

*Wyoming*

# IDENTIFYING WORKFORCE NEEDS IN WYOMING: A SYSTEMATIC APPROACH

Presented to The Wyoming Workforce Development Council

February 12, 2014

Research & Planning  
Wyoming Department of Workforce Services

<http://wyomingLMI.org>



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## Research & Planning

<http://doe.state.wy.us/LMI/oes.htm>

### **OUR ORGANIZATION:**

R&P is a separate, exclusively statistical entity.

### **WHAT WE DO:**

R&P collects, analyzes, and publishes timely and accurate labor market information (LMI) meeting established statistical standards.

### **OUR CUSTOMERS:**

LMI makes the labor market more efficient by providing the public and the public's representatives with the basis for informed decision making.



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## Agenda

- Indicators of labor supply in Wyoming
- Indicators of labor demand in Wyoming
- Labor market interventions & program evaluation
- Questions

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## Wyoming Workforce Development Council: Mission and Goals

- “Encourage development of a robust diversified economy *by identifying and responding to the workforce needs of existing and emerging businesses and industries*”

\* Source: Governor's Executive Order 2001-9

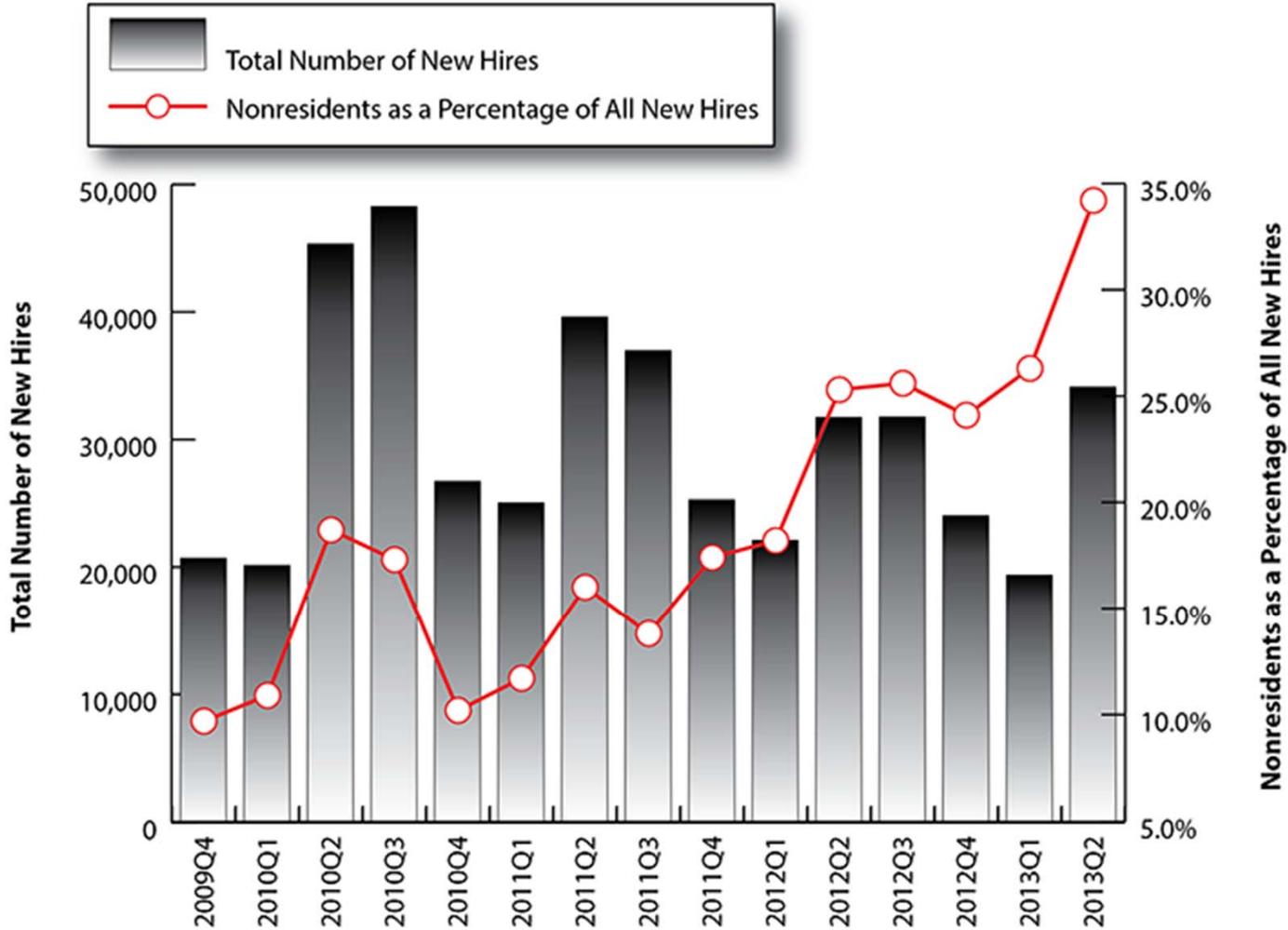
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# Supply



# Nonresidents: The Disposable Workforce

Total Number of New Hires and Nonresidents as a Percentage of All New Hires in Wyoming, 2009Q4-2013Q2



# Potential Training Opportunities

Top 10 Occupations for Nonresident New Hires Requiring More than a High School Diploma, 2011-12

Rank	SOC Code	Occupation	Education	Total			Wages	Turnover
				N	N	Row %	Average Hourly Wage	% Employed 1 Quarter After Hire
1	47-2073	Operating Engineers and Other Construction Equipment ...	Post Secondary	3,614	705	19.5	\$18.00	69.0%
2	51-4121	Welders, Cutters, Solderers, and Brazers	Post Secondary	2,499	531	21.3	\$18.00	73.3%
3	47-2111	Electricians	Post Secondary	2,211	235	10.6	\$24.00	65.8%
4	11-1021	General and Operations Managers	Associates	1,354	177	13.1	\$31.25	93.7%
5	49-9071	Maintenance and Repair Workers, General	Post Secondary	1,590	165	10.4	\$13.50	83.2%
6	31-1014	Nursing Assistants	Post Secondary	1,958	135	6.9	\$12.00	87.3%
7	11-9021	Construction Managers	Bachelors	306	132	43.1	\$43.26	86.1%
8	17-3031	Surveying and Mapping Technicians	Associates	300	113	37.7	\$16.00	69.7%
9	49-9041	Industrial Machinery Mechanics	Post Secondary	859	111	13.0	\$20.00	90.4%
10	53-7021	Crane and Tower Operators	Post Secondary	379	108	28.4	\$22.72	82.8%
<b>Subtotal, All Occupations Requiring More than a High School Diploma</b>				<b>40,488</b>	<b>5,023</b>	<b>12.4%</b>		
<b>Total, All Occupations</b>				<b>200,555</b>	<b>26,917</b>	<b>13.4%</b>	<b>\$14.50</b>	<b>76.4%</b>

At least 1 in 5 new hires for this occupation was a nonresident.

## Local Area Unemployment Statistics (LAUS)

<http://doe.state.wy.us/LMI/laus.htm>

- Estimates the unemployment rate and a count of the labor force – employed and unemployed – in an area.
- LAUS is a count of persons, not jobs
- Based on where people live
- Answers:
  - ✓ How is my local economy doing?

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# Labor Market Information

www.wyominglmi.gov

Wyoming Labor Market Information

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- Section 309 of the Workforce Investment Act
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- Wage Records Research
- Wyoming Labor Force Trends

### Information for Job

"Labor Market Information (LMI) 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.

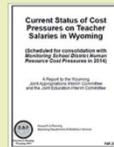
2013 TEACHER COST PRESSURES

### Executive Summary

- [PDF](#)

### Publication

#### Current Status of Cost Pressures on Teacher Salaries in Wyoming



Published October 2013.

- [PDF](#)

New *Treves*

### November 2013

- What Do Wyoming Employers Want? Evidence from the New Hires Survey

### NEW!

Labor Market Information  
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- Dynamic data
- Industries
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# Local Area Unemployment Statistics

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## Local Area Unemployment Statistics (LAUS)

STATE

- [Monthly Estimates of Civilian Labor Force, Employment and Unemployment for Wyoming, Metropolitan Statistical Areas, and 23 counties](#)
- [Latest estimates of Civilian Labor Force and Unemployment for Wyoming \(News Release\)](#)
- [Map: Wyoming's 23 Counties and 3 Largest Cities](#)

NATIONAL

- [U.S. Bureau of Labor Statistics' LAUS website](#)
- [U.S. Bureau of Labor Statistics Glossary of Terms](#)

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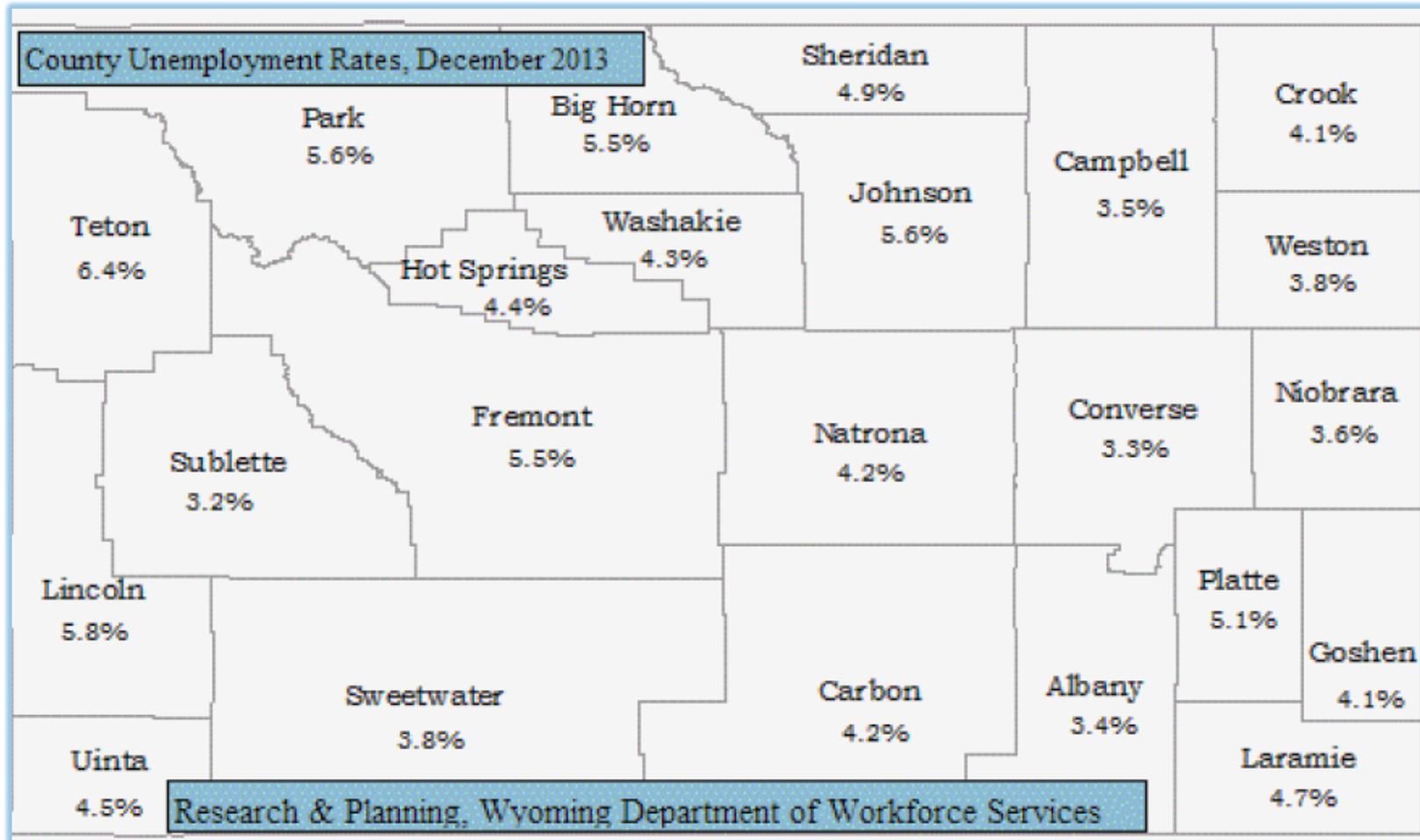
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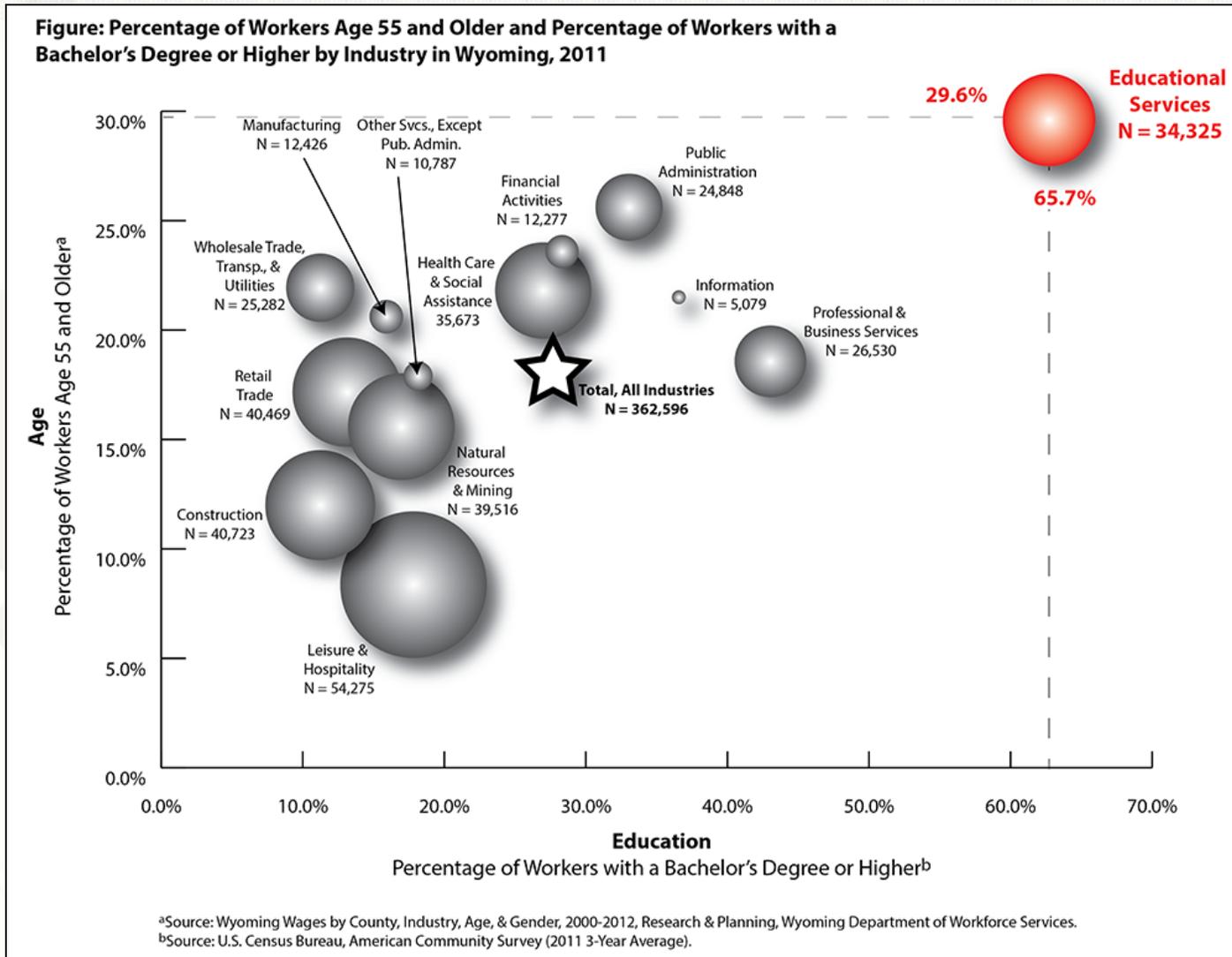


# Local Area Unemployment Statistics (LAUS)

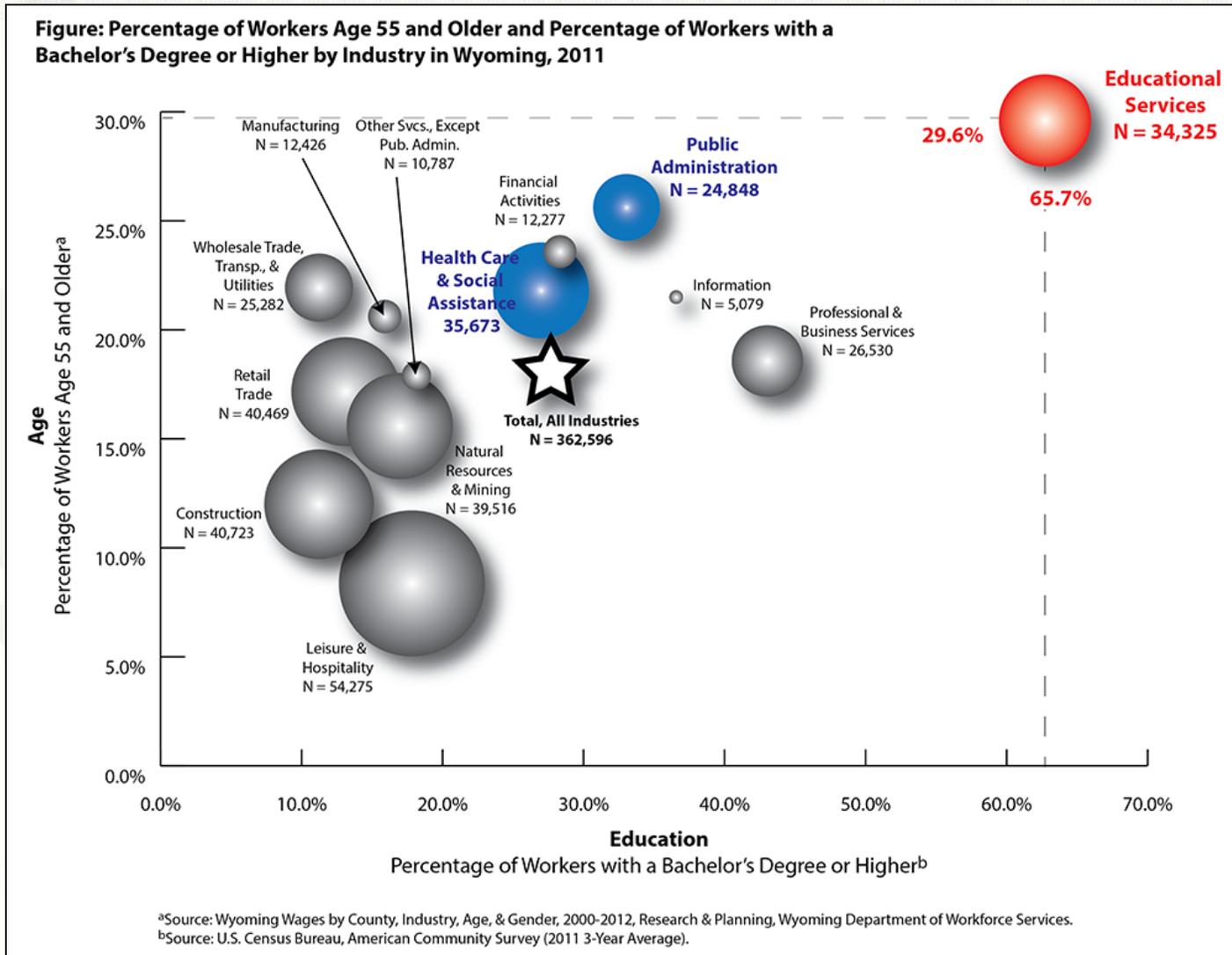
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# Demographics and Compensation Analysis



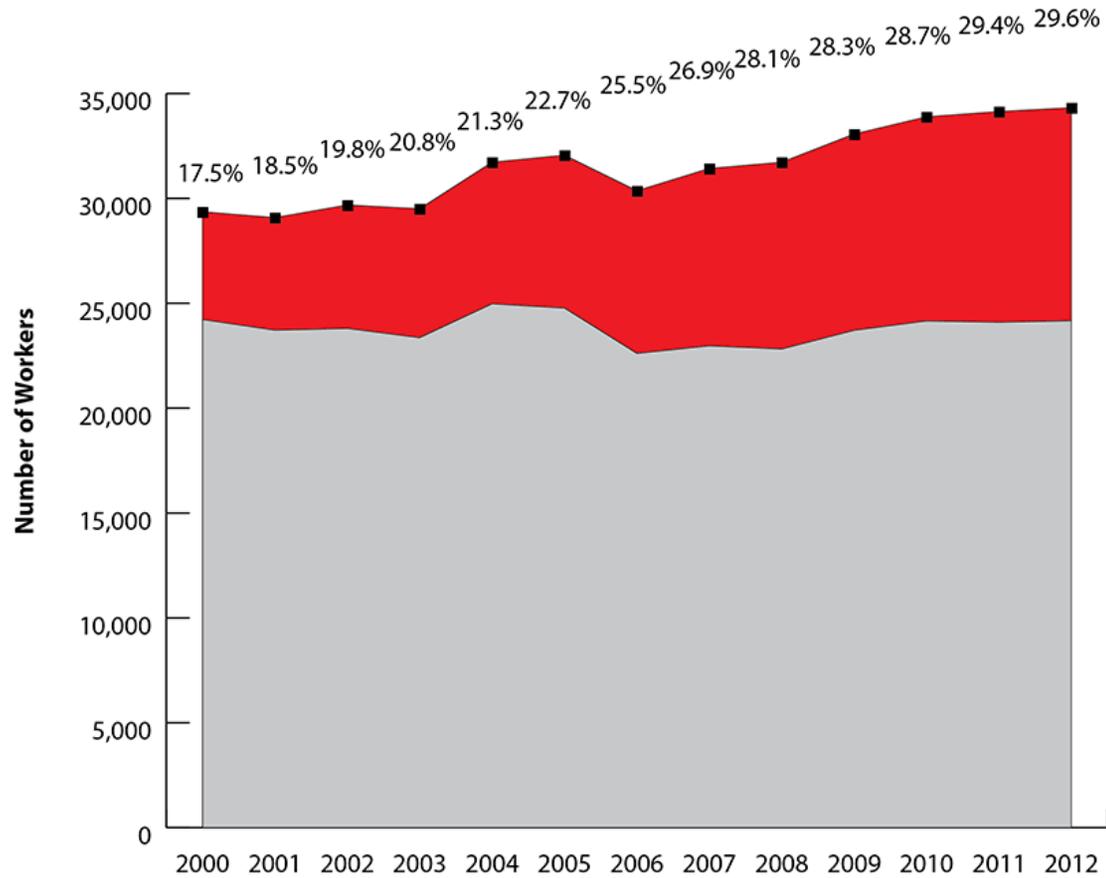
# Demographics and Compensation Analysis



# Demographics and Compensation Analysis

## Did Wyoming Create a Temporary Incentive For Older Teachers to Work Longer?

Total Number of Persons Working at Any Time in Educational Services in Wyoming and Percentage of Those Ages 55 and Older, 2000-2012

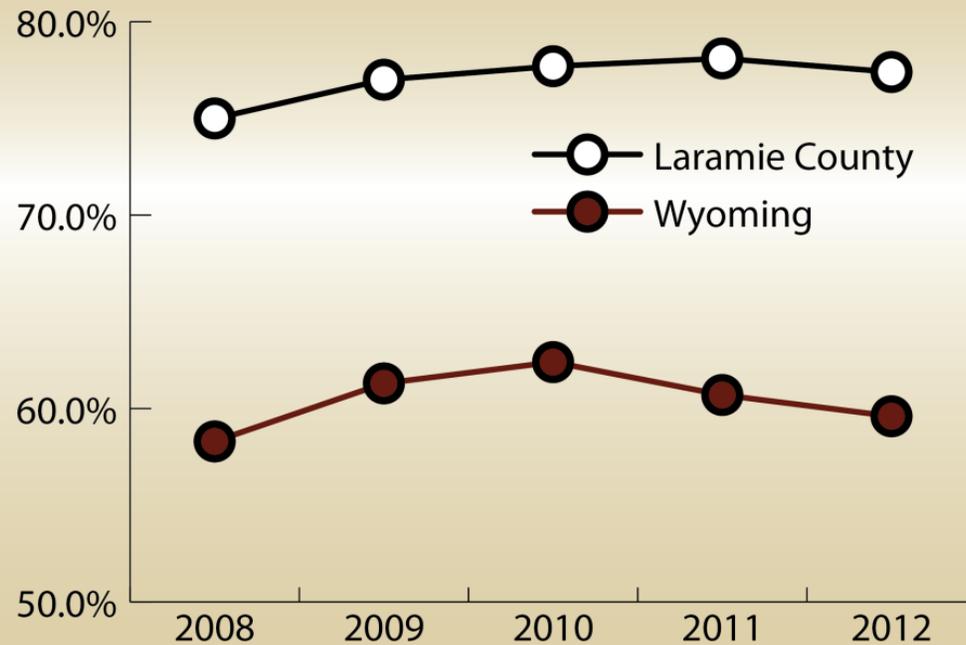


Source: Earnings in Wyoming by Industry, Age, & Gender, 2000-2012.  
Research & Planning, Wyoming Department of Workforce Services.

# Wyoming Wages by County, Industry, Age, & Gender, 1992-2012

[http://doe.state.wy.us/LMI/earnings\\_tables/2013/index.htm](http://doe.state.wy.us/LMI/earnings_tables/2013/index.htm)

**Figure: Gender Wage Gap for Laramie County and Wyoming, 2008-2012**  
Average Annual Wage for Females as a Percentage of Average Annual Wages for Males



In 2012, the gender wage gap in Laramie County (77.4%) was much narrower than the statewide average (59.6%).

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# Occupational Employment Statistics (OES) Wage and Staffing Employer Survey

<http://doe.state.wy.us/LMI/oes.htm>

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### Occupations, Earnings, and Wages

OES

#### Occupational Employment Statistics (OES) in Wyoming

**NEW: Statewide, Regional, County, and MSA Data** (estimates for Wyoming wages for May 2011 updated using September 2012 Employment Cost Index) See [note about wage updating](#) used to calculate estimates.

See a [related article](#) in the June 2012 issue of *Wyoming Labor Force Trends*

#### Wyoming Wage Survey

[Wages by Occupation-State/National Estimates](#) (U.S. Bureau of Labor Statistics website)

Occupational staffing levels and wage rates for other states and the nation can be found [HERE](#).

DEMOGRAPHICS

#### Earnings in Wyoming by County, Industry, Age and Gender, 2000-2012

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# Occupational Employment Statistics (OES)

<http://doe.state.wy.us/LMI/oes.htm>

## Total all industries Wyoming Statewide

### Construction and Extraction Occupations

Occupation	Occ. code	Est. empl.	Mean wage	10th pct	25th pct	Median wage	75th pct	90th pct
<b>CONSTRUCTION AND EXTRACTION OCCUPATIONS</b>	47-0000	33,210	46,767	28,064	34,644	43,950	56,579	70,212
			22.49	13.49	16.65	21.13	27.20	33.76
First-Line Supervisors/Managers of Construction Trades and Extraction Workers	47-1011	3,220	65,724	41,246	48,837	61,493	77,238	101,255
			31.59	19.83	23.48	29.56	37.13	48.68
Brickmasons and Blockmasons	47-2021	220	48,820	30,494	40,996	50,735	57,631	62,469
			23.47	14.66	19.71	24.40	27.71	30.03
Carpenters	47-2031	2,530	41,566	25,613	33,044	38,578	49,297	60,468
			19.99	12.31	15.89	18.54	23.71	29.07
Carpet Installers	47-2041	50	37,661	22,613	26,317	31,242	50,438	61,690
			18.10	10.87	12.66	15.02	24.24	29.66

Data that would identify an individual or employer do not appear in these tables

Doesn't mean there aren't carpet installers in Laramie County; just means we can't publish the data due to confidentiality reasons

## Total all industries Laramie County, Wyoming

### Construction and Extraction Occupations

Occupation	Occ. code	Est. empl.	Mean wage	10th pct	25th pct	Median wage	75th pct	90th pct
<b>CONSTRUCTION AND EXTRACTION OCCUPATIONS</b>	47-0000	2,600	42,982	24,400	30,285	38,533	52,220	69,478
			20.67	11.73	14.56	18.52	25.11	33.40
First-Line Supervisors/Managers of Construction Trades and Extraction Workers	47-1011	320	59,523	37,090	44,583	56,932	70,168	84,700
			28.62	17.83	21.44	27.38	33.74	40.72
Brickmasons and Blockmasons	47-2021	30	48,567	39,635	42,940	48,650	55,469	59,385
			23.35	19.06	20.65	23.39	26.66	28.55
Carpenters	47-2031	320	43,564	24,295	33,769	40,718	52,077	67,805
			20.94	11.68	16.23	19.58	25.04	32.60
Cement Masons and Concrete Finishers	47-2051	100	33,071	21,606	29,275	33,759	37,323	43,501
			15.90	10.39	14.08	16.23	17.94	20.91



# Benefits in Wyoming

<http://doe.state.wy.us/LMI/benefits.htm>

Annual benefits publication

Since 1999

Health care, retirement, paid holidays, paid sick leave, etc.

By industry, firm size, etc.

Estimated Number of Jobs and Number of Jobs Offered Benefits by Industry in Wyoming, 2011

	Natural Resources & Mining	Construction	Manufacturing	Trade, Transportation, & Utilities	Information	Financial Activities	Professional & Business Services	Education & Health Services	Leisure & Hospitality	Other Services	State & Local Government	All Industries
<b>Estimated Number of Jobs</b>	27,213	21,032	9,822	49,928	3,818	10,510	17,316	59,785	32,548	7,708	23,576	263,254
<b>Benefit Type</b>	<b>Number of Jobs Offered Benefits</b>											
Child Care	1,681	490	344	35	18	15	320	8,889	5,936	200	4,404	22,331
Dental Plan	22,892	9,230	6,898	23,550	2,074	6,595	6,699	41,024	5,432	2,702	18,754	145,849
Dependent Health Insurance	23,835	9,991	7,508	26,441	2,099	6,543	7,649	40,047	5,564	3,052	18,738	151,468
Educational/Tuition Assistance	20,517	5,546	6,445	16,296	539	4,722	4,863	33,036	4,495	1,009	13,348	110,816
Flexible Spending Account	19,389	3,576	5,320	12,442	820	5,107	4,274	38,792	5,560	1,610	13,248	110,139
Health Insurance	24,231	11,176	7,940	28,400	2,198	7,037	8,693	42,290	5,877	3,398	18,823	160,064
Hiring Bonus	17,916	1,681	1,121	4,399	50	2,422	479	9,763	1,920	215	15	39,982
Life Insurance	23,078	8,894	7,488	22,751	1,580	6,217	6,649	39,258	4,783	2,734	18,803	142,234
Long-Term Disability	20,260	3,704	5,980	12,071	1,049	5,505	3,738	29,302	1,862	1,310	11,216	95,996
Operate in Shifts	19,864	603	6,664	14,362	263	223	987	21,721	7,976	324	15,640	88,627
Shift Differentials	17,961	126	4,759	7,887	18	163	378	16,097	2,515	144	12,925	62,971
Paid Holidays	24,197	12,299	8,790	30,960	2,379	8,100	10,538	43,020	4,850	3,817	19,995	168,945
Paid Personal Leave	10,889	5,785	1,762	14,330	1,283	4,225	3,648	26,989	2,519	1,516	5,252	78,198
Paid Sick Leave	15,845	3,510	4,871	13,508	1,039	4,895	5,231	38,968	6,519	1,172	14,812	110,370
Paid Vacation	22,704	9,708	8,363	26,886	1,358	6,613	8,351	37,956	12,929	4,230	14,917	154,015
Retirement Plan	23,441	12,027	8,077	25,936	2,236	7,471	9,681	45,355	9,211	2,943	15,327	161,705
Short-Term Disability	19,523	4,738	5,736	10,854	1,156	4,646	3,593	21,186	2,372	1,694	6,345	81,842
Vision Plan	21,527	5,659	4,777	15,285	1,690	4,905	4,597	35,239	4,115	1,918	16,811	116,524

This table shows all benefits offered in each industry.

# Industry and Occupational Projections

<http://doe.state.wy.us/LMI/projections.htm>

### Industries and Occupations

Occupation: SOC\* 13-2011  
Accountants and Auditors  
Industry: NAICS<sup>b</sup> 481  
Air Transportation

Occupation: SOC 13-2011  
Accountants and Auditors  
Industry: NAICS 9992  
State Govt.,  
Excluding  
Education  
& Hospitals



Occupation: SOC 13-2011  
Accountants and Auditors  
Industry: NAICS 624  
Social Assistance

Occupation: SOC 13-2011  
Accountants and Auditors  
Industry: NAICS 541  
Sporting Goods,  
Hobby, Book,  
& Music Stores

Occupation: SOC 13-2011  
Accountants and Auditors  
Industry: NAICS 211  
Oil & Gas Extraction

The North American Industry Classification System codes describe industries; it is not a system for classifying occupations.

**Example 1.** An IT specialist who works for a police agency would be counted under police agencies, not IT companies.

**Example 2.** If a report shows 100,000 workers in the Electrical Contracting industry, this does not mean that there are 100,000 people who work as electrical contractors. These firms may employ accountants, receptionists, and other workers who would be included in the 100,000 total.

\*Standard Occupational Classification.  
<sup>b</sup>North American Industry Classification System.  
 Source: Bureau of Labor Statistics.

## Industry (NAICS):

The type of firm for which a person works

## Occupation (SOC):

A specific task or set of tasks performed by an individual

Note: Projections based on historical trend line. Cannot account for certain factors.



# Projections

<http://doe.state.wy.us/LMI/projections.htm>

## Cheyenne MSA Industry Occupational Projections 2012 to 2022.

SOC Code	SOC Title	Base Employment 2012	Projected Employment 2014	Net Change 2012 to 2014	Percent Change 2012 to 2014	Projected Employment 2022	Net Change 2012 to 2022	Percent Change 2012 to 2022	Annual Openings Net Change	Annual Openings Replacement Need
21-1012	Educational, Vocational, and School Counselors	188	198	10	5.3	237	49	26.3	5	20
Average Hourly Wage: \$30.85		Typical Education: Masters Degree								
Average Annual Wage: \$64,161		Under Educated: 2.7			Typically Educated: 96.8		Over Educated: 0.47			
21-1021	Child, Family, and School Social Workers	121	128	7	5.7	156	35	28.6	3	13
Average Hourly Wage: \$22.35		Typical Education: Bachelors Degree								
Average Annual Wage: \$46,485		Under Educated: 0.1			Typically Educated: 63.4		Over Educated: 36.41			

## New Hires Survey

<http://doe.state.wy.us/LMI/newhires.htm>

- **What it is:** R&P survey, started in 2009
- Mailed quarterly to Wyoming employers
- Most recent data is through 2012Q3
- Focuses on the job, not the person
- New hire is someone who has not worked for that employer before

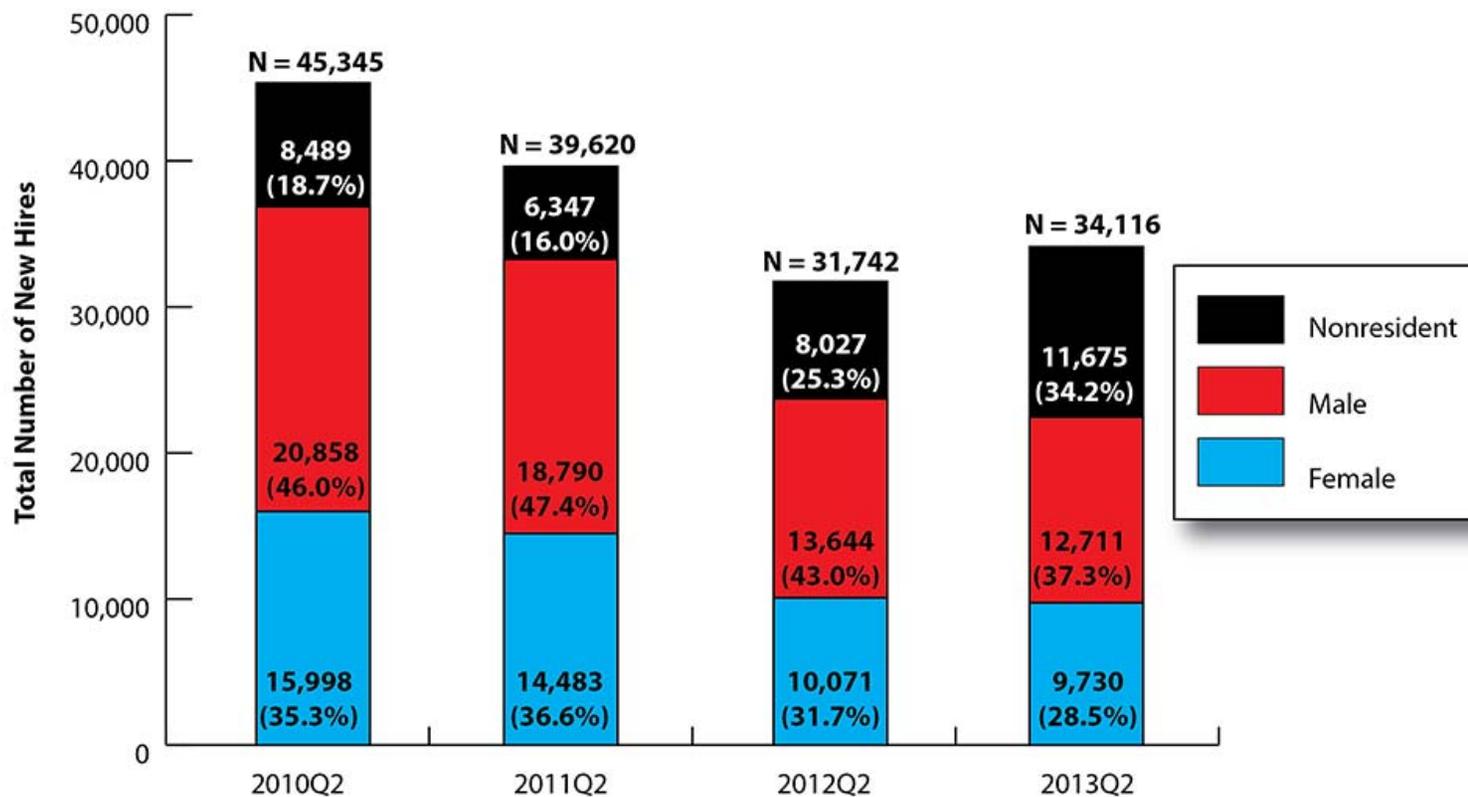
### **Answers:**

- ✓ **What skills do employers value?**
- ✓ **What are employers paying new hires?**

# New Hires Survey

<http://doe.state.wy.us/LMI/newhires.htm>

**Total Number of New Hires in Wyoming by Gender, 2010Q2-2013Q2**



Source: Research & Planning New Hires Survey.

# New Hires

Top 5 Occupations for Wyoming New Hires by Educational Requirement, 2011-12

SOC Code	Occupation	N	%
<b>High School Diploma</b>			
41-2011	Cashiers	9,937	
53-3032	Truck Drivers, Heavy and Tractor-Trailer	8,810	
41-2031	Retail Salespersons	7,232	
37-2012	Maids and Housekeeping Cleaners	6,668	
35-3021	Combined Food Preparation and Serving Workers	6,347	
		<b>21,531</b>	<b>10.7%</b>
<b>Post Secondary</b>			
47-2073	Operating Engineers and Other Construction Equipme	3,614	
51-4121	Welders, Cutters, Solderers, and Brazers	2,499	
47-2111	Electricians	2,211	
31-1014	Nursing Assistants	1,958	
49-9071	Maintenance and Repair Workers, Gen	1,590	
		<b>5,670</b>	<b>2.8%</b>
<b>Associate's Degree</b>			
11-1021	General and Operations Managers	1,354	
29-1141	Registered Nurses	1,321	
19-4041	Geological and Petroleum Technicians	569	
17-3031	Surveying and Mapping Technicians	300	
29-2021	Dental Hygienists	235	
		<b>11,414</b>	<b>5.7%</b>
<b>Bachelor's Degree</b>			
25-3098	Substitute Teachers	914	
39-9032	Recreation Workers	688	
21-1093	Social and Human Service Assistants	527	
27-2022	Coaches and Scouts	500	
25-2031	Secondary School Teachers, Except Special and Voca	372	
		<b>2,080</b>	<b>1.0%</b>
<b>All Other</b>		<b>2,080</b>	<b>1.0%</b>
<b>Total</b>		<b>200,555</b>	<b>100.0%</b>

Wyoming



# Interventions

## Labor Market Interventions

- **Wyoming Workforce Development Council**
  - Workforce Development Training Fund
  - WIA Oversight and Compliance
  - Promote Industry and Educational Partnerships
- **Wyoming Department of Workforce Services**
  - WIA Education and Training Programs
  - Vocational Rehabilitation
  - Employer Information Seminars
  - R&P Labor Market Information
- **Early Childhood Education**
  - Early Intervention
  - Special Education
  - WY Quality Counts

- Answers the questions
  - What are the outcomes of workforce development programs?
  - Which programs are effective?
  - Are programs having intended effect long term?

## Program Evaluation

<http://doe.state.wy.us/Imi/outcomes.htm>

- Job Attainment and Wages of Wyoming Vocational Rehabilitation Participants
- Wyoming Community College Graduates' Labor Market Outcomes
- Tracking University of Wyoming Graduates into the Workforce
- Measuring the Impact of Wyoming's Workforce Development Training Fund

## Presidential Memo: Job-driven Training for Workers

- “Make available to workers, job seekers, and employers the best information regarding job demand, skills matching, supports, and education, training, and career options...”

\* source: [Whitehouse.gov](http://Whitehouse.gov), Presidential Memorandum, Jan. 30, 2014

## How R&P's Data Can Help WWDC Identify Workforce Needs

- ✓ What Wyoming employers need – skill sets, education, and training
  - *New Hires and Projections*
  
- ✓ Wages and benefits typically offered
  - *OES and Benefits Survey*
  
- ✓ Turnover
  - *New Hires*

## How R&P's Data Can Help WWDC Respond to Workforce Needs

- ✓ Summary statistics of skill sets at the occupational level can inform training programs and curriculum development
- ✓ Turnover trends can help employers anticipate future need (teachers)
- ✓ Benefits surveys can help Wyoming employers prepare competitive compensation packages to retain talent

## Current Research Areas

- Teacher compensation analysis
- Wyoming Data Quality Initiative
- Numbers of Youth Working in Wyoming
- R&P Quarterly News Releases

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Questions?

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