Teacher Compensation Review Board

Report to the Governor and the Legislature

September 4th, 2018

South Dakota Teacher Compensation Review Board
2018 Report

Background

In 2015, Governor Dennis Daugaard convened the Blue Ribbon Task Force on Teachers and Students. The Blue Ribbon Task Force was charged to "reevaluate the current funding formula, collect and analyze data, engage with stakeholders, and seek public input."

The twenty-six member task force was co-chaired by Senator Deb Soholt of Sioux Falls and Representative Jacqueline Sly of Rapid City. Over the course of the year, the task force held public meetings to seek public feedback, consider data, and make recommendations. The task force's final report, which was issued on November 11, 2015, made numerous recommendations relating to the funding formula and to teacher salaries. Based on those recommendations, Governor Daugaard proposed and the 2016 State Legislature passed three pieces of legislation: House Bill 1182, Senate Bill 131, and Senate Bill 133.

Among the task force's recommendations was the creation of the Teacher Compensation Review Board. The task force was concerned that its work not be a one-time event, but that state policymakers continue to periodically consider the state's teacher salaries, as compared to surrounding states. This recommendation was included in Senate Bill 131 and codified at SDCL 1-45-39. That statute reads:

> There is hereby created the Teacher Compensation Review Board within the Department of Education. The board shall review teacher compensation, including comparable wage indexes, in surrounding states at the completion of every three school years. The board will report its findings to the Governor and the Legislature no later than September 30, 2018, and by September thirtieth in every third year thereafter.
>
> The initial appointment of the members to the board shall be made no later than March 1, 2018. The members shall serve a term of three years.
>
> The board shall consist of nine members to be appointed as follows:
>
> (1) Three members of the South Dakota Senate appointed by the president pro tempore of the Senate, no more than two of whom may be from the same political party;
> (2) Three members of the South Dakota House of Representatives appointed by the speaker of the House of Representatives, no more than two of whom may be from the same political party; and
> (3) Three members appointed by the Governor.

Pursuant to that statute, in February 2018 the following appointments were made to the Teacher Compensation Review Board:

- Senate President Pro Tempore Brock Greenfield appointed:
  - o Senator Jim Bolin (R-Canton)
  - o Senator Troy Heinert (D-Mission)
  - o Senator Deb Soholt (R-Sioux Falls)

- Speaker of the House Mark Mickelson appointed:
  - Representative Julie Bartling (D-Burke)
  - Representative Tom Holmes (R-Sioux Falls)
  - Representative David Lust (R-Rapid City)
- Governor Daugaard appointed:
  - Dr. Becky Guffin, the superintendent of schools in the Aberdeen School District
  - Tony Venhuizen, the governor's chief of staff
  - Don Kirkegaard, the secretary of education. Kirkegaard resigned from the Board in July 2018 and Governor Daugaard appointed Dr. Kelly Glodt, the superintendent of schools in the Pierre School District, to replace him.

The Board met on June 20, 2018, in Pierre. At that meeting, Senator Jim Bolin was elected chair, and Representative Julie Bartling was elected vice chair. A second meeting was held on August 29, 2018, in Pierre, and at that meeting, this report was adopted, with instructions that it be delivered to Governor Daugaard and to the Legislative Research Council no later than September 30, 2018, pursuant to the statute.

Presentations

At the June 20, 2018 meeting, the Board considered four presentations, which are attached to this report and briefly summarized below.

National Teacher Workforce Pipeline Data – Dr. Richard Ingersoll

Dr. Ingersoll had presented to the Blue Ribbon Task Force in 2015, and offered his presentation on "Why schools have difficulty staffing their classrooms with qualified teachers." His report is based on national data.

Dr. Ingersoll's report found that the areas of teaching with the greatest hiring difficulties are mathematics, science and special education. Fifty-six percent of newly hired teachers in public school systems come from the "reserve pool" of qualified teachers, rather than newly qualified teachers entering the profession.

Turnover is a major issue in the teaching profession. Based on 2003 data, teaching has higher turnover than other professions including attorneys, architects, and nurses, and the turnover rate is even slightly higher than that of police officers. In the 2011-12 school year, schools hired 343,955 new teachers at the beginning of the year, only to have 531,340 depart at the end of the year. Beginning teachers leave at the highest rates, with 23 percent of teachers leaving the profession after two years or less.

Job dissatisfaction is the most common reason that teachers depart. Dr. Ingersoll's study found that a number of workplace-related factors, such as accountability and testing, administration, facilities and resources, and student discipline, all were sited more frequently than poor salaries as a reason for teacher to depart. He noted, however, that his report was based on national data, and that in South Dakota, where salaries were unusually low, this could be a more prevalent factor.

Finally, Dr. Ingersoll's report found that efforts to recruit new teachers are futile if not paired with efforts to retain greater numbers of existing teachers. For that reason, he urges state and school leaders to improve retention programs, such as teacher mentoring, and applauded South Dakota for including a mentoring program in the Blue Ribbon package of legislation in 2016.

South Dakota Teacher Workforce Pipeline Data – Abby Javurek
Javurek, the director of the South Dakota Department of Education's Division of Accountability Systems, presented "Trends in Educator Preparation and Employment in South Dakota." The report complements the Ingersoll presentation, as it is based on up-to-date data that is specific to South Dakota.

Javurek's report includes exceptional detail about South Dakota's teaching profession. The report shows the impact of the Blue Ribbon legislation on teacher salaries. In the 2015-16 school year, the average teacher base salary in South Dakota was $32,542. In 2016-17, base salaries increased to $37,627, an increase of 15.6% as a result of the increased funding. Preliminary data for 2017-18 indicates base salaries increased slightly more, to $38,147.

The report also looks at average salaries for all teachers. In 2015-16, the average salary was $42,025. This increased to $46,922 in 2016-17, an increase of 11.7%, due to the Blue Ribbon legislation. Salaries increased to $47,631 based on preliminary 2017-18 data.

Javurek's report also looks at the five-year projection for the teacher pipeline in South Dakota. The report finds that, by the 2022-23 school year, South Dakota schools will need to hire 2,320 new teachers: 876 to replace retiring teachers, 988 to replace those who leave the teaching profession for other reasons, and 456 to accommodate projected growth in students.

Fortunately, the report projects that South Dakota will have 2,892 new teachers enter the pipeline during that five-year period, exceeding the need of 2,320 new teachers. That includes 1,742 new teachers who will graduate from a public or private university in South Dakota and remain in the state, 855 teachers who will come to South Dakota from out-of-state, and 295 teachers who enter the profession through alternative certification.

Unfortunately, despite this progress, many schools still face hiring challenges. Javurek's report stated that, at the beginning of the 2017-18 school year, 50.66 teaching FTEs in school districts remained unfilled. This represented teaching positions at 78 schools in 39 school districts.

Finally, the report includes data indicating that the hardest-to-fill teaching positions are mathematics, science, high school language arts, special education, career and technical education, and English as a second language. The report also includes information about steps schools are taking to address these persistent shortages.

National Spending and Salary Data – Michael Griffith
Michael Griffith, school finance consultant for the Education Commission of the States, prepared a report comparing South Dakota teacher salaries, administrator salaries, and spending data to other

states. The report was an update of a report that Griffith had presented to the Blue Ribbon Task Force. However, Griffith's report did not include data from 2016-17, the first year in which the Blue Ribbon Task Force legislation affected teacher salaries, and is of limited value in gauging South Dakota's current position in relation to other states.

<u>Teacher salary rankings – Tony Venhuizen</u>
Tony Venhuizen, chief of staff to Governor Daugaard, presented three rankings of average teacher salaries by state:

- "Average salary of teachers" for 2015-16 and 2016-17, as compiled by the National Education Association in its "Rankings of the States 2017 and Estimates of School Statistics 2018" (page 26).
- "NEA average teacher salaries, by state, adjusted by 2016 BEA regional price parities." This document adjusts the NEA average teacher salary for 2016-17 by the Bureau of Economic Analysis' most recent Regional Price Parities, which are an index of cost of living, and ranks the states by the cost-of-living adjusted average teacher salary.
- "Average teacher salaries, adjusted for regional price parities and state taxes." This document, prepared by the South Dakota Governor's Office of Economic Development, goes a step beyond the prior document, by also adjusting average salaries by the federal and state tax burden in each state.

Venhuizen noted that the NEA annual report has always been the source for the statement that South Dakota is "last in the nation" in teacher pay. The latest report indicates that, in the 2016-17 school year, South Dakota rose from #51 in the nation to #48, making this the first school year since 1985 that South Dakota did not have the lowest average teacher salaries in the nation. The NEA report also states that South Dakota's average salaries increased from $42,025 in 2015-16 to $46,979 in 2016-17, an increase of $4,954 or 11.8%. Both as a dollar amount and as a percentage, this was by far the largest increase in the nation that year.

The statute creating the Board states that it "shall review teacher compensation, including comparable wage indexes, in surrounding states at the completion of every three school years." Accordingly, the Board considered South Dakota's position, compared to surrounding states, in each of the three methodologies presented:

NEA Average Teacher Salaries 2016-17

State	Salary	Rank	
Wyoming	$58,187	16	*South Dakota is the lowest among its surrounding*
Minnesota	$57,346	20	*states. SD would need to increase average salaries*
Iowa	$55,647	22	*by $11,209 (23.9%) to reach the top, or by $5,989*
N. Dakota	$52,968	27	*(12.7%) to reach the median.*
Nebraska	$52,338	30	
Montana	$51,422	32	
S. Dakota	$46,979	48	

Source: National Education Association

NEA Average Teacher Salaries 2016-17, adjusted by 2016 BEA regional price parities

State	Salary	Rank	
Iowa	$61,692.90	14	*South Dakota is the lowest among its surrounding*
Wyoming	$60,172.70	17	*states. SD would need to increase average*
Minnesota	$58,816.41	23	*adjusted salaries by $8,489.05 (16.0%) to reach the*
N. Dakota	$57,888.52	25	*top, or by $4,684.67 (8.8%) to reach the median.*
Nebraska	$57,832.04	26	
Montana	$54,646.12	33	
S. Dakota	$53,203.85	38	

Source: National Education Association; U.S. Department of Labor Bureau of Economic Analysis

NEA Average Teacher Salaries 2016, adjusted by RPP and SD GOED tax calculator

State	Salary	Rank	
Wyoming	$49,263	11	*South Dakota is sixth among the seven surrounding*
Iowa	$47,911	14	*states. SD would need to increase average*
N. Dakota	$47,522	16	*adjusted salaries by $4,667 (10.5%) to reach the*
Nebraska	$45,708	26	*top, or by $1,112 (2.5%) to reach the median.*
Minnesota	$45,418	27	
S. Dakota	$44,596	30	
Montana	$42,894	38	

Source: National Education Association; U.S. Department of Labor Bureau of Economic Analysis; South Dakota Governor's Office of Economic Development

Conclusion

The Board discussed all of these reports at its June meeting and continued the discussion at its August meeting, and makes the following findings:

- The data demonstrates that South Dakota has made significant strides in teacher pay as a result of the Blue Ribbon legislation.
- This progress is due to the changes in the funding formula, and the increase in funding, that were a part of the Blue Ribbon legislation.
- South Dakota's teacher salaries are now more regionally competitive. However, South Dakota still has one of the lowest average teacher salaries in the nation and, even when adjusted for cost of living, is lower than most surrounding states.
- In order to remain market-competitive, South Dakota should maintain and strive to improve its national ranking in average teacher salaries and to reach or exceed the median of surrounding states, when adjusted for regional price parities.

Appendices

Why Schools Have Difficulty Staffing Their Classrooms with Qualified Teachers?

Richard M. Ingersoll
Professor of Education and Sociology
University of Pennsylvania
and
Consortium for Policy Research in Education

The Source of Data
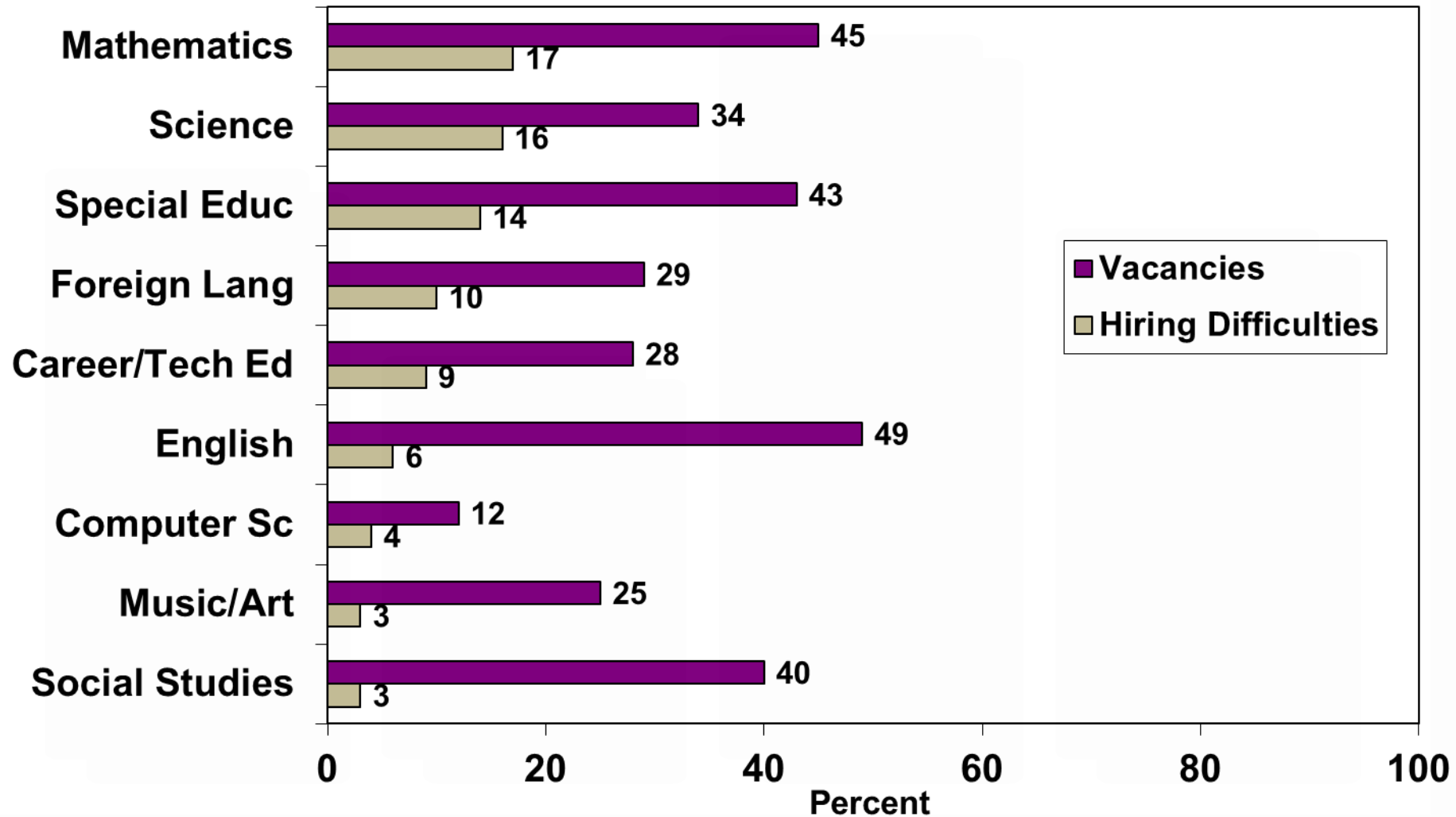
The Schools and Staffing Survey with the Teacher Follow-up Survey

- Conducted by the Census Bureau for the U.S. Department of Education

- 8 Cycles over 3 Decades:
  1987-1989, 1990-1992, 1993-1995, 1999-2001,

  2003-2005, 2007-2009; 2011-13, 2015-16

- The largest source of information on teachers:

  -Sample: 55,000 teachers

             12,000 schools

  -Representing all 50 states

Schools with Serious Teacher Shortages
(Percent Public Secondary Schools with Teaching Vacancies and with Serious Difficulties Filling those Vacancies, by Field, 2015-16)

Mathematics — Vacancies: 45, Hiring Difficulties: 17
Science — Vacancies: 34, Hiring Difficulties: 16
Special Educ — Vacancies: 43, Hiring Difficulties: 14
Foreign Lang — Vacancies: 29, Hiring Difficulties: 10
Career/Tech Ed — Vacancies: 28, Hiring Difficulties: 9
English — Vacancies: 49, Hiring Difficulties: 6
Computer Sc — Vacancies: 12, Hiring Difficulties: 4
Music/Art — Vacancies: 25, Hiring Difficulties: 3
Social Studies — Vacancies: 40, Hiring Difficulties: 3

Legend: ■ Vacancies ■ Hiring Difficulties

X-axis: Percent (0, 20, 40, 60, 80, 100)

The Surprising Sources of Teacher Supply
(Percent of Newly Hired Teachers in the Public School System, by Supply Source, 2015-16)
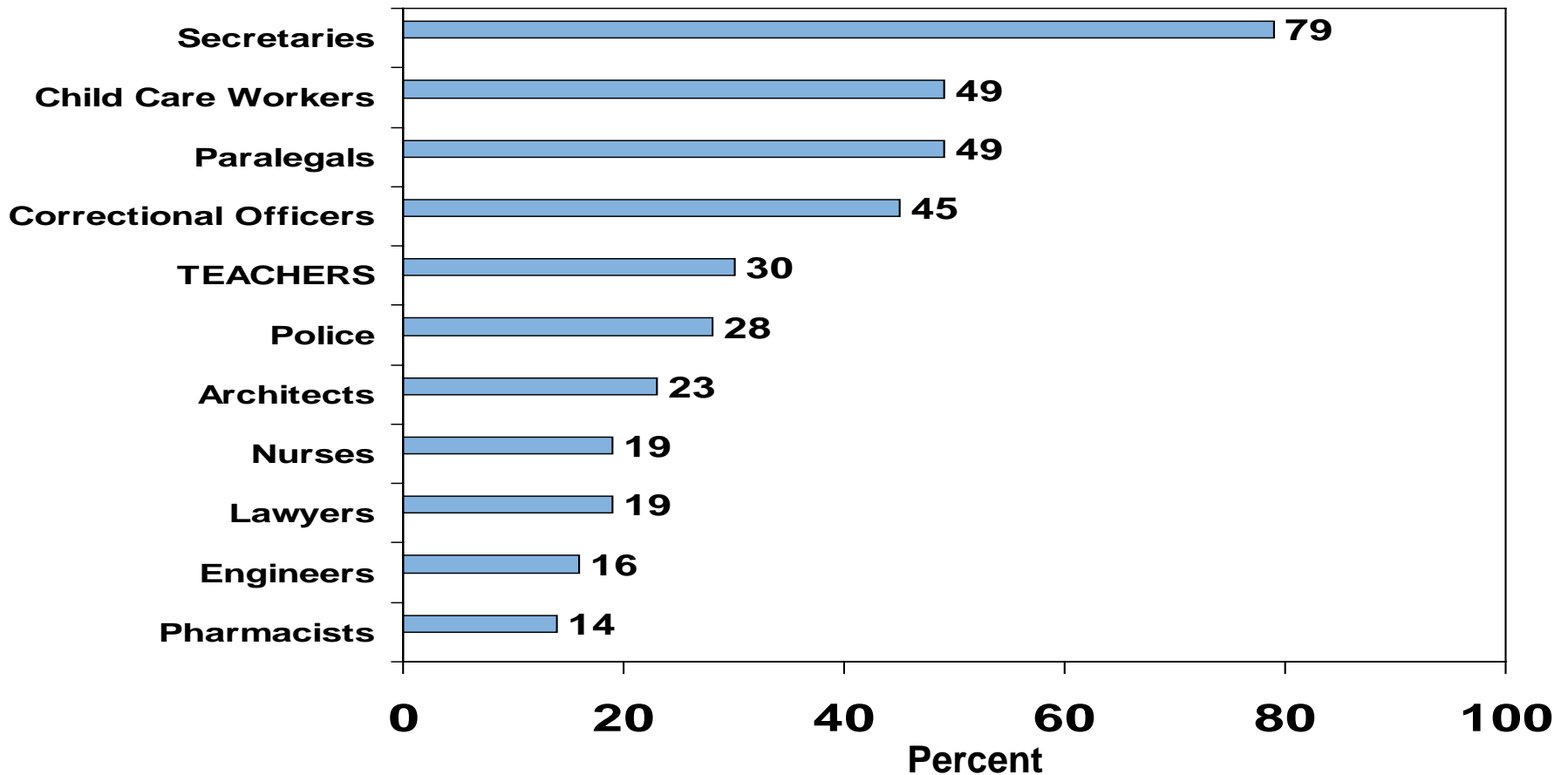

Reserve Pool, 56%

Newly Qualified with only Noneducation Degrees, 14%

Newly Qualified with both Education and Noneducation Degrees, 5%

Newly Qualified with only Education School degrees, 25%
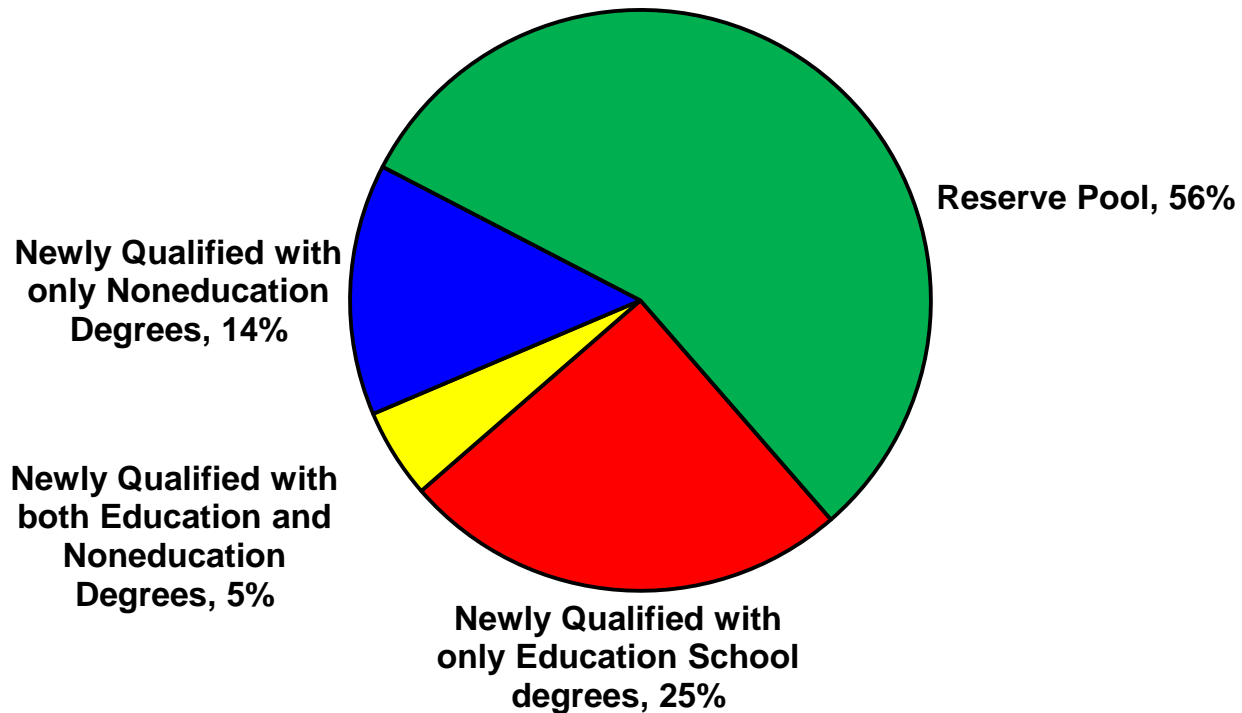
Attrition in Teaching is Higher Than in Many Occupations/Professions

(Among 1993 College Grads Who Entered Selected Occupations by 1997, Percent Gone From Occupation by 2003)

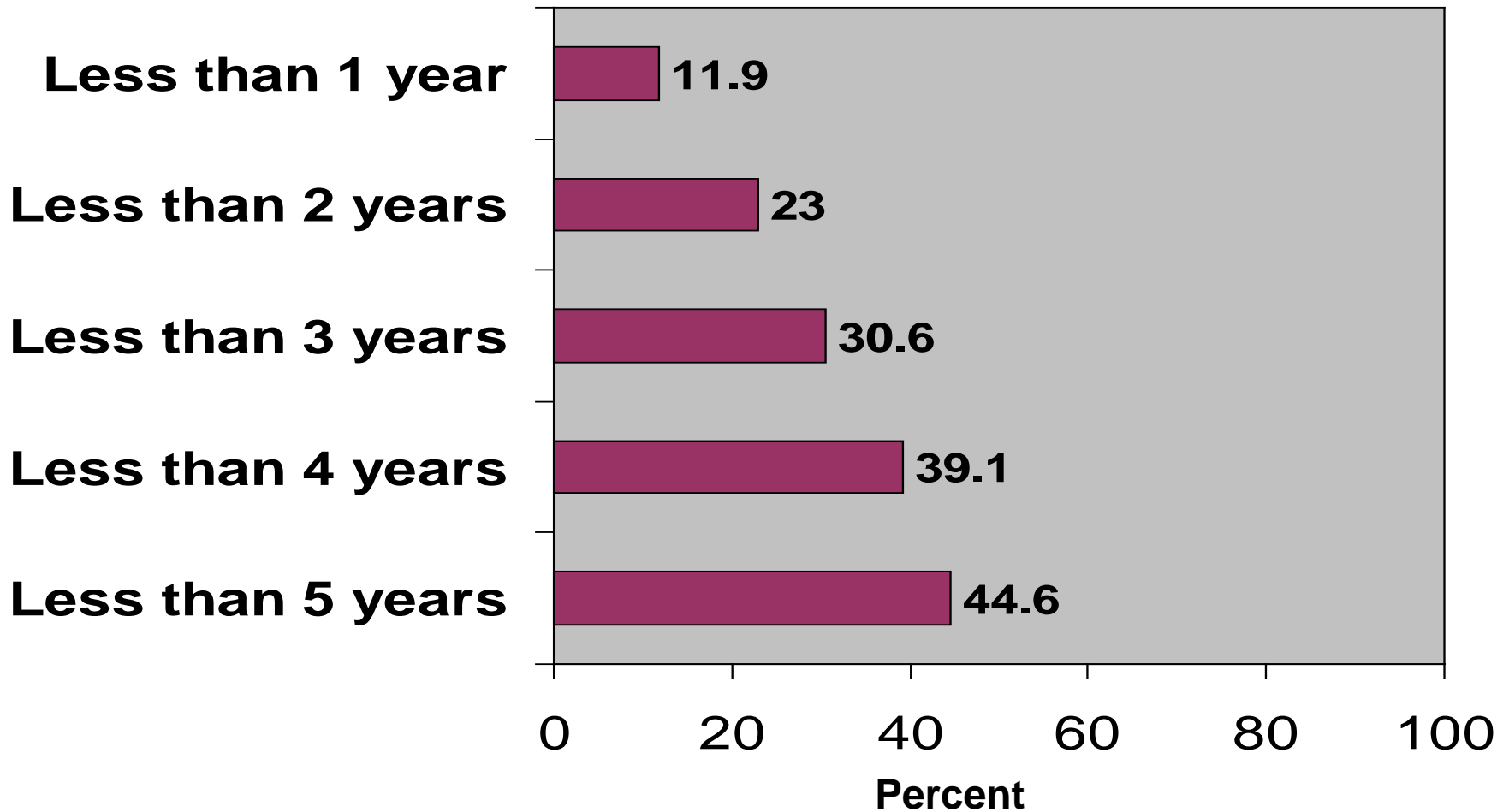| Occupation	Percent
Secretaries	79
Child Care Workers	49
Paralegals	49
Correctional Officers	45
TEACHERS	30
Police	28
Architects	23
Nurses	19
Lawyers	19
Engineers	16
Pharmacists	14

Percent

Schools Suffer from a Revolving Door

**(Numbers of Public School Teachers in Transition Into
and Out of Schools Before and After 2011-12 School Year)**

Hires
343,955

Teaching Force
3,385,171

Turnover
531,340

At Beginning of School Year   During School Year   After End of School Year
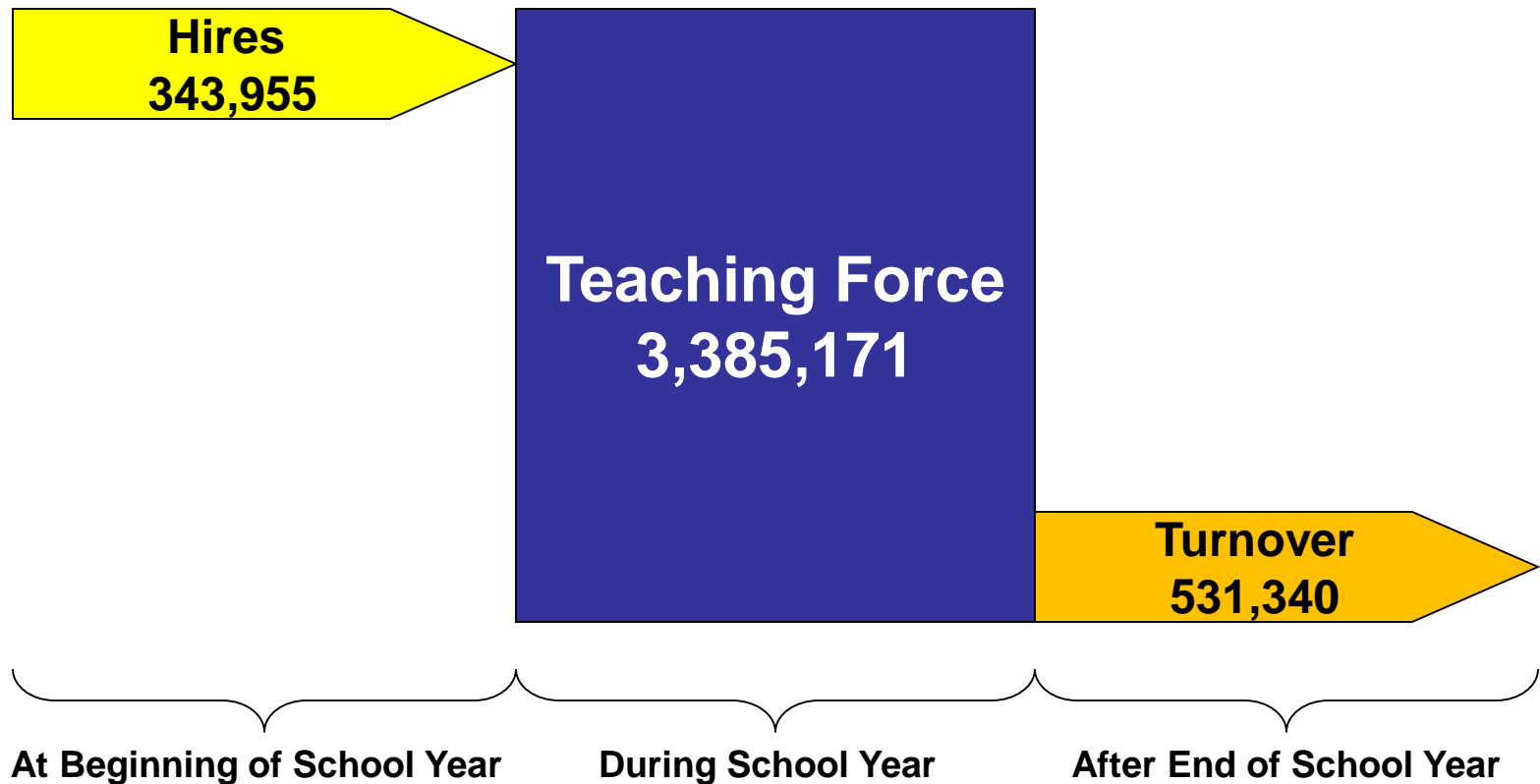
Beginning Teachers Leave Teaching at Highest Rates

(Cumulative Percent Teacher Attrition, by Years of Experience: 1993-2003

	Percent
Less than 1 year	11.9
Less than 2 years	23
Less than 3 years	30.6
Less than 4 years	39.1
Less than 5 years	44.6

Source: Perda, D. 2013. *Transitions Into and Out of Teaching: A Longitudinal Analysis of Early Career Teacher Turnover.* PhD Dissertation, Univ of Penn.

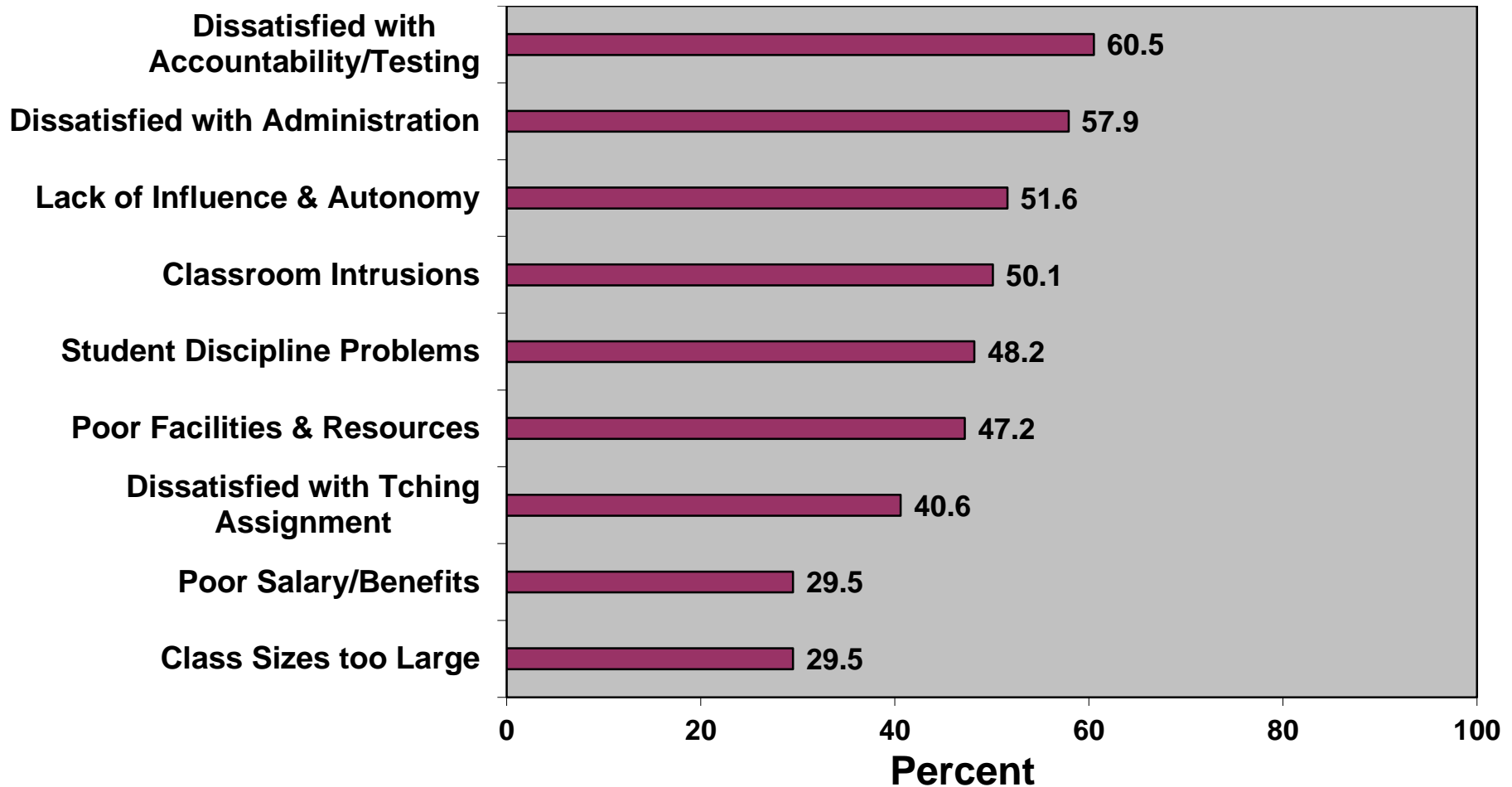# Job Dissatisfaction a Leading Factor Behind Teacher Turnover

(Percent Public School Teachers Reporting that Various Reasons Were Important for their Turnover, 2012-13)

Retirement: 18.7
School Staffing Action: 20.2
Family or Personal: 44.4
To Pursue Other Job: 36
Dissatisfaction: 55.7
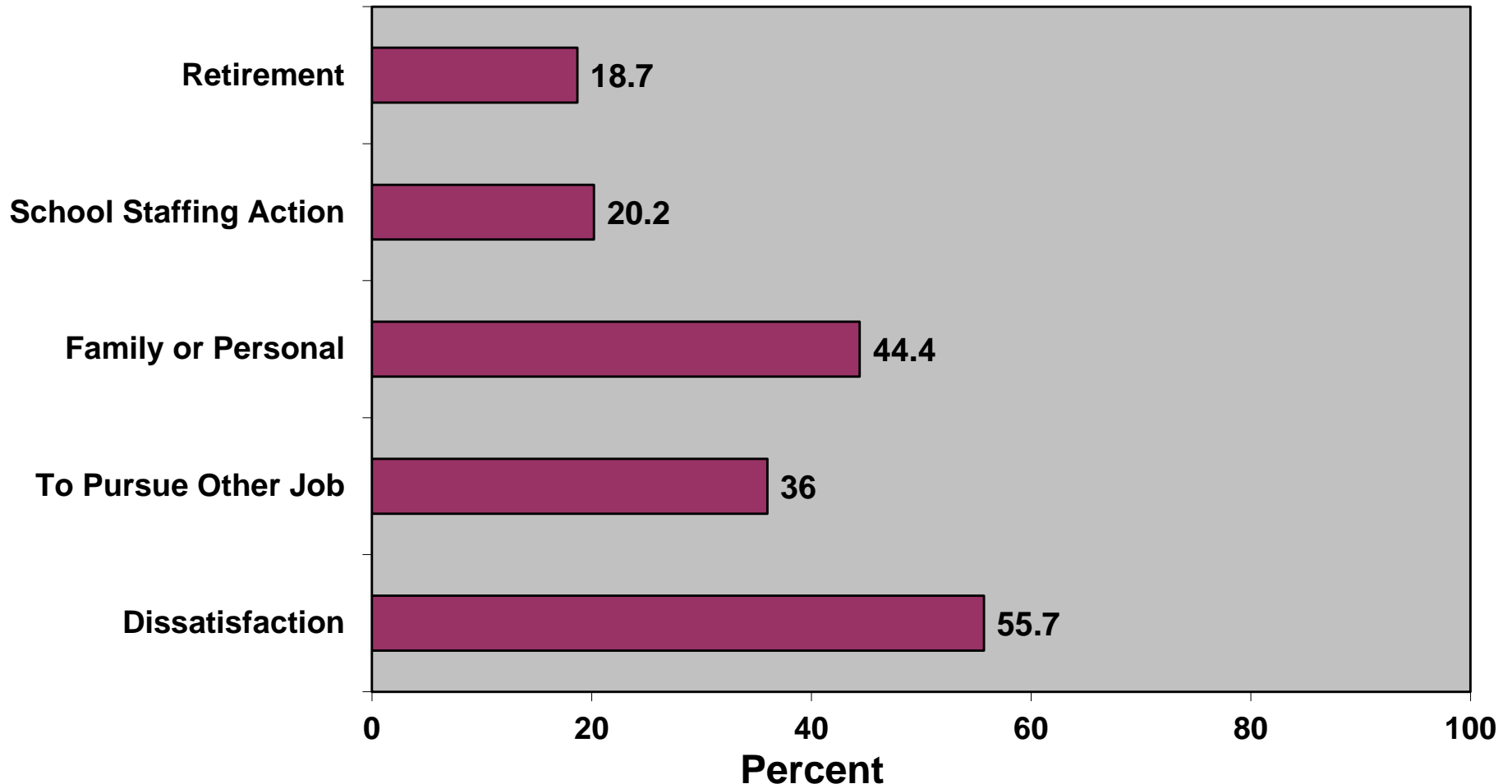
Percent

Teachers' Working Conditions are Important for Turnover

(Of Those Public School Teachers Who Moved From or Left Their School Because of Dissatisfaction, Percent Reporting Particular Sources of Dissatisfaction, 2012-13)

Source of Dissatisfaction	Percent
Dissatisfied with Accountability/Testing	60.5
Dissatisfied with Administration	57.9
Lack of Influence & Autonomy	51.6
Classroom Intrusions	50.1
Student Discipline Problems	48.2
Poor Facilities & Resources	47.2
Dissatisfied with Tching Assignment	40.6
Poor Salary/Benefits	29.5
Class Sizes too Large	29.5

Percent

Teacher Recruitment Alone Does Not Work

In 2010 the federal "100k in 10" initiative was launched: Recruitment of 10,000 New Math/Science Teachers per year for 10 years.

But, between 2012 and 2013 alone…..

- 40,600 Math/Science Teachers Left Teaching Altogether

  - Of them:

  - 8,900 Retired

  - 15,200 reported Dissatisfaction as a major reason for leaving

- 37,000 Math/Science Teachers Moved to Other Schools

  - Of them:
  - Four times as many moved to affluent as to poor schools

The Leaky Bucket
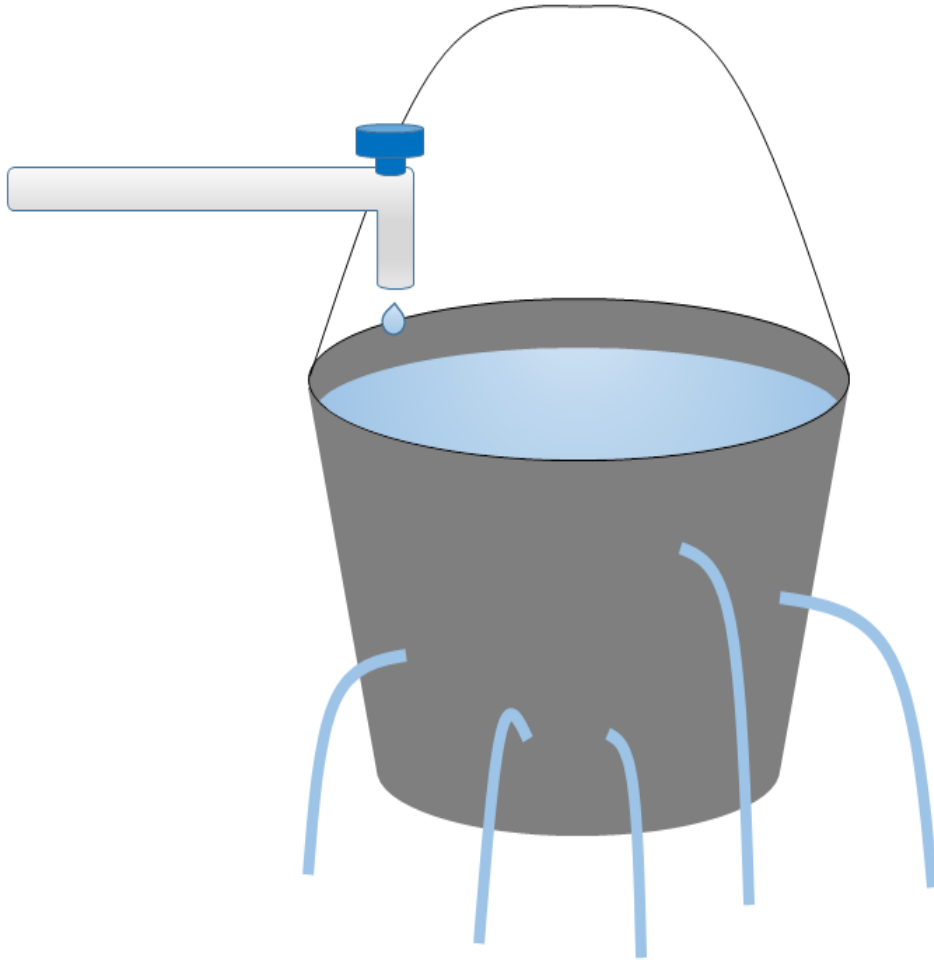
Research Shows Positive Effects of Induction & Support Program for Beginning Teachers

- We examined 15 best empirical studies, since the 1980s

- three sets of outcomes:
  - teacher commitment and retention
  - teacher classroom instructional practices
  - student achievement

- Most of the studies reviewed showed positive impacts

Source: Ingersoll & Strong. 2011. "The Impact of Induction and Mentoring for Beginning Teachers: A Critical Review of the Research." *Review of Educational Research.* 81(2) 201-233 .

For Further Information, Copies of Articles, Reports, etc.:

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Trends in Educator Preparation and Employment in South Dakota

Presented by:

Abby Javurek

Director, Division of Accountability Systems

South Dakota Department of Education

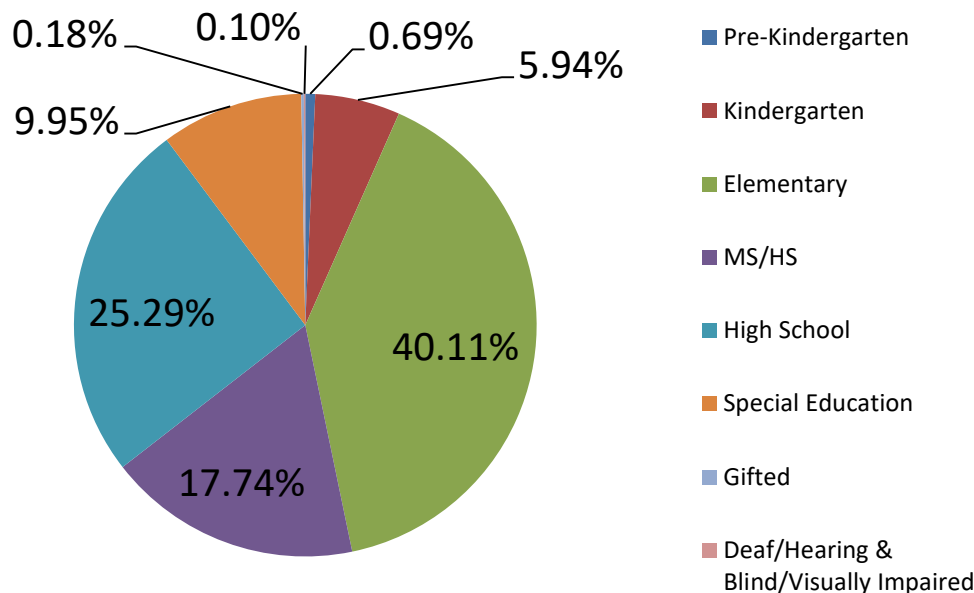06/20/2018

Setting the Stage: Purpose & Source Data

- **Purpose:** Examine South Dakota teacher pipeline

- **Goal:** Help the committee to frame SD data in the national context

- **Data sources:** SD DOE data sets, South Dakota Retirement System, IPEDS federal reports, Board of Regents Teacher Graduate Reports

Overview of the South Dakota Teaching Field

South Dakota: Number of elementary and secondary school teachers and students, 2005-2018
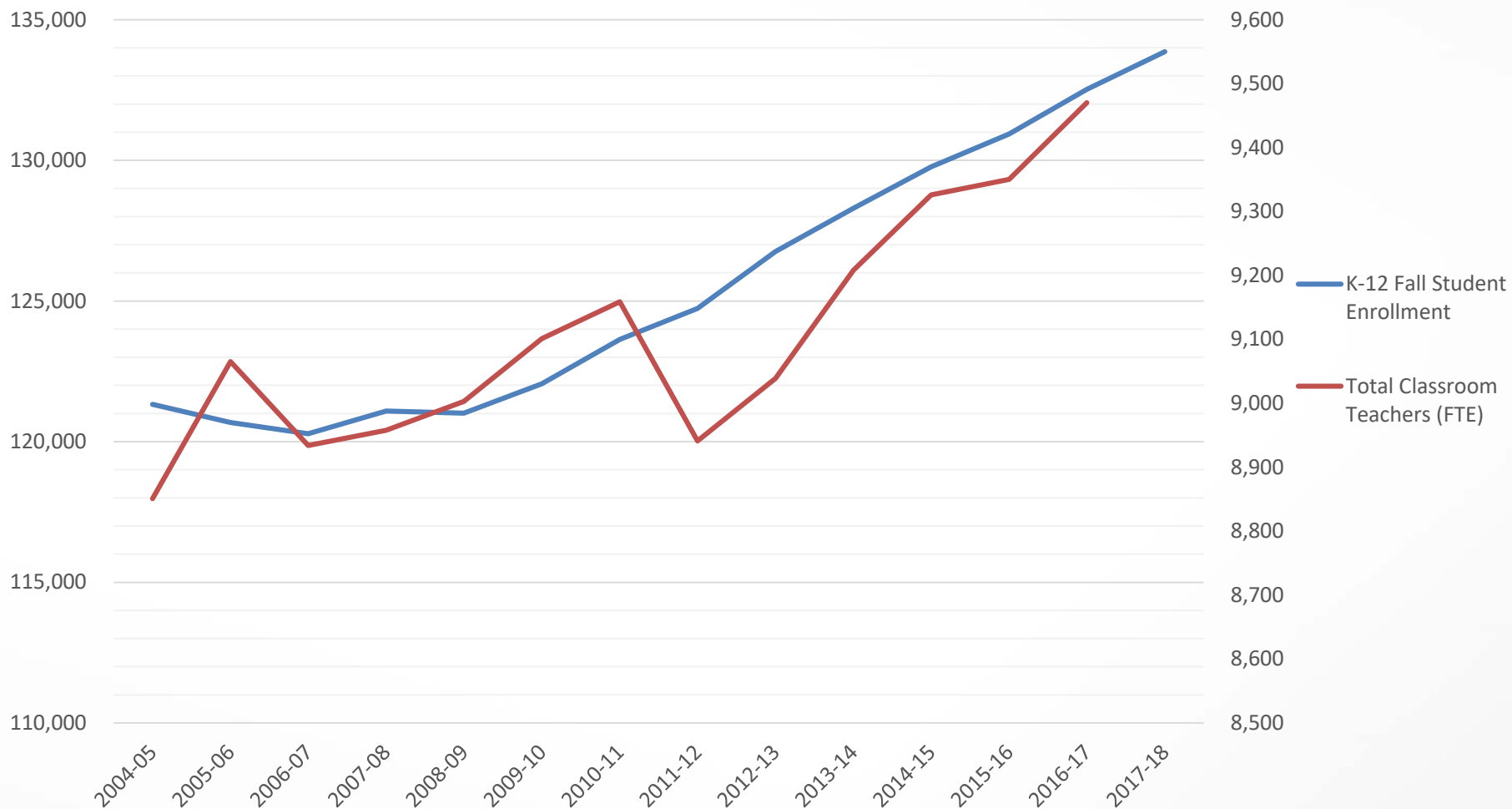
South Dakota: Distribution of Teachers by Grade Span/ Type 2016-17

- Pre-Kindergarten
- Kindergarten
- Elementary
- MS/HS
- High School
- Special Education
- Gifted
- Deaf/Hearing & Blind/Visually Impaired

Pre-Kindergarten Teachers FTE	66.7
Kindergarten Teachers FTE	572.57
Elementary Teachers FTE	3864
MS/HS Teachers FTE	1709.43
High School Teachers FTE	2436.27
Special Education Teachers FTE	958.38
Gifted Teachers FTE	17.47
Deaf/Hearing & Blind/Visually Impaired Teachers FTE	9.31
TOTAL	9634.13

- Elementary/ Self-Contained is largest group of teachers (nearly 40% of all FTE).

- If combined with Kindergarten, Elementary is greater than Middle and High School combined.

SOURCE: SD DOE Statistical Digest

South Dakota: Overview of the field 2016-17 Year

Of the 9,634.13 Teacher FTE in South Dakota:

Teachers on Plans of Intent:	654	Number of Non-Certified Educators:	64.0
Percent of Teachers with Advanced Degrees:	34.7%	Average District Beginning Salary:	$37,680
Average Years of Experience:	14.1	Average Salary:	$46,922
Number Students (K-12 Fall Enrollment):	132,520	Student to Teacher Ratio (K-12):	14.1 : 1

SOURCE: SD DOE Statistical Digest, Plans of Intent from Personnel Record Form (PRF)

South Dakota: District norms
Teacher average years experience
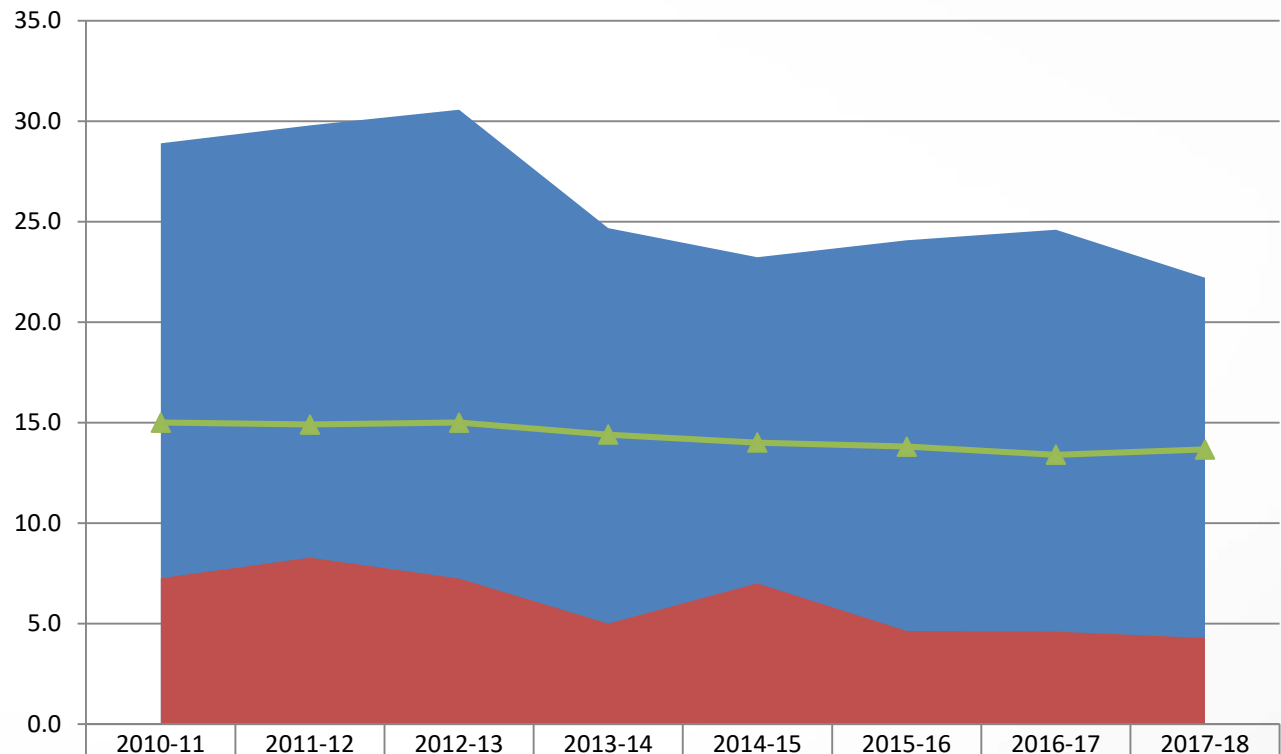
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Max Average years Experience (teacher)	28.9	29.8	30.6	24.7	23.2	24.1	24.6	22.2
Min Average Years experience (teacher)	7.3	8.3	7.2	5.0	7.0	4.6	4.6	4.3
Average Years Experience (teacher)	15.0	14.9	15.0	14.4	14.0	13.8	13.4	13.7

South Dakota: District norms
Administrator average years experience
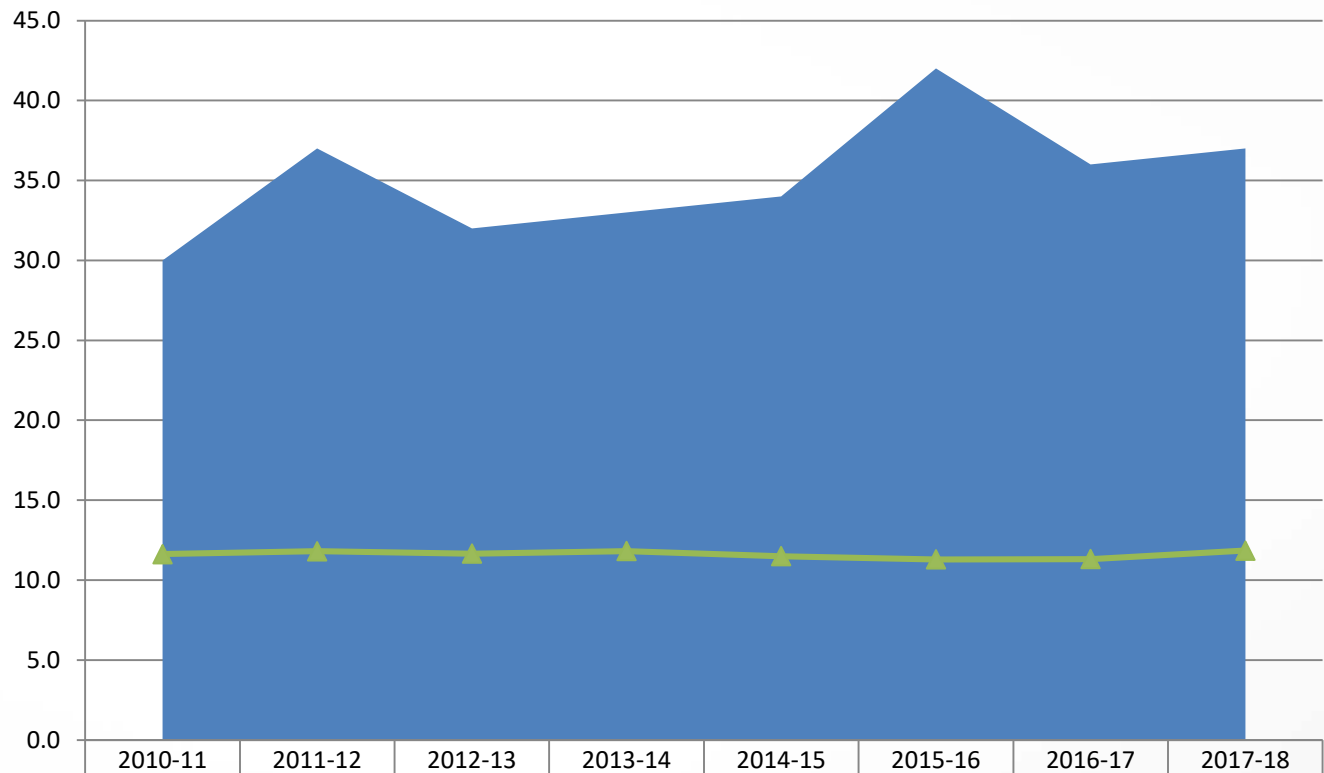
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Max Average Administrator experience	30.0	37.0	32.0	33.0	34.0	42.0	36.0	37.0
Min Average Administrator experience	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Administrator experience	11.6	11.8	11.7	11.8	11.5	11.3	11.3	11.9

SOURCE: SD DOE statistical digest; 2017-18 is preliminary only

South Dakota: Age distribution of teachers 2016-17

Pie chart:
- Age 20-30: 20.39%
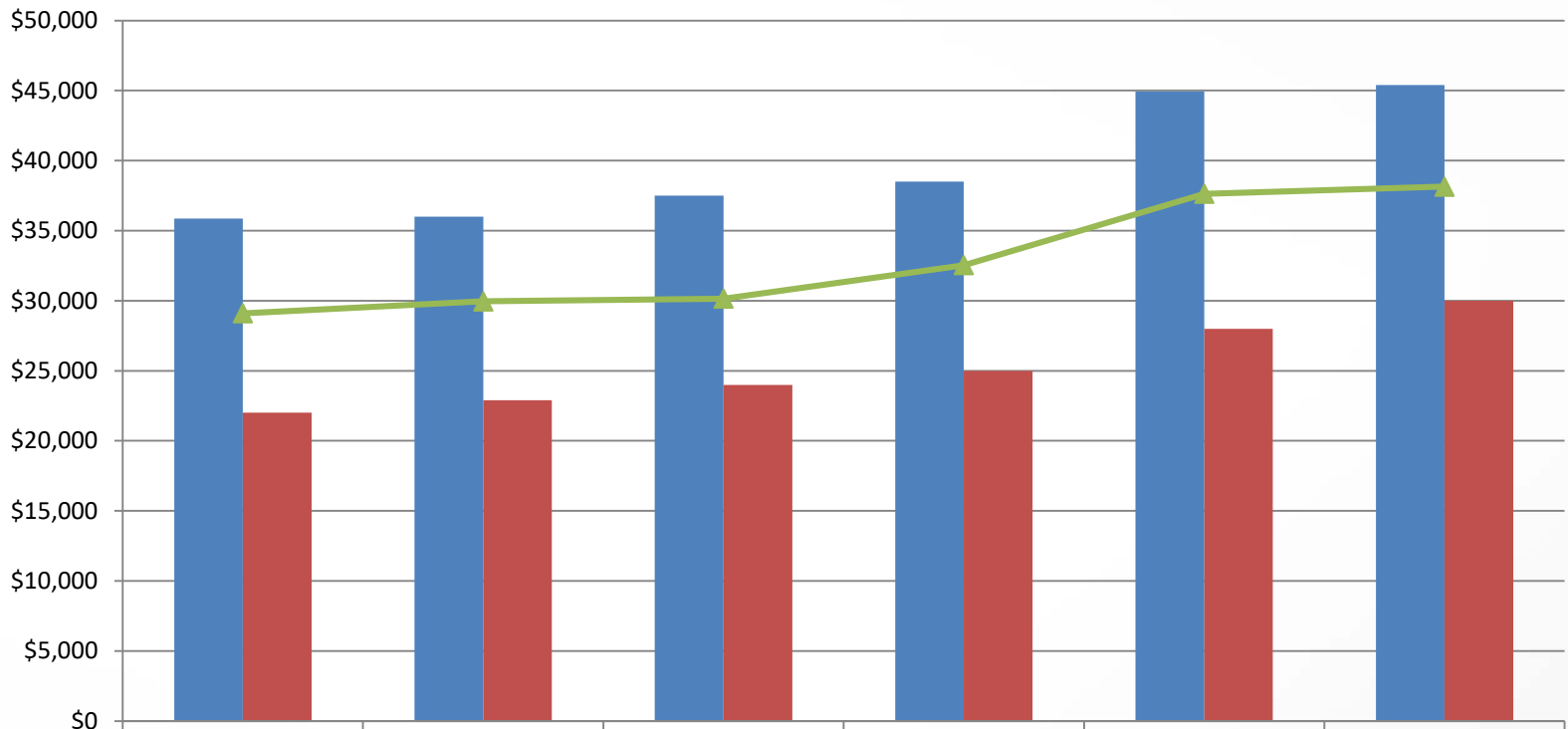- Age 31-40: 26.72%
- Age 41-50: 23.74%
- Age 51+: 29.15%
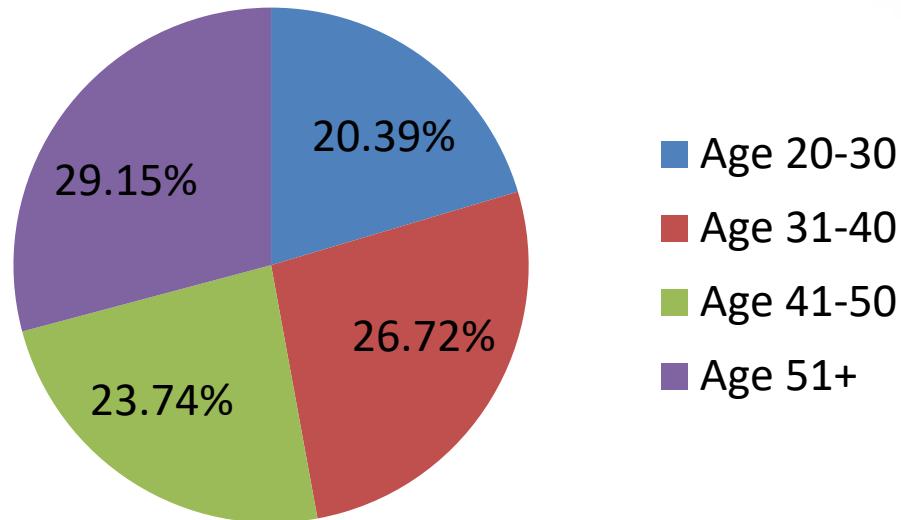
- About 30 % of teachers in the state are over the age of 51

- SD has seen the most growth in the numbers of younger teachers, and a decline in teachers over the age of 51

Age 20-30	1,951.18
Age 31-40	2,556.24
Age 41-50	2,271.32
Age 51+	2,788.69

South Dakota: District norms
Teacher average starting/base salary

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Max teacher base salary	$35,870	$36,010	$37,510	$38,510	$44,950	$45,400
Min teacher base salary	$22,000	$22,900	$24,000	$25,000	$28,000	$30,000
Average teacher base salary	$29,100	$29,950	$30,153	$32,542	$37,627	$38,147

SOURCE: SD DOE statistical digest ; 2017-18 is preliminary only

South Dakota: District norms
Teacher average salary (not total compensation)
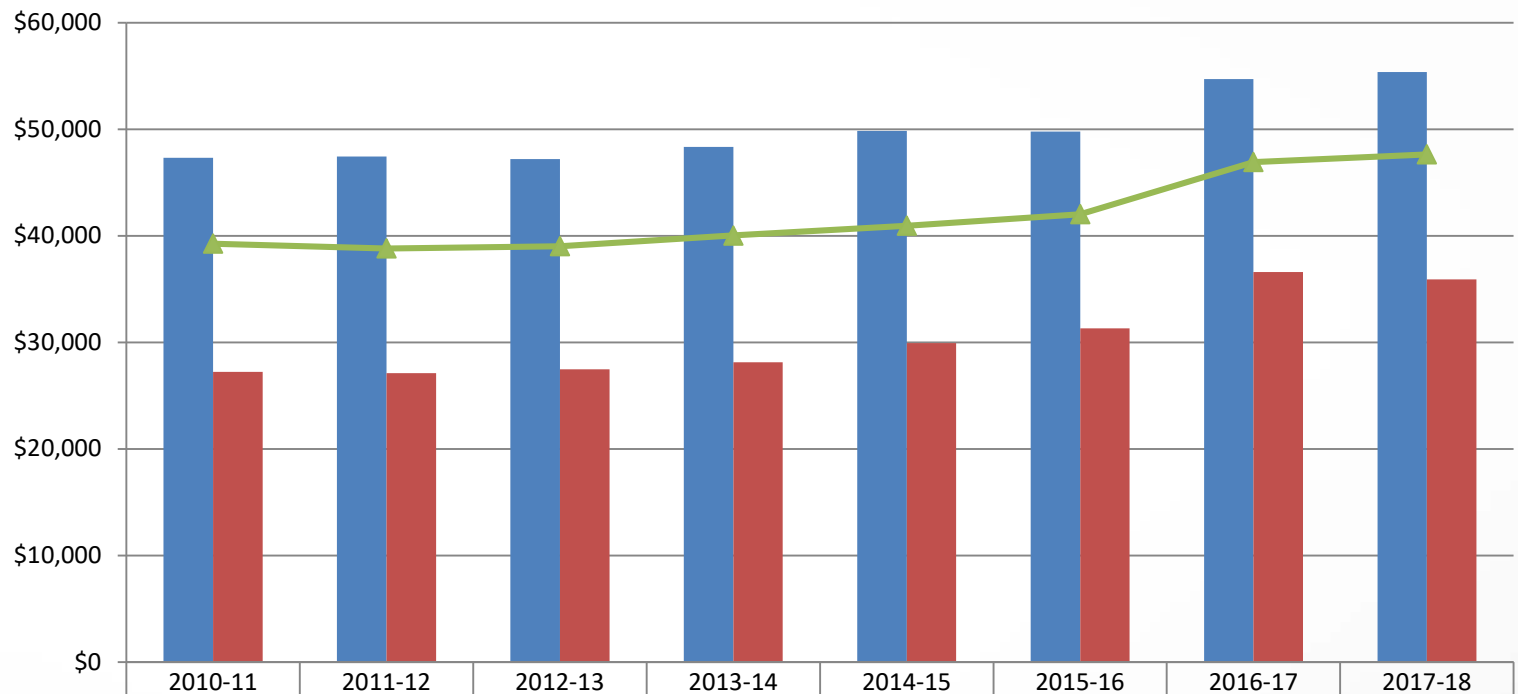
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Max Average Teacher Salary	$47,315	$47,438	$47,196	$48,343	$49,825	$49,778	$54,703	$55,353
Min Average Teacher Salary	$27,212	$27,093	$27,479	$28,125	$29,916	$31,303	$36,587	$35,906
Average Salary	$39,253	$38,807	$39,018	$40,023	$40,935	$42,025	$46,922	$47,631

South Dakota: District norms
Administrator average salary (not total compensation)
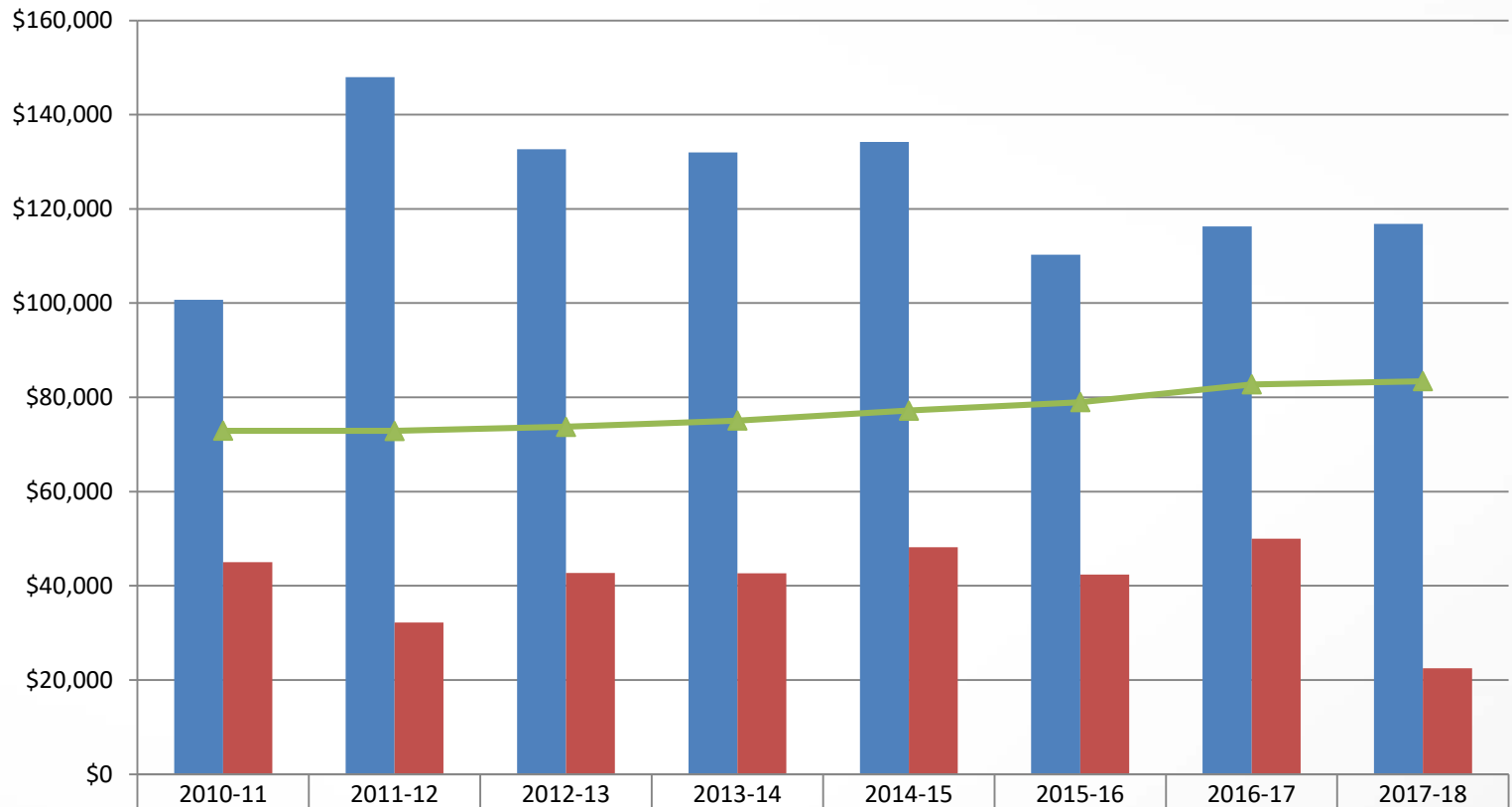
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Max Average Administrator Salary	$100,679	$148,000	$132,663	$132,000	$134,213	$110,301	$116,278	$116,827
Min Average Administrator Salary	$45,046	$32,213	$42,717	$42,657	$48,193	$42,417	$50,000	$22,500
Average Administrator Salary	$72,904	$72,863	$73,758	$75,057	$77,184	$78,993	$82,754	$83,432

2017-18 Headcount by Assignment Area

Assignment Category	Total 2018 Head Count	Public	Non-Public School District	Tribal/BIE School	Cooperative or Multi-District	State Special School	Alternative School	Virtual Providers
Administrators	740	607	80	44	6	2	1	0
Career and Technical Education	882	765	44	24	23	2	1	23
English Language Learner	71	70	1	0	0	0	0	0
Fine Arts	327	283	27	11	3	0	0	3
Language Arts	1,871	1,666	97	81	4	5	4	14
Math	1,354	1,178	85	71	3	4	1	12
Military	6	4	0	2	0	0	0	0
Miscellaneous	1,038	950	39	38	7	2	0	2
Music	559	500	53	2	0	1	0	3
Non-Credit	5,110	4,664	279	142	10	15	0	0
PE-Health	659	568	51	27	3	1	2	7
Religion	60	1	59	0	0	0	0	0
Science	1,074	927	69	53	3	4	2	16
Elementary	3,877	3,375	353	146	1	0	0	2
Social Science	1,145	982	85	52	4	4	2	16
Special Education	1,209	1,091	18	50	35	12	3	
World Language	261	177	37	29	1	0	0	17
	20,243	17,808	1,377	772	103	52	16	115

SOURCE: SD DOE Personnel Record Form

South Dakota: Key pieces of pipeline data

2016-17 "Other" Certificates (Preliminary)			Number of Graduates from South Dakota Teacher Prep-Programs 2015-16 (most recent complete data available)	
Number of Certificates Awarded to non-SD graduates:	288			
Number of Alternative (Non-TFA) Certificates Awarded**:	65		Board of Regents Universities:	509
Number of Teach for America Teachers:	27		Private Universities:	161
TOTAL First Time Certificates Issued:			1,119	

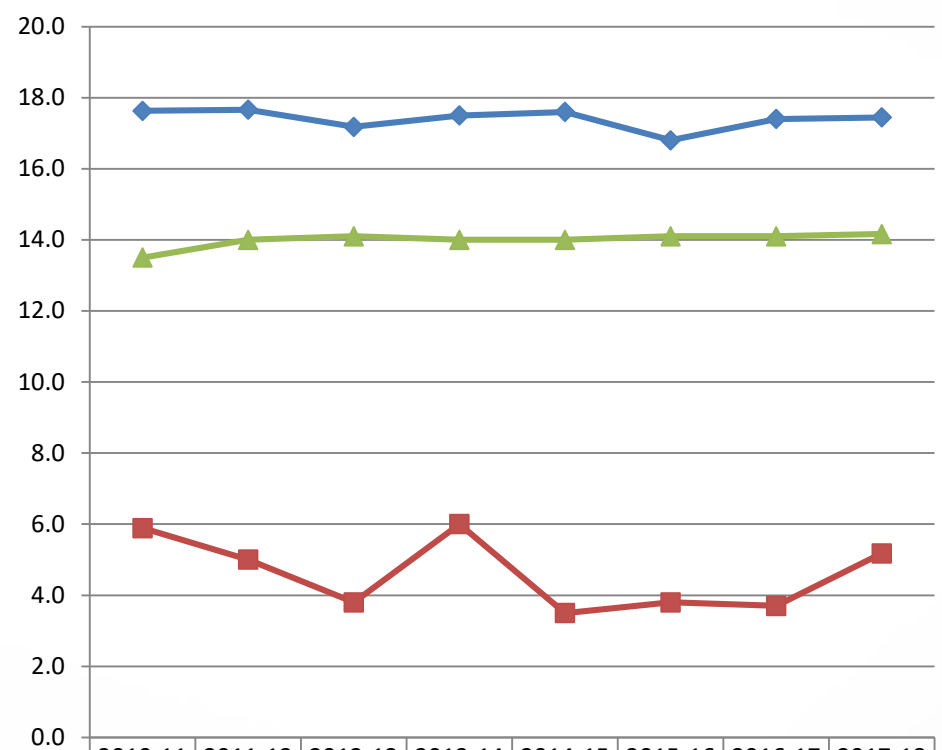** New Alternative Certificate Structure in 2017-18 with new certification rules

5 Year Projections: Teacher Need
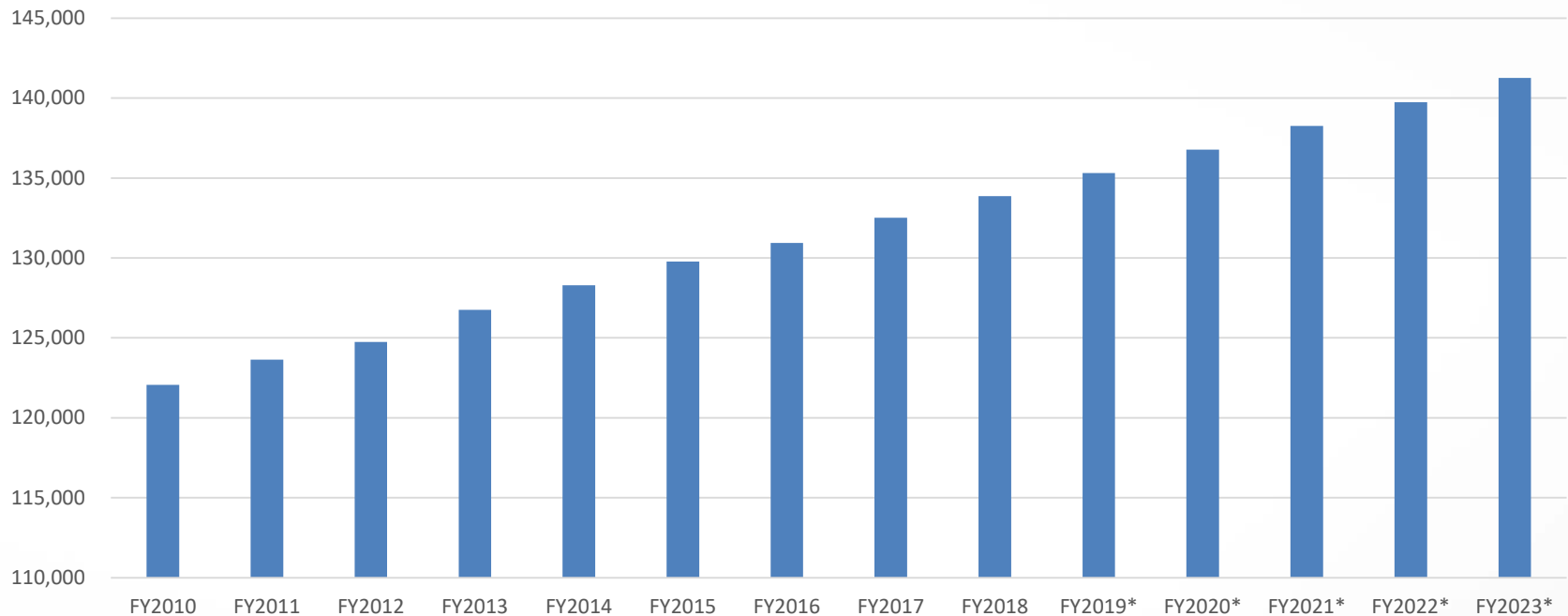
Need to meet student growth

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South Dakota: District Norms
Average Student to Teacher Ratio

Statewide average hovers around 14.0

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Max Student to Teacher Ratio	17.6	17.7	17.2	17.5	17.6	16.8	17.4	17.4
Min Student to Teacher Ratio	5.9	5.0	3.8	6.0	3.5	3.8	3.7	5.2
Statewide Student to Teacher Ratio	13.5	14.0	14.1	14.0	14.0	14.1	14.1	14.2

SOURCE: SD DOE Statistical Digest; 2017-18 is preliminary only

doe.sd.gov

South Dakota: K-12 student enrollments including 5 year projections

Projections call for enrollments to increase by about 7,400 over the next 5 years

doe.sd.gov

South Dakota: Teacher need to meet anticipated student growth
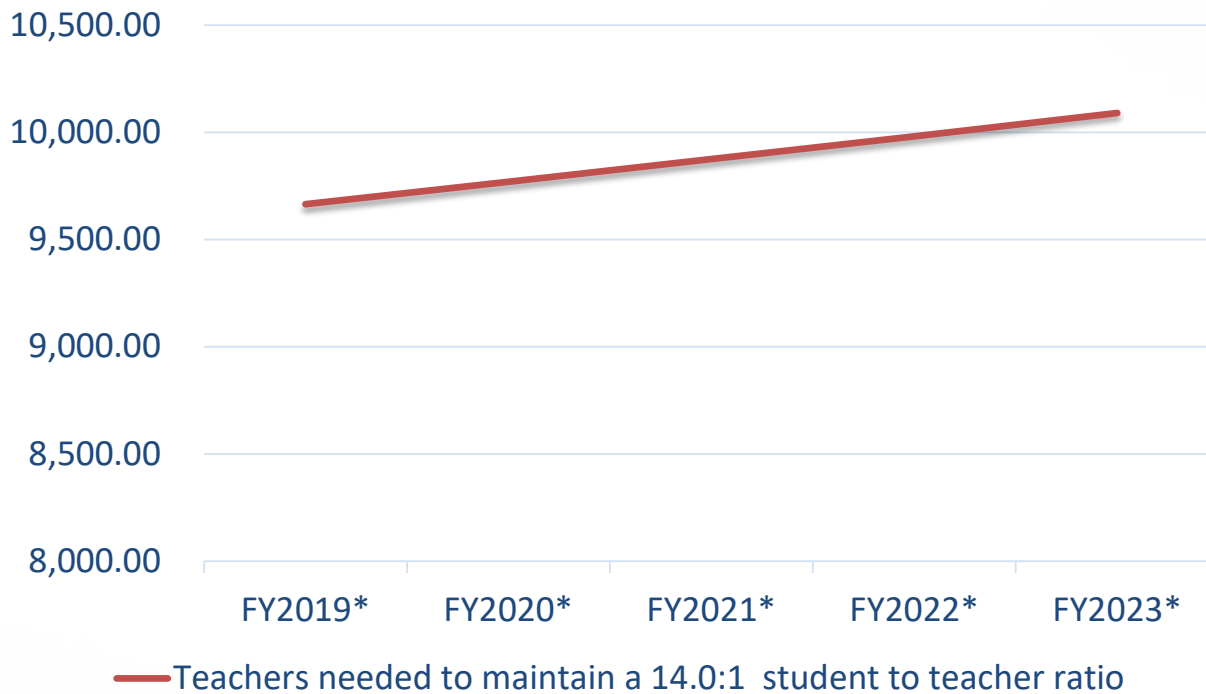
To maintain current student to teacher ratio averages, an additional **456** FTE are needed in the next 5 years.

—Teachers needed to maintain a 14.0:1 student to teacher ratio

Estimated Projected Teacher Need	FY2019	FY2020	FY2021	FY2022	FY2023
Teachers to Maintain 14.0 Student to Teacher ratio	9,664.71	9,769.71	9,875.21	9,981.86	10,089.64

Need to replace retirees

South Dakota: Administrator, teacher, and education specialist retirements 2011-2016
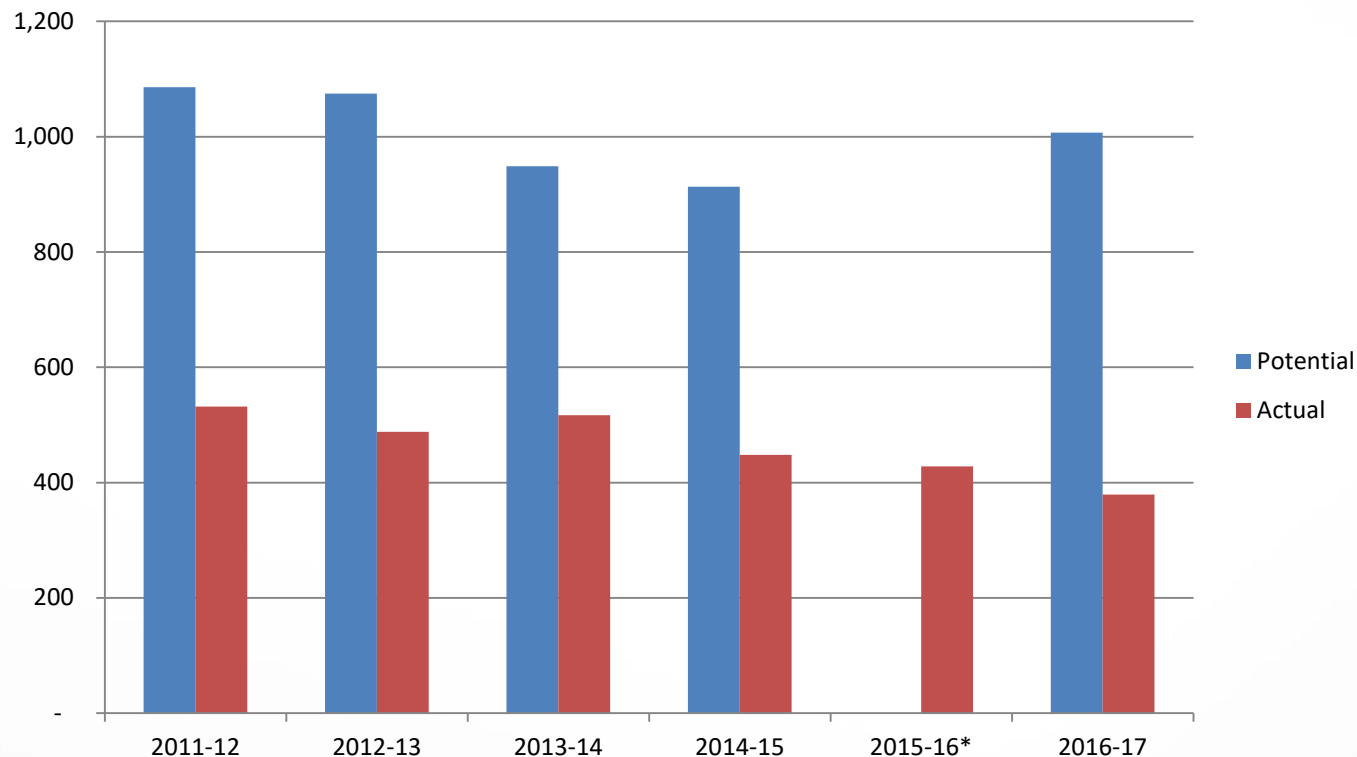
47.1% of all eligible education retirees actually retire

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South Dakota: One, Five and ten-year retirements eligible versus estimated
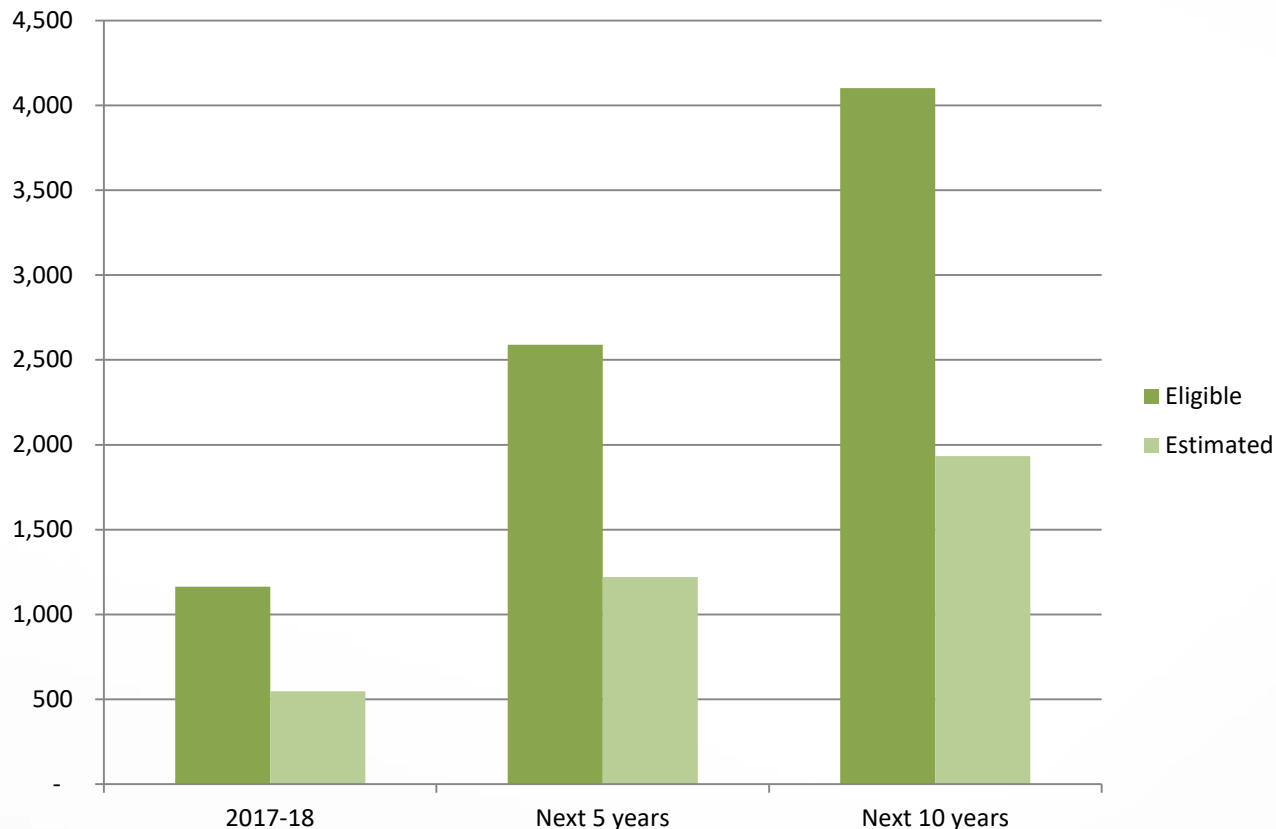
State data indicates that teachers comprised 71.8% of education retirees in the most recent year.

5 year estimate: **876** teachers retiring

SOURCE: Eligible from South Dakota Retirement System; Estimated based on projections of 49.4% retiring

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Need to replace teachers leaving for other reasons

South Dakota: Reasons that K-12 teachers do not return to their position (Headcount)

Public School Districts	2014-15	2015-16	2016-17	2017-18
Employed in another school/district outside of state	83	110	86	62
Family/personal relocation	98	99	96	45
On Leave of Absence or Sabbatical	7	13	12	13
Other employment in education	119	72	75	79
Other employment outside of education	91	109	86	86
Reason Unknown	172	217	136	117
Retirement	293	261	236	178
Laid Off	5	2	11	10
Discharged	21	29	32	33
Employed in another accredited SD school/district	254	269	216	183
Illness	5	7	6	3
Death	7	2	3	7
Mentor	5	7	2	3
Employed by district in another capacity not tracked	8	25	19	13
TOTAL	1168	1223	1018	833

SOURCE: SD DOE personnel record form

South Dakota: Reasons teachers do not return to prior position (2017/18 School Year)

|	Teachers	Admin	Educ. Spec.
Death	5.37	0.00	1.00
Employed by District in another capacity not tracked	10.17	2.00	171.11
Employed in another accredited SD school/district.	174.88	13.60	21.41
Employed in another school/district out of state	60.00	1.13	4.59
Family/personal relocation	42.34	0.85	3.73
Illness	3.00	0.41	0.00
Non-Renewal	31.39	1.60	0.00
On Leave of Absence or Sabbatical	11.50	0.00	1.00
Other employment in education	72.02	6.24	11.17
Other employment outside of education	77.26	3.70	10.13
Mentor	3.00	0.00	0.00
Reason Unknown	108.42	3.00	12.13
Reduction-in-Force	8.80	0.00	1.40
Retirement	165.95	12.00	21.88
TOTAL	**774.10**	**44.53**	**259.55**
Percent of 2016-17 Staff	8%	8%	23%
Percent of Staff Leaving Education in SD	4%	3%	4%
Percent of Staff Still in SD Education Field but in Different Position	3%	4%	18%
Percent Unknown	1%	1%	1%

South Dakota: Estimated number of teachers leaving the field

	Estimated number of Teachers	Estimated number No longer Employed
2018-19	9,665	193
2019-20	9,770	195
2020-21	9,875	198
2021-22	9,982	200
2022-23	10,090	202
Five Year Total		**988**

Estimates:
- 2% of teachers will continue to leave the field for reasons other than retirement

- In next 5 years: 988 teachers will leave the education field in SD

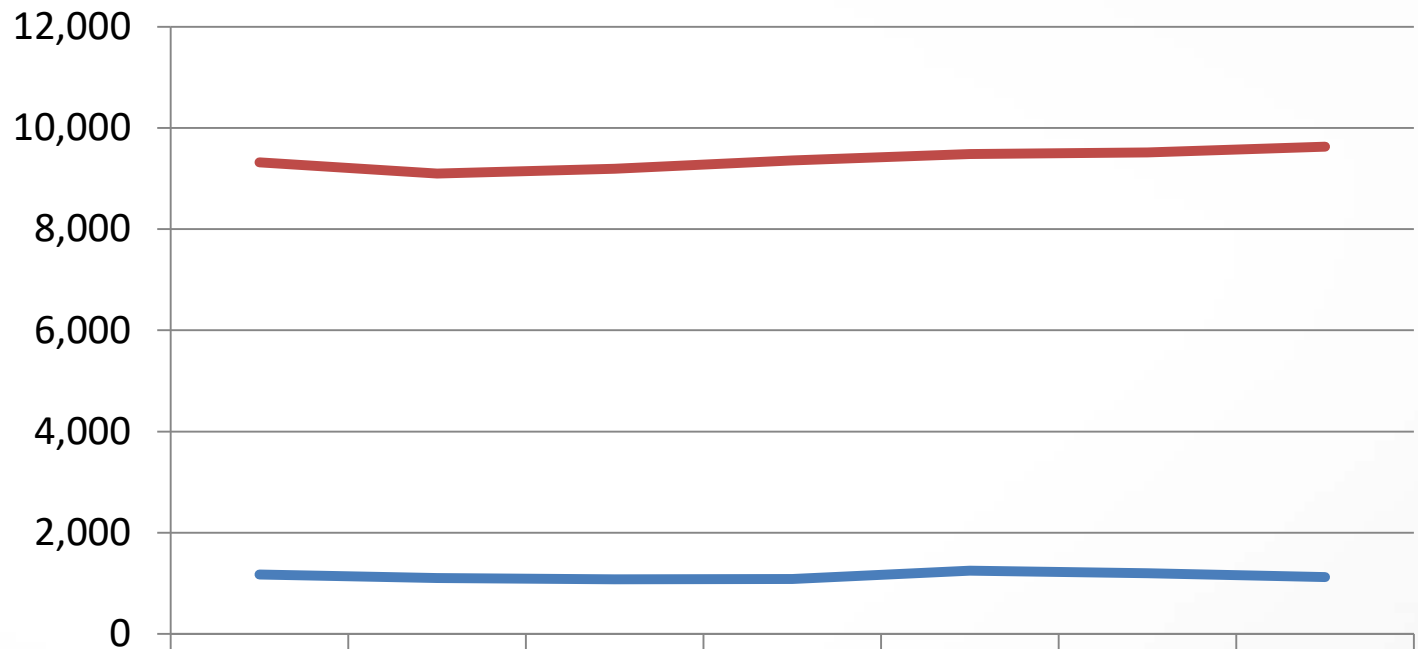**Putting it all together: 5 Year Projected Need**

South Dakota: 5-year projected teacher need

	RETIREES	NEED TO MEET STUDENT GROWTH	TEACHERS LEAVING THE FIELD
NEED	876	456	988
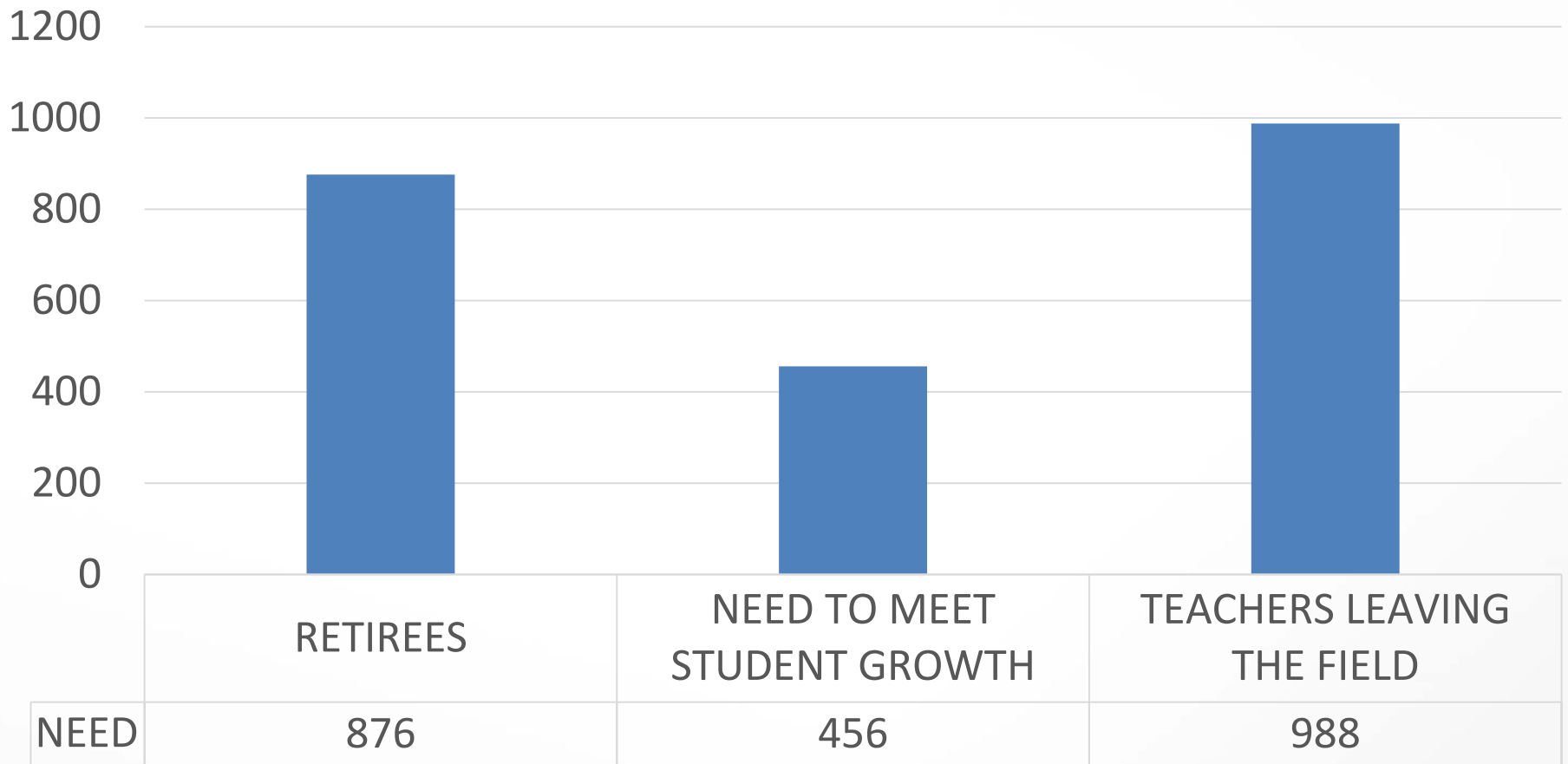
South Dakota Teacher Pipeline

South Dakota: Total FTE of Certified Teachers and Total Number of New Certificates, last 5 years

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
New Certificates Issued	1,174	1,103	1,074	1,083	1,250	1,198	1,119
FTE Certified Teachers PK-12	9,321	9,099	9,196	9,362	9,483	9515.89	9634.13

Pipeline: South Dakota College Graduates

South Dakota: Teacher preparation graduates 2002-03 to 2016-17
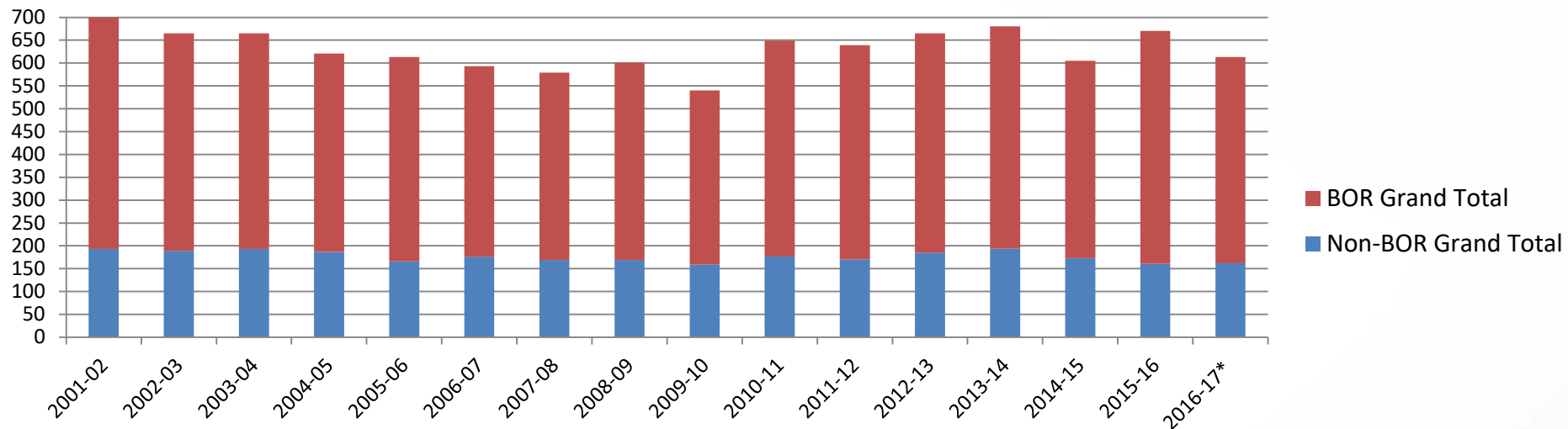
	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017*
Non-BOR Grand Total	193	189	193	187	166	176	169	169	159	177	170	185	194	173	161	162
BOR Grand Total	507	476	472	434	447	417	410	432	381	472	469	480	486	432	509	451
Combined Grand Total	700	665	665	621	613	593	579	601	540	649	639	665	680	605	670	613

SOURCE: 2002-2015/16 SD BOR data from SD BOR; Non-BOR from IPEDS Completion report (2016-17 data is preliminary IPEDS data)

doe.sd.gov

BOR Teacher Graduate Placements FY 2002-2016

Approximately half (55.4%) of all undergraduate teacher education graduates since FY2002 have been placed in an in-state school district

Placement rates are dramatically higher for teacher education candidates who attended a South Dakota high school

In-State Placement Rates by High School State of Teacher

From SD High School — 32.6% / 67.4%
Not from SD High School — 32.0% / 68.0%
Total — 44.6% / 55.4%

Placed ▉ (yellow)   Not Placed ▉ (gray)
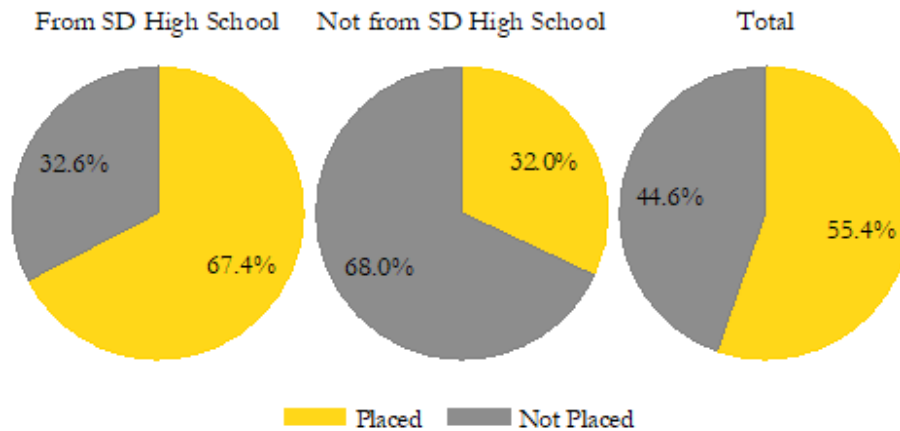
In-State Placement Rates by Institution and High School State of Teacher (Percentages)

	From SD High School			Not from SD High School			Total		
	Placed	Not Placed	Total	Placed	Not Placed	Total	Placed	Not Placed	Total
BHSU	68.9	31.2	100.0	30.7	69.3	100.0	53.0	47.0	100.0
DSU	79.7	20.3	100.0	50.3	49.7	100.0	73.0	27.0	100.0
NSU	71.1	28.9	100.0	32.2	67.8	100.0	62.4	37.6	100.0
SDSU	55.7	44.3	100.0	25.4	74.6	100.0	45.7	54.3	100.0
USD	68.5	31.5	100.0	34.2	65.8	100.0	54.5	45.5	100.0
System	67.4	32.6	100.0	32.0	68.0	100.0	55.4	44.6	100.0
(n)	3,044	1,471	4,515	738	1,571	2,309	3,782	3,042	6,824

South Dakota: Trajectories for new teacher graduates, next 5 years

5 Years Estimated SD Teacher Graduates

	2016-17	2017-18	2018-19	2019-20	2020-21
Board of Regents Universities	162	174	174	174	174
Non-BOR Universities	451	458	458	459	460
TOTAL	**613**	**632**	**632**	**633**	**634**
			Five Year Total	**3,144**	

Estimated SD Placements

	Projected Grads	Projected Placed in SD
2016-17	613	340
2017-18	632	350
2018-19	632	350
2019-20	633	351
2020-21	634	351
TOTAL	3,144	1,742

Per the most recently available long term data, 55.4% of all Board of Regents teacher education graduates were employed in South Dakota.

This means that we expect 1,742 of 3,144 grads to take jobs in SD in the next 5 years

Pipeline: Out of State College Graduates

South Dakota: Teachers from out-of-state 2010-2014

Certificates Issued to Out-of-State Graduates

	Certificates Issued	Employed in SD	Employed %	Administration Endorsement	Educator Specialist Endorsement	Teacher Endorsement
2010	440	268	60.91%	27	24	389
2011	414	247	59.66%	17	21	376
2012	466	283	60.73%	24	30	412
2013	490	320	65.31%	27	11	452
2014	435	265	60.92%	21	20	394
2015	416	192	46.15%	18	8	400
2016	370	178	48.11%	14	11	358
2017	299	130	43.48%	14	8	288

On average 55.66% of out of state educators who apply for certification in South Dakota will be employed in South Dakota public schools

5 year trajectory:
- 1,536 out-of-state applicants
- 855 employed in the SD public schools.

SOURCE: SD DOE Certification and Personnel Record Form databases

doe.sd.gov

Pipeline: Alternative Certification

South Dakota: Alternative certificates

	Alternative Certificates	Teach For America	Total Alternative
2010-11	41	26	67
2011-12	37	17	54
2012-13	51	15	66
2013-14	48	23	71
2014-15	55	31	86
2015-16	86	29	115
2016-17	114	19	133
2017-18	188	20	208

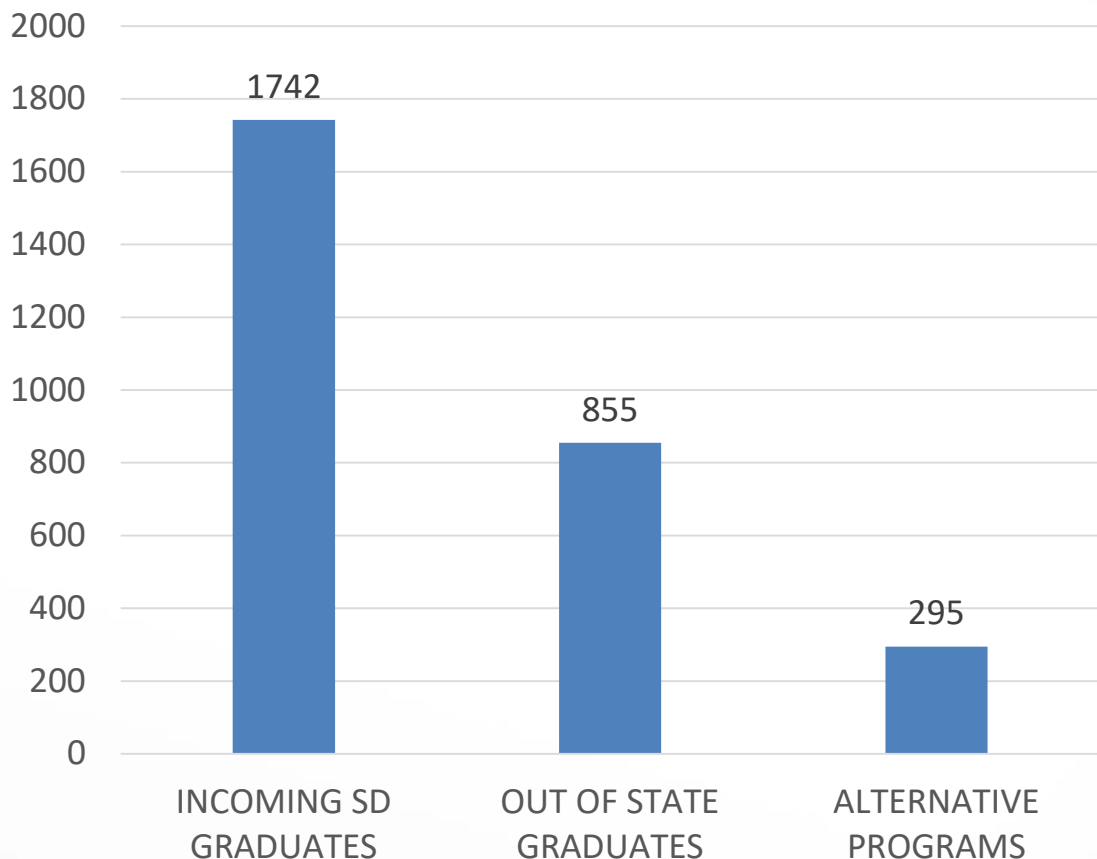SOURCE: SD DOE Certification and Personnel Record Form databases

Expectations:

- The alternative Certification program will continue to grow, but will stabilize under the new rules.

- Teach For America will remain steady at an average 23 teachers a year

- 5 year conservative projection: **295**
- **new teachers**

Putting it all together: 5-year teacher pipeline projections

Projected Totals

South Dakota: Pipeline Overview
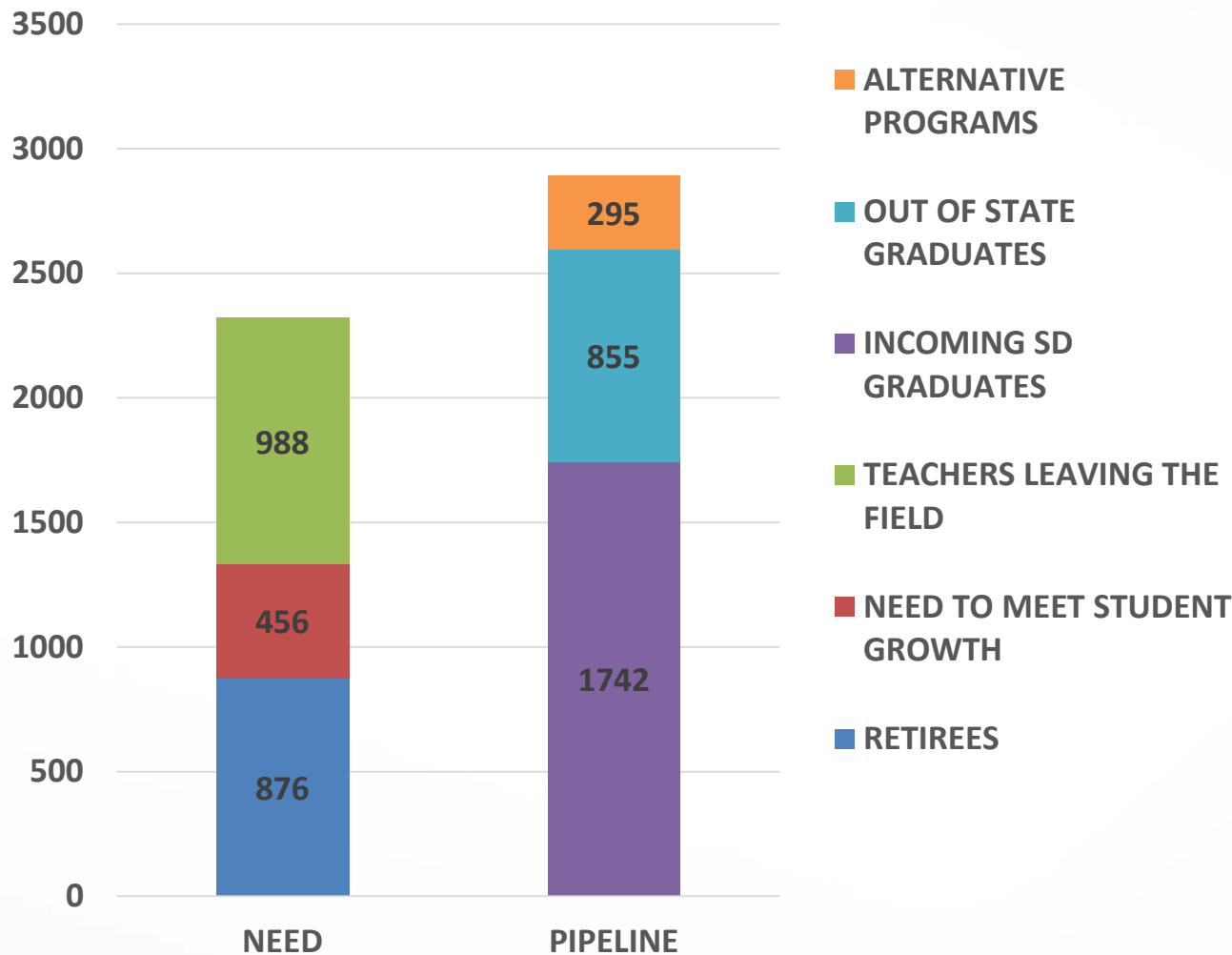
The estimated supply of teachers indicates the potential teacher pool will be **572 more** than the minimal five-year need.

Hard to Fill Positions

2018 Preliminary Plans of Intent

Educator Assignment	PLANS OF INTENT BY HEAD COUNT	Percent on Plan of Intent
Administrators	18	3%
Career and Technical Education	108	14%
English Language Learner	13	19%
Fine Arts	13	5%
Language Arts	64	4%
Math	41	3%
Military	0	0%
Miscellaneous	4	0%
Music	14	3%
Non-Credit	3	0%
PE-Health	35	6%
Religion	0	0%
Science	59	6%
Elementary	77	2%
Social Science	63	6%
Special Education	39	4%
World Language	16	9%
	567	**3%**

SOURCE: SD DOE Personnel Record Form database

South Dakota: Unfilled Vacancies, First Day of School 2017-18

	FTE	Courses
Administrators	1	
Career and Technical Education	3.48	22
Education Specialists	12.11	14
English Learner/ ESL	1	1
Fine Arts	1.15	2
Language Arts	3.86	20
Math	3.73	22
Miscellaneous	2	8
Music	0.8	1
Non-Credit	5.46	24
PE-Health	0.19	2
Science	1.8	9
Elementary	13.46	15
Social Science	0.97	4
Special Education	12.52	13
World Language	0.24	2
Total FTE	**63.77**	**161**

- Includes ALL Public schools
- Represents teaching positions at 78 schools; 39 districts
- Administrator and School Service Specialists at 11 districts

SOURCE: SD DOE Personnel Record Form database

South Dakota: High School vacancies by FTE first day of school, 2014-2015

	FTE	Percent of ALL FTE vacancies
Administrators	0.66	66.00%
Career and Technical Education	2.84	81.61%
Education Specialists	0.5	4.13%
Fine Arts	0.15	13.04%
Language Arts	2.44	63.21%
Math	2.22	59.52%
Miscellaneous	0.58	29.00%
Non-Credit	4.42	80.95%
PE-Health	0.06	31.58%
Science	1.53	85.00%
Social Science	0.5	51.55%
Special Education	4.52	36.10%
World Language	0.24	100.00%
TOTAL	**20.66**	**32.40%**

- Represents positions at 24 schools and districts (11.94% of HS)

- Math & Science: 8 high schools with at least 1 unfilled course (4.0% of HS)

- English: 3 high schools with at least 1 unfilled course (1.5% of HS)

Hard to Fill Positions

South Dakota: Hard to fill positions
Plans of Intent 2017-18

	PLANS OF INTENT (HEAD COUNT)	% OF CATEGORY
Administrators	18	3%
CTE	108	14%
ESL (Non-Core)	13	19%
Fine Arts	13	5%
Language Arts	64	4%
Math	41	3%
Military	0	0%
Miscellaneous	4	0%
Music	14	3%
Non-Credit	3	0%
PE-Health	35	6%
Science	59	6%
Elementary	77	2%
Social Science	63	6%
Special Ed (Non-Core)	39	4%
World Language	16	9%

- Includes all Public Schools in the state

- English as a Second Language, World Language, and CTE teachers were the most likely to be on Plans of Intent

- Highest numbers of Plans of intent in Elementary, CTE, Language Arts, & Social Science

SOURCE: SD DOE Personnel Record Form database

South Dakota: Plan of Intent Trends

	2015	2016	2017
# Plans of Intent	576	726	676
Not Completed	N/A	538	520
Completed	N/A	188	156
Headcount	501	596	563

SOURCE: SD DOE Personnel Record Form database

- One teacher may be on multiple plans of intent to teach multiple courses
- Both the number of teachers and the number of plans of intent has been growing
- Plans of Intent are issued for up to 2 years in most cases
- Educators have completed 24.49% of Plans of Intent in recent years on average. This is down from pre-2015 percentages

South Dakota: Hard to fill position resolution of Unfilled Vacancies 2014-15 (October 15)

	# of Courses	% of Vacancies
Eliminate Course/Program	27	16.77%
Additional duties given to other staff	38	23.60%
Hired certified candidate after school started	8	4.97%
Increased Class size	16	9.94%
Position remains vacant	31	19.25%
Use Distance Learning	14	8.70%
Other	27	16.77%
Total (including Administrators and School Service Specialists)	161	

- Most common resolution was to re-assign duties to other staff

- Vacant courses is down from 2015

Hard to Fill Positions:

Flexible Course Offerings

South Dakota: Flexible Learning Options
South Dakota Virtual School Courses

	Districts		Courses		Total Student Enrollments
	Public	Other	Available	Offered	
2010-11	118		233		3446
2011-12	127		255		3389
2012-13	133		289		3750
2013-14	135		298		3837
2014-15	133	16	389		3952
2015-16	126	15		209	4078
2016-17	133	13		275	4005

SOURCE: SD Virtual School annual reports

- Represents officially reported public school enrollments

- 16.22% increase in student enrollments since 2010-11

South Dakota: Flexible Learning Options
South Dakota Virtual School Courses

	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
CTE	276	283	316	401	400	365	284
Credit Recovery	842	942	946	727	627	559	609
College Readiness			115	169	128	115	90
Fine Arts	188	114	127	132	132	107	59
Health/PE	105	60	43	66	55	151	123
ELA	320	299	351	297	255	411	287
Math	340	194	246	286	334	653	344
Sciences	280	334	396	413	524	403	310
Social Sciences	798	137	165	190	285	311	200
World Language		1008	1015	1098	1061	808	698
Personal Fiance/Econ		1	7	40	44	66	45
Technology		14	10	9	9	3	7
Elementary					84	89	17
Other	38	3	13	9	14	37	0

- Over time, offerings in more subjects have been added
- Credit Recovery and World Languages have the highest enrollments
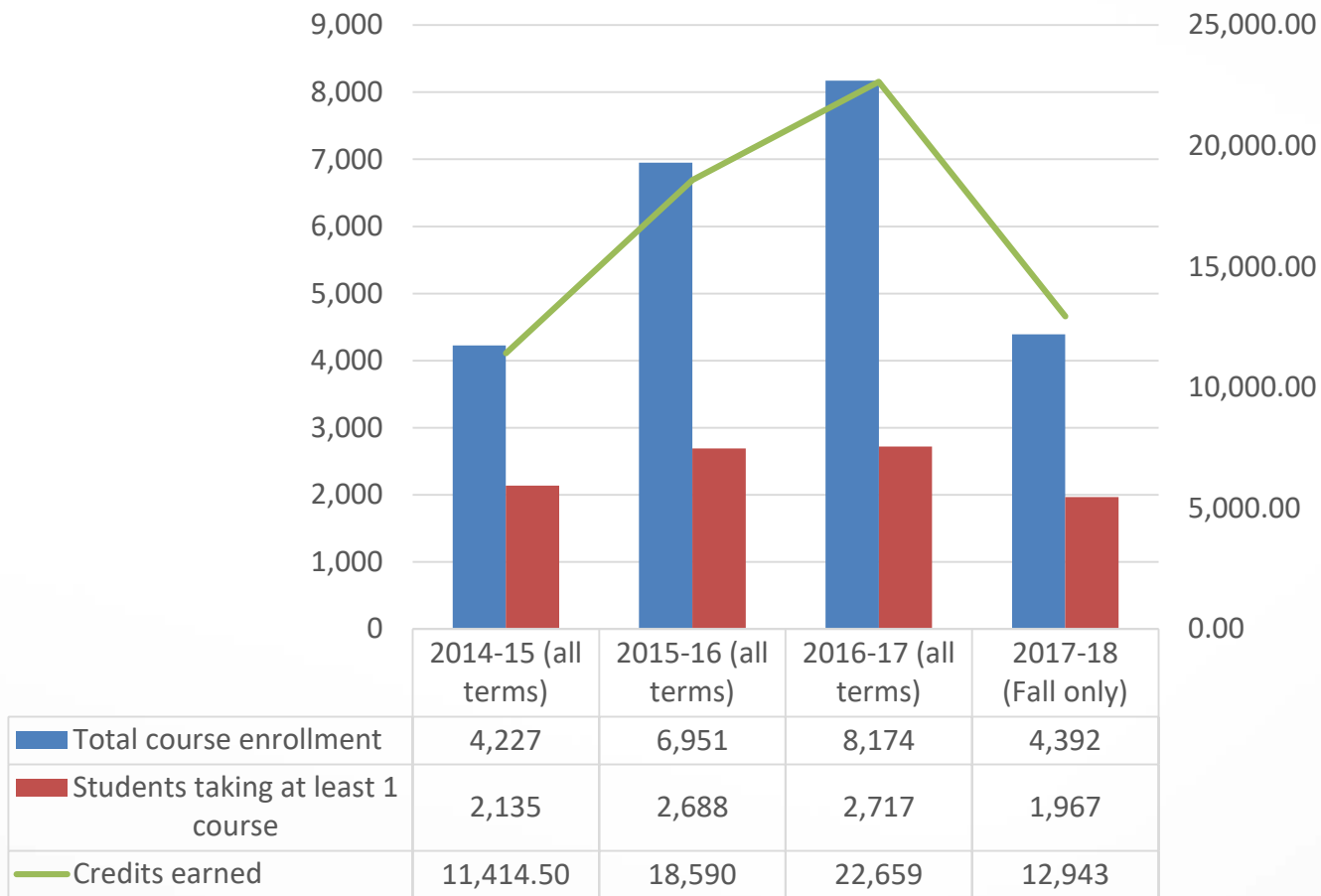
South Dakota: Flexible Learning Options
South Dakota Virtual School Courses

	2014-15		2015-16		2016-17	
	Enrolled	Completion Rate	Enrolled	Completion Rate	Enrolled	Completion Rate
CTE	400	68.8%	365	96.7%	284	95.4%
Credit Recovery	627	21.7%	559	24.3%	609	23.2%
College Readiness	128	63.3%	115	46.1%	90	90.0%
Fine Arts	132	70.5%	107	76.6%	59	78.0%
Health/PE	555	61.8%	151	48.3%	123	54.5%
ELA	255	41.6%	411	49.6%	287	53.0%
Math	334	45.8%	653	58.3%	344	55.2%
Sciences	524	52.3%	403	80.6%	310	86.8%
Social Sciences	285	42.8%	311	70.1%	200	71.0%
World Language	1061	52.3%	808	78.3%	698	80.7%
Personal Fiance/Econ	44	79.6%	66	77.3%	45	77.8%
Technology	9	55.6%	3	100.0%	7	85.7%
Elementary	84	52.4%	89	47.2%	17	64.7%
Other	14	71.4%	37	78.4%	0	

- Credit Recovery courses had the lowest completion rates across the board, and account for a significant portion of enrollments

- Completion rates have increased over time

- Overall completion rate without Credit Recovery courses included jumps from 64.24% to 74.39%

South Dakota: Flexible Learning Options
Dual Credit Courses by Institution

	2014-15 (all terms)	2015-16 (all terms)	2016-17 (all terms)	2017-18 (Fall only)
Black Hills State University	50	52	70	45
Dakota State University	19	23	24	17
Lake Area Technical Institute	51	64	65	60
Mitchell Technical Institute	24	58	55	37
Northern State University	30	46	43	33
South Dakota School of Mines and Technology	23	26	35	15
South Dakota State University	52	60	59	47
Southeast Technical Institute	51	63	54	42
University of South Dakota	37	54	63	39
Western Dakota Tech	35	71	84	31
	372	**517**	**552**	**366**

SOURCE: SD DOE dual credit program, August 2015 reports

Questions?

- Abby Javurek
- SD Dept. of Education
- 605.773.3426
- Abby.Javurek@state.sd.us
- SD DOE website: http://doe.sd.gov

Rankings of the States 2017
and
Estimates of School Statistics 2018

NEA RESEARCH
April 2018

Great Public Schools for Every Student

B-6. AVERAGE SALARY OF TEACHERS

	2016		2017		2016-17	
	SALARY ($)	RANK	SALARY ($)	RANK	CHANGE (%)	RANK
Alabama	48,518	38	50,391	35	3.9	3
Alaska	67,443	7	68,138	8	1.0	34
Arizona	47,218	43	47,403	44	0.4	45
Arkansas	48,218	39	48,304	42	0.2	47
California	77,179	2	79,128	2	2.5	13
Colorado	51,233	30	51,808	31	1.1	32
Connecticut	72,013	5	73,147	5	1.6	25
Delaware	59,960	14	60,214	14	0.4	41
District of Columbia	73,991	4	75,692	4	2.3	18
Florida	46,612	46	47,267	45	1.4	26
Georgia	54,190	23	55,532	23	2.5	15
Hawaii	56,049	20	56,651	21	1.1	33
Idaho	46,122	47	47,504	43	3.0	8
Illinois	63,475	11	64,933	11	2.3	19
Indiana	53,645	26	54,308	26	1.2	30
Iowa	54,386	22	55,647	22	2.3	17
Kansas	47,755	42	49,422	40	3.5	4
Kentucky	52,134	27	52,338	29	0.4	46
Louisiana	49,745	34	50,000	37	0.5	40
Maine	50,498	33	51,077	33	1.1	31
Maryland	66,456	8	68,357	7	2.9	10
Massachusetts	76,522	3	78,100	3	2.1	20
Michigan	61,875	12	62,287	12	0.7	39
Minnesota	56,913	17	57,346	20	0.8	36
Mississippi	42,744	50	42,925	51	0.4	42
Missouri	47,959	40	48,618	41	1.4	27
Montana	51,034	32	51,422	32	0.8	38
Nebraska	51,386	29	52,338	30	1.9	21
Nevada	56,943	16	57,376	18	0.8	37
New Hampshire	56,616	18	57,522	17	1.6	24
New Jersey	69,330	6	69,623	6	0.4	44
New Mexico	47,163	44	47,122	47	-0.1	50
New York	79,152	1	81,902	1	3.5	5
North Carolina	47,941	41	49,970	39	4.2	2
North Dakota	51,223	31	52,968	27	3.4	6
Ohio	56,441	19	58,202	15	3.1	7
Oklahoma	45,276	49	45,292	50	0.0	49
Oregon	60,395	13	61,862	13	2.4	16
Pennsylvania	65,151	10	66,265	10	1.7	22
Rhode Island	66,197	9	66,477	9	0.4	43
South Carolina	48,769	37	50,000	38	2.5	14
South Dakota	42,025	51	46,979	48	11.8	1
Tennessee	48,817	36	50,099	36	2.6	12
Texas	51,890	28	52,575	28	1.3	29
Utah	46,887	45	47,244	46	0.8	35
Vermont	55,726	21	57,349	19	2.9	9
Virginia	49,690	35	51,049	34	2.7	11
Washington	53,701	25	54,433	25	1.4	28
West Virginia	45,622	48	45,555	49	-0.1	51
Wisconsin	54,115	24	54,998	24	1.6	23
Wyoming	58,140	15	58,187	16	0.1	48
United States	**58,479**	-	**59,660**	-	**2.0**	-

NEA 2017 AVERAGE TEACHER SALARIES, BY STATE, ADJUSTED BY 2016 BEA REGIONAL PRICE PARITIES

State	RPP	NEA Salary	Adjusted Salary	Rank	State	RPP	NEA Salary	Adjusted Salary	Rank
Massachusetts	107.8	$78,100	$72,448.98	1	Vermont	101.6	$57,349	$56,445.87	27
New York	115.6	$81,902	$70,849.48	2	Arkansas	86.9	$48,304	$55,585.73	28
California	114.4	$79,128	$69,167.83	3	Tennessee	90.2	$50,099	$55,542.13	29
Pennsylvania	98.4	$66,265	$67,342.48	4	South Carolina	90.3	$50,000	$55,370.99	30
Connecticut	108.7	$73,147	$67,292.55	5	Louisiana	90.4	$50,000	$55,309.73	31
Michigan	93.3	$62,287	$66,759.91	6	North Carolina	90.9	$49,970	$54,972.50	32
Rhode Island	99.6	$66,477	$66,743.98	7	Montana	94.1	$51,422	$54,646.12	33
Illinois	98.9	$64,933	$65,655.21	8	Kansas	90.5	$49,422	$54,609.94	34
DC	115.9	$75,692	$65,308.02	9	Missouri	89.5	$48,618	$54,321.79	35
Ohio	89.3	$58,202	$65,175.81	10	New Hampshire	105.9	$57,522	$54,317.28	36
Alaska	105.4	$68,138	$64,647.06	11	Texas	96.9	$52,575	$54,256.97	37
Maryland	109.5	$68,357	$62,426.48	12	South Dakota	88.3	$46,979	$53,203.85	38
Oregon	99.8	$61,862	$61,985.97	13	West Virginia	87.6	$45,555	$52,003.42	39
Iowa	90.2	$55,647	$61,692.90	14	Maine	98.4	$51,077	$51,907.52	40
New Jersey	113.2	$69,623	$61,504.42	15	Washington	105.5	$54,433	$51,595.26	41
Georgia	92.1	$55,532	$60,295.33	16	Idaho	93.0	$47,504	$51,079.57	42
Wyoming	96.7	$58,187	$60,172.70	17	Oklahoma	89.0	$45,292	$50,889.89	43
Indiana	90.3	$54,308	$60,141.75	18	New Mexico	93.6	$47,122	$50,344.02	44
Delaware	100.2	$60,214	$60,093.81	19	Colorado	103.0	$51,808	$50,299.03	45
Kentucky	87.8	$52,338	$59,610.48	20	Virginia	102.3	$51,049	$49,901.27	46
Wisconsin	92.8	$54,998	$59,265.09	21	Mississippi	86.4	$42,925	$49,681.71	47
Nevada	97.4	$57,376	$58,907.60	22	Arizona	95.9	$47,403	$49,429.61	48
Minnesota	97.5	$57,346	$58,816.41	23	Utah	97.3	$47,244	$48,554.98	49
Alabama	86.6	$50,391	$58,188.22	24	Hawaii	118.4	$56,651	$47,847.13	50
North Dakota	91.5	$52,968	$57,888.52	25	Florida	99.7	$47,267	$47,409.23	51
Nebraska	90.5	$52,338	$57,832.04	26					

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BEA 18—23

Real Personal Income for States and Metropolitan Areas, 2016

Real state personal income grew on average 1.1 percent in 2016, after increasing 4.7 percent in 2015, according to estimates released today by the Bureau of Economic Analysis. Real state personal income is a state's current-dollar personal income adjusted by the state's regional price parity and the national personal consumption expenditures price index. The percent change in real state personal income ranged from 3.3 percent in Utah and Georgia to -3.6 percent in Wyoming (table 1). In the District of Columbia, real personal income grew 4.5 percent. Across metropolitan areas, the percent change ranged from 6.6 percent in Jacksonville, NC to -8.1 percent in Midland, TX and Odessa, TX (table 4).

(/newsreleases/regional/rpp/2018/_images/rpp0518.png)

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Real Personal Income in 2016

States with the fastest growth in real personal income were Utah (3.3 percent), Georgia (3.3 percent), and Washington (3.0 percent). The District of Columbia's real personal income grew 4.5 percent.

Eight states had declining real personal income. The largest percent declines were in Wyoming (-3.6 percent), Oklahoma (-2.7 percent), and Louisiana (-1.9 percent).

Large metropolitan areas – those with population greater than two million – with the fastest growth in real personal income were Atlanta-Sandy Springs-Roswell, GA (3.4 percent), Orlando-Kissimmee-Sanford, FL (3.3 percent), and Charlotte-Concord-Gastonia, NC-SC (3.2 percent).

The three large metropolitan areas with declining real personal income were Houston-The Woodlands-Sugar Land, TX (-3.3 percent), Denver-Aurora-Lakewood, CO (-0.7 percent), and Pittsburgh, PA (-0.4 percent).

Regional Price Parities in 2016

Regional Price Parities (RPPs) measure the differences in price levels across states and metropolitan areas for a given year and are expressed as a percentage of the overall national price level. All items RPPs cover all consumption goods and services, including rents. Areas with high/low RPPs typically correspond to areas with high/low price levels for rents.

States with the highest RPPs were Hawaii (118.4), New York (115.6), and California (114.4) (table 3). The District of Columbia's RPP was 115.9.

States with the lowest RPPs were Mississippi (86.4), Alabama (86.6), and Arkansas (86.9).

Across states, Hawaii had the highest rents RPP (157.4) and Alabama and West Virginia had the lowest (63.2).

Large metropolitan areas with the highest RPPs were San Francisco-Oakland-Hayward, CA (124.7), New York-Newark-Jersey City, NY-NJ-PA (122.0), and Washington-Arlington-Alexandria, DC-VA-MD-WV, (119.1) (table 6).

Large metropolitan areas with the lowest RPPs were Cincinnati, OH-KY-IN (89.6), Cleveland-Elyria, OH (90.2), and St. Louis, MO-IL (90.8).

Across large metropolitan areas, San Francisco-Oakland-Hayward, CA had the highest rents RPP (190.9) and Cleveland-Elyria, OH had the lowest (77.9).

Across all metropolitan areas, San Jose-Sunnyvale-Santa Clara, CA had the highest rents RPP (213.3) and Gadsden, AL

had the lowest (51.5).

Estimates of real personal income and regional price parities for state metropolitan and nonmetropolitan portions can be found at https://www.bea.gov/itable (/iTable/iTableHtml.cfm?reqid=70&step=1&isuri=1&acrdn=8). Supplemental tables are available upon request.
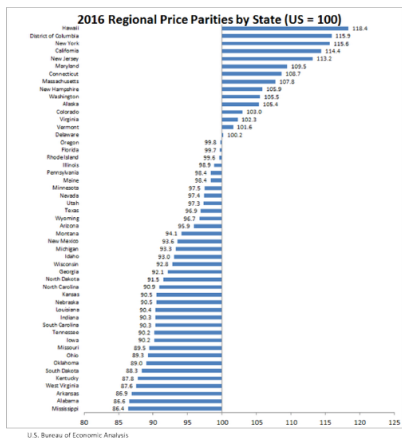
(/newsreleases/regional/rpp/2018/_images/rpp0518_chart_01.png)

Updates to Real Personal Income

Today, BEA also released revised real personal income statistics for states and metropolitan areas for 2014-2015 and real per capita personal income statistics for states for 2010-2013. These revisions were made to incorporate newly available source data. BEA will update real personal income for states on September 25, 2018 with the release of state personal income. Real personal income for metropolitan areas will be updated on November 15, 2018 with the release of local area personal income.

Next release: May 2019 – Real Personal Income for States and Metropolitan Areas, 2017.

Technical Notes on Regional Price Parities and Implicit Regional Price Deflators

Price indexes commonly measure price changes over time. The BEA's personal consumption expenditures (PCE) price index and the Bureau of Labor Statistics' consumer price index (CPI) are two examples. Spatial price indexes measure price level differences across regions for one time period. An example of these type of indexes are purchasing power parities (PPPs), which measure differences in price levels across countries for a given period, and can be used to convert estimates of per capita GDP into comparable levels in a common currency. The regional price parities (RPPs) that BEA has developed compare regions within the United States, but without the need for currency conversion. An implicit regional price deflator (IRPD) can be derived by combining the RPPs and the U.S. PCE price index.

Regional Price Parities. The RPPs are calculated using price quotes for a wide array of items from the CPI, which are aggregated into broader expenditure categories (such as food, transportation or education)[1]. Data on rents are obtained separately from the Census Bureau's American Community Survey (ACS). The expenditure weights for each category are constructed using CPI expenditure weights, BEA's personal consumption expenditures, and ACS rents expenditures[2].

The broader categories and the data on rents are combined with the expenditure weights using a multilateral aggregation method that expresses a region's price level relative to the U.S[3].

For example, if the RPP for area A is 120 and for area B is 90, then on average, prices are 20 percent higher and 10 percent lower than the U.S. average for A and B, respectively. If the personal income for area A is $12,000 and for area B is $9,000, then RPP-adjusted incomes are $10,000 (or $12,000/1.20) and $10,000 (or $9,000/0.90), respectively. In other words, the purchasing power of the two incomes is equivalent when adjusted by their respective RPPs.

Implicit Regional Price Deflator. The IRPD is a regional price index derived as the product of two terms: the regional price parity and the U.S. PCE price index.

The implicit regional price deflator will equal current dollar personal income divided by real personal income in chained dollars. The growth rate or year-to-year change in the IRPDs is a measure of regional inflation[4].

Detailed information on the methodology used to estimate the RPPs may be found on the regional methodology page of the BEA website: www.bea.gov/regional/methods.cfm (/regional/methods.cfm).

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Historical time series for these estimates can be accessed in BEA's Interactive Data Application (/itable/).

Access BEA data by registering for BEA's Data Application Programming Interface (/API/signup/) (API).

For more on BEA's statistics, see our monthly online journal, the Survey of Current Business (/scb/).

BEA's news release schedule (/newsreleases/news_release_schedule.htm).

Definitions

Personal income is the income received by, or on behalf of, all persons from all sources: from participation as laborers in production, from owning a home or business, from the ownership of financial assets, and from government and business in the form of transfers. It includes income from domestic sources as well as the rest of world. It does not include realized or unrealized capital gains or losses.

Per capita personal income is calculated as the total personal income of the residents of a given area divided by the population of the area. In computing per capita personal income, BEA uses Census Bureau mid-year population estimates.

Personal income is measured before the deduction of personal income taxes and other personal taxes and is reported in current dollars (no adjustment is made for price changes). Comparisons for different regions and time periods reflect changes in both the price and quantity components of regional personal income.

The estimate of personal income for the United States is the sum of the state estimates and the estimate for the District of Columbia; it differs slightly from the estimate of personal income in the national income and product accounts (NIPAs) because of differences in coverage, in the methodologies used to prepare the estimates, and in the timing of the availability of source data.

Regional price parities (RPPs) are regional price levels expressed as a percentage of the overall national price level for a given year. The price level is determined by the average prices paid by consumers for the mix of goods and services consumed in each region.

Detailed CPI price data are adjusted to obtain average price levels for BLS-defined areas[5]. These are allocated to counties in combination with direct price and expenditure data on rents from the ACS.

County data are then aggregated to states and metropolitan areas.

Personal income at RPPs is current-dollar personal income divided by the price parity[6] for a given year and region. A balancing factor is applied so that the sum of personal income at RPPs across regions equals the current dollar sum.

Real personal income is personal income at RPPs divided by the national PCE chain-type price index. The result is real personal income in chained dollars (using 2009 as the reference year). Using Alaska in 2016 as an example:

(1) Personal Income is divided by the RPP	(2) Balancing factor is applied	(3) Personal Income at RPPs is deflated by the U.S. PCE Price Index	2016 Alaska Real Personal Income
$41.3 / 1.054 = $39.2	$39.2 / 0.997 = $39.3	$39.3 / 1.108 = $35.5	$35.5

(/newsreleases/regional/rpp/2018/_images/rpp0518_formula_01.png)

Estimates of real personal income in the United States are derived as the sum of the regional estimates divided by the U.S. PCE Price Index.

Implicit Regional Price Deflator (IRPD) is the product of the RPP times the national PCE price index. It is equal to personal income divided by real personal income. See also the Technical Note.

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Table 1. Real Personal Income and Implicit Regional Price Deflators by State, 2015-2016

Table 2. Real Per Capita Personal Income by State, 2015-2016

Table 3. Regional Price Parities by State, 2016

Table 4. Real Personal Income and Implicit Regional Price Deflators by Metropolitan Area, 2015-2016

Table 5. Real Per Capita Personal Income by Metropolitan Area, 2015-2016

Table 6. Regional Price Parities by Metropolitan Area, 2016

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[1] The BEA Regional Price Parity statistics are based in part on restricted access Consumer Price Index data from the Bureau of Labor Statistics (BLS). The BEA statistics presented herein are products of BEA and not BLS.

[2] To estimate RPPs, CPI price quotes are quality adjusted and pooled over 5 years. The ACS rents are also quality adjusted and are either annual for states or pooled over 3 years for metropolitan areas. The expenditure weights are specific for each year.

[3] The multilateral system that is used is the Geary additive method. Any region or combination of regions may be used as the base or reference region without loss of consistency.
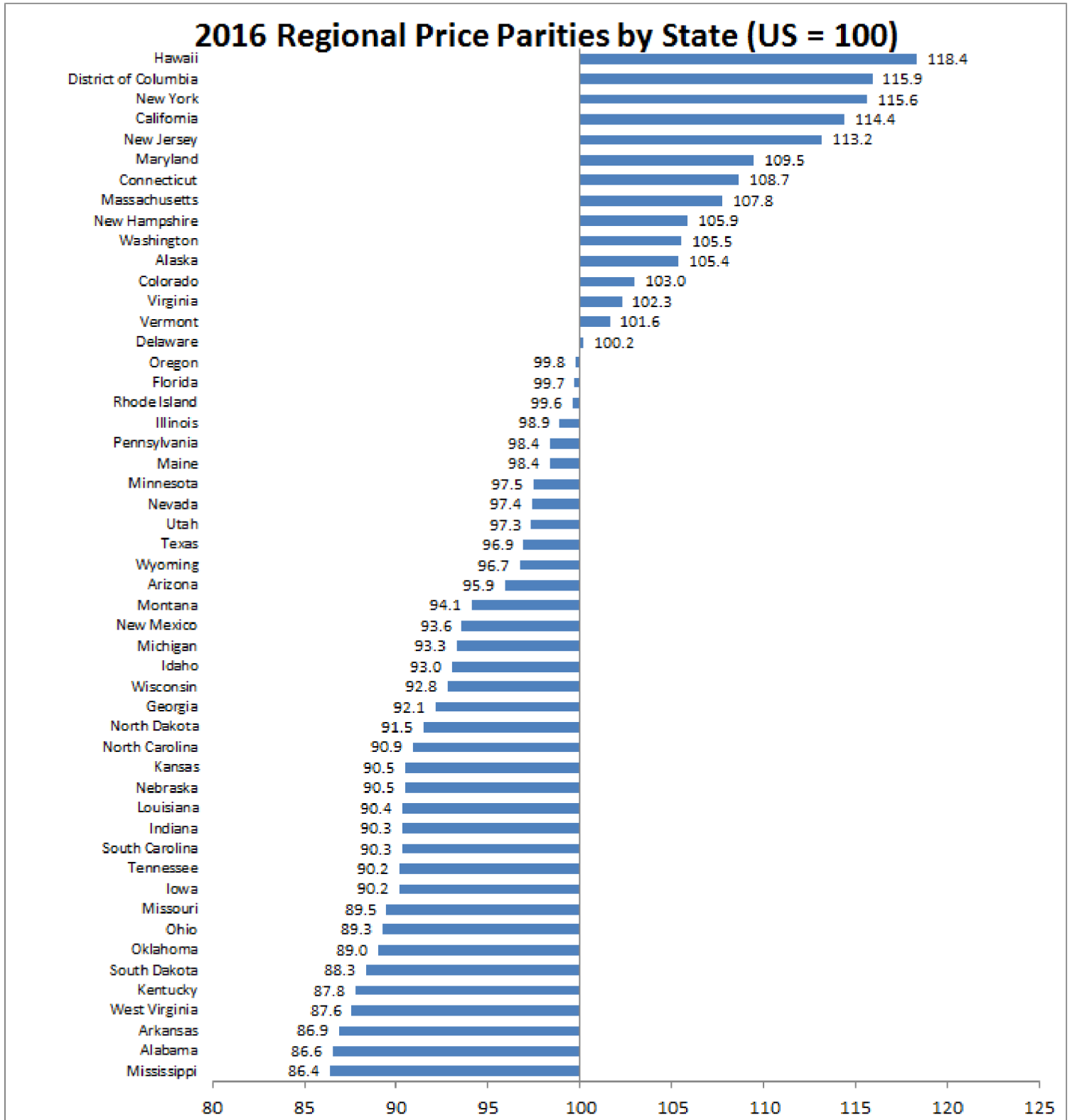
[4] The growth rate of the implicit regional price deflators will not necessarily equal the region or metro area price deflators published by the BLS. This is because the CPI deflators are calculated directly while the IRPDs are indirect estimates, and because of differences in the source data and methodology.

[5] The CPI represents about 93 percent of the total U.S. population, including almost all residents of urban or metropolitan areas. In the Northeast region, rural area prices (exclusive of rents) are assumed to be the same as those in the small metropolitan areas of the CPI; in the Midwest, South, and West regions, they are assumed to be the same as those in the nonmetropolitan urban areas of the CPI.

[6] RPP should first be divided by 100.

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2016 Regional Price Parities by State (US = 100)

State	Value
Hawaii	118.4
District of Columbia	115.9
New York	115.6
California	114.4
New Jersey	113.2
Maryland	109.5
Connecticut	108.7
Massachusetts	107.8
New Hampshire	105.9
Washington	105.5
Alaska	105.4
Colorado	103.0
Virginia	102.3
Vermont	101.6
Delaware	100.2
Oregon	99.8
Florida	99.7
Rhode Island	99.6
Illinois	98.9
Pennsylvania	98.4
Maine	98.4
Minnesota	97.5
Nevada	97.4
Utah	97.3
Texas	96.9
Wyoming	96.7
Arizona	95.9
Montana	94.1
New Mexico	93.6
Michigan	93.3
Idaho	93.0
Wisconsin	92.8
Georgia	92.1
North Dakota	91.5
North Carolina	90.9
Kansas	90.5
Nebraska	90.5
Louisiana	90.4
Indiana	90.3
South Carolina	90.3
Tennessee	90.2
Iowa	90.2
Missouri	89.5
Ohio	89.3
Oklahoma	89.0
South Dakota	88.3
Kentucky	87.8
West Virginia	87.6
Arkansas	86.9
Alabama	86.6
Mississippi	86.4

U.S. Bureau of Economic Analysis

Purchasing Power

The attached spreadsheets are designed to accurately calculate federal income tax, state income tax and FICA tax (Social Security and Medicare tax) on an individual's annual wage/salary. Taxes are computed assuming a single filer, standard deduction, and no additional dependents. The accounting firm, Eide Bailly, prepares the calculations and they should be accurate within $5 annually.

Once we know how much in taxes are due we can determine after tax wages (gross salary less taxes). This is how much money a worker has left over once the government has taken out the correct amount of payroll taxes.

We also know that different areas/regions have different costs of living. For example, New York City has a much higher cost of living than Sioux Falls. To determine the cost of living in any given city or state the US Bureau of Economic Analysis (BEA) compares millions of price points on goods and services across the nation, and produces Regional Price Parities (RPP).

The national average of all costs is 100%. A state or city with lower average costs will have an RPP of less than 100% (SD'S is 88.3%), and a city or state with a higher cost of living will have an RPP over 100% (for example, Hawaii's RPP is 118.4%).

So, to determine purchasing power, we divide after tax wages by a given city or state's RPP. This is the only way to have a meaningful comparison of wages in different cities and states.

The true measure of how well you're paid is not your gross pay; rather it is how much you can buy with your wages after the government has taken its share.

Note: The BEA will release the 2017 RPPs in May of 2019.

Rank	State	Average Teacher Salary (NEA 2017)	Total Federal and State Adjustments to Pay	Take Home Pay	RPP Cost of Living Index (BEA 2016)	After Tax Wages Adjusted for Cost of Living (RPP)
1	Massachusetts	78,100	20,118	57,982	1.078	53,787
2	Pennsylvania	66,265	14,983	51,282	0.984	52,116
3	Alaska	68,138	13,500	54,638	1.054	51,839
4	New York	81,902	22,018	59,884	1.156	51,803
5	Ohio	58,202	11,987	46,215	0.893	51,753
6	Rhode Island	66,477	15,043	51,434	0.996	51,641
7	Michigan	62,287	14,242	48,045	0.933	51,495
8	California	79,128	20,967	58,161	1.144	50,840
9	Connecticut	73,147	18,526	54,621	1.087	50,249
10	Illinois	64,933	15,284	49,649	0.989	50,201
11	Wyoming	58,187	10,550	47,637	0.967	49,263
12	Nevada	57,376	10,311	47,065	0.974	48,321
13	District of Columbia	75,692	19,942	55,750	1.159	48,102
14	Iowa	55,647	12,431	43,216	0.902	47,911
15	Indiana	54,308	11,127	43,181	0.903	47,820
16	North Dakota	52,968	9,485	43,483	0.915	47,522
17	Maryland	68,357	16,518	51,839	1.095	47,341
18	New Jersey	69,623	16,243	53,380	1.132	47,156
19	Georgia	55,532	12,605	42,927	0.921	46,609
20	Kentucky	52,338	11,513	40,825	0.878	46,498
21	Tennessee	50,099	8,211	41,889	0.902	46,440
22	Alabama	50,391	10,261	40,130	0.866	46,340
23	Delaware	60,214	13,819	46,395	1.002	46,302
24	Oregon	61,862	15,991	45,871	0.998	45,963
25	Wisconsin	54,998	12,348	42,650	0.928	45,959
26	Nebraska	52,338	10,973	41,365	0.905	45,708
27	Minnesota	57,346	13,063	44,283	0.975	45,418
28	Texas	52,575	8,888	43,687	0.969	45,085
29	Louisiana	50,000	9,683	40,318	0.904	44,599
30	South Dakota	46,979	7,601	39,378.5	0.883	44,596
31	New Hampshire	57,522	10,355	47,167	1.059	44,539
32	Vermont	57,349	12,149	45,200	1.016	44,488
33	Arkansas	48,304	9,847	38,458	0.869	44,255
34	South Carolina	50,000	10,360	39,641	0.903	43,899
35	Missouri	48,618	9,353	39,265	0.895	43,871
36	Kansas	49,422	9,988	39,434	0.905	43,573
37	North Carolina	49,970	10,456	39,514	0.909	43,470
38	Montana	51,422	11,058	40,364	0.941	42,894
39	Washington	54,433	9,437	44,996	1.055	42,650
40	West Virginia	45,555	9,112	36,443	0.876	41,602
41	Maine	51,077	10,908	40,169	0.984	40,822

42	Oklahoma	45,292	8,979	36,313	0.890	40,802
43	New Mexico	47,122	9,071	38,051	0.936	40,653
44	Idaho	47,504	9,990	37,514	0.930	40,338
45	Arizona	47,403	8,879	38,524	0.959	40,171
46	Colorado	51,808	10,509	41,299	1.030	40,096
47	Mississippi	42,925	8,385	34,540	0.864	39,977
48	Florida	47,267	7,659	39,609	0.997	39,728
49	Virginia	51,049	10,882	40,167	1.023	39,264
50	Utah	47,244	9,543	37,701	0.973	38,747
51	Hawaii	56,651	13,752	42,899	1.184	36,232

Source: SD Governor's Office of Economic Development, based on 2018 federal tax data and 2017 state tax data

South Dakota Blue Ribbon Task Force on School Funding

Pierre, South Dakota
July, 2015

Michael Griffith
School Finance Consultant
Education Commission of the States

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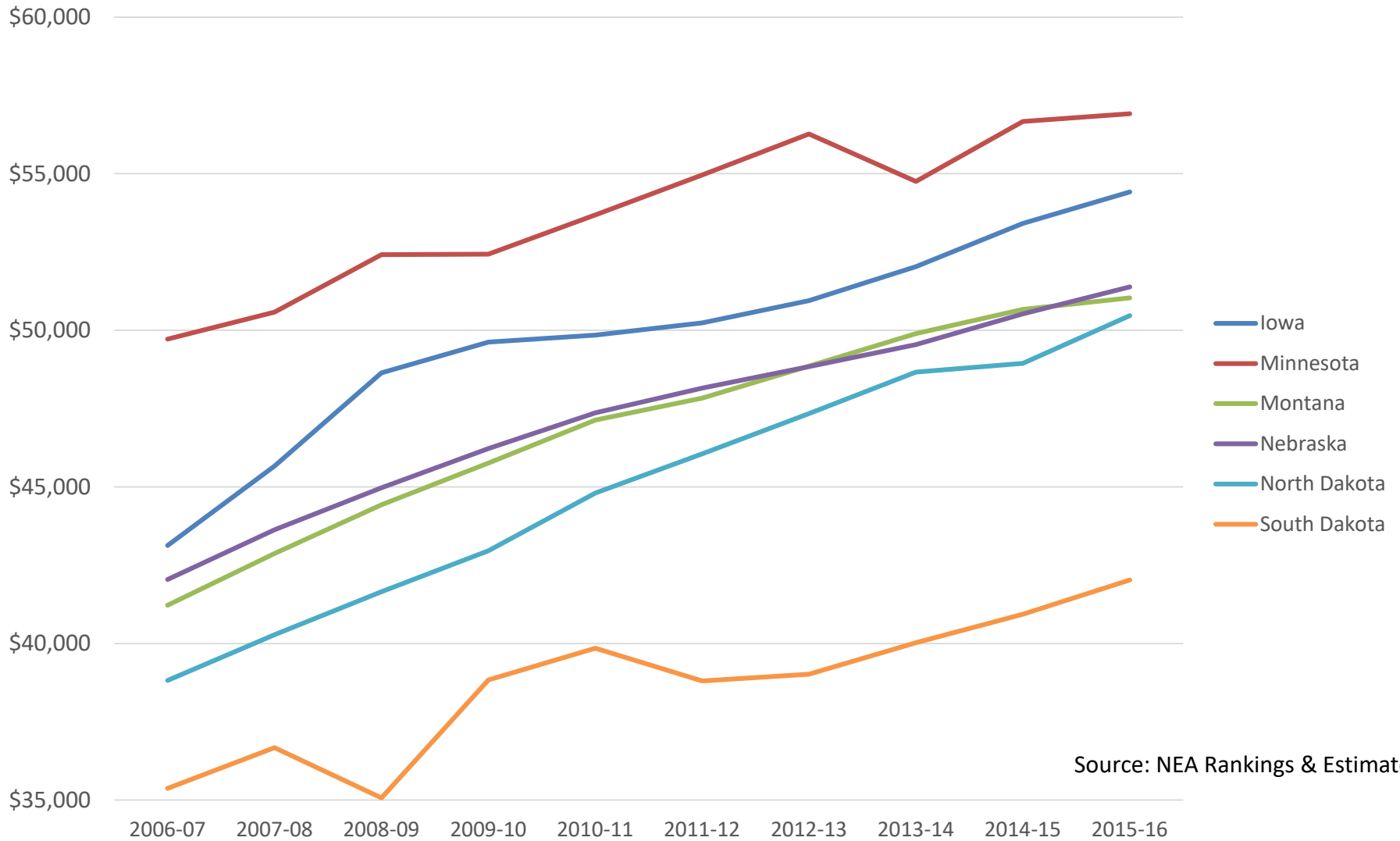# Per Pupil Expenditures 2006-07 to 2016-17
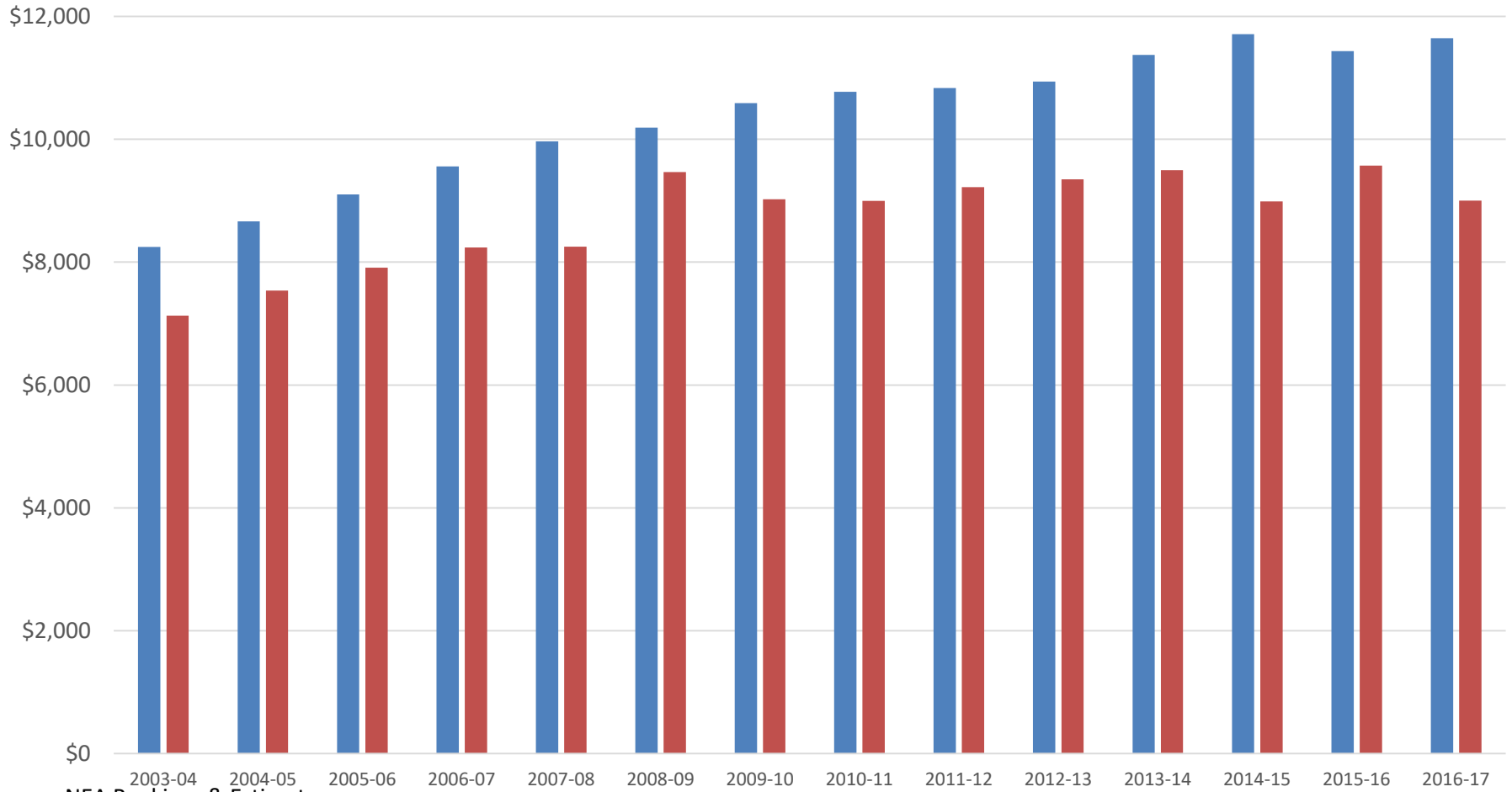
Source: NEA Rankings & Estimates
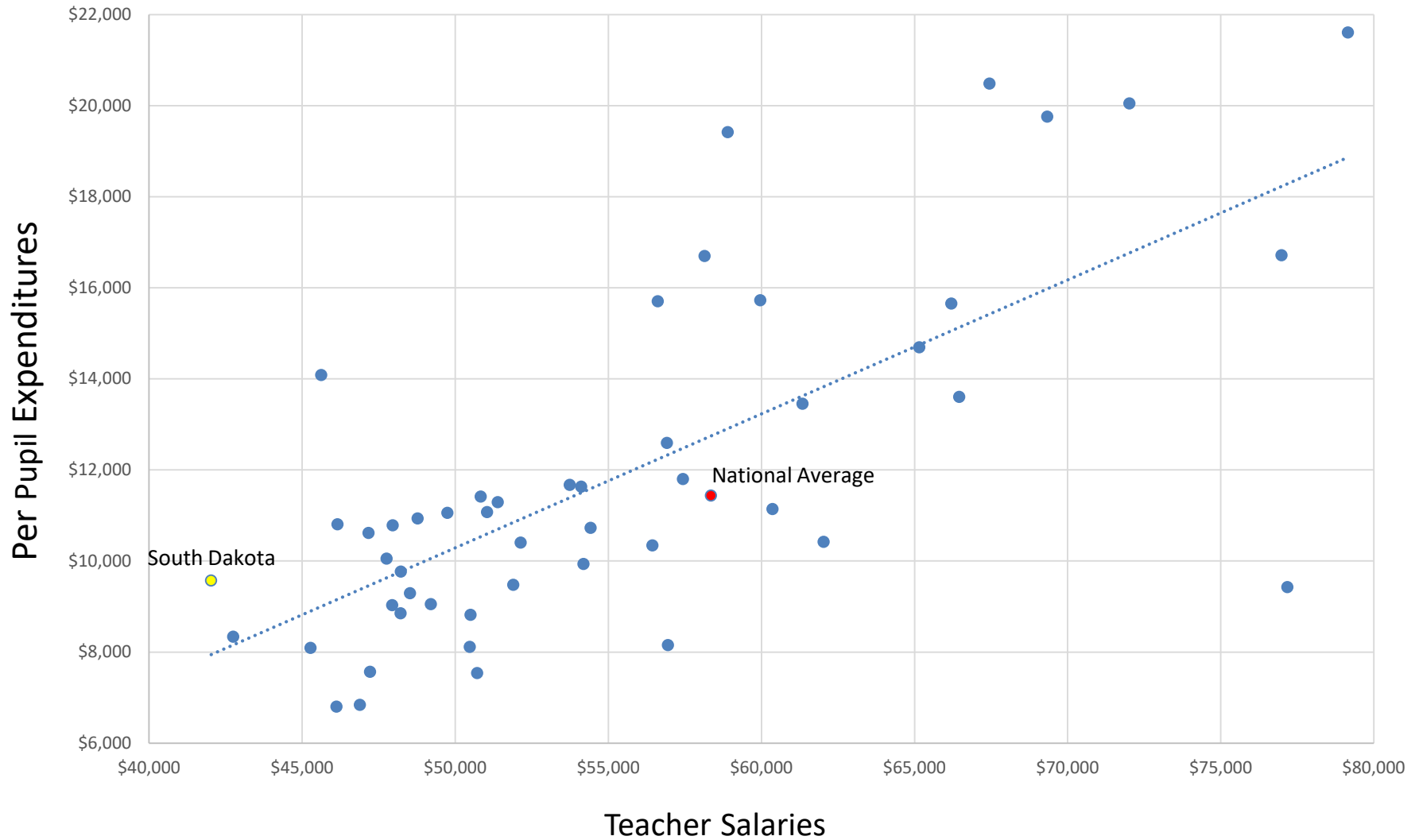
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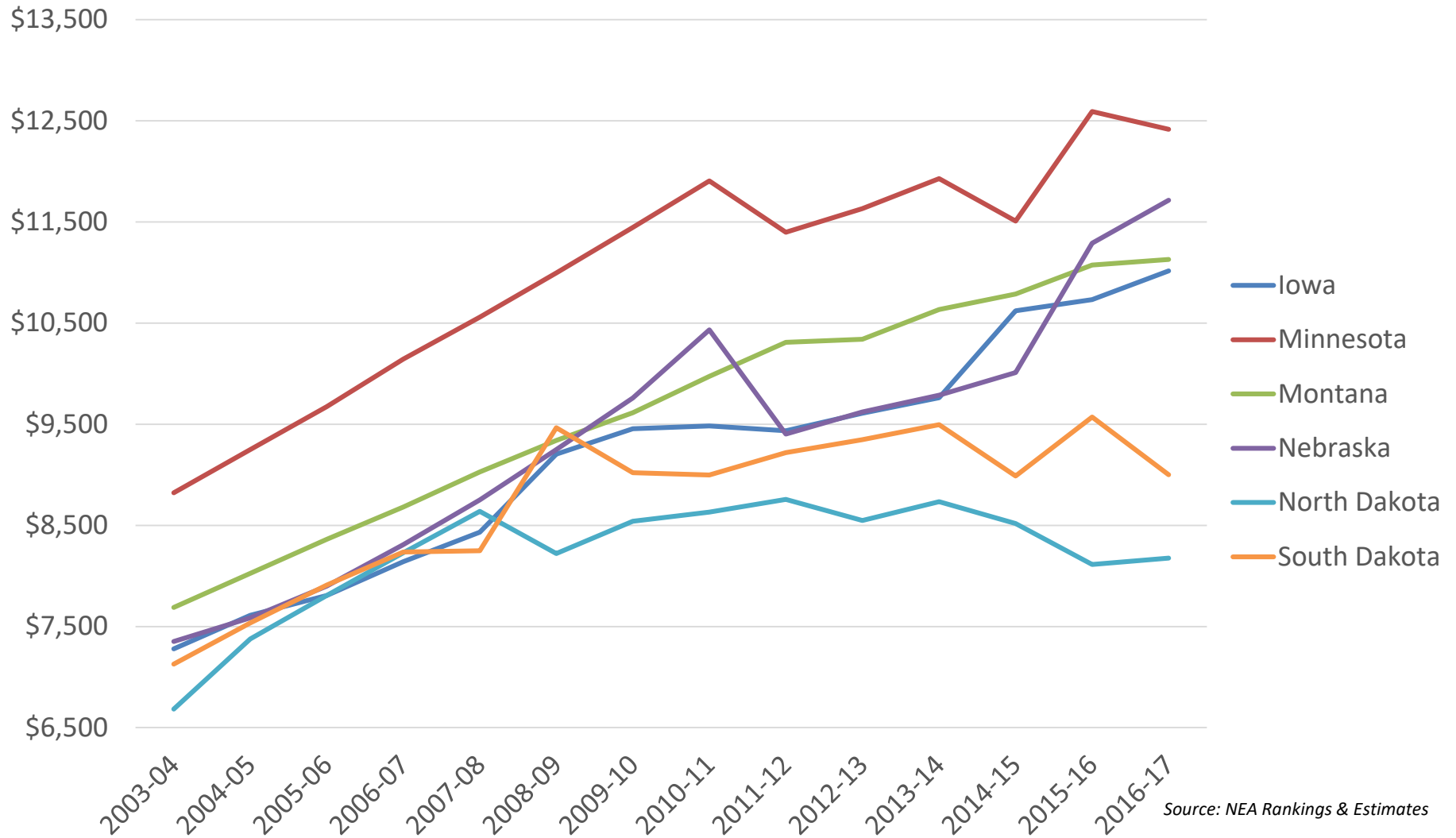
Source: NEA Rankings & Estimates

Average Teacher Salaries in Bordering States

Legend: Iowa, Minnesota, Montana, Nebraska, North Dakota, South Dakota

Source: NEA Rankings & Estimates

Teacher Salaries & Average Per Pupil Expenditures FY 2015-16

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