

TRENDS

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Research & Planning

TRAINING FOR WHAT? PART 5

Examining the Gender Wage Gap Among New Hires in Wyoming's Manufacturing Industry

by: Tony Glover, Workforce Information Supervisor

This is the fifth installment in a series of articles examining Wyoming's manufacturing industry. This article analyzes new hires in Wyoming's manufacturing industry and across all industries in order to determine if a wage gap existed within the same occupation for male and female new hires. Within most occupations, there was no evidence of wage disparity between male and female new hires.

Previous labor market analyses by the Research & Planning (R&P) section of the Wyoming Department of Workforce Services have shown that the gender wage gap in Wyoming is largely due to the industrial structure and distribution of occupations in the state (Jones, 2004, 2007, 2008, and Moore, 2011). Through a U.S. Department of Labor American Recovery and Reinvestment Act (ARRA) grant, R&P earlier this year took this prior research a step further by contrasting newly hired males and females with the same occupation across all industries and

specifically in manufacturing.

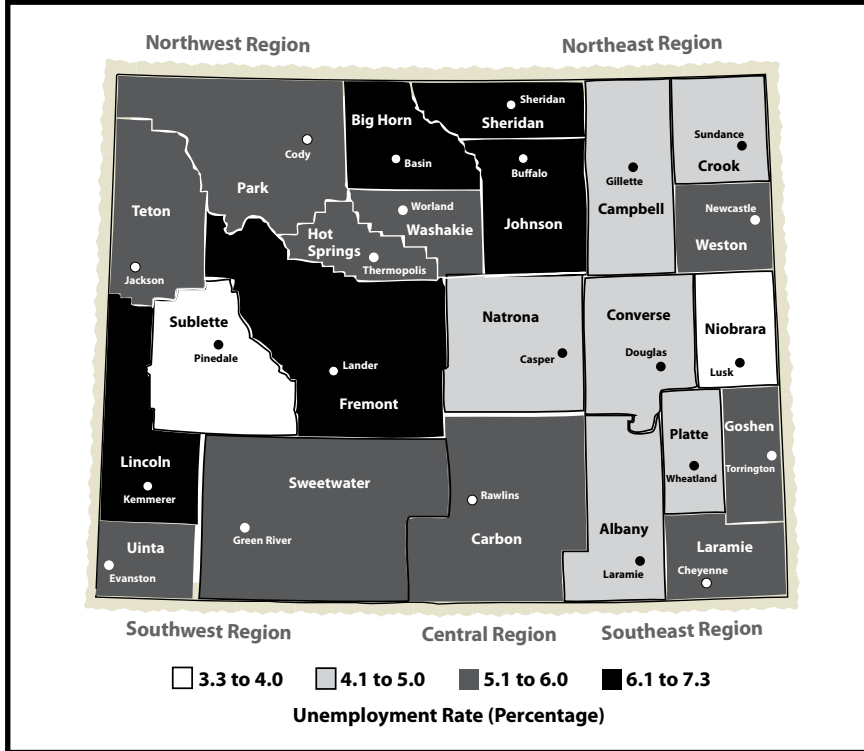
Research & Planning collected data from a random sample of 11,471 new hires from fourth quarter 2009 to third quarter 2010. These were employees who had not worked for their current employer in the previous 20 years. The data collected include occupations, wages, other benefits, skills, and employers' satisfaction with the work performed. Some new hires were excluded because they were paid a piece

(Text continued on page 3)

HIGHLIGHTS

- Excerpts from Research & Planning's Occasional Paper No. 5 — ARRA Labor Market Dynamics: An Overview of the American Recovery and Reinvestment Act of 2009 discuss how legislation is put in place in order to address new energy-efficient technologies and the effects these technologies could have on the regulatory environment. ... *page 15*
- Initial unemployment insurance claims decreased by 19.2% from year-ago levels. ... *page 30*

Unemployment Rate by Wyoming County, June 2011 (Not Seasonally Adjusted)



IN THIS ISSUE

Training for What? Part 5: Examining the Gender Wage Gap Among New Hires in Wyoming's Manufacturing Industry	1
New Wyoming Long- and Short-Term Occupational Projections by Industry Now Available	12
ARRA Dynamics in the Labor Market: Part 2	13
Change in Unemployment Rate for Wyoming and Surrounding States, June 2009 to June 2011	24
Occupation Spotlight: Truck Drivers, Light or Delivery Services	25
Wyoming Unemployment Rate Falls to 5.9% in June 2011	25
State Unemployment Rates (Seasonally Adjusted)	26
Wyoming Nonagricultural Wage and Salary Employment	27
Economic Indicators	28
Wyoming County Unemployment Rates	29
Wyoming Normalized Unemployment Insurance Statistics: Initial Claims	30
Wyoming Normalized Unemployment Insurance Statistics: Continued Claims	31

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(Text continued from page 1)

rate or commission, and an hourly wage could not be determined. Others were excluded because the employee’s gender was not known – primarily nonresidents for whom R&P did not have demographic information. This left an analysis pool of 8,745 workers (see Table 1, page 4). More information on this methodology can be found online at <http://doe.state.wy.us/LMI/0211/a2.htm>.

Data were aggregated at each industry and occupation level independently. At the finer levels of detail, which include a specific industry or occupation, analysis was restricted to cases where there were at least two males and two females. As

a result, the number of new hires for all occupations exceeds the sum of the detail rows in the table.

For each occupation, wages for males and females were compared to determine whether a statistically significant difference in wages existed. For portions of the analysis that address manufacturing occupations specifically, the number of new hires, average wages, and standard deviation of wages were suppressed to protect confidentiality of data for employers and employees. The values in the statistical test column include “F” when the females were paid significantly more than males, “M” when males were paid significantly more than females, “No” when there was no significant difference

between wages paid to females and males, and the field is left blank when no data were collected or were suppressed due to the two males/two females rule.

Across all industries and occupations, newly hired males were paid significantly more than newly hired females (see Table 1, row 1). The average hourly wage for males across all industries and occupations was \$15.21, compared to \$12.19 for females. The standard deviation in the Figure represents the distribution of wages paid for males and females. For example, while the average hourly wage for males was \$15.21, some were paid more and others were paid less.

The Figure plots the distribution of wages paid to males and females based on the average wage and the standard deviation of the wage of each group, and demonstrates that there is overlap in the wage distributions of males and females. The statistical test applied to this analysis is referred to as a Student’s t-test. It is designed to test the hypothesis that there is no difference between the earnings of males and females based not only on

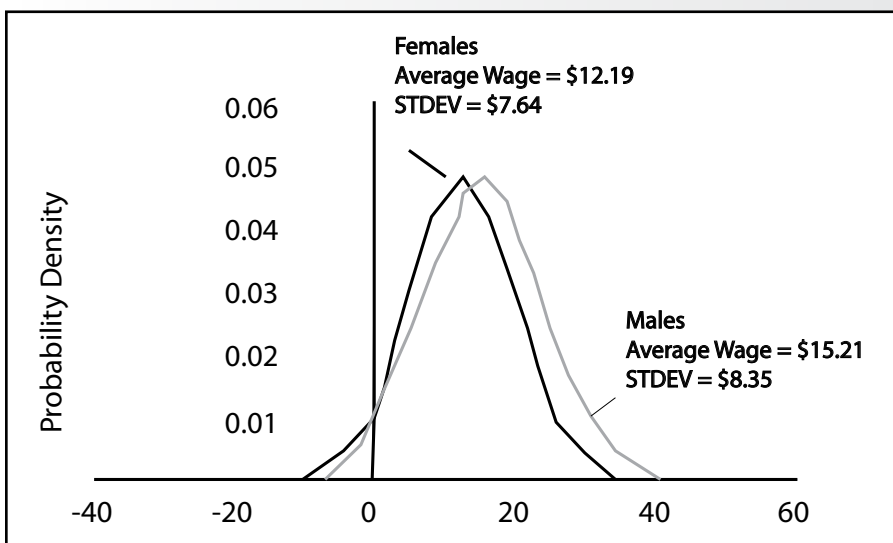


Figure: Average Wage & Standard Deviation of Newly Hired Employees for All Occupations and All Industries, Males and Females, Wyoming

(Text continued on page 10)

Table 1: Gender Wage Comparison in Wyoming, All Occupations & All Industry and Manufacturing Detail Based on New Hires Survey, 2009Q4 to 2010Q3

SOC Code	Title	Number of New Hires	All Industries - 184 Occupations				Statistical Difference Between Males and Females	Manufacturing - 11 Occupations	
			Males		Females			Job Typically Found in Manufacturing	Statistical Difference Between Males and Females
			Average Wage	STDEV Wage	Average Wage	STDEV Wage		Yes	M
00-0000	Total all occupations	8,745	\$15.21	\$8.35	\$12.19	\$7.64	M	Yes	M
11-1021	General & Operations Managers	7	\$22.92	\$7.21	\$31.55	\$13.28	No	Yes	
11-3031	Financial Managers	12	\$38.05	\$9.92	\$28.15	\$12.68	No	Yes	
11-9032	Education Administrators, Elementary & Secondary School	4	\$43.83	\$2.72	\$34.38	\$4.17	No		
11-9141	Property, Real Estate, & Community Association Managers	12	\$16.53	\$4.29	\$14.76	\$3.43	No		
11-9151	Social & Community Svc. Managers	7	\$19.99	\$7.20	\$13.94	\$5.44	No		
11-9199	Managers, All Other	10	\$23.10	\$10.30	\$27.84	\$26.99	No	Yes	
13-1151	Training & Development Specialists	6	\$18.48	\$9.12	\$16.97	\$6.10	No	Yes	
13-1161	Market Research Analysts	6	\$27.98	\$13.59	\$15.65	\$3.33	No	Yes	
13-1199	Business Op. Specialists, All Other	11	\$38.02	\$16.50	\$15.67	\$4.33	M	Yes	
13-2011	Accountants & Auditors	37	\$28.63	\$14.67	\$25.09	\$14.32	No	Yes	
13-2072	Loan Officers	18	\$18.45	\$5.97	\$17.47	\$9.91	No		
13-2082	Tax Preparers	7	\$10.39	\$1.95	\$17.17	\$7.01	No		
13-2099	Financial Specialists, All Other	6	\$22.48	\$13.02	\$18.62	\$7.29	No		
15-1141	Database Administrators	5	\$22.36	\$10.54	\$17.00	\$8.54	No	Yes	
15-1151	Computer User Support Specialists	17	\$12.73	\$4.10	\$10.22	\$0.50	M		
15-1199	Computer Occupations, All Other	5	\$20.28	\$13.74	\$11.04	\$1.47	No	Yes	
17-3011	Architectural & Civil Drafters	5	\$21.50	\$4.95	\$16.17	\$4.86	No	Yes	
17-3022	Civil Engineering Technicians	7	\$14.60	\$2.88	\$14.25	\$0.35	No		
17-3031	Surveying & Mapping Technicians	14	\$15.83	\$7.91	\$12.88	\$3.75	No		
19-2031	Chemists	5	\$24.07	\$12.29	\$14.98	\$1.81	No	Yes	
19-4031	Chemical Technicians	11	\$17.55	\$6.46	\$15.70	\$6.03	No	Yes	
19-4041	Geological & Petroleum Technicians	15	\$21.62	\$8.92	\$14.50	\$2.12	M	Yes	
19-4061	Social Science Research Assistants	8	\$13.14	\$4.16	\$11.72	\$3.52	No		
19-4091	Environmental Science & Protection Technicians, Including Health	15	\$13.90	\$3.63	\$12.04	\$3.29	No		
21-1011	Substance Abuse & Behavioral Disorder Counselors	5	\$18.79	\$1.70	\$28.99	\$9.83	No		
21-1015	Rehabilitation Counselors	40	\$9.85	\$2.33	\$10.12	\$2.29	No		
21-1021	Child, Family, & School Social Workers	19	\$14.31	\$7.93	\$11.39	\$2.57	No		
21-1023	Mental Health & Substance Abuse Social Workers	4	\$15.60	\$6.50	\$13.50	\$3.53	No		
21-1093	Social & Human Service Assistants	34	\$10.71	\$2.60	\$14.95	\$16.92	No		
21-1099	Community & Social Service Specialists, All Other	8	\$11.48	\$5.99	\$12.96	\$4.08	No		
23-1011	Lawyers	13	\$46.00	\$51.78	\$60.24	\$39.77	No	Yes	
23-2011	Paralegals & Legal Assistants	27	\$12.32	\$4.36	\$14.91	\$3.61	No		
25-1194	Voc. Ed. Teachers, Postsecondary	13	\$20.71	\$5.77	\$25.53	\$14.89	No		

F = Females are paid statistically more than males.

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Table continued on page 5

Table continued from page 4

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SOC Code	Title	Number of New Hires	All Industries - 184 Occupations				Statistical Difference Between Males and Females	Manufacturing - 11 Occupations	
			Males		Females			Job Typically Found in Manufacturing	Statistical Difference Between Males and Females
			Average Wage	STDEV Wage	Average Wage	STDEV Wage			
25-2011	Preschool Teachers, Exc. Special Ed.	7	\$15.50	\$0.71	\$12.84	\$2.92	No		
25-2021	Elementary School Teachers, Except Special Education	14	\$22.18	\$2.55	\$23.03	\$5.85	No		
25-2031	Secondary School Teachers, Except Special & Vocational Education	9	\$27.51	\$8.85	\$23.79	\$1.88	No		
25-3021	Self-Enrichment Education Teachers	9	\$25.17	\$10.68	\$11.71	\$4.88	M		
25-3098	Substitute Teachers	107	\$12.87	\$3.70	\$12.40	\$4.37	No		
25-3099	Teachers & Instructors, All Other	8	\$15.52	\$2.67	\$14.87	\$4.92	No		
25-4031	Library Technicians	40	\$11.30	\$2.30	\$9.93	\$1.88	No		
25-9041	Teacher Assistants	42	\$11.04	\$1.80	\$11.36	\$2.63	No		
25-9099	Education, Training, & Library Workers, All Other	17	\$10.59	\$1.08	\$12.14	\$3.36	No		
27-1024	Graphic Designers	16	\$11.04	\$2.87	\$12.68	\$1.85	No	Yes	
27-1026	Merchandise Displayers & Window Trimmers	34	\$11.69	\$2.62	\$10.85	\$1.82	No		
27-2022	Coaches & Scouts	10	\$14.17	\$6.60	\$9.13	\$2.36	No		
27-3011	Radio & Television Announcers	11	\$14.51	\$7.63	\$10.26	\$1.63	No		
27-3022	Reporters & Correspondents	9	\$11.18	\$1.50	\$9.84	\$2.55	No		
27-3031	Public Relations Specialists	6	\$16.43	\$10.01	\$10.00	\$0.71	No		
27-4012	Broadcast Technicians	6	\$9.59	\$3.20	\$7.50	\$0.43	No		
27-4021	Photographers	6	\$8.98	\$2.18	\$8.50	\$1.39	No		
29-1071	Physician Assistants	4	\$36.30	\$23.05	\$40.84	\$1.18	No		
29-1141	Registered Nurses	63	\$26.60	\$7.32	\$25.27	\$11.41	No	Yes	
29-2041	Emergency Med. Tech. & Paramedics	11	\$12.69	\$3.45	\$11.86	\$3.49	No		
29-2051	Dietetic Technicians	8	\$10.50	\$0.71	\$10.14	\$1.16	No		
31-1011	Home Health Aides	7	\$17.17	\$9.00	\$11.47	\$1.94	No		
31-1014	Nursing Aides, Orderlies, & Attendants	103	\$11.29	\$1.09	\$11.40	\$2.36	No		
31-2022	Physical Therapist Aides	10	\$9.50	\$0.71	\$10.10	\$1.91	No		
31-9096	Veterinary Assistants & Laboratory Animal Caretakers	17	\$11.75	\$6.18	\$9.46	\$2.13	No		
31-9099	Healthcare Support Workers, All Other	13	\$13.67	\$1.89	\$9.99	\$1.16	M		
33-3012	Correctional Officers & Jailers	19	\$18.47	\$4.33	\$15.57	\$3.04	No		
33-9032	Security Guards	55	\$12.19	\$4.98	\$10.53	\$3.87	No	Yes	
33-9091	Crossing Guards	26	\$15.53	\$3.87	\$12.80	\$2.37	M		
33-9092	Lifeguards, Ski Patrol, & Other Rec. Protective Service Workers	44	\$9.23	\$2.72	\$8.33	\$1.45	No		
33-9099	Protective Service Workers, All Other	10	\$10.58	\$2.63	\$12.94	\$3.44	No		
35-1012	First-Line Supervisors/Managers of Food Preparation & Serving Workers	23	\$18.11	\$11.54	\$13.46	\$4.58	No	Yes	

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Table continued on page 6

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SOC Code	Title	Number of New Hires	All Industries - 184 Occupations				Statistical Difference Between Males and Females	Manufacturing - 11 Occupations	
			Males		Females			Job Typically Found in Manufacturing	Statistical Difference Between Males and Females
			Average Wage	STDEV Wage	Average Wage	STDEV Wage			
35-2011	Cooks, Fast Food	18	\$8.17	\$1.01	\$7.96	\$1.01	No		
35-2012	Cooks, Institution & Cafeteria	30	\$10.47	\$0.52	\$11.10	\$2.28	No	Yes	
35-2014	Cooks, Restaurant	69	\$9.71	\$2.24	\$9.89	\$3.52	No		
35-2015	Cooks, Short Order	9	\$8.63	\$1.14	\$8.00	\$0.00	No		
35-2019	Cooks, All Other	6	\$11.28	\$2.78	\$10.38	\$3.36	No		
35-2021	Food Preparation Workers	32	\$8.93	\$1.27	\$8.82	\$1.57	No		
35-3011	Bartenders	67	\$10.42	\$7.48	\$8.23	\$1.65	No		
35-3021	Combined Food Preparation & Serving Workers, Incl. Fast Food	132	\$7.87	\$0.67	\$7.90	\$0.66	No	Yes	
35-3022	Counter Attendants, Cafeteria, Food Concession, & Coffee Shop	94	\$8.04	\$2.00	\$7.77	\$1.08	No	Yes	M
35-3031	Waiters & Waitresses	60	\$7.38	\$0.14	\$10.09	\$4.12	F		
35-9011	Dining Room & Cafeteria Attendants & Bartender Helpers	21	\$8.60	\$2.22	\$8.56	\$2.41	No		
35-9021	Dishwashers	42	\$8.17	\$1.00	\$8.21	\$0.85	No	Yes	
35-9031	Hosts & Hostesses, Restaurant, Lounge, & Coffee Shop	21	\$7.92	\$0.38	\$8.40	\$1.91	No		
35-9099	Food Preparation & Serving Related Workers, All Other	7	\$10.91	\$0.79	\$7.96	\$0.54	M		
37-2011	Janitors & Cleaners, Except Maids & Housekeeping Cleaners	177	\$11.21	\$3.01	\$11.03	\$2.55	No	Yes	
37-2012	Maids & Housekeeping Cleaners	144	\$9.91	\$2.97	\$9.45	\$2.10	No		
37-3011	Landscaping & Groundskeeping Workers	239	\$10.79	\$2.67	\$10.32	\$3.15	No		
37-3012	Pesticide Handlers, Sprayers, & Applicators, Vegetation	59	\$12.05	\$2.55	\$10.76	\$1.29	M		
39-2021	Nonfarm Animal Caretakers	20	\$8.71	\$2.14	\$8.79	\$1.18	No		
39-3021	Motion Picture Projectionists	7	\$7.88	\$0.88	\$7.95	\$0.65	No		
39-3031	Ushers, Lobby Attendants, & Ticket Takers	5	\$7.38	\$0.18	\$14.08	\$4.19	F		
39-3091	Amusement & Rec. Attendants	69	\$9.20	\$2.41	\$9.02	\$3.09	No		
39-7012	Travel Guides	13	\$14.71	\$7.59	\$9.00	\$0.00	M		
39-9011	Child Care Workers	111	\$8.52	\$1.87	\$9.13	\$2.62	No		
39-9021	Personal & Home Care Aides	50	\$9.25	\$0.29	\$10.41	\$2.28	F		
39-9031	Fitness Trainers & Aerobics Instructors	49	\$14.50	\$8.46	\$12.26	\$5.77	No	Yes	
39-9032	Recreation Workers	25	\$9.17	\$1.33	\$10.97	\$2.96	F		
39-9099	Personal Care & Service Workers, All Other	8	\$12.12	\$3.23	\$8.31	\$1.18	M		

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			Males		Females			Job Typically Found in Manufacturing	Statistical Difference Between Males and Females
			Average Wage	STDEV Wage	Average Wage	STDEV Wage			
41-1011	First-Line Supervisors/Managers of Retail Sales Workers	16	\$17.90	\$8.40	\$15.05	\$6.06	No	Yes	
41-2011	Cashiers	238	\$8.53	\$1.11	\$8.50	\$1.27	No	Yes	
41-2021	Counter & Rental Clerks	93	\$11.94	\$3.92	\$9.70	\$2.89	M	Yes	
41-2022	Parts Salespersons	22	\$12.88	\$4.29	\$13.13	\$3.67	No		
41-2031	Retail Salespersons	187	\$9.89	\$3.30	\$9.34	\$1.74	No	Yes	
41-3011	Advertising Sales Agents	23	\$10.14	\$2.53	\$14.90	\$19.85	No		
41-3021	Insurance Sales Agents	26	\$17.71	\$6.35	\$20.99	\$33.42	No		
41-3099	Sales Rep., Services, All Other	24	\$23.92	\$12.08	\$12.99	\$5.69	M	Yes	
41-4011	Sales Rep., Wholesale & Mfg., Technical & Scientific Products	7	\$19.91	\$6.99	\$19.97	\$4.45	No	Yes	
41-4012	Sales Representatives, Wholesale & Manufacturing, Except Technical & Scientific Products	45	\$22.64	\$9.48	\$17.56	\$18.81	No	Yes	M
41-9022	Real Estate Sales Agents	6	\$25.50	\$22.61	\$14.75	\$5.30	No		
41-9041	Telemarketers	4	\$8.52	\$0.73	\$10.00	\$0.00	No		
41-9099	Sales & Related Workers, All Other	10	\$15.68	\$6.15	\$12.25	\$4.74	No	Yes	
43-1011	First-Line Supervisors/Mgrs. of Office & Admin. Support Workers	7	\$20.54	\$8.54	\$15.62	\$5.52	No	Yes	
43-3011	Bill & Account Collectors	13	\$13.33	\$1.54	\$12.76	\$2.82	No		
43-3031	Bookkeeping, Accounting, & Auditing Clerks	144	\$12.99	\$5.13	\$13.56	\$4.24	No	Yes	
43-3071	Tellers	123	\$11.22	\$2.67	\$10.30	\$1.81	No		
43-4051	Customer Service Representatives	28	\$12.71	\$3.95	\$11.81	\$5.34	No	Yes	
43-4071	File Clerks	23	\$8.25	\$1.09	\$9.79	\$1.63	F	Yes	
43-4081	Hotel, Motel, & Resort Desk Clerks	49	\$11.88	\$5.34	\$9.53	\$1.60	M		
43-4171	Receptionists & Information Clerks	106	\$9.50	\$0.87	\$10.91	\$2.38	F	Yes	
43-4181	Reservation & Transportation Ticket Agents & Travel Clerks	16	\$11.83	\$4.54	\$11.10	\$2.12	No		
43-5021	Couriers & Messengers	14	\$11.89	\$2.57	\$12.48	\$6.21	No		
43-5031	Police, Fire, & Ambulance Dispatchers	14	\$13.59	\$2.86	\$13.67	\$3.89	No		
43-5032	Dispatchers, Except Police, Fire, & Ambulance	8	\$14.51	\$5.42	\$10.50	\$0.71	No	Yes	
43-5071	Shipping, Receiving, & Traffic Clerks	30	\$13.51	\$5.69	\$11.63	\$3.91	No	Yes	
43-5081	Stock Clerks & Order Fillers	81	\$11.02	\$3.33	\$9.71	\$1.71	M	Yes	No
43-5111	Weighers, Measurers, Checkers, & Samplers, Recordkeeping	4	\$10.25	\$3.18	\$9.48	\$2.09	No	Yes	
43-6011	Executive Secretaries & Administrative Assistants	57	\$15.19	\$4.04	\$14.13	\$3.67	No	Yes	

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Table continued on page 8

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			Males		Females			Job Typically Found in Manufacturing	Statistical Difference Between Males and Females
			Average Wage	STDEV Wage	Average Wage	STDEV Wage			
43-6014	Secretaries, Except Legal, Medical, & Executive	190	\$13.09	\$8.53	\$11.57	\$3.41	No	Yes	
43-9021	Data Entry Keyers	31	\$11.73	\$3.89	\$12.06	\$3.57	No	Yes	
43-9041	Insurance Claims & Policy Processing Clerks	35	\$11.78	\$0.38	\$11.81	\$2.92	No		
43-9051	Mail Clerks & Mail Machine Operators, Except Postal Service	5	\$8.38	\$1.59	\$8.83	\$1.26	No		
43-9061	Office Clerks, General	150	\$10.13	\$2.12	\$11.25	\$3.21	F	Yes	
43-9071	Office Machine Operators, Except Computer	5	\$7.25	\$0.00	\$12.39	\$2.61	F		
43-9199	Office & Administrative Support Workers, All Other	18	\$10.25	\$2.19	\$12.26	\$3.92	No		
45-2091	Agricultural Equipment Operators	20	\$12.98	\$2.82	\$27.16	\$26.53	No		
45-2092	Farmworkers & Laborers, Crop, Nursery, & Greenhouse	44	\$10.36	\$2.37	\$8.52	\$0.78	M		
45-2093	Farmworkers, Farm & Ranch Animals	94	\$11.14	\$3.05	\$11.01	\$3.20	No		
45-4011	Forest & Conservation Workers	11	\$11.53	\$1.44	\$12.60	\$0.55	No		
47-1011	First-Line Supervisors/Managers of Construction Trades & Extraction Workers	28	\$29.33	\$11.15	\$11.88	\$4.42	M	Yes	
47-2031	Carpenters	65	\$18.73	\$5.68	\$17.67	\$2.52	No	Yes	
47-2061	Construction Laborers	162	\$13.65	\$3.97	\$13.26	\$3.77	No	Yes	
47-2073	Operating Engineers & Other Construction Equipment Operators	80	\$18.24	\$3.51	\$12.60	\$5.19	M	Yes	
47-2111	Electricians	76	\$21.57	\$6.57	\$20.00	\$7.07	No	Yes	
47-2141	Painters, Construction & Maintenance	19	\$13.51	\$4.32	\$8.50	\$0.00	M	Yes	
47-3014	Helpers--Painters, Paperhangers, Plasterers, & Stucco Masons	9	\$13.71	\$3.26	\$11.25	\$1.77	No		
47-4011	Construction & Building Inspectors	15	\$26.70	\$15.07	\$11.24	\$1.33	M		
47-4071	Septic Tank Servicers & Sewer Pipe Cleaners	11	\$14.78	\$4.12	\$14.26	\$6.02	No		
47-5099	Extraction Workers, All Other	149	\$16.01	\$4.01	\$15.00	\$3.11	No		
49-3023	Auto. Service Tech. & Mechanics	59	\$13.81	\$4.97	\$10.17	\$2.75	M	Yes	
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	30	\$22.64	\$6.01	\$9.90	\$0.00	M	Yes	
49-3093	Tire Repairers & Changers	28	\$10.95	\$2.57	\$11.00	\$1.41	No	Yes	
49-9041	Industrial Machinery Mechanics	51	\$21.67	\$7.76	\$17.94	\$9.25	No	Yes	
49-9043	Maintenance Workers, Machinery	17	\$17.62	\$6.41	\$16.50	\$0.00	No	Yes	
49-9052	Telecommunications Line Installers & Repairers	13	\$13.86	\$1.88	\$24.17	\$22.41	No		

F = Females are paid statistically more than males.

M = Males are paid statistically more than females.

No = There is no statistical difference between what females are paid and what males are paid.

Table continued on page 9

Table continued from page 8

Table 1: Gender Wage Comparison in Wyoming, All Occupations & All Industry and Manufacturing Detail Based on New Hires Survey, 2009Q4 to 2010Q3

SOC Code	Title	Number of New Hires	All Industries - 184 Occupations				Statistical Difference Between Males and Females	Manufacturing - 11 Occupations	
			Males		Females			Job Typically Found in Manufacturing	Statistical Difference Between Males and Females
			Average Wage	STDEV Wage	Average Wage	STDEV Wage			
49-9071	Maint. & Repair Workers, General	129	\$12.40	\$4.52	\$9.25	\$2.30	M	Yes	
49-9098	Helpers--Installation, Maintenance, & Repair Workers	59	\$13.90	\$10.61	\$11.50	\$2.65	No	Yes	
49-9099	Installation, Maintenance, & Repair Workers, All Other	40	\$14.80	\$7.25	\$13.41	\$4.54	No	Yes	
51-1011	First-Line Supervisors/Managers of Production & Operating Workers	10	\$28.91	\$11.79	\$17.70	\$13.72	No	Yes	
51-2092	Team Assemblers	5	\$9.50	\$1.32	\$8.38	\$0.53	No	Yes	
51-2099	Assemblers & Fabricators, All Other	17	\$11.38	\$2.67	\$10.92	\$2.74	No	Yes	No
51-3011	Bakers	11	\$7.75	\$0.35	\$10.77	\$2.49	F	Yes	
51-3021	Butchers & Meat Cutters	12	\$11.77	\$3.75	\$9.00	\$0.00	M	Yes	
51-3099	Food Processing Workers, All Others	5	\$8.78	\$0.32	\$11.74	\$2.83	No		
51-4121	Welders, Cutters, Solderers, & Brazers	89	\$19.82	\$7.73	\$24.20	\$16.22	No	Yes	
51-6011	Laundry & Dry-Cleaning Workers	28	\$8.86	\$0.57	\$9.12	\$1.37	No		
51-6031	Sewing Machine Operators	6	\$15.25	\$0.35	\$9.25	\$1.55	M	Yes	
51-6099	Textile, Apparel, & Furnishings Workers, All Other	9	\$10.63	\$2.06	\$10.14	\$1.33	No	Yes	
51-8099	Plant & System Operators, All Other	7	\$15.20	\$3.29	\$10.62	\$0.88	M		
51-9023	Mixing & Blending Machine Setters, Operators, & Tenders	8	\$13.53	\$8.58	\$11.50	\$4.95	No	Yes	
51-9061	Inspectors, Testers, Sorters, Samplers, & Weighers	43	\$21.93	\$11.71	\$24.12	\$12.10	No	Yes	
51-9111	Packaging & Filling Machine Operators & Tenders	16	\$13.63	\$3.32	\$11.42	\$2.25	No	Yes	No
51-9198	Helpers--Production Workers	60	\$12.63	\$3.49	\$10.76	\$3.82	No	Yes	No
51-9199	Production Workers, All Other	19	\$15.27	\$3.61	\$9.33	\$2.98	M	Yes	
53-3021	Bus Drivers, Transit & Intercity	17	\$11.73	\$2.07	\$10.83	\$3.82	No		
53-3022	Bus Drivers, School	23	\$14.45	\$3.76	\$14.09	\$3.04	No		
53-3031	Driver/Sales Workers	43	\$11.97	\$3.83	\$11.94	\$3.92	No	Yes	
53-3032	Truck Drivers, Heavy & Tractor-Trailer	428	\$17.46	\$5.33	\$15.84	\$3.95	M	Yes	No
53-3033	Truck Drivers, Light or Delivery Svcs.	102	\$11.35	\$3.90	\$10.99	\$3.51	No	Yes	
53-3041	Taxi Drivers & Chauffeurs	20	\$11.27	\$2.01	\$9.25	\$2.21	M		
53-3099	Motor Vehicle Operators, All Other	7	\$12.34	\$4.46	\$12.50	\$0.00	No		
53-6099	Transportation Workers, All Other	11	\$11.81	\$3.37	\$11.60	\$4.77	No		
53-7051	Industrial Truck & Tractor Operators	43	\$15.50	\$4.12	\$14.59	\$1.74	No	Yes	No
53-7061	Cleaners of Vehicles & Equipment	68	\$10.11	\$3.23	\$9.31	\$2.16	No	Yes	
53-7062	Laborers and Freight, Stock, & Material Movers, Hand	147	\$11.92	\$4.19	\$9.64	\$1.71	M	Yes	No
53-7063	Machine Feeders & Offbearers	10	\$9.30	\$2.03	\$10.24	\$2.39	No	Yes	
53-7064	Packers & Packagers, Hand	36	\$8.90	\$2.06	\$8.66	\$1.79	No	Yes	No

F = Females are paid statistically more than males.

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No = There is no statistical difference between what females are paid and what males are paid.

(Text continued from page 3)

the average wage but also the distribution of the wages in the two groups. The significance level selected for the current work was $p = .05$ on both ends of the distributions. As discussed earlier, the results of the statistical analysis for row 1 of Table 1 show that males are paid significantly more than females; in statistical terms, there is only a 5% ($p = .05$) chance that the same results could be reached randomly. This statistical test gives confidence that there is a significant difference between the wages of males and females.

In some instances, a wage gap between

males and females within a specific occupation may not exist across all industries, but is present in that same occupation in the manufacturing industry. For example, while there is no statistical difference between males and females hired as counter attendants, cafeteria, food concession, & coffee shop across all industries, there is a statistical difference between male and female new hires in the manufacturing industry (see Table 1).

Another occupation of interest, which is traditionally male-dominated and one of the fastest growing occupations in Wyoming, is truck drivers, heavy & tractor-trailer. Across all industries, males were paid significantly

Training for What?

An In-Depth Analysis of Wyoming's Manufacturing Industry

The three most recent issues of *Wyoming Labor Force Trends* have included articles analyzing Wyoming's manufacturing industry. This type of research and analysis can be performed for any of Wyoming's industries by the Research & Planning section of the Wyoming Department of Workforce Services.

Training for What? Part 1: Manufacturing Sector in Wyoming Small but Growing

<http://doe.state.wy.us/LMI/0611/a1.htm>

Training for What? Part 2: New Hires and Occupational Projections in Wyoming's Manufacturing Industry

<http://doe.state.wy.us/LMI/0611/a2.htm>

Training for What? Part 3: Training Needs for Wyoming's Manufacturing Industry

<http://doe.state.wy.us/LMI/trends/0711/a1.htm>

Training for What? Part 4: Skills Needs in Manufacturing

<http://doe.state.wy.us/LMI/trends/0711/a2.htm>

Training for What? Part 5: Examining the Wage Gap Among New Hires in Manufacturing

<http://doe.state.wy.us/LMI/trends/0811/a1.htm>

more than females; within the manufacturing industry, however, there was no statistical difference. One of the suggested solutions to address gender wage inequity is to recruit females to traditionally higher-paying, male-dominated occupations. Applying this strategy to the truck drivers occupation may not achieve the desired result.

Research & Planning has collected data on 184 occupations across all industries for which there is a minimum of two observations for males and two observations for females (see Table 2). Female new hires had significantly higher wages for 9 of the occupations. Males had significantly higher wages for 31 occupations, and the remaining 144 occupations showed no statistical differences between the earnings of males and females.

Table 2: Summary Statistics for the Gender Wage Comparisons, Wyoming

Observation	Number of Occupations	
	All Industries	Mfg.
Total F (Female)	9	0
Total M (Male)	31	3
Total Not Significant	144	8
Total Observations	184	11

Within the manufacturing industry, R&P collected data on 11 occupations; in 3 instances, males were paid significantly more than females, while there was no significant difference within the remaining 8 occupations.

Care should be taken exploring the remainder of the data in Table 1, as it is expected that future iterations of this analysis may yield differing results. The statistical analysis used for this research is sensitive to the number of cases observed. A larger number of observations allows a greater confidence in the results. For example, it is unlikely that the results for the occupation of cashiers, for which there were 238 new hires across all industries, will change in future analysis. In contrast, only 7 home health aides were hired during this period; the information for this occupation presented in Table 1 could be drastically changed if one higher paying employer hired 3 home health aides in the next survey panel.

Several variables that need to be considered in subsequent analyses are:

- Age
- Experience of individual in industry

- Residency status of new hire
- Benefits offered
- Job characteristics
- Industry

The experience level of workers was not examined, which could explain some of the differences that were observed. For example, this analysis may be comparing 10 males who have worked in manufacturing for 10 years to 7 females who are just entering the manufacturing industry. The same concepts apply to age, job characteristics, and the remainder of the previously mentioned variables.

This current analysis is a byproduct of research conducted under R&P's ARRA grant to study the impact of current legislation on energy efficiency related occupations. Those studies were designed to determine if there is a difference in earnings between occupations in energy efficient defined companies and all others. For example, do electricians working on windmills and solar panels earn more than electricians in residential construction? To do an in-depth analysis of issues related to gender wage inequities across Wyoming and within specific industries

in Wyoming would require additional funding, as the work is not covered by an existing R&P grant. Research funded by the ARRA grant can be found online at <http://doe.state.wy.us/LMI/energy.htm>.

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NOW ONLINE

New Wyoming Long- and Short-Term Occupational Projections by Industry Now Available

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

The number of jobs in Wyoming is projected to grow by 47,491 (17.6%) from 2010 to 2020, according to the latest occupational projections from the Research & Planning section of the Wyoming Department of Workforce Services.

The latest occupational projections by industry include short-term projections from 2010 to 2012 and long-term projections from 2010-2020. In addition to projected growth, the projections also include annual openings due to permanent exits from Wyoming's labor force. Permanent exits are attributed to factors such as relocation, withdrawal from the market to care for a family member, retirement, or death.

These projections include detailed information about occupations in particular industries and at the sub-state area level. For example, the health care and social assistance industry is projected to add 1,303 new registered nurses from 2010 to 2020. Also, Wyoming's northeast region is projected to add 223 general & operations managers during this period.

ARRA Dynamics in the Labor Market: Part 2

excerpted by: Phil Ellsworth, Editor

Editor's Note: Although traditional labor market research examines past patterns and market behavior to forecast trends, disturbances of differing magnitudes can alter these forecasts at the local, statewide, and national levels. Both the recent economic downturn and subsequent passage of the American Recovery and Reinvestment Act of 2009 (ARRA) are examples of such disturbances. To assess the effects of ARRA, the Research & Planning section of the Wyoming Department of Workforce Services, in cooperation with the Rocky Mountain and Northern Plains Consortium, received funding to study the workforce and, as a subset, jobs that spend time on activities that increase energy efficiency, use or develop renewable energy resources, or preserve or restore the environment.

The following three articles comprise the second part of a two-part series of excerpts from Occasional Paper No. 5 – ARRA Labor Market Dynamics: An Overview of the American Recovery and Reinvestment Act of 2009 as it Pertains to the Wyoming Department of Employment Research & Planning section¹ and the Rocky Mountain and Northern Plains Consortium. Several other chapters of Occasional Paper No. 5 appeared as stand-alone articles in Wyoming Labor Force Trends (see related box).

A major component of this research was a survey of Wyoming employers who hired new workers from fourth quarter 2009 to third quarter 2010. This study showed segments of the labor market that were hiring despite the economic downturn, and

¹ The Wyoming Department of Employment and Wyoming Department of Workforce Services merged, effective July 1, 2011, becoming the Wyoming Department of Workforce Services.

Occasional Paper No. 5

ARRA Labor Market Dynamics An Overview of the American Recovery and Reinvestment Act of 2009 as it Pertains to the Wyoming Department of Employment Research & Planning Section and the Rocky Mountain and Northern Plains Consortium

The full document is available at <http://doe.state.wy.us/LMI/occasional/occ5.pdf>

- Chapter 1. Definition(s) of “Green” Jobs (Online at <http://doe.state.wy.us/LMI/occasional/occ5.pdf#page=6>)
- Chapter 2. A Review of Alternative Energy and Environmental Enhancement Technologies (Excerpted in May 2011 *Trends*)
- Chapter 3. State Level Legislation Regarding Energy-Efficient Technologies
- Chapter 4. Legislation and Regulatory Landscape Regarding EE Technologies (See article, page 15)
- Chapter 5. Results of the Baseline Survey (Article in February 2011 *Trends*)
- Chapter 6. A Summary of the New Hires Survey (Article in February 2011 *Trends*)
- Chapter 7. Text Mining Analysis of the New Hires Survey (See article, page 22)
- Chapter 8. Wyoming IMPLAN Analysis of ARRA Spending (Article in October 2010 *Trends*)

to what extent these jobs involved energy-efficient activities: those “that produce goods or provide services that benefit the environment or conserve natural resources” or those “in which workers’ duties involve making their establishments’ production processes more environmentally friendly or use fewer natural resources.”

The following first and second articles specifically address Wyoming’s legislative and regulatory landscape in relation to energy-efficient technologies. The third article looks at employers’ responses from the new hires survey using text mining to gain a clearer picture of which skills were deemed most important in those jobs.

State Level Legislation Regarding Energy-Efficient Technologies

by: Sara Saulcy, Senior Economist, and Patrick Manning, Principal Economist, January 2011

The previous article in this series (see ARRA Dynamics in the Labor Market, May 2011 Trends) reviewed some of the alternative energy and environmental enhancement technologies currently available or in the design or pilot program stage. For these technologies to be introduced or expanded in an efficient and socially responsible manner, the appropriate legislation must be in place to ensure they are implemented smoothly. For example, wind power generation in Wyoming has expanded greatly in recent years. If this is to continue, property rights must be established and maintained, siting requirements must be created and enforced, and habitat for protected species (e.g. sage grouse) must be maintained. The following sections discuss some of the legislation in Wyoming that will affect the implementation of these technologies.

In some areas, Wyoming may lag behind states such as California and Washington in the implementation of renewable energy and pollution-abatement initiatives. However, Wyoming has been proactive in addressing some of the issues regarding carbon capture and sequestration and wind energy production in the state. For example, state law in 2008 established that surface owners own underground storage

rights, and specified that the Wyoming Department of Environmental Quality would oversee permitting for geologic sequestration (Wyoming Annotated Statutes, 2008a and 2008b). In 2010, legislation was approved mandating the Wyoming Department of Environmental Quality (DEQ) adopt rules and regulations requiring bonding and financial assurances for geologic sequestration site permit holders. (Wyoming Annotated Statutes, 2010). Regarding wind power generation, the construction of wind farms has sometimes led to conflicts regarding property rights issues. Chapter 47 from the 2010 Session expands the Industrial Siting Council’s (ISC) authority to regulate wind farms with 30 or more towers (and other energy facilities that produce 160,000 volts or more). Thus a permitting process is required to assess potential environmental impacts and impacts on local employment (<http://legisweb.state.wy.us/2010/Session%20Laws.pdf> p.221-231). Chapter 97 - (County Regulation of Wind Energy Development) requires that a wind facility of 0.5 megawatts or greater be required to apply for a permit in a given county. Permit applications are to include information on waste management plans, emergency management plans, sufficient proof of legal access to the site, and project

plans. The act also requires the ISC to adopt rules regarding the decommissioning and reclamation of wind energy facilities (<http://legisweb.state.wy.us/2010/Session%20Laws.pdf> p.498- 508).

References

Wyoming Annotated Statutes, (2008b) § 30-5-501. Oil and gas activities at geologic

sequestration sites.

Wyoming Annotated Statutes, (2008b) § 35-11-101 et seq.

Wyoming Annotated Statutes, (2010a) § 35-11-318. Geologic sequestration special revenue account.

Wyoming Annotated Statutes, (2010b) § 35-11-313. Carbon sequestration; permit requirements.

Legislation and Regulatory Landscape Regarding Energy Efficient Technologies: Impacts on the Regulatory Environment

by: *Sylvia Jones, Senior Research Analyst, November 2010*

The development of any of the previously discussed technologies and industries (Chapter 2), along with the legislation required to administer it (Chapter 3) will have a direct impact on the regulatory landscape. In Wyoming, the agency most affected by these changes is the Department of Environmental Quality (DEQ). In fact, several legislative measures that have been approved in Wyoming specifically include funding for reclassification and/or addition of positions to accomplish the regulatory tasks necessary. For example, from the 2010 legislative session, the act titled, “Carbon Sequestration-Financial Assurances and Regulation” authorizes the DEQ to reclassify a vacant computer technology support position to a principal accountant position “to assist the department in fulfilling its rulemaking duties relating to financial assurances pursuant to this act” (Ch. 52, p. 245).

The Research & Planning (R&P) section of the Wyoming Department of Workforce Services conducted interviews with employees of the DEQ starting in September

2010 to gather information regarding changes they know will or perceive may happen due to the introduction (or expansion) of these new industries and technologies. Other states in the consortium also conducted interviews with their respective regulatory agencies. By doing so, R&P hopes to be able to better project employment based on regulatory change rather than relying solely on what happened during the past. We recognize that what we currently know about any particular industry may become obsolete very quickly because of rapid change in regulation, change in monitoring technology, and the introduction of new “green” technologies.

Background Information on DEQ

The Wyoming Department of Environmental Quality’s mission statement is: “To protect, conserve and enhance the quality of Wyoming’s environment for the benefit of current and future generations” (<http://deq.state.wy.us/mission.htm>). In general, the agency employs 268 individuals who collectively work to

minimize environmental pollution while enabling responsible economic development within the state. There are six departments within DEQ, irrespective of administration, each charged with a separate specialty of oversight. They include: Air Quality, Water Quality, Land Quality, Industrial Siting, Solid Waste Management, and Abandoned Mine Reclamation. As a whole, DEQ serves approximately 5,000 businesses annually, approximately 20% of all business in Wyoming (Brennan, 2010) and over 30,000 individual facilities throughout the state. The department operated with a budget last biennium (2008-2010) of \$140 million, of which \$39 million came from the General Fund.

Air Quality

The purpose of the Air Quality program is to protect the public health and welfare from the harmful effects of air pollution. It works to ensure compliance with state and national ambient air quality standards and compliance with other requirements of the federal Clean Air Act in an effort to conserve and enhance the air resources of the state for public, agricultural, industrial, recreational, and other beneficial uses. Major program activities include:

- Conducts permit reviews for all new emission sources or modifications of existing emission sources, to ensure that the source is built with Best Available Control Technology (BACT) to limit emissions to the lowest technically and economically achievable level to minimize impact to Wyoming's air resource.
- Implements Wyoming's operating permit program, mandated by the Clean Air Act Amendments of 1990, to permit continued operation of major

emission sources through development of state and federally enforceable permits that incorporate all state and federal regulatory requirements. These permits are issued for a term of five years and must be renewed and updated to incorporate current regulatory requirements.

- Ensures that permittees construct and operate their facilities in accordance with the requirements of their permits and all other applicable regulations through file reviews and on-site inspections. This activity is also involved in the resolution of issues related to citizen concerns about proper operation of those facilities.
- Maintains an inventory of actual and allowable air emissions from all air pollution sources in the state (used in air modeling for major permits), installing and operating ambient air quality monitoring systems to evaluate the quality of Wyoming's ambient air (that to which the general public is exposed), and working with federal land managers, industry and others to develop strategies to mitigate air pollution impacts from new and expanded energy projects.

The workload of the Air Quality Division has increased during recent years despite the recent economic downturn and is expected to continue to increase throughout the foreseeable future. Permit issuance is likely to increase due to natural gas facility development, and because most permits are issued for only five years at a time. At the end of the five-year period, permittees are required to reapply for permits and are required to address any new compliance monitoring requirements currently in place.

The Air Quality Division's compliance workload is expected to increase similarly. At the end of Fiscal Year 2009 there were more than 22,000 sources of air pollution in the state, many of which were subject to periodic testing and reporting of emission totals and other requirements. This process includes more than 300 physical inspections per year.

The division's planning workload is also expected to increase as large energy projects continue to be proposed. For example, Las Vegas-based American Renewable Energy Associates has proposed a power plant to be built in Wheatland that would run on a combination of garbage from area communities as well as agricultural wastes (Lacock, 2010). The plant is slated to begin construction sometime during 2011 and is expected to start accepting trash and agricultural waste by August. While the company claims the process is "a totally enclosed, clean process," the Air Quality Division will be involved throughout the project. It will provide oversight in the form of air emissions testing to ensure that the burning process does not pollute the ambient air.

In addition to the division's standard practice, it is also required to address unique air quality issues as they arise. For example, the Upper Green River Basin has elevated wintertime ambient ozone levels. The Air Quality Division is working to develop strategies to solve the problem and meet Clean Air Act requirements.

Furthermore, the Division is involved, in coordination with the Department of Transportation, with metropolitan planning organizations in an effort to establish transportation improvement plans (DEQ, 2010). The plans are aimed at increasing

the efficiency of transportation routes so as to decrease the resulting air pollution.

Water Quality

The purpose of the Water Quality program is to protect and restore the quality of Wyoming's surface water and groundwater resources so that they are available for existing and potential designated uses. It works to prevent water pollution in compliance with the Clean Water Act. It also helps fund the Groundwater Pollution Control Program and the Underground Injection Control program under the Safe Drinking Water Act.

The Division of Water Quality is able to attain these goals by engaging in the following activities:

- Permitting discharges and enforcement activities are the primary mechanisms for protecting surface and groundwater from pollution.
- Permitting the construction of public water distribution systems and treatment plants, and wastewater collection systems and treatment plants protect the public health and safety and the environment.
- Operator certification assures the technical competence of operators of public water supply systems and municipal wastewater systems.
- The Community Support Branch provides assistance to owners and operators of public water supply systems with an evaluation of their ability to meet the technical, managerial, and financial requirements of these systems. This

section also manages the State Revolving Fund programs for the construction and upgrading of sewer and water systems.

- Subdivision application reviews result in recommendations to County Commissioners as to the safety and adequacy of proposed sewer and water systems for subdivisions.
- The Non-Point Source Program provides matching grants to individuals, organizations, and local and state government agencies for education, technical assistance, and voluntary implementation of management practices to prevent and reduce water impacts from non-point sources of pollution.
- The Water Quality Laboratory provides analytical support to the surface and groundwater permitting and enforcement programs and to the watershed ambient water quality monitoring program.

In 2010, the State of Wyoming started requiring drillers to list the ingredients of hydraulic fracturing fluids with their drill permit applications (Farquhar, 2010). Hydraulic fracturing, also known as fracking, is a technique used by the oil and gas industry, to either enhance or initiate the flow of oil and gas from rock formations. Using a combination of water, silica sand and chemicals, fracking fluid is pumped under high pressure into rock formations, causing the rock to fracture. The fractures are kept open with the particles of silica and sand, allowing oil and gas to emerge from tight, rock-like sandstone and shale. Some companies want to keep the specific ingredients a proprietary secret; however, because of the

potential for the fracking fluids leaching into groundwater, the ingredients are required to be given to the Division of Water Quality.

The division is also involved in the new water reclamation facility in Wyoming's Red Desert. The facility aims to make water produced from oil and gas drilling reusable (Casper Star-Tribune, 2010). The plant plans to accept and treat about 20,000 barrels of produced water daily, from oil and gas operators within a 100-mile radius of the facility. Company officials said the reclamation plant will render the water clean enough for agricultural use. The process involves the use of chemical-free, low-cost technology to clean large quantities of produced water to meet Environmental Protection Agency and Wyoming Department of Environmental Quality regulatory standards. Officials said the company plans to add additional facilities in Wyoming over the next 18 months. This places an additional burden on the Division of Water Quality to monitor the plans for the new facilities as well as monitor the output of the facilities for compliance.

The Water Quality Division also is inherently involved in carbon sequestration legislation. Wyoming leadership has recognized the potential of carbon sequestration to continue the state's dominance of carbon based resources (Carbon Sequestration Working Group, 2009). The workgroup appointed to investigate the feasibility of carbon sequestration in the state identified four phases: site characterization and permitting; operations including injection, monitoring and closure tasks; post-closure including monitoring until plume stabilization is confirmed; and long-term stewardship after bond release and permit

termination, where the sequestration site still requires periodic monitoring to confirm it remains stable over an indefinite period of time. Because one of the key risks associated with the technology is contamination of underground sources of water, the Water Quality Division is required in the oversight process. Together with the Oil and Gas Conservation Commission, the division regulates all carbon sequestration projects in the state.

Land Quality

The purpose of the Division of Land Quality is to ensure that mining and exploration for solid minerals is conducted in a manner that protects the public and the environment from harmful impacts. The program also ensures the land after mining is reclaimed to a condition that is equal to or better than it was prior to mining. The major program activities are as follows:

- Issue permits for mining and exploration including reclamation, monitoring, and bonding to ensure reclamation of the mine in the event of operator failure.
- Inspect all mining activities in the state to ensure compliance with the regulations and permit standards and to assist operators in achieving compliance.

Solid and Hazardous Waste

This division regulates the storage, treatment, and disposal of municipal solid and hazardous waste to ensure that the activities cause no harm to people or the environment. In addition, the division operates both voluntary and non-voluntary remediation programs to oversee the cleanup of contaminated sites to ensure

that future uses do not expose people to toxic conditions and to ensure that any harm to the environment is mitigated. The division also administers a program to regulate petroleum product or hazardous substance storage tanks. It also works to remediate these sites at the state's expense should the facilities experience a release of a regulated substance.

Abandoned Mine Reclamation

The purpose of the Abandoned Mine Land program is to eliminate health and safety hazards associated with abandoned mines and to mitigate impacts from coal and mineral mining through construction contracts for the reclamation of abandoned mine sites. To date, the program has reclaimed or contracted for reclamation over 900 abandoned mine sites, to include a total of more than 35,000 acres. More than 1,400 property owners, including several federal land management agencies, have benefited from the reclamation activities. In addition, the program has provided financial assistance to many mining-impacted Wyoming communities to mitigate health and safety concerns and to 35 different research projects aimed at improving the efficacy and efficiency of mine lands reclamation efforts.

Results from the Interview Process

Identify and Quantify Skill and Competency Requirements

In addition to gaining knowledge of the DEQ's role in the regulatory environment, another objective of this research was to elicit responses from DEQ managers regarding the educational requirements, skills, and training necessary for workers

in the regulatory environment. In general, the managers felt that finding applicants with the necessary educational requirements was not difficult; finding educated applicants with experience was far more challenging. In terms of necessary occupations, engineering was by far the most commonly mentioned. Some divisions felt strongly that the professional engineer certification was important for success while others felt it was of little importance. Geologists and groundwater scientists (e.g. groundwater hydrologist, groundwater modeler, and hydro chemist) were also mentioned frequently. Other disciplines mentioned include:

- Natural sciences: biology, botany, chemistry, soil science, wildlife management, etc.
- Social Sciences: specifically statistics and archaeology
- Technical occupations: service technicians, wastewater plant operators, landfill operators.

In terms of the skills necessary for successful employment, all those interviewed mentioned oral and written communication as necessary skills. Grant writing and contract writing were two specific forms of writing mentioned. Other than speaking and writing, other basic skills cited by DEQ managers included “reading comprehension,” “critical thinking,” “mathematics,” “monitoring,” and “science.” “Reading comprehension,” “critical thinking,” “mathematics,” and “science” were mentioned specifically by name while “monitoring” was inferred from activities such as “comparing what you see to a checklist of what you should see.” Time management and project management

were two resource management skills mentioned specifically. Social skills such as coordination, instructing, negotiation, persuasion, service orientation, and social perceptiveness were mentioned by interviewees as important either directly or indirectly.

Establish a Listing of Renewable Energy Businesses and Related Employment

Based on DEQ rules and interviews, a list of regulated industries has been compiled. The list classified by North American Industrial Classification System (NAICS) code is available at <http://doe.state.wy.us/LMI/occasional/occ5.pdf#page=34>.

Anticipate Industry Growth

Industry projections for labor market use are typically produced using a base period of time (typically 10 years) to establish a trend line. They are useful for estimating employment change in a static environment but are less useful during times of dramatic economic change. They are unable, for instance, to predict significant economic downturns, or conversely, major regulatory changes that would increase employment requirements. Long-term industry and occupational projections are produced every two years by the Wyoming Department of Workforce Services, Research & Planning (R&P) section (see <http://doe.state.wy.us/LMI/projections.htm>).

Information that affects industry employment projections includes an increased or decreased demand for the industry’s product or service, a change in governmental involvement (regulation), and turnover. Traditional projections attempt to estimate changing demand.

Employee Turnover

An important issue that was discussed with those interviewed was worker turnover. Each manager stated that when the economy is in a downturn, he or she has very few job openings because there are fewer opportunities available elsewhere. Furthermore, when openings do occur, they are easily filled (e.g. underemployed engineers and geologists). Conversely, a growing economy creates difficulty in hiring and retaining qualified individuals in DEQ. This is due largely to the higher salary levels in private industry compared to what a state agency can pay for the same occupation/skill level.

An impending issue that confronts the agency is that 28.3% of DEQ's workforce is eligible to retire within 10 years (or are age 55 or older). Thus, succession planning appears to be an important concern. However, the managers interviewed stated that with a substantial workload currently, succession planning has not been addressed.

Recognize Technological Applications Affecting Labor Requirements Unique to the Regulatory Environment

In general, those interviewed expected little change in labor requirements because of technological changes. Most stated there are few areas in their jobs that could be automated or altered by technology. For instance, one manager stated, "It is tough to automate much. You can't send robots out to do inspections." However, some mentioned changing technology in the areas they regulate

and most mentioned changing legislation that would eventually affect staffing requirements. For instance, many of the oilfields in Wyoming were issued permits many years ago under a different, more lax set of regulations. In order to renew their permits, the oilfields are expected to comply with the new set of regulations. In addition to significant work on the part of the firm seeking the permit – for example, attainability analysis or biological studies – the change places additional workload on the DEQ staff who now have to review the vast amount of permitting information.

New technologies have the potential to increase or decrease the regulatory load. For example, in some industries the push to automate as many monitoring systems as possible may decrease the workload for DEQ staff. In contrast, the implementation of carbon sequestration and storage would require oversight by the Water Quality Division because of the risk of groundwater contamination. In some cases the technology may shift the burden from one regulatory division to another. For example, wind turbines, while considered clean energy, do have gear boxes that generate used oil every month. Its disposal must be monitored by the Solid and Hazardous Waste Division, thereby increasing the need for monitoring staff. However, if wind generation displaced some coal-generated power generation, this may ease the workload of the Air Quality Division.

In conclusion, the regulatory environment will certainly be a changing landscape in the next decade and beyond. Only time will tell what technologies will prove feasible and economically viable, thus becoming important factors in the economic activities of society, and

which will fall by the wayside. Changes in legislation either of a regulatory nature or through the subsidization of certain technologies at the expense of others will also shape the future of energy production, pollution control, and environmental remediation. This in turn will affect the nature of occupations and skills necessary in a changing industry mix.

More detailed information can be found in the paper, “A Change in Course: Jobs in the Regulatory Environment” (http://doe.state.wy.us/LMI/energy/regulatory_jobs_2011.pdf).

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Text Mining Analysis of the New Hires Survey

by: Sara Saulcy, Senior Economist, and Tony Glover, Workforce Information Supervisor, March 2011

Using the data from the new hires survey from the previous chapter (2009Q4 and 2010Q1), a project was conducted to identify the job skills required for newly hired employees. Additionally, the difference in skill sets between those workers with an EE (“energy efficiency” or “environmentally enhancing”) component to their jobs was compared to those workers that did not (see <http://doe.state.wy.us/LMI/0611/a3.htm> for the definition of EE employment). The results of this research will be used to inform employees,

educators, policy makers, and training providers about the skills necessary to gain employment in Wyoming’s labor market.

Methodology

The new hires questionnaire was comprised of two types of questions: closed-ended questions and open-ended questions. Closed-ended questions limit the number of possible responses. These types of

questions force respondents to choose from a limited number of responses. An example of a closed-ended question is “What time is it where you live?” In open-ended questions, response options are not limited. “What is your opinion of Wyoming’s economy?” is an example of an open-ended question. To assess employer skills needs, R&P first asked employers closed-ended questions about five types of skills:

- service orientation (actively looking for ways to help people);
- critical thinking (using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems);
- reading comprehension (understanding written sentences and paragraphs in work-related documents);
- technology design (generating or

adapting equipment and technology to serve user needs);

- and operation and control (controlling operations of equipment or systems).

The open-ended question was, “In your opinion, what one skill is most important to accomplishing the activities and duties of this job? It could be one of the above or it could be another skill.”

In order to evaluate respondents’ answers to the open-ended question, a technique called text mining was employed. Text mining is a useful tool for evaluating and quantifying responses to open-ended questions. The process helps to identify themes that cannot otherwise be determined from closed-ended questions. The purpose of identifying themes is to capture information based on what respondents consider important, not what researchers consider important. For large surveys (over 5,000 responses in this case), text mining by hand is impractical.

Table 1: Co-Occurrent Responses by Employers Participating in the Wyoming New Hires Survey, Fourth Quarter 2009 and First Quarter 2010

Question: “In your opinion, what one skill is most important to accomplishing the activities and duties of this job? It could be one of the above or it could be another skill.”

Category 1	Responses	Category 2	Responses	Co-Occurrent Responses
Critical Thinking	1,021	Operation & Control	821	146
Service Orientation	1,496	Critical Thinking	1,021	119
Reading Comprehension	202	Critical Thinking	1,021	81
Operation & Control	821	Service Orientation	1,496	70
Critical Thinking	1,021	Technology Design	116	69
Reading Comprehension	202	Service Orientation	1,496	67
Reading Comprehension	202	Operation & Control	821	66
Technology Design	116	Operation & Control	821	66
Reading Comprehension	202	Technology Design	116	65
Technology Design	116	Service Orientation	1,496	65

Therefore, R&P used text mining software to expedite the process of capturing common themes reported by employers about skills needed to be successful in jobs for which employees were newly hired.

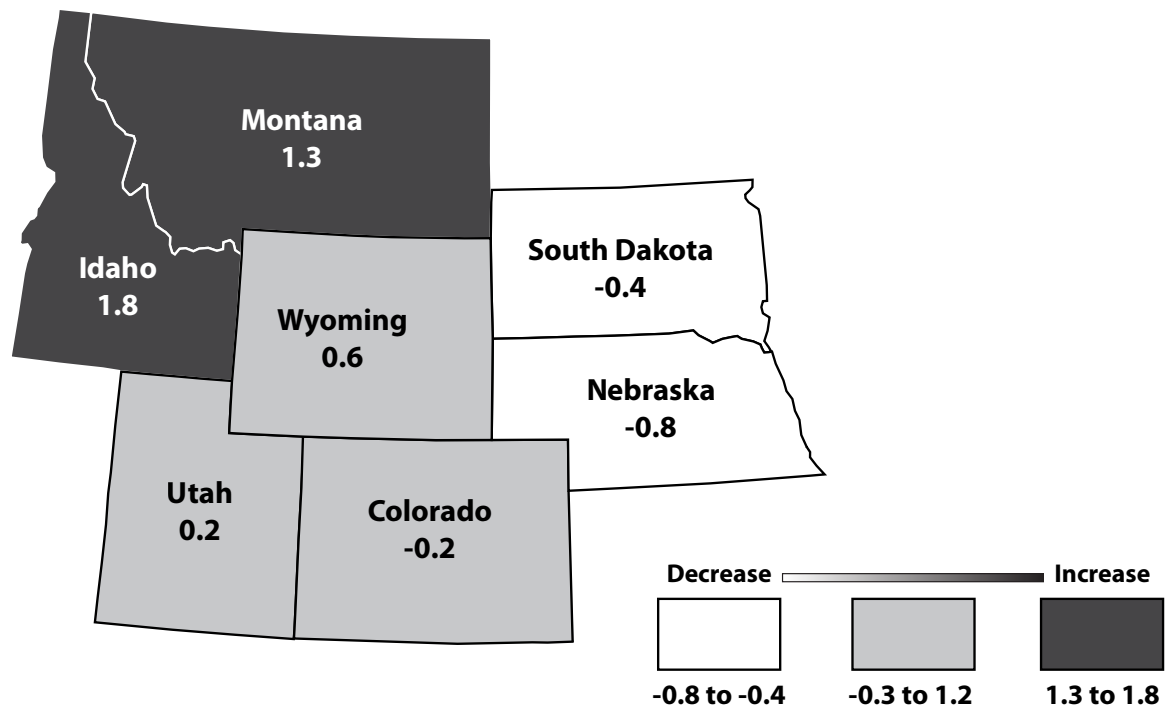
Results

Of the 5,331 newly hired positions examined, service orientation was the skill most frequently reported as being important (28.1%). Understandably, more than one skill was considered as important for many of these newly hired jobs. The 10 most frequent co-occurrences are shown in Table 1 (see page 23).

Of all new hires, 926 (17.4%) held jobs that involve activities and duties related to increasing energy efficiency, utilizing or developing renewable energy resources, or preserving and/or restoring the environment some or all of the time.

Of the five skills, critical thinking had the highest frequency of importance for environmental jobs: (247 of 926, or 26.7%) followed by service orientation (185, or 20.0%). Although critical thinking was more often reported as important for environmental jobs (26.7%) than for non-environmental jobs (16.8%), it was important for all jobs. For the full text mining report see http://doe.state.wy.us/LMI/energy/text_mining_draft.pdf.

Percentage Point Change in Unemployment Rate^a for Wyoming and Surrounding States, June 2009 to June 2011



^aSeasonally Adjusted

Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics (<http://bls.gov/lau>)

Occupation Spotlight

There are an estimated 1,530 workers classified as truck drivers, light or delivery services in Wyoming. According to O*Net Online (<http://www.onetonline.org>), these are truck drivers who “drive a truck or van with a capacity of under 26,000 GVW, primarily to deliver or pick up merchandise or to deliver packages within a specified area.”



Truck Drivers, Light or Delivery Services

According to the Occupational Employment Statistics (OES) survey, these workers are paid a mean wage of \$15.45 per hour. Those in the 90th percentile earn as much as \$26.06 per hour.

Wage data for specific occupations is available online at <http://doe.state.wy.us/LMI/oes.htm>. Click on the “County and Regional Wages (estimates for Wyoming wages for March 2011)” link.

Wyoming Unemployment Rate Falls to 5.9% in June 2011

by: David Bullard, Senior Economist

According to the Research & Planning section of the Wyoming Department of Workforce Services, the state’s seasonally adjusted¹ unemployment rate fell from 6.0% in May to 5.9% in June. Wyoming’s unemployment rate has been steadily decreasing since December 2009, when it was 7.7%. It is significantly lower than its year-ago level of 7.0% and the current U.S. rate of 9.2%. Seasonally adjusted employment fell slightly from May to June (down an estimated 413 individuals, or 0.1%).

Lincoln County posted the highest unemployment rate in June (7.3%). It was followed by Fremont and Big Horn counties (both 6.7%) and Laramie County (6.6%). Sublette County reported the lowest unemployment rate (3.3%), a position it has held for 13 consecutive months. Three other counties had unemployment rates lower than 5.0% (Campbell, 4.4%;

Niobrara, 4.8%; and Converse, 4.9%).

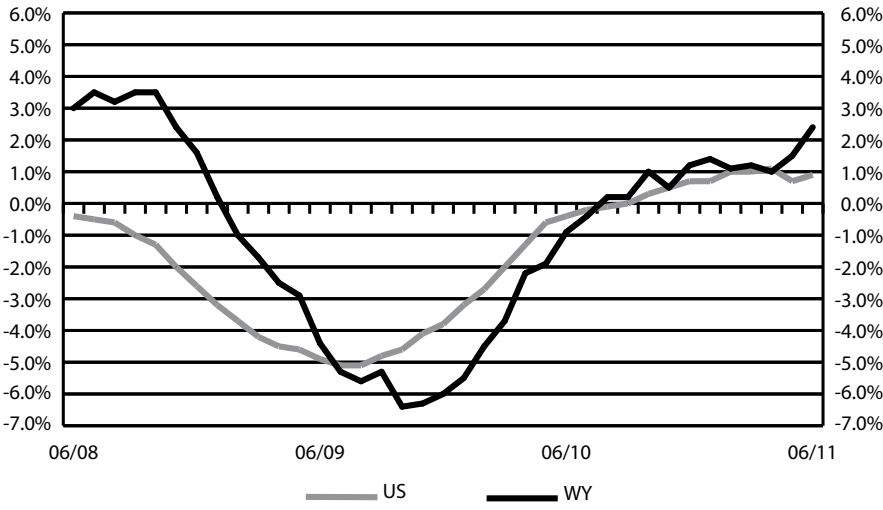
From May to June, most unemployment rates followed their normal seasonal pattern and decreased. Teton County’s unemployment rate dropped from 9.2% in May to 5.2% in June as the summer tourist season got into full swing. Lincoln County’s rate fell from 8.6% to 7.3%, Park County’s rate fell from 6.1% to 5.1%, and Carbon County’s rate fell from 6.6% to 5.8%.

From June 2010 to June 2011 unemployment rates decreased in every county. The largest decreases occurred in energy-dependent counties. Uinta County’s jobless rate fell from 7.0% to 5.3%, Campbell County’s rate fell from 5.9% to 4.4%, and Sweetwater County’s rate fell from 6.5% to 5.1%.

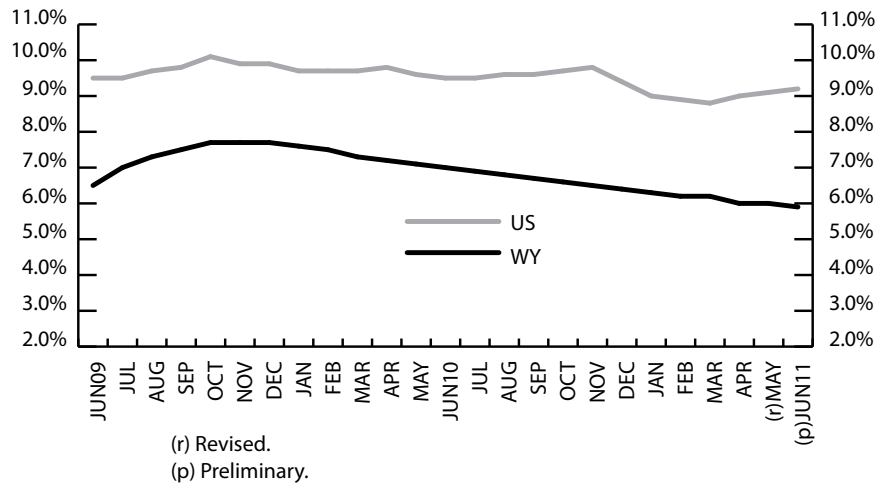
Total nonfarm employment increased to 298,700 in June, a gain of 6,900 jobs (2.4%) from its year-ago level. Despite this increase, employment was still down 9,400 jobs (or 3.1%) from June 2008.

¹ Seasonal adjustment is a statistical procedure to remove the impact of normal regularly recurring events (such as weather, major holidays, and the opening and closing of schools) from economic time series to better understand changes in economic conditions from month to month.

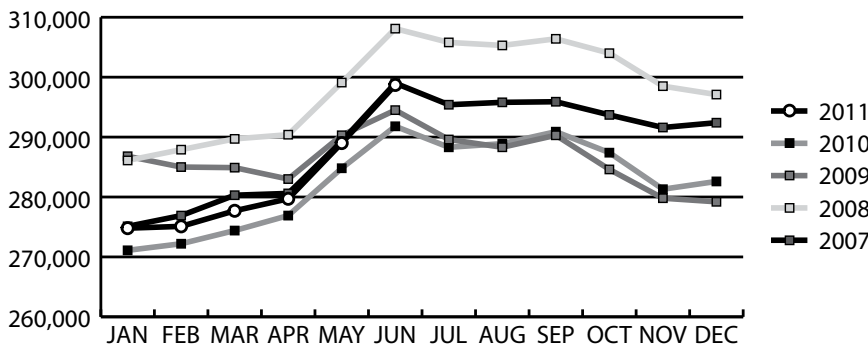
**Nonagricultural Employment Growth
(Percentage Change Over Previous Year)**



Seasonally Adjusted Unemployment Rate (Percentage)



Wyoming Nonagricultural Wage and Salary Employment



**State Unemployment Rates
June 2011
(Seasonally Adjusted)**

State	Unemp. Rate
Puerto Rico	14.9
Nevada	12.4
California	11.8
Rhode Island	10.8
Florida	10.6
Michigan	10.5
South Carolina	10.5
District of Columbia	10.4
Mississippi	10.3
Alabama	9.9
Georgia	9.9
North Carolina	9.9
Tennessee	9.8
Kentucky	9.6
New Jersey	9.5
Idaho	9.4
Oregon	9.4
Arizona	9.3
Illinois	9.2
United States	9.2
Washington	9.2
Connecticut	9.1
Missouri	8.8
Ohio	8.8
Colorado	8.5
West Virginia	8.5
Indiana	8.3
Texas	8.2
Arkansas	8.1
Delaware	8.0
New York	8.0
Louisiana	7.8
Maine	7.8
Massachusetts	7.6
Pennsylvania	7.6
Wisconsin	7.6
Alaska	7.5
Montana	7.5
Utah	7.4
Maryland	7.0
New Mexico	6.8
Minnesota	6.7
Kansas	6.6
Hawaii	6.0
Iowa	6.0
Virginia	6.0
Wyoming	5.9
Vermont	5.5
Oklahoma	5.3
New Hampshire	4.9
South Dakota	4.8
Nebraska	4.1
North Dakota	3.2

Wyoming Nonagricultural Wage and Salary Employment

by: David Bullard, Senior Economist

	% Change Total Employment				
	Employment in Thousands		Employment		
	Jun 11	May 11	Jun 10	May 11	Jun 11
CAMPBELL COUNTY					
TOTAL NONAG. WAGE & SALARY EMPLOYMENT	28.6	28.2	28.8	1.4	-0.7
TOTAL PRIVATE	23.6	23.3	23.9	1.3	-1.3
GOODS PRODUCING	11.5	11.2	11.9	2.7	-3.4
Natural Resources & Mining	8.3	8.1	7.9	2.5	5.1
Construction	2.7	2.6	3.5	3.8	-22.9
Manufacturing	0.5	0.5	0.5	0.0	0.0
SERVICE PROVIDING	17.1	17.0	16.9	0.6	1.2
Trade, Transport., & Utilities	5.4	5.4	5.4	0.0	0.0
Information	0.2	0.2	0.2	0.0	0.0
Financial Activities	0.7	0.7	0.7	0.0	0.0
Professional & Bus. Services	1.8	1.8	1.7	0.0	5.9
Educational & Health Serv.	1.0	1.0	1.0	0.0	0.0
Leisure & Hospitality	2.0	2.0	2.0	0.0	0.0
Other Services	1.0	1.0	1.0	0.0	0.0
GOVERNMENT	5.0	4.9	4.9	2.0	2.0

	% Change Total Employment				
	Employment in Thousands		Employment		
	Jun 11	May 11	Jun 10	May 11	Jun 11
SWEETWATER COUNTY					
TOTAL NONAG. WAGE & SALARY EMPLOYMENT	25.4	25.3	24.5	0.4	3.7
TOTAL PRIVATE	20.4	20.2	19.6	1.0	4.1
GOODS PRODUCING	8.9	8.9	8.4	0.0	6.0
Natural Resources & Mining	5.8	5.8	5.4	0.0	7.4
Construction	1.7	1.8	1.7	-5.6	0.0
Manufacturing	1.4	1.3	1.3	7.7	7.7
SERVICE PROVIDING	16.5	16.4	16.1	0.6	2.5
Trade, Transport., & Utilities	5.1	5.0	4.9	2.0	4.1
Information	0.2	0.2	0.2	0.0	0.0
Financial Activities	0.9	0.9	0.9	0.0	0.0
Professional & Bus. Services	1.2	1.2	1.1	0.0	9.1
Educational & Health Serv.	1.0	1.0	1.0	0.0	0.0
Leisure & Hospitality	2.4	2.3	2.4	4.3	0.0
Other Services	0.7	0.7	0.7	0.0	0.0
GOVERNMENT	5.0	5.1	4.9	-2.0	2.0

	% Change Total Employment				
	Employment in Thousands		Employment		
	Jun 11	May 11	Jun 10	May 11	Jun 11
TETON COUNTY					
TOTAL NONAG. WAGE & SALARY EMPLOYMENT	19.4	15.9	19.3	22.0	0.5
TOTAL PRIVATE	16.8	13.4	16.7	25.4	0.6
GOODS PRODUCING	1.9	1.7	1.8	11.8	5.6
Nat. Res. Mining & Const.	1.7	1.6	1.7	6.2	0.0
Manufacturing	0.2	0.1	0.1	100.0	100.0
SERVICE PROVIDING	17.5	14.2	17.5	23.2	0.0
Trade, Transport., & Utilities	2.4	2.1	2.4	14.3	0.0
Information	0.2	0.2	0.2	0.0	0.0
Financial Activities	0.8	0.7	0.8	14.3	0.0
Professional & Bus. Services	1.8	1.6	1.7	12.5	5.9
Educational & Health Serv.	1.0	0.9	1.0	11.1	0.0
Leisure & Hospitality	8.2	5.8	8.3	41.4	-1.2
Other Services	0.5	0.4	0.5	25.0	0.0
GOVERNMENT	2.6	2.5	2.6	4.0	0.0

State Unemployment Rates June 2011 (Not Seasonally Adjusted)

State	Unemp. Rate
Puerto Rico	15.2
Nevada	13.5
California	12.1
District of Columbia	11.9
South Carolina	11.2
Florida	11.1
Michigan	11.0
Mississippi	11.0
Alabama	10.5
Georgia	10.5
North Carolina	10.4
Rhode Island	10.3
Tennessee	10.2
Arizona	9.9
Illinois	9.7
Kentucky	9.7
New Jersey	9.7
Oregon	9.7
Idaho	9.3
United States	9.3
Washington	9.3
Ohio	9.2
Connecticut	9.1
Missouri	9.0
Texas	8.8
Colorado	8.7
Arkansas	8.6
West Virginia	8.6
Indiana	8.5
Delaware	8.4
Louisiana	8.1
Wisconsin	8.1
New York	8.0
Pennsylvania	8.0
Alaska	7.9
Massachusetts	7.8
Montana	7.8
New Mexico	7.8
Utah	7.7
Maine	7.4
Maryland	7.4
Minnesota	6.9
Hawaii	6.8
Kansas	6.7
Virginia	6.3
Iowa	6.0
Oklahoma	6.0
Vermont	5.6
Wyoming	5.6
New Hampshire	5.2
South Dakota	4.6
Nebraska	4.4
North Dakota	3.8

Economic Indicators

by: Margaret Hiatt, Administrative/Survey Support Specialist

The number of discouraged workers in the U.S. fell by 18.6% from June 2010 to June 2011, suggesting improvement in the labor market.

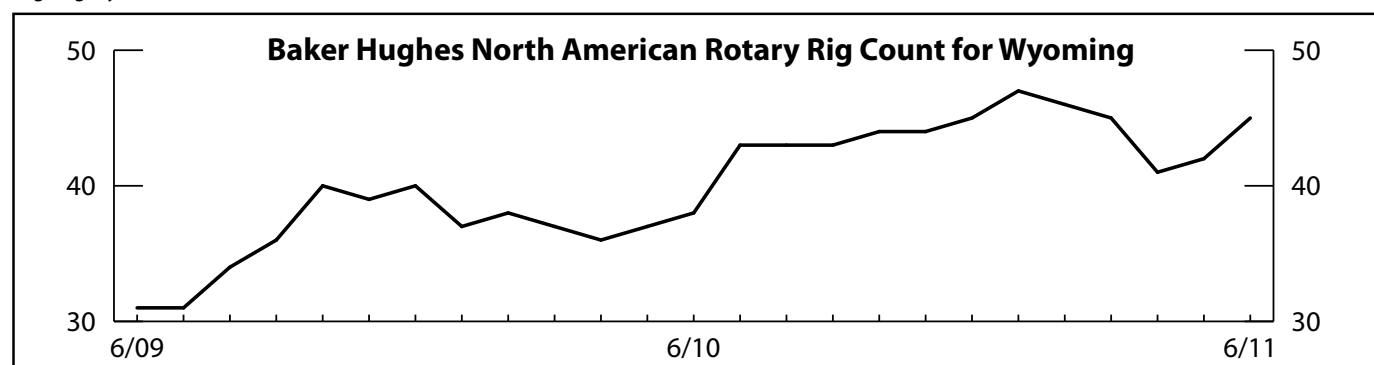
	Jun 2011 (p)	May 2011 (r)	Jun 2010 (b)	Percent Change Month	Percent Change Year
Wyoming Total Nonfarm Employment	298,700	289,000	291,800	3.4	2.4
Wyoming State Government	16,700	17,500	16,400	-4.6	1.8
Laramie County Nonfarm Employment	44,100	43,600	44,100	1.1	0.0
Natrona County Nonfarm Employment	39,900	39,200	39,000	1.8	2.3
Selected U.S. Employment Data					
U.S. Multiple Jobholders	6,861,000	7,084,000	6,899,000	-3.1	-0.6
As a percent of all workers	4.9%	5.1%	4.9%	N/A	N/A
U.S. Discouraged Workers	982,000	822,000	1,207,000	19.5	-18.6
U.S. Part Time for Economic Reasons	8,738,000	8,270,000	8,867,000	5.7	-1.5
Wyoming Unemployment Insurance					
Weeks Compensated	24,187	23,800	32,271	1.6	-25.1
Benefits Paid	\$7,826,502	\$7,643,865	\$10,682,087	2.4	-26.7
Average Weekly Benefit Payment	\$323.58	\$321.17	\$331.01	0.8	-2.2
State Insured Covered Jobs ¹	269,076	261,032	267,649	3.1	0.5
Insured Unemployment Rate	2.1%	2.5%	2.5%	N/A	N/A
Consumer Price Index (U) for All U.S. Urban Consumers (1982 to 1984 = 100)					
All Items	225.7	226.0	218.0	-0.1	3.6
Food & Beverages	227.5	227.1	219.6	0.2	3.6
Housing	219.6	218.5	216.8	0.5	1.3
Apparel	120.6	122.3	118.3	-1.4	1.9
Transportation	216.9	220.3	192.7	-1.5	12.6
Medical Care	399.6	399.4	388.2	0.0	2.9
Recreation (Dec. 1997=100)	113.7	113.7	113.8	0.0	-0.1
Education & Communication (Dec. 1997=100)	130.6	130.6	129.3	0.0	1.0
Other Goods & Services	386.2	385.5	380.9	0.2	1.4
Producer Prices (1982 to 1984 = 100)					
All Commodities	204.0	204.2	183.5	-0.1	11.2
Wyo. Bldg. Permits (New Privately Owned Housing Units Authorized)					
Total Units	288	150	209	92.0	37.8
Valuation	\$47,570,000	\$40,641,000	\$57,765,000	17.0	-17.6
Single Family Homes	164	137	148	19.7	10.8
Valuation	\$38,162,000	\$39,820,000	\$53,189,000	-4.2	-28.3
Casper MSA ² Building Permits	97	11	20	781.8	385.0
Valuation	\$8,546,000	\$1,355,000	\$3,119,000	530.7	174.0
Cheyenne MSA Building Permits	39	31	45	25.8	-13.3
Valuation	\$6,863,000	\$4,690,000	\$5,195,000	46.3	32.1
Baker Hughes North American Rotary Rig Count for Wyoming	45	42	38	7.1	18.4

(p) Preliminary. (r) Revised. (b) Benchmarked.

¹Local Area Unemployment Statistics Program estimates.

²Metropolitan Statistical Area.

Note: Production worker hours and earnings data have been dropped from the Economic Indicators page because of problems with accuracy due to a small sample size and high item nonresponse. The Bureau of Labor Statistics will continue to publish these data online at <http://www.bls.gov/eag/eag.wy.htm>



Wyoming County Unemployment Rates

by: Carola Cowan, BLS Programs Supervisor

Sublette County reported the lowest unemployment rate in June (3.3%), a position it has held for 13 consecutive months.

REGION	Labor Force			Employed			Unemployed			Unemployment Rates		
	Jun 2011	May 2011	Jun 2010	Jun 2011	May 2011	Jun 2010	Jun 2011	May 2011	Jun 2010	Jun 2011	May 2011	Jun 2010
County	(p)	(r)	(b)	(p)	(r)	(b)	(p)	(r)	(b)	(p)	(r)	(b)
NORTHWEST	47,143	44,422	47,442	44,322	41,570	44,185	2,821	2,852	3,257	6.0	6.4	6.9
Big Horn	5,096	4,865	5,159	4,757	4,527	4,783	339	338	376	6.7	6.9	7.3
Fremont	19,002	18,920	19,114	17,720	17,632	17,590	1,282	1,288	1,524	6.7	6.8	8.0
Hot Springs	2,582	2,488	2,584	2,451	2,358	2,449	131	130	135	5.1	5.2	5.2
Park	16,185	13,976	16,143	15,360	13,119	15,198	825	857	945	5.1	6.1	5.9
Washakie	4,278	4,173	4,442	4,034	3,934	4,165	244	239	277	5.7	5.7	6.2
NORTHEAST	54,672	53,764	55,239	51,833	50,891	51,697	2,839	2,873	3,542	5.2	5.3	6.4
Campbell	27,240	27,394	27,646	26,031	26,188	26,027	1,209	1,206	1,619	4.4	4.4	5.9
Crook	3,671	3,443	3,710	3,489	3,261	3,495	182	182	215	5.0	5.3	5.8
Johnson	4,222	3,874	4,137	3,960	3,608	3,823	262	266	314	6.2	6.9	7.6
Sheridan	16,349	15,858	16,482	15,334	14,810	15,288	1,015	1,048	1,194	6.2	6.6	7.2
Weston	3,190	3,195	3,264	3,019	3,024	3,064	171	171	200	5.4	5.4	6.1
SOUTHWEST	65,531	63,645	65,358	62,108	59,720	61,096	3,423	3,925	4,262	5.2	6.2	6.5
Lincoln	8,430	7,996	8,523	7,818	7,309	7,809	612	687	714	7.3	8.6	8.4
Sublette	7,431	7,087	7,448	7,188	6,840	7,124	243	247	324	3.3	3.5	4.4
Sweetwater	23,902	24,400	23,660	22,689	23,219	22,116	1,213	1,181	1,544	5.1	4.8	6.5
Teton	14,459	13,037	14,731	13,709	11,839	13,824	750	1,198	907	5.2	9.2	6.2
Uinta	11,309	11,125	10,996	10,704	10,513	10,223	605	612	773	5.3	5.5	7.0
SOUTHEAST	72,655	74,464	73,534	68,280	70,179	68,564	4,375	4,285	4,970	6.0	5.8	6.8
Albany	18,267	19,859	18,757	17,359	18,958	17,720	908	901	1,037	5.0	4.5	5.5
Goshen	6,278	6,255	6,287	5,905	5,908	5,876	373	347	411	5.9	5.5	6.5
Laramie	42,543	42,938	42,990	39,751	40,196	39,818	2,792	2,742	3,172	6.6	6.4	7.4
Niobrara	1,295	1,220	1,275	1,233	1,168	1,205	62	52	70	4.8	4.3	5.5
Platte	4,272	4,192	4,225	4,032	3,949	3,945	240	243	280	5.6	5.8	6.6
CENTRAL	56,130	55,975	56,438	52,905	52,742	52,596	3,225	3,233	3,842	5.7	5.8	6.8
Carbon	8,002	7,495	7,963	7,535	7,000	7,404	467	495	559	5.8	6.6	7.0
Converse	7,490	7,391	7,646	7,124	7,039	7,203	366	352	443	4.9	4.8	5.8
Natrona	40,638	41,089	40,829	38,246	38,703	37,989	2,392	2,386	2,840	5.9	5.8	7.0
STATEWIDE	296,130	292,271	298,009	279,449	275,104	278,136	16,681	17,167	19,873	5.6	5.9	6.7
Statewide Seasonally Adjusted										5.9	6.0	7.0
U.S.										9.3	8.7	9.6
U.S. Seasonally Adjusted										9.2	9.1	9.5

Prepared in cooperation with the Bureau of Labor Statistics. Benchmarked 02/2011. Run Date 07/2011.

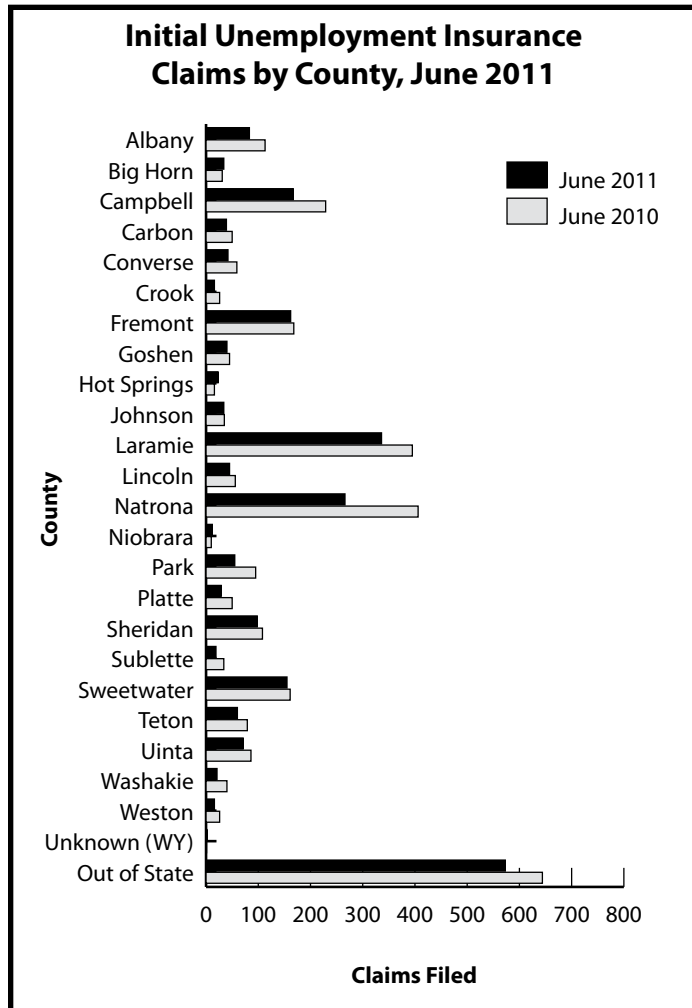
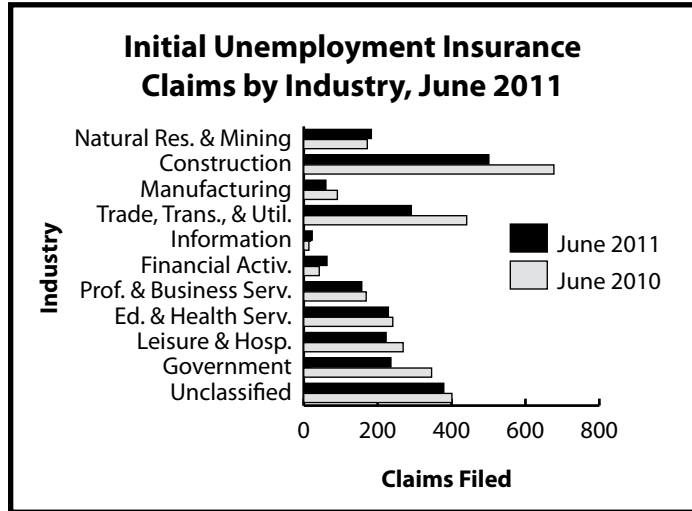
Data are not seasonally adjusted except where otherwise specified.

(p) Preliminary. (r) Revised. (b) Benchmarked.

Wyoming Normalized^a Unemployment Insurance Statistics: Initial Claims

by: Douglas W. Leonard, Senior Economist

Initial claims continued to fall compared to 2010, with an over-the-year decline of 19.2%. The largest over-the-year declines were observed in construction (-176), wholesale trade (-83), and federal government (-94).



Initial Claims	Claims Filed		Percent Change Claims Filed		
	Jun 11	May 11	Jun 11	Jun 11	
Wyoming Statewide	2,395	2,923	2,964	-18.1	-19.2
TOTAL CLAIMS FILED					
TOTAL GOODS-PRODUCING	744	1,079	940	-31.0	-20.9
Natural Res. & Mining	183	201	172	-9.0	6.4
Mining	171	187	162	-8.6	5.6
Oil & Gas Extraction	8	9	10	-11.1	-20.0
Construction	501	798	677	-37.2	-26.0
Manufacturing	60	80	91	-25.0	-34.1
TOTAL SERVICE-PROVIDING	1,036	1,198	1,277	-13.5	-18.9
Trade, Transp., & Utilities	291	371	441	-21.6	-34.0
Wholesale Trade	43	51	126	-15.7	-65.9
Retail Trade	172	209	223	-17.7	-22.9
Transp., Warehousing & Utilities	76	111	92	-31.5	-17.4
Information	23	12	14	91.7	64.3
Financial Activities	63	43	42	46.5	50.0
Prof. and Business Svcs.	157	178	169	-11.8	-7.1
Educational & Health Svcs.	229	209	241	9.6	-5.0
Leisure & Hospitality	223	331	269	-32.6	-17.1
Other Svcs., exc. Public Admin.	50	54	101	-7.4	-50.5
TOTAL GOVERNMENT	236	222	346	6.3	-31.8
Federal Government	42	49	136	-14.3	-69.1
State Government	23	23	31	0.0	-25.8
Local Government	171	150	179	14.0	-4.5
Local Education	97	53	101	83.0	-4.0
UNCLASSIFIED	379	424	401	-10.6	-5.5

Laramie County					
TOTAL CLAIMS FILED	336	356	396	-5.6	-15.2
TOTAL GOODS-PRODUCING	87	115	112	-24.3	-22.3
Construction	70	107	97	-34.6	-27.8
TOTAL SERVICE-PROVIDING	202	191	214	5.8	-5.6
Trade, Transp., & Utilities	50	65	84	-23.1	-40.5
Financial Activities	16	8	7	100.0	128.6
Prof. & Business Svcs.	36	28	20	28.6	80.0
Educational & Health Svcs.	56	45	46	24.4	21.7
Leisure & Hospitality	27	34	44	-20.6	-38.6
TOTAL GOVERNMENT	33	35	54	-5.7	-38.9
UNCLASSIFIED	14	15	16	-6.7	-12.5

Natrona County					
TOTAL CLAIMS FILED	267	327	408	-18.3	-34.6
TOTAL GOODS-PRODUCING	90	105	128	-14.3	-29.7
Construction	42	67	80	-37.3	-47.5
TOTAL SERVICE-PROVIDING	151	197	232	-23.4	-34.9
Trade, Transp., & Utilities	51	77	85	-33.8	-40.0
Financial Activities	6	7	12	-14.3	-50.0
Prof. & Business Svcs.	25	26	27	-3.8	-7.4
Educational & Health Svcs.	30	32	41	-6.3	-26.8
Leisure & Hospitality	26	42	52	-38.1	-50.0
TOTAL GOVERNMENT	18	11	36	63.6	-50.0
UNCLASSIFIED	8	14	12	-42.9	-33.3

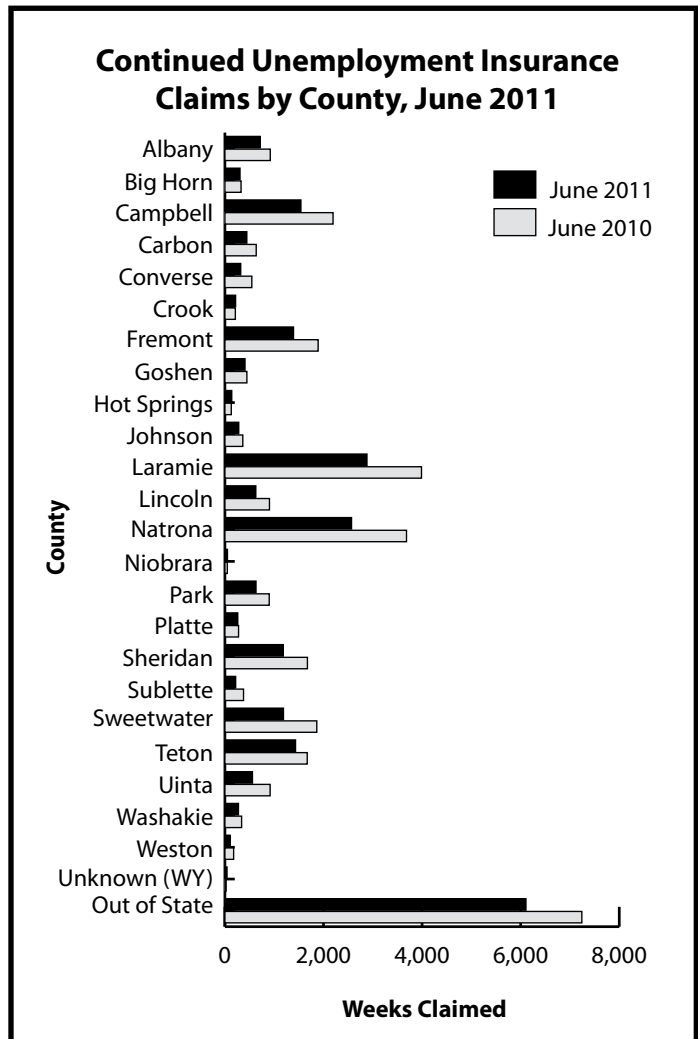
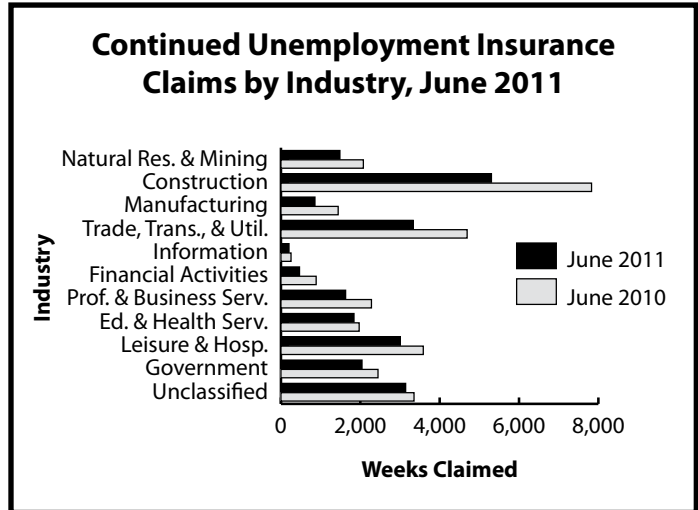
^aAn average month is considered 4.33 weeks. If a month has four weeks, the normalization factor is 1.0825. If the month has five weeks, the normalization factor is 0.866. The number of raw claims is multiplied by the normalization factor to achieve the normalized claims counts.

Wyoming Normalized^a Unemployment Insurance Statistics: Continued Claims

by: Douglas W. Leonard, Senior Economist

Continued claims were 24.7% less than in June 2010. All reported sectors at the statewide level showed over-the-year declines in claims activity.

Continued Claims	Percent Change Claims Filed				
	Claims Filed		Jun 11 Jun 11 Jun 10		
	Jun 11	May 11	Jun 10	May 11	Jun 10
Wyoming Statewide					
TOTAL WEEKS CLAIMED	23,902	28,720	31,751	-16.8	-24.7
EXTENDED WEEKS CLAIMED	14,800	16,678	20,922	-11.3	-29.3
TOTAL UNIQUE CLAIMANTS ^b	6,078	8,507	7,828	-28.6	-22.4
Benefit Exhaustions	622	877	1,002	-29.1	-37.9
Benefit Exhaustion Rates	10.2%	10.3%	12.8%	-0.1%	-2.6%
TOTAL GOODS-PRODUCING					
Natural Res. & Mining	7,648	9,274	11,347	-17.5	-32.6
Natural Res. & Mining	1,486	1,710	2,077	-13.1	-28.5
Mining	1,324	1,524	1,866	-13.1	-29.0
Oil & Gas Extraction	92	115	135	-20.0	-31.9
Construction	5,305	6,506	7,828	-18.5	-32.2
Manufacturing	857	1,058	1,442	-19.0	-40.6
TOTAL SERVICE-PROVIDING					
Trade, Transp., & Utilities	11,068	13,995	14,604	-20.9	-24.2
Trade, Transp., & Utilities	3,331	3,885	4,692	-14.3	-29.0
Wholesale Trade	486	503	874	-3.4	-44.4
Retail Trade	2,085	2,446	2,807	-14.8	-25.7
Transp., Warehousing & Utilities	760	936	1,011	-18.8	-24.8
Information	203	200	254	1.5	-20.1
Financial Activities	468	492	887	-4.9	-47.2
Prof. & Business Svcs.	1,630	1,911	2,281	-14.7	-28.5
Educational & Health Svcs.	1,841	1,598	1,971	15.2	-6.6
Leisure and Hospitality	3,009	5,287	3,587	-43.1	-16.1
Other Svcs., exc. Public Admin.	586	622	932	-5.8	-37.1
TOTAL GOVERNMENT					
Federal Government	2,043	2,201	2,446	-7.2	-16.5
State Government	465	791	701	-41.2	-33.7
State Government	251	254	276	-1.2	-9.1
Local Government	1,327	1,156	1,469	14.8	-9.7
Local Education	362	211	380	71.6	-4.7
UNCLASSIFIED	3,143	3,250	3,354	-3.3	-6.3
Laramie County					
TOTAL WEEKS CLAIMED	2,880	2,962	3,987	-2.8	-27.8
TOTAL UNIQUE CLAIMANTS	708	861	987	-17.8	-28.3
Total Goods-Producing					
Construction	734	860	1,118	-14.7	-34.3
Construction	585	739	908	-20.8	-35.6
Total Service-Providing					
Trade, Transp., and Utilities	1,673	1,631	2,269	2.6	-26.3
Trade, Transp., and Utilities	470	515	830	-8.7	-43.4
Financial Activities	102	95	187	7.4	-45.5
Prof. & Business Svcs.	257	262	362	-1.9	-29.0
Educational and Health Svcs.	454	403	344	12.7	32.0
Leisure & Hospitality	245	224	327	9.4	-25.1
TOTAL GOVERNMENT					
Local Government	368	352	494	4.5	-25.5
UNCLASSIFIED	105	119	106	-11.8	-0.9
Natrona County					
TOTAL WEEKS CLAIMED	2,569	2,845	3,686	-9.7	-30.3
TOTAL UNIQUE CLAIMANTS	637	841	899	-24.3	-29.1
Total Goods-Producing					
Construction	694	825	1,221	-15.9	-43.2
Construction	386	523	737	-26.2	-47.6
TOTAL SERVICE-PROVIDING					
Trade, Transp., and Utilities	1,733	1,826	2,226	-5.1	-22.1
Trade, Transp., and Utilities	594	641	780	-7.3	-23.8
Financial Activities	67	63	169	6.3	-60.4
Professional & Business Svcs.	312	340	288	-8.2	8.3
Educational & Health Svcs.	333	288	401	15.6	-17.0
Leisure & Hospitality	253	296	382	-14.5	-33.8
TOTAL GOVERNMENT					
Local Government	90	121	180	-25.6	-50.0
UNCLASSIFIED	52	73	59	-28.8	-11.9



^aAn average month is considered 4.33 weeks. If a month has four weeks, the normalization factor is 1.0825. If the month has five weeks, the normalization factor is 0.866. The number of raw claims is multiplied by the normalization factor to achieve the normalized claims counts.
^bDoes not include claimants receiving extended benefits.

**Wyoming Department
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Research & Planning
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