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TRENDS

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Manufacturing Workforce in Wyoming: Economically Needed Diversity Options for Wyoming (ENDOW)

by: Tom Gallagher, Research & Planning Manager

A new report from the Research & Planning (R&P) section of the Wyoming Department of Workforce Services addresses the question regarding economic diversification raised in state legislation enacted in spring 2017. The report addresses existing workforce strengths and deficiencies as they apply to manufacturing in Wyoming.

Excerpted from *Manufacturing Workforce in Wyoming: Economically Needed Diversity Options for Wyoming (ENDOW).*

This report is available at http://doe.state.wy.us/LMI/Manufacturing_Workforce_2017.pdf

Manufacturing in Wyoming is unique because it is often tied directly to available natural resources rather than to the assembly of inputs from other locations for re-export, as is the case in other states. Rather than access to markets or proximity to transportation, the driver for manufacturing in Wyoming is natural resources readily extracted from the environment. This means that manufacturing is vulnerable to contractions in energy prices in bad times, or becomes a donor of labor to the mining industry during boom times. In times of rapid expansion in the mining industry, among the first sources of labor for mining are the workers in manufacturing who build the equipment used in the mining industry.

Manufacturing is a relatively small industry in Wyoming. In 2015, there were 11,684 persons whose primary

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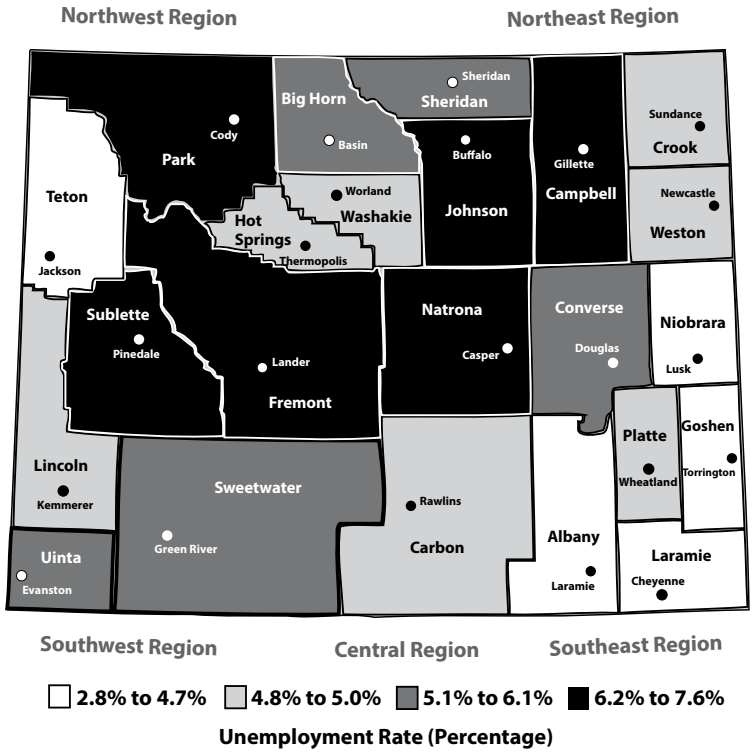
HIGHLIGHTS

- **Wyoming's gross state product decreased by 7.2% from 2009 to 2016. The state's largest decrease was seen in natural resources & mining (-29.6%, or -$3.8 billion). ...** ***page 17***
- **The Baker Hughes North American Rotary Rig Count for Wyoming remained unchanged at 19 for the second consecutive month. ...** ***page 24***

Unemployment Rate by Wyoming County, January 2017 (Not Seasonally Adjusted)



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Wyoming Labor Force Trends

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John Cox, Director

Research & Planning
P.O. Box 2760
Casper, WY 82602-2760
dws-researchplanning@wyo.gov
307-473-3807

Tom Gallagher, Manager

Tony Glover, Workforce Information Supervisor

Carola Cowan, Bureau of Labor Statistics Programs Supervisor

Michael Moore, Editor

Editorial Committee: David Bullard, Katelynd Faler, Matthew Halama, Chris McGrath, Lynae Mohondro, Michael Moore, and Carol Toups

Contributors to *Wyoming Labor Force Trends* this month: David Bullard, Carola Cowan, Katelynd Faler, Tom Gallagher, Patrick Manning, and Michael Moore

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industry of employment was manufacturing. This represented 3.2% of all persons working in an Unemployment Insurance (UI) covered job.

Demographics and Nativity

In general, compared to most other states, Wyoming's labor market is characterized by cyclical and seasonal volatility. This volatility means a dependency on *nonresidents*[1] for much of the workforce as the market bids up wages during peak periods and loses jobs rapidly during off-peak seasons and downturns.

Based on household survey estimates from the Census Bureau, in 2015, only two in five residents of Wyoming were born in Wyoming (Research & Planning, in press). Dependence on a nonresident workforce implies that employer recruitment efforts need to go further afield and cost more than if their needs are met locally. Similarly, job seekers must make greater effort to find work over long distances. In 2015, about one in five persons working in Wyoming was a nonresident (see Table 1). On the other hand, a smaller proportion (16.1%) of those working in manufacturing were nonresidents.

As seen in Table 1, during 2015 males made up 66.3% of workers in manufacturing but only 42.6% of workers in all industries. Females made up 17.6% of workers in manufacturing, with the balance of nonresidents of unknown gender. Workers in manufacturing also tend to be older than the workforce as a whole, with 15.5% of workers in manufacturing age 55-64 compared to 12.9% of workers in all industries (see Table 2, page 4). To the extent that age is a predictor of retirement, a weakness in the manufacturing workforce is the greater need to plan for its replacement than in the market as a whole.

Wages

Higher earnings in manufacturing may be considered an asset to the degree that they mitigate recruitment and retention problems. As seen in Table 1, both genders, as well as nonresidents working in manufacturing made substantially more in comparison to all workers. Females, for example, earned $32,963 on average, or 15.2% more than female workers in the economy of Wyoming as a whole during 2015. Gross earnings levels (i.e., $59,989 for males) in Table 1 may be different than rates of compensation as a function of multiple job

Persons Working in Wyoming

Table 1: Number of Persons Working in Manufacturing (NAICS[a] 31-33) and All Industries in Wyoming by Gender, 2015

	Manufacturing			All Industries		
Gender	N	%	Average Annual Wage	N	%	Average Annual Wage
Females	2,054	17.6	$32,963	132,473	36.5	$28,611
Males	7,746	66.3	$59,989	154,426	42.6	$47,496
Nonresidents	1,884	16.1	$30,122	75,615	20.9	$19,950
Total	**11,684**	**100.0**	**$50,422**	**362,514**	**100.0**	**$34,849**

Nonresidents are individuals for whom demographic data are not available.
[a]North American Industry Classification System.
Source: Employment and Earnings by Industry, County, Age, & Gender, 2000-2015 (http://doe.state.wy.us/LMI/earnings_tables/2016/Index.htm). Research & Planning, WY DWS.
Prepared by M. Moore, Research & Planning, WY DWS, 4/21/17.

1 *Nonresidents* are individuals for whom demographic data are not available.

holding, turnover, and the exclusion of over-time pay, profit sharing, holiday bonuses, and other forms of non-standard pay from BLS occupational wage surveys.

Turnover

Certain segments of manufacturing in Wyoming are tied directly to food processing, resulting in a marked component of employment seasonality. However, with higher earnings and an overall lower level of turnover characteristic of manufacturing as a whole, workers in manufacturing are more likely to enjoy greater employment security by virtue of the fact that they are eligible for Unemployment Insurance benefits should they lose their jobs through no fault of their own. As seen in Table 3, 94.4% of jobs in manufacturing were monetarily eligible for UI were they to lose their jobs in comparison to 88.5% of all workers in 2016Q3.

Not only is job turnover lower in manufacturing than in other industries in Wyoming (Gallagher, 2017, p. 7), workers in manufacturing whether in Wyoming or the U.S. are highly likely to be

Monetary Eligibility

Table 3: **Unemployment Insurance Benefit Eligibility for Individuals Working in Manufacturing (NAICS[a] 31-33) and All Industries in Wyoming, 2016Q3**

	Eligible		Not Eligible		Total	
Industry	N	Row %	N	Row %	N	Column %
Manufacturing	9,086	94.4	540	5.6	9,626	3.8
Total, All Industries	222,853	88.5	29,144	11.5	252,997	100.0

For Wyoming workers who worked in 2016Q3 and the base period.
[a]North American Industry Classification System.
Source: Wage Records administrative database and Unemployment Insurance claims program. Research & Planning, WY DWS.
Prepared by S. Wen and M. Moore, Research & Planning, WY DWS, 4/21/17.

Residents Working in Wyoming by Gender and Age

Table 2: **Number of Wyoming Residents Working in Manufacturing (NAICS[a] 31-33) and All Industries in Wyoming by Gender and Age, 2015**

	Manufacturing (NAICS 31-33)						All Industries					
	Females		Males		Total		Females		Males		Total	
Age Group	N	Column %	N	Column %	N	Column %		N	Column %	N	Column %	N	Column %
<20	113	5.5	204	2.6	317	2.7	<20	9,960	7.5	9,931	6.4	19,891	5.5
20-24	185	9.0	754	9.7	939	8.0	20-24	15,337	11.6	17,331	11.2	32,668	9.0
25-34	432	21.0	1,903	24.6	2,335	20.0	25-34	29,547	22.3	36,779	23.8	66,326	18.3
35-44	403	19.6	1,616	20.9	2,019	17.3	35-44	24,987	18.9	30,235	19.6	55,222	15.2
45-54	424	20.6	1,527	19.7	1,951	16.7	45-54	23,385	17.7	26,728	17.3	50,113	13.8
55-64	386	18.8	1,424	18.4	1,810	15.5	55-64	21,978	16.6	24,765	16.0	46,743	12.9
65+	111	5.4	318	4.1	429	3.7	65+	7,252	5.5	8,638	5.6	15,890	4.4
Total	**2,054**	**100.0**	**7,746**	**100.0**	**11,684**	**100.0**	**Total**	**132,473**	**100.0**	**154,426**	**100.0**	**362,514**	**100.0**
Excludes 1,884 nonresidents[b].							Excludes 75,615 nonresidents.						

[a]North American Industry Classification System.
[b]Nonresidents are individuals for whom demographic data are not available.
Source: Employment and Earnings by Industry, County, Age, & Gender, 2000-2015 (http://doe.state.wy.us/LMI/earnings_tables/2016/Index.htm). Research & Planning, WY DWS.
Prepared by M. Moore, Research & Planning, WY DWS, 4/21/17.

working full-time. According to a U.S. Census Bureau program, over 80% of employed workers in manufacturing were working full-time (35 hours or more per week) based on averages over five years of household surveys from 2011 to 2015 (see Table 4).

Full- and Part-Time Workers

Table 4: Full- and Part-Time Status for Workers Ages 16 and Older in Manufacturing (NAICS[a] 31-33) in Wyoming and the U.S., 2015[b]

	Wyoming		U.S.	
Status	N	%	N	%
Full-Time	11,712	80.3	15,126,614	81.4
Part-Time	1,668	11.4	1,289,674	6.9
N/A	1,210	8.3	2,177,649	11.7
Total	**14,590**	**100.0**	**18,593,937**	**100.0**

[a]North American Industry Classification System.
[b]Five-year estimates, 2011-2015.
N/A = Were not in the labor force during past year or were unemployed.
Full-Time = 35 or more hours worked.
Source: IPUMS/U.S. Census Bureau American Community Survey.
Prepared by L. Knapp, Research & Planning, WY DWS, 4/25/17.

Structure and Composition of Demand: Industry

Despite the relatively small size of the manufacturing industry in Wyoming, employment is distributed across a wide variety of sub-sectors. In contrast to employment in the U.S. (see Figure 1, page 6) there is a greater concentration of firms and employment in petroleum & coal, chemical, plastics, and nonmetallic mineral product manufacturing in Wyoming. The concentration of economic activity in carbon-based manufacturing and supporting manufacturing of equipment, and selected firms in plastics and metal manufacturing in support of minerals extraction tends to tie manufacturing employment change in several of these sub-sectors to the fortunes of the mining industry.

Structure and Composition of Demand: Occupation

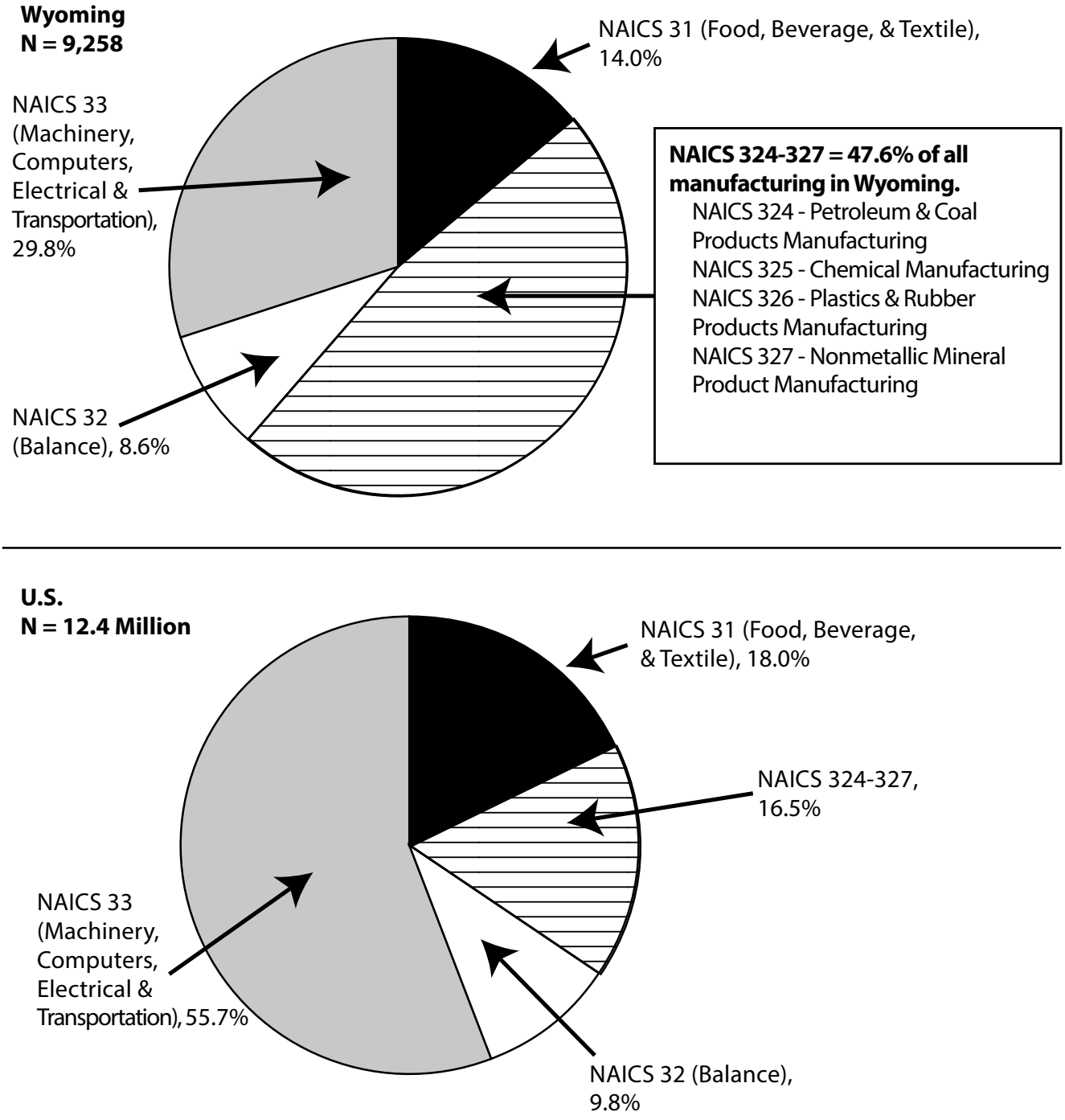
There is a substantial amount of diversity in the composition of manufacturing whether viewed from an industry (what firms do) or occupational (functions of jobs) perspective.

The chief distinctions in occupational demand are found in the overrepresentation of installation, maintenance & repair occupations at 11.7% of all jobs in manufacturing, compared to 6.3% of all wage and salary jobs (see Table 5, page 7). Production occupations make up nearly half (47.6%) of all jobs in manufacturing compared to 4.6% of all jobs. Some of the larger segments of production occupations are first line production supervisors, machinists, welders, petroleum pump system operators, and production worker helpers. Architectural and engineering jobs are about twice as likely to occur in manufacturing (at 4.1%) as in all jobs (1.8%) worked.

The median hourly rate of compensation in manufacturing, at $23.76, is 27.7% above the median wage in the market as a whole in Wyoming. The median annual wage for the general category of production occupations (SOC 51-000) is $45,456 with wide variation from $79,322 for chemical equipment operators (SOC 51-9011) to $27,690 for sewing machine operators (SOC 51-6031). Higher wages tend to be associated

(Text continued on page 7)

Manufacturing by 2-Digit NAICS[a]



[a]North American Industry Classification System.
Source: Quarterly Census of Employment and Wages. U.S. Bureau of Labor Statistics.
Prepared by M. Moore, Research & Planning, WY DWS, 4/24/17.

Figure 1: Distribution of Jobs by Two-Digit NAICS Code in Wyoming and the U.S., 2016Q3

(Text continued from page 5)

with lower turnover and therefore lower recruitment and replacement costs when compared to all industries. Moreover, as the literature on manufacturing in Wyoming has shown in the past, lower wage occupations are often the subject of shorter-term employment and higher turnover.

Occupations in Manufacturing and All Industries

Table 5: Jobs Worked and Median Wages in Manufacturing (NAICS[a] 31-33) and All Industries in Wyoming by Occupation, 2016

		Manufacturing (NAICS 31-33)				All Industries			
		Employment		Median Wages		Employment		Median Wages	
SOC[a] Code	Occupation	N	%	Hourly	Annual	N	%	Hourly	Annual
00-0000	**Total**	**9,440**	**100.0**	**$23.76**	**$49,431**	**276,120**	**100.0**	**$18.61**	**$38,713**
11-0000	Management Occs.	490	5.2	$54.48	$113,310	11,430	4.1	$41.89	$87,134
13-0000	Business & Financial Operations Occs.	280	3.0	$37.55	$78,110	8,480	3.1	$28.48	$59,246
15-0000	Computer & Math. Occs.	40	0.4	$35.20	$73,222	2,650	1.0	$28.16	$58,573
17-0000	Architecture & Engineering Occs.	390	4.1	$42.81	$89,054	4,860	1.8	$34.35	$71,456
19-0000	Life, Physical, & Social Science Occs.	100	1.1	$34.61	$71,986	4,200	1.5	$25.90	$53,870
21-0000	Community & Social Services Occs.	--	--	--	--	4,090	1.5	$21.93	$45,608
23-0000	Legal Occs.	--	--	--	--	1,580	0.6	$30.14	$62,687
25-0000	Education, Training, & Library Occs.	--	--	--	--	20,230	7.3	$22.58	$46,968
27-0000	Arts, Design, Ent., Sports, & Media Occs.	90	1.0	$19.75	$41,089	3,070	1.1	$17.08	$35,524
29-0000	Healthcare Practitioners & Technical Occs.	60	0.6	$40.39	$84,005	14,300	5.2	$29.37	$61,085
31-0000	Healthcare Support Occs.	--	--	--	--	6,630	2.4	$14.10	$29,332
33-0000	Protective Service Occs.	10	0.1	$25.32	$52,656	5,980	2.2	$19.75	$41,081
35-0000	Food Prep. & Serving-Related Occs.	90	1.0	$8.92	$18,560	25,180	9.1	$9.91	$20,604
37-0000	Building & Grounds Cleaning & Maintenance Occs.	60	0.6	$16.11	$33,501	11,670	4.2	$12.45	$25,894
39-0000	Personal Care & Service Occs.	--	--	--	--	8,110	2.9	$11.38	$23,661
41-0000	Sales & Related Occs.	270	2.9	$23.81	$49,526	25,320	9.2	$12.71	$26,427
43-0000	Office & Administrative Support Occs.	890	9.4	$17.59	$36,588	36,190	13.1	$16.06	$33,409
45-0000	Farming, Fishing, & Forestry Occs.	--	--	--	--	500	0.2	$14.23	$29,588
47-0000	Construction & Extraction Occs.	180	1.9	$23.07	$47,979	27,890	10.1	$22.88	$47,593
49-0000	Installation, Maintenance, & Repair Occs.	1,100	11.7	$34.27	$71,283	17,380	6.3	$24.79	$51,567
51-0000	Production Occs.	4,490	47.6	$21.85	$45,456	12,770	4.6	$23.44	$48,765
53-0000	Transportation & Material Moving Occs.	880	9.3	$17.48	$36,359	23,600	8.5	$19.21	$39,953

[a]North American Industry Classification System.

[b]Standard Occupational Classification.

Source: Occupational Employment Statistics May 2016 estimates. U.S. Bureau of Labor Statistics files using the LEWIS system.
Prepared by D. Hauf, Research & Planning, WY DWS, 4/20/17.

Benefits

Workers in manufacturing are also more likely to be offered such benefits as medical insurance, paid holidays, and retirement than workers as a whole. Higher earnings and the availability of benefits can contribute to viable local economies through worker spending, and in the case of health care, a greater likelihood of utilizing the local health care delivery system and enhancing the probability of its local continuation.

However, benefits offerings are associated with firms' size and full-time employment. Since many of the firms in manufacturing, e.g. refineries, tend to be among larger firms, it is not unusual to see employers utilizing indirect compensation as a retention tool.

Labor Supply: New Hires

R&P conducts a random sample survey of hires from employers to collect information about the characteristics of jobs filled and the conditions of employment (New Hires Job Skills Survey, or New Hires Survey). The sample is restricted to employment in firms for which the new hire has never before worked and seeks to exclude temporary jobs. For the most recent four-quarter period (2015), there were 113,204 hires meeting these criteria. Even in the middle of a downturn, some employers continued to hire, although at a lower level than during a period of growth.

The 2015 New Hires Survey estimates for the state, available at http://doe.state.wy.us/LMI/new_hires/2015/toc.htm, reveal that 14.1% of new hires went to nonresidents and that on average 76.6% of all new hires were retained one quarter after hire. On the other hand, in manufacturing, a lower proportion were hired from among nonresidents (10.2%) and the retention rate was higher, with 82.2% of new hires retained after one quarter. In the current market, manufacturers have lower recruitment and retention costs in comparison to employers in Wyoming as a whole. On the other hand, for certain occupations manufacturers are more dependent on nonresident labor.

The three most frequently occurring occupations for which manufacturers hired in 2015 were also more likely to include nonresidents than the average new hire occupation (10.2%). As can be seen in Table 6 (see page 9), there were an estimated 485 hires of welders (11.9% nonresidents); 150 hires of laborers and freight, stock, & material movers (19.2% nonresidents); and 127 hires of helpers – production workers (13.6% nonresidents) among whom nonresidents were over represented. Among new hires in manufacturing, half of these same laborers and 31.8% of helpers were age 24 and younger (and predominantly male). These low wage jobs may not serve to hold the interest of young and mobile populations. At lower wages, both the incidence of employment and frequency of turnover coincide. Of the six occupations making up relatively large shares of hires in Table 6, four paid an average wage of less than half the 2016 industry average of $23.76 (see Table 5, page 7) and only one required formal education beyond high school.

It is important to note that the annual average number of manufacturing jobs worked in a welding occupation was estimated at 510 (Gallagher, 2017, p. 12). With 485 hires of welders in Table 6, we gain some understanding of the volume of turnover employers experience for this

occupation. Similarly, the employment estimate for laborers and freight stock, & material movers is 150 jobs while the number of new hires was at that same level. The employment level for production worker helpers is 250, while hires were estimated at 127. These data at the occupational level begin to give us an appreciation for the dynamics of labor flow.

Postsecondary Education

The New Hires Survey estimates include both a rating by employers of selected skills and minimum education requirements for the job. A relatively small fraction of new hires involved at least some postsecondary educational requirements. When such requirements were present, the wages tended to rise well above the average wage for all hires. Higher wages are generally associated with a reduced need to replace turnover.

Table 7 (see page 10) shows the number of degrees awarded to Wyoming community college and University of Wyoming graduates in manufacturing-related programs of study for the combined 2011/12, 2012/13, and 2013/14 school years. Table 7 also shows the number, percentage, and hourly wage (in real 2015 dollars) of those graduates found working in Wyoming two years after graduation.

Table 7 shows that there were only two instances where more than one-third of graduates were found working in manufacturing: physical science technologies/technicians (one-year certificate) and post-graduate chemistry awards.

The supply of labor with postsecondary awards from higher education making

New Hires: Most Frequently Occurring

Table 6: **Selected New Hires Occupations in Manufacturing (NAICS[a] 31-33) in Wyoming, 2015**

SOC[b] Code	Occupation	Education	N	Median Hourly Wage ($)	% Nonresidents[c]	% Retained 1 Quarter After Hire
51-4121	Welders, Cutters, Solderers, & Brazers	High School Diploma or Equivalent	485	18.00	11.9	81.0
53-7062	Laborers & Freight, Stock, & Material Movers, Hand	Less than High School	150	12.00	19.2	88.5
51-9198	Helpers – Production Workers	Less than High School	127	12.00	13.6	68.2
51-2099	Assemblers & Fabricators, All Other	High School Diploma or Equivalent	58	12.00	30.0	100.0
11-1021	General & Operations Managers	Bachelor's Degree	46	30.00	12.5	75.0
53-7051	Industrial Truck & Tractor Operators	Less than High School	46	12.87	12.5	75.0
00-0000	**All Occupations**	**N/A**	**2,718**	**15.00**	**10.2**	**82.8**

[a]North American Industry Classification System.
[b]Standard Occupational Classification.
[c]Nonresidents are individuals for whom demographic data are not available.
Source: New Hires Job Skills Survey, Research & Planning, WY DWS.
Prepared by M. Moore, Research & Planning, WY DWS, 4/25/17.

their way to employment in manufacturing appears to be sufficient. In 15 out of 18 fields of study in which graduation is associated with work in manufacturing, Table 7 shows that less than 20% find work in manufacturing two years after graduation.

Consumer Reports: Wyoming Career Assist, the source of data in Table 7, includes narrative documentation, tables, and interactive graphics for all fields of postsecondary study in Wyoming and employment outcomes in Wyoming and in 11 other states. It may be accessed at http://doe.state.wy.us/LMI/education_we_connect/2017/consumer_reports_intro.htm.

Educational Requirements: Discussion

In the OES program and in the New Hires Survey, R&P attaches the typical entry-level education, work experience in a related occupation, and on-the-job training necessary to work in the occupation as determined by BLS. While there may be

Postsecondary Graduates

Table 7: **Number of Degrees Awarded from a Wyoming Community College or the University of Wyoming Found Working in Manufacturing in Wyoming Two Years After Graduation (2011/12, 2012/13, & 2013/14 Graduates)**

				Working in Manufacturing in WY		
College	Program of Study	Degree	Number of Degrees	N	%	Median Hourly Wage
All Community Colleges	Electrical/Electronics Maintenance & Repair Technology	Occupational 1 Year	53	8	15.1	42.56
		Occupational 2 Year	54	11	20.4	30.61
	Engineering, General	Academic	107	8	7.5	26.72
	Heavy/Industrial Equipment Maintenance Technologies	Occupational 2 Year	28	5	17.9	39.67
	Liberal Arts & Sciences, General Studies & Humanities	Academic	1,695	20	1.2	15.77
	Mathematics	Academic	62	6	9.7	16.82
	Physical Science Technologies/Technicians	Occupational 1 Year	44	15	34.1	28.83
	Precision Metal Working	Occupational 1 Year	328	44	13.4	20.94
		Occupational 2 Year	190	29	15.3	21.38
	Teacher Education and Professional Development, Specific Levels & Methods	Academic	514	7	1.4	17.76
	Vehicle Maintenance & Repair Technologies	Occupational 1 Year	257	12	4.7	18.03
		Occupational 2 Year	179	10	5.6	24.66
University of Wyoming	Business Administration, Management & Operations	Master's\Doctorate\ Professional	94	5	5.3	50.09
	Chemical Engineering	Bachelor's	61	10	16.4	40.16
	Chemistry	Master's\Doctorate\ Professional	14	5	35.7	38.87
	Electrical, Electronics & Communications Engineering	Bachelor's	56	5	8.9	30.88
	Geography and Cartography	Bachelor's	50	5	10.0	24.85
	Mechanical Engineering	Bachelor's	108	15	13.9	30.32

Source: Consumer Reports: Wyoming Career Assist. Research & Planning, WY DWS. Published February 14, 2017, at http://doe.state.wy.us/LMI/education_we_connect/2017/consumer_reports_intro.htm.

Prepared by T. Glover, Research & Planning, WY DWS, 4/24/17.

alternative and multiple career paths to success in an occupation, the system used in this publication focuses on the typical pathway as defined by BLS. For more information, see https://stats.bls.gov/emp/ep_education_tech.htm.

Education and training requirements for the 2016 OES estimates are provided in Table 8. Following the BLS standards, data reveal that almost 80% of jobs in Wyoming manufacturing in 2016 required no more formal education than a high school diploma or equivalent and that only 14% of jobs required a bachelor's degree or higher. However, the BLS system of assigning education and training requirements may not be representative of employer requirements in Wyoming, nor does it acknowledge the role of employer-provided training and related non-degree awards.

In addition, most students in postsecondary education work for pay at least some time during the school year. Many students in Wyoming use work as a means of financing their education (see *Wyoming's Hathaway Scholarship Program: A Workforce Outcomes Evaluation of a State Merit-Based Scholarship Initiative Using Administrative Records*, available at http://doe.state.wy.us/LMI/education_we_connect/hathaway2016/toc_hathaway.htm). It is clear that everyone brings at least some level of educational attainment to the manufacturing work environment. How educational attainment and the work environment interact to serve both employer and worker needs in the market is the focus of an expanding future study.

Labor Supply: Stocks and Flows

During peak seasonal periods of UI claims activity, between one-fifth and one-fourth of persons claiming weekly benefits against job loss from an employer located in Wyoming do so from a nonresident address. However, during the peak of a cyclical downturn, more than one-third of all claims are filed from a nonresident address (Mohondro, 2016).

Given the extensive connection between the processing of carbon-based mined products in manufacturing and the system of supporting manufactures (e.g. plastics and machinery), it is not unusual to find that UI claims activity follows a pattern similar to that of all industries when commodity prices change direction dramatically. Figure 2 (see page 12), which depicts the over-the-year percentage change in UI claims activity (a claim represents a request for weekly benefit amount and a person may file for two weeks at a time) from 2000 to present, clearly demonstrates the close correlation between claims activity

Educational Requirements

Table 8: Typical Education Required to Enter an Occupation for Jobs Worked in Manufacturing (NAICS[a] 31-33) in Wyoming, 2016

Typical Education	N	%
No Formal Educational Credential	1,204	12.8
High School Diploma or Equivalent	6,319	66.9
Some College, No Degree	138	1.5
Postsecondary Non-Degree Award	304	3.2
Associate's Degree	154	1.6
Bachelor's Degree or Higher	1,317	14.0
All Occupations	**9,440**	**100.0**

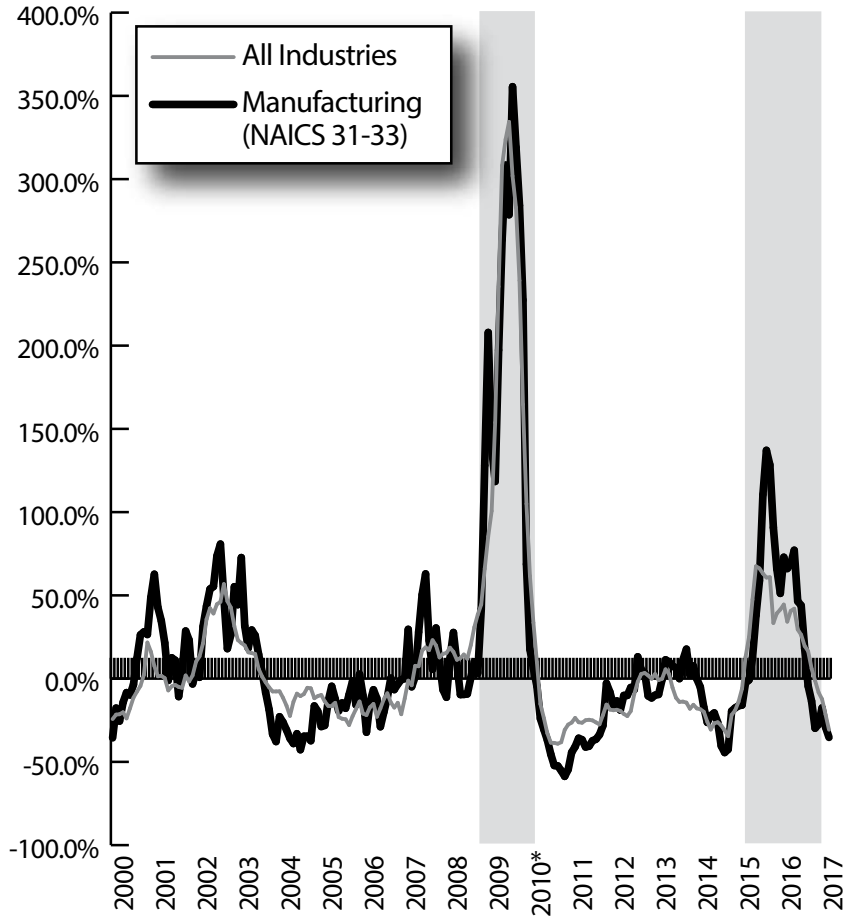
[a]North American Industry Classification System.

Source: Occupational Employment Statistics May 2016 estimates. U.S. Bureau of Labor Statistics files using the LEWIS system.

Prepared by D. Hauf and M. Moore, Research & Planning, WY DWS, 4/25/17.

in manufacturing and statewide claims activity.

The number of persons (the workforce) claiming UI benefits underpinning the percent changes in Figure 2 can be found in Tables 9 and 10 (see page 13). In 2015, the 963 persons who were claimants represented 8.2% of the 11,684 persons whose primary industry of employment was manufacturing (see Table 9). In 2014, the 2,995 persons in manufacturing who claimed UI benefits represented 25.4% of the 11,778 workers whose primary industry was manufacturing. The number of claimants decreased from 2014 to 2015, while weeks claimed increased (see Figure 2), indicating that the number of weeks claimed per claimant rose substantially. With the number of jobs decreasing across Wyoming's labor market, the decrease in the number of manufacturing claimants and benefit exhaustees (claimants using all of the weeks to which they are entitled) is perhaps best explained by out-migration from Wyoming.



Shaded areas indicate periods of economic downturn: 2009Q1 to 2010Q1 and 2015Q2 to 2016Q4 (most recent data).
*Revised 1/28/2011 to account for a coding change which occurred in November 2009. The coding change affects data from that point forward.
Source: Research & Planning, Wyoming Department of Workforce Services. (2016). Unemployment Insurance statistics (http://doe.state.wy.us/LMI/ui.htm).
Prepared by M. Moore, Research & Planning, WY DWS, 4/26/17.

Figure 2: Over-the-Year Percentage Change in Continued Unemployment Insurance Continued Weeks Claimed, January 2000 to March 2017

Commuting

Inter-state and intra-state commuting represents one mechanism the market uses to channel labor to high demand employment opportunities and to shed those workers when no longer needed. Commuting (see http://doe.state.wy.us/LMI/commute.htm) has both a seasonal and trend component. The distance commuted tends to be directly and positively related to earnings opportunity and the demographics of the workforce.

Table 11 (see page 14) shows the number of persons commuting to another

county within Wyoming and the number of persons commuting from another state into Wyoming. The peak seasonal quarter for commuting is the third quarter. In 2016Q3, 23.3% of all persons working in the state commuted across a county or state line, with 14.8% coming from another state and 9.1% from another county.

Commuting by Wyoming residents to a surrounding state for work can be found in Figure 3 (see page 14). This figure reveals that Colorado is the chief destination for over 8,000 residents of Wyoming who work in another state. As Figure 4 (see page 15)

UI Benefit Recipients in Manufacturing

Table 9: **Total Number of Persons Working at Any Time and Unemployment Insurance (UI) Benefit Recipients in Manufacturing (NAICS[a] 31-33) in Wyoming, 2006-2015**

	Persons Working[b]	UI Benefit Recipients[c]	
Year	N	N	Row %
2006	12,450	632	5.1
2007	12,424	784	6.3
2008	12,224	941	7.7
2009*	11,106	5,230	47.1
2010*	10,722	4,766	44.5
2011	11,219	4,195	37.4
2012	11,501	3,846	33.4
2013	11,695	3,771	32.2
2014	11,778	2,995	25.4
2015	11,684	963	8.2

[a]North American Industry Classification System.

[b]Source: Employment and Earnings by Industry, County, Age, & Gender, 2000-2015 (http://doe.state.wy.us/LMI/earnings_tables/2016/Index.htm). Research & Planning, WY DWS.

[c]Source: Unemployment Insurance Statistics. Research & Planning, WY DWS.

*Revised January 31, 2011 to reflect a code change which occurred in November 2009.

Prepared by M. Moore, Research & Planning, WY DWS, 7/6/17.

UI Benefit Recipients

Table 10: **Selected Unemployment Insurance Benefit Recipient Data for Wyoming, 2001-2016**

	Manufacturing				Nonresidents[a]				Total Claimants			
			Benefit Exhaustees				Benefit Exhaustees				Benefit Exhaustees	
Year	N	Row %	N	Rate	N	Row %	N	Rate	N	Row %	N	Rate
2006	632	5.2	136	21.5	3,639	29.8	952	26.2	12,201	100.0	2,885	23.7
2007	784	6.0	151	19.3	3,837	29.4	934	24.3	13,064	100.0	2,804	21.5
2008	941	5.6	158	16.8	5,128	30.3	1,156	22.5	16,916	100.0	3,450	20.4
2009*	5,230	14.0	1,807	34.6	12,322	33.1	4,164	33.8	37,251	100.0	12,069	32.4
2010*	4,766	13.9	2,025	42.5	11,518	33.5	4,263	37.0	34,388	100.0	12,304	35.8
2011	4,195	15.1	1,356	32.3	9,494	34.2	3,120	32.9	27,756	100.0	8,710	31.4
2012	3,846	15.0	1,130	29.4	9,946	38.8	2,623	26.4	25,617	100.0	6,725	26.3
2013	3,771	15.8	1,041	27.6	9,529	39.9	2,462	25.8	23,854	100.0	6,098	25.6
2014	2,995	15.6	699	23.3	7,315	38.0	1,688	23.1	19,232	100.0	4,257	22.1
2015	963	4.2	187	19.4	5,198	22.8	1,468	28.2	22,753	100.0	4,880	21.4
2016	1,119	4.3	311	27.8	4,895	18.8	1,507	30.8	26,101	100.0	6,735	25.8

[a]Nonresidents are individuals for whom demographic data are not available.

Note: Nonresidents and manufacturing are not mutually exclusive. Benefit recipients in manufacturing may have also been nonresidents.

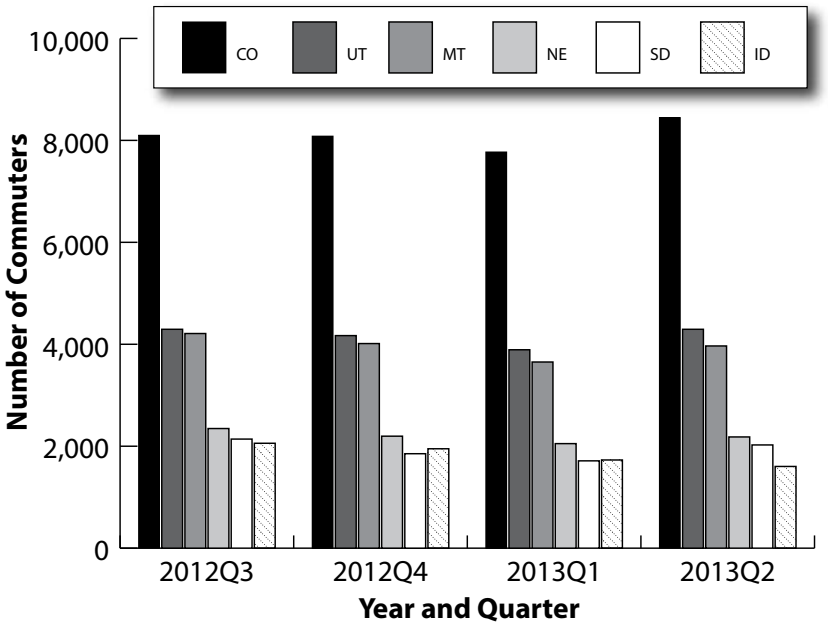
*Revised January 31, 2011 to reflect a code change which occurred in November 2009.

Source: Unemployment Insurance Statistics. Research & Planning, WY DWS.

Prepared by M. Moore, Research & Planning, WY DWS, 4/26/17.

reveals, a significant number of Wyoming residents commute to surrounding states to find work in the manufacturing industry. Both Figures 3 and 4 represent a time when jobs were increasing in Wyoming. Whether due to wage competition, a more efficient match between worker skills and employer needs, or simply a preference for where one resides, it is apparent that the workforce disregards state boundaries and that workers may reside in Wyoming and establish employer loyalty in other states. With rapid expansion in employment opportunities among surrounding states, such as Colorado, Idaho, and Montana, those markets may be increasingly attractive to Wyoming job losers. The attractiveness of neighboring markets is relative, and building capacity to quantify the attractiveness of those markets is of potential interest in determining workforce development strategies for Wyoming.

Commuting: Outflow



Source: Wyoming Wage Records database.
Excerpted from Cowan, C., and Bullard, D. Understanding how commuting flows and job losses in other states could affect Wyoming's unemployment rate. *Wyoming Labor Force Trends, 52*(4).
Retrieved from http://doe.state.wy.us/LMI/trends/0415/a2.htm
Prepared by L. Mohondro, Research & Planning, WY DWS.

Figure 3: **Wyoming Commuters into Border States, 2012Q3-2013Q2**

Jobs in Wyoming's manufacturing industry have experienced negative

Commuting: Inflow

Table 11: **Number of Persons Working in Wyoming by Place of Residency, 2016Q1 and 2016Q3**

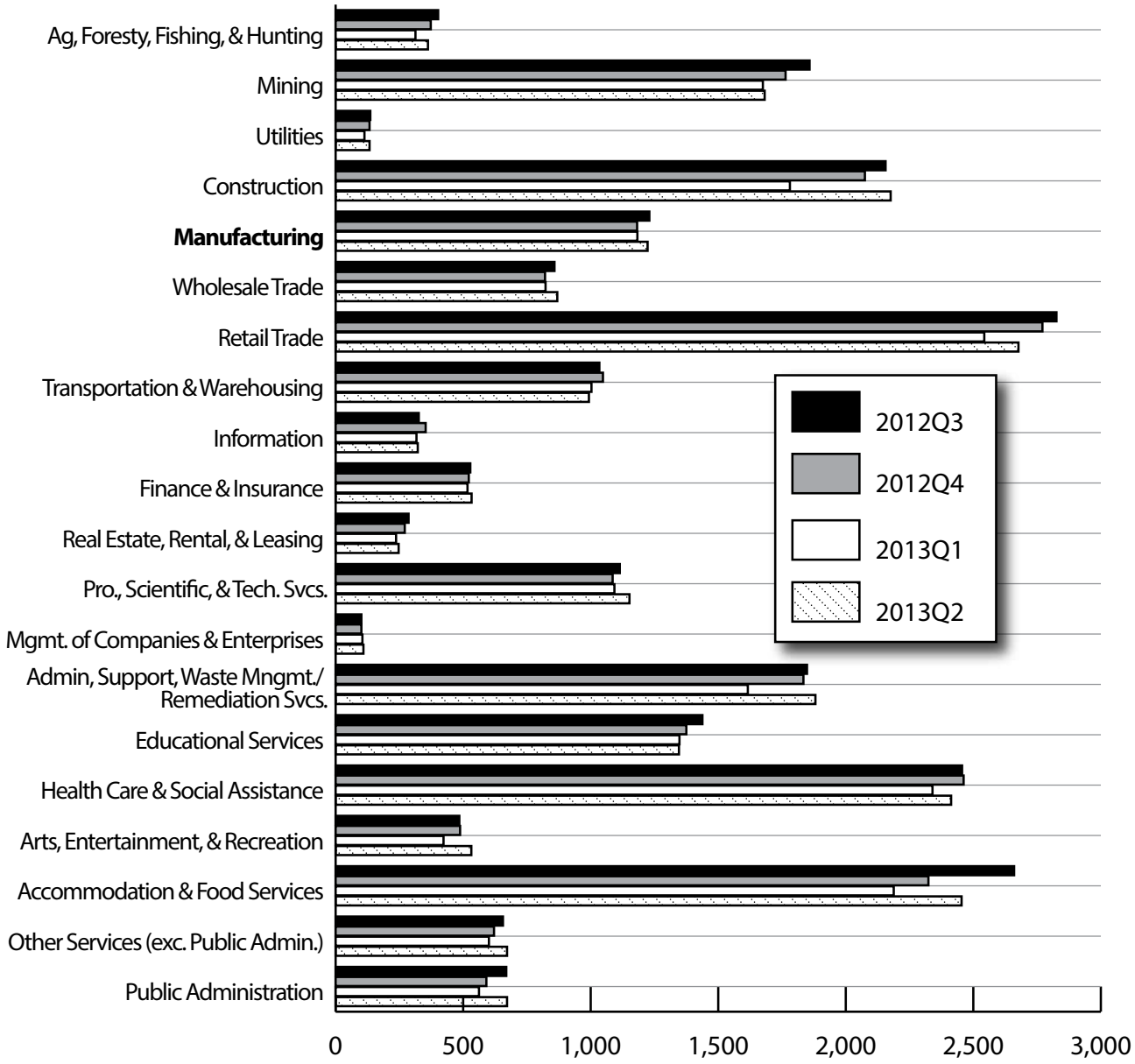
					Inflow from Another Wyoming County or Another State or Country					
	Total		Home County[a]		Other WY County[b]		Nonresidents[c]		Total Inflow[d]	
Year and Quarter	N	%	N	%	N	%	N	%	N	%
2016Q1	299,863	100.0	235,798	78.6	29,290	9.8	34,775	11.6	64,065	21.4
2016Q3	323,285	100.0	240,732	74.5	29,423	9.1	47,877	14.8	75,374	23.3

[a]Individuals who are employed in their county of residence.
[b]Individuals who commute to work from another Wyoming county.
[c]Individuals for whom demographic data are not available and commute to work in Wyoming from another state or country.
[d]All individuals who commute into a county from another Wyoming county or another state or country.
Source: Research & Planning Commuting Patterns based on Wage Records (County of Employment) and Wyoming Driver's License File (County of Residence).

Prepared by M. Moore, Research & Planning, WY DWS, 4/26/17.

change for the past seven calendar quarters through 2016Q4, the most recent period for which payroll data are available (see Figure 5, page 16). Jobs have fallen by 7.9% (-798) since their quarterly peak in 2014Q4 during the last expansion while the payroll fell over the same period by $9.5 million, or 6.0%. The annualized wage of the 798 jobs lost in 2016Q4 is almost $48,000, which is consistent with median wages ($45,456)

Commuting: Outflow



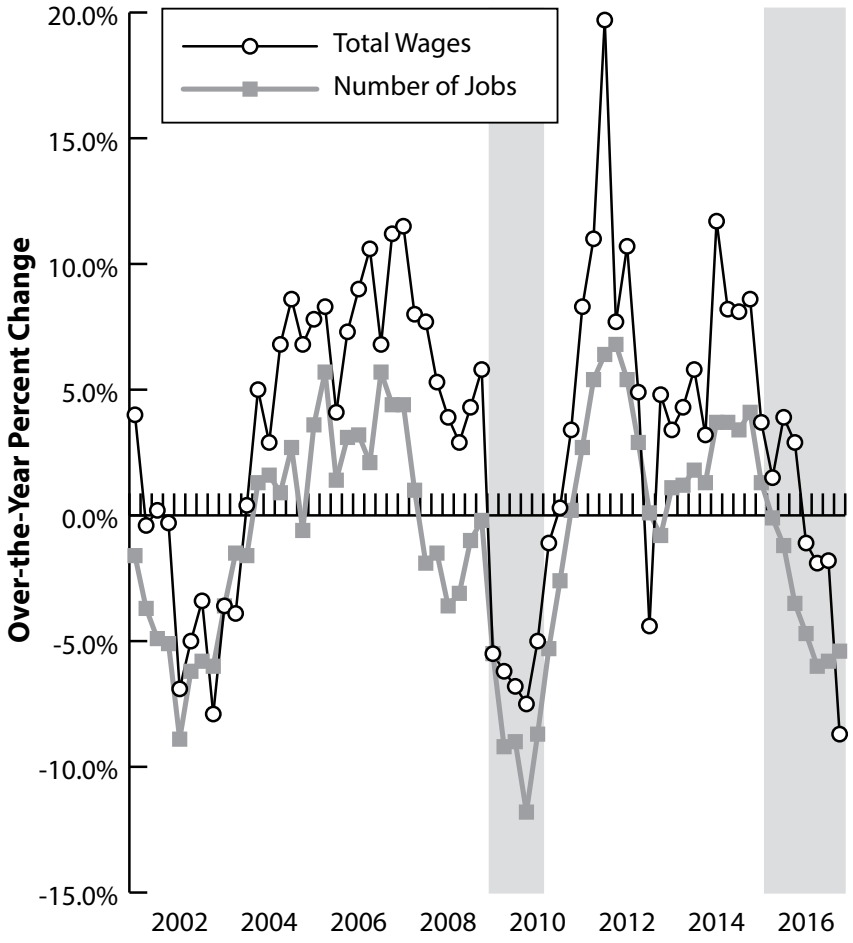
Source: Wyoming Wage Records database.
Excerpted from Cowan, C., and Bullard, D. Understanding how commuting flows and job losses in other states could affect Wyoming's unemployment rate. *Wyoming Labor Force Trends, 52*(4). Retrieved from http://doe.state.wy.us/LMI/trends/0415/a2.htm
Prepared by L. Mohondro, Research & Planning, WY DWS.

Figure 4: Wyoming Commuters into Border States by Industry, 2012Q3-2013Q2

in the general category of production occupations.

Information on the occupations of jobs lost thus far in manufacturing's downturn from the UI claims record is of uncertain quality. However, since the average wage continues to increase in the early quarters of job loss, it seems most likely that lower wage helper & laboring production occupations that most frequently occur among new hires are the most likely to have been put out of work in the manufacturing industry. Since persons in these jobs tend to be relatively young among residents, and have a larger than average share of nonresidents among them, they may well have left the state entirely.

The manufacturing workforce today is neither the same size nor comprised of entirely the same individuals as it was two years ago. It is unclear when, or with what strength, Wyoming's labor market will begin to recover. This uncertainty is exacerbated by the fact that the national economy is in the longest period of growth on record and cannot go on indefinitely. In the interim, the aging of manufacturing's workforce will create a need to hire replacements. Should the growth of jobs reappear, the occupations most frequently occurring among new hires probably represent the most likely skill sets required. Although the question is the subject of future research, it seems most likely that job loss in the manufacturing industry precipitated out-migration or an increase in commuting to other states for work. This means that should employment growth return, unless manufacturing can compete with other states on the basis of earnings, the pipeline for new workers is most likely to be local communities.



Shaded areas indicate periods of economic downturn: 2009Q1 to 2010Q1 and 2015Q2 to 2016Q4 (most recent data). 2016Q3 data are preliminary.
Source: Quarterly Census of Employment and Wages.
Revised by M. Moore, Research & Planning, WY DWS, 4/26/17.

Figure 5: **Over-the-Year Percent Change in Jobs Worked and Total Wages in Manufacturing in Wyoming, 2002Q2-2016Q4**

Wyoming Gross State Product and U.S. Gross Domestic Product by Industry, 2009-2016

By: Katelynd Faler, Senior Economist, and Michael Moore, Editor

The tables and figures in this article compare Wyoming's economy to the national economy in the years 2009, 2015, and 2016. These years are significant to the state economy because they represent periods of economic downturn (Moore, 2016). Throughout 2009 and into first quarter 2010 (2010Q1), Wyoming's economy contracted just as the national Great Recession was ending (National Bureau of Economic Research, 2010). Over the next five years, Wyoming's economy experienced inconsistent growth in total wages, average monthly employment, and average weekly wages before falling into another economic downturn beginning in the second quarter of 2015 and continuing through 2016 (Moore, 2010).

This article compares Wyoming's economy to the national economy based on the value of the final use of goods and services they produced; at the national level, this is known as gross domestic product (GDP) and, for the purpose of this article, Wyoming's gross state product (GSP). While the National Bureau of Economic Research "does not define a recession in terms of two consecutive quarters of decline in real GDP," Research & Planning chose to use GDP because the Bureau indicates that widespread economic activity is "normally visible in real GDP" among other factors (National Bureau of Economic Research, n.d).

GDP is an estimate that goes through multiple revisions, where each round incorporates new and better data. The Bureau of Economic Analysis estimates GDP using government spending on wages and salaries, revenue reports of cellular telephone companies, rental income, private investment in research and development, retail sales, and sales of nondiesel gasoline and electricity, among many other factors (Holdren, 2014).

Discussion

Bullard (2015) noted that in 2015Q1, mining paid approximately $1 of every $5 in total covered Unemployment Insurance (UI) wage and salary compensation in Wyoming. The following quarter (2015Q2), Wyoming entered a period of economic downturn based on the "substantial decline in the prices of oil, an extended period of low natural gas prices, and the erosion in the price of coal" (Gallagher, 2016) that persisted through at least 2016Q4.

The Table (see page 18) shows Wyoming's GSP (in millions of dollars) and the national GDP (in billions of dollars) for 2009, 2015, and 2016 by industry as identified by the North American Industry Classification System (NAICS), along with the change from 2009 to 2016. From 2009 to 2016, the national GDP grew by 17.8% (U.S. Bureau of Economic Analysis, 2017). The largest percentage increases were seen in information (32.3%, or $390 billion), professional & business services (29.2%, or $758 billion), retail trade (26.4%, or $322 billion), and leisure & hospitality (25.2%, or $238 billion).

By comparison, Wyoming's GSP decreased by 7.2% from 2009 to 2016.

(Text continued on page 19)

Table: **Wyoming Gross State Product and U.S. Gross Domestic Product by Industry, 2009, 2015, and 2016**

Wyoming Gross State Product (in Millions of Dollars)

Industry and NAICS[a] Code	2009	2015	2016	Change, 2009-2016 $	Change, 2009-2016 %
Private Industry	**$32,050**	**$30,350**	**$29,086**	**-$2,964**	**-9.2**
Natural Resources & Mining (11, 21)	$12,848	$9,788	$9,050	-$3,798	-29.6
Construction (23)	$2,016	$1,981	$1,753	-$263	-13.0
Manufacturing (31-33)	$1,645	$1,779	$1,884	$239	14.5
Wholesale Trade, Transportation, & Utilities (42,22,48, & 49)	$4,254	$4,761	$4,514	$260	6.1
Retail Trade (44-45)	$1,965	$2,014	$1,997	$32	1.6
Information (51)	$549	$597	$614	$65	11.8
Financial Activities (52)	$4,009	$4,886	$4,783	$774	19.3
Professional & Business Services (54-56)	$1,482	$1,629	$1,534	$52	3.5
Educational Services (61)	$78	$70	$68	-$10	-12.8
Health Care & Social Assistance (62)	$1,385	$1,458	$1,485	$100	7.2
Leisure & Hospitality (71-72)	$1,200	$1,308	$1,281	$81	6.8
Other Services (81)	$619	$542	$507	-$112	-18.1
Government	**$5,080**	**$5,411**	**$5,378**	**$298**	**5.9**
Federal	$1,140	$1,063	N/A	N/A	N/A
State and Local	$3,940	$4,346	N/A	N/A	N/A
Total	**$37,129**	**$35,726**	**$34,439**	**-$2,690**	**-7.2**

U.S. Gross Domestic Product (in Billions of Dollars)

Industry and NAICS[a] Code	2009	2015	2016	Change, 2009-2016 $	Change, 2009-2016 %
Private Industry	**$21,426**	**$25,305**	**$25,880**	**$4,454**	**20.8**
Natural Resources & Mining (11, 21)	$722	$865	$807	$84	11.7
Construction (23)	$1,090	$1,183	$1,232	$142	13.0
Manufacturing (31-33)	$4,469	$5,309	$5,381	$911	20.4
Wholesale Trade, Transportation, & Utilities (42,22,48, & 49)	$2,255	$2,724	$2,712	$457	20.3
Retail Trade (44-45)	$1,223	$1,508	$1,545	$322	26.4
Information (51)	$1,205	$1,529	$1,595	$390	32.3
Financial Activities (52)	$4,421	$4,925	$5,024	$604	13.7
Professional & Business Services (54-56)	$2,596	$3,231	$3,354	$758	29.2
Educational Services (61)	$259	$284	$289	$30	11.5
Health Care & Social Assistance (62)	$1,716	$2,013	$2,118	$402	23.4
Leisure & Hospitality (71-72)	$943	$1,141	$1,181	$238	25.2
Other Services (81)	$526	$580	$609	$83	15.8
Government	**$3,231**	**$3,121**	**$3,160**	**-$71**	**-2.2**
Federal	$1,074	$995	$1,002	-$72	-6.7
State and Local	$2,157	$2,124	$2,156	-$1	0.0
Total	**$24,657**	**$28,425**	**$29,038**	**$4,381**	**17.8**

Real dollars. 2009 Consumer Price Index = 100.

Source: U.S. Bureau of Economic Analysis, Real GDP by State (Millions of Chained 2009 Dollars). Retrieved June 16, 2016, from https://www.bea.gov/regional/index.htm and https://www.bea.gov/national/index.htm#gdp.

N/A = Not available. The U.S. Bureau of Economic Analysis updates data at several points throughout the year, and federal, state, and local government data for 2016 were not available for Wyoming when these tables were updated May 11, 2017.

[a]North American Industry Classification System.

Revised by M. Moore, Research & Planning, WY DWS, 6/16/17.

(Text continued from page 17)

The state's most substantial percentage decreases were seen in natural resources & mining (-29.6%, or -$3.8 billion), other services (-18.1%, or -$112 million), and private educational services (-12.8%, or -$10 million). The industries that experienced the greatest percentage growth in Wyoming were financial activities (19.3%, or $774 million), manufacturing (14.5%, or $239 million), and information (11.8%, or $65 million).

As illustrated in the Figure (see page 20), in terms of industry contribution, the national GDP was largely unchanged from 2009 to 2016. In Wyoming, however, natural resources & mining made up considerably less of the state GSP in 2016 (26.3%) than in 2009 (34.6%). In other words, approximately $1 of every $3 of the state's GSP in 2009 came from the mining sector. In 2016, mining contributed approximately $1 of every $4.

Conclusion

The economic downturn that began in 2015Q2 led to a substantial decline in Wyoming's GSP. In 2016, mining contributed $3.8 billion less to the GSP than in 2009 (see the Table). While moderate growth in industries such as financial activities and manufacturing have partially offset the losses in mining, Wyoming's GSP still decreased by $2.7 million (-7.2%) from 2009 to 2016.

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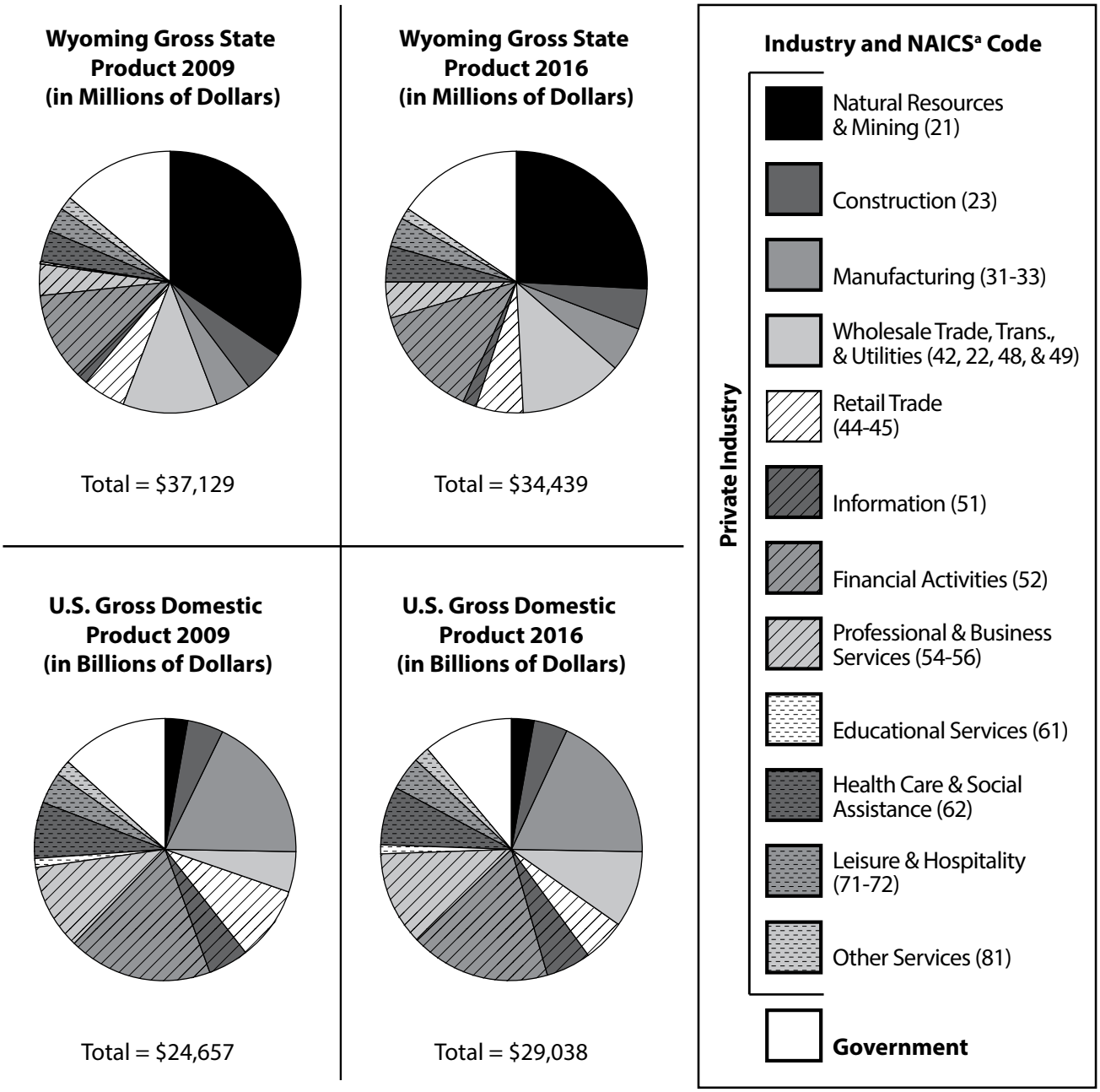


Real dollars. 2009 Consumer Price Index = 100.
Source: U.S. Bureau of Economic Analysis, Real GDP by State (Millions of Chained 2009 Dollars). Retrieved June 16, 2017, from https://www.bea.gov/regional/index.htm and https://www.bea.gov/national/index.htm#gdp.
[a]North American Industry Classification System.
Revised by K. Faler and M. Moore, Research & Planning, WY DWS, 6/16/17.

Figure: **Wyoming Gross State Product and U.S. Gross Domestic Product by Industry, 2009 and 2016**

Wyoming Unemployment Rate Unchanged at 4.8% in Jan. 2017

by: David Bullard, Senior Economist

The Research & Planning section of the Wyoming Department of Workforce Services reported that the state's seasonally adjusted[1] unemployment rate was unchanged from December to January at 4.8%. Wyoming's unemployment rate was slightly lower than its January 2016 level of 5.1%. Seasonally adjusted employment of Wyoming residents increased slightly from December to January, rising by an estimated 1,309 individuals (0.5%; not a statistically significant change).

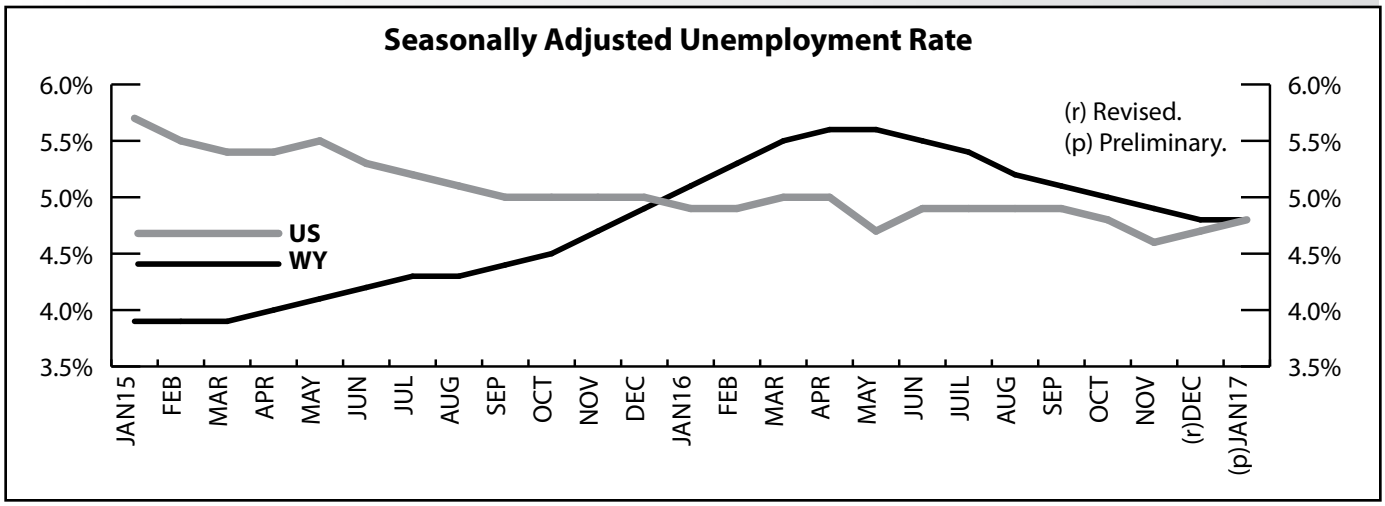
From December to January, almost all county unemployment rates followed their normal seasonal pattern and increased. Unemployment often increases in January because of seasonal job losses in many sectors, including construction; retail trade; transportation, warehousing, & utilities; professional & business services; and government. The largest unemployment rate increases were seen in Park (up from 5.1% to 6.2%), Fremont (up from 6.5% to 7.5%), Johnson (up from 5.5% to 6.5%), and Sheridan (up from 4.6% to 5.6%) counties. Teton County's unemployment rate fell from 3.7% to 2.9%.

From January 2016 to January 2017, unemployment rates fell in 19 counties, rose in three counties and remained unchanged in Converse County (5.8%). The largest decreases occurred in Lincoln (down from 6.2% to 4.8%), Sublette (down from 7.3% to 6.2%), Sheridan (down from 6.5% to 5.6%), Niobrara (down from 4.2% to 3.3%), and Carbon (down from 5.7% to 4.8%) counties.

Teton County (2.9%) posted the lowest unemployment rate in January. It was followed by Niobrara (3.3%), Goshen (3.3%), and Albany (3.4%) counties. The highest unemployment rates were found in Natrona (7.6%), Fremont (7.5%), and Campbell (6.7%) counties.

The estimate of total nonfarm jobs (not seasonally adjusted and measured by place of work) fell from 278,300 in January 2016 to 269,000 in January 2017, a decrease of 9,300 jobs (or –3.3%; a statistically significant decrease).

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.



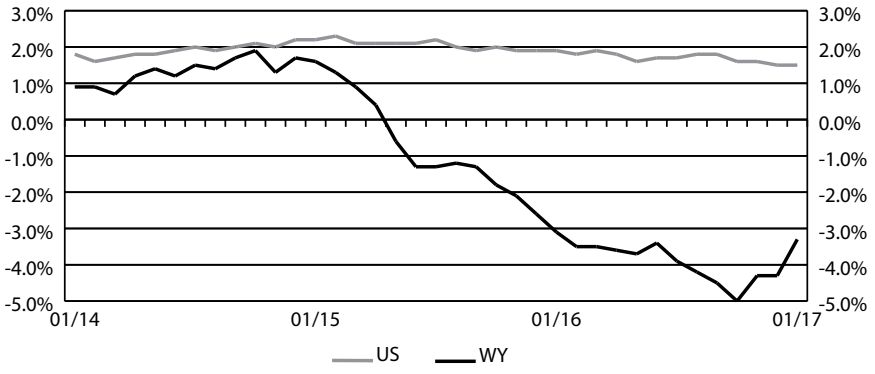
Current Employment Statistics (CES) Estimates and Research & Planning's Short-Term Projections, January 2017

by: David Bullard, Senior Economist

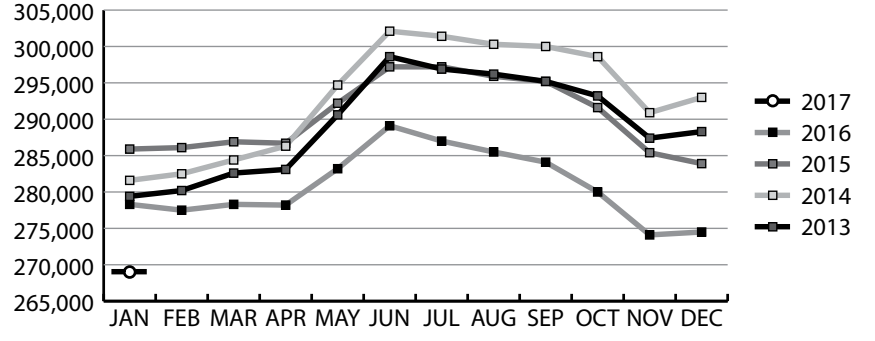
Industry Sector	Research & Planning's Short-Term Projections	Current Employment Statistics (CES) Estimates	N Difference	% Difference
Total Nonfarm Employment	**268,295**	**269,000**	**705**	**0.3%**
Natural Resources & Mining	17,498	18,400	902	4.9%
Construction	17,544	18,300	756	4.1%
Manufacturing	9,027	9,200	173	1.9%
Wholesale Trade	8,096	8,300	204	2.5%
Retail Trade	29,634	29,600	-34	-0.1%
Transportation & Utilities	14,027	14,300	273	1.9%
Information	3,675	3,700	25	0.7%
Financial Activities	10,563	10,400	-163	-1.6%
Professional & Business Services	16,638	16,400	-238	-1.5%
Educational & Health Services	27,871	27,900	29	0.1%
Leisure & Hospitality	32,770	32,300	-470	-1.5%
Other Services	10,817	10,800	-17	-0.2%
Government	70,135	69,400	-735	-1.1%

Projections were run in February 2017 and based on QCEW data through September 2016.

Nonagricultural Employment Growth (Percentage Change Over Previous Year)



Wyoming Nonagricultural Wage and Salary Employment



State Unemployment Rates January 2017 (Seasonally Adjusted)

State	Unemp. Rate
Puerto Rico	12.2
New Mexico	6.7
Alaska	6.5
Alabama	6.4
Louisiana	5.9
District of Columbia	5.7
Illinois	5.7
West Virginia	5.6
Georgia	5.5
Mississippi	5.5
Tennessee	5.4
North Carolina	5.3
Michigan	5.2
Pennsylvania	5.2
California	5.1
Washington	5.1
Arizona	5.0
Florida	5.0
Kentucky	5.0
Nevada	5.0
Ohio	5.0
Texas	4.8
Wyoming	**4.8**
United States	**4.8**
Oklahoma	4.7
Rhode Island	4.7
New Jersey	4.6
New York	4.6
Connecticut	4.5
Delaware	4.4
South Carolina	4.4
Oregon	4.3
Maryland	4.2
Missouri	4.2
Kansas	4.1
Indiana	4.0
Minnesota	4.0
Virginia	4.0
Montana	3.9
Wisconsin	3.9
Arkansas	3.8
Idaho	3.6
Maine	3.5
Iowa	3.3
Nebraska	3.3
Massachusetts	3.2
Utah	3.1
Vermont	3.1
North Dakota	3.0
Colorado	2.9
South Dakota	2.9
Hawaii	2.8
New Hampshire	2.7

Wyoming Nonagricultural Wage and Salary Employment

by: David Bullard, Senior Economist

	Employment in Thousands			% Change Total Employment	
	Jan 17	Dec 16	Jan 16	Jan 17 Dec 16	Jan 17 Jan 16
CAMPBELL COUNTY					
TOTAL NONAG. WAGE & SALARY EMPLOYMENT	**24.3**	**24.7**	**27.0**	**-1.6**	**-10.0**
TOTAL PRIVATE	**19.1**	**19.5**	**21.7**	**-2.1**	**-12.0**
GOODS PRODUCING	**7.6**	**7.8**	**9.3**	**-2.6**	**-18.3**
Natural Resources & Mining	5.4	5.4	6.8	0.0	-20.6
Construction	1.8	2.0	2.0	-10.0	-10.0
Manufacturing	0.4	0.4	0.5	0.0	-20.0
SERVICE PROVIDING	**16.7**	**16.9**	**17.7**	**-1.2**	**-5.6**
Trade, Transportation, & Utilities	5.1	5.2	5.8	-1.9	-12.1
Information	0.2	0.2	0.2	0.0	0.0
Financial Activities	0.7	0.7	0.7	0.0	0.0
Professional & Business Services	1.5	1.6	1.6	-6.3	-6.3
Educational & Health Services	1.1	1.1	1.1	0.0	0.0
Leisure & Hospitality	2.2	2.2	2.2	0.0	0.0
Other Services	0.7	0.7	0.8	0.0	-12.5
GOVERNMENT	**5.2**	**5.2**	**5.3**	**0.0**	**-1.9**

	Employment in Thousands			% Change Total Employment	
	Jan 17	Dec 16	Jan 16	Jan 17 Dec 16	Jan 17 Jan 16
SWEETWATER COUNTY					
TOTAL NONAG. WAGE & SALARY EMPLOYMENT	**22.0**	**22.7**	**23.2**	**-3.1**	**-5.2**
TOTAL PRIVATE	**17.2**	**17.7**	**18.4**	**-2.8**	**-6.5**
GOODS PRODUCING	**6.7**	**6.9**	**7.6**	**-2.9**	**-11.8**
Natural Resources & Mining	4.1	4.1	4.8	0.0	-14.6
Construction	1.2	1.4	1.4	-14.3	-14.3
Manufacturing	1.4	1.4	1.4	0.0	0.0
SERVICE PROVIDING	**15.3**	**15.8**	**15.6**	**-3.2**	**-1.9**
Trade, Transportation, & Utilities	4.6	4.8	4.7	-4.2	-2.1
Information	0.2	0.2	0.2	0.0	0.0
Financial Activities	0.7	0.7	0.8	0.0	-12.5
Professional & Business Services	0.9	0.9	0.9	0.0	0.0
Educational & Health Services	1.3	1.3	1.3	0.0	0.0
Leisure & Hospitality	2.2	2.3	2.3	-4.3	-4.3
Other Services	0.6	0.6	0.6	0.0	0.0
GOVERNMENT	**4.8**	**5.0**	**4.8**	**-4.0**	**0.0**

	Employment in Thousands			% Change Total Employment	
	Jan 17	Dec 16	Jan 16	Jan 17 Dec 16	Jan 17 Jan 16
TETON COUNTY					
TOTAL NONAG. WAGE & SALARY EMPLOYMENT	**19.5**	**19.4**	**19.0**	**0.5**	**2.6**
TOTAL PRIVATE	**17.0**	**16.8**	**16.5**	**1.2**	**3.0**
GOODS PRODUCING	**2.0**	**2.2**	**2.1**	**-9.1**	**-4.8**
Natural Resources, Mining & Construction	1.8	2.0	1.9	-10.0	-5.3
Manufacturing	0.2	0.2	0.2	0.0	0.0
SERVICE PROVIDING	**17.5**	**17.2**	**16.9**	**1.7**	**3.6**
Trade, Transportation, & Utilities	2.7	2.7	2.6	0.0	3.8
Information	0.2	0.2	0.2	0.0	0.0
Financial Activities	1.0	1.0	0.9	0.0	11.1
Professional & Business Services	1.7	1.8	1.7	-5.6	0.0
Educational & Health Services	1.2	1.1	1.2	9.1	0.0
Leisure & Hospitality	7.7	7.3	7.3	5.5	5.5
Other Services	0.5	0.5	0.5	0.0	0.0
GOVERNMENT	**2.5**	**2.6**	**2.5**	**-3.8**	**0.0**

State Unemployment Rates January 2017 (Not Seasonally Adjusted)

State	Unemp. Rate
Puerto Rico	11.7
Alaska	7.2
New Mexico	7.0
Alabama	6.8
Illinois	6.5
West Virginia	6.2
Louisiana	6.1
Mississippi	6.1
Ohio	6.0
District of Columbia	5.9
Kentucky	5.8
Washington	5.8
Michigan	5.7
Tennessee	5.7
Georgia	5.6
Wyoming	**5.6**
California	5.5
North Carolina	5.5
Rhode Island	5.5
Connecticut	5.4
Pennsylvania	5.3
Florida	5.2
Arizona	5.1
Nevada	5.1
United States	**5.1**
Minnesota	5.0
New York	5.0
South Carolina	4.9
Texas	4.9
Delaware	4.8
Montana	4.8
Indiana	4.7
New Jersey	4.7
Oklahoma	4.7
Missouri	4.6
Idaho	4.5
Maryland	4.5
Oregon	4.5
Kansas	4.3
Arkansas	4.2
Virginia	4.2
Wisconsin	4.2
Iowa	4.0
Maine	4.0
Massachusetts	4.0
Nebraska	3.7
North Dakota	3.7
Vermont	3.5
Colorado	3.3
South Dakota	3.3
Utah	3.3
New Hampshire	3.2
Hawaii	2.9

Economic Indicators

by: David Bullard, Senior Economist

Total employment in Wyoming state government decreased 5.2% from January 2016 to January 2017.

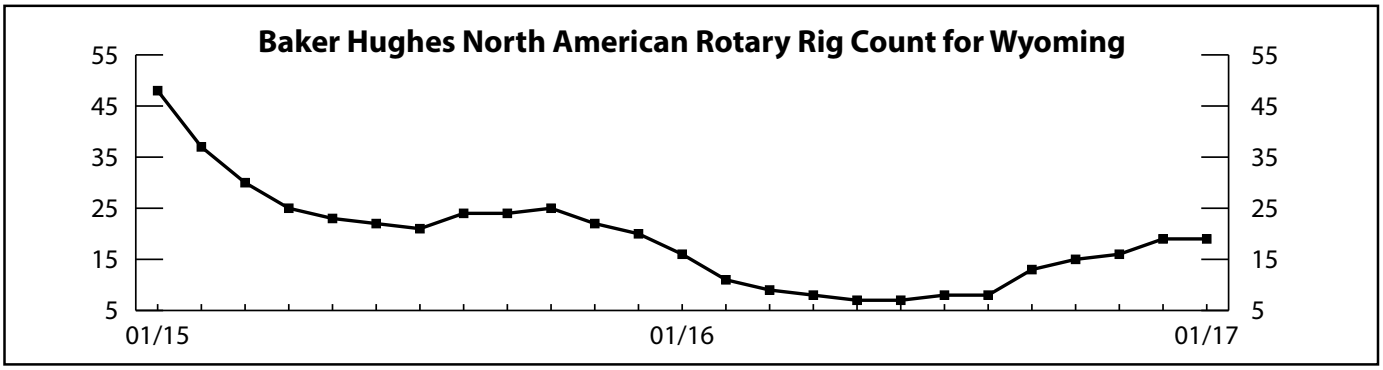
	Jan 2017 (p)	Dec 2016 (r)	Jan 2016 (b)	Percent Change Month	Year
Wyoming Total Nonfarm Employment	**269,000**	**274,500**	**278,300**	**-2.0**	**-3.3**
Wyoming State Government	14,600	15,300	15,400	-4.6	-5.2
Laramie County Nonfarm Employment	45,400	46,000	45,500	-1.3	-0.2
Natrona County Nonfarm Employment	36,100	37,400	39,900	-3.5	-9.5
Selected U.S. Employment Data					
U.S. Multiple Jobholders	7,405,000	7,675,000	7,314,000	-3.5	1.2
As a percent of all workers	4.9%	5.1%	4.9%	N/A	N/A
U.S. Discouraged Workers	532,000	426,000	623,000	24.9	-14.6
U.S. Part Time for Economic Reasons	6,226,000	5,707,000	6,406,000	9.1	-2.8
Wyoming Unemployment Insurance					
Weeks Compensated	28,119	20,874	26,441	34.7	6.3
Benefits Paid	$10,876,029	$7,961,985	$10,492,866	36.6	3.7
Average Weekly Benefit Payment	$386.79	$381.43	$396.84	1.4	-2.5
State Insured Covered Jobs[1]	252,237	256,669	257,950	-1.7	-2.2
Insured Unemployment Rate	3.1%	2.6%	3.6%	N/A	N/A
Consumer Price Index (U) for All U.S. Urban Consumers					
(1982 to 1984 = 100)					
All Items	242.8	241.4	236.9	0.6	2.5
Food & Beverages	248.1	247.1	248.2	0.4	-0.1
Housing	247.9	246.8	240.4	0.5	3.1
Apparel	123.1	122.6	121.9	0.4	1.0
Transportation	199.3	196.3	190.2	1.5	4.8
Medical Care	471.7	469.4	454.2	0.5	3.9
Recreation (Dec. 1997=100)	117.3	116.6	116.1	0.7	1.1
Education & Communication (Dec. 1997=100)	139.0	139.1	139.5	0.0	-0.3
Other Goods & Services	427.6	427.2	419.1	0.1	2.0
Producer Prices (1982 to 1984 = 100)					
All Commodities	190.6	188.3	182.6	1.2	4.4
Wyo. Bldg. Permits (New Privately Owned Housing Units Authorized)					
Total Units	63	87	93	-27.6	-32.3
Valuation	$17,175,000	$35,813,000	$19,531,000	-52.0	-12.1
Single Family Homes	54	81	65	-33.3	-16.9
Valuation	$16,131,000	$34,885,000	$17,973,000	-53.8	-10.2
Casper MSA[2] Building Permits	7	5	8	40.0	-12.5
Valuation	$1,049,000	$759,000	$1,982,000	38.2	-47.1
Cheyenne MSA Building Permits	29	31	21	-6.5	38.1
Valuation	$4,782,000	$5,480,000	$3,827,000	-12.7	25.0
Baker Hughes North American Rotary Rig Count for Wyoming	19	19	16	0.0	18.8

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

[1]Local Area Unemployment Statistics Program estimates.

[2]Metropolitan 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

Teton County (2.9%) posted the lowest unemployment rate in January, followed by Niobrara (3.3%), Goshen (3.3%), and Albany (3.4%) counties. The highest unemployment rates were found in Natrona (7.6%), Fremont (7.5%), and Campbell (6.7%) counties.

	Labor Force			Employed			Unemployed			Unemployment Rates		
REGION	Jan 2017	Dec 2016	Jan 2016	Jan 2017	Dec 2016	Jan 2016	Jan 2017	Dec 2016	Jan 2016	Jan 2017	Dec 2016	Jan 2016
County	(p)	(r)	(b)	(p)	(r)	(b)	(p)	(r)	(b)	(p)	(r)	(b)
NORTHWEST	**47,986**	**47,408**	**46,787**	**44,877**	**44,794**	**43,449**	**3,109**	**2,614**	**3,338**	**6.5**	**5.5**	**7.1**
Big Horn	5,516	5,430	5,343	5,220	5,185	5,010	296	245	333	5.4	4.5	6.2
Fremont	20,151	19,956	19,965	18,638	18,652	18,301	1,513	1,304	1,664	7.5	6.5	8.3
Hot Springs	2,498	2,462	2,420	2,373	2,356	2,283	125	106	137	5.0	4.3	5.7
Park	15,500	15,252	14,845	14,540	14,470	13,874	960	782	971	6.2	5.1	6.5
Washakie	4,321	4,308	4,214	4,106	4,131	3,981	215	177	233	5.0	4.1	5.5
NORTHEAST	**52,438**	**51,787**	**53,143**	**49,255**	**49,019**	**49,881**	**3,183**	**2,768**	**3,262**	**6.1**	**5.3**	**6.1**
Campbell	24,207	24,052	25,581	22,587	22,589	24,014	1,620	1,463	1,567	6.7	6.1	6.1
Crook	3,750	3,604	3,651	3,563	3,442	3,455	187	162	196	5.0	4.5	5.4
Johnson	4,177	4,091	4,058	3,907	3,867	3,762	270	224	296	6.5	5.5	7.3
Sheridan	16,286	16,051	15,873	15,381	15,314	14,841	905	737	1,032	5.6	4.6	6.5
Weston	4,018	3,989	3,980	3,817	3,807	3,809	201	182	171	5.0	4.6	4.3
SOUTHWEST	**60,062**	**59,681**	**59,207**	**56,987**	**56,814**	**55,758**	**3,075**	**2,867**	**3,449**	**5.1**	**4.8**	**5.8**
Lincoln	8,863	8,759	8,514	8,435	8,372	7,988	428	387	526	4.8	4.4	6.2
Sublette	4,369	4,124	4,262	4,100	3,885	3,949	269	239	313	6.2	5.8	7.3
Sweetwater	22,264	22,368	22,538	20,902	21,172	21,065	1,362	1,196	1,473	6.1	5.3	6.5
Teton	15,249	15,036	14,452	14,800	14,487	13,924	449	549	528	2.9	3.7	3.7
Uinta	9,317	9,394	9,441	8,750	8,898	8,832	567	496	609	6.1	5.3	6.5
SOUTHEAST	**84,248**	**84,098**	**82,558**	**80,717**	**80,996**	**78,679**	**3,531**	**3,102**	**3,879**	**4.2**	**3.7**	**4.7**
Albany	20,973	21,567	20,909	20,264	20,931	20,125	709	636	784	3.4	2.9	3.7
Goshen	7,178	7,129	6,960	6,944	6,916	6,680	234	213	280	3.3	3.0	4.0
Laramie	49,988	49,481	48,668	47,677	47,470	46,178	2,311	2,011	2,490	4.6	4.1	5.1
Niobrara	1,348	1,300	1,318	1,303	1,261	1,262	45	39	56	3.3	3.0	4.2
Platte	4,761	4,621	4,703	4,529	4,418	4,434	232	203	269	4.9	4.4	5.7
CENTRAL	**56,525**	**56,138**	**58,466**	**52,622**	**52,624**	**54,454**	**3,903**	**3,514**	**4,012**	**6.9**	**6.3**	**6.9**
Carbon	8,413	8,253	8,112	8,008	7,901	7,647	405	352	465	4.8	4.3	5.7
Converse	7,839	7,716	8,193	7,384	7,284	7,714	455	432	479	5.8	5.6	5.8
Natrona	40,273	40,169	42,161	37,230	37,439	39,093	3,043	2,730	3,068	7.6	6.8	7.3
STATEWIDE	**301,259**	**299,114**	**300,160**	**284,456**	**284,248**	**282,221**	**16,803**	**14,866**	**17,939**	**5.6**	**5.0**	**6.0**
Statewide Seasonally Adjusted										4.8	4.8	5.1
U.S.										5.1	4.5	5.3
U.S. Seasonally Adjusted										4.8	4.7	4.9

Prepared in cooperation with the Bureau of Labor Statistics. Benchmarked 03/2017. Run Date 03/2017.

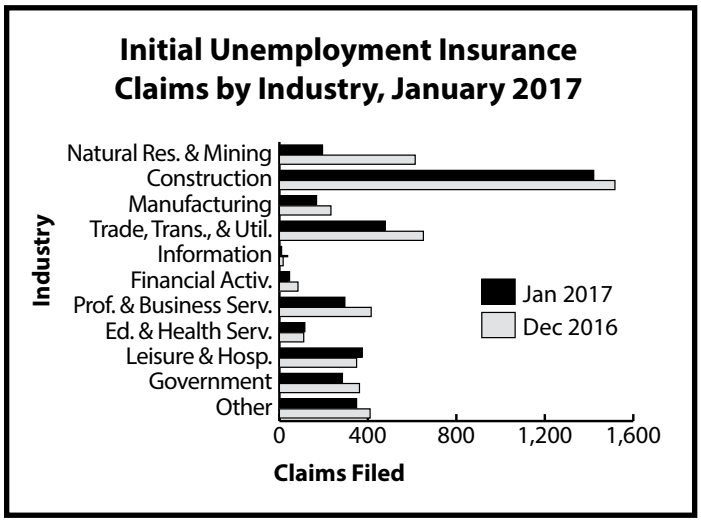
Data are not seasonally adjusted except where otherwise specified.

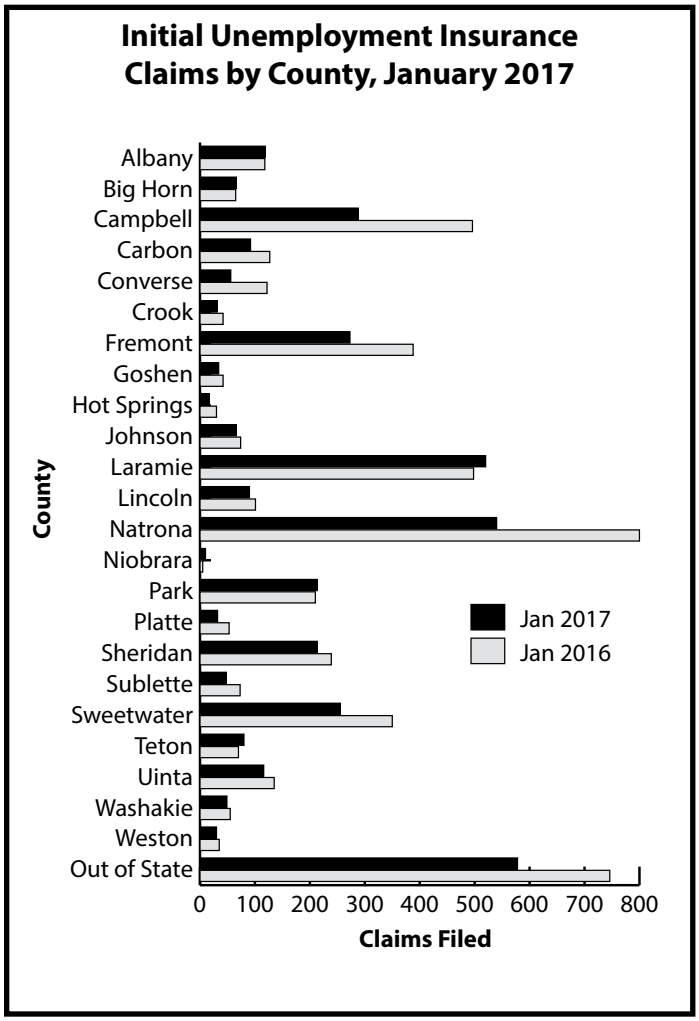
(p) Preliminary. (r) Revised. (b) Benchmarked.

Wyoming Normalized[a] Unemployment Insurance Statistics: Initial Claims

by: Patrick Manning, Principal Economist

Total initial claims decreased 21.7% (-580 claims) from January 2016 to January 2017. Initial claims in natural resources & mining decreased 68.2% (-419 claims) over the year.





Initial Claims

	Claims Filed			Percent Change Claims Filed	
	Jan 17	Dec 16	Jan 16	Jan 17 Dec 16	Jan 17 Jan 16
Wyoming Statewide					
TOTAL CLAIMS FILED	**3,817**	**3,911**	**4,874**	**-2.4**	**-21.7**
TOTAL GOODS-PRODUCING	1,786	2,117	2,366	-15.6	-24.5
Natural Res. & Mining	195	240	614	-18.8	-68.2
Mining	177	213	592	-16.9	-70.1
Oil & Gas Extraction	20	7	31	185.7	-35.5
Construction	1,421	1,698	1,517	-16.3	-6.3
Manufacturing	168	178	233	-5.6	-27.9
TOTAL SERVICE-PROVIDING	1,396	1,135	1,735	23.0	-19.5
Trade, Transp., & Utilities	479	381	651	25.7	-26.4
Wholesale Trade	58	40	138	45.0	-58.0
Retail Trade	257	198	282	29.8	-8.9
Transp., Warehousing & Utilities	164	143	231	14.7	-29.0
Information	10	12	17	-16.7	-41.2
Financial Activities	46	25	84	84.0	-45.2
Prof. and Business Svcs.	296	276	415	7.2	-28.7
Educational & Health Svcs.	115	104	110	10.6	4.5
Leisure & Hospitality	375	285	349	31.6	7.4
Other Svcs., exc. Public Admin.	67	46	102	45.7	-34.3
TOTAL GOVERNMENT	285	216	362	31.9	-21.3
Federal Government	123	122	125	0.8	-1.6
State Government	28	17	32	64.7	-12.5
Local Government	134	76	204	76.3	-34.3
Local Education	22	15	21	46.7	4.8
UNCLASSIFIED	349	441	410	-20.9	-14.9
Laramie County					
TOTAL CLAIMS FILED	**519**	**557**	**497**	**-6.8**	**4.4**
TOTAL GOODS-PRODUCING	267	357	261	-25.2	2.3
Construction	244	318	210	-23.3	16.2
TOTAL SERVICE-PROVIDING	202	168	197	20.2	2.5
Trade, Transp., & Utilities	70	64	76	9.4	-7.9
Financial Activities	9	8	14	12.5	-35.7
Prof. & Business Svcs.	54	52	44	3.8	22.7
Educational & Health Svcs.	23	17	23	35.3	0.0
Leisure & Hospitality	27	21	22	28.6	22.7
TOTAL GOVERNMENT	25	15	20	66.7	25.0
UNCLASSIFIED	23	16	18	43.8	27.8
Natrona County					
TOTAL CLAIMS FILED	**540**	**710**	**799**	**-23.9**	**-32.4**
TOTAL GOODS-PRODUCING	271	433	434	-37.4	-37.6
Construction	212	340	279	-37.6	-24.0
TOTAL SERVICE-PROVIDING	238	237	330	0.4	-27.9
Trade, Transp., & Utilities	91	74	144	23.0	-36.8
Financial Activities	6	3	12	100.0	-50.0
Prof. & Business Svcs.	49	56	70	-12.5	-30.0
Educational & Health Svcs.	22	32	17	-31.3	29.4
Leisure & Hospitality	50	48	52	4.2	-3.8
TOTAL GOVERNMENT	10	16	14	-37.5	-28.6
UNCLASSIFIED	19	23	21	-17.4	-9.5

[a]An 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

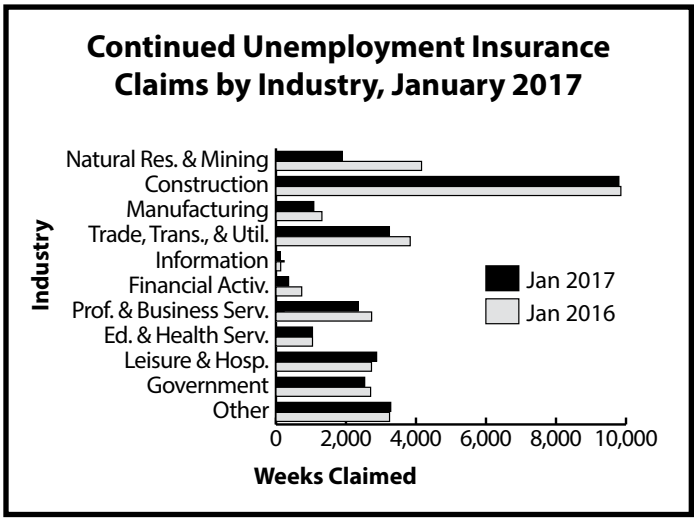
by: Patrick Manning, Principal Economist

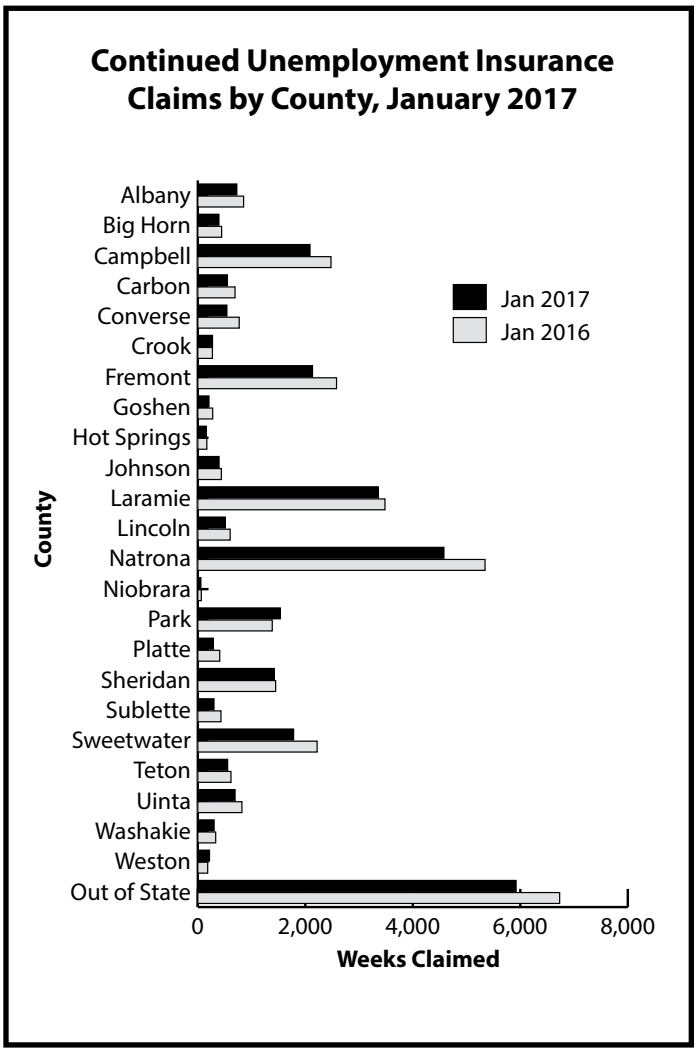
Over the year, the total number of unique claimants decreased by 1,191 individuals (-12.2%), while the total number of weeks claimed decreased by 4,056 weeks (-12.3%).

Continued Claims

	Claims Filed			Percent Change Claims Filed	
	Jan 17	Dec 16	Jan 16	Jan 17 Dec 16	Jan 17 Jan 16
Wyoming Statewide					
TOTAL WEEKS CLAIMED	**29,000**	**25,198**	**33,056**	**15.1**	**-12.3**
TOTAL UNIQUE CLAIMANTS	8,565	7,765	9,756	10.3	-12.2
Benefit Exhaustions	490	513	478	-4.5	2.5
Benefit Exhaustion Rates	5.7%	6.6%	4.9%	-0.9%	0.8%
TOTAL GOODS-PRODUCING	12,773	9,408	15,327	35.8	-16.7
Natural Res. & Mining	1,895	1,737	4,159	9.1	-54.4
Mining	1,668	1,533	3,957	8.8	-57.8
Oil & Gas Extraction	190	194	464	-2.1	-59.1
Construction	9,796	6,926	9,853	41.4	-0.6
Manufacturing	1,081	742	1,313	45.7	-17.7
TOTAL SERVICE-PROVIDING	10,411	10,481	11,779	-0.7	-11.6
Trade, Transp., & Utilities	3,241	3,168	3,835	2.3	-15.5
Wholesale Trade	572	648	840	-11.7	-31.9
Retail Trade	1,755	1,615	1,445	8.7	21.5
Transp., Warehousing & Utilities	914	905	1,550	1.0	-41.0
Information	123	114	135	7.9	-8.9
Financial Activities	361	398	736	-9.3	-51.0
Prof. & Business Services	2,348	1,990	2,733	18.0	-14.1
Educational & Health Svcs.	1,043	999	1,044	4.4	-0.1
Leisure and Hospitality	2,876	3,413	2,729	-15.7	5.4
Other Svcs., exc. Public Admin.	412	392	560	5.1	-26.4
TOTAL GOVERNMENT	2,535	2,499	2,704	1.4	-6.3
Federal Government	1,236	1,261	1,202	-2.0	2.8
State Government	210	201	253	4.5	-17.0
Local Government	1,088	1,037	1,248	4.9	-12.8
Local Education	213	238	187	-10.5	13.9
UNCLASSIFIED	3,279	2,809	3,245	16.7	1.0
Laramie County					
TOTAL WEEKS CLAIMED	**3,355**	**2,660**	**3,482**	**26.1**	**-3.6**
TOTAL UNIQUE CLAIMANTS	**1,001**	**858**	**1,048**	**16.7**	**-4.5**
TOTAL GOODS-PRODUCING	1,794	1,256	1,920	42.8	-6.6
Construction	1,634	1,129	1,589	44.7	2.8
TOTAL SERVICE-PROVIDING	1,247	1,130	1,150	10.4	8.4
Trade, Transp., and Utilities	450	454	456	-0.9	-1.3
Financial Activities	42	32	105	31.3	-60.0
Prof. & Business Svcs.	393	330	262	19.1	50.0
Educational and Health Svcs.	163	126	140	29.4	16.4
Leisure & Hospitality	149	125	120	19.2	24.2
TOTAL GOVERNMENT	156	135	264	15.6	-40.9
UNCLASSIFIED	156	138	147	13.0	6.1
Natrona County					
TOTAL WEEKS CLAIMED	**4,578**	**3,851**	**5,344**	**18.9**	**-14.3**
TOTAL UNIQUE CLAIMANTS	**1,352**	**1,199**	**1,584**	**12.8**	**-14.6**
TOTAL GOODS-PRODUCING	2,267	1,739	2,736	30.4	-17.1
Construction	1,680	1,216	1,530	38.2	9.8
TOTAL SERVICE-PROVIDING	2,067	1,914	2,366	8.0	-12.6
Trade, Transp., and Utilities	695	692	920	0.4	-24.5
Financial Activities	71	99	209	-28.3	-66.0
Professional & Business Svcs.	501	454	469	10.4	6.8
Educational & Health Svcs.	278	251	192	10.8	44.8
Leisure & Hospitality	378	304	397	24.3	-4.8
TOTAL GOVERNMENT	123	108	109	13.9	12.8
UNCLASSIFIED	120	88	132	36.4	-9.1

[a]An 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 Department of Workforce Services, Research & Planning
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