

*Wyoming*

# MONITORING SCHOOL DISTRICT HUMAN RESOURCE COST PRESSURES

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Presented by Tom Gallagher  
October 30, 2012

Research & Planning  
Wyoming Department of Workforce Services

<http://doe.state.wy.us/LMI>  
[http://doe.state.wy.us/LMI/education\\_costs.htm](http://doe.state.wy.us/LMI/education_costs.htm)



Research & Planning  
Wyoming DWS



# Research & Planning

What we do:

- Research & Planning (R&P) is a separate, exclusively statistical entity that collects, analyzes, and publishes timely and accurate labor market information (LMI) meeting established statistical standards. Labor market information is “an applied science; it is the systematic collection and analysis of data which describes and predicts the relationship between labor demand and supply.” — The States’ Labor Market Information Review, ICESA, 1995, p. 7.
- Staff consists of 13 full-time researchers, most holding graduate degrees, with backgrounds in economics, demography, sociology, psychology, statistics, and engineering. R&P also has two editors with backgrounds in journalism and two administrative support staff.

## About the Research

*Monitoring School District Human Resource Cost Pressures:*

*A Report to the Wyoming Joint Education Committee*

[http://doe.state.wy.us/LMI/education\\_costs.htm](http://doe.state.wy.us/LMI/education_costs.htm)

### **Cost Pressures**

“ ... a level of direct compensation that leads to the recruitment and retention of staff capable of producing a superior work product in the public school setting.”  
(Gallagher, p. 5).

## About the Research

### **Occupational Employment Statistics (OES)**

Annual average estimates. Nationwide state-federal statistical program operated by the U.S. Bureau of Labor Statistics (BLS).

### **Wyoming Department of Education 602 Contract File (WDE 602)**

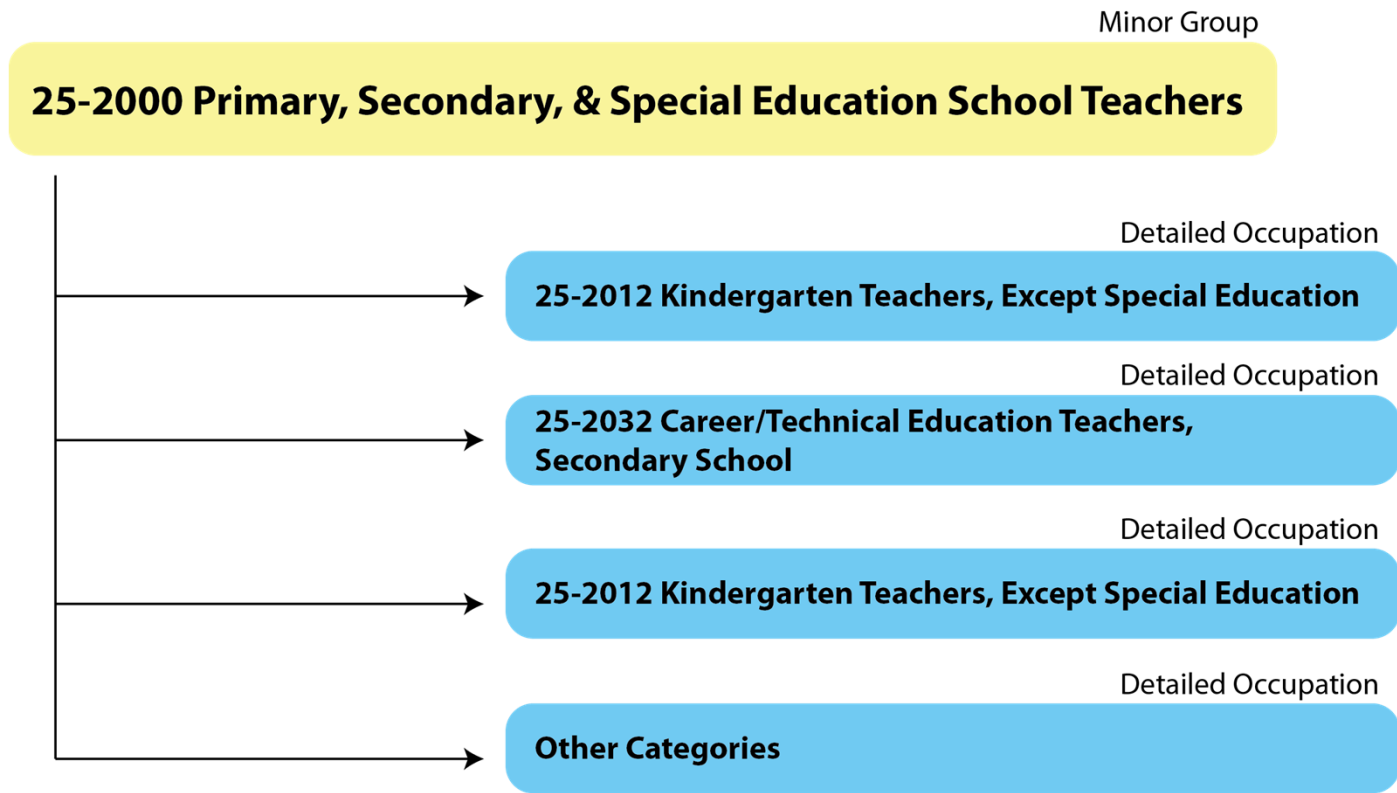
Annual census of school district positions.

### **Unemployment Insurance Wage Records**

Quarterly payroll tax records for Wyoming and 10 other states.

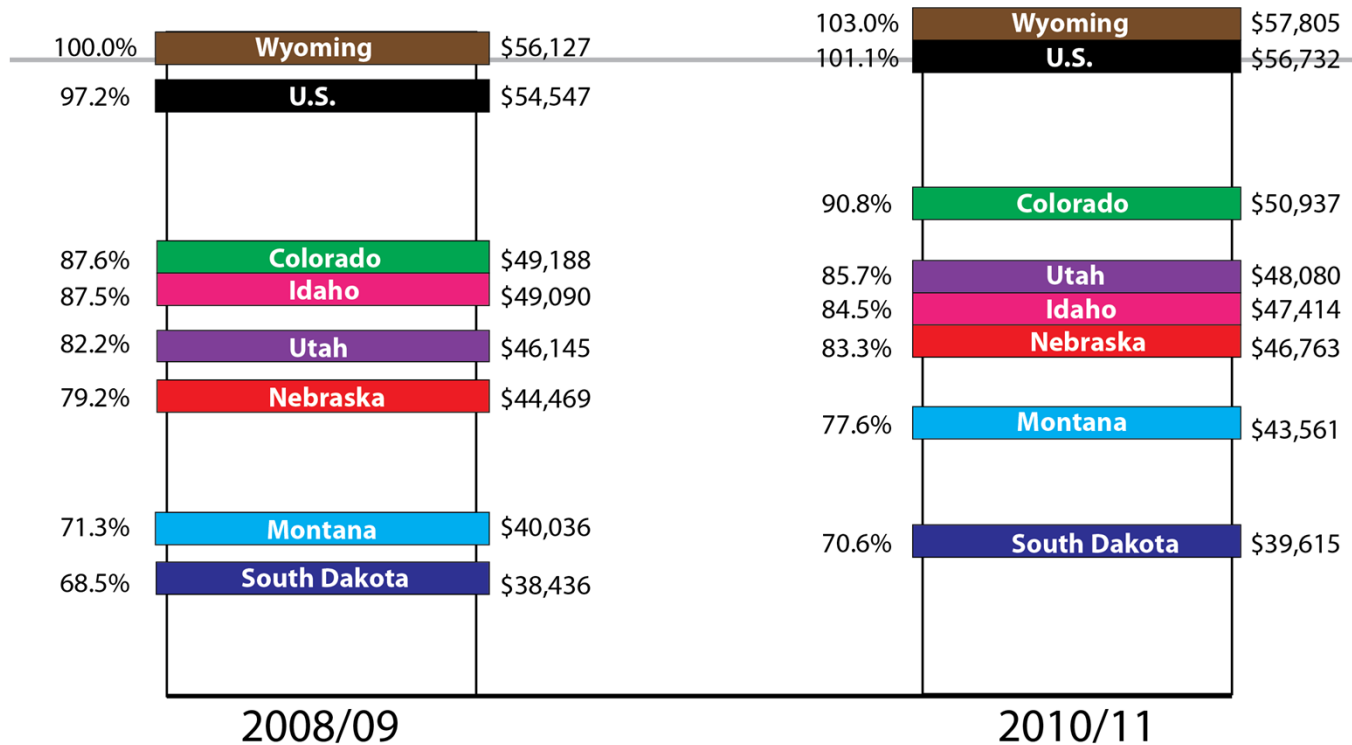
# Employment and Wage Estimates in the OES Program

## Standard Occupational Classification (SOC) System Structure



## Teacher Wage Levels and Trends Regional and National Context

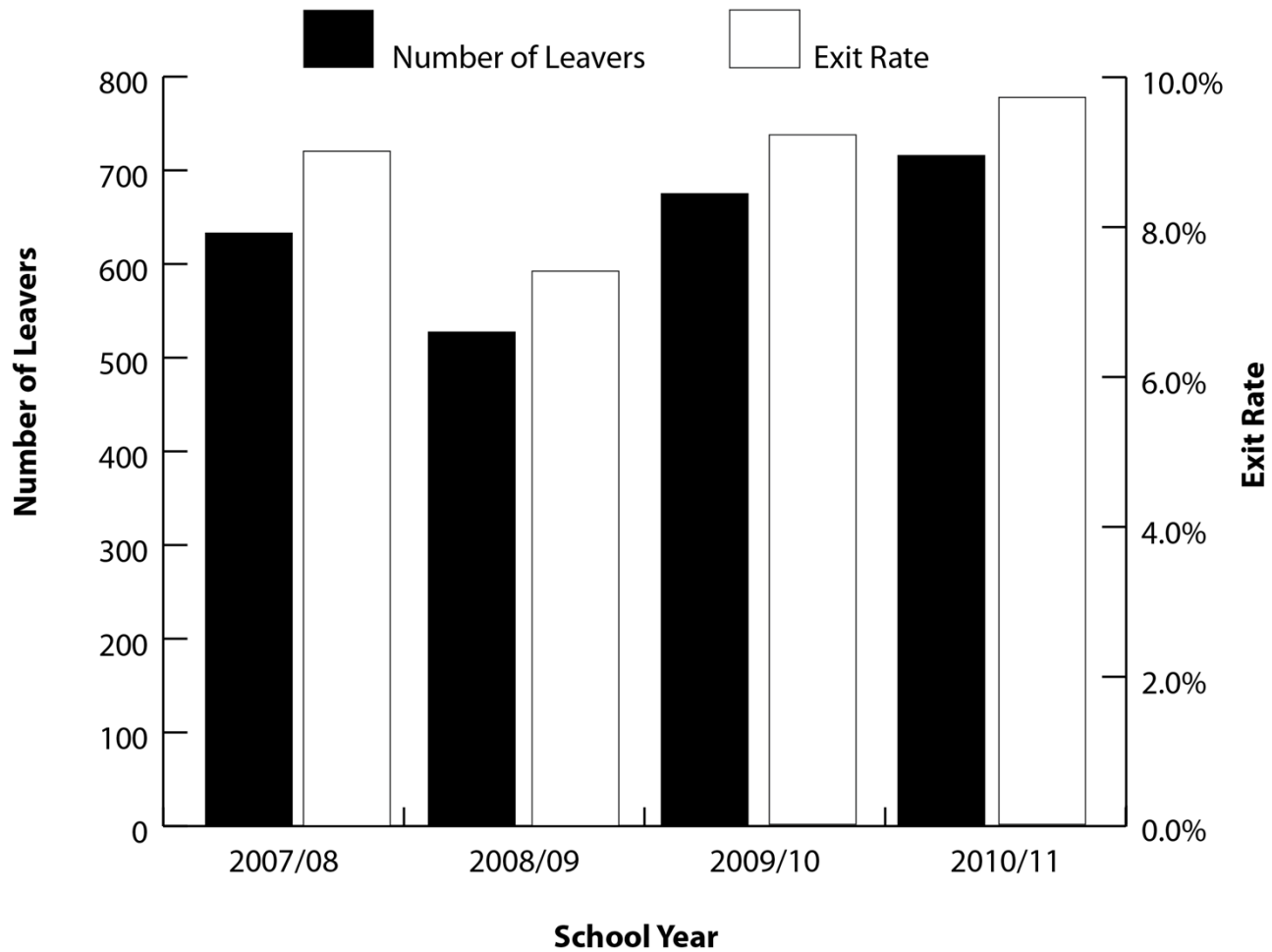
### All Primary, Secondary, and Special Education Teachers (SOC 25-2000)



Source: Occupational Employment Statistics Survey Files, U.S. Bureau of Labor Statistics.  
Estimates by T Glover, Research & Planning, Wyoming Department of Workforce Services, 9/7/2012.

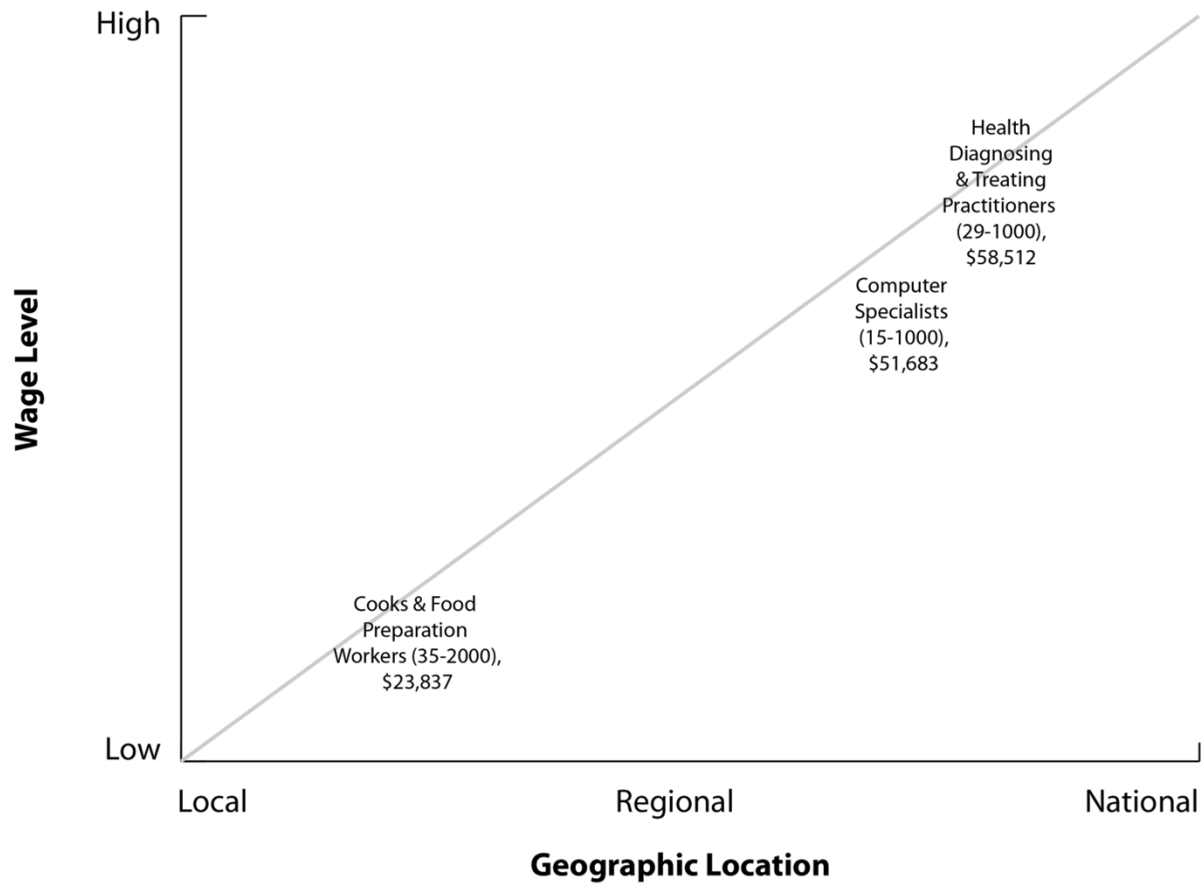
# Teacher Turnover

**Number of Leavers and Exit Rates for All Primary, Secondary, and Special Education Teachers (SOC 25-2000) in Public Schools in Wyoming, 2007/08 to 2010/11**



# Local, Regional, and National Competition

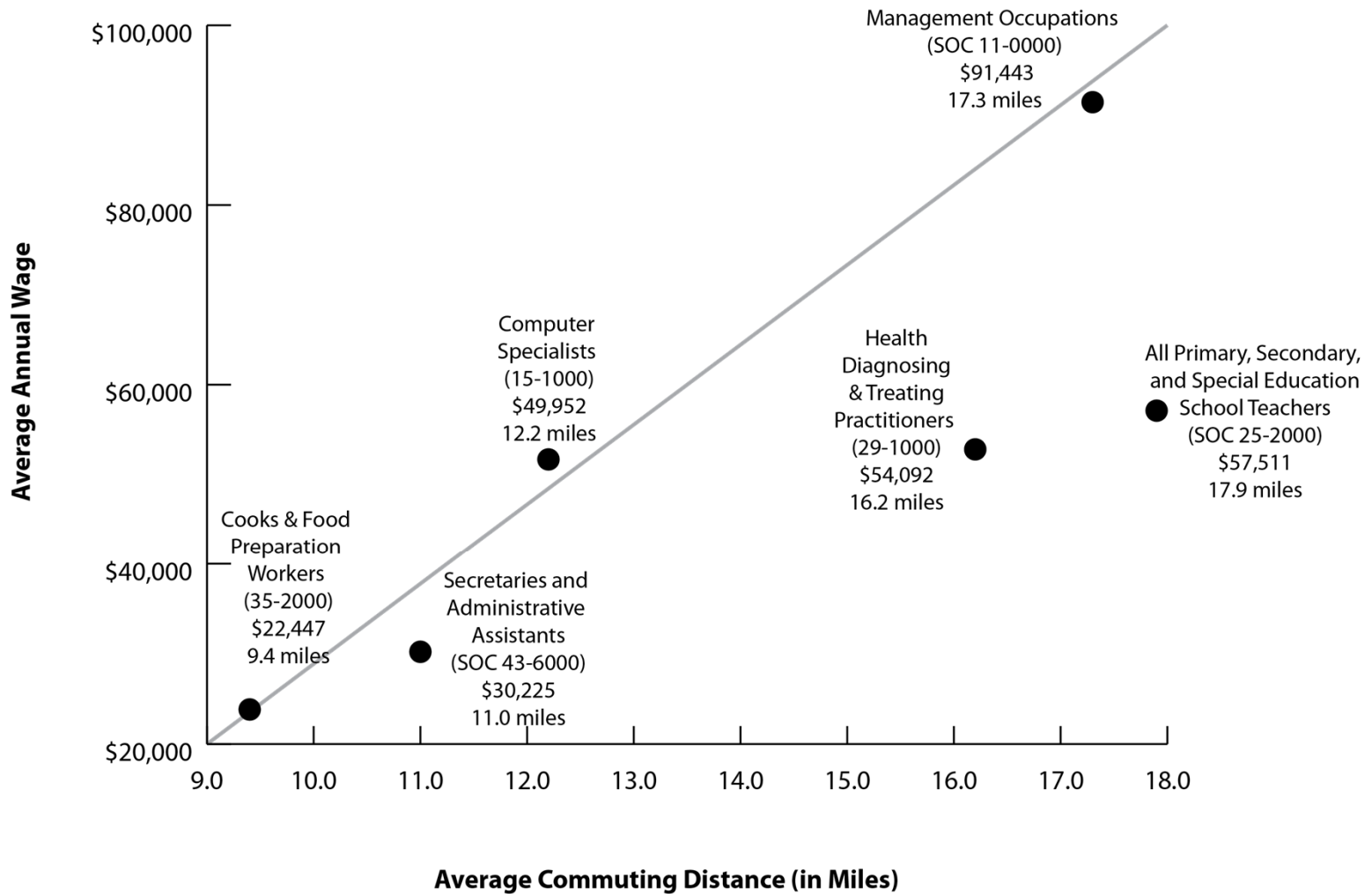
## General Perspective on Wage Compensation and the Geographic Scope of Competition





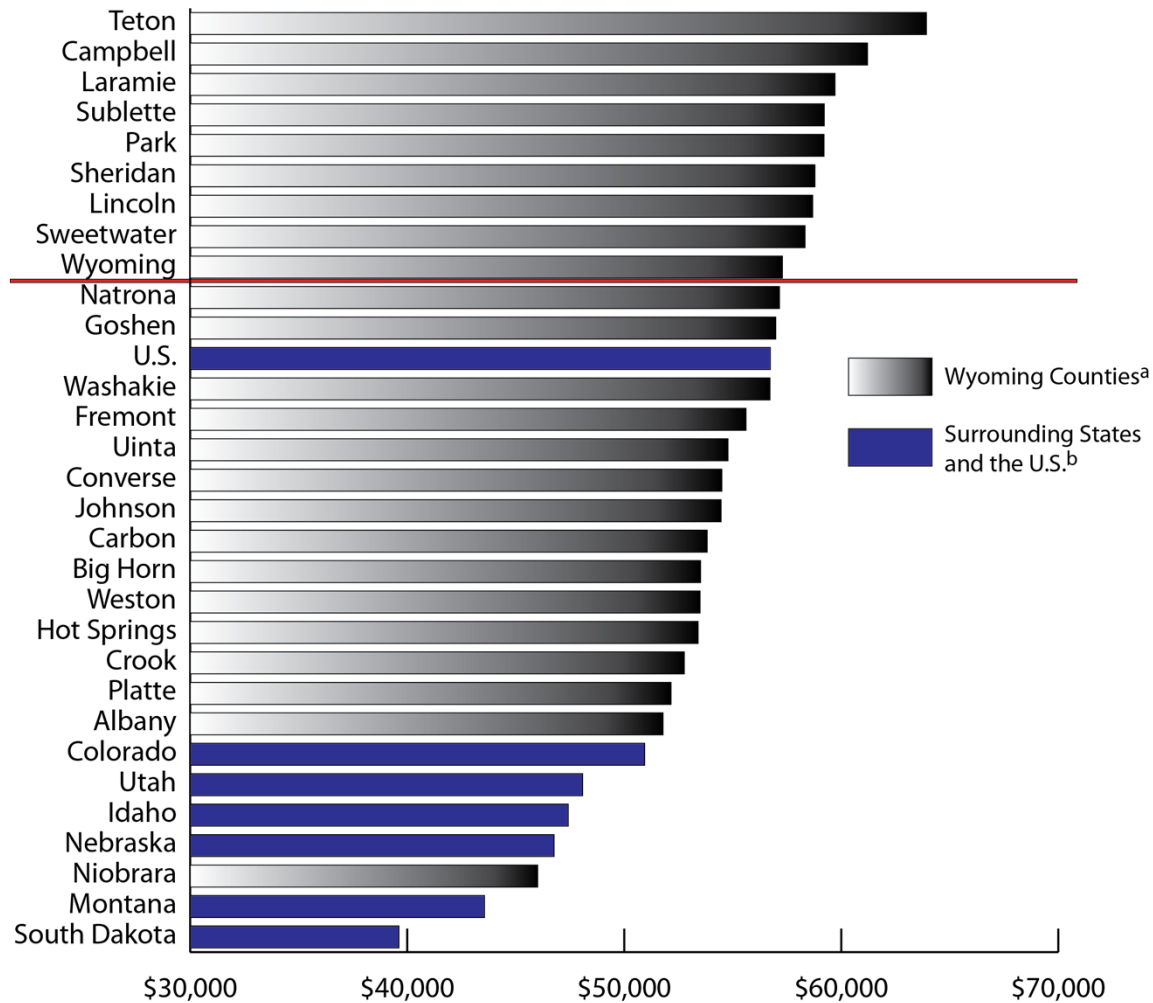
# Wages and Commuting

**Average Annual Wage and Commuting Distance to Work for Selected Occupations in Public Schools in Wyoming, 2009/10 and 2010/11**



## Local, Regional, and National Wages

Average Annual Wage for Primary, Secondary, and Special Education School Teachers (SOC 25-2000) in Public Schools (NAICS 611100) in Wyoming (including Counties), Surrounding States, and the U.S., 2010/11



<sup>a</sup>Source: Wyoming Department of Education Contract Files (WDE 602).

<sup>b</sup>Source: Occupational Employment Statistics (OES).

## Local, Regional, and National Wage Comparison

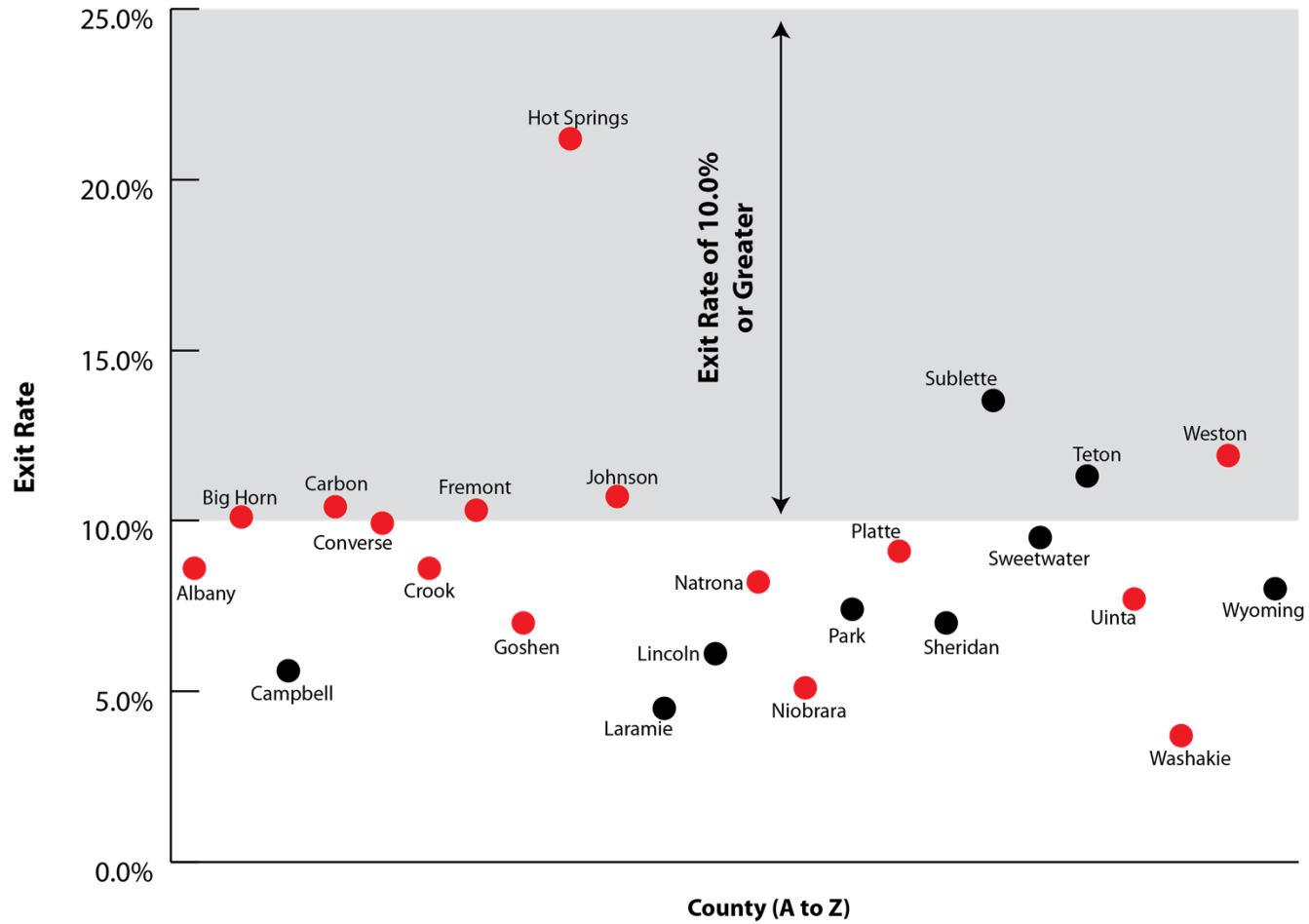
Difference in Average Annual Wage for All Primary, Secondary, and Special Education Teachers (SOC 25-2000) in Wyoming Counties <sup>1</sup> and Surrounding States <sup>2</sup>									
		WY	U.S.	CO	ID	MT	NE	SD	UT
		\$57,805	\$56,732	\$50,937	\$47,417	\$43,561	\$46,763	\$39,615	\$48,080
Albany County	\$51,876	-\$5,929	-\$4,856	\$939	\$4,459	\$8,315	\$5,113	\$12,261	\$3,796
Big Horn County	\$53,512	-\$4,293	-\$3,220	\$2,575	\$6,095	\$9,951	\$6,749	\$13,897	\$5,432
Campbell County	\$61,206	\$3,401	\$4,474	\$10,269	\$13,789	\$17,645	\$14,443	\$21,591	\$13,126
Carbon County	\$53,822	-\$3,983	-\$2,910	\$2,885	\$6,405	\$10,261	\$7,059	\$14,207	\$5,742
Converse County	\$54,495	-\$3,310	-\$2,237	\$3,558	\$7,078	\$10,934	\$7,732	\$14,880	\$6,415
Crook County	\$52,764	-\$5,041	-\$3,968	\$1,827	\$5,347	\$9,203	\$6,001	\$13,149	\$4,684
Fremont County	\$55,609	-\$2,196	-\$1,123	\$4,672	\$8,192	\$12,048	\$8,846	\$15,994	\$7,529
Goshen County	\$56,980	-\$825	\$248	\$6,043	\$9,563	\$13,419	\$10,217	\$17,365	\$8,900
Hot Springs County	\$53,399	-\$4,406	-\$3,333	\$2,462	\$5,982	\$9,838	\$6,636	\$13,784	\$5,319
Johnson County	\$54,463	-\$3,342	-\$2,269	\$3,526	\$7,046	\$10,902	\$7,700	\$14,848	\$6,383
Laramie County	\$59,710	\$1,905	\$2,978	\$8,773	\$12,293	\$16,149	\$12,947	\$20,095	\$11,630
Lincoln County	\$58,685	\$880	\$1,953	\$7,748	\$11,268	\$15,124	\$11,922	\$19,070	\$10,605
Natrona County	\$57,150	-\$655	\$418	\$6,213	\$9,733	\$13,589	\$10,387	\$17,535	\$9,070
Niobrara County	\$46,012	-\$11,793	-\$10,720	-\$4,925	-\$1,405	\$2,451	-\$751	\$6,397	-\$2,068
Park County	\$59,204	\$1,399	\$2,472	\$8,267	\$11,787	\$15,643	\$12,441	\$19,589	\$11,124
Platte County	\$52,153	-\$5,652	-\$4,579	\$1,216	\$4,736	\$8,592	\$5,390	\$12,538	\$4,073
Sheridan County	\$58,784	\$979	\$2,052	\$7,847	\$11,367	\$15,223	\$12,021	\$19,169	\$10,704
Sublette County	\$59,213	\$1,408	\$2,481	\$8,276	\$11,796	\$15,652	\$12,450	\$19,598	\$11,133
Sweetwater County	\$58,331	\$526	\$1,599	\$7,394	\$10,914	\$14,770	\$11,568	\$18,716	\$10,251
Teton County	\$63,926	\$6,121	\$7,194	\$12,989	\$16,509	\$20,365	\$17,163	\$24,311	\$15,846
Uinta County	\$54,777	-\$3,028	-\$1,955	\$3,840	\$7,360	\$11,216	\$8,014	\$15,162	\$6,697
Washakie County	\$56,715	-\$1,090	-\$17	\$5,778	\$9,298	\$13,154	\$9,952	\$17,100	\$8,635
Weston County	\$53,491	-\$4,314	-\$3,241	\$2,554	\$6,074	\$9,930	\$6,728	\$13,876	\$5,411

<sup>1</sup>Source: Wyoming Department of Education Contract Files.

<sup>2</sup>Source: Occupational Employment Statistics (OES).

## Exit Rates by County

Exit Rates for All Primary, Secondary, & Special Education Teachers (25-2000) Age 55 and Older in Public Schools in Wyoming by County, 2010/11 to 2011/12 School Years



Source: Wyoming Department of Education Contract Files (WDE 602).



## Where Do They Go, and at What Price? (Teachers)

Change in Average Annual Wage for All Primary, Secondary, & Special Education Teachers (25-2000) who Left Employment in Public Schools by Destination, 2009/10 and 2010/11

	Total			20-34			35-54			55 and Older		
	Contracts	Pre Wage <sup>a</sup>	Post Wage <sup>b</sup>	Contracts	Pre Wage <sup>a</sup>	Post Wage <sup>b</sup>	Contracts	Pre Wage <sup>a</sup>	Post Wage <sup>b</sup>	Contracts	Pre Wage <sup>a</sup>	Post Wage <sup>b</sup>
<b>Total</b>	<b>1,391</b>	<b>\$53,438</b>	<b>\$32,207</b>	<b>460</b>	<b>\$45,690</b>	<b>\$33,009</b>	<b>447</b>	<b>\$51,810</b>	<b>\$37,794</b>	<b>484</b>	<b>\$62,306</b>	<b>\$23,894</b>
\$ Change			<b>-\$21,230</b>			<b>-\$12,681</b>			<b>-\$14,015</b>			<b>-\$38,411</b>
% Change			<b>-39.7</b>			<b>-27.8</b>			<b>-27.1</b>			<b>-160.8</b>
<b>Wyoming</b>	<b>916</b>	<b>\$51,780</b>	<b>\$32,506</b>	<b>319</b>	<b>\$44,890</b>	<b>\$33,382</b>	<b>334</b>	<b>\$51,149</b>	<b>\$38,406</b>	<b>263</b>	<b>\$60,939</b>	<b>\$23,952</b>
\$ Change			<b>-\$19,274</b>			<b>-\$11,508</b>			<b>-\$12,743</b>			<b>-\$36,987</b>
% Change			<b>-37.2</b>			<b>-25.6</b>			<b>-24.9</b>			<b>-154.4</b>
<b>Other States</b>	<b>75</b>	<b>\$49,635</b>	<b>\$28,556</b>	<b>45</b>	<b>\$46,550</b>	<b>\$30,363</b>	<b>20</b>	<b>\$49,540</b>	<b>\$27,578</b>	<b>10</b>	<b>\$63,709</b>	<b>\$22,379</b>
\$ Change			<b>-\$21,079</b>			<b>-\$16,187</b>			<b>-\$21,962</b>			<b>-\$41,329</b>
% Change			<b>-42.5</b>			<b>-34.8</b>			<b>-44.3</b>			<b>-184.7</b>
<b>Teachers Not Found</b>	<b>400</b>	<b>\$57,947</b>		<b>96</b>	<b>\$47,945</b>		<b>93</b>	<b>\$54,668</b>		<b>211</b>	<b>\$63,942</b>	

<sup>a</sup>Source: Wyoming Department of Education Contract Files (WDE 602).

<sup>b</sup>Source: Unemployment Insurance Wage Records.

Prepared by T Glover Research & Planning, WY DWS, 10/23/2012.

## Where Do They Go, and at What Price? (Non-Teachers)

Change in Average Annual Wage for Workers in Non-Teaching Occupations who Left Employment in Public Schools by Destination, 2009/10 and 2010/11

	Total			20-34			35-54			55 and Older		
	Contracts	Pre Wage <sup>a</sup>	Post Wage <sup>b</sup>	Contracts	Pre Wage <sup>a</sup>	Post Wage <sup>b</sup>	Contracts	Pre Wage <sup>a</sup>	Post Wage <sup>b</sup>	Contracts	Pre Wage <sup>a</sup>	Post Wage <sup>b</sup>
<b>Total</b>	4,213	\$22,478	\$24,889	1,236	\$15,250	\$22,465	1,746	\$20,869	\$28,286	1,231	\$32,016	\$21,873
\$ Change			\$2,412			\$7,214			\$7,418			-\$10,143
% Change			10.7			47.3			35.5			-46.4
<b>Wyoming</b>	2,928	\$20,542	\$24,885	907	\$14,150	\$22,346	1,300	\$20,129	\$28,326	721	\$29,326	\$21,876
\$ Change			\$4,343			\$8,196			\$8,197			-\$7,450
% Change			21.1			57.9			40.7			-34.1
<b>Other States</b>	119	\$22,136	\$24,989	69	\$18,749	\$24,024	43	\$22,923	\$27,100	7	\$50,688	\$21,536
\$ Change			\$2,853			\$5,275			\$4,177			-\$29,153
% Change			12.9			28.1			18.2			-135.4
<b>Not Found</b>	1,166	\$27,373		260	\$18,160		403	\$23,034		503	\$35,612	

<sup>a</sup>Source: Wyoming Department of Education Contract Files (WDE 602).

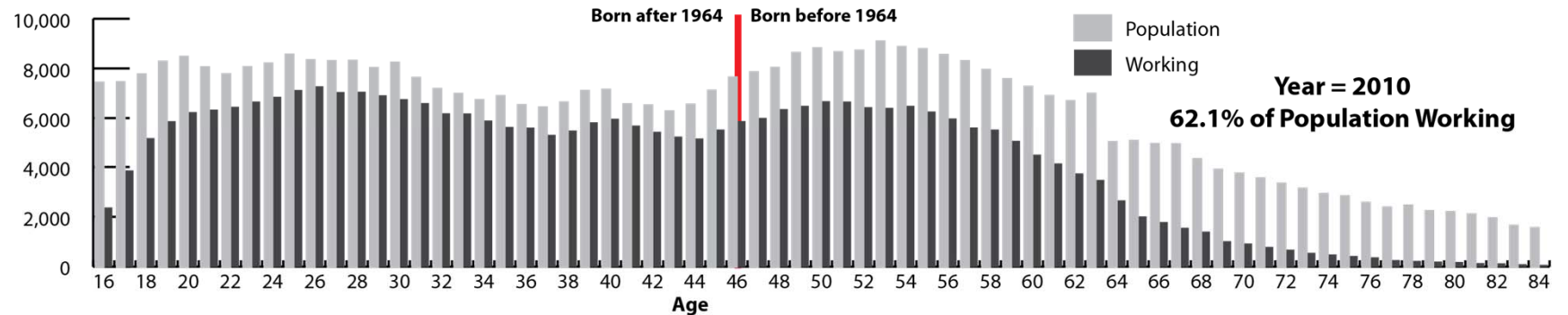
<sup>b</sup>Source: Unemployment Insurance Wage Records.

Prepared by T Glover Research & Planning, WY DWS, 10/23/2012.



## Wyoming's Aging Workforce

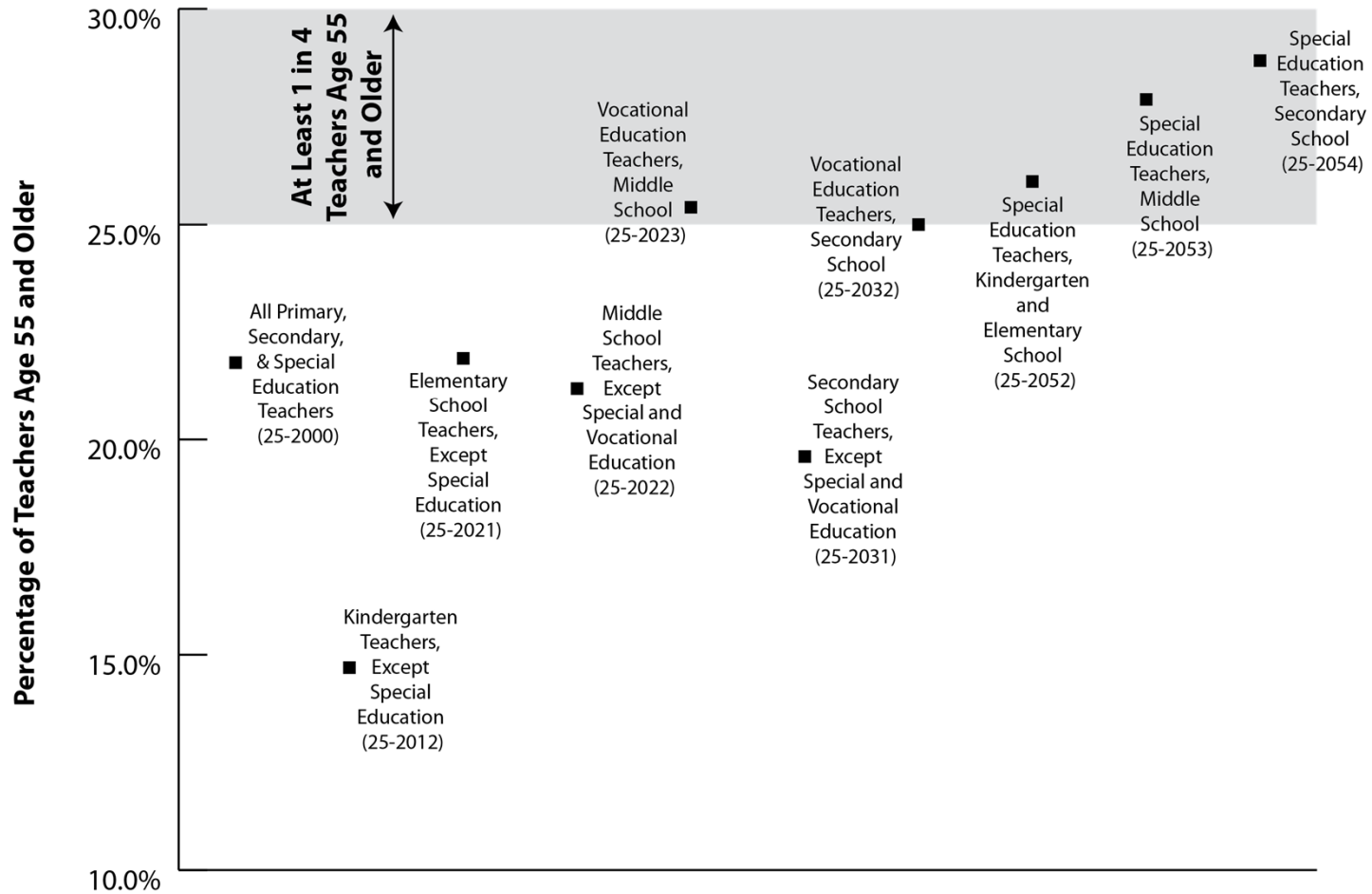
**Estimates of the Resident Population and Working Population by Single Years of Age in Wyoming for Selected Years (Ages 16+)**



Sources: U.S. Census Bureau; Wyoming Department of Workforce Services, Research & Planning, Unemployment Insurance Wage Records

# Age Distribution by Occupation

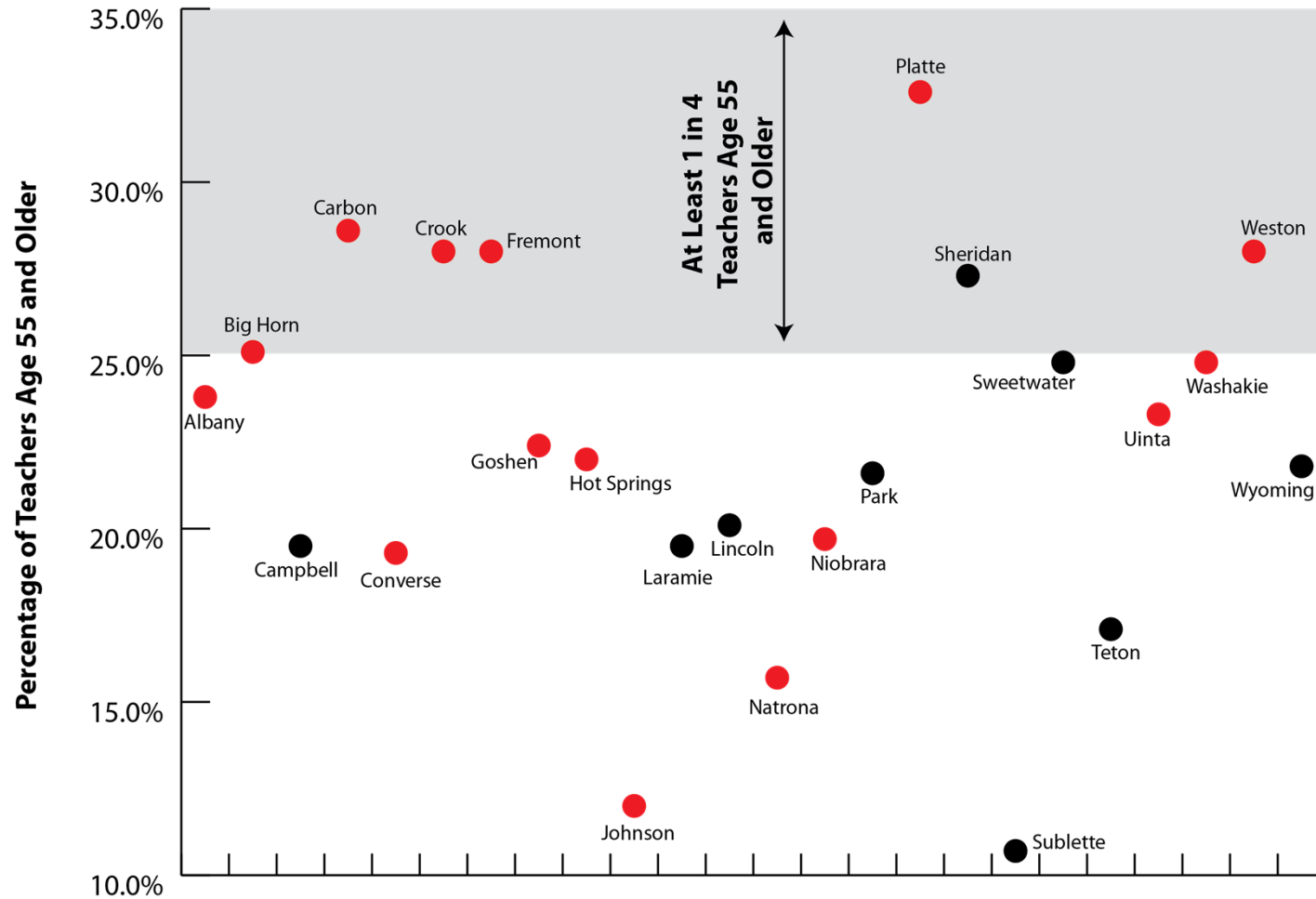
Percentage of Teachers Age 55 and Older in Public Schools in Wyoming by Occupation, 2011/12 School Year





## Age Distribution by County

Percentage of All Primary, Secondary, & Special Education Teachers (25-2000) Age 55 and Older in Public Schools in Wyoming by County, 2011/12 School Year



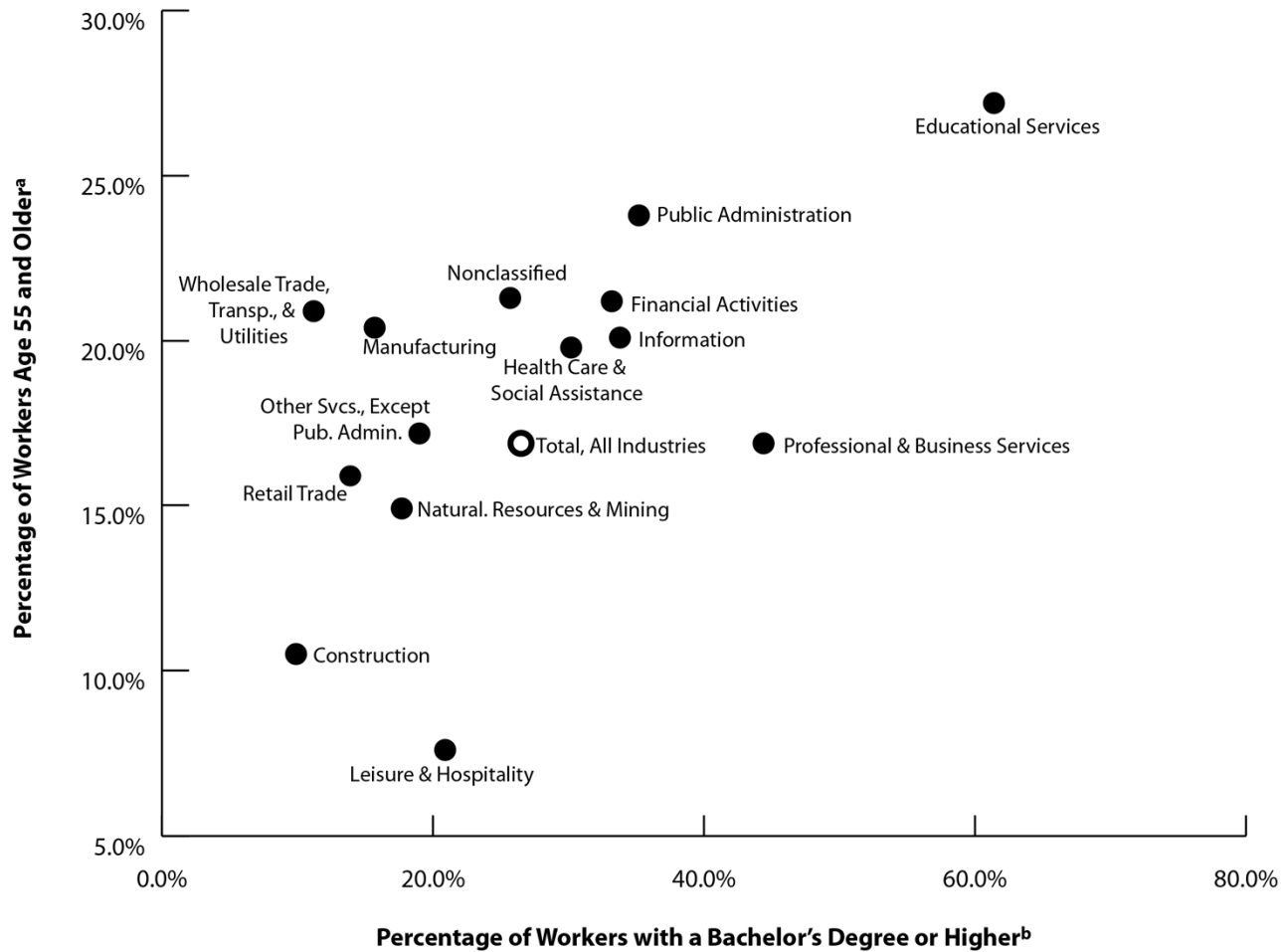
## Counties to Monitor

**Big Horn, Carbon, Hot Springs, and Weston counties  
all face three significant challenges:**

- High percentage of teachers age 55 and older (25.5% to 29.7%)
- Double-digit exit rates (10.1% to 21.2%)
- Comparatively low annual wages (6.0% to 6.8% less than the state average)

# Age and Education

**Percentage of Workers Age 55 and Older and Percentage of Workers with a Bachelor's Degree or Higher by Industry in Wyoming, 2010**



<sup>a</sup>Source: Wyoming Wages by County, Industry, Age, & Gender, 1992-2011, Research & Planning, Wyoming Department of Workforce Services.  
<sup>b</sup>Source: U.S. Census Bureau, American Community Survey (2010 3-Year Average).

## Teacher Supply

**Number of Education Degrees Conferred by Institutions Granting Predominantly 4-Year Degrees, State and National, and Percent Change by Year, 2008-2011**

	2011	% Change, 2010-2011	2010	% Change, 2009-2010	2009	% Change, 2008-2009	2008	% Change, 2008-2011
Wyoming	239	-7.4	258	2.4	252	0.4	251	-4.8
Nebraska	2,250	17.2	1,919	-10.7	2,149	2.3	2,101	7.1
South Dakota	493	-25.6	663	8.5	611	3.0	593	-16.9
Idaho	1,209	-3.4	1,252	3.9	1,205	4.8	1,150	5.1
Montana	592	12.1	528	-10.8	592	-10.8	664	-10.8
Colorado	757	5.7	716	-3.0	738	-10.7	826	-8.4
Utah	3,456	24.8	2,770	3.1	2,687	-6.0	2,860	20.8
<i>Regional Total</i>	8,996	11.0	8,106	-1.6	8,234	-2.5	8,445	6.5
<b>U.S. Total</b>	<b>180,397</b>	<b>-1.3</b>	<b>182,739</b>	<b>1.2</b>	<b>180,533</b>	<b>1.4</b>	<b>178,004</b>	<b>1.3</b>

Source: National Center for Education Statistics/Integrated Postsecondary Education System.

Note: CIP codes chosen based on crosswalk to SOC codes for kindergarten, elementary, middle school, secondary, and related special education teachers. Totals include both first- and second-major degrees conferred. Totals include graduates of institutions granting primarily baccalaureate degrees or higher only.

## What's Next

1. Continue the use of OES as the standard measure of cost pressures.
2. Analyze the occupational exit rate of non-teaching staff by occupation (see appendix Table 4-5) and post – exit earnings by age.
3. Identify the source of teaching replacements with Professional Teaching Standards Board files.
4. Track middle-aged and younger teachers who exit a school district to identify wage progression and changes in assignment status.
5. Obtain access to Retirement Board files to expand our understanding of exit rates for older district staff and comparable occupations.
6. Establish a system of dashboard indicators for district staff and comparable occupations in health care and state government, including wage progression, retention, experience in the industry, tenure with employer, and turnover.

## Future Research

1. Develop a modeling approach to retirement for teachers, non-teaching district staff, and comparable occupations in health care and among state employees (requires Retirement Board files).
2. Link Department of Health files to other administrative databases determine how births, deaths, divorces, and marriages impact career decisions.
3. Examine commuting data to determine if workers in public schools change districts in order to shorten their commute to work.
4. Change the unit of measurement from the individual to the household to explore the relationship between leavers and their partners.

## Contact Information

### Research & Planning

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***Monitoring School District Human Resource Cost Pressures  
A Report to the Wyoming Joint Education Committee***

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