

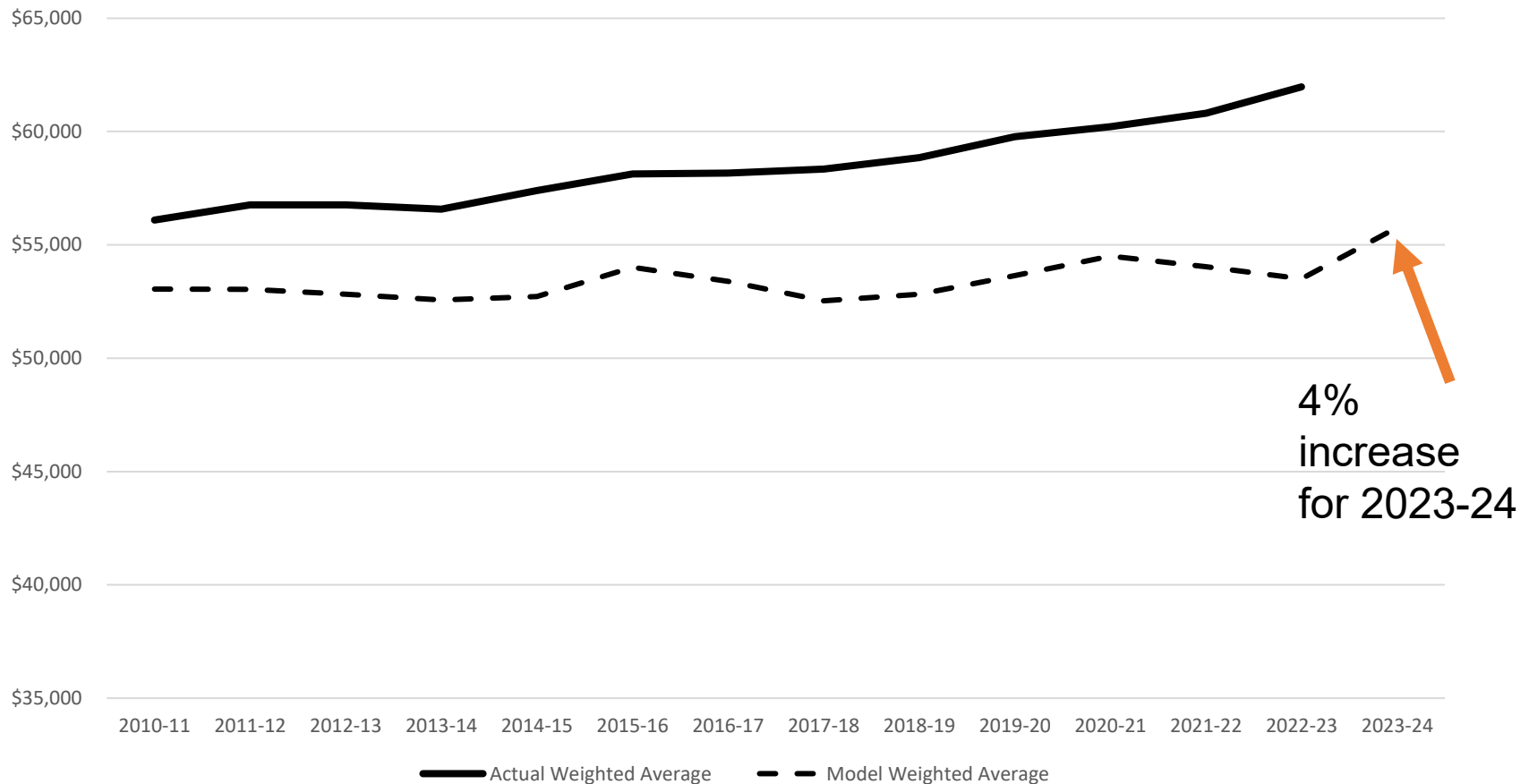
# Labor Market Analysis of Teaching Staff in Wyoming

Report to the  
Joint Appropriations Committee and the  
Joint Education Committee

Christiana Stoddard, Ph. D.

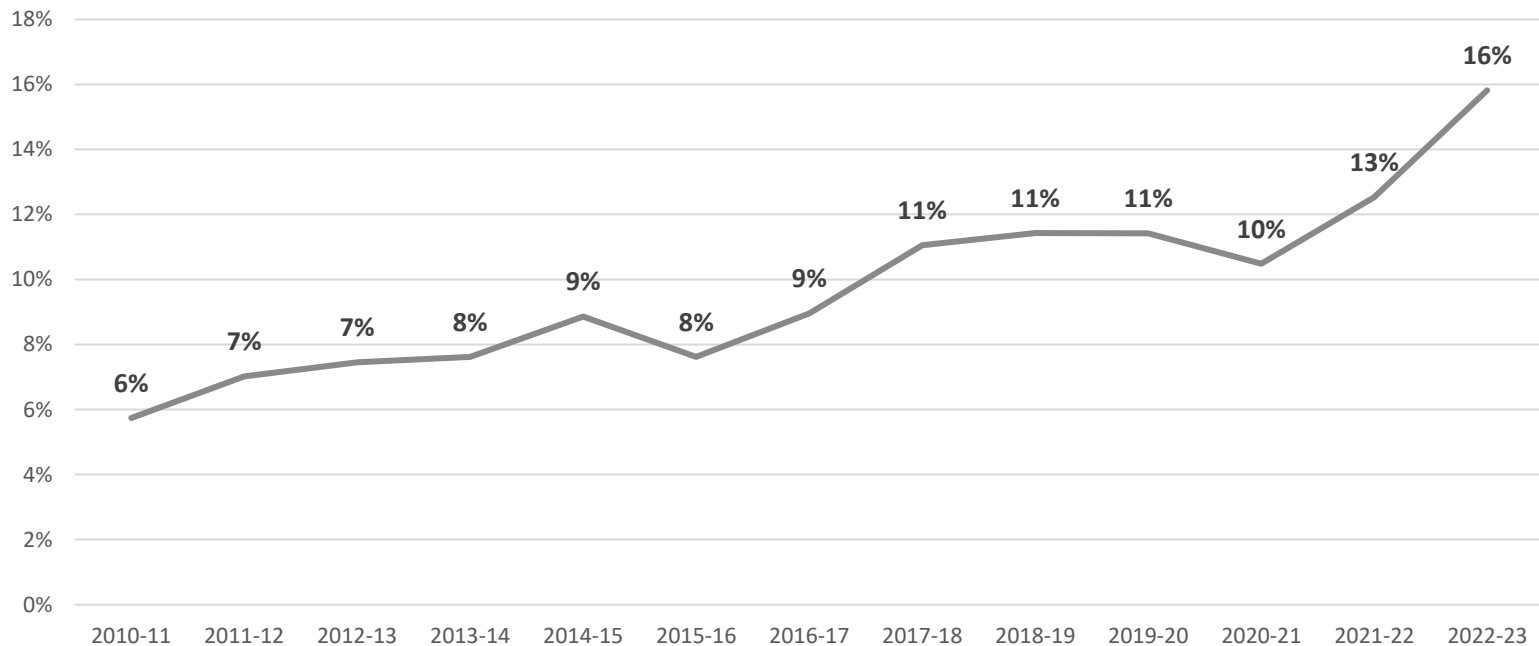
September 2023

# Context: Actual Average Teaching Salaries and Average Teaching Salaries in the Wyoming Funding Model



Source: Wyoming Department of Education staffing files. Model salaries from Wyoming Legislative Service Office.

## Context: Percent Difference Between Actual and Model Weighted Average Teaching Salaries



Source: Wyoming Department of Education staffing files. Model salaries from Wyoming Legislative Service Office.

# Cost Pressures Matter Because They Affect Quality of Teachers

- Cost pressures are forces that require higher salaries to maintain quality of teaching pool.
- How is quality of teaching pool determined?
- Individuals decide to teach based on skills/ interests and other employment options.
- High teaching salaries can attract individuals with better alternative employment options.

# Monitoring Process

- There is no “right” level of the indicators (teacher salary, retention rates, retirement rates)
- However, changes relative to historical patterns signal cost pressures on districts
- This report combines data from many sources (National Education Association, US Department of Education’s National Center for Education Statistics, WY Department of Education, US BLS Occupational Employment Statistics, University of Wyoming)

# Overview of Cost Pressure Indicators

- Labor Market Indicators

- Demographic Indicators

- Retention Indicators

- Recruitment Indicators

# Labor Market Indicators

1. Changes in the ratio of teaching wages relative to wages of comparable professionals
2. Comparisons with other locations

Labor market opportunities affect the number of individuals choosing teaching over other professions and choosing Wyoming over other locations

# Demographic Indicators

3. Trends in student enrollment

4. Trends in teacher retirement

Student enrollment and retirement trends impact number of open positions districts will need to fill



# Recruitment and Retention Indicators

5. The fraction of new hires
6. Retention rates of current teachers  
These reflect current hiring conditions for school districts based on actual salaries
7. Enrollment in teacher training programs  
Pipeline of future teachers

# Sources of Cost Pressure: Labor Market and Demographic Indicators

## Labor market Indicators:

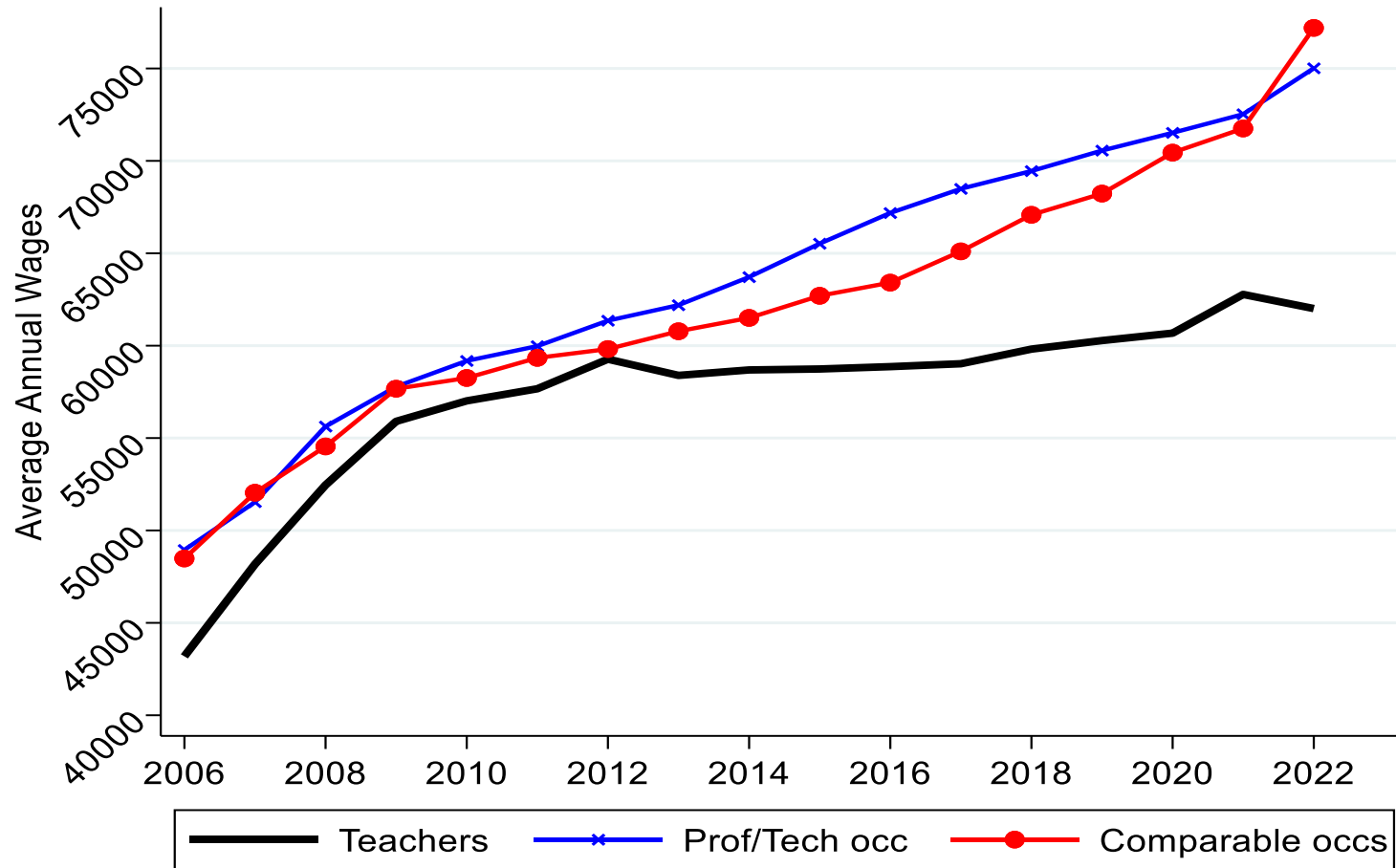
Changes in the ratio of teaching wages and wages in other professional and technical occupations

- OES quarterly establishment data
- Comparisons: All professional and technical occupations; Comparable occupations with similar job characteristics and skill requirements
- These data can not be adjusted for age, hours/weeks of work, or benefits, but are most current

# Comparison Occupations

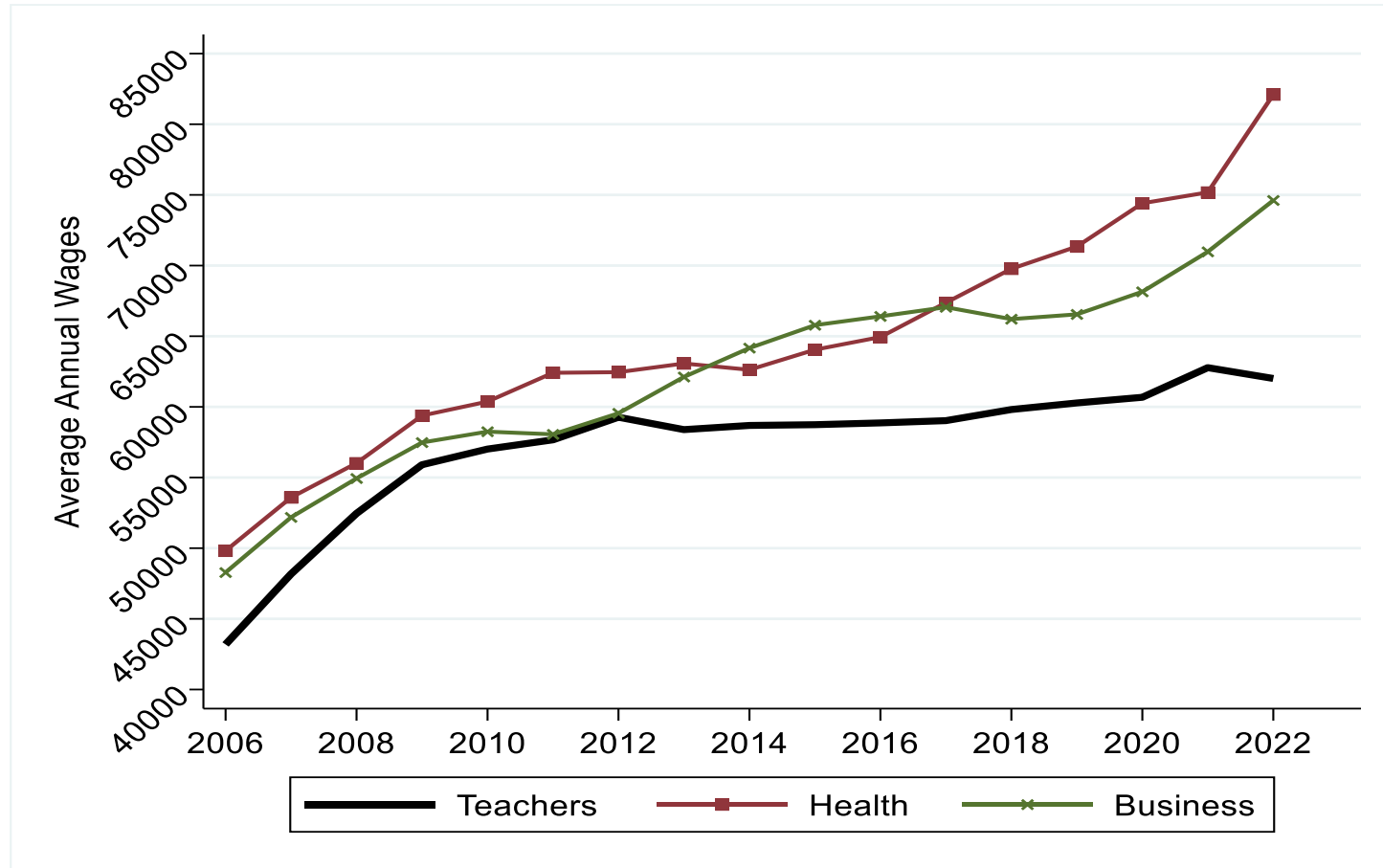
- **Professional and technical occupations:** Management; Business and Financial Operations; Computer and Mathematical Occupations; Architecture and Engineering; Life, Physical, and Social Science; Community and Social Services; Legal; Educational, Instruction and Library Occupations (excluding elementary, secondary, and special education teachers); Arts, Design, Entertainment, Sports, and Media; Healthcare Practitioners and Technical Occupations
- **Closely comparable:**  
Accountants and auditors; Personnel training and labor relations specialists, compliance offices; Registered nurses, Occupational therapists, Physical therapists  
Architects, Editors and technical writers, Counselors, Journalists, Curators, Computer programmers, conservation and forestry scientists

# Teaching wages declined significantly relative to comparable workers through May 2022



Source: U.S. Bureau of Labor Statistics May Quarterly Occupational Employment Statistics. All ownerships across all NAICS.

# Particularly sharp increases for wages in Health and Business



Source: U.S. Bureau of Labor Statistics May Quarterly Occupational Employment Statistics. All ownerships across all NAICS.

# Non-teacher labor market in 2023

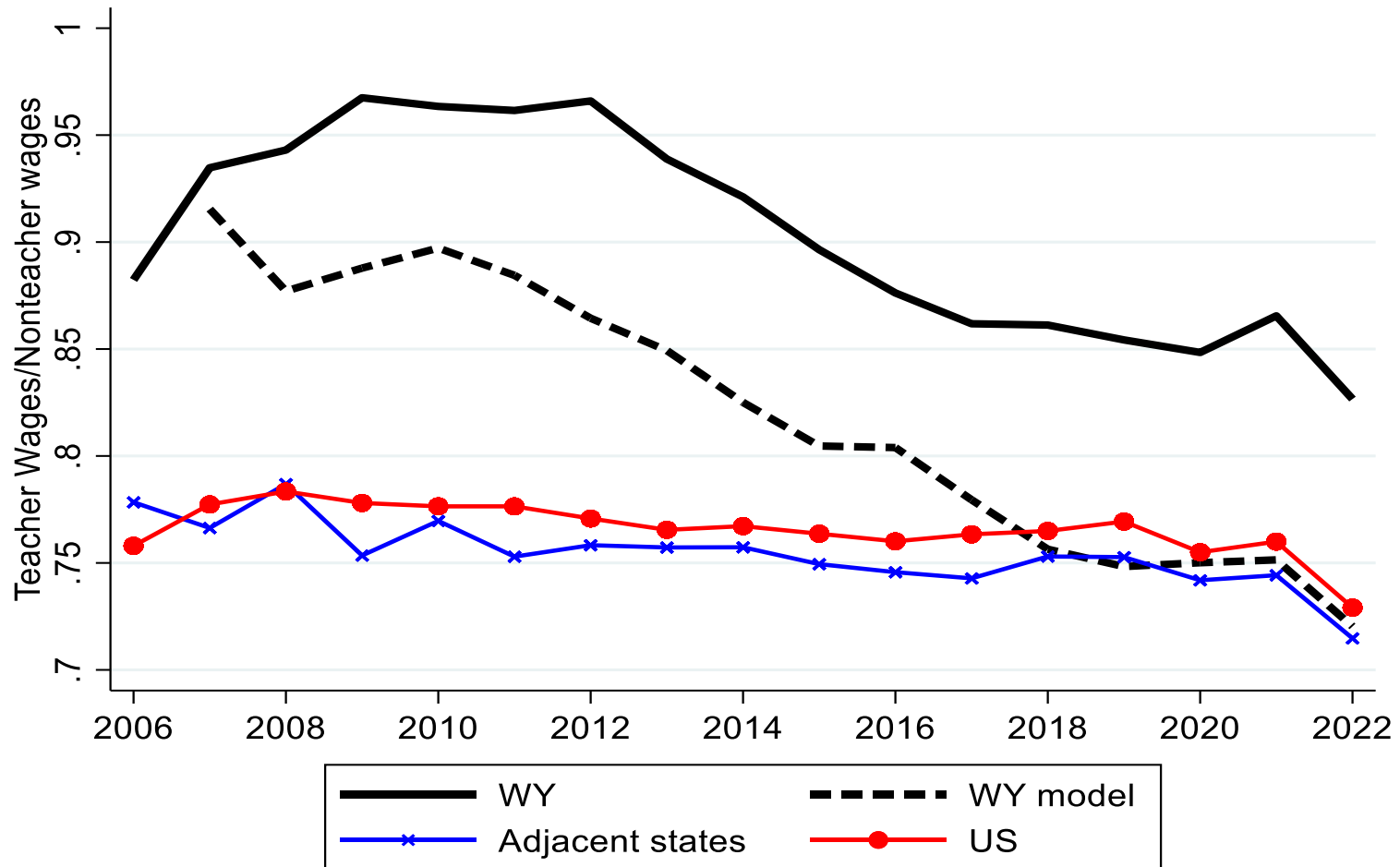
<b>Percent Change in Average Weekly Wage</b>		
	March 2021 - March 2022	March 2022-March 2023
<b>U.S.</b>	6.7%	6.6%
<b>Wyoming</b>	11.2%	7.8%
<b>Colorado</b>	8.8%	7.1%
<b>Idaho</b>	8.5%	10.1%
<b>Montana</b>	8.3%	9.3%
<b>Nebraska</b>	9.2%	8.0%
<b>North Dakota</b>	6.9%	9.8%
<b>Utah</b>	8.2%	7.9%

<b>By education (National level)</b> <b>Median usual weekly earnings of</b> <b>full-time wage and salary workers ages 25+</b>		
<b>BA or higher</b>	6.9%	2.7%
<b>Some college</b>	2.9%	5.1%
<b>HS only</b>	4.4%	6.1%
<b>Less than HS</b>	9.3%	3.5%
<b>BA or higher</b>	6.9%	4.5%

Source: Average weekly wages from Bureau of Labor Statistics  
Quarterly Census of Employment and Wages. Median usual weekly  
wages of full-time workers from BLS Current Population

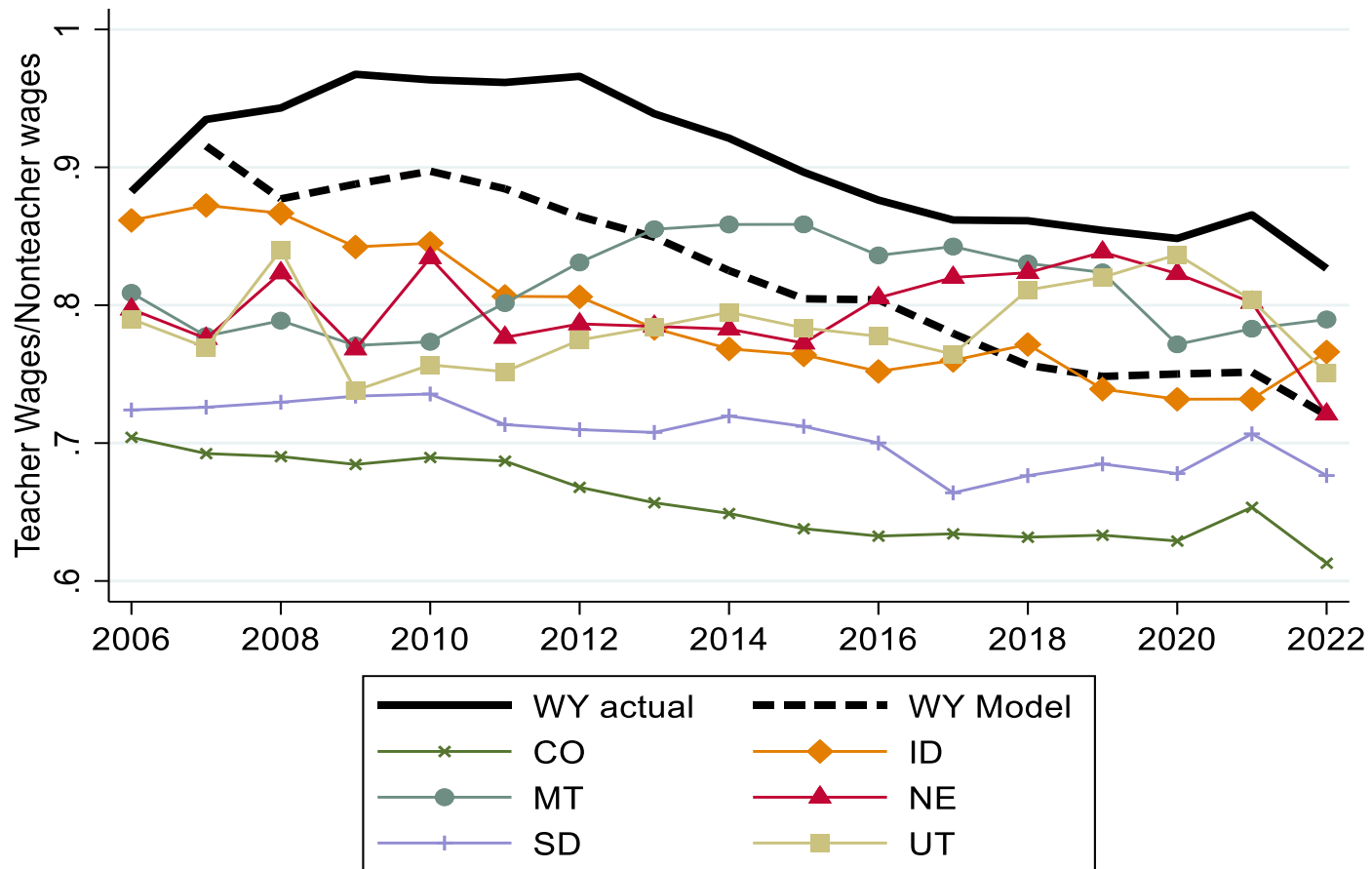


# Ratio remains high in Wyoming has fallen relative to average of other states



Source: U.S. Bureau of Labor Statistics May Quarterly Occupational Employment Statistics. All ownerships across all NAICS.

# Model ratio is middle of surrounding states



Source: U.S. Bureau of Labor Statistics May Quarterly Occupational Employment Statistics. All ownerships across all NAICS.

# Hours and weeks of work

- Hours of work per week reported by teachers and non-teachers in Census data (ACS) are similar  
(44 vs 45 hours per week)
- 185 contract days = 37 weeks of work.
- 40 weeks per year is most common report for teachers in WY who do not work full year
- National Compensation Survey reports average private industry worker has 15 – 20 days vacation after 5 years 48-49 weeks of work  
→ 76-83% of weeks of work

# Benefits comparison

	Teachers	Management, professional, and related occupations	Registered nurses
Paid leave and supplemental pay	\$3.43	\$8.31	\$9.43
Insurance	\$7.09	\$5.32	\$5.67
Retirement and savings	\$9.57	\$4.11	\$3.30
Legally required benefits	\$3.18	\$4.27	\$4.62
Total benefits	\$23.27	\$22.01	\$23.02

Source: U.S. Bureau of Labor Statistics, “Employer Costs for Employee Compensation-  
March 2023” (Released June 16, 2023) <https://www.bls.gov/news.release/pdf/ecec.pdf>

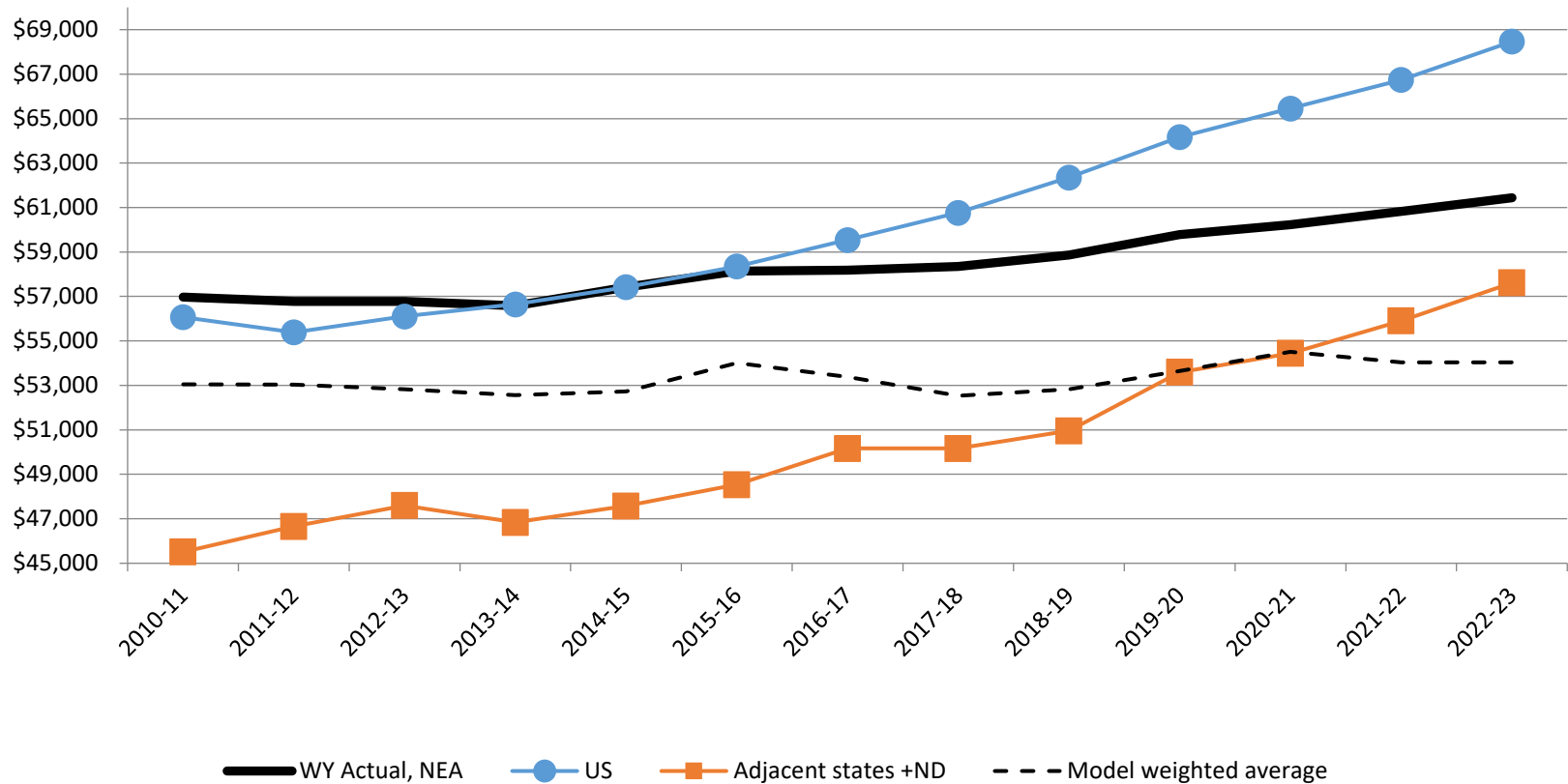
## Labor market Indicators:

Changes in ratio of teaching wages in WY to teaching wages in other states

- Data from National Education Association survey of state education agencies
- Trend reflects changing attractiveness of teaching in WY relative to other states

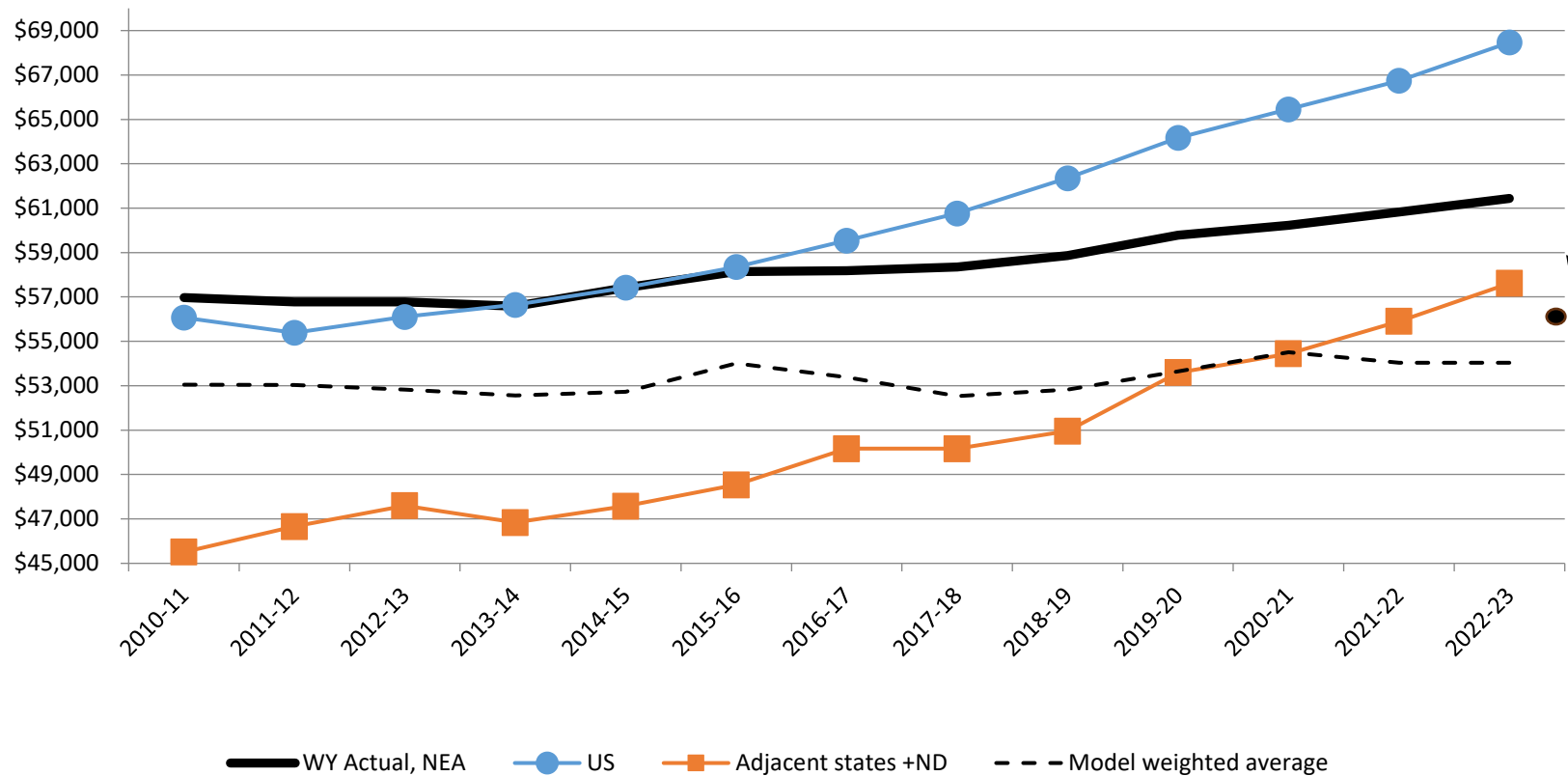
# WY Average below US average

## Model for last 2 years below neighboring average



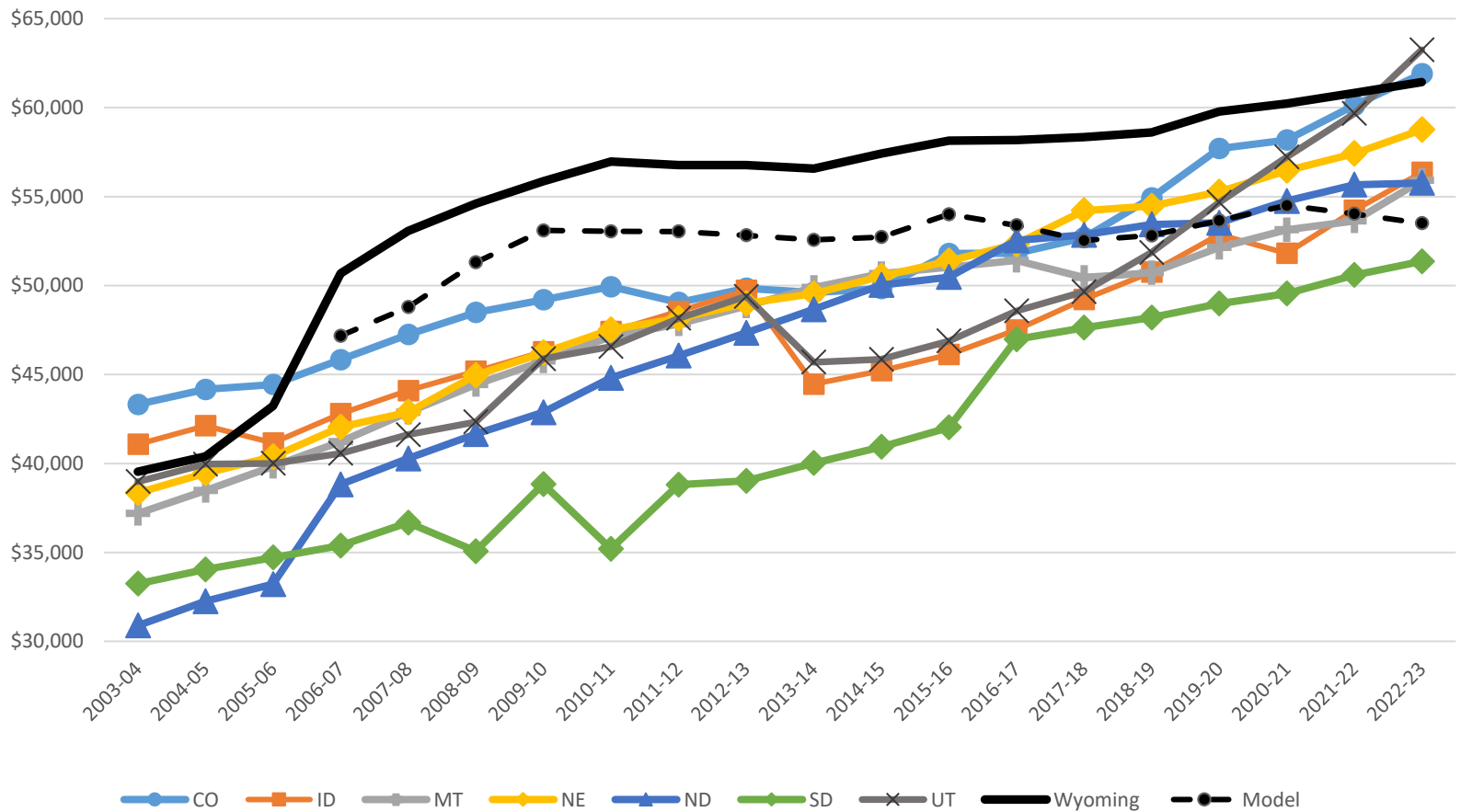
Source: National Education Association, Ranking and Estimates of School Statistics.  
The 2021/22 salary figures are estimates; all other years are actual.

Model average for 2023/24 is \$55,763



Source: National Education Association, Ranking and Estimates of School Statistics.  
The 2022/23 salary figures are estimates; all other years are actual.

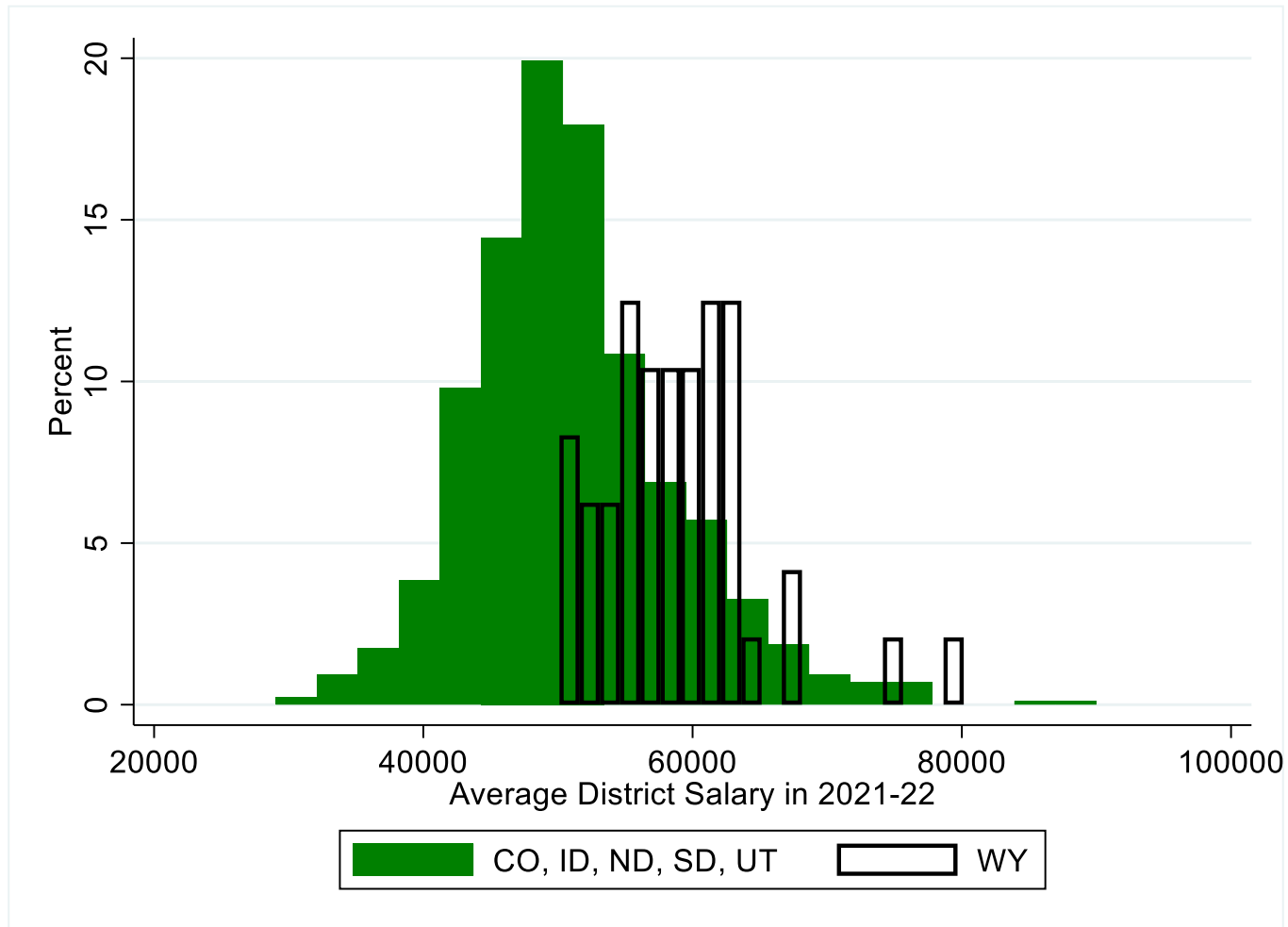
# Average Teaching Salaries in Neighboring States + ND



Source: National Education Association, Ranking and Estimates of School Statistics.  
The 2022/23 salary figures are estimates; all other years are actual.



# District salary comparisons, 2021/22



Source: Individual collection of salary data from individual state reports.

# District salary comparisons, 2021/22

	Highest	Top 10%	Top 25%	Median District	Bottom 25%
<b>WY Actual</b>	\$80,142	\$64,966	\$61,668	\$58,617	\$55,418
<b>WY Model</b>	\$81,746	\$55,344	\$53,908	\$51,255	\$50,590
<b>CO</b>	\$84,505	\$62,184	\$52,912	\$45,865	\$41,614
<b>ID</b>	\$74,546	\$59,616	\$53,251	\$50,398	\$48,219
<b>ND</b>	\$76,906	\$64,626	\$59,000	\$54,685	\$51,403
<b>SD</b>	\$61,437	\$52,265	\$49,585	\$47,181	\$45,307
<b>UT</b>	\$71,599	\$62,883	\$56,998	\$52,227	\$47,227

# District salary comparisons, 2022/23

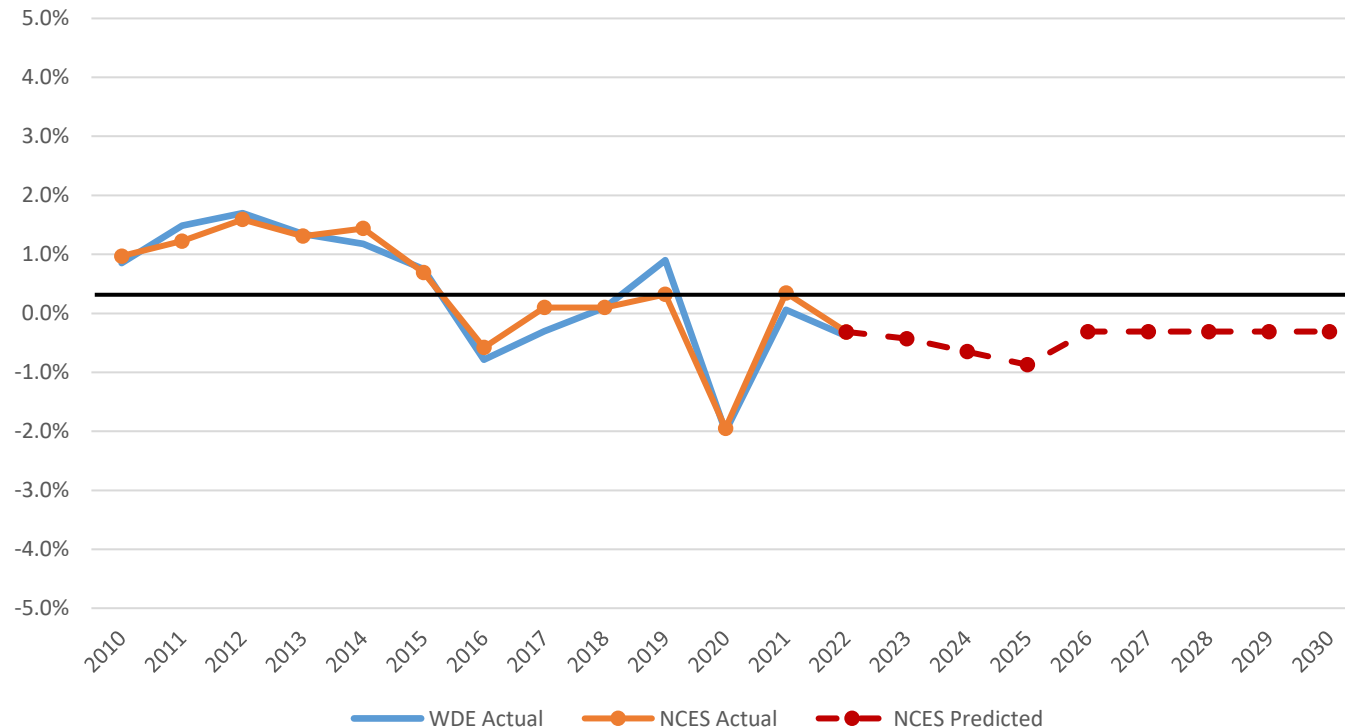
	Highest	Top 10%	Top 25%	Median District	Bottom 25%
<b>WY Actual</b>	\$84,403	\$67,561	\$62,987	\$60,026	\$56,333
<b>WY Model</b>	\$81,761	\$54,732	\$54,732	\$50,930	\$50,097
<b>CO</b>	\$87,164	\$65,705	\$56,572	\$48,306	\$43,020
<b>ID</b>	\$80,152	\$62,642	\$56,427	\$51,471	\$49,520

# Demographic Indicators:

## Trend in Student Enrollment

- Data from WY Department of Education student enrollment numbers, projections from NCES
- WY experienced sharp decline in enrollment, future projections are low growth
- If rising student enrollment can lead to more new positions to fill, declining leads to less pressure

# Student enrollment predicted to continue to decline



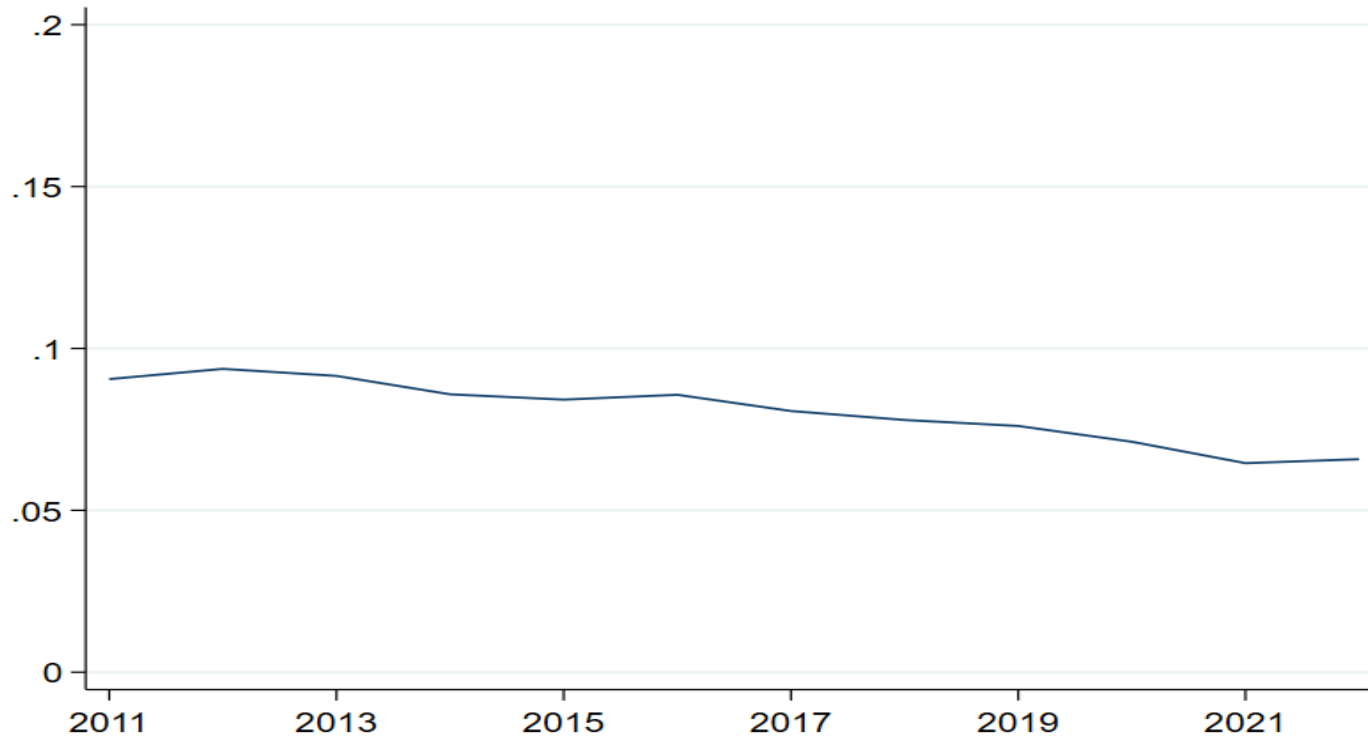
Source: National Center for Education Statistics, Projections of Education Statistics to 2030, Wyoming Department of Education. Actual Enrollment for Fall 2020-2022 Projected Enrollment 2022-2030.

## Demographic Indicators:

### Trend in teacher retirements

- Last 10 years have been a steady decline in number of older teachers
- Percentage likely to retire predicted to be relatively constant

# Declining number teachers 60+



Source: Wyoming Department of Education Staffing Files (WDE 602)

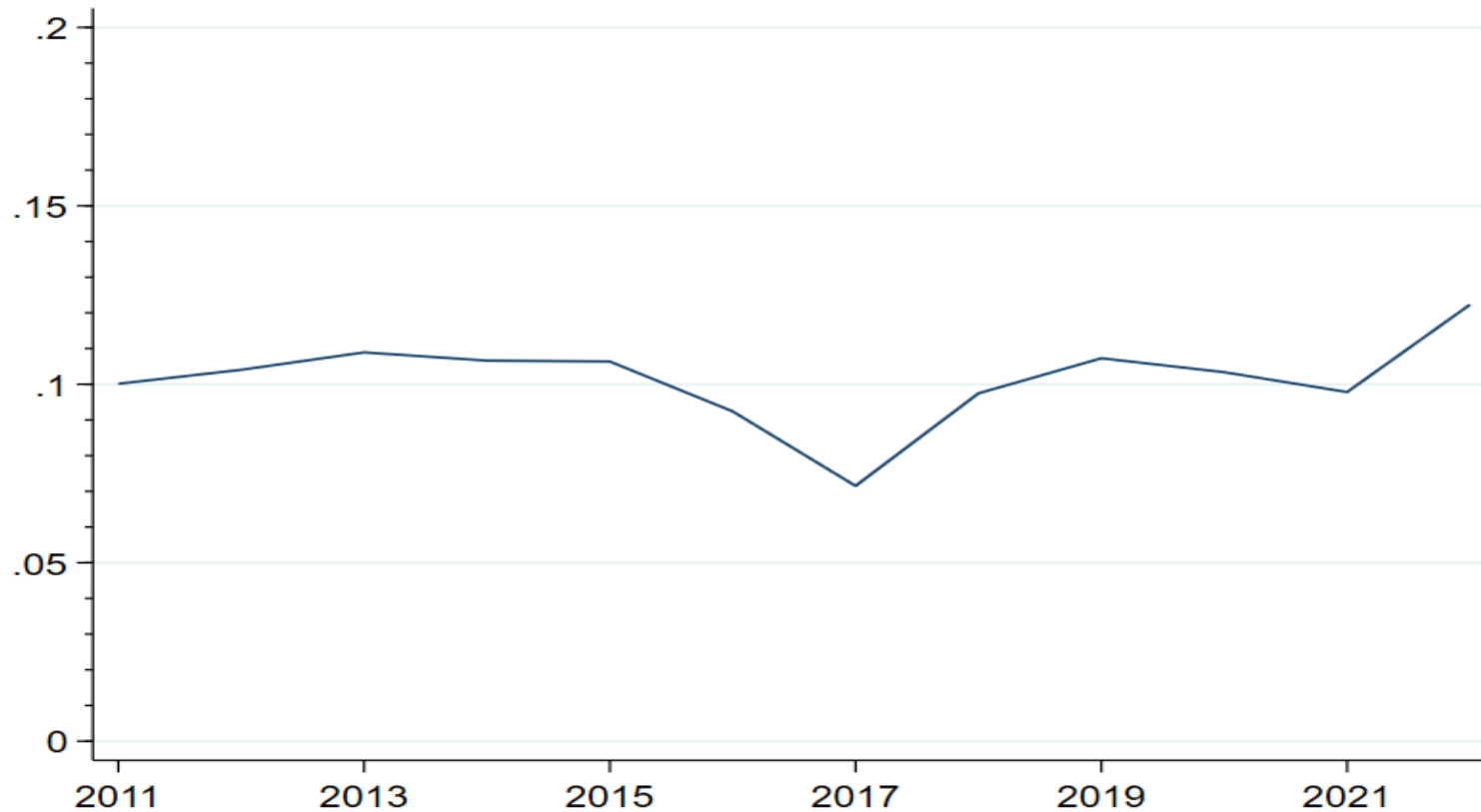
## Recruitment and Retention Indicators: Percent New Hires

Percent new hires is a combination of

- New positions,
- Teacher retirement,
- Exit for other reasons



# Uptick in percent of new hires

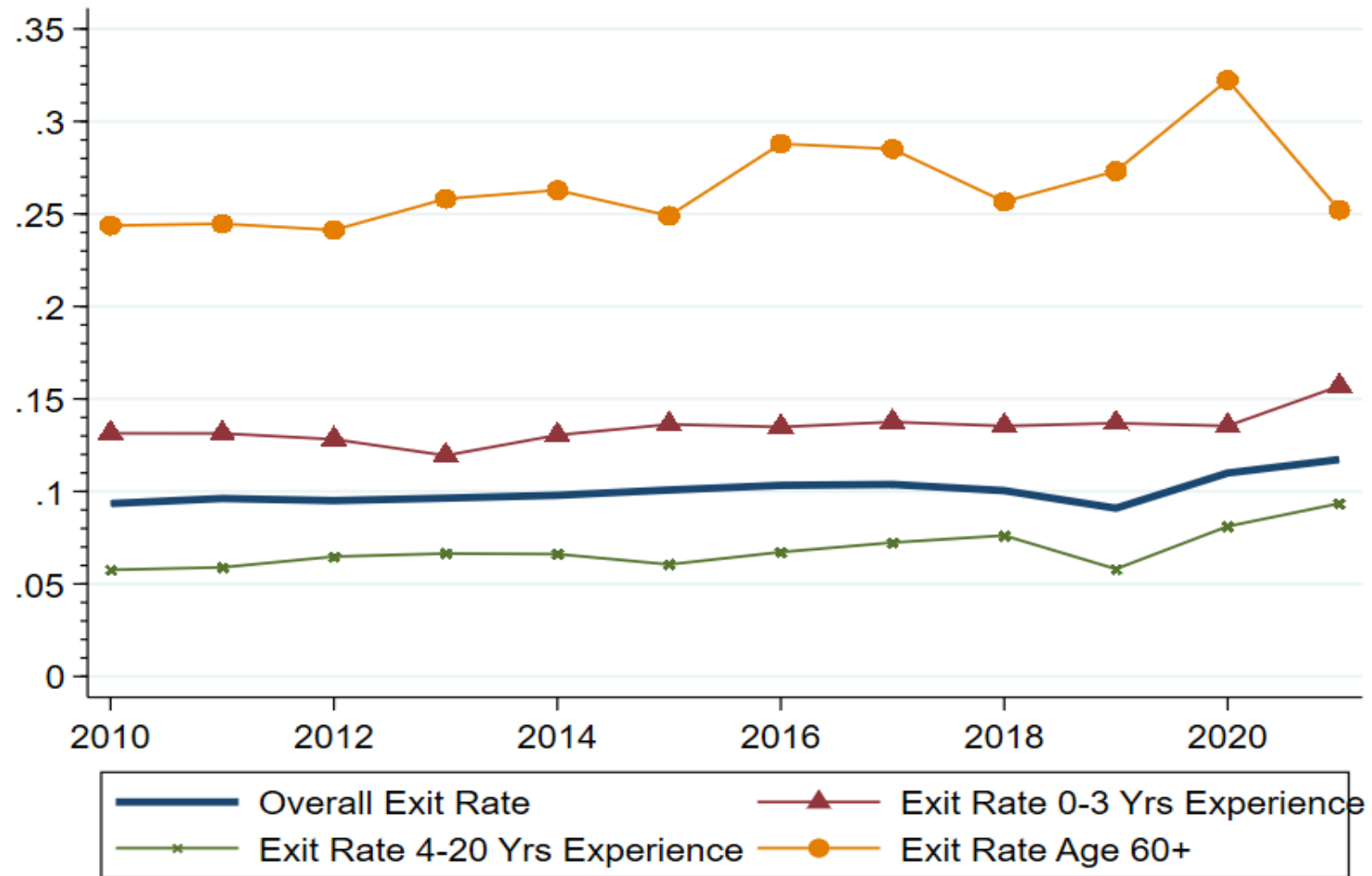


Source: Wyoming Department of Education Staffing files (WDE 602)

## Recruitment and Retention Indicators: Teacher Retention Rates

- Quantity based measure available:
  - Overall retention rate
  - % new teachers (0-3 years experience) exiting
- Little information about whether high quality teachers are more or less likely to exit

# Uptick in exit rates



Source: Wyoming Department of Education Staffing files (WDE 602)

# Vacancy Rates

- Wyoming is one of 13 states that do not collect vacancy data
- As a result cannot tell
  - (1) if there is a teaching shortage,
  - (2) if there are more issues in certain areas, and
  - (3) If there are more issues in certain teaching fields (e.g., special education)

(See Overview of State Policies to Improve Teacher Recruitment and Retention, Stoddard 2022)

# Recruitment and Retention Indicators: Preparation and Training Pipeline

- What programs are hires coming from?
- What does the pipeline for future teachers look like?

**Trends in Teacher Education**  
**Teachers with BA degree earned 2017-2022, Hired 2018-22**

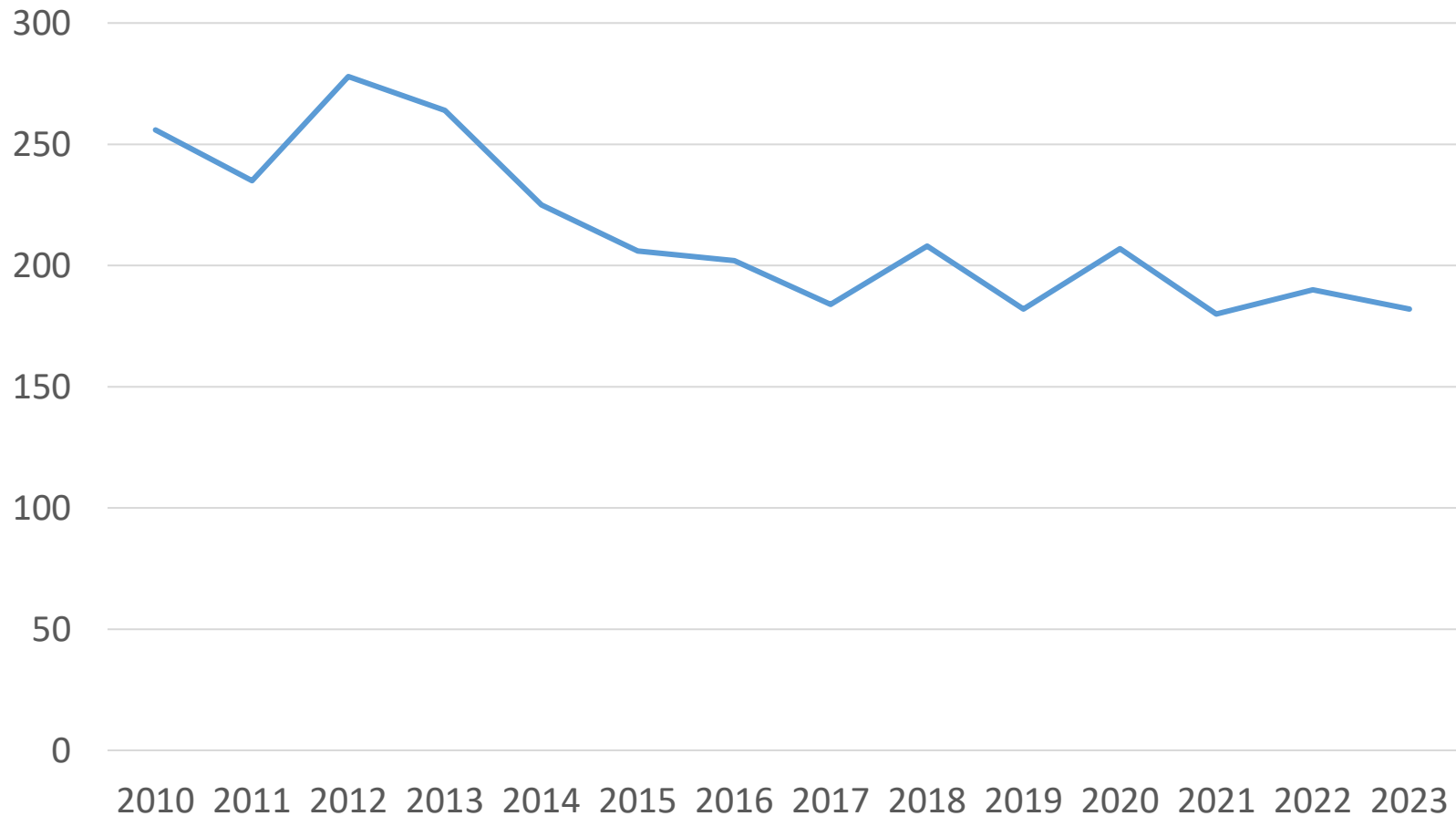
<b>Bachelor's Degree Institution</b>	
<b>University of Wyoming</b>	45%
<b>Black Hills State University</b>	6
<b>Western Governor's University</b>	12
<b>Valley City State University</b>	5
<b>Chadron State</b>	4
<b>Grand Canyon University</b>	2
<b>About 1-2% each from Brigham Young University Idaho, University of Northern Colorado, Utah State University</b>	
<b>Other Universities: 22%</b>	

# University of Wyoming Teaching Graduates (BA)

Year	Education BA Degrees Awarded	All UW BA Degrees	Ed as Percent of Degrees
2015	206	2,022	10.2%
2016	202	2,159	9.4%
2017	184	2,204	8.3%
2018	208	2,127	9.8%
2019	182	2,228	8.2%
2020	207	2,295	9.0%
2021	180	2,205	8.2%
2022	190	2,121	9.0%
2023	182	2,111	8.6%

Source: University of Wyoming Banner Information System. Degrees in education include a CIP code of 13.

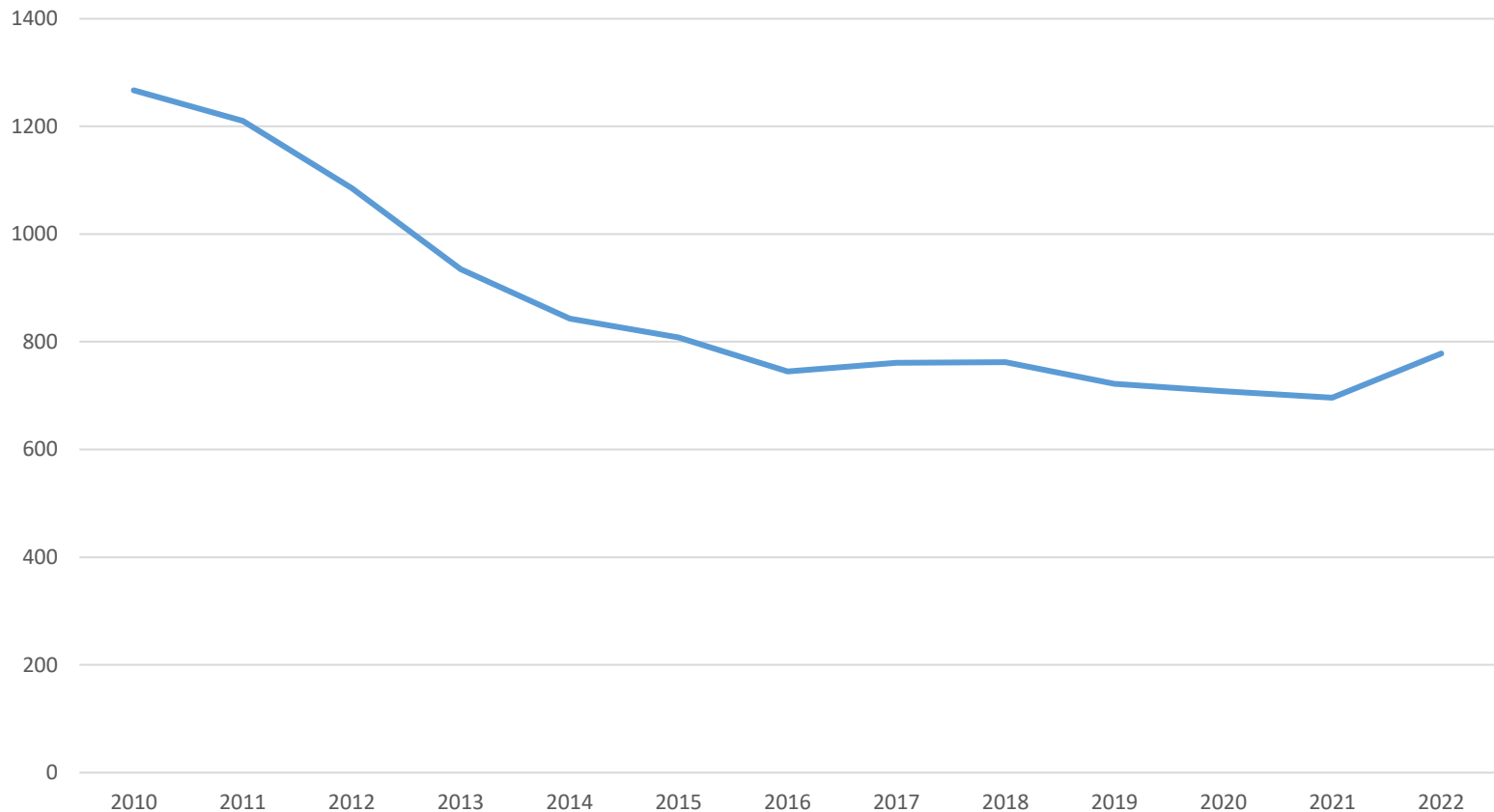
# Number of BA teaching degrees from University of Wyoming stable since 2016



Source: University of Wyoming Banner Information System. Degrees in education include a CIP code of 13.

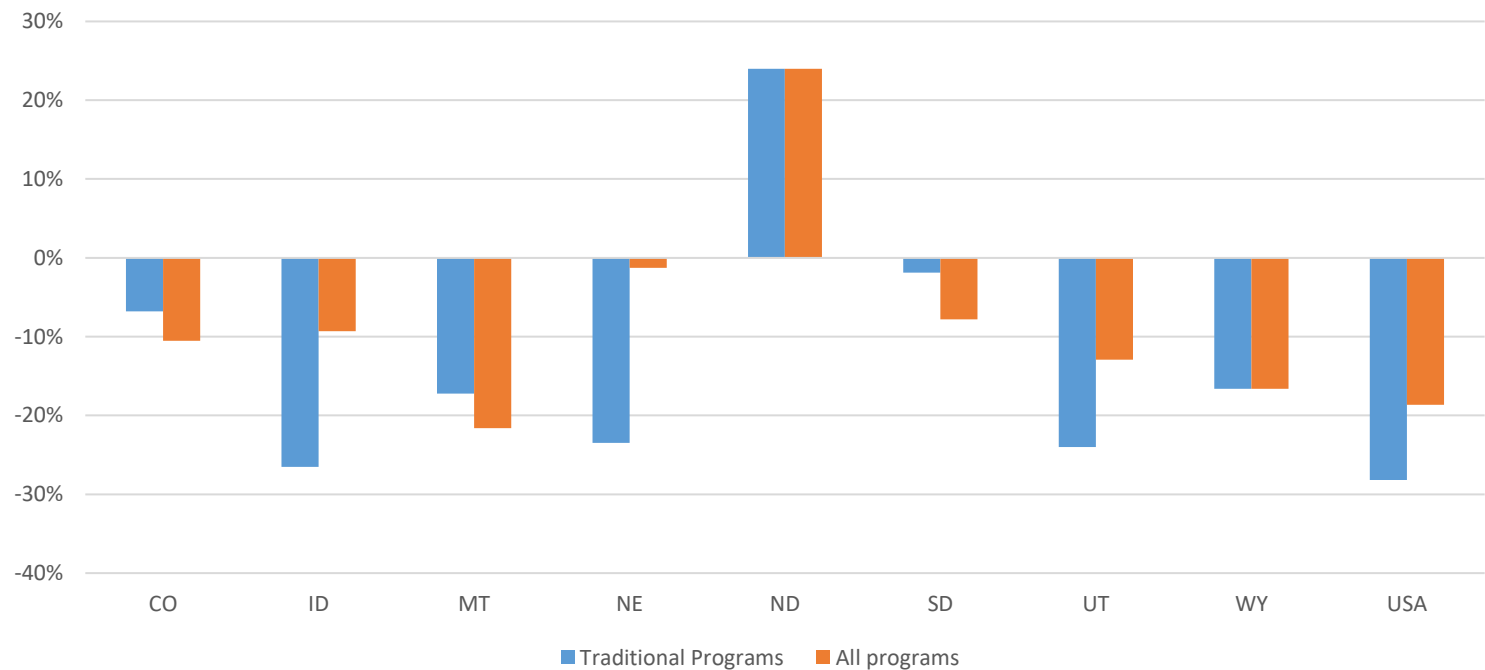


# Number of teaching majors from University of Wyoming has recent uptick



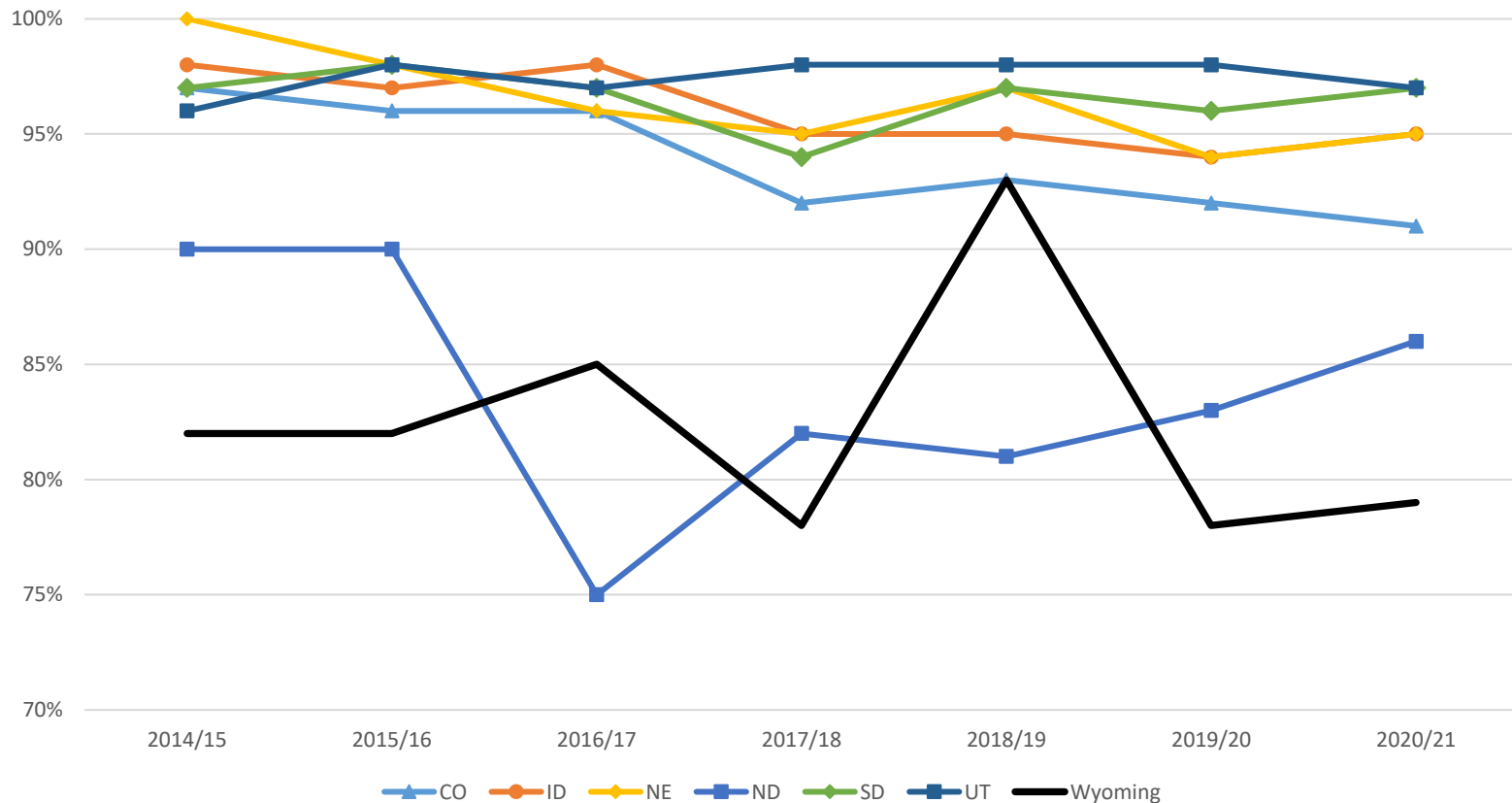
Source: University of Wyoming Banner Information System. Degrees in education include a CIP code of 13.

# Teacher preparation, 2011/12-2020/21



Source: US Department of Education. <https://title2.ed.gov/Public/Home.aspx>. Accessed 9/16/2022

# Certification exam pass rate



Source: US Department of Education.

<https://title2.ed.gov/Public/Home.aspx>. Accessed 9/16/2022

# Summary of Indicators

# Summary Labor Market Indicators

- Wyoming teaching salaries have shown little growth since 2012/13
- Teaching wages have fallen relative to salaries in other comparable occupations in WY, from a ratio of 96% to 87% in 2021 and 83% in 2022.
- The 2021 to 2022 decline was especially sharp due to rapid wage increases in health and business.
- This ratio is still higher than other states. The ratio in surrounding states is 74% and is 72% nationally.

# Summary Labor Market Indicators

- Average actual teaching wages in WY in 2022/23 were 6.6% above the average in neighboring states and ND.
- WY actual salaries grew at less than 1 percent per year. Average salaries in other states increased 1-2 percent per year.
- The premium fell from 26% in 2010/11 and a 10% in 2021/22.
- For the first time, other states in the region have average wages above WY (UT and NE), while other states in the region are lower.
- Salaries in the model for 2022/23 were 5.5% below actual average salary in nearby states.  
(Note that other states have different funding models and do not have state model salaries.)

# Summary Labor Market Indicators

- All WY districts paid above \$50,000 in 2021/22. Half of the districts in comparison states had salaries below that level.
- The highest paid districts in Wyoming have salaries similar to high paid districts in Colorado, Idaho, Utah, and North Dakota.

# Summary of Demographic Indicators

- Wyoming does not face significant demographic pressures that require many new teachers
  - Student enrollment is projected to decline
  - The fraction of teachers 60 and older has been falling from the 2012/13
  - The spike in turnover rates for 65+ teachers in 2021 fell back to normal in 2022



# Summary of Retention Indicators

- About 12.2% of teachers in 2022/23 were new hires, a slight rise.
- Exit rates were 12%, a slight rise.
- Exit rates of new teachers (up to 3 years experience) had an uptick to 16%.
- Mid career teachers had an uptick to 9.3%.
- These are the highest exit rates recorded.

# Summary of Recruitment Indicators

- The number and fraction of BA degrees in education at the University of Wyoming has been trending downward since 2010, but has been relatively stable over last 5 years. Number of majors is up slightly.
- Two potential recruitment challenges have been a lack of alternative pathways into teaching and low pass rates on the certification exam.