

WORKFORCE OPPORTUNITIES IN WYOMING: DEVELOPING A DATA-DRIVEN APPROACH TO PUBLIC SECTOR INVESTMENT AND EVALUATION, PART TWO

Presented to the Wyoming Workforce Development Council
Cheyenne, Wyo.
January 14, 2015
by Michele Holmes and Tom Gallagher

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.



Research & Planning
Wyoming DWS

Agenda

- ▶ High-demand, High-growth occupations
- ▶ Labor Shortages
- ▶ Supporting Documentation – neither random nor comprehensive
- ▶ Evaluation

WWDC Request: Compile a List of High-Demand, High-Growth Occupations

Wyoming Occupational Projections and Average Hourly Wage for Occupations with and Average Hourly Wage >= \$14.00 and Projected Employment Growth >= 200 Jobs Over the Next Decade

WWDC Criteria	SOC Code	SOC Title	Employment 2012	Employment 2022	Net Change	Percent Change	Hourly Wage	Typical Education
Yes	47-2031	Carpenters	3,908	4,706	798	20.4	\$19.66	H.S. Diploma or equiv.
Yes	49-9041	Industrial Machinery Mechanics	2,407	3,115	708	29.4	\$27.21	Post-Secondary Cert.
No	29-1141	Registered Nurses	4,738	5,619	881	18.6	\$29.56	Associate's Degree
No	53-3032	Heavy and Tractor-Trailer Truck Drivers	7,081	7,901	820	11.6	\$22.28	H.S. Diploma or equiv.
No	11-1021	General and Operations Managers	5,352	6,153	801	15	\$45.94	Associate's Degree
No	43-3031	Bookkeeping, Accounting, and Auditing Clerks	4,718	5,396	678	14.4	\$17.52	H.S. Diploma or equiv.
No	47-2061	Construction Laborers	3,907	4,567	660	16.9	\$15.61	H.S. Diploma or equiv.
No	43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	4,787	5,412	625	13.1	\$16.08	H.S. Diploma or equiv.
No	47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	3,743	4,323	580	15.5	\$31.68	H.S. Diploma or equiv.
No	49-9071	Maintenance and Repair Workers, General	3,966	4,442	476	12	\$20.03	H.S. Diploma or equiv.
No	43-9061	Office Clerks, General	5,630	6,087	457	8.1	\$14.61	H.S. Diploma or equiv.
No	47-2111	Electricians	2,751	3,171	420	15.3	\$25.82	Post-Secondary Cert.
No	25-2021	Elementary School Teachers, Except Special Education	2,649	3,031	382	14.4	\$27.63	B.A. or M.A. Degree
No	41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	2,115	2,494	379	17.9	\$28.18	B.A. Degree
No	47-2073	Operating Engineers and Other Construction Equipment Operators	5,543	5,917	374	6.7	\$23.66	H.S. Diploma or equiv.
No	43-6013	Medical Secretaries	1,169	1,534	365	31.2	\$15.06	H.S. Diploma or Some college
No	53-7062	Laborers and Freight, Stock, and Material Movers, Hand	2,269	2,625	356	15.7	\$15.15	H.S. Diploma or equiv.
No	47-5013	Service Unit Operators, Oil, Gas, and Mining	3,130	3,472	342	10.9	\$24.04	H.S. Diploma or equiv.
No	43-4051	Customer Service Representatives	1,919	2,260	341	17.8	\$14.14	H.S. Diploma or equiv.
No	51-4121	Welders, Cutters, Solderers, and Brazers	2,437	2,732	295	12.1	\$23.59	Post-Secondary Cert. or A.A.
No	13-2011	Accountants and Auditors	1,887	2,161	274	14.5	\$29.77	B.A. Degree
No	43-1011	First-Line Supervisors of Office and Administrative Support Workers	1,928	2,170	242	12.6	\$22.37	On-job training or A.A.
No	41-1011	First-Line Supervisors of Retail Sales Workers	3,735	3,973	238	6.4	\$19.02	On-job training or A.A.
No	53-3033	Light Truck or Delivery Services Drivers	1,475	1,692	217	14.7	\$17.35	H.S. Diploma or equiv.
No	47-2141	Painters, Construction and Maintenance	1,092	1,304	212	19.4	\$17.62	H.S. Diploma or equiv.
No	47-2152	Plumbers, Pipefitters, and Steamfitters	1,085	1,294	209	19.3	\$20.35	H.S. Diploma or equiv.
No	47-5071	Roustabouts, Oil and Gas	2,044	2,253	209	10.2	\$19.42	H.S. Diploma or less

Source: Wyoming's Occupational Projections 2012 to 2022 and Wyoming's Occupational Employment Statistics 2013. Wyoming Department of Workforce Services, Research & Planning.
T Glover, WYDWS Research and Planning. 08/01/2014

Definition of “some college,” or, What is the Investment?

According to O*NET, "Some college" means a "Post-Secondary Certificate awarded for training completed after high school (for example, in Personnel Services, Engineering-related Technologies, Vocational and Home Economics, Construction Trades, Mechanics and Repairers, and Production Trades) *and* Some College Courses."

Source: Occupational Information Network (O*NET), 2014

Regional Projections in Selected States 2012 – 2022: If We Train Them, Will They Come – Will They Stay?

Code	Occupation	Wyoming			Montana			Colorado			North Dakota			US		
		N Ch	% Ch	Hr Wage	N Ch	% Ch	Hr Wage	N Ch	% Ch	Hr Wage	N Ch	% Ch	Hr Wage	N Ch	% Ch	Hr Wage
291141	Registered Nurses	881	18.6	\$29.56	1,786	20.4	\$29.18	11,070	26.2	\$33.16	1,635	21.1	\$26.94	526,900	19.4	\$33.13
472031	Carpenters	798	20.4	\$19.66	967	26.3	\$18.79	5,020	28.8	\$19.59	829	19.9	\$18.28	218,200	24.2	\$21.62
472061	Construction Laborers	660	16.9	\$15.61	994	24.9	\$16.17	6,380	32.1	\$15.12	919	17.4	\$17.79	259,900	24.3	\$16.84
414012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	379	17.9	\$28.18	945	21.9	\$27.23	5,470	16.1	\$34.51	708	14.5	\$28.32	132,100	8.9	\$31.09
472073	Operating Engineers and Other Construction Equipment Operators	374	6.8	\$23.66	709	21.5	\$22.04	1,650	23.7	\$21.08	228	7.4	\$23.41	66,400	18.9	\$22.63
475071	Roustabouts, Oil and Gas	209	10.2	\$19.42	259	36.8	\$22.39	1,940	70.2	\$19.04	-327	-7.7	\$21.29	11,700	19.2	\$17.39
499041	Industrial Machinery Mechanics	708	29.4	\$27.21	195	26.7	\$23.93	1,760	36	\$24.27	420	2.6	\$26.27	60,300	18.9	\$23.83
436013	Medical Secretaries	365	31.2	\$15.06	694	32.2	\$14.80	2,850	37	\$16.36	170	30.4	\$14.58	189,300	36	\$15.93

L.A. Hammer, R&P DWS, 8/20/14, WY LMI Projections, MT LMI Projections, ND LMI Projections, ProjectionCentral, BLS OES Data

Is there a Labor Shortage?

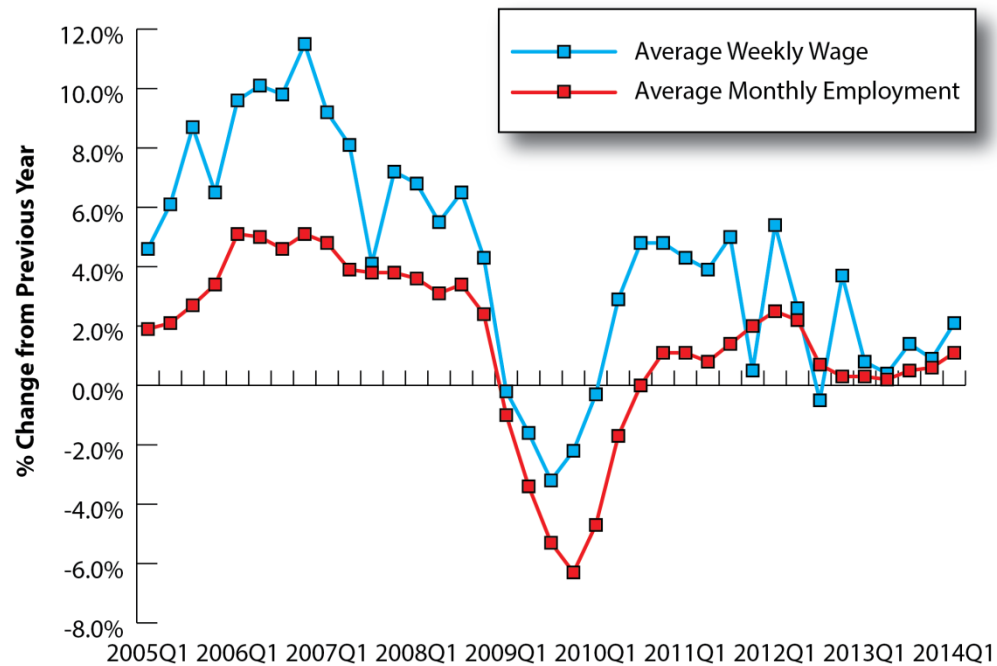
Consequences of a Labor Shortage

“We could do another third of the work we’re doing but can’t because of lack of people.”

~ Steve Loftin, 71 Construction, as reported in Casper–Star Tribune 10/20/2014

Evidence of a Labor Shortage – Wyoming Wages and Employment 2005 – 2014

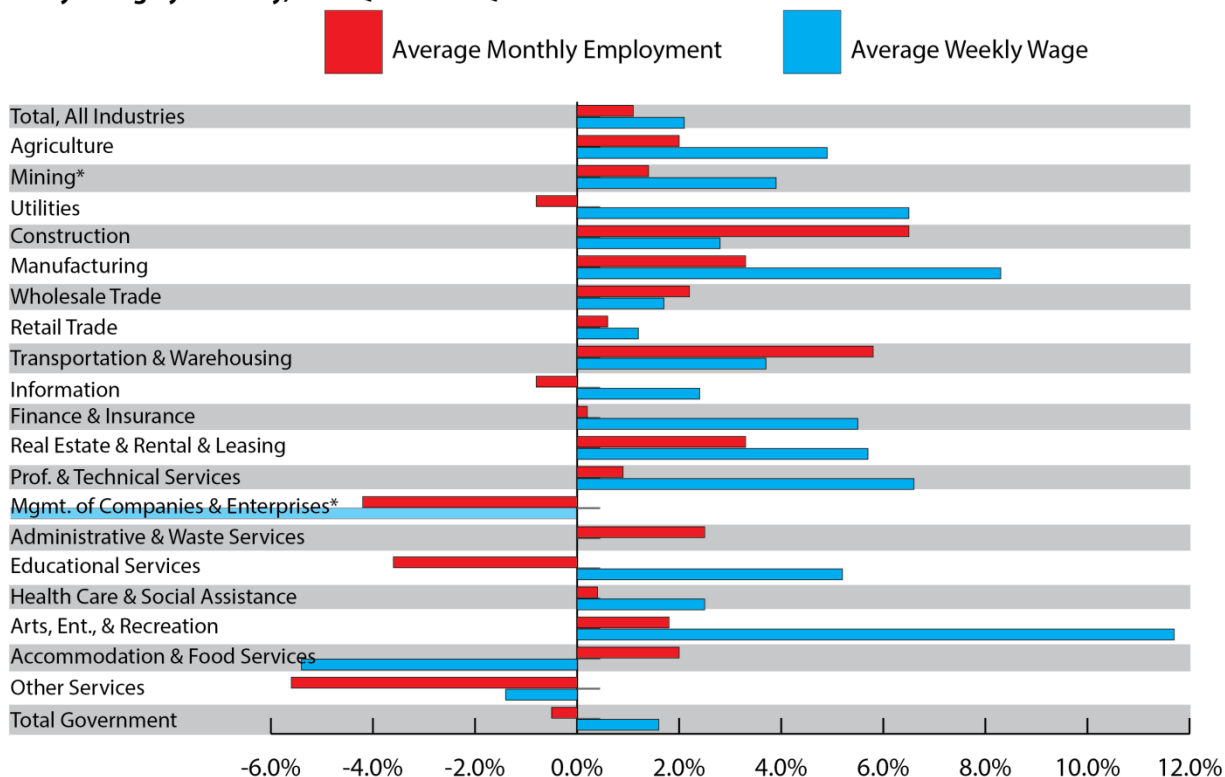
Figure: Wyoming Over-the-Year Percentage Change in Average Monthly Employment and Average Weekly Wage, 2005Q1 to 2014Q1



Source: Quarterly Census of Employment and Wages.
Prepared by N. Brennan and M. Moore, Research & Planning, WY DWS.

Evidence of a Labor Shortage – Wages and Employment for Wyoming by Industry 2013 –2014

Figure: Percentage Change in Average Monthly Employment and Average Weekly Wage in Wyoming by Industry, 2013Q1 to 2014Q1

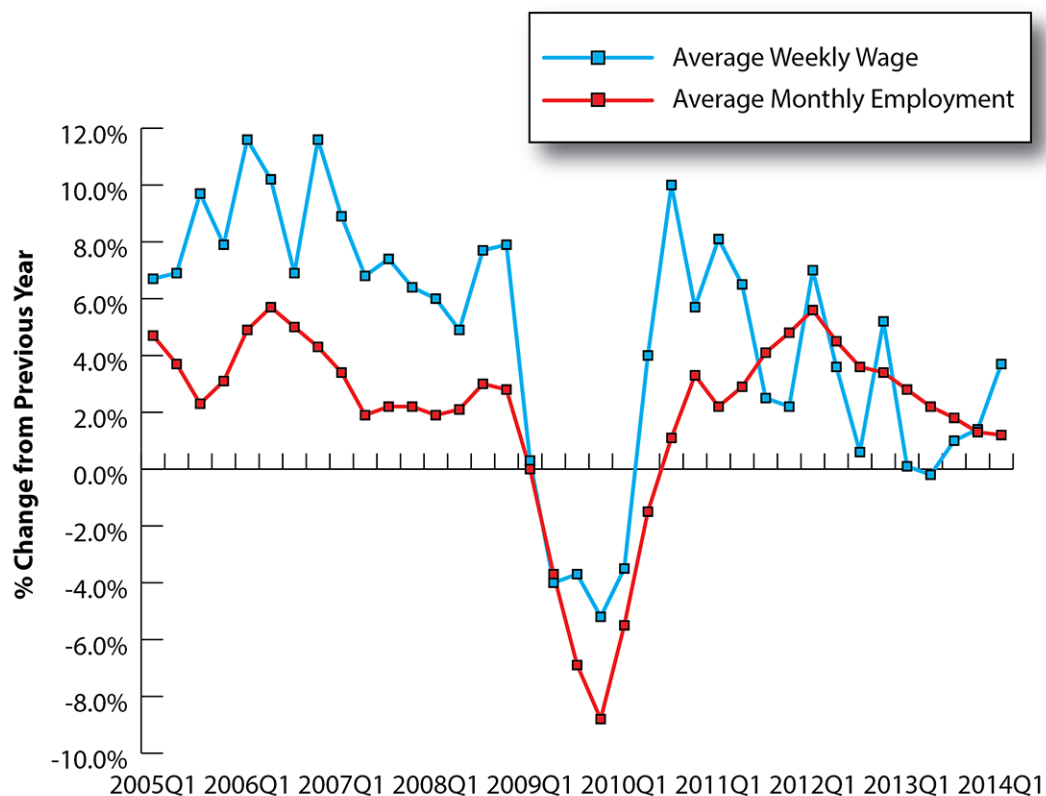


Source: Quarterly Census of Employment and Wages

*Change in average weekly wage for management of companies and enterprises was -39.6%.

Evidence of a Labor Shortage – Natrona County Wages and Employment 2005 – 2014

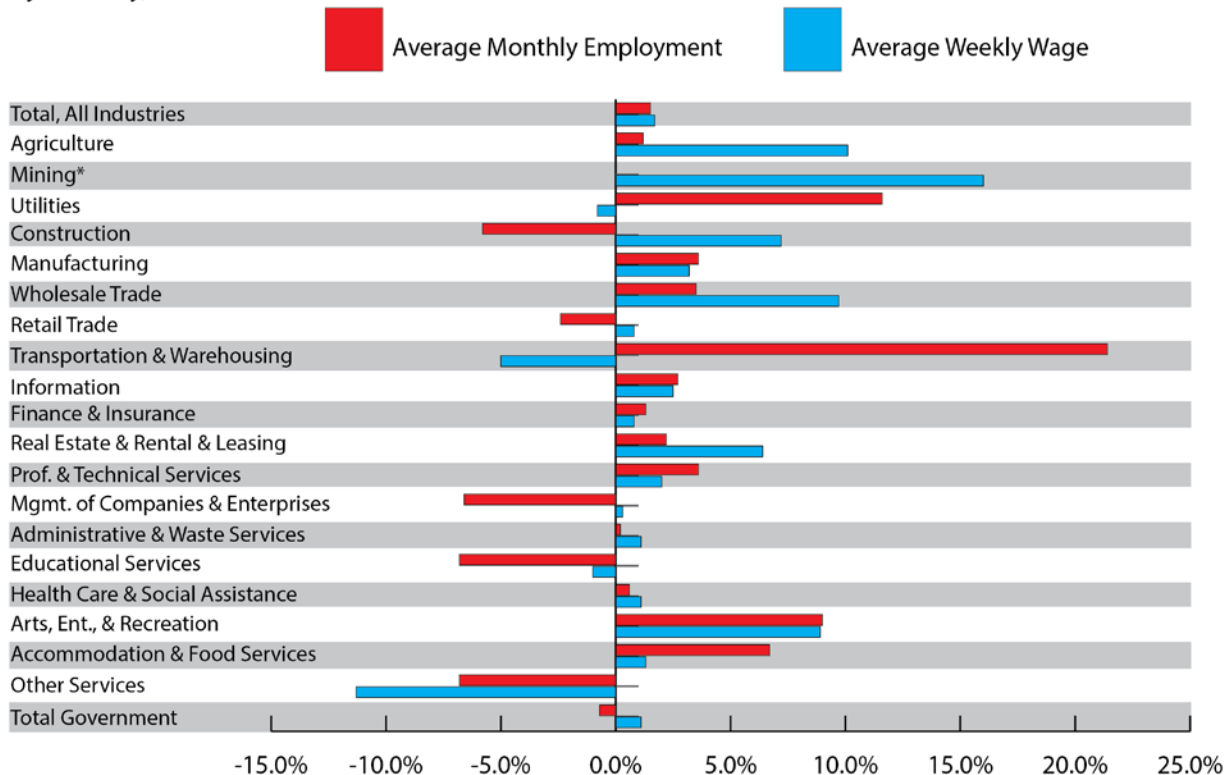
Figure 3: Over-the-Year Percentage Change in Average Monthly Employment and Average Weekly Wage in Natrona County, 2005Q1 to 2014Q1



Source: Quarterly Census of Employment and Wages.

Evidence of a Labor Shortage – Wages and Employment for Natrona County by Industry 2013 – 2014

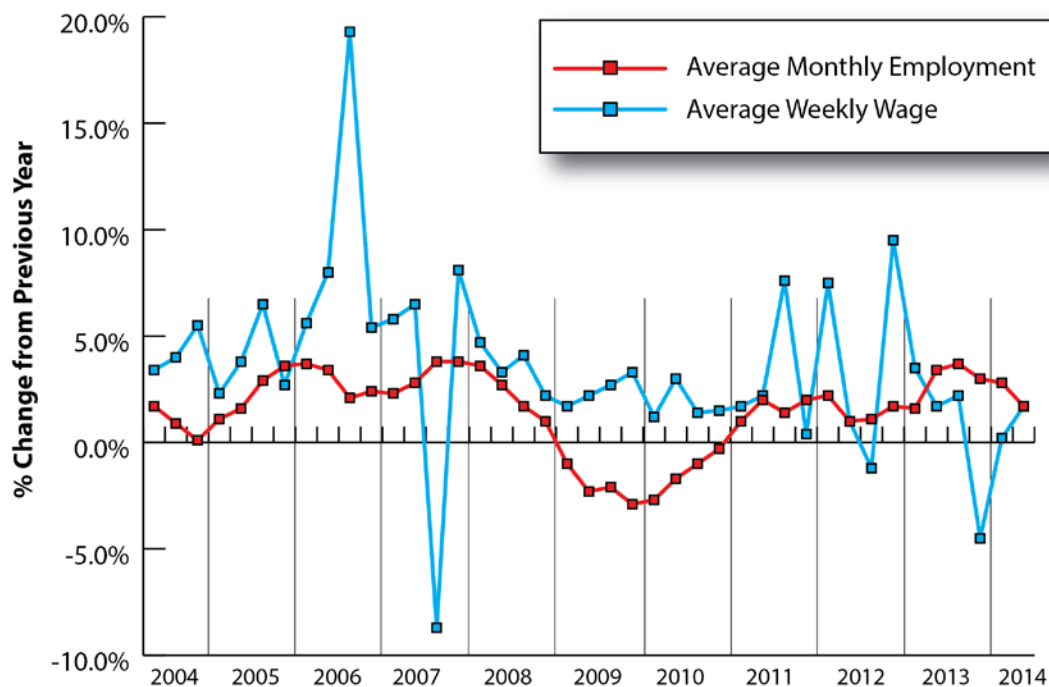
Figure: Natrona County Percentage Change in Average Monthly Employment and Average Weekly Wage by Industry, 2013Q1 to 2014Q1



Source: Quarterly Census of Employment and Wages.
 Prepared by N. Brennan and M. Moore, Research & Planning, WY DWS, 1/12/15.

Evidence of a Labor Shortage – Laramie County Wages and Employment 2005 – 2014

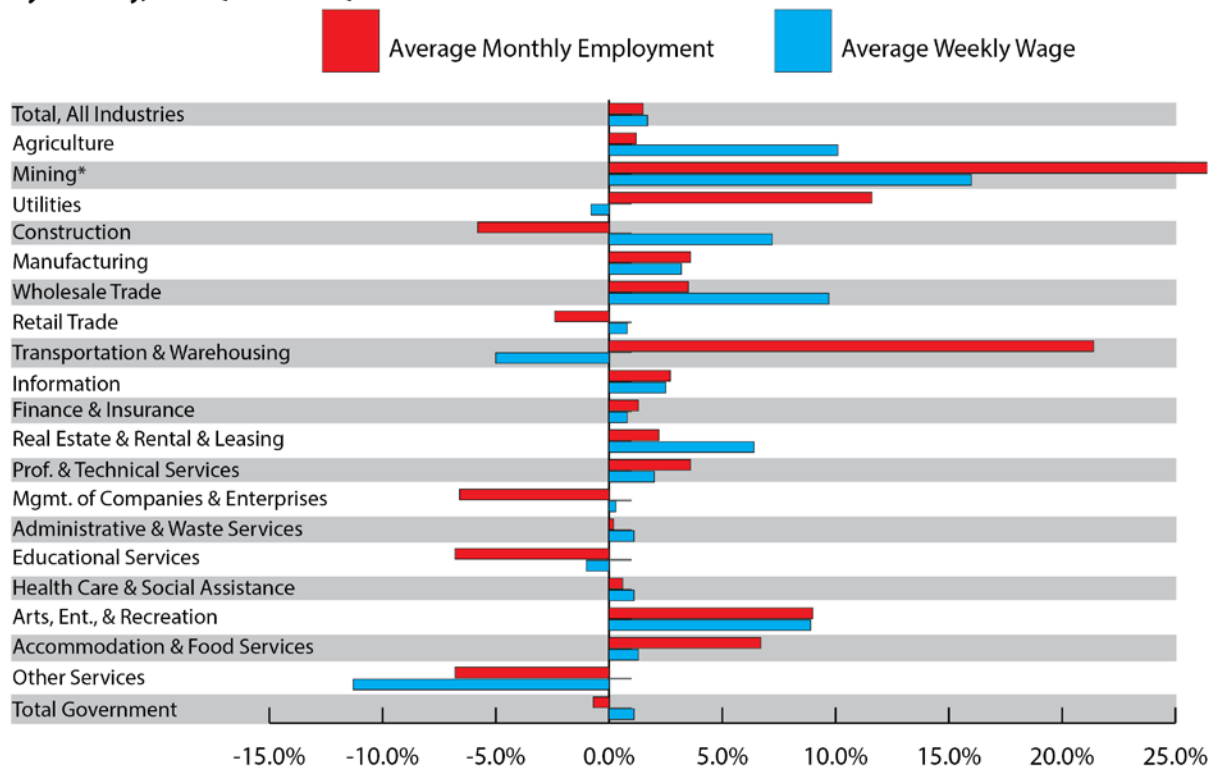
Figure: Laramie County Over-the-Year Percentage Change in Average Monthly Employment and Average Weekly Wage, 2004Q2 to 2014Q2



Source: Quarterly Census of Employment and Wages.
Prepared by N. Brennan and M. Moore, Research & Planning, WYDWS, 1/12/15.

Evidence of a Labor Shortage – Wages and Employment for Laramie County by Industry 2013 –2014

Figure: Laramie County Percentage Change in Average Monthly Employment and Average Weekly Wage by Industry, 2013Q2 to 2014Q2



Source: Quarterly Census of Employment and Wages.

* Mining employment change = 63.9%.

Prepared by N. Brennan and M. Moore, Research & Planning, WY DWS, 1/12/15.

The Rundown: Labor Shortage Framework

- ▶ Greatest Population Changes from 2009–2013:
 - Wyoming: 7.1%
 - North Dakota: 11.8%
- ▶ States with a Positive Wage Change:
 - Wyoming: 1.1%
 - North Dakota: 12.3%
- ▶ Smallest UI covered Employment Growth:
 - Wyoming: 1.8%

Wyoming has a Labor Shortage

- ▶ Possible Causes:
 - Relatively slow labor force growth
 - Fewer people entering the workforce than leaving
 - Changes in immigration policy
 - Changes in technology
- ▶ Growth of Population ages 20–59:
 - Wyoming: 1.5%
 - Nation: 2.0%
- ▶ Growth of Population 19 and under:
 - Wyoming: 1.2%
 - Nation: -1.2%

*Excerpt from “Occupational Shortages in the Construction Industry” by K. Faler, 2014, DWS, R&P

Occupational Shortages as of May 2013

Wyoming	Region	Nation
<ul style="list-style-type: none"> • Crane and Tower Operators • Drywall and Ceiling Tile Installers • Electrical Power-Line Installers and Repairers • Electricians • Excavating and Loading Machine and Dragline Operators • Heating, Air Conditioning, and Refrigeration Mechanics • Insulation Workers, Mechanical • Operating Engineers and Other Construction Equipment Operators • Telecommunication Line Installers and Repairers 	<ul style="list-style-type: none"> • Crane and Tower Operators • Electrical Power-Line Installers and Repairers • Excavating and Loading Machine and Dragline Operators • Operating Engineers and Other Construction Equipment Operators • Security and Fire Alarm Systems Installers <div> <p>Figure: Map of Wyoming and the Region</p> <p>The figure is a map showing Wyoming at the center, surrounded by its neighboring states: Montana to the north, North Dakota to the northeast, South Dakota to the east, Nebraska to the southeast, Colorado to the south, Utah to the southwest, and Idaho to the west.</p> </div>	<ul style="list-style-type: none"> • Crane and Tower Operators • Electrical Power-Line Installers and Repairers • Elevators Installers and Repairers • Insulation Workers, Mechanical • Paving, Surfacing, and Tamping Equipment Operators • Reinforcing Iron and Rebar Workers • Security and Fire Alarm Systems Installers <p>*Excerpt from “Occupational Shortages in the Construction Industry” by K. Faler, 2014, DWD, R&P</p>

A Word about North Dakota: Regional Demand

- ▶ Greatest Change in Regional Population
- ▶ Greatest Change in UI Covered Employment
- ▶ Greatest Change in Inflation Adjusted Wages
- ▶ Third Highest Median Hourly Wages in Region
- ▶ Occupational employment in North Dakota grows faster even when wages are higher in Wyoming.

*Excerpt from “Occupational Shortages in the Construction Industry” by K. Faler, 2014, DWS, R&P

Supporting Documents

Our Understanding of a Labor Shortage is Indirect

- ▶ Therefore we must look for additional evidence regarding a labor shortage
- ▶ There are other supporting documents that may indicate a labor shortage: proportion of non-resident workers from our New Hires Survey, changes in Unemployment Insurance claims, and changes in real wages.
- ▶ Our office was awarded Workforce Data Quality Initiative Grant (WDQI) last year
- ▶ WDQI will allow us to report on the labor supply coming out of high schools and colleges with this grant (how many students graduate from CC with a welding certificate)
- ▶ WDQI analysis will offer a much clearer picture of what the education system is producing in terms of local labor supply

Supporting Document: New Hires Survey

**11-9021
Construction
Managers**

42.4% of all new hires were nonresidents

Average hourly wage: \$43.26

100.0% of employers were satisfied with new hires' skills

Retention Rate:
88.5% of these
new hires were
still working for
that employer
one quarter later

Job Characteristics		
Typical Education ^a		Bachelors
N		346
Nonresidents	Nonresident N	147
	Nonresident %	42.4
	Average Hourly Wage (\$)	43.26
% Paid Piece Rate		0.0
% Offered Selected Benefits	Health Insurance	73.1
	Retirement	73.1
	Paid Leave	74.4
Skills Selected as "Important" (%)	Service Orientation	87.3
	Critical Thinking	88.5
	Reading Comprehension	88.5
	Technology Design	65.6
	Operation and Control	100.0
Employers' Satisfaction with New Hires' Skills	Satisfied	100.0
	Not Satisfied	0.0
	Neither	0.0
	Other	0.0
Average Weekly Hours	20 or Less	0.0
	21-35	0.0
	36 or More	100.0
Gender	Female	6.8
	Male	50.7
	Nonresident	42.4
Age Group	19 and Younger	0.0
	20-24	0.0
	25-34	6.8
	35-44	22.9
	45-54	25.1
	55-64	9.5
	65 and Older	0.0
Unknown (Nonresidents)	35.6	
Retention	% Still Working 1 Quarter After Hire	88.5

Table 2: Selected New Hires Occupations Requiring More Than a High School Diploma With an Average Hourly Wage of At Least \$15 in Which Nonresidents Accounted for At Least 20% of All New Hires in Wyoming, 2011Q4-2013Q3

Job Characteristics	Total All Occupations	Occupation and SOC Code		
		00-0000	47-2073	11-9021
		Operating Engineers & Other Construction ...	Construction Managers	Surveying & Mapping Technicians
Typical Education ^a	N/A	Post-Secondary Certificate	Bachelors	Associates
N	218,308	3,316	346	309
Nonresident N	32,843	646	147	90
Nonresident %	15.0	20.0	42.4	29.1
Average Hourly Wage (\$)	11.00	19.81	43.26	16.00

Supporting Document: Biased, Unemployment Insurance Claims by Industry, 2011 – 2014

Count and Percent Change in Initial Claimants: March 2011 to March 2014

	March-11	March-12	% Change March 2011 to March 2012	March-13	% Change March 2012 to March 2013	March-14	% Change March 2013 to March 2014
Total	3250	2725	-16.2%	2785	2.2%	2401	-13.8%
Nat. Resources & Mining	275	232	-15.6%	281	21.1%	215	-23.5%
Construction	788	560	-28.9%	598	6.8%	525	-12.2%
Manufacturing	150	174	16.0%	161	-7.5%	152	-5.6%
Trade, Transportation, & Utilities	397	368	-7.3%	353	-4.1%	287	-18.7%
Information	15	8	-46.7%	9	12.5%	10	11.1%
Financial Activities	37	50	35.1%	54	8.0%	57	5.6%
Prof. & Bus. Services	182	160	-12.1%	157	-1.9%	140	-10.8%
Ed. & Health Services	163	143	-12.3%	142	-0.7%	101	-28.9%
Leisure & Hospitality	578	496	-14.2%	468	-5.6%	429	-8.3%
Government	223	175	-21.5%	201	14.9%	172	-14.4%
Other	442	359	-18.8%	376	4.7%	329	-12.5%

* Data can be found on R&P LMI website: <http://doe.state.wy.us/LMI/ui.htm>

Other Supporting Documents: Job Orders by Occupation for Natrona County, 2013 – 2014

W@W 2013 & 2014 Job Order Report (Natrona County)

Occupation Group	Total Job Orders (2013)	Total Job Orders (2014)	Change		Total Job Openings (2013)	Total Job Openings (2014)	Change	
			N	%			N	%
All Occupations	1076	1757	681	63.3%	1925	3534	1609	83.6%
Architecture and Engineering Occupations (17)	19	32	13	68.4%	19	42	23	121.1%
Arts, Design, Entertainment, Sports, and Media Occupations (27)	17	11	-6	-35.3%	20	92	72	360.0%
Building & Grounds Cleaning & Maintenance Occupations (37)	70	80	10	14.3%	105	136	31	29.5%
Business and Financial Operations Occupations (13)	11	23	12	109.1%	13	26	13	100.0%
Community and Social Services Occupations (21)	13	19	6	46.2%	13	28	15	115.4%
Computer and Mathematical Occupations (15)	3	10	7	233.3%	3	10	7	233.3%
Construction and Extraction Occupations (47)	127	289	162	127.6%	287	902	615	214.3%
Education, Training, and Library Occupations (25)	4	18	14	350.0%	5	24	19	380.0%
Farming, Fishing, and Forestry Occupations (45)	2	2	0	0.0%	2	2	0	0.0%
Food Preparation and Serving Related Occupations (35)	65	92	27	41.5%	155	180	25	16.1%
Healthcare Practitioners and Technical Occupations (29)	33	71	38	115.2%	37	94	57	154.1%
Healthcare Support Occupations (31)	21	31	10	47.6%	41	90	49	119.5%
Installation, Maintenance, and Repair Occupations (49)	102	155	53	52.0%	122	201	79	64.8%
Legal Occupations (23)	2	2	0	0.0%	4	2	-2	-50.0%
Life, Physical, and Social Science Occupations (19)	5	13	8	160.0%	5	13	8	160.0%
Management Occupations (11)	35	52	17	48.6%	44	53	9	20.5%
Military Specific Occupations (55)	1	1	0	0.0%	1	1	0	0.0%
Office and Administrative Support Occupations (43)	131	221	90	68.7%	147	277	130	88.4%
Personal Care and Service Occupations (39)	21	28	7	33.3%	26	49	23	88.5%
Production Occupations (51)	138	150	12	8.7%	302	308	6	2.0%
Protective Service Occupations (33)	7	18	11	157.1%	9	26	17	188.9%
Sales and Related Occupations (41)	79	153	74	93.7%	153	292	139	90.8%
Transportation and Material Moving Occupations (53)	170	286	116	68.2%	412	686	274	66.5%

W@W Job order report 13&14, R&P DWS, 10/22/14

Evaluation

Wages and Projected Wages at Placement

New Hires (Welders SOC 51-4121) By Industry For Two Years (2011Q4 - 2013Q3)							
	Total	Mining	Construction	Manufacturing	Administrative, Support and Waste Management	Other Services (except Public Administration)	
Education	Post Secondary	Post Secondary	Post Secondary	Post Secondary	Post Secondary	Post Secondary	Post Secondary
Number	2621	444	635	666	220	243	
Average Hourly Wage for New Hire	\$18.00	\$20.00	\$22.00	\$16.10	\$14.50	\$19.00	
Average Hourly Wage for Industry (May 2013)*	\$23.59	\$26.68	25.25	20.79	NA	22.68	
% Paid Piece Rate	2.4	0.0	6.3	0.0	10.0	0.0	
% Offered Benefits	Health Insurance	46.4	62.5	37.5	61.8	20.0	85.7
	Retirement	23.7	29.2	18.8	36.8	10.0	23.8
	Paid Leave	31.4	41.7	12.5	54.4	10.0	61.9
Skills Selected as "Important" (%)	Service Orientation	60.7	70.8	68.8	32.4	60.0	42.9
	Critical Thinking	92.1	91.7	100.0	77.9	90.0	100.0
	Reading Comprehension	53.7	62.5	43.8	67.6	80.0	76.2
	Technology Design	65.2	66.7	62.5	55.9	40.0	71.4
Employers' Satisfaction with New Hires' Skills	Operation and Control	90.6	87.5	93.8	82.4	90.0	95.2
	Satisfied	54.9	87.5	50.0	52.9	100.0	47.6
	Not Satisfied	4.3	0.0	0.0	11.8	0.0	14.3
	Neither	26.6	4.2	18.8	14.7	0.0	38.1
Average Weekly Hours	Other	14.2	8.3	31.3	20.6	0.0	0.0
	20 or Less	1.4	0.0	0.0	3.4	0.0	5.6
	21-35	7.5	0.0	0.0	8.5	50.0	0.0
Gender	36 or More	91.2	100.0	100.0	88.1	50.0	94.4
	Female	15.4	16.7	0.0	10.3	10.0	23.8
	Male	67.5	75.0	68.8	79.4	50.0	71.4
Age Group	Nonresident	17.1	8.3	31.3	10.3	40.0	4.8
	19 and Younger	10.2	12.5	0.0	8.8	0.0	4.8
	20-24	15.2	25.0	12.5	16.2	10.0	9.5
	25-34	20.9	25.0	12.5	25.0	20.0	42.9
	35-44	20.6	20.8	37.5	14.7	10.0	19.0
	45-54	10.9	8.3	6.3	16.2	10.0	14.3
	55-64	4.8	0.0	0.0	7.4	10.0	4.8
	65 and Older	0.4	0.0	0.0	1.5	0.0	0.0
Unknown	17.1	8.3	31.3	10.3	40.0	4.8	
Turnover	% Still Working 1 Quarter After Hire	70.6	66.7	37.5	82.4	90.0	66.7

*NA = Data not Available
*N/D = Not disclosable due to confidentiality

LAH, R&P DWS, 10/22/2014, WY LMI New Hires Survey Results

Wages and Projected Wages at Placement

New Hires (Maintenance and Repair Workers, General SOC 49-9071) By Industry For Two Years (2011Q4 - 2013Q3)

New Hires (Maintenance and Repair Workers, General SOC 49-9071) By Industry For Two Years (2011Q4 - 2013Q3)

		New Hires (Maintenance and Repair Workers, General SOC 49-9071) By Industry For Two Years (2011Q4 - 2013Q3)										New Hires (Maintenance and Repair Workers, General SOC 49-9071) By Industry For Two Years (2011Q4 - 2013Q3)										
		Total	Ag. Forestry, Fishing & Hunting	Mining	Utilities	Construction	Manufacturing	Wholesale Trade	Retail Trade	Transportation & Warehousing	Information	Finance and Insurance	Real Estate, Rental, and Leasing	Professional, Scientific, & Technical Services	Management of Companies and Enterprises	Administrative, Support and Waste Management	Educational Services	Health Care and Social Assistance	Arts, Entertainment, & Recreation	Accommodation & Food Services	Other Services (except Public Administration)	Public Administration
		Post Secondary	Post Secondary	Post Secondary	Post Secondary	Post Secondary	Post Secondary	Post Secondary	Post Secondary	Post Secondary	NA	Post Secondary	Post Secondary	Post Secondary	Post Secondary	Post Secondary	Post Secondary	NA	Post Secondary	Post Secondary	Post Secondary	Post Secondary
Number		2075	N/D	56	61	79	98	N/D	N/D	N/D	NA	N/D	390	N/D	N/D	N/D	NA	NA	N/D	768	58	367
Average Hourly Wage for New Hire		\$12.69	NA	\$15.00	\$24.42	\$13.25	\$17.00	\$14.50	\$16.19	\$13.00	NA	\$18.50	\$12.00	NA	\$12.50	\$10.00	\$17.13	NA	\$12.75	\$11.00	\$16.54	\$12.00
Average Hourly Wage for Industry (May 2013)		\$20.03	NA	\$32.56	\$35.45	\$13.40	\$31.69	\$16.41	\$16.29	\$21.42	NA	NA	\$13.79	\$19.93	NA	\$17.25	\$19.52	NA	\$17.11	\$15.52	\$15.43	\$19.52
% Paid Piece Rate		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	0.0	0.0	0.0	0.0
% Offered Benefits	Health Insurance	50.1	100.0	33.3	100.0	50.0	50.0	50.0	100.0	100.0	NA	100.0	49.1	0.0	0.0	0.0	100.0	NA	0.0	54.5	60.0	32.6
	Retirement	45.2	100.0	33.3	100.0	50.0	50.0	0.0	0.0	100.0	NA	100.0	36.4	0.0	0.0	0.0	100.0	NA	0.0	54.5	60.0	32.6
	Paid Leave	48.4	100.0	33.3	100.0	50.0	50.0	50.0	0.0	100.0	NA	100.0	50.9	0.0	0.0	0.0	100.0	NA	0.0	54.5	60.0	32.6
Skills Selected as "Important" (%)	Service Orientation	63.7	100.0	33.3	27.8	50.0	60.0	0.0	100.0	100.0	NA	100.0	65.5	100.0	50.0	100.0	0.0	NA	75.0	63.6	80.0	69.6
	Critical Thinking	80.8	100.0	33.3	77.8	100.0	100.0	50.0	100.0	100.0	NA	100.0	67.3	100.0	50.0	100.0	0.0	NA	25.0	90.9	100.0	76.1
	Reading Comprehension	57.4	0.0	33.3	100.0	100.0	100.0	0.0	100.0	100.0	NA	100.0	60.0	100.0	50.0	100.0	0.0	NA	25.0	36.4	60.0	73.9
	Technology Design	52.9	0.0	0.0	77.8	50.0	50.0	50.0	100.0	100.0	NA	0.0	36.4	0.0	50.0	0.0	0.0	NA	25.0	63.6	40.0	63.0
Employers' Satisfaction with New Hires' Skills	Operation and Control	74.4	100.0	33.3	94.4	0.0	30.0	50.0	100.0	100.0	NA	100.0	60.0	0.0	50.0	100.0	50.0	NA	25.0	90.9	60.0	93.5
	Satisfied	63.5	100.0	100.0	100.0	50.0	80.0	100.0	100.0	100.0	NA	0.0	65.5	100.0	100.0	100.0	50.0	NA	50.0	54.5	80.0	54.3
	Not Satisfied	5.2	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	NA	0.0	9.1	0.0	0.0	0.0	0.0	NA	25.0	0.0	0.0	6.5
	Neither	23.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	0.0	5.5	0.0	0.0	0.0	50.0	NA	25.0	45.5	20.0	21.7
Average Weekly Hours	Other	8.1	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	NA	100.0	20.0	0.0	0.0	0.0	0.0	NA	0.0	0.0	0.0	17.4
	20 or Less	13.7	0.0	0.0	11.8	0.0	30.0	0.0	0.0	0.0	NA	0.0	21.3	0.0	50.0	0.0	0.0	NA	100.0	0.0	25.0	30.0
	21-35	24.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	0.0	14.9	0.0	0.0	0.0	0.0	NA	0.0	55.6	0.0	12.5
	36 or More	61.6	0.0	100.0	88.2	100.0	70.0	100.0	100.0	100.0	NA	100.0	63.8	0.0	50.0	100.0	100.0	NA	0.0	44.4	75.0	57.5
Gender	Female	20.1	50.0	33.3	16.7	0.0	0.0	0.0	0.0	0.0	NA	0.0	23.6	0.0	0.0	0.0	0.0	NA	25.0	27.3	0.0	19.6
	Male	69.0	50.0	66.7	83.3	100.0	90.0	100.0	100.0	100.0	NA	100.0	67.3	50.0	100.0	100.0	100.0	NA	25.0	54.5	100.0	76.1
	Nonresident	10.9	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	NA	0.0	9.1	50.0	0.0	0.0	0.0	NA	50.0	18.2	0.0	4.3
Age Group	19 and Younger	11.0	0.0	33.3	0.0	0.0	10.0	0.0	0.0	0.0	NA	0.0	0.0	0.0	50.0	100.0	0.0	NA	0.0	9.1	0.0	28.3
	20-24	18.0	0.0	33.3	27.8	50.0	10.0	100.0	0.0	100.0	NA	0.0	18.2	0.0	0.0	0.0	0.0	NA	0.0	18.2	0.0	13.0
	25-34	22.7	50.0	33.3	44.4	0.0	20.0	0.0	100.0	0.0	NA	0.0	27.3	0.0	0.0	0.0	50.0	NA	0.0	18.2	60.0	17.4
	35-44	12.9	50.0	0.0	16.7	50.0	20.0	0.0	0.0	0.0	NA	100.0	29.1	50.0	0.0	0.0	0.0	NA	0.0	0.0	40.0	10.9
	45-54	15.2	0.0	0.0	11.1	0.0	10.0	0.0	0.0	0.0	NA	0.0	7.3	0.0	0.0	0.0	50.0	NA	0.0	27.3	0.0	13.0
	55-64	6.1	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	NA	0.0	3.6	0.0	0.0	0.0	0.0	NA	0.0	9.1	0.0	6.5
	65 and Older	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	0.0	3.6	0.0	50.0	0.0	0.0	NA	25.0	0.0	0.0	0.0
Unknown	12.8	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	NA	0.0	10.9	50.0	0.0	0.0	0.0	NA	75.0	18.2	0.0	10.9	
Turnover	% Still Working 1 Quarter After Hire	85.7	100.0	100.0	100.0	0.0	80.0	100.0	100.0	100.0	NA	100.0	83.6	100.0	50.0	100.0	100.0	NA	100.0	100.0	40.0	73.9

High Growth, High Demand

Wyoming Occupational Projections and Average Hourly Wage for Occupations with and Average Hourly Wage >= \$14.00 and Projected Employment Growth >= 200 Jobs Over the Next Decade

WWDC Criteria	SOC Code	SOC Title	Employment 2012	Employment 2022	Net Change	Percent Change	Hourly Wage	Typical Education
Yes	47-2031	Carpenters	3,908	4,706	798	20.4	\$19.66	H.S. Diploma or equiv.
Yes	49-9041	Industrial Machinery Mechanics	2,407	3,115	708	29.4	\$27.21	Post-Secondary Cert.
No	29-1141	Registered Nurses	4,738	5,619	881	18.6	\$29.56	Associate's Degree
No	53-3032	Heavy and Tractor-Trailer Truck Drivers	7,081	7,901	820	11.6	\$22.28	H.S. Diploma or equiv.
No	11-1021	General and Operations Managers	5,352	6,153	801	15	\$45.94	Associate's Degree
No	43-3031	Bookkeeping, Accounting, and Auditing Clerks	4,718	5,396	678	14.4	\$17.52	H.S. Diploma or equiv.
No	47-2061	Construction Laborers	3,907	4,567	660	16.9	\$15.61	H.S. Diploma or equiv.
No	43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	4,787	5,412	625	13.1	\$16.08	H.S. Diploma or equiv.
No	47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	3,743	4,323	580	15.5	\$31.68	H.S. Diploma or equiv.
No	49-9071	Maintenance and Repair Workers, General	3,966	4,442	476	12	\$20.03	H.S. Diploma or equiv.
No	43-9061	Office Clerks, General	5,630	6,087	457	8.1	\$14.61	H.S. Diploma or equiv.
No	47-2111	Electricians	2,751	3,171	420	15.3	\$25.82	Post-Secondary Cert.
No	25-2021	Elementary School Teachers, Except Special Education	2,649	3,031	382	14.4	\$27.63	B.A. or M.A. Degree
No	41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	2,115	2,494	379	17.9	\$28.18	B.A. Degree
No	47-2073	Operating Engineers and Other Construction Equipment Operators	5,543	5,917	374	6.7	\$23.66	H.S. Diploma or equiv.
No	43-6013	Medical Secretaries	1,169	1,534	365	31.2	\$15.06	H.S. Diploma or Some college
No	53-7062	Laborers and Freight, Stock, and Material Movers, Hand	2,269	2,625	356	15.7	\$15.15	H.S. Diploma or equiv.
No	47-5013	Service Unit Operators, Oil, Gas, and Mining	3,130	3,472	342	10.9	\$24.04	H.S. Diploma or equiv.
No	43-4051	Customer Service Representatives	1,919	2,260	341	17.8	\$14.14	H.S. Diploma or equiv.
No	51-4121	Welders, Cutters, Solderers, and Brazers	2,437	2,732	295	12.1	\$23.59	Post-Secondary Cert. or A.A.
No	13-2011	Accountants and Auditors	1,887	2,161	274	14.5	\$29.77	B.A. Degree
No	43-1011	First-Line Supervisors of Office and Administrative Support Workers	1,928	2,170	242	12.6	\$22.37	On-job training or A.A.
No	41-1011	First-Line Supervisors of Retail Sales Workers	3,735	3,973	238	6.4	\$19.02	On-job training or A.A.
No	53-3033	Light Truck or Delivery Services Drivers	1,475	1,692	217	14.7	\$17.35	H.S. Diploma or equiv.
No	47-2141	Painters, Construction and Maintenance	1,092	1,304	212	19.4	\$17.62	H.S. Diploma or equiv.
No	47-2152	Plumbers, Pipefitters, and Steamfitters	1,085	1,294	209	19.3	\$20.35	H.S. Diploma or equiv.
No	47-5071	Roustabouts, Oil and Gas	2,044	2,253	209	10.2	\$19.42	H.S. Diploma or less

Source: Wyoming's Occupational Projections 2012 to 2022 and Wyoming's Occupational Employment Statistics 2013. Wyoming Department of Workforce Services, Research & Planning.
T Glover, WYDWS Research and Planning. 08/01/2014

Training Opportunities

Occupation	High Growth	Labor Shortage
Welders	YES	NO
Electricians	YES	YES
Operating Engineers and Other Construction Equipment Operators	YES	YES

Evaluation

- ▶ Workforce opportunities list endorsed September 2014
- ▶ First trainees enter program 4th Quarter 2014
- ▶ 4th Quarter 2015: did trainee get job?
- ▶ 1st Quarter 2016: where are they employed?
- ▶ *Evaluation needs to be built in up front, otherwise necessary data are missing & program evaluation is costly*

Future Research / Reporting

- ▶ Workforce Development Training Fund Evaluation
- ▶ Statewide Workforce Development Plan
- ▶ Hiring of 18 to 20 year-olds in Wyoming: Series in *Labor Force Trends*
- ▶ Hathaway Scholarship Analysis

Questions?

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