are fully certified versus those utilizing alternate routes, and distinguishing whether they are leaving the classroom voluntarily or not. Another critical area for research would be to understand why 33% of the teachers who receive an initial Idaho teaching certificate choose not to serve in our public schools, perhaps by incorporating a survey as part of the certification application process or upon graduation from Idaho preparation programs. Finally, it is most critical to the health of Idaho education to discover the contributing circumstances that cause over 1,000 teachers to leave teaching every year for reasons other than retirement.

As we strive to better understand the factors that underlie the attrition in our teaching workforce across the state, we will be able to recognize those policy options that are addressing the true challenges in preparing and retaining high quality teachers. However, until we have identified the issues that best characterize the faults in Idaho's teacher pipeline, some major factors influencing national teacher retention have been identified (Sutcher, et al., 2016,) which can be acted upon immediately:

1) Compensation that is competitive with other occupations;

2) Preparation that focuses on pedagogical training and is affordable;

3) Mentoring and induction programs that utilize trained mentors and adequate release time for collaboration.

The Pipeline Workgroup has offered actionable recommendations that touch on each of these categories.

Reference:

Sutcher, L., Darling-Hammond, L., & Carver-Thomas, D. (2016). A coming crisis in teaching? Teacher supply, demand, and shortages in the US. *Learning Policy Institute*.

### **Attachment 2. Pipeline Report Detail**

## 2017 Teacher Pipeline Report<sup>1</sup>

Table 1: IHE Completers

Table 2: Number receiving New Idaho certifications (non-duplicated), instructional endorsements only

Significant fact: About a third of instructional teachers who are certified in Idaho each year are not employed in Idaho. The number of instructional teachers certified and employed in Idaho is relatively constant.

		Certificat	Certificates issued to those who were employed in Idaho			
		Ac	ademic Cer	tificates		
	Total certificates		Stat cert	e of first tification		Share not employed in
	issued	Total	Idaho	Other state	CTE Certificates	Idaho
2013-2014	1,932	1,249	828	421	33	35%
2014-2015	1,720	1,180	782	398	51	31%
2015-2016	1,889	1,298	909	389	61	31%
2016-2017	1,952	1,234	821	413	56	37%

Notes: Excludes certifications with only Administration or Pupil Personnel Services endorsements. A teacher that received more than one certification would only appear once in this tally. Total certificates issued includes certificates issued to teachers who never had a teaching assignment in Idaho. State of first certification is not available for these teachers. CTE Certificates are those certificates with only CTE endorsements. Teachers with both academic and CTE endorsements would be included in the Academic certificates group.

Table 3: Idaho certifications issued by school level (duplicated), instructional endorsements only

Significant fact: The number of elementary and secondary certificates issued in 2016-2017 is the same as the number issued in 2013-2014.

	Elementary	Secondary
2013-2014	1,044	831
2014-2015	866	735
2015-2016	1,049	780
2016-2017	1,042	829

Notes: Excludes certifications with only Administration or Pupil Personnel Services endorsements. A teacher that received more than one certification could appear more than once in this tally. Excludes CTE only endorsements as they would be eligible to teach only at the Secondary level. This covers all certificates issued. School level was determined by the endorsements issued. See Appendix I for a list of endorsements and how they were classified. Endorsements could also cover All Grades – these endorsements were not included in this analysis.

<sup>1</sup> Cathleen M. McHugh, Ph.D. Principal Research Analyst Idaho State Board of Education <u>cathleen.mchugh@osbe.idaho.gov</u>

Table 4: Number receiving Idaho certifications issued with Special Education endorsements

Significant fact: The number of certifications issued with Special Education endorsements is higher in 2016-2017 than in any other year.

	Total certificates
	issued
2013-2014	260
2014-2015	237
2015-2016	282
2016-2017	292

Notes: A teacher that received more than one certification would only appear once in this tally.

Table 5: Idaho certifications issued for select secondary endorsements, by area of assignment

Significant fact: While the number of teachers certified to teach STEM courses has increased, the number of teachers certified to teach other subjects has decreased.

#### STEM

	Mathematics	Life and Physical Science	Computer and Informational Systems
2013-2014	187	142	19
2014-2015	150	138	21
2015-2016	172	171	19
2016-2017	207	184	14

#### Languages and Humanities

	English		
	Language and	World	
	Literature	Language	Humanities
2013-2014	436	74	568
2014-2015	380	68	500
2015-2016	407	48	485
2016-2017	416	63	488

#### Other

		Fine and	Physical, Health and	
	Social Science	Performing Arts	Safety	
2013-2014	213	247	,	97
2014-2015	192	194		75
2015-2016	168	200		75
2016-2017	187	173		86

Note: Area of assignment was determined by using the crosswalk between endorsements and assignments provided by SDE in the 2016-17 Assignment Credential Manual. See appendix for a list of which endorsements are counted in each category. Special education endorsements were not included. A teacher would appear only once in each subject category but may appear in more than one subject category.

#### What are the demographic characteristics of teachers?

This section of the report examines characteristics of teachers who had instructional teaching assignments. Teachers with only summer school teaching assignments were excluded. Assignments were only included if they were instructional. An assignment was categorized as being instructional if it fell into one of the following subject matter areas:

- 00: Elementary Education
- 01 & 51: English Language and Literature
- 02 & 52: Mathematics
- 03 & 53: Life and Physical Science
- 04 & 54: Social Science
- 05 & 55: Fine and Performing Arts
- 06 & 56: World Language
- 07 & 57: Humanities
- 08 & 58: Physical, Health, and Safety Education
- 09 & 59: Military Science
- 10 & 60: Computer and Information Systems
- 11 & 61: Communications and Audio/Visual Technology
- 12 & 62: Business and Marketing
- 13 & 63: Manufacturing
- 14: Health Care Sciences CTE
- 15: Public, Protective, and Governmental Services CTE
- 16: Hospitality and Tourism CTE
- 17 & 67: Architecture and Construction
- 18 & 68: Agriculture, Food, and Natural Resources
- 19 & 69: Human Services
- 20 & 70: Transportation, Distribution, and Logistics
- 21 & 71: Engineering and Technology
- 23 & 73: Special Education Services

Assignments were categorized as not being instructional if they fell into one of the following subject matter areas:

- 22 & 72: Miscellaneous/Elective Course Only
- 31: Teacher Support Certified
- 32: Pupil Personnel Services Certified
- 33: Education Media Certified
- 4X: Administration Certified
- 86: Early Graduation

Assignments that were restricted or only served Pre-Kindergarten were also excluded.

Table 6: Age

16% 14% 12% 10% 8% 6%



Significant fact: Teachers with instructional assignments are fairly evenly distributed across the different age groups.









	2013-2014	2014-2015	2015-2016	2016-2017
Age 24 or younger	3%	3%	3%	3%
	499	508	501	552
Age 25 to 29	10%	10%	10%	10%
	1,540	1,561	1,606	1,590
Age 30 to 34	12%	13%	12%	12%
	1,902	1,963	1,957	1,946
Age 35 to 39	13%	13%	14%	14%
	2,022	2,044	2,145	2,230
Age 40 to 44	15%	15%	15%	15%
	2,295	2,309	2,340	2,398
Age 45 to 49	13%	13%	14%	15%
	2,025	2,090	2,236	2,362
Age 50 to 54	13%	13%	13%	13%
	2,036	2,039	2,020	2,007
Age 55 to 59	12%	12%	11%	11%
	1,813	1,793	1,771	1,775
Age 60 to 64	6%	6%	6%	6%
	995	974	926	921
Age 65 and older	1%	1%	2%	2%
	194	225	252	253

#### Table 8: Race/ethnicity



Significant fact: There has been an increase in the number of Hispanic teachers with instructional assignments. However, the vast majority of teachers with instructional assignments are White.

	2013-2014	2014-2015	2015-2016	2016-2017
American Indian or Alaska				
Native	0.2%	0.3%	0.2%	0.2%
	35	41	37	35
Hispanic	2%	2%	2%	2%
	315	323	347	376
White	97%	97%	97%	96%
	14,831	15,003	15,224	15,463
Other	1%	1%	1%	1%
	141	140	159	161

Note: Other race includes those identified as Asian, Native Hawaiian or other Pacific Islander, Black or African American, Two or more races, and those missing data on race/ethnicity.

#### Table 9: Highest Degree Earned

Significant fact: The vast majority of teachers with instructional assignments have either a Bachelor or a Master degree. Over the past four years, there has been a steady decrease in the share with a Master degree and a corresponding increase in the share with a Bachelor degree.



	2013-2014	2014-2015	2015-2016	2016-2017
Associate or less	0.5%	0.5%	0.6%	0.7%
	72	77	93	118
Bachelor	61%	62%	63%	65%
	9,274	9,604	9,985	10,378
Master	37%	36%	35%	33%
	5,704	5,578	5,449	5,312
Ph.D.	2%	2%	2%	1%
	272	248	240	226

#### Table 10: Year of K-12 teaching experience in Idaho

Significant fact: A little over 40 percent of teachers with instructional assignments have over ten years of K-12 Idaho teaching experience. Approximately 10 percent of teachers with instructional assignments have no prior teaching experience.



	2013-2014	2014-2015	2015-2016	2016-2017
No experience	9%	9%	9%	10%
	1,399	1,363	1,469	1,637
0.1 to 3.9 years of experience	17%	19%	20%	20%
	2,570	2,914	3,167	3,233
4.0 to 7.9 years of experience	18%	17%	16%	16%
	2,786	2,577	2,506	2,604
8 to 10 years of experience	12%	12%	12%	11%
	1,811	1,916	1,894	1,838
More than 10 years of experience	44%	43%	43%	42%
	6,755	6,736	6,718	6,722

#### Patterns of teacher attrition

This section of the report examines attrition patterns of teachers with instructional teaching assignments. The same definitions applied in the last section were applied in this section. A teacher is counted as leaving if that teacher had an instructional assignment in one year and did not have an instructional assignment in the next year.<sup>2</sup>

Table 11: Number of teachers with instructional assignments who have instructional assignments in the next school year

Significant fact: Approximately ten percent of teachers with instructional assignments in one year do not have instructional assignments the next year. Only 1 percent of those left to become only administrators.

				Number	
				without	
				instructional	
		Number with		assignment but	Share who
	Number with	instructional		with	leave to
	instructional	assignment in	Attrition	Administrative	become only
	assignment	next year	Rate	assignment	Administrators
2013-2014	15,322	13,814	10%	108	1%
2014-2015	15,507	13,922	10%	98	1%
2015-2016	15,767	14,116	10%	114	1%

<sup>2</sup> One district did not properly enter data for the 2014-2015 school year. The data they entered indicated that all of their teachers left that year. For this section, I coded that district's teachers as being present in 2014-2015 if that teacher was present in the district in 2013-3014 and also present in 2015-2016.

Table 12: Number of teachers with instructional assignments who have instructional assignments in the next school year, by age

	Attrition Rate - Share with an assignment in base year but without assignment in next year				
	2013-2014	2014-2015	2015-2016		
Age 24 or younger	16%	18%	18%		
Age 25 to 29	11%	13%	14%		
Age 30 to 34	10%	9%	11%		
Age 35 to 39	7%	8%	7%		
Age 40 to 44	7%	6%	6%		
Age 45 to 49	5%	6%	7%		
Age 50 to 54	6%	7%	6%		
Age 55 to 59	13%	13%	14%		
Age 60 to 64	23%	28%	24%		
Age 65 and older	31%	35%	36%		
Overall	10%	11%	10%		
	10/0	11/0	10/0		

Significant fact: Attrition rates are highest for those under the age of 35 and those over the age of 54.

Note: Age is measured as of base year. Rates lower than the overall rate are highlighted.

Table 13: Number of teachers with instructional assignments who have instructional assignments in the next school year, by years of experience

Significant fact: Approximately 15 percent of new teachers leave after the first year.

	Attrition Rate - Share with an assignment in base year but			
	without	assignment	t in next	
		year		
	2013-	2014-	2015-	
	2014	2015	2016	
No prior experience	14%	17%	15%	
0.1 to 3.9 years of experience	10%	12%	11%	
4.0 to 7.9 years of experience	10%	9%	11%	
8 to 10 years of experience	7%	8%	8%	
More than 10 years of experience	10%	10%	10%	
Overall	10%	11%	10%	

Note: Experience is measured as of base year. Attrition rates higher than the overall rate are highlighted. Years of experience only includes years of teaching K-12 in Idaho.

### Table 14: Share of new teacher cohort who leave in subsequent years







	2013-2014			
	(Base Year)	2014-2015	2015-2016	2016-2017
Had instructional assignment	1,399	1,207	1,065	963
Returned from break in service			17	14
Did not have instructional				
assignment		192	317	422
	2014-2015			
	(Base Year)	2015-2016	2016-2017	
Had instructional assignment	1,363	1,131	1,002	
Returned from break in service			28	
Did not have instructional				
assignment		232	333	

Note: This only includes teachers with 0 years of teaching experience in the base year.

This section of the report examines attrition patterns of teachers with instructional teaching assignments by district. Most of the same definitions applied in the last section were applied in this section. A teacher is counted as leaving if that teacher had an instructional assignment in one year in a district and did not have an instructional assignment in the next year in that same district. Therefore, this measures attrition both from the teaching profession as well as from the individual district.

The number of teachers with teaching assignment in each group is tabulated as well as the number of teachers from that group who left the district. Some teachers appear in more than one district. For instance, in the 2013-2014 school year, 906 teachers appeared in more than one district. Of those, 861 were in 2 districts, 33 were in 3 districts, 2 were in 4 districts, 1 was in 5 districts, and 9 were in 6 districts. Therefore the total teachers in each school year will not match the total teachers in earlier graphs and figures.

### Table 15: District-level attrition rates by locale

	2013-201	.4	2014-201	.5	2015-2016	
	Number of teachers with	District- level	Number of teachers with	District- level	Number of teachers with	District- level
	assignments	Attrition Rate	assignments	Attrition Rate	assignments	Attrition Rate
Urban	12,732	13%	12,981	14%	13,047	13%
Rural, Fringe &	, -		,		- , -	
Distant	2,059	17%	2,026	18%	2,057	16%
Rural, Remote	1,079	16%	1,070	15%	1,075	16%
Virtual	412	12%	453	10%	484	11%

Significant fact: Districts in rural locales have more turnover than districts in urban locales.

Note: Locale was determined using categories defined by the National Center for Education Statistics (NCES).

Table 16: District-level attrition rates by region

Significant fact: Regions 4 and 6 consistently have among the highest district-level attrition rates although there is not a lot of variation between regions.

	2013-2014		2014-2015		2015-2016	
	Number of	District-	Number of	District-	Number of	District-
	teachers with	level	teachers with	level	teachers with	level
	instructional	Attrition	instructional	Attrition	instructional	Attrition
Region	assignments	Rate	assignments	Rate	assignments	Rate
1	1,736	12%	1,764	13%	1,779	13%
2	977	11%	927	11%	940	13%
3	6,867	14%	6,964	14%	7,058	13%
4	2,268	14%	2,307	17%	2,310	15%
5	1,438	8%	1,480	17%	1,438	13%
6	2,584	16%	2,635	16%	2,654	16%
Virtual	412	12%	453	10%	484	11%

 Table 17: One-year district-level attrition for first-year teachers

Significant fact: There is not a clear pattern of differences in district-level attrition for first-year teachers by locale.

	2013-2014		2014-20	015	2015-2016	
	Number of first-year teachers with instructional assignments	District- level Attrition Rate	Number of first-year teachers with instructional assignments	District- level Attrition Rate	Number of first-year teachers with instructional assignments	District- level Attrition Rate
Urban	1,090	22%	1,120	24%	1,232	19%
Rural, Fringe &						
Distant	223	21%	207	20%	181	33%
Rural, Remote	124	27%	90	23%	89	20%
Virtual	58	14%	27	26%	31	19%

Note: This measures attrition following the first-year of teaching for teachers with instructional assignments.

### How prevalent are the use of alternative paths?

Districts were only included if they were public. All PCSC-authorized charter schools should have been identified. However, district-authorized charter schools may or may not have been identified depending on how the district name was entered in the report.

		Content		Prov	Teacher to		Share of
2013-2014	ABCTE	Specialist		Auth	New	TFA	teachers
-			5	4	16		2%
			3	4	29		4%
3	38		14	57	79		3%
2	19		11	17	42		4%
	17		3	22	29		5%
6	25		3	43	27		4%
Charter schools	15		3	16	20		6%
Total	114		42	163	242		
							Share of
		Content		Prov	Teacher to		instructional
2014-2015	ABCTE	Specialist		Auth	New	TFA	teachers
-			1	6	24		2%
2	1		5	3	16		3%
3	28		23	41	84		3%
2	9		10	35	37		4%
Į.	4		9	15	21		4%
e	12		7	36	32		4%
Charter schools	11		5	23	30		7%
Total	65		60	159	244		
							Share of
		Content		Prov	Teacher to		instructional
2015-2016	ABCTE	Specialist		Auth	New	TFA	teachers
-	2		22		29		3%
			16		22		5%
3	41		106		72	14	4%
4	26		102		38		8%
	7		50		24		6%
6	30		57		34		5%
Charter schools	13		46		23		8%
Total	119		399	0	242	14	

							Share of	
		Contont		Broy	Toochor to		instructional	
2012 2014	ADCTE	Content		PIUV Auth		тгл	toochors	
2013-2014	ADUTE	specialist		Auth	New	IFA	teachers	
Urban	85		31	108	136			3%
Rural, Fringe &								
Distant	7		5	16	42			4%
Rural, Remote	7		3	23	44			8%
Total	114		42	163	242			
							Share of	
		Content		Prov	Teacher to		instructional	
2014-2015	ABCTE	Specialist		Auth	New	TFA	teachers	
Urban	41		43	102	135			3%
Rural, Fringe &								
Distant	7		5	21	48			5%
Rural, Remote	6		7	13	31			6%
Total	65		60	159	244			
							Share of	
		Content		Prov	Teacher to		instructional	
2015-2016	ABCTE	Specialist		Auth	New	TFA	teachers	
Urban	88		251		129	14		4%
Rural, Fringe &								
Distant	11		57		54			7%
Rural, Remote	7		45		36			9%
Total	119		399	0	242	14		

Appendix I: Classification of endorsements

### **Classification of endorsements to assignment areas**

	Mathomatics
	Iviatilematics
7300	Mathematics (6-12)
	Mathematics - Basic (6-
7320	12)
7400	Computer Science (6-12)
7990	Engineering (6-12)
8300	Mathematics (5-9)
8320	Mathematics - Basic (5-9)

-

	Life and Physical Science
7400	Computer Science (6-12)
7420	Natural Science (6-12)
7421	Biological Science (6-12)
7430	Physical Science (6-12)
7440	Chemistry (6-12)
7450	Physics (6-12)
7451	Earth and Space Science (6-12)
7452	Geology (6-12)
7990	Engineering (6-12)
8420	Natural Science (5-9)
8421	Biological Science (5-9)
8430	Physical Science (5-9)
8440	Chemistry (5-9)
8450	Physics (5-9)
8451	Earth and Space Science (5-9)
8452	Geology (5-9)

	Computer and Informational Systems
7092	Marketing Technology Education (6-12)
7093	Business Technology Education (6-12)
7400	Computer Science (6-12)
7981	Technology Education (6-12)
8092	Marketing Technology Education (5-9)
8093	Business Technology Education (5-9)
8400	Computer Science (5-9)
8981	Technology Education (5-9)

	English Language and Literature
7038	Bilingual Education (K-12)
7120	English (6-12)
7126	English as a New Language (ENL) (K-12)
7139	Literacy (K-12)
7144	Communication (6-12)
8120	English (5-9)
8144	Communication (5-9)

Phys	sical, Health, and Safety Education
7511	Physical Education (PE) (K-12)
7512	Physical Education (PE) (6-12)
7520	Health (6-12)
7521	Health (K-12)
8510	Physical Education (PE) (5-9)
8520	Health (5-9)

	World Language
7700	World Language (6-12)
7701	World Language - American Sign Language (K-12)
7702	World Language - American Sign Language (6-12)
7710	World Language (K-12)
7711	World Language - Spanish (K-12)
7712	World Language - French (K-12)
7713	World Language - German (K-12)
7714	World Language - Russian (K-12)
7715	World Language - Chinese (K-12)
7720	World Language - Spanish (6-12)
7730	World Language - French (6-12)
7740	World Language - German (6-12)
7750	World Language - Latin (K-12)
7760	World Language - Russian (6-12)
7770	American Indian Language (6-12)
7779	World Language - Greek (6-12)
7780	World Language - Greek (K-12)
7781	World Language - Arabic (6-12)
7782	World Language - Arabic (K-12)
7789	World Language - Persian (6-12)
7790	World Language - Persian (K-12)
7791	World Language - Portuguese (K-12)
7792	World Language - Japanese (K-12)
7793	World Language - Italian (K-12)
7794	World Language - Hebrew (K-12)
7795	World Language - Korean (K-12)
7796	World Language - Chinese (6-12)
7797	World Language - Slovak (K-12)
7798	World Language - Czech (K-12)
8700	World Language (5-9)
8702	World Language - American Sign Language (5-9)
8720	World Language - Spanish (5-9)
8740	World Language - German (5-9)
8760	World Language - Russian (5-9)
8781	World Language - Arabic (5-9)
8790	World Language - Persian (5-9)
8796	World Language - Chinese (5-9)
8830	World Language - French (5-9)

	Humani	ties	
7120	English (6-12)	7851	Visual Arts (K-12)
7133	Humanities (6-12)	7852	Visual Arts (6-12)
7200	Social Studies (6-12)	8120	English (5-9)
7221	History (6-12)	8133	Humanities (5-9)
7229	Sociology (6-12)	8229	Sociology (5-9)
7231	Psychology (6-12)	8231	Psychology (5-9)
7236	Sociology/Anthropology (6-12)	8700	World Language (5-9)
7700	World Language (6-12)	8720	World Language - Spanish (5-9)
7710	World Language (K-12)	8740	World Language - German (5-9)
7711	World Language - Spanish (K-12)	8760	World Language - Russian (5-9)
7712	World Language - French (K-12)	8781	World Language - Arabic (5-9)
7713	World Language - German (K-12)	8790	World Language - Persian (5-9)
7714	World Language - Russian (K-12)	8796	World Language - Chinese (5-9)
7715	World Language - Chinese (K-12)	8830	World Language - French (5-9)
7720	World Language - Spanish (6-12)	8852	Visual Arts (5-9)
7730	World Language - French (6-12)		
7740	World Language - German (6-12)		
7750	World Language - Latin (K-12)		
7760	World Language - Russian (6-12)		
7779	World Language - Greek (6-12)		
7780	World Language - Greek (K-12)		
7781	World Language - Arabic (6-12)		
7782	World Language - Arabic (K-12)		
7789	World Language - Persian (6-12)		
7790	World Language - Persian (K-12)		
7791	World Language - Portuguese (K-12)		
7792	World Language - Japanese (K-12)		
7793	World Language - Italian (K-12)		
7794	World Language - Hebrew (K-12)		
7795	World Language - Korean (K-12)		
7796	World Language - Chinese (6-12)		
7797	World Language - Slovak (K-12)		
7798	World Language - Czech (K-12)		
7810	Music (K-12)		
7820	Music (6-12)		

	Social Science
7200	Social Studies (6-12)
7221	History (6-12)
7222	American Government/Political Science (6-12)
7226	Geography (6-12)
7228	Economics (6-12)
7229	Sociology (6-12)
7231	Psychology (6-12)
7236	Sociology/Anthropology (6-12)
8200	Social Studies (5-9)
8221	History (5-9)
8222	American Government/Political Science (5-9)
8226	Geography (5-9)
8228	Economics (5-9)
8229	Sociology (5-9)
8231	Psychology (5-9)
8236	Sociology/Anthropology (5-9)

	Fine and Performing Arts
7134	Journalism (6-12)
7137	Theater Arts (6-12)
7511	Physical Education (PE) (K-12)
7512	Physical Education (PE) (6-12)
7810	Music (K-12)
7820	Music (6-12)
7851	Visual Arts (K-12)
7852	Visual Arts (6-12)
8134	Journalism (5-9)
8137	Theater Arts (5-9)
8510	Physical Education (PE) (5-9)
8820	Music (5-9)
8852	Visual Arts (5-9)

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Classification of endorsements: CTE, Special Education, Grade Range

		Special	
	CTE	Education	
	instructional	instructional	Grade
Endorsement	endorsement	endorsement	range
1010: Marketing	Х	-	Secondary
108: Animal Health & Veterinary Sci	Х	-	Secondary
1080: Sales	Х	-	Secondary
1085: Hospitality	Х	-	Secondary
109: Agriculture Business & Mgm	Х	-	Secondary
110: Agriculture Production	Х	-	Secondary
114: Farm & Ranch Management	Х	-	Secondary
130: Agricultural Power Machinery	Х	-	Secondary
150: Horticulture	Х	-	Secondary
161: Aquaculture	Х	-	Secondary
170: Forestry	Х	-	Secondary
174: Natural Resource Management	Х	-	Secondary
2000: Orientation Health Occupations	Х	-	Secondary
2011: Dental Assisting	Х	-	Secondary
2013: Dental Laboratory Technology	Х	-	Secondary
2015: Dental Hygiene	Х	-	Secondary
2030: Dietitian	Х	-	Secondary
2032: Practical Nursing	Х	-	Secondary
2033: Nursing Assistant	Х	-	Secondary
2035: Surgical Technology	Х	-	Secondary
2050: Rehab/Therapeutic Services	Х	-	Secondary
2060: Radiology Technology	Х	-	Secondary
2080: Mental Health Technology	Х	-	Secondary
2085: Emergency Medical Technician	Х	-	Secondary
2093: Respiratory Therapy	Х	-	Secondary
2094: Medical Assisting	Х	-	Secondary
2095: Pharmacy Assisting	Х	-	Secondary
2096: Medical Administrative Assisting	Х	-	Secondary
2097: Health Informatics	х	-	Secondary
2098: Sports Medicine/Athletic Train	х	-	Secondary
2099: Personal Trainer	х	-	Secondary
3020: Child Dev Care & Guidance	х	-	Secondary
3023: Food Service	х	-	Secondary
3025: Culinary Arts	х	-	, Secondary
3030: Fashion and Interiors 6/12	х	-	, Secondary
4010: Bookkeeping	Х	-	Secondary

		Special	
	CTE	Education	
	instructional	instructional	Grade
Endorsement	endorsement	endorsement	range
4015: Business Management/Finance	Х	-	Secondary
4020: Microcomputer Applications	Х	-	Secondary
4021: Computer Graphic Communication	Х	-	Secondary
4023: Business Data Processing	X	-	Secondary
4024: Information/Communication Tech	Х	-	Secondary
4025: Word Processing Technology	Х	-	Secondary
4026: Network Support Technician	Х	-	Secondary
4030: General Office Clerical	Х	-	Secondary
4060: Medical Professional Assistant	Х	-	Secondary
4070: General Office Secretarial	Х	-	Secondary
4075: Accounting	Х	-	Secondary
4080: Paralegal/Legal Assisting	Х	-	Secondary
5014: General Engineering (PLW)	Х	-	Secondary
5015: Principles of Engineering	Х	-	Secondary
5016: Civil Engineering Technology	х	-	Secondary
5017: Surveying Technology	Х	-	Secondary
5018: Electronic Technology	Х	-	Secondary
5019: Electromechanical Technology	Х	-	Secondary
5020: Laser Electro-Optics	Х	-	Secondary
5022: Manufacturing Technology	Х	-	Secondary
5023: Computer Assisted Production	Х	-	Secondary
5025: Semiconductor Technology	Х	-	Secondary
5030: Electrical Technology	Х	-	Secondary
5112: Instrumentation Technology	Х	-	Secondary
5992: Water/Waste Water Technology	Х	-	Secondary
6010: Heating/Air Conditioning & Ref	Х	-	Secondary
6015: Plumbing	Х	-	Secondary
6020: Major Appliance Repair	Х	-	Secondary
6031: Automotive Body Repair	Х	-	Secondary
6032: Automotive Technology	Х	-	Secondary
6035: Marine Mechanic	Х	-	Secondary
6041: Aircraft Mech/Airframe & Power	х	-	Secondary
6045: Aviation and Airway Science	х	-	Secondary
6060: Business Systems/Computer Tech	х	_	Secondary
6101: Carpentry	x	-	Secondary
6102: Electrician	х	-	Secondary

		Special	
	CTE	Education	
	instructional	instructional	Grade
Endorsement	endorsement	endorsement	range
6103: Masons & Tile Setters	Х	-	Secondary
6105: Cabinetmaking & Millwork	Х	-	Secondary
6108: Building Trades Construction	Х	-	Secondary
6109: Indust Maintenance Mechanics	Х	-	Secondary
6110: Paint&Wallcover/Building Maint	Х	-	Secondary
6112: Digital Home Technology	Х	-	Secondary
6120: Diesel Engine Mechanics	Х	-	Secondary
6130: Drafting	Х	-	Secondary
6131: Architectural Drafting Tech	Х	-	Secondary
6132: Mechanical Drafting Tech	Х	-	Secondary
6142: Lineworker	Х	-	Secondary
6145: Environmental Control Tech	Х	-	Secondary
6148: Alternative Energy Technology	Х	-	Secondary
6151: Communications Technology	х	-	Secondary
6152: Industrial Electronics	х	-	Secondary
6153: Networking Technologies	х	-	Secondary
6155: Computer Science/Information Techn	х	-	Secondary
6157: Computer Science PLTW 6/12	Х	-	Secondary
6180: Graphic Arts/Journalism	Х	-	Secondary
6190: Graphic/Printing Communication	Х	-	Secondary
6192: Photography	Х	-	Secondary
6195: Television Prod/Broadcasting	Х	-	Secondary
6200: Nuclear Power & Radiation Tech	Х	-	Secondary
6203: Chemical Technology	Х	-	Secondary
6204: Environmental & Pollution Con	Х	-	Secondary
6232: Machining Technologist	Х	-	Secondary
6236: Welding	Х	-	Secondary
6241: Quality Control Technology	Х	-	Secondary
6262: Cosmetology	Х	-	Secondary
6280: Fire Control/Safety Technology	Х	-	Secondary
6282: Law Enforcement	Х	-	Secondary
6283: Security	Х	-	Secondary
6310: Small Engine Repair	Х	-	Secondary
6350: Upholstering	Х	-	Secondary
6506: Meat Cutter	Х	-	Secondary
6898: Truck and Bus Driving	Х	-	Secondary

		Special	
	CTE	Education	
	instructional	instructional	Grade
Endorsement	endorsement	endorsement	range
7009: All Subjects K/3	-	-	Elementary
7010: All Subjects (K-8)	-	-	Elementary
7011: All Subjects 1/8	-	-	Elementary
7014: Blended Elementary Ed/Elementary Special Ed (4-6)	-	Х	Elementary
7019: Early Childhood Special Education	-	Х	Elementary
7020: Teacher Librarian (K-12)	-	-	All grades
7021: Early Childhood PreK/3	-	-	Elementary
7028: Gifted and Talented (K-12)	-	-	All grades
7029: Exceptional Child Generalist (K-12	-	Х	Elementary
7030: Deaf/Hard of Hearing (K-12)	-	Х	All grades
7031: Serious/Emotion Disturbed K/12	-	Х	All grades
7032: Severe Retardation K/12	-	Х	All grades
7033: Multiple Impairment K/12	-	Х	All grades
7034: Physical Impairment K/12	-	Х	All grades
7035: Visually Impairment (K-12)	-	Х	All grades
7036: Exceptional Child Generalist (K-8)	-	Х	Elementary
7037: Exceptional Child Generalist (6-12)	-	Х	Secondary
7038: Bilingual Education (K-12)	-	-	All grades
7039: Sec Bilingual Ed 6/12	-	-	Secondary
7040: Applied Music	-	-	Secondary
7041: Bible Instruction	-	-	Secondary
7045: Special Education Consulting Teach	-	Х	All grades
7061: Arts Proficiency 6/8	-	-	Secondary
7062: Drama Proficiency 6/8	-	-	Secondary
7063: Economics Proficiency 6/8	-	-	Secondary
7065: English Proficiency 6/8	-	-	Secondary
7066: Foreign Languages Proficiency 6/8	-	-	Secondary
7067: Geography Proficiency 6/8	-	-	Secondary
7068: History Proficiency 6/8	-	-	Secondary
7069: Math Proficiency 6/8	-	-	Secondary
7070: Music Proficiency 6/8	-	-	Secondary
7071: Political Science/Government Proficiency 6/8	-	-	Secondary
7072: Science Proficiency 6/8	-	-	Secondary
7073: Social Studies Proficiency 6/8	-	-	Secondary
7080: Junior ROTC (6-12)	-	-	Secondary
7083: Blended EC/EC Special Ed (Birth-Gr	-	Х	Elementary

		Special	
	CTE	Education	
	instructional	instructional	Grade
Endorsement	endorsement	endorsement	range
7091: Voc Agriculture 6/12	-	-	Secondary
7092: Marketing Technology Education (6-	-	-	Secondary
7093: Business Technology Education (6-1	-	-	Secondary
7094: Vocational Home Economics 6/12	-	-	Secondary
7095: Voc Office Occup-Clerical 6/12	-	-	Secondary
7096: Multi-Occupations 6/12	-	-	Secondary
7097: Vocational Special Needs	-	Х	Secondary
7098: Vocational Industrial Tech	-	-	Secondary
71: Vocational Agriculture 6/12	Х	-	Secondary
7120: English (6-12)	-	-	Secondary
7125: English as a New Language 6/12	-	-	Secondary
7126: English as a New Language (ENL) (K	-	-	All grades
7133: Humanities (6-12)	-	-	Secondary
7134: Journalism (6-12)	-	-	Secondary
7135: Debate 6/12	-	-	Secondary
7136: Speech 6/12	-	-	Secondary
7137: Theater Arts (6-12)	-	-	Secondary
7138: Literacy 6/12	-	-	Secondary
7139: Literacy (K-12)	-	-	All grades
7141: Communication/Drama 6/12	-	-	Secondary
7144: Communication (6-12)	-	-	Secondary
7161: Arts Generalist 6/12	-	Х	Secondary
7162: Drama Generalist 6/12	-	Х	Secondary
7163: Economics Generalist 6/12	-	Х	Secondary
7165: English Generalist 6/12	-	Х	Secondary
7166: Foreign Languages Generalist 6/12	-	Х	Secondary
7167: Geography Generalist 6/12	-	Х	Secondary
7168: History Generalist 6/12	-	Х	Secondary
7169: Math Generalist 6/12	-	Х	Secondary
7170: Music Generalist 6/12	-	Х	Secondary
7171: Political Science/Government Gener	-	Х	Secondary
7172: Science Generalist 6/12	-	Х	Secondary
7173: Social Studies Generalist 6/12	-	Х	Secondary
72: Vocational Distributive Ed	Х	-	Secondary
7200: Social Studies (6-12)	-	-	Secondary
7221: History (6-12)	-	-	Secondary

		Special	
	CTE	Education	
	instructional	instructional	Grade
Endorsement	endorsement	endorsement	range
7222: American Government/Political Scie	-	-	Secondary
7223: American Government 6/12	-	-	Secondary
7226: Geography (6-12)	-	-	Secondary
7227: Political Science 6/12	-	-	Secondary
7228: Economics (6-12)	-	-	Secondary
7229: Sociology (6-12)	-	-	Secondary
7230: Philosophy 6/12	-	-	Secondary
7231: Psychology (6-12)	-	-	Secondary
7233: American Studies 6/12	-	-	Secondary
7234: Anthropology 6/12	-	-	Secondary
7236: Sociology/Anthropology (6-12)	-	-	Secondary
7288: Economics 6/12	-	-	Secondary
7299: Mathematics Consulting Teacher (K-	-	-	All grades
73: Vocational Office Occupational	Х	-	Secondary
7300: Mathematics (6-12)	-	-	Secondary
7320: Mathematics - Basic (6-12)	-	-	Secondary
7321: Computer Applications	-	-	Secondary
74: Family & Consumer Sciences	Х	-	Secondary
7400: Computer Science (6-12)	-	-	Secondary
7420: Natural Science (6-12)	-	-	Secondary
7421: Biological Science (6-12)	-	-	Secondary
7422: Environmental Science 6/12	-	-	Secondary
7430: Physical Science (6-12)	-	-	Secondary
7440: Chemistry (6-12)	-	-	Secondary
7450: Physics (6-12)	-	-	Secondary
7451: Earth and Space Science (6-12)	-	-	Secondary
7452: Geology (6-12)	-	-	Secondary
7511: Physical Education (PE) (K-12)	-	-	All grades
7512: Physical Education (PE) (6-12)	-	-	Secondary
7513: P.E. & Health 6/12	-	-	Secondary
7514: Dance 6/12	-	-	Secondary
7515: Drill Team	-	_	Secondary
7520: Health (6-12)	-	_	Secondary
7521: Health (K-12)	-	-	All grades
76: Multi-Occupations 6/12	Х	-	Secondary
7700: World Language (6-12)	-	-	Secondary

		Special	
	CTE	Education	
	instructional	instructional	Grade
Endorsement	endorsement	endorsement	range
7701: World Language - American Sign Lan	-	-	All grades
7702: World Language - American Sign Language (6-12)	-	-	Secondary
7710: World Language (K-12)	-	-	All grades
7711: World Language - Spanish (K-12)	-	-	All grades
7712: World Language - French (K-12)	-	-	All grades
7713: World Language - German (K-12)	-	-	All grades
7714: World Language - Russian (K-12)	-	-	All grades
7715: World Language - Chinese (K-12)	-	-	All grades
7720: World Language - Spanish (6-12)	-	-	Secondary
7730: World Language - French (6-12)	-	-	Secondary
7740: World Language - German (6-12)	-	-	Secondary
7750: World Language - Latin (K-12)	-	-	All grades
7760: World Language - Russian (6-12)	-	-	Secondary
7770: American Indian Language (6-12)	-	-	Secondary
7779: World Language - Greek (6-12)	-	-	Secondary
7780: World Language - Greek (K-12)	-	-	All grades
7781: World Language - Arabic (6-12)	-	-	Secondary
7782: World Language - Arabic (K-12)	-	-	All grades
7789: World Language - Persian (6-12)	-	-	Secondary
7790: World Language - Persian (K-12)	-	-	All grades
7791: World Language - Portuguese (K-12)	-	-	All grades
7792: World Language - Japanese (K-12)	-	-	All grades
7793: World Language - Italian (K-12)	-	-	All grades
7794: World Language - Hebrew (K-12)	-	-	All grades
7795: World Language - Korean (K-12)	-	-	All grades
7796: World Language - Chinese (6-12)	-	-	Secondary
7797: World Language - Slovak (K-12)	-	-	All grades
7798: World Language - Czech (K-12)	-	-	All grades
7810: Music (K-12)	-	-	All grades
7820: Music (6-12)	-	-	Secondary
7823: Vocal Choral Music	-	-	Secondary
7825: Music Specialist K/8	-	-	Elementary
7851: Visual Arts (K-12)	-	-	All grades
7852: Visual Arts (6-12)	-	-	Secondary
7853: Arts & Crafts 6/12	-	-	Secondary
7870: Photography 6/12	-	-	Secondary

		Special	
	CTE	Education	
	instructional	instructional	Grade
Endorsement	endorsement	endorsement	range
7920: General Agriculture 6/12	-	-	Secondary
7921: Agricultural Science and Technolog	-	-	Secondary
7924: Driver Education	-	-	Secondary
7930: Business Ed-Office Occupation	-	-	Secondary
7933: Secretarial Science 6/12	-	-	Secondary
7935: Business Education 6/12	-	-	Secondary
7937: Business Ed Accounting	-	-	Secondary
7939: Basic Business 6/12	-	-	Secondary
7950: Consumer Ec 6/12	-	-	Secondary
7960: Marketing Ed 6/12	-	-	Secondary
7970: General Home Economics 6/12	-	-	Secondary
7971: Family and Consumer Sciences (6-12	-	-	Secondary
7972: Family/Consumer Sciences 6/12	-	-	Secondary
7980: Industrial Arts 6/12	-	-	Secondary
7981: Technology Education (6-12)	-	-	Secondary
7982: Industrial Technology 6/12	-	-	Secondary
7985: Electricity/Electronics 6/12	-	-	Secondary
7988: Drafting 6/12	-	-	Secondary
7989: Online Teacher (Pre-K-12)	-	-	All grades
7990: Engineering (6-12)	-	-	Secondary
8092: Marketing Technology Education (5-9)	-	-	Secondary
8093: Business Technology Education (5-9	-	-	Secondary
8120: English (5-9)	-	-	Secondary
8133: Humanities (5-9)	-	-	Secondary
8134: Journalism (5-9)	-	-	Secondary
8136: Speech 6/9	-	-	Secondary
8137: Theater Arts (5-9)	-	-	Secondary
8138: Literacy 6/9	-	-	Secondary
8141: Communication/Drama 6/9	-	-	Secondary
8144: Communication (5-9)	-	-	Secondary
8200: Social Studies (5-9)	-	-	Secondary
8221: History (5-9)	-	-	Secondary
8222: American Government/Political Scie	-	-	Secondary
8223: American Government 6/9	-	-	Secondary
8226: Geography (5-9)	-	-	Secondary
8227: Political Science 6/9	_	_	Secondary
8228: Economics (5-9)	-	-	Secondary

		Special	
	CTE	Education	
	instructional	instructional	Grade
Endorsement	endorsement	endorsement	range
8229: Sociology (5-9)	-	-	Secondary
8230: Philosophy 6/9	-	-	Secondary
8231: Psychology (5-9)	-	-	Secondary
8234: Anthropology 6/9	-	-	Secondary
8236: Sociology/Anthropology (5-9)	-	-	Secondary
8244: Motel/Hotel Management	Х	-	Secondary
8300: Mathematics (5-9)	-	-	Secondary
8320: Mathematics - Basic (5-9)	-	-	Secondary
8321: Computer App 6/9	-	-	Secondary
8400: Computer Science (5-9)	-	-	Secondary
8420: Natural Science (5-9)	-	-	Secondary
8421: Biological Science (5-9)	-	-	Secondary
8430: Physical Science (5-9)	-	-	Secondary
8440: Chemistry (5-9)	-	-	Secondary
8450: Physics (5-9)	-	-	Secondary
8451: Earth and Space Science (5-9)	-	-	Secondary
8452: Geology (5-9)	-	-	Secondary
8510: Physical Education (PE) (5-9)	-	-	Secondary
8520: Health (5-9)	-	-	Secondary
8556: Office Procedures	-	-	Secondary
8700: World Language (5-9)	-	-	Secondary
8702: World Language - American Sign Language (5-9)	-	-	Secondary
8720: World Language - Spanish (5-9)	-	-	Secondary
8740: World Language - German (5-9)	-	-	Secondary
8760: World Language - Russian (5-9)	-	-	Secondary
8781: World Language - Arabic (5-9)	-	-	Secondary
8790: World Language - Persian (5-9)	-	-	Secondary
8796: World Language - Chinese (5-9)	-	-	Secondary
8820: Music (5-9)	-	-	Secondary
8830: World Language - French (5-9)	-	-	Secondary
8852: Visual Arts (5-9)	-	-	Secondary
8921: Agricultural Science and Technology (5-9)	-	-	Secondary
8935: Business Ed 6/9	-	-	Secondary
8960: Marketing Ed 6/9	-	-	Secondary
8971: Family and Consumer Sciences (5-9)	-	-	Secondary
8981: Technology Education (5-9)	-	-	Secondary
8990: Engineering (5-9)	-	-	Secondary
98: Related Subjects	Х	-	Secondary

### **Attachment 3. Survey Results**

## Methodology

### Survey Source

The Minnesota Teacher Supply and Demand Survey provided the framework for the current survey.

### Survey Content

Survey materials included questions about difficulty filling vacancies by subject area, eliminating specific courses, increasing student-teacher ratios, future staffing needs, difficulty securing substitute teachers, hiring and retention barriers, and open-ended responses.

### Distribution

School administrators received a link to a SurveyMonkey survey.

### Assigning Rural vs. Urban Status

Using the NCES locale framework, we examined variations in rural and urban responses. The NCES locale framework includes four major types and subtypes under each major type. The major types include: city, rural, suburb, and town. Sub-categories are as follows:

- City & Suburb: Large, Mid-size, Small
- Town & Rural: Distant, Fringe, Remote

City and suburb subtypes are based upon population, while rural subtypes are based on distance. Please reference Attachment A for definitions of each type and subtype.

### **Descriptive Statistics**

### Reporting districts

130 districts out of 169 districts responded to the survey. Survey respondents included 28 charter schools authorized by PCSC and eight charter schools authorized through other districts.

Distribution of respondents

Respondent Title	# of Respondents
Administrator	10
Assistant Superintendent	4
Director	15
HR Personnel	6
Superintendent	83



Distribution of Responsive & Unresponsive Districts by Urban-Centric Locale Type

Table 2. Number of districts that did not respond vs. number of districts that did respond, broken down by NCES locale type and subtype. Charters not authorized through PCSC were excluded.



Percentage of Responsive and Unresponsive Districts by Region

### Regional Distribution of Responses





Table 4. Distribution of regional responses for responding districts.

### Distribution of Responses by Region & Locale Type





Table 5. Distribution of responding districts by region, broken up by NCES urban-centric locale type. Only responding noncharter and non-virtual charter schools authorized through PCSC are included.

Distribution of Urban-Centric Locale Type Responses

## Survey Limitations

Following presentation of preliminary data, several limitations of the survey emerged. Weaknesses include:

### Absence of an "I don't know" selection.

Without the presence of an "I don't know" selection for some questions, some answers might have resulted from a lack of options rather than truly reflecting the opinion of the survey taker.

- Afflicted questions:
  - "How easy or difficult was it to fill vacancies for the 2016–17 and/or 2017–18 school years in each of the following fields?"
  - "Next, consider your staffing needs for the next five years. In general, how easy
    or difficult do you think it will be for you to fill the teacher vacancies in your
    district with applicants in each of the following fields? For needs other than
    those listed below, please use the "Other" category and specify any other
    staffing needs you anticipate."
    - Answers included: "No need for this position in district/charter," "Easy," "Somewhat Difficult," "Very Difficult," "Had to/anticipate having to hire non-certificated staff (alternate route or provisional route)," and "Could not fill all vacancies"
      - Without an "I don't know" option, administrators that were unsure about the difficulty of filling positions might have devalued the "Easy" option.

## Results

Responses to "How easy or difficult was it to fill vacancies for the 2016–17 and/or 2017– 18 school years in each of the following fields?"

### Potential Answers

- No need for this position in district/charter
- Easy
- Somewhat difficult
- Very difficult
- Had to/anticipate having to hire non-certificated staff (alternate route or provisional route)
- Could not fill all vacancies

Distribution of Responses by Region for "How easy or difficult was it to fill vacancies for the 2016-2017 and/or 2017-18 school years in each of the following fields?"



region. Only non-charter and charter schools authorized through PCSC are included.





Figure 3. Number of times each course appeared in the "Very Difficult" category as a percentage of total answers, excluding "No Need for this Position" answers. Only non-charter and charter schools authorized through PCSC are included.



Figure 4. Number of times each course appeared in the "Requiring Non-Certified Staff" category as a percentage of total answers, excluding "No Need for this Position" answers. Only non-charter and charter schools authorized through PCSC are included.



PPGA

Responses to, "Has your district increased student-teacher ratios due to lack of qualified teaching staff (but not due to changes in enrollment) for the 2016-17 or 2017-18 academic years?"

When excluding responses from charters not authorized through PCSC, 22.95% of all respondents indicated that they had increased student-teacher ratios due to a lack of qualified teaching staff.



### Distribution of Responses by Region

Regional and Urban-Centric Locale Break-Down for Districts Reporting Increased Student-Teacher Ratios due to a Lack of Qualified Teaching Staff



**PPGA** 

TAB 5 Page 58

# Responses to, "Did your district eliminate specific courses for the 2016-17 or 2017-18 academic years due to lack of qualified teaching staff (but not due to decreasing enrollment)?"

When excluding responses from charters not authorized through PCSC, 30% of all respondents indicated that they had eliminated specific courses due to a lack of qualified teaching staff.



Distribution of Responses by Region

Regional and Urban-Centric Locale Break-Down for Districts Reporting Elimination of Specific Courses Due to a Lack of Qualified Teaching Staff





courses as a percentag of each locale by region. Only noncharters and nonvirtual charters authorized through PCSC are included.



*How much difficulty did your district have during the 2016-17 or 2017-18 academic years in securing substitute teachers?* 

Difficulty Securing Long-Term Substitutes



PPGA

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# Attachment 4. NCES Urban-Centric Locale Definitions and District Examples

### All definitions and data come from the Locale Boundaries User's Manual or other NCES sources

### Urban (Urbanized Areas, Urban Clusters) and Rural

The Census Bureau's urban areas represent densely developed territory, and encompass residential, commercial, and other non-residential urban land uses. The boundaries of this urban footprint have been defined using measures based primarily on population counts and residential population density, but also through criteria that account for non-residential urban land uses, such as commercial, industrial, transportation, and open space that are part of the urban landscape. The Census Bureau delineates urban areas after each decennial census. Since the 1950 Census, the Census Bureau has reviewed and revised the urban criteria, as necessary, for each decennial census. These changes are discussed in Section 6.0 of the Locale Boundaries User's Manual.

Urban area boundaries are constructed from qualifying census tracts and census blocks. To qualify as an urban area, the territory must encompass at least 2,500 people, at least 1,500 of which reside outside institutional group quarters. Urban areas that contain 50,000 or more people are designated as Urbanized Areas (UAs); urban areas that contain at least 2,500 and less than 50,000 people are designated as Urban Clusters (UCs). The term "urban area" refers to both UAs and UCs. The term "rural" encompasses all population, housing, and territory not included within an urban area.

### Principal City

Principal Cities are incorporated places with a large population of residents and workers located within a <u>Core Based Statistical Area (CBSA)</u>. More specifically, the Principal City (or Cities) of a CBSA include:

(a) the largest incorporated place with a population of at least 10,000 in the CBSA or, if no incorporated place with at least 10,000 population is present in the CBSA, the largest incorporated place or Census designated place (CDP) in the CBSA;

(b) any additional incorporated place or CDP with a population of at least 250,000 or in which 100,000 or more persons work;

(c) any additional incorporated place or CDP with a population of at least 50,000, but less than 250,000, and in which the number of workers working in the place meets or exceeds the number of workers living in the place;

(d) any additional incorporated place or CDP with a population of at least 10,000, but less than 50,000, and at least one-third the population size of the largest place, and in which the number of workers working in the place meets or exceeds the number of workers living in the place.

#### **NCES Locale Classifications and Criteria**

The NCES locale framework is composed of four basic types (City, Suburban, Town, and Rural) that each contains three subtypes. It relies on standard urban and rural definitions developed by the U.S. Census Bureau, and each type of locale is either urban or rural in its entirety. The NCES locales can be fully collapsed into a basic urban–rural dichotomy, or expanded into a more detailed collection of 12 distinct categories. These subtypes are differentiated by size (in the case of City and Suburban assignments) and proximity (in the case of Town and Rural assignments).

*City – Large (11)*: Territory inside an Urbanized Area and inside a Principal City with population of 250,000 or more.

*City – Midsize (12)*: Territory inside an Urbanized Area and inside a Principal City with population less than 250,000 and greater than or equal to 100,000.

*City – Small (13):* Territory inside an Urbanized Area and inside a Principal City with population less than 100,000.

*Suburban – Large (21)*: Territory outside a Principal City and inside an Urbanized Area with population of 250,000 or more.

*Suburban – Midsize (22)*: Territory outside a Principal City and inside an Urbanized Area with population less than 250,000 and greater than or equal to 100,000.

*Suburban – Small (23)*: Territory outside a Principal City and inside an Urbanized Area with population less than 100,000.

*Town – Fringe (31)*: Territory inside an Urban Cluster that is less than or equal to 10 miles from an Urbanized Area.

*Town – Distant (32)*: Territory inside an Urban Cluster that is more than 10 miles and less than or equal to 35 miles from an Urbanized Area.

*Town – Remote (33)*: Territory inside an Urban Cluster that is more than 35 miles from an Urbanized Area.

*Rural – Fringe (41)*: Census-defined rural territory that is less than or equal to 5 miles from an Urbanized Area, as well as rural territory that is less than or equal to 2.5 miles from an Urban Cluster.

*Rural – Distant (42)*: Census-defined rural territory that is more than 5 miles but less than or equal to 25 miles from an Urbanized Area, as well as rural territory that is more than 2.5 miles but less than or equal to 10 miles from an Urban Cluster.

*Rural – Remote (43)*: Census-defined rural territory that is more than 25 miles from an Urbanized Area and also more than 10 miles from an Urban Cluster.

# City

The NCES City locale designation is limited to territory located within principal cities of metropolitan areas. It does not include principal cities of micropolitan areas. More specifically, City classifications are limited to the portion of a principal city that is contained within a UA. Therefore, schools located in rural territory are designated as rural, even if they are contained within a principal city boundary. This approach focuses city classifications on large, densely populated areas, and avoids spurious classifications of rural schools resulting from overextended city boundaries primarily intended to accommodate future annexation and growth. The locale framework disaggregates city classifications by size, using 250,000 and 100,000 population thresholds to identify large, midsize, and small areas. Most principal cities of metropolitan areas are classified as small cities.

## **Mid-Size** Territory inside an Urbanized Area and inside a Principal City with population less than 250,000 and greater than or equal to 100,000.

District Name	LEA #
Boise Independent	001
Idaho Connects Online Charter District	469
Idaho Dept Correction	671
Inspire Virtual Charter	457
iSucceed Virtual High School	466
Sage International School Of Boise	475
The Village Charter School District	473

## Small

Territory inside an Urbanized Area and inside a Principal City with population less than 100,000.

District Name	LEA #
Coeur D'Alene	271
Coeur D'Alene Charter Academy	491
Idaho Falls	091
Kootenai Bridge Academy	470
Lewiston	340
Pocatello	025
The Academy	460

# Rural

## Remote

Census-defined rural territory that is more than 25 miles from an Urbanized Area and also more than 10 miles from an Urban Cluster.

District Name	LEA #
Avery	394
Bear Lake	033
Bliss	234
Bruneau-Grand View Joint School District	365
Butte County	111
Camas County	121
Cambridge Joint District	432
Cascade District	422
Challis	181
Clark County	161
Cottonwood	242
Council District	013
Dietrich	314
Garden Valley District	071
Glenns Ferry	192
Kamiah	304
Mackay	182
Mccall-Donnelly Jt. School District	421
Meadows Valley District	011
Midvale District	433
Murtaugh	418
Nezperce	302
North Gem	149
Oneida	351
Pleasant Valley Elem Dist	364
Potlatch	285
Prairie Elem. District	191
Richfield	316
Rockland	382
Salmon River	243
Shoshone	312
South Lemhi	292
Swan Valley	092
Teton County	401
Three Creek	416
Valley	262
West Jefferson	253
Whitepine	288

The NCES rural locale assignments rely on the Census Bureau's designation of non-urban territory as rural. This category accounts for the overwhelming majority of U.S. land area, and it includes a considerable range of settlement patterns and land uses. Some rural areas where school-age children live are extremely remote and difficult to access, while rural areas just outside large urban cores may have relatively easy access to a broad range of specialized goods and services typically associated with suburban and city schools. Metropolitan areas can contain both urban and rural territory. Because counties serve as the building blocks of metropolitan areas, and the extent of some metropolitan counties is quite large, some rural portions of metropolitan areas may be farther from urban cores than rural territory outside metropolitan areas. Therefore, the traditional metropolitan-based urban-suburbanrural framework poses difficulties for rural classifications as well.

The NCES rural locale provides fringe, distant, and remote subtypes that differentiate rural locations based on the distance and size of the nearest urban area. Distance thresholds applied for UCs (2.5 miles and 10 miles) are shorter than the distances used for UAs (5 miles and 25 miles) to reflect potential differences in the functional relationship between rural and urban areas. These criteria assume that families served by a rural school located 10 miles from a town of 10,000 are likely to have different options than families served by a rural school located 10 miles from an urban core with a population of 110,000. Therefore the rural locale criteria take into consideration not only distance, but also distance from which type of urban core.

The basic unit for these distance indicators (2.5 miles) was borrowed from the Census Bureau's criterion for connecting densely settled noncontiguous territory to a qualifying core of an urbanized area (UA) or a UC during the urban delineation process, officially referred to as a "jump." Distances used to define locale subtypes are simple multiples of the basic distance unit (i.e., 1x, 2x, 4x, and 10x for Rural; 4x and 14x for Towns).

# Rural

## Fringe

Census-defined rural territory that is less than or equal to 5 miles from an Urbanized Area, as well as rural territory that is less than or equal to 2.5 miles from an Urban Cluster.

District Name	LEA #
American Heritage Charter	482
Buhl Joint	412
Chief Tahgee	483
Fremont County	215
Gooding	231
Idaho Dept Juvenile Correction	709
Jefferson County	251
Kellogg	391
Ktec - Kootenai Tech Ed Campus	641
Liberty Charter	458
North Idaho Stem Charter Academy	480
North Star Charter	493
Notus District	135
Snake River	052
Taylors Crossing Chrt	461
Victory Charter School	451
Wendell	232
Xavier Charter	462

## Distant

Census-defined rural territory that is more than 5 miles but less than or equal to 25 miles from an Urbanized Area, as well as rural territory that is more than 2.5 miles but less than or equal to 10 miles from an Urban Cluster.

District Name	LEA #
Aberdeen	058
Arbon Elem	383
Basin School District	072
Canyon-Owyhee School Service Agency (Cossa)	555
Castleford	417
Culdesac	342
Firth	059
Genesee	282
Grace	148
Hagerman	233
Hansen	415
Highland	305
Horseshoe Bend School District	073
Kendrick	283
Kootenai	274
Lapwai	341
Marsh Valley	021
Marsing Joint District	363
Melba Joint District	136
Mullan	392
New Plymouth District	372
Parma District	137
Plummer-Worley	044
Ririe	252
Troy	287
West Bonner	083
West Side	202
Wilder District	133

## Suburb

## Large

Territory outside a Principal City and inside an Urbanized Area with population of 250,000 or more.

District Name	LEA #
Compass Charter School	455
Idaho College And Career Readiness	489
Idaho Virtual Admy	452
Rolling Hills Charter School	454
West Ada (Meridian)	002
	00-

## **Mid-size**

Territory outside a Principal City and inside an Urbanized Area with population less than 250,000 and greater than or equal to 100,000.

District Name	LEA #
Another Choice Virtual Charter District	476
Caldwell District	132
Heritage Community Charter District	481
Legacy Charter School District	478
Middleton District	134
Nampa School District	131
Vallivue School District	139
Vision Charter School	463

## Small

Territory outside a Principal City and inside an Urbanized Area with population less than 100,000.

District Name	LEA #
Bonneville	093
Monticello Montessori Chrt	474
Post Falls	273
White Pine Charter	464

The NCES Suburban designation applies to territory inside a Urbanized Area (UA) that is located outside the boundary of a principal city of a metropolitan area. Although most suburban territory is located within metropolitan areas, micropolitan areas may contain suburban territory as well. As with City classifications, suburban subtypes are defined by population size using the same thresholds (250,000 and 100,000) to determine large, midsize, and small areas. Although the geographic extent of suburban territory is restricted to the portion of UAs located outside principal cities, the size designation for suburban locales is based on the population of the entire UA, not just the suburban portion.

The NCES locales are not equivalent to the "urban, suburban, rural" framework often found in social research and discussions of educational conditions. This familiar three-part construct is a blend of the Census Bureau's metropolitan and urban hierarchies. Unlike NCES, the Census Bureau does not explicitly define suburban areas. All territory is either urban or rural. The suburban classification included in the three-part scheme largely stems from metropolitan area data that the Census Bureau occasionally disaggregates for three types of areasterritory inside a metropolitan area and inside a principal city, territory inside a metropolitan area and outside a principal city, and the balance of territory outside metropolitan areas. Unfortunately, some data users unfamiliar with Census geography mistakenly equate these categories with urban, suburban, and rural, when in fact all three categories may contain both urban and rural territory. The non-city balance of most metropolitan areas contains a wide range of land uses, much of which looks nothing like stereotypical suburban areas envisioned by many users of suburban data. In addition to this overgeneralization, some federal programs designate all non-metropolitan areas as rural territory, while others refer to cities and urban areas interchangeably.

The NCES Suburb locale relies on a clearer and more constrained definition of suburban areas than that offered by the metropolitan-based approach. As a result, it also has limitations. It does not 6 include emerging exurban areas that are too sparsely populated to be included within a UA, and it may leave out well-established bedroom communities that have strong functional ties to a UA but are too distant to be included as part of it. Moreover, because the Census Bureau delineates urban area boundaries only once per decade, the extent of the UA boundary may become less representative of the actual urban fringe later in the decade as population and settlement grow.

## Town

## Distant

Territory inside an Urban Cluster that is more than 10 miles and less than or equal to 35 miles from an Urbanized Area.

District Name	LEA #
American Falls	381
Blackfoot	055
Blackfoot Chrt Comm Lrng Cntr	477
Emmett Independent Dist	221
Fruitland District	373
Homedale Joint District	370
Idaho Science & Tech Chrt	468
Idaho Stem Academy Dba Bingham	485
Lake Pend Oreille	084
Madison	321
Moscow	281
Mountain Home District	193
Orofino	171
Palouse Prairie Charter	472
Payette Joint District	371
Preston	201
Richard Mckenna Charter High School	453
St Maries	041
Sugar-Salem	322

The NCES locale framework classifies all Urban Clusters (UCs) as towns. As with the city classification, town locale assignments are based on the extent of the UC boundary rather than the extent of a place boundary (though a UC and place may share the same name). Therefore, schools in rural portions of an incorporated place or CDP are considered rural, while schools located inside a UC are identified as town—regardless of whether the area is contained within an incorporated place or CDP.

Unlike city and suburban subclassifications that are based on population size, town subtypes are identified based on the town's proximity to a UA. UCs located within 10 miles of a UA are identified as fringe, while those more than 10 miles but less than 35 miles away are designated as distant. UCs located more than 35 miles away from a UA are categorized as remote. All proximity thresholds for town and rural classifications are based on geodesic distance between the vertices of the UC and UA polygon boundaries.

Towns are commonly located near UAs, often radiating along major roadways that provide easy access to the larger population core. Although they range in size (from 2,500 to 49,999), most Towns have a population less than 10,000.

NCES town assignments differ considerably from the REAP town locale criteria. Likewise, NCES's use of UCs for town assignments is not the same as that used by the Federal Communication Commission's E-rate program. Although E-rate makes use of Census urban/rural definitions to determine discounts, the program reclassifies UCs with a population less than 25,000 as rural territory.

# Town

## Fringe

Territory inside an Urban Cluster that is less than or equal to 10 miles from an Urbanized Area.

District Name	LEA #
Falcon Ridge Charter School	456
Kuna Joint District	003
Lakeland	272
Shelley	060

## Remote

Territory inside an Urban Cluster that is more than 35 miles from an Urbanized Area.

District Name	LEA #
Blaine County	061
Boundary	101
Cassia County	151
Filer	413
Heritage Admy.	479
Idaho School For Deaf And Blind	596
Jerome	261
Kimberly	414
Minidoka	331
Mountain View	244
North Valley Academy	465
Salmon	291
Soda Springs	150
Syringa Mountain Charter District	488
Twin Falls	411
Wallace	393
Weiser District	431