Wyoming Department of Workforce Services

Research & Planning

# Wyoming Workforce Annual Report

2018

Wyoming Workforce Development Council

# Wyoming Workforce Annual Report 2018

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**"Your Source for Wyoming Labor Market Information"**

## Who We Are

Research & Planning (R&P) functions as an exclusively statistical entity within the Wyoming Department of Workforce Services. R&P collects, analyzes, and publishes timely and accurate labor market information (LMI) meeting established statistical standards. We work to make the labor market more efficient by providing the public and the public's representatives with the information needed for evidence-based, informed decision making.

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## Contents



WELCOME

***Dear Reader,***

Welcome to the 2018 edition of the *Wyoming Workforce Annual Report*, produced by the Research & Planning (R&P) section of the Wyoming Department of Workforce Services in partnership with the Wyoming Workforce Development Council. This report provides an overview of Wyoming's economy and workforce. Highlights from this year's report include:

- Wyoming employment began growing again in the final few months of 2017. Natural resources & mining added 700 jobs in 2017 and professional & business services added 500 jobs (see page 5).
- Wyoming's estimated resident population declined by 1.0% from 2016 to 2017, while the number of persons working at any time decreased by 3.7% (see page 21).
- The number of unemployed workers receiving Unemployment Insurance benefits decreased by 31.6% over the year (see page 32).
- New short-term projections indicate mining and leisure & hospitality will experience the greatest job growth from 2017 to 2019 (see page 38).

Thank you for taking the time to review this report. I encourage you to contact us with questions, suggestions, or to share your thoughts on future research.

Best Regards,

Tony Glover, Manager
Research & Planning, Wyoming
Department of Workforce Services

# Users Can Find Helpful Data on WyomingatWork.com

*by: Lynae Mohondro, Senior Economist*

An employer looking to start a business in Wyoming might wonder which county contains a large enough population to staff the business. A jobseeker might want to know the average wage of an occupation in her desired field. And a local policymaker might be interested in knowing the unemployment rate of his county. The answer to each of these questions can be found using the labor market information (LMI) page online at WyomingatWork.com.


Employers and job seekers can find useful tools and information on Wyoming at Work, such as information on training programs or advice on building a resume. Additionally, individuals can view current LMI that may help in making informed career or workforce decisions. Wyoming at Work provides LMI data populated by the Workforce Information Database, a required deliverable of the Workforce Information Grant, funded by the U.S. Department of Labor Employment and Training Administration. Some of the data found on Wyoming at Work include employment and unemployment in Wyoming and its 23 counties; industry and occupational employment, wages and projections; staffing patterns; and demographic information.

In addition to much of the data in this report, WyomingatWork.com can provide users with other types of customizable data. For example, WyomingatWork.com also provides staffing patterns for each industry by substate region and occupation. The staffing patterns use the industry and occupational projections to provide the estimated and projected employment by occupation in each industry. Hovering over the graph on Wyoming at Work allows the user to view the data for the selected occupation. According to the staffing patterns available at WyomingatWork.com, in the accommodation & food services industry, an estimated 20,645 individuals worked in food preparation and service occupations in 2014 and a projected 22,907 individuals will work in those occupations in 2024.

The Wyoming at Work LMI page provides users with a wide range of economic data in an easy-to-use layout. From statewide to county and substate regions, Wyoming at Work offers information for many locations in the state. The LMI is just one of the many tools that can be found on WyomingatWork.com. And while the LMI page may only deliver a brief overview of Wyoming's economic situation, more data and information can be found at R&P's website at http://doe.state.wy.us/LMI/.

## Chapter 1

# Wyoming Adds Jobs in Late 2017

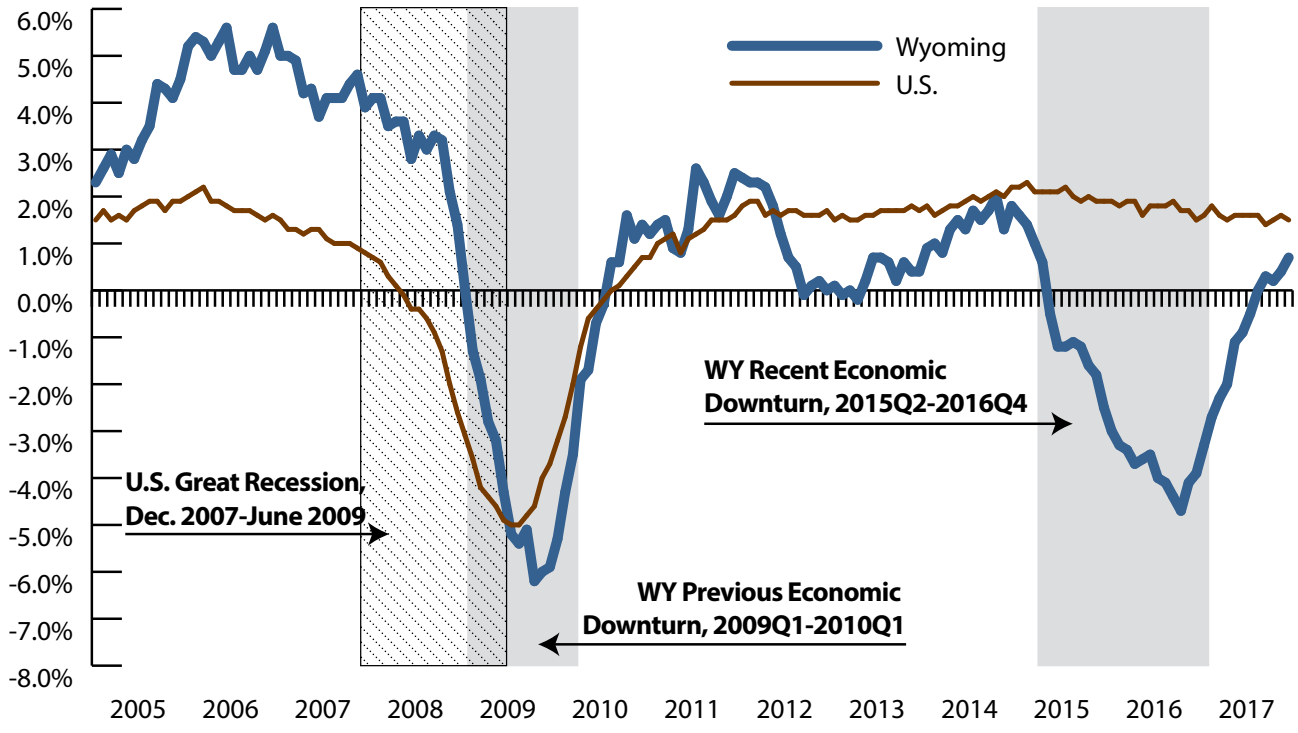
***by: David Bullard, Senior Economist***

CES

After weathering an economic downturn that began in second quarter 2015 (2015Q2), Wyoming employment began growing again in the final few months of 2017. According to Current Employment Statistics (CES) data, natural resources & mining added 700 jobs in 2017 and professional & business services added 500 jobs. It appears that higher energy prices may be prompting job gains in Wyoming's mining sector.

Figure 1.1 shows job growth in Wyoming and the United States from 2005 to 2017. From January 2005 to June 2009, Wyoming added jobs at a faster pace than the U.S. During this period, employment in Wyoming grew rapidly as the energy sector expanded. Between 2005 and 2008, natural resources & mining added 6,600 jobs. Growth was seen in oil & gas extraction (800 jobs), coal mining (1,700 jobs), and support activities for mining (+3,900 jobs).

The national Great Recession began in December 2007 and lasted through June




Shaded areas indicate periods of economic downturn: 2009Q1-2010Q1 and 2015Q2-2016Q4.
Source: Quarterly Census of Employment and Wages (QCEW).
Prepared by M. Moore, Research & Planning, WY DWS, 3/20/18.

Figure 1.1: **Over-the-Year Percent Change in Average Monthly Employment (Number of Jobs Worked) in Wyoming and the U.S., 2005-2017**

2009 (NBER, 2010). Wyoming entered a five-quarter period of economic downturn that lasted from 2009Q1 to 2010Q1 (see Chapter 2, page 7). Wyoming's downturn began later than the national Great Recession, but Wyoming lost more jobs in percentage terms.

From June 2012 to December 2017, the U.S. job growth rate was higher than Wyoming's. When energy prices declined precipitously in late 2014, Wyoming's energy sector began contracting. Table 1.1 shows that Wyoming's natural resources & mining sector lost 3,500 jobs in 2015 and 5,000 jobs in 2016. Other sectors also contracted, with construction losing 400 jobs in 2015 and 2,200 jobs in 2016.

In Wyoming, many different industries provide support for the mining sector, and most all industries are affected by revenues brought into the state from the mining sector. As shown in Table 1.1, manufacturing lost 500 jobs in 2016, wholesale trade lost 1,000 jobs in 2016, and transportation, warehousing, & utilities lost 1,100 jobs in 2016. Leisure & hospitality lost 400 jobs in 2016.

Chapter 2 of this publication provides a more detailed discussion on employment and wages at the industry and county levels for Wyoming.

## Reference

National Bureau of Economic Research. (2010). Business Cycle Dating Committee report. Retrieved April 13, 2018, from http://www.nber.org/cycles/sept2010.html

Table 1.1: **Change in Wyoming Nonagricultural Wage and Salary Employment for Selected Industries, 2014-2017**

| Industry | 2014 | 2015 | 2016 | 2017 | Over-the-Year Change 2014-2015 N | 2014-2015 % | 2015-2016 N | 2015-2016 % | 2016-2017 N | 2016-2017 % |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Nonag. Wage & Salary Employment** | **296,900** | **295,200** | **284,000** | **281,300** | **-1,700** | **-0.6** | **-11,200** | **-3.8** | **-2,700** | **-1.0** |
| Natural Resources & Mining | 27,400 | 23,900 | 18,900 | 19,600 | -3,500 | -12.8 | -5,000 | -20.9 | 700 | 3.6 |
| Construction | 23,700 | 23,300 | 21,100 | 19,500 | -400 | -1.7 | -2,200 | -9.4 | -1,600 | -8.2 |
| Manufacturing | 9,800 | 9,700 | 9,200 | 9,400 | -100 | -1.0 | -500 | -5.2 | 200 | 2.1 |
| Trade, Transportation, Warehousing, & Utilities | 55,000 | 55,900 | 53,700 | 52,200 | 900 | 1.6 | -2,200 | -3.9 | -1,500 | -2.9 |
| Wholesale Trade | 9,500 | 9,500 | 8,500 | 8,200 | 0 | 0.0 | -1,000 | -10.5 | -300 | -3.7 |
| Retail Trade | 29,800 | 30,800 | 30,700 | 29,700 | 1,000 | 3.4 | -100 | -0.3 | -1,000 | -3.4 |
| Transportation, Warehouse, & Utilities | 15,700 | 15,600 | 14,500 | 14,300 | -100 | -0.6 | -1,100 | -7.1 | -200 | -1.4 |
| Information | 3,800 | 3,800 | 3,700 | 3,700 | 0 | 0.0 | -100 | -2.6 | 0 | 0.0 |
| Financial Activities | 11,300 | 11,100 | 10,800 | 10,900 | -200 | -1.8 | -300 | -2.7 | 100 | 0.9 |
| Professional & Business Services | 18,400 | 18,500 | 17,800 | 18,300 | 100 | 0.5 | -700 | -3.8 | 500 | 2.7 |
| Educational & Health Services | 26,900 | 27,100 | 27,700 | 27,600 | 200 | 0.7 | 600 | 2.2 | -100 | -0.4 |
| Leisure & Hospitality | 35,400 | 36,200 | 35,800 | 36,000 | 800 | 2.3 | -400 | -1.1 | 200 | 0.6 |
| Other Services | 14,100 | 14,500 | 14,100 | 14,100 | 400 | 2.8 | -400 | -2.8 | 0 | 0.0 |
| Government | 71,200 | 71,200 | 71,200 | 70,100 | 0 | 0.0 | 0 | 0.0 | -1,100 | -1.6 |

Final Benchmark 1990-2016, Preliminary Benchmark 2017.
Source: Current Employment Statistics.
Prepared by D. Bullard, Research & Planning, WY DWS, 4/12/18.

## Chapter 2

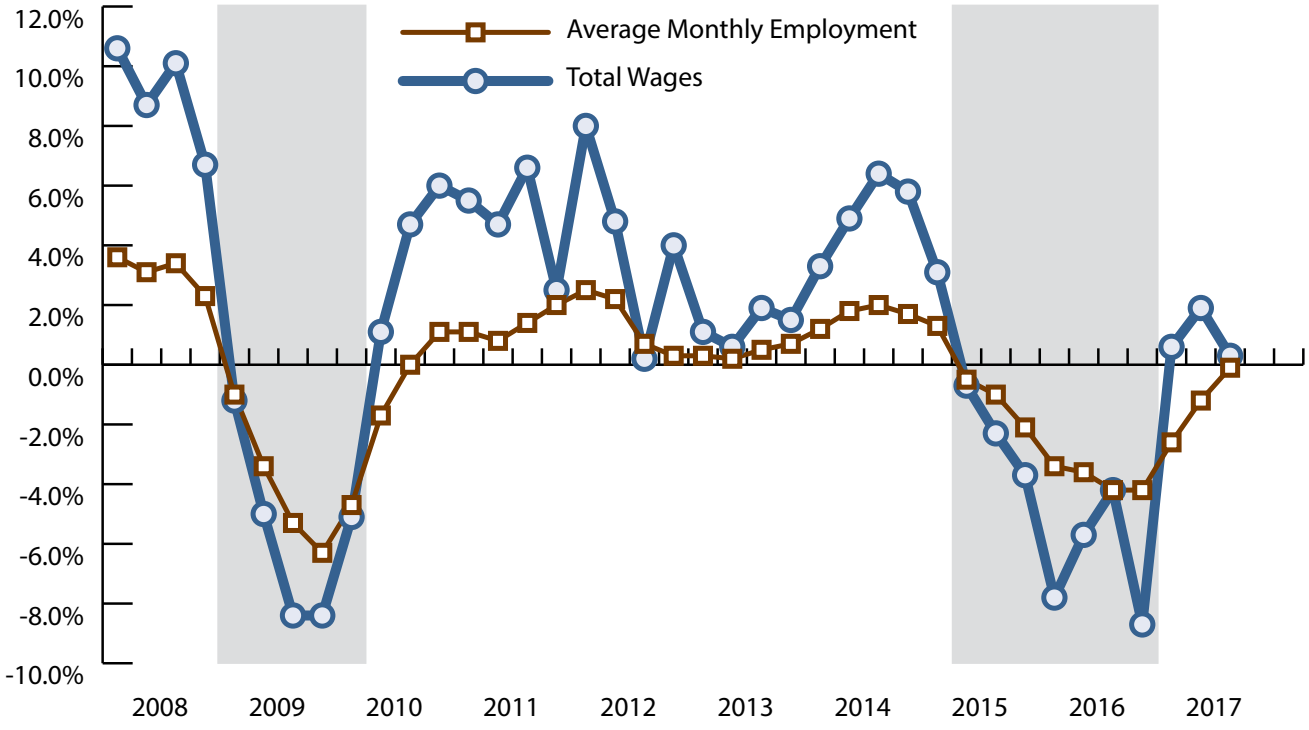
# Some Industries Experience Wage, Job Growth in 2017Q3

QCEW

*by: Michael Moore, Editor*

Over the last decade, Wyoming experienced two periods of economic downturn; for this publication, an economic downturn is defined as at least two consecutive quarters of over-the-year decrease in average monthly employment (a count of jobs worked) and total wages based on data from the Quarterly Census of Employment and Wages (QCEW). The previous downturn coincided with the national Great Recession and lasted from 2009Q1 to 2010Q1. The most recent downturn began in 2015Q2 due to a decline in the prices of and demand for coal, oil, and natural gas.

As shown in Figure 2.1, the most recent downturn lasted considerably longer than the previous downturn. However, the total number of jobs in Wyoming remained essentially unchanged from 2016Q3 to 2017Q3, the first quarter without substantial over-the-year declines in employment since 2015Q1. While Wyoming's average monthly employment is still considerably below pre-downturn




Shaded areas indicate periods of economic downturn: 2009Q1-2010Q1 and 2015Q2-2016Q4.
Source: Quarterly Census of Employment and Wages (QCEW).
Prepared by M. Moore, Research & Planning, WY DWS, 3/20/18.

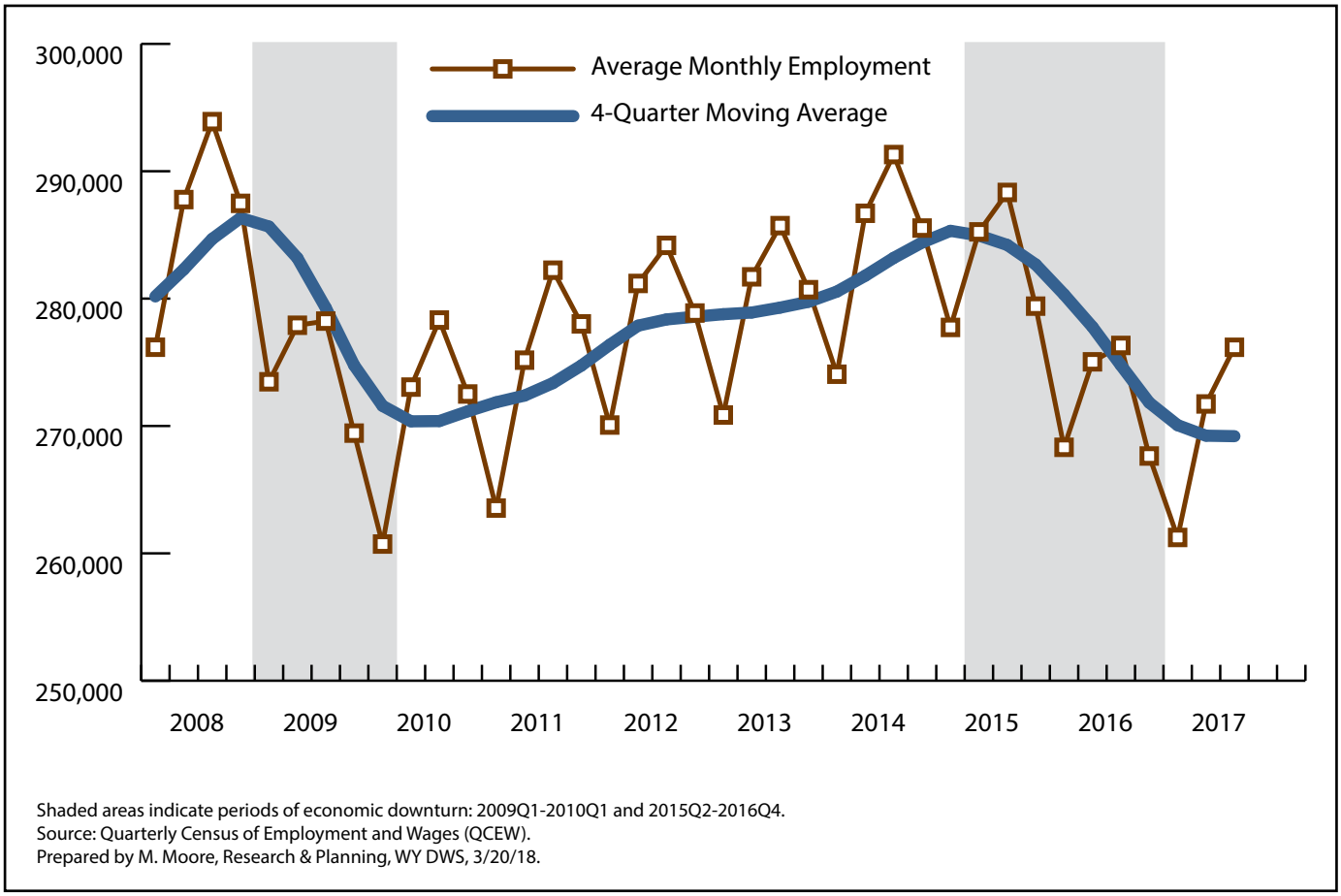
Figure 2.1: **Over-the-Year Percent Change in Average Monthly Employment (Number of Jobs Worked) and Total Wages in Wyoming, 2008Q1-2017Q3**

levels (see Figure 2.2), this could be an indication that the state's economy is starting to recover.

Industries are classified according to the North American Industry Classification System (NAICS). Table 2.1 (see page 9) shows that at the two-digit major industry level, some industries in Wyoming experienced an increase in average monthly employment from 2016Q3 to 2017Q3, including mining (NAICS 21; 10.9%) and manufacturing (NAICS 31-33; 3.2%).

Table 2.1 also shows average monthly employment at the three-digit subsector level in mining. The number of jobs worked decreased in oil & gas extraction (NAICS 211; -12.8%) but increased in mining, except oil & gas (NACIS 212; 2.0%) and support activities for mining (NAICS 213; 36.0%), which includes drilling for oil and gas.

This chapter provides employment and wage information on several key industries in Wyoming, including mining, construction, manufacturing, health care & social assistance, leisure & hospitality, and government. This chapter also includes information on average monthly employment for Wyoming's 23 counties and surrounding states.




Shaded areas indicate periods of economic downturn: 2009Q1-2010Q1 and 2015Q2-2016Q4.
Source: Quarterly Census of Employment and Wages (QCEW).
Prepared by M. Moore, Research & Planning, WY DWS, 3/20/18.

Figure 2.2: **Average Monthly Employment (Number of Jobs Worked) in Wyoming, 2008Q1-2017Q3**

**Find it Online: Quarterly Census of Employment and Wages (QCEW)**
**http://doe.state.wy.us/LMI/toc_202.htm**

Table 2.1: **Change in Average Monthly Employment in Wyoming by Industry, 2016Q3 and 2017Q3**

| | NAICS[a] Code | Industry | Average Monthly Employment 2016 | Average Monthly Employment 2017 | Change, 2016Q3-2017Q3 N | Change, 2016Q3-2017Q3 % |
|---|---|---|---|---|---|---|
| **Private Sector** | | | | | | |
| | | **Total** | **212,456** | **213,343** | **887** | **0.4** |
| Goods Producing Industries | 11 | Agriculture, Forestry, Fishing & Hunting | 2,917 | 3,006 | 89 | 3.1 |
| | 21 | Mining, Quarrying, & Oil & Gas Extraction | 17,961 | 19,925 | 1,964 | 10.9 |
| | 211 | Oil & Gas Extraction | 3,547 | 3,091 | -456 | -12.8 |
| | 212 | Mining, Except Oil & Gas | 8,141 | 8,303 | 162 | 2.0 |
| | 213 | Support Activities for Mining | 6,273 | 8,531 | 2,258 | 36.0 |
| | 23 | Construction | 22,463 | 20,923 | -1,540 | -6.9 |
| | 31-33 | Manufacturing | 9,256 | 9,547 | 292 | 3.2 |
| Service Providing Industries | 42, 48-49, 22 | Wholesale Trade, Transportation, Warehousing, & Utilities | 20,321 | 20,197 | -124 | -4.0 |
| | 44 | Retail Trade | 31,395 | 30,755 | -640 | -2.0 |
| | 51 | Information | 3,742 | 3,700 | -42 | -1.1 |
| | 52-53 | Financial Activities | 10,913 | 11,045 | 132 | 1.2 |
| | 54-56 | Professional & Business Services | 18,591 | 18,913 | 322 | 1.7 |
| | 61 | Educational Services | 1,669 | 1,680 | 11 | 0.6 |
| | 62 | Health Care & Social Assistance | 24,755 | 24,636 | -119 | -0.5 |
| | 71-72 | Leisure & Hospitality | 41,090 | 41,524 | 435 | 1.1 |
| **Government** | | | | | | |
| | | **Total** | **63,867** | **62,835** | **-1,033** | **-1.6** |
| | | Federal Government | 8,120 | 8,189 | 69 | 0.8 |
| | | State Government | 13,135 | 12,964 | -170 | -1.3 |
| | | Local Government | 42,613 | 41,682 | -931 | -2.2 |
| **Total, All Industries** | | | | | | |
| | | **Total** | **276,323** | **276,178** | **-146** | **0.0** |

[a]North American Industry Classification System.
Source: Quarterly Census of Employment and Wages.
Prepared by M. Moore, Research & Planning, WY DWS, 1/10/18.

PHOTO CREDIT: SL Photography/iStock/Thinkstock

# Mining, Quarrying, & Oil & Gas Extraction (NAICS 21)

Average monthly employment in Wyoming's mining sector increased 10.9% in 2017Q3 — an increase of 1,964 jobs (see Table 2.2). The greatest increases were seen in support activities for mining (NAICS 213), which includes oil & gas well drilling.

**Table 2.2: Employment and Wages for Mining, Quarrying, & Oil & Gas Extraction (NAICS[a] 21)**

| | | | Change | | % of Total | |
|---|---|---|---|---|---|---|
| | 2016Q3 | 2017Q3 | N | % | 2016Q3 | 2017Q3 |
| Average Monthly Employment | 17,961 | 19,925 | 1,964 | 10.9 | 6.5 | 7.2 |
| Total Wages (in Millions) | $374.3 | $423.7 | $49.4 | 13.2 | 12.0 | 13.6 |
| Average Weekly Wage | $1,603 | $1,636 | $33 | 2.0 | 185.3 | 188.5 |

[a]North American Industry Classification System.
Source: Quarterly Census of Employment and Wages.
Prepared by M. Moore, Research & Planning, 1/10/18.

In 2017Q3, mining accounted for 7.2% of all jobs and 13.6% of all wages. Mining has historically accounted for a greater share of Wyoming's total wages; for example, Bullard (2015) noted that in 2015Q1, mining paid $1 of every $5 in total covered Unemployment Insurance (UI) wage and salary compensation in Wyoming. However, total mining wages decreased at a greater rate than the state's total wages throughout 2015 and 2016, so mining accounted for a smaller proportion of Wyoming's wages.

The average weekly wage in mining in 2017Q3 was $1,636, or 188.5% of the total statewide average of $868.

PHOTO CREDIT: Zheng Zai Shuru/iStock/Thinkstock

## Construction (NAICS 23)

Wyoming's construction industry lost 1,540 jobs (-6.9%) from 2016Q3 to 2017Q3, and total wages decreased by approximately $27.5 million (-9.4%). Average weekly wage also decreased over the year (-$27, or -2.7%).

In 2016Q3, construction accounted for 8.1% of Wyoming's average monthly employment and 9.4% of the state's total wages (see Table 2.3). By 2017Q3, however, construction accounted for a small proportion of both average monthly employment (7.6%) and total wages (8.5%).

Wages in construction tend to be higher than the statewide average. In 2017Q3, construction's average weekly wage of $976 was 112.5% of the state's average weekly wage, or 12.5% ($108) greater.

Table 2.3: **Employment and Wages for Construction (NAICS[a] 23)**

| | | | Change | | % of Total | |
|---|---|---|---|---|---|---|
| | 2016Q3 | 2017Q3 | N | % | 2016Q3 | 2017Q3 |
| Average Monthly Employment | 22,463 | 20,923 | -1,540 | -6.9 | 8.1 | 7.6 |
| Total Wages (in Millions) | $293.0 | $265.6 | -$27.5 | -9.4 | 9.4 | 8.5 |
| Average Weekly Wage | $1,003 | $976 | -$27 | -2.7 | 116.0 | 112.5 |

[a]North American Industry Classification System.
Source: Quarterly Census of Employment and Wages.
Prepared by M. Moore, Research & Planning, 1/10/18.

## Manufacturing (NAICS 31-33)

From 2016Q3 to 2017Q3, manufacturing experienced the second greatest percentage increase in average monthly employment among all industries in Wyoming (3.2%, or 292; see Table 2.4). Total wages (-$2.4 million, or -1.6%) and average weekly wage (-$57, or -4.6%) both declined over the year. The increase in employment and decrease in wages may be an indication that employers in Wyoming's manufacturing sector added more new workers at lower or entry-level wages in 2017Q3.

Manufacturing made up 3.5% of all jobs and 4.7% of total wages in 2017Q3, largely unchanged over the year.

The average weekly wage for manufacturing ($1,178) was 135.7% of the statewide average across all industries, or 35.7% ($310) greater.

Table 2.4: **Employment and Wages for Manufacturing (NAICS[a] 31-33)**

| | | | Change | | % of Total | |
|---|---|---|---|---|---|---|
| | 2016Q3 | 2017Q3 | N | % | 2016Q3 | 2017Q3 |
| Average Monthly Employment | 9,256 | 9,547 | 292 | 3.2 | 3.3 | 3.5 |
| Total Wages (in Millions) | $148.6 | $146.2 | -$2.4 | -1.6 | 4.8 | 4.7 |
| Average Weekly Wage | $1,235 | $1,178 | -$57 | -4.6 | 142.8 | 135.7 |

[a]North American Industry Classification System.
Source: Quarterly Census of Employment and Wages.
Prepared by M. Moore, Research & Planning, 1/10/18.

# Health Care & Social Assistance (NAICS 62)

Average monthly employment in health care & social assistance remained largely unchanged over the year, with a loss of 119 jobs (-0.5%; see Table 2.5). Total wages decreased by 1.0% (-$2.7 million), while average weekly wage remained practically unchanged (-0.5%, or -$4).

Table 2.5: **Employment and Wages for Health Care & Social Assistance (NAICS[a] 62)**

| | | | Change | | % of Total | |
|---|---|---|---|---|---|---|
| | 2016Q3 | 2017Q3 | N | % | 2016Q3 | 2017Q3 |
| Average Monthly Employment | 24,755 | 24,636 | -119 | -0.5 | 9.0 | 8.9 |
| Total Wages (in Millions) | $266.8 | $264.1 | -$2.7 | -1.0 | 8.6 | 8.5 |
| Average Weekly Wage | $829 | $825 | -$4 | -0.5 | 95.8 | 95.0 |

[a]North American Industry Classification System.
Source: Quarterly Census of Employment and Wages.
Prepared by M. Moore, Research & Planning, 1/10/18.

Employment and wages in Wyoming's health care & social assistance industry grew steadily for several years but, as noted by Manning (see Chapter 8, page 39), growth in this sector has slowed somewhat due to a decrease in the state's population.

In 2017Q3, health care & social assistance made up 8.9% of all jobs and 8.5% of total wages, largely unchanged from 2016Q3.

The average weekly wage for health care was $825 in 2017Q3, or 95.0% of the statewide average.

# Leisure & Hospitality (NAICS 71-72)

Leisure & hospitality experienced growth in average monthly employment (1.1%) and total wages (3.2%) from 2016Q3 to 2017Q3. Average weekly wage increased by 2.0% (see Table 2.6).

Table 2.6: **Employment and Wages for Leisure & Hospitality (NAICS[a] 71-72)**

| | | | Change | | % of Total | |
|---|---|---|---|---|---|---|
| | 2016Q3 | 2017Q3 | N | % | 2016Q3 | 2017Q3 |
| Average Monthly Employment | 41,090 | 41,524 | 435 | 1.1 | 14.9 | 15.0 |
| Total Wages (in Millions) | $214.3 | $221.0 | $6.8 | 3.2 | 6.9 | 7.1 |
| Average Weekly Wage | $401 | $409 | $8 | 2.0 | 46.4 | 47.1 |

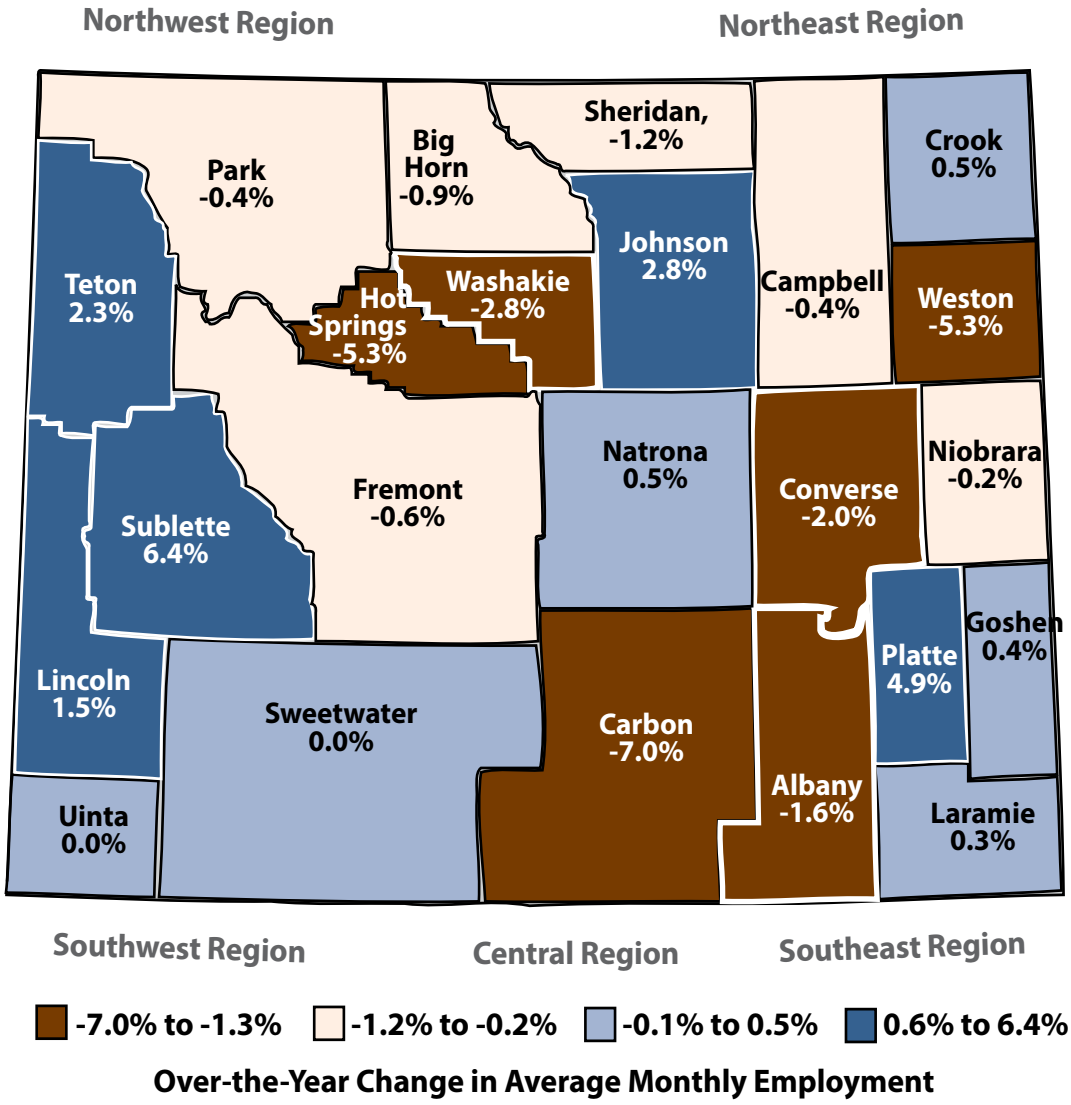
[a]North American Industry Classification System.
Source: Quarterly Census of Employment and Wages.
Prepared by M. Moore, Research & Planning, 1/10/18.

In 2017Q3, leisure & hospitality made up a large share of the state's total jobs (15.0%) but a considerably smaller proportion of total wages (7.1%). This disparity is due to the prevalance of jobs in this industry that offer fewer hours and lower wages. Leisure & hospitality had the lowest average weekly wage ($409) of all industries in 2017Q3, and the average weekly wage was less than half (47.1%) of the statewide average for all industries.

# Employment and Wages by County

While average monthly employment continued to decline in many Wyoming counties in 2017Q3, there were some counties that experienced job growth. As shown in Figure 2.3, the counties that experienced the greatest job growth over the year were Sublette (6.4%), Platte (4.9%), Johnson (2.8%), Teton (2.3%), and Lincoln (1.5%).

The counties that continued to experience the greatest loss of jobs were Carbon (-7.0%), Hot Springs (-5.3%), Weston (-5.3%), Washakie (-2.8%), Converse (-2.0%), and Albany (-1.6%).




Source: Quarterly Census of Employment and Wages.
Prepared by M. Moore, Research & Planning, WY DWS, 4/11/18.

Figure 2.3: **Over-the-Year Percent Change in Average Monthly Employment (Number of Jobs Worked) in Wyoming by County, 2016Q3-2017Q3**

In 2017Q3, five counties accounted for more than half (56.1%) of all jobs in Wyoming: Laramie (45,847, or 16.6%), Natrona (38,454, or 13.9%), Campbell (24,442, or 8.8%), Teton (24,053, or 8.7%), and Sweetwater (22,224, or 8.0%) counties (see Table 2.7).

These same five counties also accounted for 60.1% of total wages in Wyoming.

The statewide average weekly wage for Wyoming was $868. Counties where mining made up a sizable proportion of total employment had the highest average weekly wages: Sweetwater ($1,074), Sublette ($1,055), Campbell ($1,053), Converse ($930), and Natrona ($913). The lowest average weekly wages were found in Wyoming's two smallest counties, Niobrara ($629) and Hot Springs ($662).

Table 2.7: **Average Monthly Employment, Total Wages, and Average Weekly Wage for Wyoming by County, 2017Q3**

| | Average Monthly Employment | | Total Wages (in Millions) | | Average Weekly Wage | |
|---|---|---|---|---|---|---|
| County | N | % | $ | % | $ | % |
| **Total** | **276,178** | **100.0** | **$3,115.1** | **100.0** | **$868** | **100.0** |
| Albany | 15,413 | 5.6 | $156.8 | 5.0 | $783 | 90.2 |
| Big Horn | 4,219 | 1.5 | $41.0 | 1.3 | $747 | 86.1 |
| Campbell | 24,442 | 8.8 | $334.5 | 10.7 | $1,053 | 121.3 |
| Carbon | 7,000 | 2.5 | $74.0 | 2.4 | $813 | 93.7 |
| Converse | 5,514 | 2.0 | $66.6 | 2.1 | $930 | 107.1 |
| Crook | 2,396 | 0.9 | $24.5 | 0.8 | $787 | 90.8 |
| Fremont | 15,435 | 5.6 | $148.2 | 4.8 | $738 | 85.1 |
| Goshen | 4,307 | 1.6 | $38.7 | 1.2 | $691 | 79.6 |
| Hot Springs | 1,980 | 0.7 | $17.0 | 0.5 | $662 | 76.3 |
| Johnson | 3,331 | 1.2 | $29.4 | 0.9 | $678 | 78.2 |
| Laramie | 45,847 | 16.6 | $515.7 | 16.6 | $865 | 99.7 |
| Lincoln | 6,289 | 2.3 | $69.7 | 2.2 | $852 | 98.2 |
| Natrona | 38,454 | 13.9 | $456.6 | 14.7 | $913 | 105.3 |
| Niobrara | 909 | 0.3 | $7.4 | 0.2 | $629 | 72.5 |
| Park | 15,125 | 5.5 | $144.6 | 4.6 | $736 | 84.8 |
| Platte | 3,570 | 1.3 | $38.6 | 1.2 | $831 | 95.8 |
| Sheridan | 13,348 | 4.8 | $130.7 | 4.2 | $753 | 86.8 |
| Sublette | 4,220 | 1.5 | $57.9 | 1.9 | $1,055 | 121.6 |
| Sweetwater | 22,224 | 8.0 | $310.3 | 10.0 | $1,074 | 123.8 |
| Teton | 24,053 | 8.7 | $258.1 | 8.3 | $825 | 95.1 |
| Uinta | 8,288 | 3.0 | $79.9 | 2.6 | $742 | 85.5 |
| Washakie | 3,605 | 1.3 | $36.8 | 1.2 | $784 | 90.4 |
| Weston | 2,181 | 0.8 | $19.9 | 0.6 | $703 | 81.0 |
| Nonclassified | 4,026 | 1.5 | $58.1 | 1.9 | $1,110 | 127.9 |

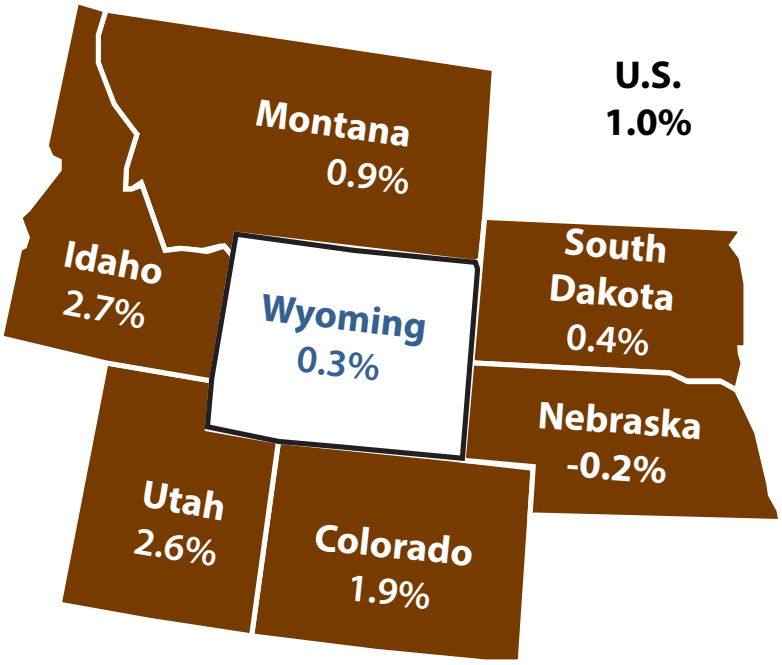
Source: Quarterly Census of Employment and Wages.
Prepared by M. Moore, Research & Planning, 3/21/18.


PHOTO CREDIT: Hey Darlin Photography/iStock/Thinkstock

# Job Growth in Wyoming and Surrounding States

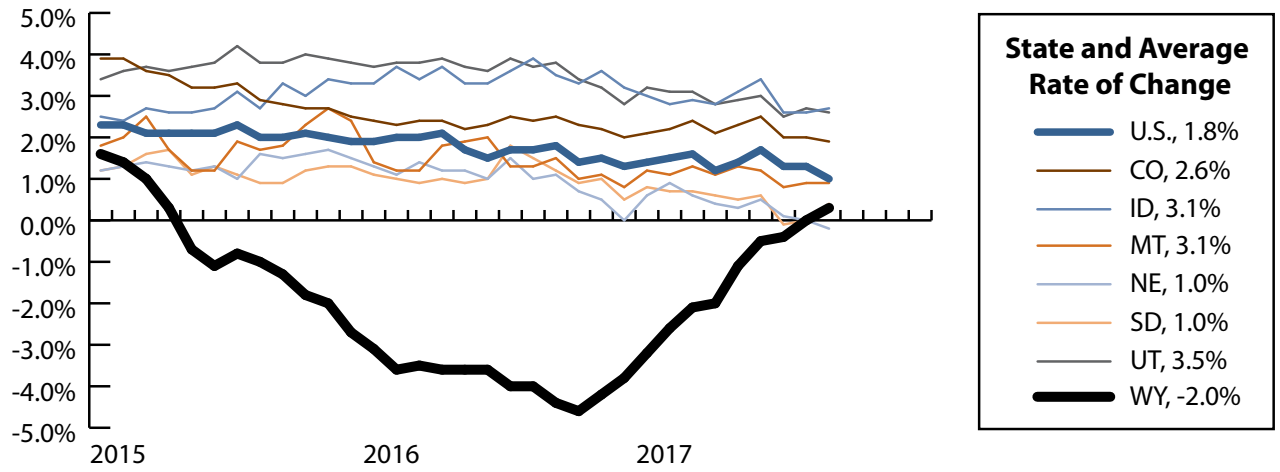
Migration tends to follow job growth, and people go where there is work. All of the states surrounding Wyoming showed consistent job growth from January 2015 to September 2017 (see Figure 2.4), while Wyoming lost jobs at a rate of -2.0%. Because of this dynamic, workers who lost their jobs during Wyoming's most recent economic downturn may have been able to find work in a nearby state with a growing economy.

Figure 2.5 shows that by September 2017, Wyoming finally began to show some growth, although at a much lesser rate than many surrounding states.




Source: Quarterly Census of Employment and Wages (QCEW).
Prepared by M. Moore, Research & Planning, WY DWS, 3/20/18.

**Figure 2.5: Over-the-Year Percent Change in Average Monthly Employment (Number of Jobs Worked) in Wyoming, Surrounding States, and the U.S., September 2016 to September 2017**




Shaded areas indicate periods of economic downturn: 2009Q1-2010Q1 and 2015Q2-2016Q4.
Source: Quarterly Census of Employment and Wages (QCEW).
Prepared by M. Moore, Research & Planning, WY DWS, 3/20/18.

**Figure 2.4: Over-the-Year Percent Change in Average Monthly Employment (Number of Jobs Worked) in Wyoming, Surrounding States, and the U.S., and Average Rate of Change, January 2015 to September 2017**

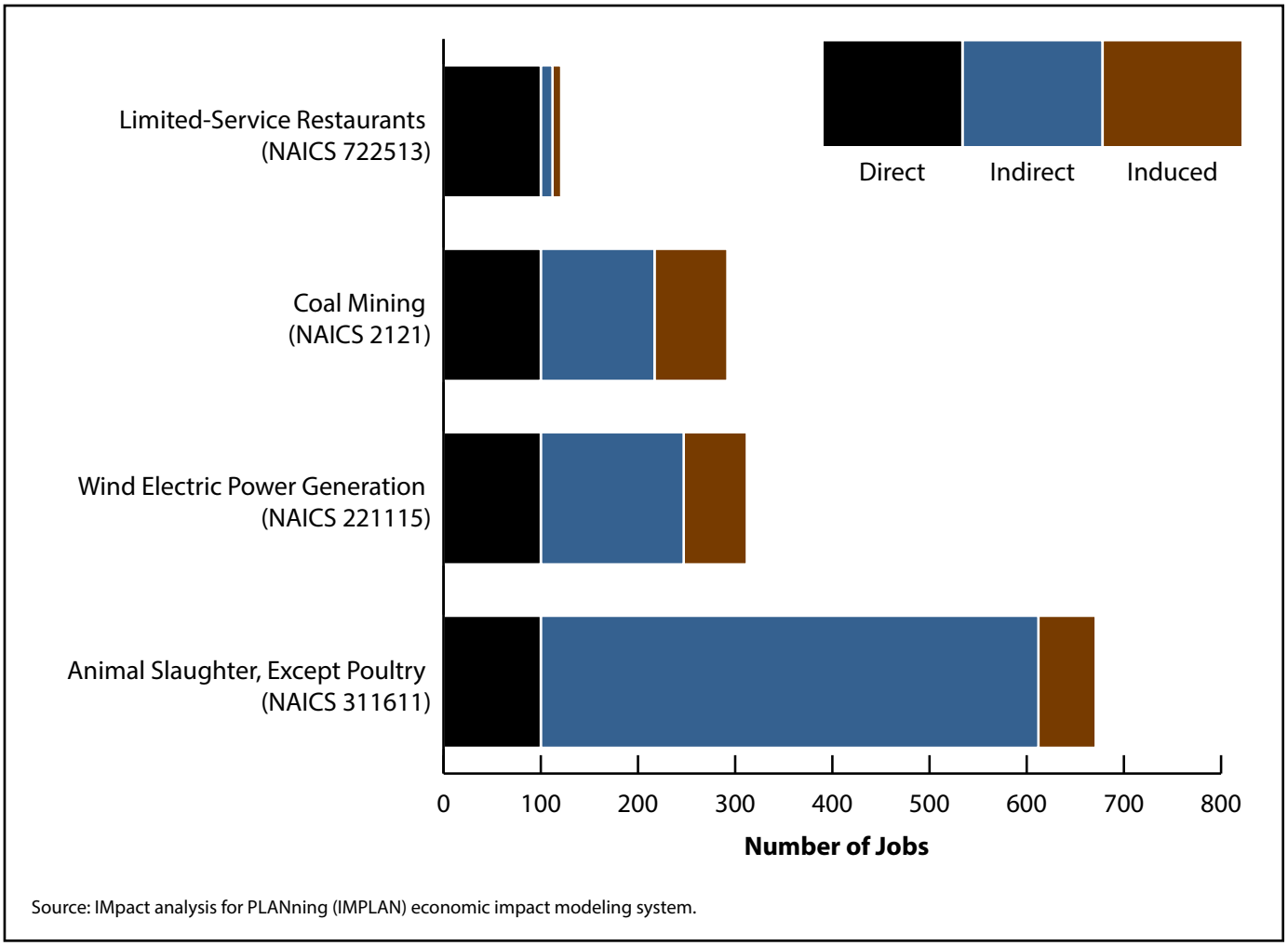
Chapter 3

# Economic Impacts of Growing and Potential Industries on the Wyoming Economy

*by: Matthew Halama, Economist and Patrick Manning, Principal Economist*

There are several initiatives to diversify Wyoming's economy, including the Economically Needed Diversity Options for Wyoming (ENDOW) program, and many areas could be targeted for increased economic activity.

This article examines the economic impact of four selected industries based on the North American Industry Classification System (NAICS). For illustrative purposes, coal mining (NAICS 2121) was chosen as an established industry, while wind electric power generation (NAICS 221115) was chosen as an emerging industry. A commercial-scale slaughterhouse (animal slaughter except poultry; NAICS 311611) was chosen as a potential diversification industry. Limited-service restaurants (NAICS 722513) was chosen as a low impact industry.




Source: IMpact analysis for PLANning (IMPLAN) economic impact modeling system.

Figure 3.1: **Direct, Indirect, and Induced Impacts on Employment when 100 Jobs are Added to Four Selected Industries in Wyoming**

## Methodology

In this analysis, it is presumed that 100 workers will be added to each of the four industries. This does not imply that this many additional workers are needed in each industry, but it allows direct comparison of the four industries.

To assess these industry changes, economists from the Research & Planning (R&P) section of the Wyoming Department of Workforce Services used the IMPLAN (IMpact analysis for PLANning) economic impact modeling system.

IMPLAN provides analysts with three types of estimates:

- Direct impacts: economic impacts as a result of actual project spending, such as the hiring of a general contractor to perform a construction project that subsequently increases employment to complete the project.

- Indirect impacts: economic impacts as a result of business-to-business spending when projects or events occur, such as a construction company that purchases lumber from a supplier in the region of analysis because of a new project.

- Induced impacts: economic impacts as a result of household spending changes because of project or event occurrence, such as an electrician who wires a new building and then takes his family out to dinner because of the increased wages.

Figure 3.1 (see page 16) shows direct, indirect, and induced impacts on employment of adding 100 jobs to each of the four industries. The sum of direct, indirect, and induced impacts represents the total impact of the activity for a given year.

Another measure for each of these impacts relates to the following three metrics:

- Labor income: all employee income (wages and benefits) and proprietor income.

- Value added: The difference between an industry's or an establishment's total output and the cost of its intermediate inputs. Value added is calculated by subtracting intermediate inputs (consumption of goods and services purchased from other industries or imported) from gross output (sales or receipts and other operating income, plus inventory change). Value added consists of compensation of employees, taxes on production and imports less subsidies (formerly indirect business taxes and nontax payments), and gross operating surplus (formerly other value added). Gross value added is the value of output minus the value of intermediate consumption; it is a measure of the contribution to GDP made by an individual producer, industry, or sector.

- Output: Output represents the value of industry production. In IMPLAN these are annual production estimates for the year of the data set and are in producer prices. For manufacturers this would be sales plus/minus change in inventory. For service sectors production output equals sales. For retail and wholesale trade, output equals gross margin and not gross sales.

Detailed information regarding the IMPLAN software package, how it operates, and what it produces can be found at www.implan.com.

# Results

## Low Impact: Limited-Service Restaurants (NAICS 722513)

Limited service restaurants would be in the category of low impact industries. The total effect is small compared to the other industries, as labor income is $2,634,318 and output is $11,390,804 (see Table 3.1).

An increase of 100 employees in a limited service restaurant would have an indirect effect of creating around 12 jobs and an induced effect of nine jobs (see Table 3.1). The top sectors of employment would be real estate (four jobs), full-scale and limited service restaurants (one job each), and wholesale trade (one job; see Table 3.2, page 19).

## Established Industry: Coal Mining (NAICS 2121)

The baseline industry for this article is coal mining, which is a high impact industry. Table 3.1 shows summary results for the impact of adding 100 workers in coal mining. The total effect of adding 100 workers leads to an increase of $22,069,266 in labor income and overall output of $128,615,007.

A gain of 100 employees leads to an indirect effect of adding around 117 jobs and an induced effect of 75 jobs. The top sectors of employment created through the indirect effects are support activities for oil & gas operations (39 jobs), wholesale trade (11 jobs), maintenance & repair construction of nonresidential structures (nine jobs), other financial investment activities & real estate (seven jobs), rail transportation (six jobs) and full service and limited service restaurants (five jobs each; see Table 3.2).

## Emerging Industry: Wind Electric Power Generation (NAICS 221115)

Wind generation has been consistently mentioned as a way to diversify Wyoming's economy and the type of energy people consume. Wind generation has a bigger indirect impact than coal mining, which carries it to a slightly larger total impact at $131,438,381 (see Table 3.1).

If wind generation adds 100 employees the indirect effect will be an increase of around 147 jobs and an induced effect of about 66 jobs. The top sectors of employment would be marketing research & all other miscellaneous

Table 3.1: **Impact on Selected Industries in Wyoming When 100 Jobs are Added**

| Impact Type | Employment | Labor Income | Total Value Added | Output |
|---|---|---|---|---|
| **Low Impact Industry: Limited-Service Restaurants (NAICS 722513)** | | | | |
| Direct | 100 | $1,813,888 | $4,537,715 | $8,200,551 |
| Indirect | 12 | $489,675 | $1,054,887 | $1,999,227 |
| Induced | 9 | $330,755 | $671,869 | $1,191,027 |
| **Total** | **121** | **$2,634,318** | **$6,264,472** | **$11,390,804** |
| **Established Industry: Coal Mining (NAICS 2121)** | | | | |
| Direct | 100 | $11,140,801 | $48,955,117 | $90,475,203 |
| Indirect | 117 | $8,157,153 | $15,357,419 | $28,160,372 |
| Induced | 75 | $2,771,312 | $5,629,934 | $9,979,432 |
| **Total** | **293** | **$22,069,266** | **$69,942,470** | **$128,615,007** |
| **Emerging Industry: Wind Electric Power Generation (NAICS 221115)** | | | | |
| Direct | 100 | $8,516,824 | $66,710,140 | $96,758,208 |
| Indirect | 147 | $8,232,437 | $12,575,802 | $26,009,625 |
| Induced | 66 | $2,407,653 | $4,893,926 | $8,670,549 |
| **Total** | **312** | **$19,156,915** | **$84,179,869** | **$131,438,381** |
| **Potential Industry: Animal Slaughter, Except Poultry (NAICS 3116)** | | | | |
| Direct | 100 | $2,619,815 | $3,865,189 | $64,988,585 |
| Indirect | 512 | $12,584,781 | $20,621,121 | $56,915,340 |
| Induced | 59 | $2,186,126 | $4,444,242 | $7,872,916 |
| **Total** | **671** | **$17,390,722** | **$28,930,552** | **$129,776,841** |

Source: IMpact analysis for PLANning (IMPLAN) economic impact modeling system.

professional, scientific, & technical services (23 jobs); full service restaurants (17 jobs); scenic & sightseeing transportation & support activities for transportation (15 jobs); maintenance & repair construction of nonresidential structures (12 jobs); real estate (12 jobs); monetary authorities & depository credit intermediation (seven jobs); employment services (six jobs); wholesale trade (six jobs); and legal services (six jobs; see Table 3.2).

### Potential Industry: Animal Slaughter Except Poultry (NAICS 311611)

As a potential industry, animal slaughter except poultry (NAICS 311611) is considered a high impact industry. Compared to coal mining and wind generation it falls short in direct effects but it shows higher returns, specifically through indirect effects.

An increase of 100 employees in a commercial-scale slaughterhouse would likely have an indirect effect of creating 512 new jobs and an induced effect of around 60 jobs. According to the IMPLAN model, the top sectors of employment would be beef cattle ranching & farming, including feedlots (249 jobs), followed by animal production, except cattle & poultry and eggs (101 jobs); truck transportation (43 jobs); support activities for agriculture & forestry (38 jobs); wholesale trade (14 jobs); all other crop farming (13 jobs); real estate (11 jobs); full-service restaurants (five jobs); and limited-service restaurants (five jobs).

## Summary

IMPLAN is a tool that allows R&P analysts and economists to see potential effects of a gain in employment for certain industries and understand where the impact will likely occur. Using IMPLAN also provides an idea of which industries capture more of the value added component that occurs along the supply chain. The operation of a slaughterhouse is an example of attempting to capture more of the value added component of the supply chain, as it includes employment in feedlots, dual purpose farming, wholesale trade, truck transportation, real estate, etc. Finally, comparing the differences between low impact and high impact industries provides greater insight into the impact of investing in specific industries.

Table 3.2: **Top 10 Sectors for Employment When 100 Jobs are Added to Selected Industries in Wyoming**

| Sector | Total Employment | Total Labor Income | Total Value Added | Total Output |
|---|---|---|---|---|
| **Low Impact Industry: Limited-Service Restaurants (NAICS 722513)** | | | | |
| **Limited-service restaurants** | **100** | **$1,828,249** | **$4,573,642** | **$8,265,478** |
| Real estate | 4 | $71,966 | $396,628 | $616,044 |
| Full-service restaurants | 1 | $17,497 | $18,599 | $38,572 |
| Wholesale trade | 1 | $69,168 | $121,270 | $184,106 |
| Services to buildings | 1 | $12,771 | $14,262 | $23,728 |
| Management of companies & enterprises | <1 | $21,419 | $41,074 | $84,693 |
| Retail - General merchandise stores | <1 | $11,841 | $21,322 | $31,535 |
| Accounting, tax preparation, bookkeeping, & payroll services | <1 | $19,408 | $25,521 | $33,527 |
| All other food & drinking places | <1 | $7,983 | $8,888 | $15,380 |
| Automotive repair & maintenance, except car washes | <1 | $17,637 | $22,908 | $34,131 |
| Remaining Sectors | 9 | $556,379 | $1,020,359 | $2,063,611 |
| **Total Impact** | **121** | **$2,634,318** | **$6,264,472** | **$11,390,804** |

(Table continued on page 20)

(Table continued from page 19)

Table 3.2: **Top 10 Sectors for Employment When 100 Jobs are Added to Selected Industries in Wyoming**

| Sector | Total Employment | Total Labor Income | Total Value Added | Total Output |
|---|---|---|---|---|
| **Established Industry: Coal Mining (NAICS 2121)** | | | | |
| **Coal mining** | **100** | **$11,566,494** | **$50,825,708** | **$93,932,289** |
| Support activities for oil & gas operations | 39 | $2,960,766 | $3,386,183 | $5,305,248 |
| Wholesale trade | 11 | $937,240 | $1,643,218 | $2,494,665 |
| Maintenance & repair construction of nonresidential structures | 9 | $486,624 | $641,554 | $1,322,817 |
| Other financial investment activities | 7 | -$14,609 | $80,291 | $995,512 |
| Real estate | 7 | $136,196 | $750,621 | $1,165,870 |
| Rail transportation | 6 | $738,976 | $3,051,058 | $4,115,319 |
| Full-service restaurants | 5 | $109,215 | $116,094 | $240,768 |
| Limited-service restaurants | 5 | $91,519 | $228,949 | $413,757 |
| Architectural, engineering, & related services | 4 | $237,234 | $238,277 | $516,730 |
| Remaining Sectors | 101 | $4,819,611 | $8,980,517 | $18,112,032 |
| **Total Impact** | **293** | **$22,069,266** | **$69,942,470** | **$128,615,007** |
| **Emerging Industry: Wind Electric Power Generation (NAICS 221115)** | | | | |
| **Wind Electric Power Generation** | **100** | **$8,518,743** | **$66,725,172** | **$96,780,010** |
| Marketing research & all other miscellaneous professional, scientific, & technical services | 23 | $902,242 | $875,533 | $1,513,451 |
| Full-service restaurants | 17 | $345,509 | $367,271 | $761,687 |
| Scenic & sightseeing transportation & support activities for transportation | 14 | $836,506 | $1,054,621 | $2,272,395 |
| Maintenance & repair construction of nonresidential structures | 12 | $659,248 | $869,137 | $1,792,069 |
| Real estate | 11 | $222,333 | $1,225,355 | $1,903,229 |
| Monetary authorities & depository credit intermediation | 7 | $455,922 | $781,433 | $1,434,681 |
| Employment services | 6 | $242,390 | $410,566 | $533,874 |
| Wholesale trade | 6 | $528,441 | $926,491 | $1,406,559 |
| Legal services | 6 | $327,209 | $452,911 | $706,531 |
| Remaining Sectors | 109 | $6,118,373 | $10,491,381 | $22,333,896 |
| **Total Impact** | **312** | **$19,156,915** | **$84,179,869** | **$131,438,381** |
| **Potential Industry: Animal Slaughter, Except Poultry (NAICS 311611)** | | | | |
| Beef cattle ranching & farming, including feedlots | 249 | $2,787,130 | $5,484,794 | $27,046,675 |
| Animal production, except cattle & poultry & eggs | 101 | $2,535,620 | $4,348,562 | $7,576,957 |
| **Animal, except poultry, slaughtering** | **100** | **$2,621,085** | **$3,867,062** | **$65,020,086** |
| Truck transportation | 43 | $2,770,949 | $3,239,667 | $7,177,234 |
| Support activities for agriculture & forestry | 37 | $530,208 | $497,503 | $959,203 |
| Wholesale trade | 14 | $1,271,241 | $2,228,807 | $3,383,681 |
| All other crop farming | 13 | $291,278 | $338,332 | $551,580 |
| Real estate | 10 | $202,305 | $1,114,972 | $1,731,781 |
| Full-service restaurants | 5 | $108,063 | $114,870 | $238,230 |
| Limited-service restaurants | 5 | $86,703 | $216,901 | $391,982 |
| Remaining Sectors | 93 | $4,186,140 | $7,479,082 | $15,699,432 |
| **Total Impact** | **671** | **$17,390,722** | **$28,930,552** | **$129,776,841** |

Source: IMpact analysis for PLANning (IMPLAN) economic impact modeling system.

## Chapter 4

# Wyoming Population Declines from 2016 to 2017

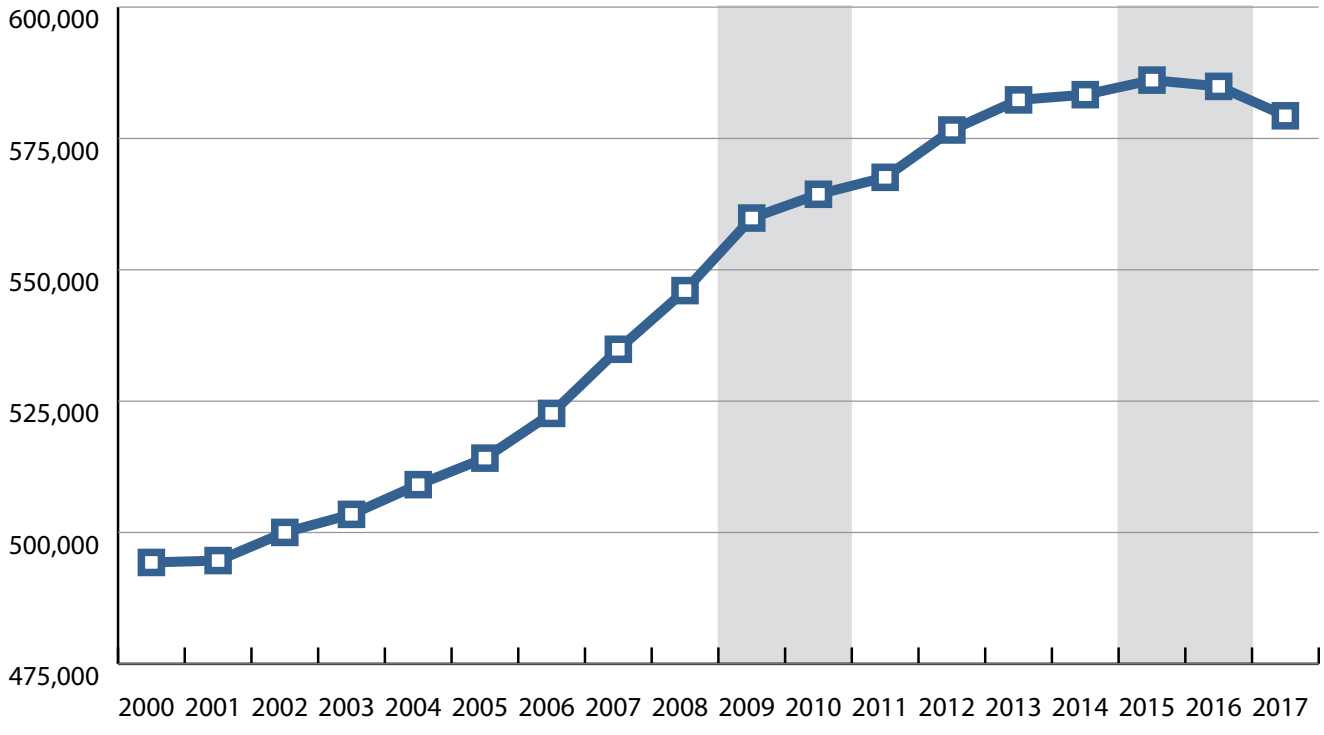
***by: Michael Moore, Editor***

Wyoming's estimated resident population declined from 584,910 in 2016 to 579,315 in 2017, a change of -5,595, or -1.0%. This marked the greatest percentage decrease in estimated population among all states. As shown in Figure 4.1, Wyoming had experienced relatively stable over-the-year population growth from 2010 to 2015, before declining in 2016 and 2017.

From 2016 to 2017, Wyoming experienced a natural increase of 2,666 individuals based on 7,513 births compared to 4,847 deaths. However, Wyoming's net migration from 2016 to 2017 was -8,285; in other words, 8,285 more individuals left the state than migrated into the state.

Beginning in second quarter 2015 (2015Q2), Wyoming entered a period of economic downturn during which average monthly employment (the number of jobs worked) and total wages decreased from prior-year levels. At the same time, all of the states surrounding Wyoming have experienced economic growth (see Chapter 2, page 15).

As noted by Liu (2018), migration tends to




Shaded areas indicate periods of economic downturn: 2009Q1-2010Q1 and 2015Q2-2016Q4.
Source: U.S. Census Bureau, Population Division.
Prepared by M. Moore, Research & Planning, WY DWS, 3/20/18.

Figure 4.1: **Estimated Resident Population of Wyoming, 2000-2017**

follow employment changes, and "people tend to move to areas where jobs are available, or conversely, may leave the areas where employment opportunities become limited." As shown in Table 4.1, all of the states surrounding Wyoming also experienced population growth from 2016 to 2017. In particular, Idaho's estimated resident population grew by 36,917, or 2.2% — the greatest percentage growth of any state.

Table 4.2 shows that several counties experienced substantial population losses from 2016 to 2017. Campbell County showed the greatest numeric loss (-2,558) and proportionate loss (-5.2%) over the year. Natrona County's population declined by 1,345, or -1.7%. Counties that experienced growth included Laramie (359, or 0.4%), Albany (345, or 0.9%), and Lincoln (189, or 1.0%) counties.

## Reference

Liu, W. (2018, March). Many counties experienced large population losses in 2017. Retrieved April 2, 2018, from http://eadiv.state.wy.us/pop/CO-17est.pdf

Table 4.1: **Change in Resident Population Estimates for the U.S., Wyoming, and Surrounding States, 2016-2017**

| State | 2016 | 2017 | Over-the-Year Change N | Over-the-Year Change % |
|---|---|---|---|---|
| U.S. | 323,405,935 | 325,719,178 | 2,313,243 | 0.7 |
| Wyoming | 584,910 | 579,315 | -5,595 | -1.0 |
| Colorado | 5,530,105 | 5,607,154 | 77,049 | 1.4 |
| Idaho | 1,680,026 | 1,716,943 | 36,917 | 2.2 |
| Montana | 1,038,656 | 1,050,493 | 11,837 | 1.1 |
| Nebraska | 1,907,603 | 1,920,076 | 12,473 | 0.7 |
| South Dakota | 861,542 | 869,666 | 8,124 | 0.9 |
| Utah | 3,044,321 | 3,101,833 | 57,512 | 1.9 |

Source: U.S. Census Bureau, Population Division.
Prepared by M. Moore, Research & Planning, WY DWS, 1/2/18.

Table 4.2: **Resident Population Estimates for Wyoming by County, 2016-2017**

| County | 2016 | 2017 | Over-the-Year Change N | Over-the-Year Change % |
|---|---|---|---|---|
| Albany | 37,987 | 38,332 | 345 | 0.9 |
| Big Horn | 11,941 | 11,906 | -35 | -0.3 |
| Campbell | 48,800 | 46,242 | -2,558 | -5.2 |
| Carbon | 15,727 | 15,303 | -424 | -2.7 |
| Converse | 14,127 | 13,809 | -318 | -2.3 |
| Crook | 7,497 | 7,410 | -87 | -1.2 |
| Fremont | 40,245 | 39,803 | -442 | -1.1 |
| Goshen | 13,355 | 13,378 | 23 | 0.2 |
| Hot Springs | 4,669 | 4,696 | 27 | 0.6 |
| Johnson | 8,496 | 8,476 | -20 | -0.2 |
| Laramie | 97,968 | 98,327 | 359 | 0.4 |
| Lincoln | 19,076 | 19,265 | 189 | 1.0 |
| Natrona | 80,892 | 79,547 | -1,345 | -1.7 |
| Niobrara | 2,470 | 2,397 | -73 | -3.0 |
| Park | 29,412 | 29,568 | 156 | 0.5 |
| Platte | 8,675 | 8,562 | -113 | -1.3 |
| Sheridan | 30,049 | 30,210 | 161 | 0.5 |
| Sublette | 10,002 | 9,799 | -203 | -2.0 |
| Sweetwater | 44,245 | 43,534 | -711 | -1.6 |
| Teton | 23,180 | 23,265 | 85 | 0.4 |
| Uinta | 20,711 | 20,495 | -216 | -1.0 |
| Washakie | 8,188 | 8,064 | -124 | -1.5 |
| Weston | 7,198 | 6,927 | -271 | -3.8 |
| **Total** | **584,910** | **579,315** | **-5,595** | **-1.0** |

Source: Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2017. U.S. Census Bureau, Population Division.
Prepared by M. Moore, Research & Planning, WY DWS, 4/2/18.
Related: See Figure 1, page 67.

**Find it Online: Population Estimates**
**U.S. Census Bureau: https://www.census.gov/**

Chapter 5

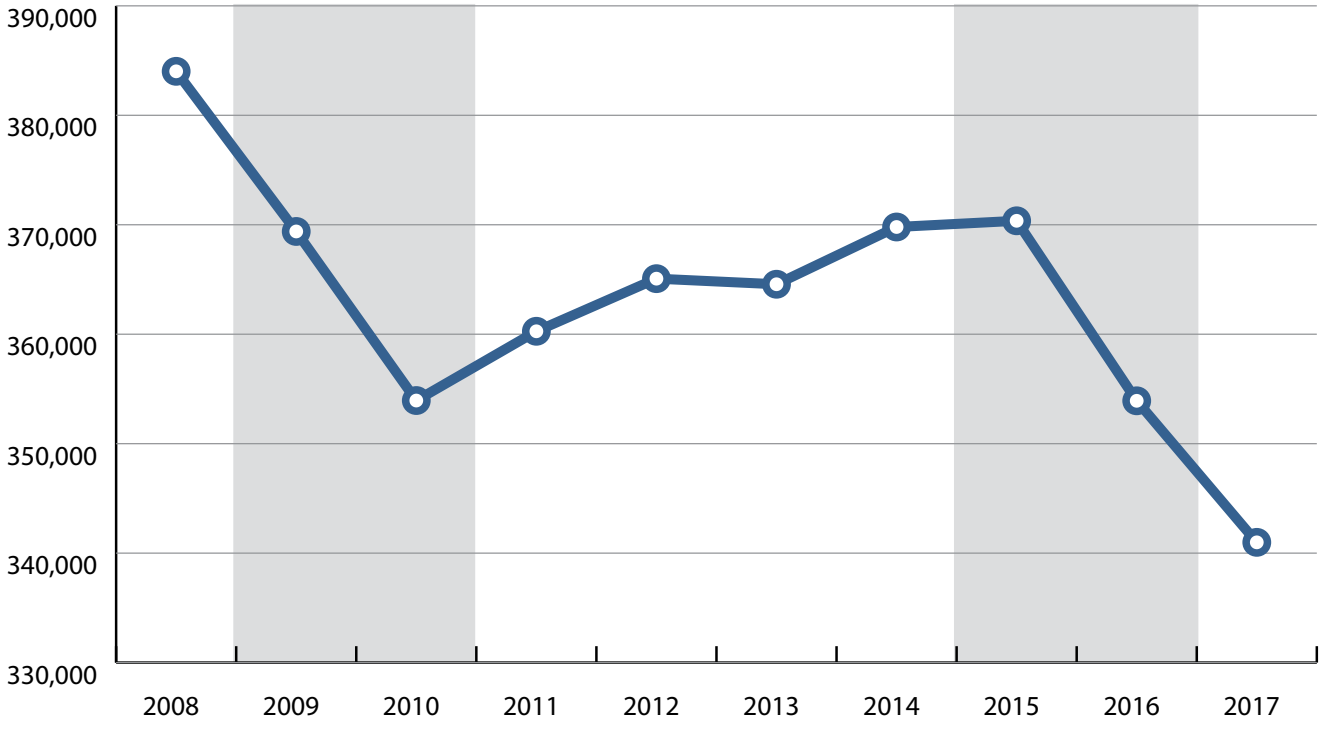
# Demographics of Wyoming's Workforce

*by: Michael Moore, Editor*

Wage Records

The total number of persons working in Wyoming at any time decreased from 353,917 in 2016 to 340,986 in 2017 (-12,931, or -3.7%) based on data from Research & Planning's Wage Records database. As shown in Figure 5.1, 2017 marked the second consecutive year of decline in the number of persons working; in addition, 2017 saw the fewest persons working in Wyoming in the last 10 years. As previously discussed in this report, Wyoming experienced a decline in both population and the number of jobs in the state in 2017, so a decrease in the number of persons working is consistent with those trends.

The numbers of individuals working in Wyoming are based on employers' quarterly wage and employment reports to the Unemployment Insurance (UI) tax section of the Wyoming Department of Workforce Services; these are referred to as wage records. UI covered




Shaded areas indicate periods of economic downturn: 2009Q1-2010Q1 and 2015Q2-2016Q4.
Source: Wyoming Wage Records database.
Prepared by M. Moore, Research & Planning, WY DWS, 4/3/18.

Figure 5.1: **Total Number of Persons Working in Wyoming at Any Time, 2008-2017**

employment represents approximately 91.5% of Wyoming's total wage and salary employment. Any individual who had wages in Wyoming at any time from 2008 to 2017 is included in the summary counts presented in this chapter. Each individual is counted only once.

By linking the Wage Records database with other administrative databases, such as the driver's license file from the Wyoming Department of Transportation, R&P is able to identify demographic information and other variables for each county and industry, including number of persons working, average annual wages, average number of quarters worked, average number of employers, gender, and age.

For the purposes of this chapter, 2017 consists of the four-quarter period from fourth quarter 2016 (2016Q4) to third quarter 2017 (2017Q3), the most recent quarter available at the time this report was published. Once data from 2017Q4 are available, data will be presented from each calendar year and will be published online at http://doe.state.wy.us/LMI/earnings_tables.htm and in *Wyoming Labor Force Trends.*

This chapter provides a sample of the type of research that can be accomplished by linking wage records to other administrative databases. Further examples can be found online at http://doe.state.wy.us/LMI/wagerecords.htm.

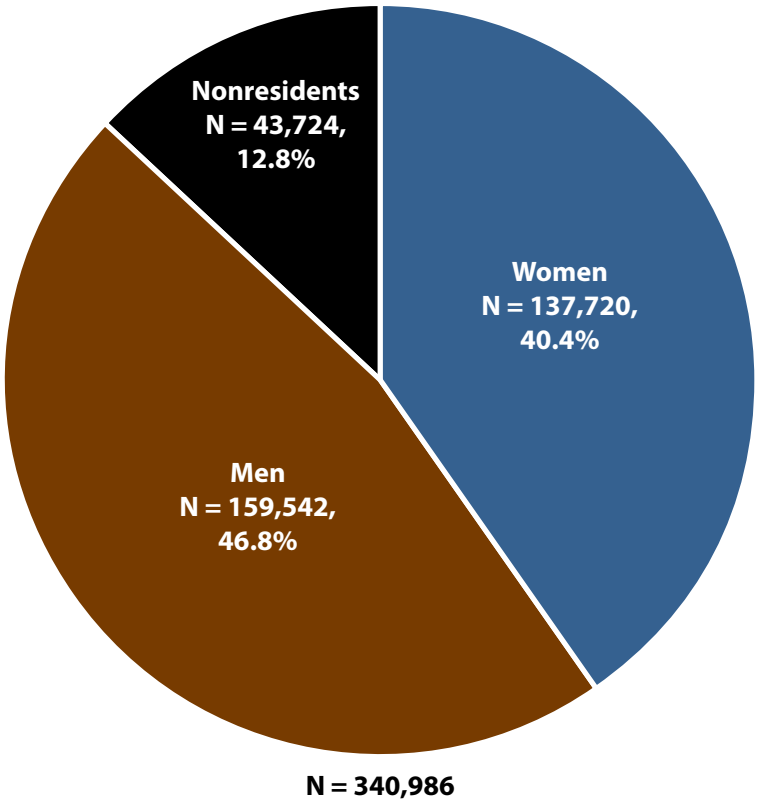
PHOTO CREDIT: Bowie 15 Photography/iStock/Thinkstock

**Find it Online: Demographics and Earnings of Persons Working in Wyoming by County, Industry, Age, & Gender**
**http://doe.state.wy.us/LMI/earnings_tables.htm**

# Gender

In 2017, men accounted for 46.8% of all persons working in Wyoming at any time, while women made up 40.4% (see Figure 5.2). The remaining 12.8% of persons working in Wyoming at any time were *nonresidents*, or individuals for whom demographic data could not be determined. These are generally out-of-state workers who travel to Wyoming for employment.

Table 5.1 shows that a greater proportion of men lost jobs during the recent downturn than women. The number of men working in Wyoming at any time decreased by 6.0% (-10,785 individuals) from 2015 to 2016, and then another 5.6% (-9,404) from 2016 to 2017. By comparison, the number of women working




[a]Nonresidents are individuals for whom demographic data are not available.
Source: Wyoming Wage Records database.
Prepared by M. Moore, Research & Planning, WY DWS, 3/20/18.

Figure 5.2: **Total Number of Persons Working in Wyoming at Any Time by Gender, 2017**

Table 5.1: **Total Number of Persons Working in Wyoming at Any Time by Gender, 2008-2017**

| | Women | | | Men | | | Nonresidents | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Over-the-Year Change | | | Over-the-Year Change | | | Over-the-Year Change | | | Over-the-Year Change | |
| Year | N | N | % | N | N | % | N | N | % | N | N | % |
| 2008 | 148,552 | | | 185,282 | | | 50,184 | | | 384,018 | | |
| 2009 | 146,630 | -1,922 | -1.3 | 182,052 | -3,230 | -1.7 | 40,706 | -9,478 | -18.9 | 369,388 | -14,630 | -3.8 |
| 2010 | 143,842 | -2,788 | -1.9 | 175,601 | -6,451 | -3.5 | 34,498 | -6,208 | -15.3 | 353,941 | -15,447 | -4.2 |
| 2011 | 145,228 | 1,386 | 1.0 | 179,053 | 3,452 | 2.0 | 35,987 | 1,489 | 4.3 | 360,268 | 6,327 | 1.8 |
| 2012 | 146,305 | 1,077 | 0.7 | 180,834 | 1,781 | 1.0 | 37,936 | 1,949 | 5.4 | 365,075 | 4,807 | 1.3 |
| 2013 | 146,550 | 245 | 0.2 | 180,561 | -273 | -0.2 | 37,454 | -482 | -1.3 | 364,565 | -510 | -0.1 |
| 2014 | 146,674 | 124 | 0.1 | 181,153 | 592 | 0.3 | 41,969 | 4,515 | 12.1 | 369,796 | 5,231 | 1.4 |
| 2015 | 146,870 | 196 | 0.1 | 179,731 | -1,422 | -0.8 | 43,761 | 1,792 | 4.3 | 370,362 | 566 | 0.2 |
| 2016 | 142,901 | -3,969 | -2.7 | 168,946 | -10,785 | -6.0 | 42,070 | -1,691 | -3.9 | 353,917 | -16,445 | -4.4 |
| 2017 | 137,720 | -5,181 | -3.6 | 159,542 | -9,404 | -5.6 | 43,724 | 1,654 | 3.9 | 340,986 | -12,931 | -3.7 |

Source: Wyoming Wage Records database.
Prepared by M. Moore, Research & Planning, WY DWS, 3/20/18.

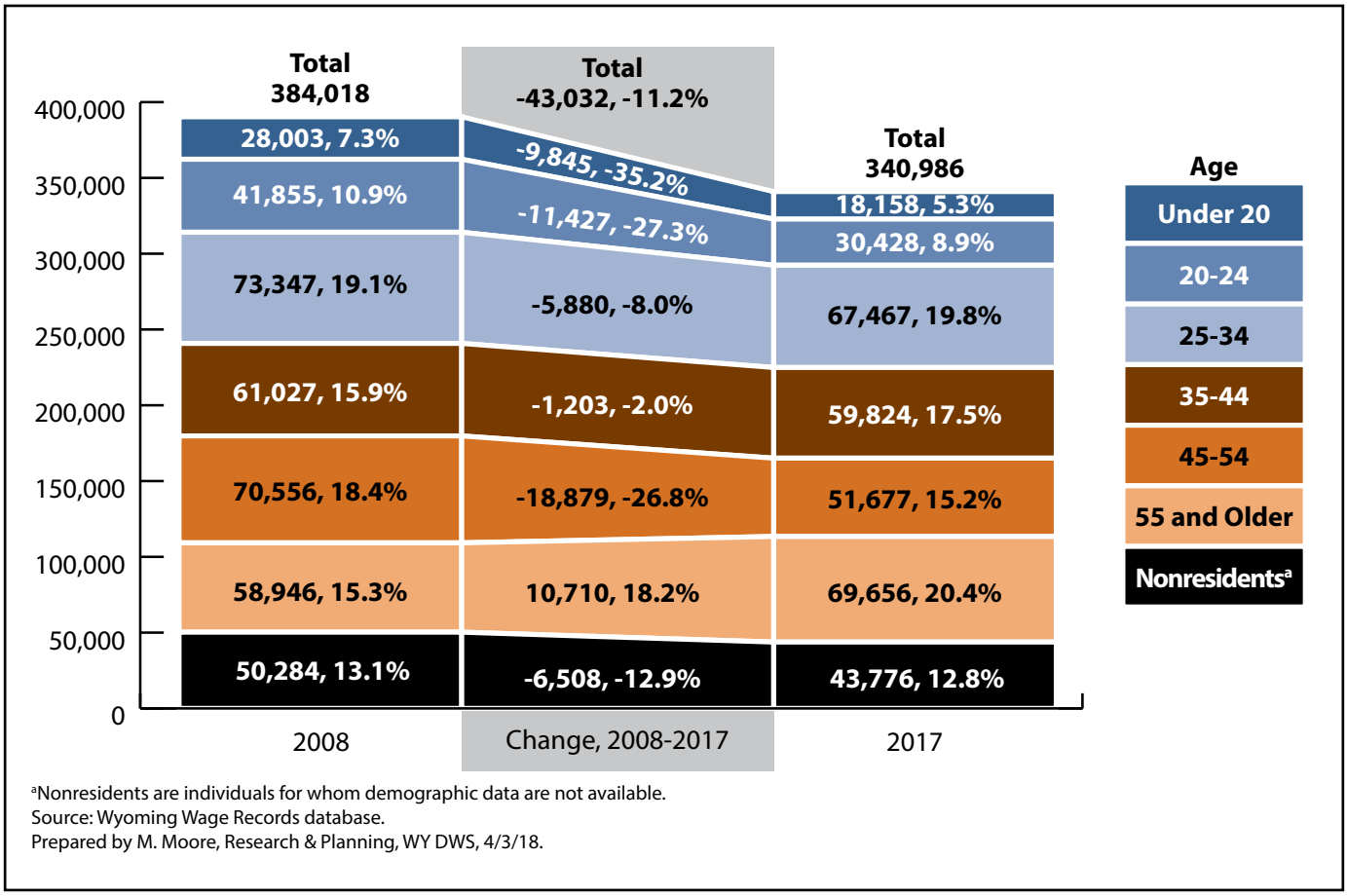
in Wyoming at any time decreased by 2.7% (-3,969) from 2015 to 2016, and then by 3.6% (-5,181) from 2016 to 2017.

## Age

Figure 5.3 shows the change in persons working in Wyoming by age from 2008 to 2017. Overall, the total number of persons working at any time decreased by 11.2%, or 43,032 individuals. Most age groups saw a decline in the number of persons working, most notably those younger than 20 (-35.2%, or -9,845) and those ages 20-24 (-27.3%, or -11,427). In 2008, these two groups of young workers accounted for 18.2% of all persons working in Wyoming. By 2017, however, individuals younger than 25 accounted for just 14.2% of all persons working.

The number of individuals ages 55 and older working in Wyoming at any time increased by 18.2% (10,710 individuals) from 2008 to 2017. In fact, in 2017, the 55 and older age group accounted for the largest share of total persons working in Wyoming at any time (20.4%).

There are a couple of key factors for the increase in the proportion of older workers in Wyoming. More of Wyoming's large baby boom population (those born between 1946 and 1964) moved into the 55 and older age group from 2008 to 2017. In addition, fewer individuals are retiring at the traditional age of 65, and are continuing to work.




[a]Nonresidents are individuals for whom demographic data are not available.
Source: Wyoming Wage Records database.
Prepared by M. Moore, Research & Planning, WY DWS, 4/3/18.

Figure 5.3: **Total Number of Persons Working in Wyoming at Any Time by Age, 2008 and 2017**

# Gender Wage Gap

In 2017, the annual wage for women working in Wyoming at any time was $28,822, or 63.7% of the $45,267 annual wage for men (see Table 5.2). In other words, women were paid 63.7 cents for every $1 paid to men.

It is important to understand that this wage disparity does not account for several factors, including occupation, number of hours worked, quarters worked in a given year, time spent in the workforce, or several others. Research & Planning has been tasked with producing a comprehensive report on Wyoming's gender wage gap, which will provide statistical analyses that take into consideration these and other factors.

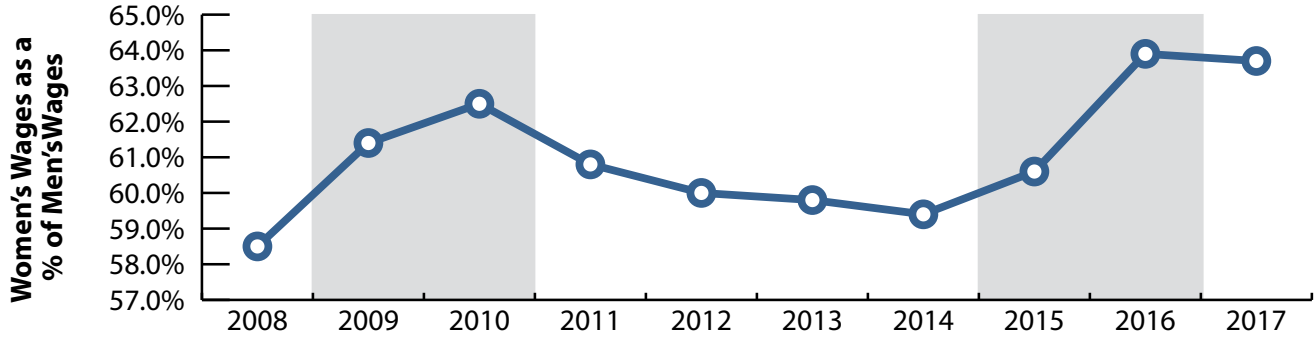
Table 5.2: **Mean Annual Wage for Persons Working in Wyoming at Any Time by Gender, 2008-2017**

| Year | | Women | Men | Women's Wages as a % of Men's Wages |
|---|---|---|---|---|
| 2008 | | $22,913 | $39,178 | 58.5 |
| 2009 | | $23,823 | $38,770 | 61.4 |
| 2010 | | $24,367 | $39,010 | 62.5 |
| 2011 | | $24,852 | $40,877 | 60.8 |
| 2012 | | $25,257 | $42,128 | 60.0 |
| 2013 | | $25,949 | $43,405 | 59.8 |
| 2014 | | $26,556 | $44,689 | 59.4 |
| 2015 | | $27,437 | $45,306 | 60.6 |
| 2016 | | $28,303 | $44,273 | 63.9 |
| 2017 | | $28,822 | $45,267 | 63.7 |
| Change, 2008-2017 | $ | $5,908 | $6,090 | |
| | % | 25.8 | 15.5 | |

Shaded areas indicate periods of economic downturn: 2009Q1-2010Q1 and 2015Q2-2016Q4.
Source: Wyoming Wage Records database.
Prepared by M. Moore, Research & Planning, WY DWS, 4/3/18.

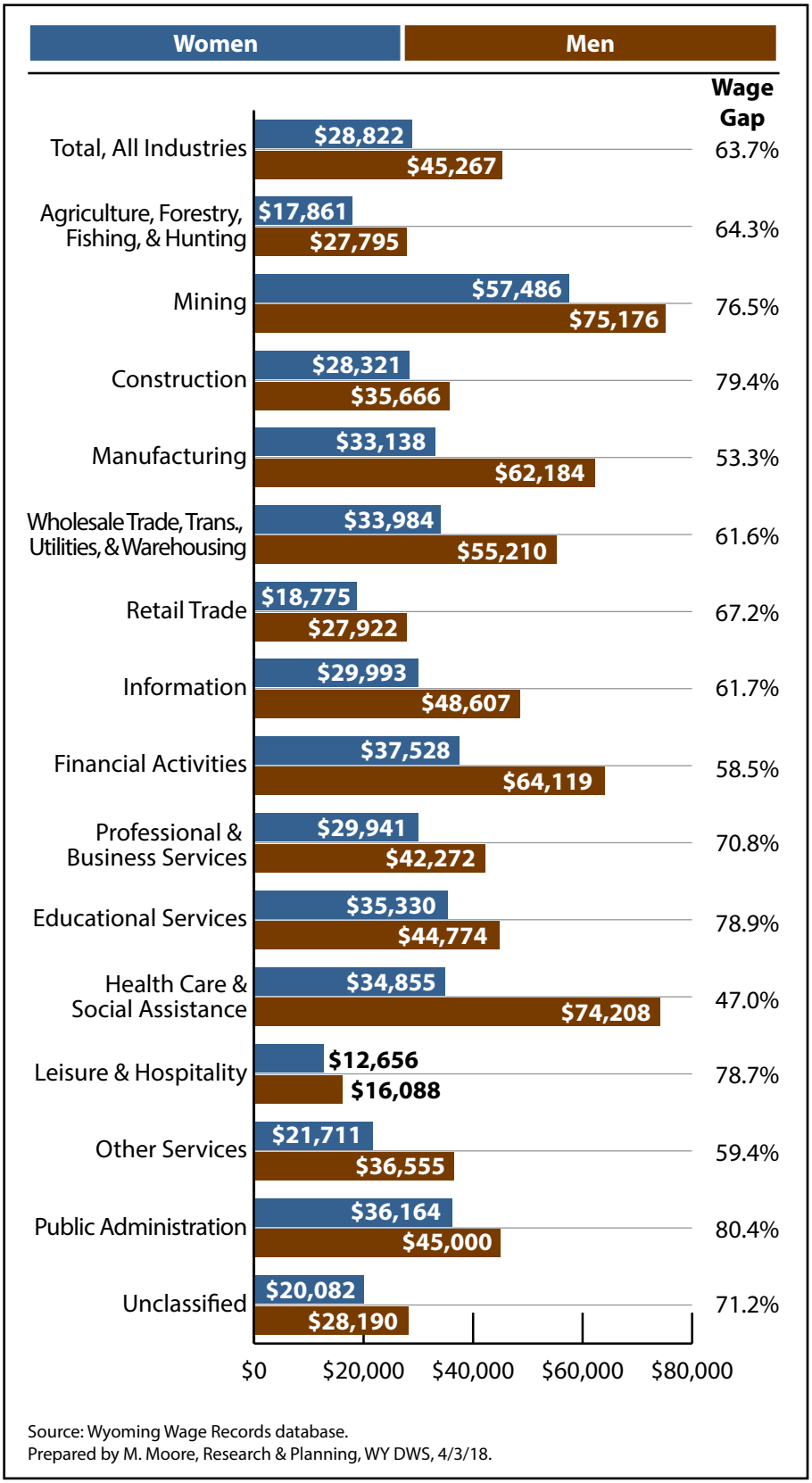
As noted by Moore (2015), Wyoming's gender wage gap is due in large part to the state's industrial composition, as male-dominated industries such as mining and construction often offer high paying jobs. In addition, Wyoming's gender wage gap is also dictated by economic conditions. During times of economic expansion, when Wyoming adds more high paying jobs in mining and construction, the gender wage gap widens. When the economy contracts, the gender wage gap narrows. This is illustrated in Figure 5.4. In 2008, during Wyoming's last period of economic expansion, women's wages were 58.5% of men's wages. In 2016 and 2017, during Wyoming's most recent downturn, the wage gap was narrower, with women's wages at 63.9% and 63.7% of men's wages, respectively.

As shown in Table 5.2, from 2008 to 2017, women's wages grew at a faster rate (25.8%) than men's wages (15.5%).




Shaded areas indicate periods of economic downturn: 2009Q1-2010Q1 and 2015Q2-2016Q4.
Source: Wyoming Wage Records database.
Prepared by M. Moore, Research & Planning, WY DWS, 4/3/18.

Figure 5.4: **Women's Wages as a Percent of Men's Wages in Wyoming, 2008-2017**




Source: Wyoming Wage Records database.
Prepared by M. Moore, Research & Planning, WY DWS, 4/3/18.

Figure 5.5: **Mean Annual Wage for Persons Working in Wyoming at Any Time by Industry, 2017**

## By Industry

As shown in Figure 5.5, Wyoming's gender wage gap varies by industry. In 2017, the gender wage gap was narrowest in public administration (80.4%), construction (79.4%), educational services (78.9%), and leisure & hospitality (78.7%). The wage gap was widest in health care & social assistance (47.0%), manufacturing (53.3%), and financial activities (58.5%).

The considerable wage disparity between men and women in health care & social assistance is due in large part to the number of women working in lower-paying nursing jobs in this industry, such as certified nursing assistants and home health aides. For example, according to data from the Wyoming New Hires Job Skills Survey (see Chapter 13, page 53), there were 695 individuals hired as nursing assistants in 2016 with a median hourly wage of $12.00. Of those, 90.2% were women.

## By County

Figure 5.6 (see page 29) shows that Wyoming's gender wage gap also varies by county. In 2017, the gender wage gap was narrowest in Niobrara (85.0%), Laramie (76.5%),

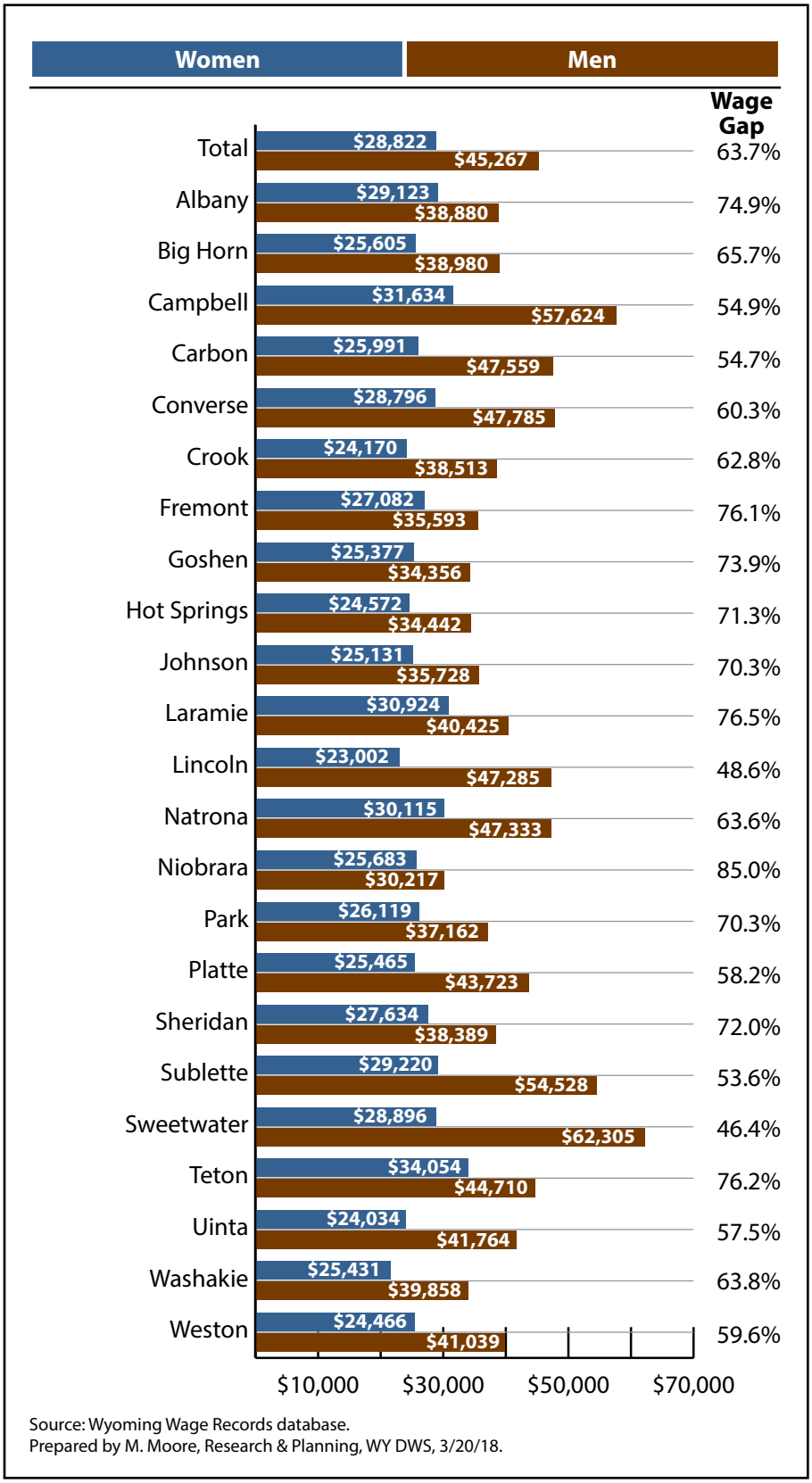
Teton (76.2%), and Fremont (76.1%) counties. The wage gap was widest in Sweetwater (46.4%), Lincoln (48.6%), Sublette (53.6%), Carbon (54.7%), and Campbell (54.9%) counties.

As noted by Holmes (2014), the gender wage gap is widest in counties where jobs in the mining industry make up a high percentage of all jobs. This is true in counties such as Sublette, Carbon, and Campbell. In contrast, the wage gap tends to be narrowest in counties with low average wages (Niobrara County) and counties in which public admininstration makes up a large portion of total jobs (Laramie County).

## References

Holmes, M. (2014). Gender wage gap stays near 60% for third straight year in 2013. *Wyoming Labor Force Trends, 51*(4). Retrieved April 11, 2018, from http://doe.state.wy.us/LMI/trends/0414/a2.htm

Moore, M. (2015). Gender wage gap: Compared to males, females earned 59% in 2014. *Wyoming Workforce Annual Report 2015*. Retrieved April 11, 2018, from https://doe.state.wy.us/LMI/annual-report/2015/2015_Annual_Report.pdf




Source: Wyoming Wage Records database.
Prepared by M. Moore, Research & Planning, WY DWS, 3/20/18.

Figure 5.6: **Mean Annual Wage for Persons Working in Wyoming at Any Time by County of Residence, 2017**

## Chapter 6

# Wyoming's Unemployment Rate Decreases as Labor Force Shrinks

LAUS

*by: Carola Cowan, BLS Programs Supervisor*

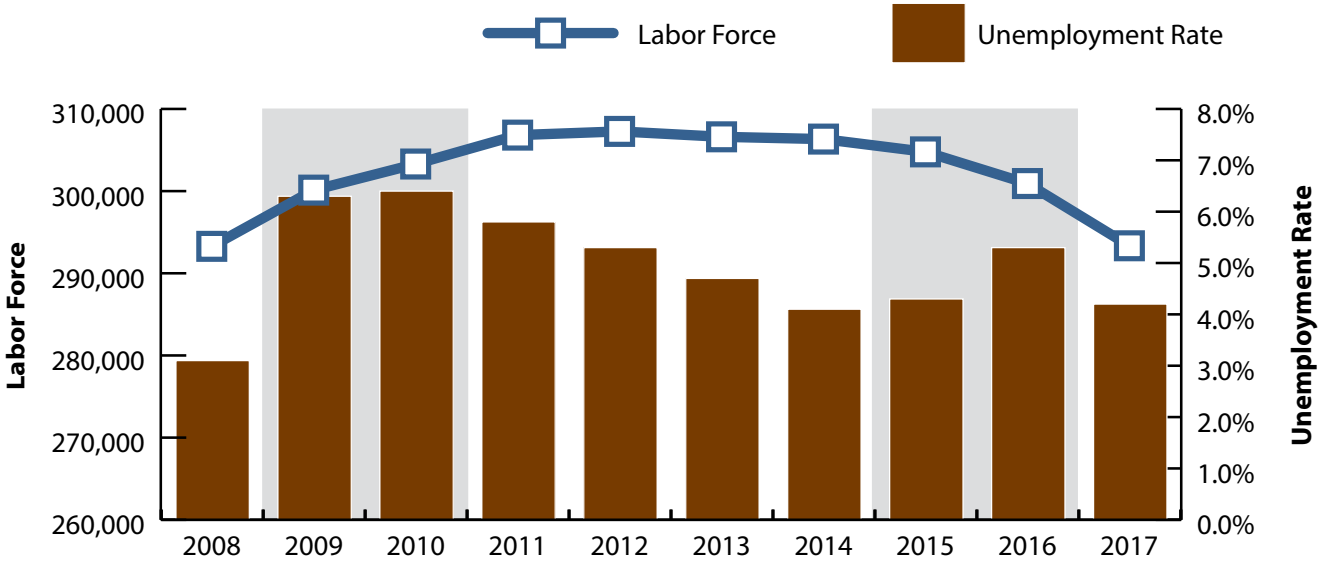
Wyoming's average annual unemployment rate for 2017 was 4.2%, down from 5.3% in 2016, according to the Local Area Unemployment Statistics (LAUS) program (see Table 6.1). Over the last decade, Wyoming's unemployment rate peaked at 6.4% in 2010. It steadily declined to 4.1% in 2014, before increasing to 4.3% in 2015 after a large number of layoffs in Wyoming's energy sector.

The decline in the unemployment rate in 2017 was associated with a large decline in the state's labor force (see Figure 6.1 and Box, page 31). The labor force in Wyoming has seen a steady decline since a high of 307,267 in 2012 to 293,347 in 2017. The last time the labor force was this low was in 2008, before the previous economic downturn (see

Table 6.1: **Wyoming Labor Force and Unemployment Rate , 2008-2017**

| Year | Labor Force | Employed | Unemployed | Unemployment Rate |
|---|---|---|---|---|
| 2008 | 293,279 | 284,310 | 8,969 | 3.1 |
| 2009 | 300,120 | 281,150 | 18,970 | 6.3 |
| 2010 | 303,297 | 283,744 | 19,553 | 6.4 |
| 2011 | 306,815 | 289,019 | 17,796 | 5.8 |
| 2012 | 307,267 | 290,932 | 16,335 | 5.3 |
| 2013 | 306,608 | 292,131 | 14,477 | 4.7 |
| 2014 | 306,331 | 293,657 | 12,674 | 4.1 |
| 2015 | 304,775 | 291,686 | 13,089 | 4.3 |
| 2016 | 300,922 | 285,052 | 15,870 | 5.3 |
| 2017 | 293,347 | 281,017 | 12,330 | 4.2 |

Source: Local Area Unemployment Statistics.
Prepared by C. Cowan, Research & Planning, WY DWS, 4/17/18.




Shaded areas indicate periods of economic downturn: 2009Q1-2010Q1 and 2015Q2-2016Q4.
Source: Local Area Unemployment Statistics.
Prepared by C. Cowan, Research & Planning, WY DWS, 4/17/18.

Figure 6.1: **Wyoming Labor Force and Unemployment Rate, 2008-2017**

Chapter 2, page 7). Even during the previous downturn and national Great Recession, Wyoming's labor force continued to grow. During the recent downturn, however, neighboring states have seen job growth, and it appears that workers left Wyoming to find jobs elsewhere.

In 2017, Niobrara (2.7%), Albany (2.8%), and Goshen (2.8%) counties had the lowest average annual unemployment rates (see Table 6.2), while Fremont (5.6%), Natrona (5.3%) and Campbell (4.9%) counties had the highest. All counties saw a decrease in the unemployment rate from the previous year. The three counties that showed the largest percentage point improvement from 2016 to 2017 were Campbell (-2.2%), Sublette (-2.0%), and Converse (-1.8%) counties, all of which are highly dependent on mining. The counties that showed the least improvement in percentage point change were Laramie (-0.4%), Teton (-0.4%), and Albany (-0.4%) counties. The primary industries of employment in these counties were government, tourism, and education, respectively. The labor force contracted in all counties except Sublette, Teton, and Platte from 2016 to 2017.

Table 6.2: **Wyoming Unemployment Rate by County, 2016-2017**

| County | 2016 | 2017 | Change |
|---|---|---|---|
| Total | 5.3 | 4.2 | -1.1 |
| Albany | 3.2 | 2.8 | -0.4 |
| Big Horn | 4.9 | 4.1 | -0.8 |
| Campbell | 7.1 | 4.9 | -2.2 |
| Carbon | 4.6 | 4.0 | -0.6 |
| Converse | 6.2 | 4.4 | -1.8 |
| Crook | 4.5 | 3.5 | -1.0 |
| Fremont | 7.1 | 5.6 | -1.5 |
| Goshen | 3.4 | 2.8 | -0.6 |
| Hot Springs | 4.7 | 3.9 | -0.8 |
| Johnson | 5.3 | 4.1 | -1.2 |
| Laramie | 4.1 | 3.7 | -0.4 |
| Lincoln | 4.6 | 3.7 | -0.9 |
| Natrona | 7.1 | 5.3 | -1.8 |
| Niobrara | 3.2 | 2.7 | -0.5 |
| Park | 4.7 | 4.2 | -0.5 |
| Platte | 4.7 | 3.7 | -1.0 |
| Sheridan | 4.7 | 4.0 | -0.7 |
| Sublette | 6.4 | 4.4 | -2.0 |
| Sweetwater | 6.0 | 4.6 | -1.4 |
| Teton | 3.4 | 3.0 | -0.4 |
| Uinta | 5.7 | 4.5 | -1.2 |
| Washakie | 4.7 | 4.1 | -0.6 |
| Weston | 4.9 | 4.0 | -0.9 |

Source: Local Area Unemployment Statistics.
Prepared by C. Cowan, Research & Planning, WY DWS, 4/17/18.

## Box: Calculating the Unemployment Rate

The *unemployment rate* is one of the most important economic indicators on which to measure the health of economies. The unemployment rate is calculated by taking the number of unemployed and dividing it by the total number of people in the labor force. The *labor force* is defined as the number of employed plus the number of unemployed individuals. Individuals less than 16 years of age, inmates of institutions, or member of the Armed Forces are excluded from the labor force, as are people who don't have a job and are not looking for employment. The number of unemployed is counted by place of residence. If a person loses his job in Wyoming and moves out of state, he is not included in Wyoming's unemployment rate, but in the state to which he moved.

**Find it Online: Local Area Unemployment Statistics**
**http://doe.state.wy.us/LMI/LAUS.htm**

## Chapter 7

# Unemployment Insurance Claims Decrease in 2017

UI Claims

*by: Sherry Wen, Principal Economist*

In 2017, the Wyoming Department of Workforce Services' Unemployment Insurance (UI) division paid a total of $67.9 million in UI benefits to unemployed workers, down 44.0% (-$53.4 million) compared to the $121.3 million paid in 2016. In total, 17,849 unemployed Wyoming workers received UI benefits in 2017, compared to 26,101 in 2016 – a decrease of 8,252 claimants, or -31.6% (see Table 7.1).

The number of UI recipients who exhausted their benefits also decreased, from 6,735 in 2016 to 4,178 in 2017 (-2,557, or -38.0%); the benefit exhaustion rate (number of exhaustees divided by total benefit recipients) decreased from 25.8% to 23.4%. Total UI benefits paid decreased from $121.3 million to $67.9 million (-$53.4 million, or -44.0%).

Fewer UI recipients could be an indication that fewer people lost their jobs in 2017 and needed to collect UI benefits as temporary financial support. A lower exhaustion rate could indicate that UI benefit recipients were able to find work without exhausting their benefits, possibly due to more employment opportunities.

This chapter provides UI benefit information at the county and industry level. More detailed information is available online at http://doe.state.wy.us/LMI/ui.htm.

Table 7.1: **Wyoming Unemployment Insurance (UI) Benefit Recipients, Exhaustees, and Total Expenses, 2016-2017**

| | | | Over-the-Year Change | |
|---|---|---|---|---|
| | 2016 | 2017 | N | % |
| UI Benefit Recipients | 26,101 | 17,849 | -8,252 | -31.6 |
| Benefit Exhaustees | 6,735 | 4,178 | -2,557 | -38.0 |
| Exhaustion Rate | 25.8% | 23.4% | -- | -2.4 |
| Benefit Expenses (in Millions) | $121.3 | $67.9 | -$53.4 | -44.0 |

Source: Wyoming Unemployment Insurance (UI) claims database.
Prepared by S. Wen, Research & Planning, WY DWS, March 23, 2018.


PHOTO CREDIT: Designer491 Photography/iStock/Thinkstock

# Benefit Recipients

## By County

As shown in Table 7.2, all counties experienced a decrease in UI recipients from 2016 to 2017; nearly all counties experienced a double-digit percentage decrease, with the exception of Park (-8.2%) and Teton (-9.7%) counties. The greatest decreases from 2016 to 2017 were seen in Natrona County (-1,664 recipients, or -39.3%), followed by Campbell County (-1,566, or -55.6%). The number of out-of-state recipients decreased by 1,399 individuals (-28.6%).

In 2017, out-of-state recipients accounted for the largest share of all recipients (3,494, or 19.6%), followed by Natrona (2,575, or 14.4%), Laramie (2,186, or 12.2%), and Campbell (1,250, or 7.0%) counties.

## By Industry

At the industry level, nearly one-third (30.3%, or 5,414 individuals) of all UI benefit recipients were from the construction industry (see Table 7.3, page 34). Accommodation & food services accounted for 14.0% (2,490 recipients) of the total, followed by retail trade (7.4%), administrative & waste services (6.2%), and public administration (6.2%). Table 7.3 also shows that approximately one-third (33.3%) of all recipients in accommodation & food services were out-of-state workers; by comparison, out-of-state workers accounted for 19.6% of all UI recipients.

All industries showed an over-the-year decrease in UI recipients from 2016 to 2017 (see Table 7.4, page 34). The largest decreases were seen in mining (-3,055, or -74.8%), construction (-1,500, or -21.7%), and transportation & warehousing (-682, or -49.8%).

Construction had the lowest UI benefit exhaustion rate (19.0%) of all industries in 2017. In contrast, 34.5% of UI recipients in utilities exhausted their benefits, followed by claimants in information (34.1%) and educational services (31.4%). Most industries showed a decrease in exhaustion rate from 2016 to 2017.

**Table 7.2: Unemployment Insurance Recipients in Wyoming by County of Residence for Claimant, 2016 and 2017**

| | 2016 | | 2017 | | Over-the-Year Change | |
|---|---|---|---|---|---|---|
| County | N | Column % | N | Column % | N | Row % |
| Albany | 601 | 2.3 | 511 | 2.9 | -90 | -15.0 |
| Big Horn | 323 | 1.2 | 262 | 1.5 | -61 | -18.9 |
| Campbell | 2,816 | 10.8 | 1,250 | 7.0 | -1,566 | -55.6 |
| Carbon | 527 | 2.0 | 365 | 2.0 | -162 | -30.7 |
| Converse | 695 | 2.7 | 321 | 1.8 | -374 | -53.8 |
| Crook | 206 | 0.8 | 137 | 0.8 | -69 | -33.5 |
| Fremont | 1,799 | 6.9 | 1,236 | 6.9 | -563 | -31.3 |
| Goshen | 223 | 0.9 | 172 | 1.0 | -51 | -22.9 |
| Hot Springs | 143 | 0.5 | 89 | 0.5 | -54 | -37.8 |
| Johnson | 275 | 1.1 | 199 | 1.1 | -76 | -27.6 |
| Laramie | 2,599 | 10.0 | 2,186 | 12.2 | -413 | -15.9 |
| Lincoln | 402 | 1.5 | 321 | 1.8 | -81 | -20.1 |
| Natrona | 4,239 | 16.2 | 2,575 | 14.4 | -1,664 | -39.3 |
| Niobrara | 44 | 0.2 | 35 | 0.2 | -9 | -20.5 |
| Park | 942 | 3.6 | 865 | 4.8 | -77 | -8.2 |
| Platte | 262 | 1.0 | 166 | 0.9 | -96 | -36.6 |
| Sheridan | 934 | 3.6 | 825 | 4.6 | -109 | -11.7 |
| Sublette | 320 | 1.2 | 174 | 1.0 | -146 | -45.6 |
| Sweetwater | 1,790 | 6.9 | 1,059 | 5.9 | -731 | -40.8 |
| Teton | 929 | 3.6 | 839 | 4.7 | -90 | -9.7 |
| Uinta | 653 | 2.5 | 435 | 2.4 | -218 | -33.4 |
| Washakie | 239 | 0.9 | 193 | 1.1 | -46 | -19.2 |
| Weston | 245 | 0.9 | 138 | 0.8 | -107 | -43.7 |
| Out-of-State | 4,893 | 18.7 | 3,494 | 19.6 | -1,399 | -28.6 |
| **Total** | **26,101** | **100.0** | **17,849** | **100.0** | **-8,252** | **-31.6** |

Source: Wyoming Unemployment Insurance (UI) claims database.
Prepared by S. Wen, Research & Planning, WY DWS, March 23, 2018.

Table 7.3: **Wyoming Unemployment Insurance Recipients by Industry and Residency, 2017**

| NAICS[a] Code | Industry | Wyoming Residents N | Wyoming Residents Row % | Out-of-State Residents N | Out-of-State Residents Row % | Total N | Total Column % |
|---|---|---|---|---|---|---|---|
| 11 | Agriculture, Forestry, Fishing, & Hunting | 133 | 89.9 | 15 | 10.1 | 148 | 0.8 |
| 21 | Mining, Quarrying, & Oil & Gas Extraction | 884 | 86.0 | 144 | 14.0 | 1,028 | 5.8 |
| 22 | Utilities | 26 | 89.7 | 3 | 10.3 | 29 | 0.2 |
| 23 | Construction | 4,324 | 79.9 | 1,090 | 20.1 | 5,414 | 30.3 |
| 31-33 | Manufacturing | 658 | 92.9 | 50 | 7.1 | 708 | 4.0 |
| 42 | Wholesale Trade | 377 | 92.9 | 29 | 7.1 | 406 | 2.3 |
| 44-45 | Retail Trade | 1164 | 88.2 | 156 | 11.8 | 1,320 | 7.4 |
| 48-49 | Transportation & Warehousing | 587 | 85.4 | 100 | 14.6 | 687 | 3.8 |
| 51 | Information | 110 | 87.3 | 16 | 12.7 | 126 | 0.7 |
| 52 | Finance & Insurance | 170 | 90.9 | 17 | 9.1 | 187 | 1.0 |
| 53 | Real Estate & Rental & Leasing | 185 | 92.5 | 15 | 7.5 | 200 | 1.1 |
| 54 | Professional & Technical Services | 417 | 85.8 | 69 | 14.2 | 486 | 2.7 |
| 55 | Mgmt.of Companies & Enterprises | 6 | 50.0 | 6 | 50.0 | 12 | 0.1 |
| 56 | Administrative & Waste Services | 1,010 | 91.9 | 89 | 8.1 | 1,099 | 6.2 |
| 61 | Educational Services | 262 | 90.3 | 28 | 9.7 | 290 | 1.6 |
| 62 | Health Care & Social Assistance | 1,029 | 94.9 | 55 | 5.1 | 1,084 | 6.1 |
| 71 | Arts, Entertainment, & Recreation | 196 | 89.1 | 24 | 10.9 | 220 | 1.2 |
| 72 | Accommodation & Food Services | 1,662 | 66.7 | 828 | 33.3 | 2,490 | 14.0 |
| 81 | Other Services | 309 | 82.0 | 68 | 18.0 | 377 | 2.1 |
| 92 | Public Administration | 751 | 68.4 | 347 | 31.6 | 1,098 | 6.2 |
| | Nonclassified | 95 | 21.6 | 345 | 78.4 | 440 | 2.5 |
| | **Total** | **14,355** | **80.4** | **3,494** | **19.6** | **17,849** | **100.0** |

[a]North American Industry Classification System.
Source: Wyoming Unemployment Insurance (UI) claims database.
Prepared by S. Wen, Research & Planning, WY DWS, March 23, 2018.

Table 7.4: **Wyoming Unemployment Insurance (UI) Recipients and Benefit Exhaustion Rates by Industry, 2016-2017**

| NAICS[a] Code | Industry | UI Recipients 2016 | UI Recipients 2017 | Over-the-Year Change N | Over-the-Year Change % | Exhaustion Rate 2016 | Exhaustion Rate 2017 |
|---|---|---|---|---|---|---|---|
| 11 | Agriculture, Forestry, Fishing, & Hunting | 164 | 148 | -16 | -9.8 | 25.0 | 23.6 |
| 21 | Mining, Quarrying, & Oil & Gas Extraction | 4,083 | 1,028 | -3,055 | -74.8 | 29.6 | 25.1 |
| 22 | Utilities | 57 | 29 | -28 | -49.1 | 35.1 | 34.5 |
| 23 | Construction | 6,914 | 5,414 | -1,500 | -21.7 | 22.0 | 19.0 |
| 31-33 | Manufacturing | 1,121 | 708 | -413 | -36.8 | 27.8 | 19.6 |
| 42 | Wholesale Trade | 1,058 | 406 | -652 | -61.6 | 30.0 | 29.6 |
| 44-45 | Retail Trade | 1,452 | 1,320 | -132 | -9.1 | 25.2 | 28.6 |
| 48-49 | Transportation & Warehousing | 1,369 | 687 | -682 | -49.8 | 25.1 | 23.6 |
| 51 | Information | 139 | 126 | -13 | -9.4 | 30.9 | 34.1 |
| 52 | Finance & Insurance | 193 | 187 | -6 | -3.1 | 26.4 | 26.2 |
| 53 | Real Estate & Rental & Leasing | 471 | 200 | -271 | -57.5 | 33.8 | 28.0 |
| 54 | Professional & Technical Services | 789 | 486 | -303 | -38.4 | 28.8 | 25.7 |
| 55 | Mgmt.of Companies & Enterprises | 31 | 12 | -19 | -61.3 | 35.5 | 25.0 |
| 56 | Administrative & Waste Services | 1,325 | 1,099 | -226 | -17.1 | 30.7 | 25.1 |
| 61 | Educational Services | 334 | 290 | -44 | -13.2 | 30.8 | 31.4 |
| 62 | Health Care & Social Assistance | 1,199 | 1,084 | -115 | -9.6 | 22.9 | 24.6 |
| 71 | Arts, Entertainment, & Recreation | 237 | 220 | -17 | -7.2 | 26.6 | 25.0 |
| 72 | Accommodation & Food Services | 2,889 | 2,490 | -399 | -13.8 | 20.5 | 19.7 |
| 81 | Other Services | 651 | 377 | -274 | -42.1 | 27.6 | 28.6 |
| 92 | Public Administration | 1,172 | 1,098 | -74 | -6.3 | 27.6 | 28.5 |
| | Nonclassified | 453 | 440 | -13 | -2.9 | 37.5 | 38.6 |
| | **Total** | **26,101** | **17,849** | **-8,252** | **-31.6** | **25.8** | **23.4** |

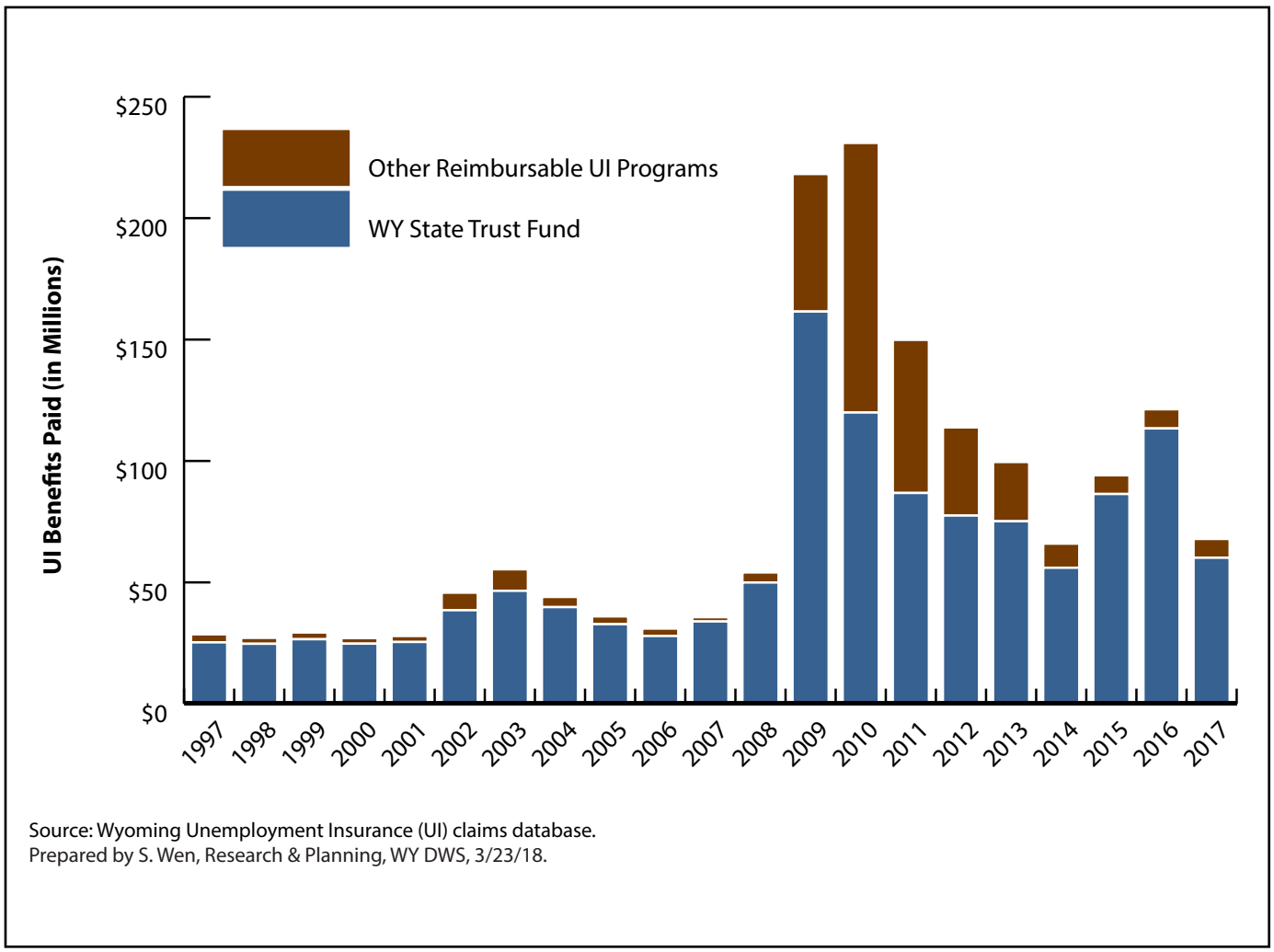
[a]North American Industry Classification System.
Source: Wyoming Unemployment Insurance (UI) claims database.
Prepared by S. Wen, Research & Planning, WY DWS, March 23, 2018.

## Benefits Paid

As shown in Figure 7.1, the $67.9 million in total benefits paid in 2017 was close to the $56.0 million in 2014, the last year before Wyoming entered its most recent economic downturn. Figure 7.1 shows historical data from 1997 (the first year for which data are available) to 2017. Wyoming's UI benefit expenses peaked in 2010 ($231.0 million) during the previous downturn that followed the national Great Recession, then decreased each year from 2011 to 2014, until the start of the recent downturn in 2015. Total benefit expenses have never returned to the levels seen before the previous downturn, which was about $36.8 million annually.

### By County

Table 7.5 (see page 36) shows Wyoming UI benefit expenses by county for 2016 and 2017. All counties had double-digit percentage decreases in UI benefit expenses from 2016 to 2017, with the exception of Teton County (-8.0%). Out-of-state recipients accounted for approximately 22% of all benefits collected in both 2016 and 2017. Natrona County accounted for the second largest share of all UI benefits paid in both 2016 ($21.0 million, or 17.3%)




Source: Wyoming Unemployment Insurance (UI) claims database.
Prepared by S. Wen, Research & Planning, WY DWS, 3/23/18.

Figure 7.1: **Unemployment Insurance Benefits Paid in Wyoming, 1997 to 2017**

and 2017 ($9.9 million, or 14.6%). Natrona County also had the greatest over-the-year decrease from 2016 to 2017 (-$11.1 million, or 52.7%). Campbell County showed the second greatest over-the-year decrease, from $14.2 million to $4.8 million (-$9.4 million, or -66.0%).

## By Industry

In 2017, nearly one-third (31.6%, or $21.5 million) of total UI benefits were paid to those who worked in the construction industry (see Table 7.6, page 37). Accommodation & food services accounted for 10.4% of all benefit expenses, followed by retail trade (6.7%).

Compared to 2016, all industries experienced double-digit percentage decreases in UI benefit expenses in 2017, with the exception of arts, entertainment, & recreation (-7.7%) and finance & insurance (11.0%). The largest over-the-year decreases were seen in mining (-$17.4 million, or -81.0%), followed by construction (-$11.5 million, or -34.9%).

Table 7.5: **Unemployment Insurance Benefit Expenses by County for Wyoming, 2016-2017**

| | 2016 | | 2017 | | Over-the-Year Change | |
|---|---|---|---|---|---|---|
| County | UI Benefit | Column % | UI Benefit | Column % | $ | Row % |
| Albany | $2,337,027 | 1.9 | $1,674,034 | 2.5 | -$662,993 | -28.4 |
| Big Horn | $1,269,261 | 1.0 | $841,139 | 1.2 | -$428,122 | -33.7 |
| Campbell | $14,199,417 | 11.7 | $4,826,415 | 7.1 | -$9,373,002 | -66.0 |
| Carbon | $2,335,895 | 1.9 | $1,485,117 | 2.2 | -$850,778 | -36.4 |
| Converse | $3,569,101 | 2.9 | $1,141,824 | 1.7 | -$2,427,277 | -68.0 |
| Crook | $986,598 | 0.8 | $474,816 | 0.7 | -$511,782 | -51.9 |
| Fremont | $8,256,795 | 6.8 | $4,713,013 | 6.9 | -$3,543,782 | -42.9 |
| Goshen | $792,574 | 0.7 | $531,013 | 0.8 | -$261,561 | -33.0 |
| Hot Springs | $667,644 | 0.6 | $360,661 | 0.5 | -$306,983 | -46.0 |
| Johnson | $1,239,444 | 1.0 | $740,417 | 1.1 | -$499,027 | -40.3 |
| Laramie | $9,456,149 | 7.8 | $7,861,779 | 11.6 | -$1,594,370 | -16.9 |
| Lincoln | $1,616,671 | 1.3 | $1,237,989 | 1.8 | -$378,682 | -23.4 |
| Natrona | $20,996,686 | 17.3 | $9,940,453 | 14.7 | -$11,056,233 | -52.7 |
| Niobrara | $189,941 | 0.2 | $122,291 | 0.2 | -$67,650 | -35.6 |
| Park | $3,602,330 | 3.0 | $2,959,178 | 4.4 | -$643,152 | -17.9 |
| Platte | $1,283,905 | 1.1 | $669,810 | 1.0 | -$614,095 | -47.8 |
| Sheridan | $3,737,035 | 3.1 | $2,972,542 | 4.4 | -$764,493 | -20.5 |
| Sublette | $1,549,210 | 1.3 | $616,834 | 0.9 | -$932,376 | -60.2 |
| Sweetwater | $8,193,606 | 6.8 | $3,999,111 | 5.9 | -$4,194,495 | -51.2 |
| Teton | $3,061,905 | 2.5 | $2,816,313 | 4.2 | -$245,592 | -8.0 |
| Uinta | $2,977,514 | 2.5 | $1,741,474 | 2.6 | -$1,236,040 | -41.5 |
| Washakie | $982,707 | 0.8 | $752,757 | 1.1 | -$229,950 | -23.4 |
| Weston | $1,407,300 | 1.2 | $559,930 | 0.8 | -$847,370 | -60.2 |
| Out of State | $26,566,136 | 21.9 | $14,813,800 | 21.8 | -$11,752,336 | -44.2 |
| **Total** | **$121,274,851** | **100.0** | **$67,852,710** | **100.0** | **-$53,422,141** | **-44.1** |

Source: Wyoming Unemployment Insurance (UI) claims database.
Prepared by S. Wen, Research & Planning, WY DWS, March 23, 2018.

**Find it Online: Unemployment Insurance Claims Data**
**http://doe.state.wy.us/LMI/ui.htm**

## Summary

Unemployment Insurance benefit expenses and the number of UI recipients decreased substantially from 2016 to 2017. This indicates that fewer layoffs happened across the state in 2017 than in 2016, and Wyoming's economy may be recovering from the recent economic downturn. This is consistent with the trend in UI covered employment (see Chapter 2) that shows that job losses appear to have stopped by 2017Q3.

Table 7.6: **Unemployment Insurance Benefit Expenses by Industry for Wyoming, 2016-2017**

| | | 2016 | | 2017 | | Over-the-Year Change | |
|---|---|---|---|---|---|---|---|
| NAICS[a] Code | Industry | UI Benefit | Column % | UI Benefit | Column % | $ | Row % |
| 11 | Agriculture, Forestry, Fishing, & Hunting | $790,329 | 0.7 | $528,986 | 0.8 | -$261,343 | -33.1 |
| 21 | Mining, Quarrying, & Oil & Gas Extraction | $21,402,745 | 17.6 | $4,056,587 | 6.0 | -$17,346,158 | -81.0 |
| 22 | Utilities | $431,130 | 0.4 | $140,136 | 0.2 | -$290,994 | -67.5 |
| 23 | Construction | $32,972,630 | 27.2 | $21,469,075 | 31.6 | -$11,503,555 | -34.9 |
| 31-33 | Manufacturing | $4,641,829 | 3.8 | $2,663,328 | 3.9 | -$1,978,501 | -42.6 |
| 42 | Wholesale Trade | $5,191,245 | 4.3 | $1,770,125 | 2.6 | -$3,421,120 | -65.9 |
| 44-45 | Retail Trade | $6,866,687 | 5.7 | $4,541,464 | 6.7 | -$2,325,223 | -33.9 |
| 48-49 | Transportation & Warehousing | $6,438,019 | 5.3 | $2,801,386 | 4.1 | -$3,636,633 | -56.5 |
| 51 | Information | $729,174 | 0.6 | $649,457 | 1.0 | -$79,717 | -10.9 |
| 52 | Finance & Insurance | $798,340 | 0.7 | $885,886 | 1.3 | $87,546 | 11.0 |
| 53 | Real Estate & Rental & Leasing | $2,264,761 | 1.9 | $892,870 | 1.3 | -$1,371,891 | -60.6 |
| 54 | Professional & Technical Services | $3,817,752 | 3.1 | $1,991,680 | 2.9 | -$1,826,072 | -47.8 |
| 55 | Mgmt. of Companies & Enterprises | $221,564 | 0.2 | $49,118 | 0.1 | -$172,446 | -77.8 |
| 56 | Administrative & Waste Services | $7,678,125 | 6.3 | $4,435,592 | 6.5 | -$3,242,533 | -42.2 |
| 61 | Educational Services | $1,832,742 | 1.5 | $1,349,842 | 2.0 | -$482,900 | -26.3 |
| 62 | Health Care & Social Assistance | $4,656,167 | 3.8 | $3,766,208 | 5.5 | -$889,959 | -19.1 |
| 71 | Arts, Entertainment, & Recreation | $990,464 | 0.8 | $914,101 | 1.3 | -$76,363 | -7.7 |
| 72 | Accommodation & Food Services | $8,613,415 | 7.1 | $7,040,132 | 10.4 | -$1,573,283 | -18.3 |
| 81 | Other Services | $3,289,417 | 2.7 | $1,708,684 | 2.5 | -$1,580,733 | -48.1 |
| 92 | Public Administration | $5,371,444 | 4.4 | $4,200,329 | 6.2 | -$1,171,115 | -21.8 |
| | Nonclassified | $2,289,384 | 1.9 | $2,023,828 | 3.0 | -$265,556 | -11.6 |
| | **Total** | **$121,287,363** | **100.0** | **$67,878,814** | **100.0** | **-$53,408,549** | **-44.0** |

[a]North American Industry Classification System.

Source: Wyoming Unemployment Insurance (UI) claims database.

Prepared by S. Wen, Research & Planning, WY DWS, March 23, 2018.

Chapter 8

# Mining, Leisure & Hospitality Lead Projected Growth

Projections

*by: Patrick Manning, Principal Economist*

The Research & Planning (R&P) section of the Wyoming Department of Workforce Services produces short-term employment projections by industry and occupation, which are available online at http://doe.state.wy.us/LMI/projections.htm. New short-term projections from R&P indicate job growth is projected to occur in all sectors, except information and public administration.

## Industry Projections

Industries are classified according to the North American Industry Classification System (NAICS). The industry projections are developed at the three-digit NAICS subsector level and then summed to the two-digit major industries shown in Table 8.1.

The short-term industry projections indicate that Wyoming's employment is expected to grow by 7,333 jobs (2.7%) from second quarter 2017 (2017Q2) to second quarter 2019 (2019Q2). At the two-digit level, job growth is forecast for all sectors, with exception of information (NAICS 51) and public administration (NAICS 92).

As shown in Table 8.1, the largest job growth is expected in mining, including oil & gas (NAICS 21; 2,410 jobs, or 12.5%) and leisure & hospitality (NAICS 71-72; 1,643, or 4.5%). Wyoming's mining sector has historically been volatile, with much of

Table 8.1: **Short-Term Industry Projections for Wyoming by Two-Digit NAICS Code, 2017Q2-2019Q2**

| | | Employment | | Change | |
|---|---|---|---|---|---|
| NAICS[a] Code | Industry | 2017Q2 (Estimated) | 2019Q2 (Projected) | N | % |
| 11 | Agriculture, Forestry, Fishing & Hunting | 2,838 | 2,974 | 136 | 4.8 |
| 21 | Mining | 19,318 | 21,728 | 2,410 | 12.5 |
| 22 | Utilities | 2,498 | 2,541 | 43 | 1.7 |
| 23 | Construction | 20,109 | 20,392 | 283 | 1.4 |
| 31-33 | Manufacturing | 9,102 | 9,432 | 330 | 3.6 |
| 42 | Wholesale Trade | 8,096 | 8,266 | 170 | 2.1 |
| 44-45 | Retail Trade | 29,646 | 30,278 | 632 | 2.1 |
| 48-49 | Transportation & Warehousing | 11,510 | 11,788 | 278 | 2.4 |
| 51 | Information | 3,704 | 3,652 | -52 | -1.4 |
| 52-53 | Financial Activities | 10,868 | 11,185 | 317 | 2.9 |
| 54-56 | Professional & Business Services | 18,058 | 18,814 | 756 | 4.2 |
| 61 | Educational Services | 29,638 | 29,705 | 67 | 0.2 |
| 62 | Health Care & Social Assistance | 32,648 | 33,432 | 784 | 2.4 |
| 71 | Leisure & Hospitality | 36,365 | 38,008 | 1,643 | 4.5 |
| 81 | Other Services (except Government) | 7,264 | 7,447 | 183 | 2.5 |
| 92 | Public Administration | 32,010 | 31,366 | -644 | -2.0 |
| | **Total, All Industries** | **273,675** | **281,008** | **7,333** | **2.7** |

[a]North American Industry Classification System.
Source: Wyoming Short-Term Projections, 2017-2019.
Prepared by P. Manning, Research & Planning, Wyoming DWS, 3/1/18.

the industry dependent on oil extraction. Employment in mining bottomed out in 2016Q3 with slightly fewer than 18,000 jobs, the lowest level in more than 10 years. Since then, however, mining has seen over-the-month increases in each of the six months prior to the base period used in these projections (2017Q2).

Projections are based on historic trends of how employment levels respond to market conditions. Oil prices are relatively favorable for Wyoming suppliers at this time, and therefore employment levels are expected to continue increasing. However, the global supply/demand situation could change abruptly.

Health care & social assistance (NAICS 62) is expected to grow modestly by 784 jobs (2.4%). Growth in this sector has been tempered somewhat due to a decrease in Wyoming's population. This is also the reason that employment in educational services (NAICS 61) is expected to remain practically unchanged.

## Occupational Projections

Occupations are classified using the Standard Occupational Classification (SOC) system. Short-term occupational projections show anticipated job growth and openings due to workers exiting the workforce or changing occupations through 2019Q2. Total openings are calculated by projected growth or decline (numeric change) in the number of jobs in a given occupation, plus the number of workers leaving the workforce (exits), plus the number of workers changing occupations (transfers). In almost all occupations, the total number of job openings is largely dictated by the number of workers leaving the workforce and the number of workers changing occupations. The projected growth or decline is generally a small component of total openings.

For example, Table 8.2 (see page 42) shows that the number of cashiers (SOC 41-2011) in Wyoming is projected to grow from 6,813 in 2017Q2 to 6,941 in 2019Q2, a growth of 128, or 1.9%. However, an additional 1,291 openings are projected due to individuals exiting the occupation, and an additional 1,260 openings are projected due to transfers, the total number of openings – growth plus exits plus transfers – is projected to be 2,679.

As shown in Figure 8.1 (see page 40), the majority of projected openings from 2017-2019 are in jobs that require a high school diploma or less (73.1%). Jobs requiring a bachelor's degree account for the second largest proportion of projected openings (12.1%), followed by jobs requiring a postsecondary certificate (5.9%). Jobs requiring an associate's degree (2.0%), master's degree (1.2%), and doctoral or professional degree (1.0%) make up less than 5% of all projected openings.

Table 8.2 (see page 42) shows the top five occupations by total projected openings by typical educational requirement. Jobs associated with the food service and retail trade industry account for the largest number of total projected openings, such as cashiers (2,679 total openings), retail salespersons (2,603), waiters & waitresses (2,321), and combined food preparation & serving workers (2,026). Office clerks round out the top five with 1,597 openings.

**Find it Online: Wyoming Long- and Short-Term Industry and Occupational Projections**
**http://doe.state.wy.us/LMI/projections.htm**

These five occupations account for 20.9% of projected total openings requiring a high school diploma or less from 2017 to 2019.

Among occupations requiring a certificate, heavy and tractor-trailer truck drivers and nursing assistants are expected to have the most openings, with 1,597 and 745, respectively. Together, all occupations requiring a certificate are expected to generate 4,315 job openings from 2017 to 2019 in Wyoming. The occupations in the top five made up 71.3% of total openings for occupations requiring a certificate.

There are projected to be 1,454 job openings that require an associate's degree from 2017 to 2019. Three technician occupations are in the top five requiring an associate's degree, including geological & petroleum technicians (140 jobs), forest & conservation technicians (137), and chemical technicians (73). Preschool teachers and paralegals & legal assistants are expected to have 131 and 116 openings, respectively. These top five occupations comprise 41.1% of total openings among jobs requiring an associate's degree.

There are projected to be 8,848 job openings over the two years that require a bachelor's degree. General & operations managers are projected to have 967 openings. Two teaching-related occupations — substitute teachers and elementary school teachers — are expected to have 673

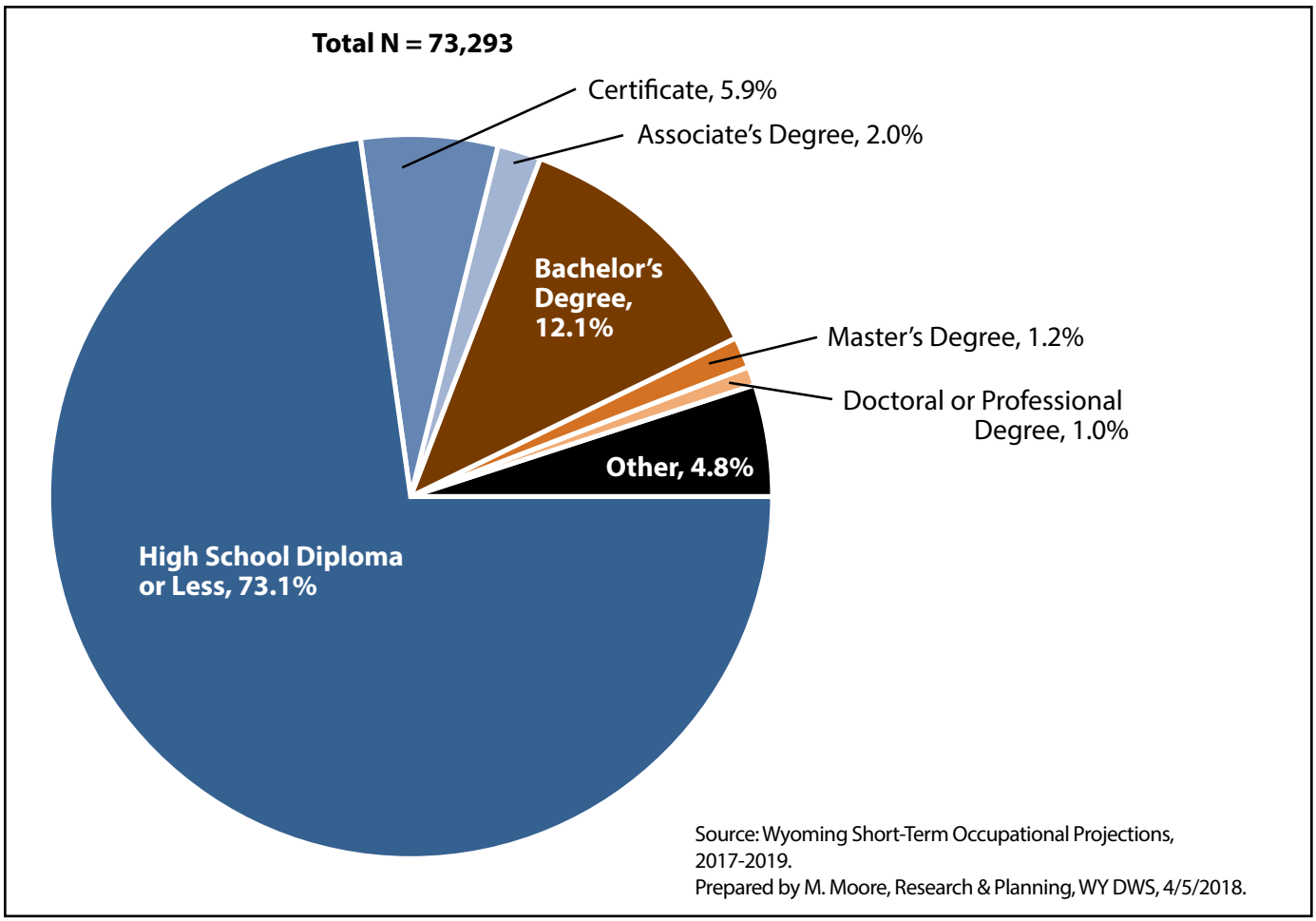



Figure 8.1: **Projected Total Job Openings in Wyoming by Educational Requirement, 2017-2019**

and 430 openings, respectively. Registered nurses (658) and accountants & auditors (390) complete the top five, which account for 35.2% of total openings for occupations requiring a bachelor's degree.

Occupations requiring a master's degree are projected to have 867 total openings from 2017 to 2019. Three of the top five occupations are education-related: educational, guidance, school, & vocational counselors (131 openings); educational administrators, elementary & secondary school (66); and instructional coordinators (64). Mental health counselors and librarians are expected to have 83 and 69 openings, respectively. These five occupations comprise 47.6% of total openings for occupations requiring a master's degree.

Projections suggest there will be 728 total openings in occupations requiring a doctoral or professional degree. Lawyers are projected to have the most openings with 91, followed by postsecondary teachers (72), pharmacists (55), physical therapists (54), and postsecondary health specialties teachers (41). These five occupations comprise 43.0% of total openings for occupations requiring a doctoral or professional degree.

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PHOTO CREDIT: Welcomia Imagery/iStock/Thinkstock

PHOTO CREDIT: Szepy/iStock/Thinkstock

PHOTO CREDIT: Anna Bizon/iStock/Thinkstock

Table 8.2: **Top 5 Occupations by Projected Total Openings for Wyoming by Educational Requirement, 2017-2019**

| SOC[a] Code | Occupation | 2017Q2 | 2019Q2 | Number of Openings Due to: Growth | Exits | Transfers | Total Openings |
|---|---|---|---|---|---|---|---|
| | **Total, All Occupations** | **292,733** | **300,594** | **7,861** | **27,750** | **37,682** | **73,293** |
| **High School Diploma or Less** | | | | | | | |
| 41-2011 | Cashiers | 6,813 | 6,941 | 128 | 1,291 | 1,260 | 2,679 |
| 41-2031 | Retail Salespersons | 8,454 | 8,621 | 167 | 1,081 | 1,355 | 2,603 |
| 35-3031 | Waiters & Waitresses | 5,521 | 5,733 | 212 | 833 | 1,276 | 2,321 |
| 35-3021 | Combined Food Prep. & Serving Workers, Including Fast Food | 4,757 | 5,013 | 256 | 865 | 905 | 2,026 |
| 43-9061 | Office Clerks, General | 6,421 | 6,519 | 98 | 759 | 740 | 1,597 |
| | **Total, All Occupations** | **190,273** | **196,099** | **5,826** | **20,223** | **27,539** | **53,588** |
| **Certificate** | | | | | | | |
| 53-3032 | Heavy & Tractor-Trailer Truck Drivers | 6,280 | 6,529 | 249 | 543 | 805 | 1,597 |
| 31-1014 | Nursing Assistants | 3,068 | 3,124 | 56 | 376 | 313 | 745 |
| 49-3023 | Automotive Service Tech. & Mechanics | 1,728 | 1,767 | 39 | 110 | 211 | 360 |
| 39-5012 | Hairdressers, Hairstylists, & Cosmetologists | 804 | 827 | 23 | 109 | 81 | 213 |
| 31-9092 | Medical Assistants | 637 | 661 | 24 | 57 | 80 | 161 |
| | **Total, All Occupations** | **19,009** | **19,501** | **492** | **1,683** | **2,140** | **4,315** |
| **Associate's Degree** | | | | | | | |
| 19-4041 | Geological & Petroleum Tech. | 312 | 383 | 71 | 19 | 50 | 140 |
| 19-4093 | Forest & Conservation Tech. | 621 | 616 | -5 | 50 | 92 | 137 |
| 25-2011 | Preschool Teachers, Except Special Ed. | 706 | 701 | -5 | 61 | 75 | 131 |
| 23-2011 | Paralegals & Legal Assistants | 521 | 532 | 11 | 35 | 70 | 116 |
| 19-4031 | Chemical Technicians | 323 | 335 | 12 | 22 | 39 | 73 |
| | **Total, All Occupations** | **7,175** | **7,365** | **190** | **489** | **775** | **1,454** |
| **Bachelor's Degree** | | | | | | | |
| 11-1021 | General & Operations Managers | 4,736 | 4,927 | 191 | 200 | 576 | 967 |
| 25-3098 | Substitute Teachers | 2,997 | 3,021 | 24 | 367 | 282 | 673 |
| 29-1141 | Registered Nurses | 5,009 | 5,155 | 146 | 291 | 221 | 658 |
| 25-2021 | Elementary School Teachers, Exc. Special Ed. | 2,997 | 3,007 | 10 | 198 | 222 | 430 |
| 13-2011 | Accountants & Auditors | 1,974 | 2,016 | 42 | 118 | 230 | 390 |
| | **Total, All Occupations** | **49,875** | **50,807** | **932** | **3,081** | **4,835** | **8,848** |
| **Master's Degree** | | | | | | | |
| 21-1012 | Educational, Guidance, School, & Vocational Counselors | 598 | 606 | 8 | 44 | 79 | 131 |
| 21-1014 | Mental Health Counselors | 355 | 365 | 10 | 26 | 47 | 83 |
| 25-4021 | Librarians | 396 | 393 | -3 | 43 | 29 | 69 |
| 11-9032 | Education Admin., Elementary & Secondary School | 438 | 439 | 1 | 25 | 40 | 66 |
| 25-9031 | Instructional Coordinators | 345 | 348 | 3 | 33 | 28 | 64 |
| | **Total, All Occupations** | **4,812** | **4,894** | **82** | **324** | **461** | **867** |
| **Doctoral or Professional Degree** | | | | | | | |
| 23-1011 | Lawyers | 1,015 | 1,022 | 7 | 40 | 44 | 91 |
| 25-1199 | Postsecondary Teachers, All Other | 458 | 461 | 3 | 34 | 35 | 72 |
| 29-1051 | Pharmacists | 529 | 538 | 9 | 25 | 21 | 55 |
| 29-1123 | Physical Therapists | 451 | 468 | 17 | 18 | 19 | 54 |
| 25-1071 | Health Specialties Teachers, Postsecondary | 215 | 223 | 8 | 16 | 17 | 41 |
| | **Total, All Occupations** | **6,401** | **6,491** | **90** | **320** | **318** | **728** |

Note: Growth + Exits + Transfers = Total Openings.
[a]Standard Occupational Classification.
Source: Wyoming Short-Term Occupational Projections, 2017-2019.
Prepared by P. Manning, Research & Planning, WY DWS.

Chapter 9

# How to Calculate Turnover Rates by County, Industry

*by: Michael Moore, Editor*

Turnover

The Research & Planning (R&P) section of the Wyoming Department of Workforce Services publishes turnover data for Wyoming on a quarterly basis. By familiarizing themselves with the available data, employers, jobseekers, and policymakers can gain a better understanding of turnover trends at the state, county, and industry levels.

There are several components to turnover data, which are defined in the Box. Understanding these components allows individuals to calculate turnover rates for specific counties and industries. Calculations for two industries are illustrated in Figure 9.1.

## Box: Turnover Definitions

***Hires***
An individual who was not employed the prior quarter and was recently hired into an industry.

***Total Hires***
All hires within a given year and quarter (hires plus both).

***Exits***
An individual who left employment in an industry who worked at least one prior quarter.

***Both***
An individual who was hired and exited an industry in the same quarter.

***Continuous***
Individuals who were found with the same employer in the prior, reference, and subsequent quarters.

***Non-Continuous***
The sum of individuals categorized as hire, both, and exit.

***Total***
The total number of wage records in any given quarter (Hires, Exits, Both, and Continuous).

***Turnover Rate***

$$\frac{\text{Hires + Exits + Both}}{\text{Total (Hires + Exits + Both + Continuous)}}$$

**Construction (NAICS[a] 23)**

$$\frac{\text{Hires Exits Both}\quad 5{,}234 + 2{,}966 + 3{,}204}{\text{Total (Hires Exits Both Cont.)}\quad 26{,}424\ (5{,}234 + 2{,}966 + 3{,}204 + 15{,}020)}$$

Turnover Rate = 43.2%

**Health Care & Social Assistance (NAICS[a] 62)**

$$\frac{\text{Hires Exits Both}\quad 3{,}507 + 3{,}692 + 835}{\text{Total (Hires Exits Both Cont.)}\quad 37{,}394\ (3{,}507 + 3{,}692 + 835 + 29{,}360)}$$

Turnover Rate = 21.5%

[a]North American Industry Classification System.
Source: Wyoming Quarterly Turnover Data, 2017Q2.
Prepared by M. Moore, Research & Planning, WY DWS, 4/19/18.

Figure 9.1: **Turnover Rate Calculations for Construction (NAICS 23) and Health Care & Social Assistance (NAICS 62) in Wyoming, 2017Q2**

# Hiring Activity Resumes for Some Industries in 2017

Turnover data can be used to identify hiring trends at the state, county, and industry levels. For example, as shown in Table 9.1, the number of total hires in Wyoming in third quarter 2017 (2017Q3) was 56,381, down 1.4% from the 57,204 in 2016Q3.

Some industries, however, saw an increase in hiring activity compared to 2016Q3, including mining (916 total hires, or 50.2%); manufacturing (409, or 34.9%); wholesale trade, transportation, warehousing, & utilities (200, or 8.4%); and other services (58, or 3.6%).

Figure 9.2 shows that hiring activity in mining reached a decade low during the recent economic downturn, particularly in 2016Q1 and 2016Q2. During the first three quarters of 2017, however, hiring activity in mining picked up, and increased from prior-year levels.

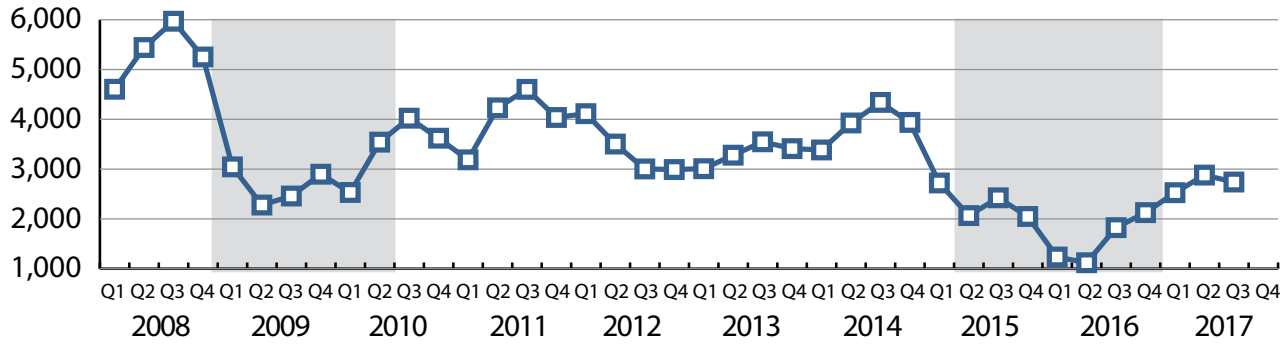
Table 9.1: **Total Hires by Industry in Wyoming, 2016Q3 and 2017Q3**

| NAICS[a] Code | Industry | 2016Q3 | 2017Q3 | Change N | Change % |
|---|---|---|---|---|---|
| 11-21 | Ag., Forestry, Fishing & Hunting | 616 | 732 | 116 | 18.8 |
| 21 | Mining | 1,825 | 2,741 | 916 | 50.2 |
| 23 | Construction | 7,110 | 6,334 | -776 | -10.9 |
| 31 | Manufacturing | 1,171 | 1,580 | 409 | 34.9 |
| 42, 48-49, 22 | Wholesale Trade, Trans., Warehousing, & Utilities | 2,376 | 2,576 | 200 | 8.4 |
| 44-45 | Retail Trade | 7,997 | 7,577 | -420 | -5.3 |
| 51 | Information | 436 | 449 | 13 | 3.0 |
| 52-53 | Financial Activities | 1,368 | 1,255 | -113 | -8.3 |
| 54-56 | Professional & Business Svcs. | 5,716 | 5,580 | -136 | -2.4 |
| 61 | Educational Services | 3,550 | 3,406 | -144 | -4.1 |
| 62 | Health Care & Social Assistance | 4,804 | 4,528 | -276 | -5.7 |
| 71-72 | Leisure & Hospitality | 16,331 | 15,878 | -453 | -2.8 |
| 81 | Other Services | 1,631 | 1,689 | 58 | 3.6 |
| 92 | Public Administration | 2,148 | 1,989 | -159 | -7.4 |
| 99 | Unclassified | 125 | 67 | -58 | -46.4 |
| | **Total** | **57,204** | **56,381** | **-823** | **-1.4** |

[a]North American Industry Classification System.

Source: Wyoming Quarterly Turnover Statistics by Industry, 1992Q1 to 2017Q2. Research & Planning, WY DWS.

Prepared by M. Moore, Research & Planning, WY DWS, 10/27/17.




Shaded areas indicate periods of economic downturn: 2009Q1-2010Q1 and 2015Q2-2016Q4.
Source: Wyoming Wage Records database, Research & Planning, WY DWS.
Prepared by M. Moore, Research & Planning, WY DWS, 4/3/18.

Figure 9.2: **Total Hires in Mining in Wyoming, 2008Q1-2017Q3**

Chapter 10

# Intercounty Commuting Patterns for Wyoming

*by: Michael Moore, Editor*

Commuting

The Research & Planning (R&P) section of the Wyoming Department of Workforce Services publishes intercounty commuting data on a quarterly basis. By linking Unemployment Insurance (UI) wage records, data from the Quarterly Census of Employment and Wages, driver's license data from the Wyoming Department of Transportation, and other administrative databases, R&P is able to identify intercounty commuting patterns from first quarter 1992 (1992Q1) to the most recent quarter of data available; in this case, 2017Q3.

This chapter provides details on *intercounty commuting,* which refers to individuals traveling from a Wyoming county of residence to another Wyoming county of employment. *Outflow* refers to workers commuting from their county of residence to another county for employment. *Inflow* refers to workers commuting into a county for employment.

Table 10.1: **Outflow: Total Number of Persons Working in Wyoming by County of Residence, 2017Q3**

| County | Total Residents | Working in County of Residence | | Working in Another County (Outflow) | |
|---|---|---|---|---|---|
| | | N | % | N | % |
| Albany | 15,386 | 13,544 | 88.0 | 1,842 | 12.0 |
| Big Horn | 4,944 | 3,720 | 75.2 | 1,224 | 24.8 |
| Campbell | 24,921 | 22,777 | 91.4 | 2,144 | 8.6 |
| Carbon | 7,277 | 6,279 | 86.3 | 998 | 13.7 |
| Converse | 6,905 | 4,722 | 68.4 | 2,183 | 31.6 |
| Crook | 2,903 | 1,757 | 60.5 | 1,146 | 39.5 |
| Fremont | 17,244 | 15,383 | 89.2 | 1,861 | 10.8 |
| Goshen | 4,811 | 4,082 | 84.8 | 729 | 15.2 |
| Hot Springs | 2,166 | 1,756 | 81.1 | 410 | 18.9 |
| Johnson | 3,987 | 3,015 | 75.6 | 972 | 24.4 |
| Laramie | 44,129 | 41,223 | 93.4 | 2,906 | 6.6 |
| Lincoln | 7,826 | 5,701 | 72.8 | 2,125 | 27.2 |
| Natrona | 40,850 | 37,664 | 92.2 | 3,186 | 7.8 |
| Niobrara | 1,036 | 815 | 78.7 | 221 | 21.3 |
| Park | 13,992 | 12,395 | 88.6 | 1,597 | 11.4 |
| Platte | 3,760 | 3,041 | 80.9 | 719 | 19.1 |
| Sheridan | 13,762 | 12,388 | 90.0 | 1,374 | 10.0 |
| Sublette | 4,265 | 3,503 | 82.1 | 762 | 17.9 |
| Sweetwater | 22,369 | 20,528 | 91.8 | 1,841 | 8.2 |
| Teton | 13,879 | 13,253 | 95.5 | 626 | 4.5 |
| Uinta | 9,483 | 7,698 | 81.2 | 1,785 | 18.8 |
| Washakie | 4,071 | 3,285 | 80.7 | 786 | 19.3 |
| Weston | 2,984 | 1,988 | 66.6 | 996 | 33.4 |
| **Total** | **272,950** | **240,517** | **88.1** | **32,433** | **11.9** |

Source: Wyoming Intercounty Commuting Patterns by Year and Quarter, 1992Q1 to 2017Q3.
Prepared by M. Moore, Research & Planning, WY DWS, 4/4/18.

## Outflow

In 2017Q3, 11.9% of Wyoming residents who were employed within the state traveled from their county of residence to another county for employment. As shown in Table 10.1, Wyoming's smallest counties tended to have the highest percentage of workers commuting to another county for employment. For example, Crook County had only 2,903 residents working in Wyoming in 2017Q3, and of those, more than one-third (39.5%) commuted to another county for work. This is likely an indication that small counties have relatively few employment opportunities, so residents must commute elsewhere for work.

## Inflow

On average, one in four workers (25.1%) working in Wyoming came from a different county or state. As shown in Table 10.2, many counties rely on both residents from other counties and other states. For example, Sublette County had an inflow rate of 29.2%. Of all persons working in Sublette County, similar amounts came from other Wyoming counties (671) and other states (773). In contrast, Teton County relies heavily on out-of state workers, as 46.2% of all persons working in that county came from another state or country.

Table 10.2: **Inflow: Total Number of Persons Working in Wyoming by County of Employment, 2017Q3**

| County of Employment | | Persons from Same County | | Inflow | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Total Inflow | | Resident Inflow[a] | | Nonresident Inflow[b] | |
| County | N | N | % | N | % | N | % | N | % |
| Albany | 18,336 | 13,544 | 73.9 | 4,792 | 26.1 | 2,087 | 11.4 | 2,705 | 14.8 |
| Big Horn | 5,018 | 3,720 | 74.1 | 1,298 | 25.9 | 810 | 16.1 | 488 | 9.7 |
| Campbell | 28,726 | 22,777 | 79.3 | 5,949 | 20.7 | 3,623 | 12.6 | 2,326 | 8.1 |
| Carbon | 8,449 | 6,279 | 74.3 | 2,170 | 25.7 | 648 | 7.7 | 1,522 | 18.0 |
| Converse | 6,304 | 4,722 | 74.9 | 1,582 | 25.1 | 1,036 | 16.4 | 546 | 8.7 |
| Crook | 2,710 | 1,757 | 64.8 | 953 | 35.2 | 458 | 16.9 | 495 | 18.3 |
| Fremont | 18,345 | 15,383 | 83.9 | 2,962 | 16.1 | 1,120 | 6.1 | 1,842 | 10.0 |
| Goshen | 4,839 | 4,082 | 84.4 | 757 | 15.6 | 270 | 5.6 | 487 | 10.1 |
| Hot Springs | 2,287 | 1,756 | 76.8 | 531 | 23.2 | 368 | 16.1 | 163 | 7.1 |
| Johnson | 3,964 | 3,015 | 76.1 | 949 | 23.9 | 569 | 14.4 | 380 | 9.6 |
| Laramie | 51,907 | 41,223 | 79.4 | 10,684 | 20.6 | 2,741 | 5.3 | 7,943 | 15.3 |
| Lincoln | 7,460 | 5,701 | 76.4 | 1,759 | 23.6 | 729 | 9.8 | 1,030 | 13.8 |
| Natrona | 45,310 | 37,664 | 83.1 | 7,646 | 16.9 | 4,512 | 10.0 | 3,134 | 6.9 |
| Niobrara | 1,020 | 815 | 79.9 | 205 | 20.1 | 130 | 12.7 | 75 | 7.4 |
| Park | 16,649 | 12,395 | 74.4 | 4,254 | 25.6 | 1,444 | 8.7 | 2,810 | 16.9 |
| Platte | 4,291 | 3,041 | 70.9 | 1,250 | 29.1 | 632 | 14.7 | 618 | 14.4 |
| Sheridan | 15,129 | 12,388 | 81.9 | 2,741 | 18.1 | 1,522 | 10.1 | 1,219 | 8.1 |
| Sublette | 4,947 | 3,503 | 70.8 | 1,444 | 29.2 | 671 | 13.6 | 773 | 15.6 |
| Sweetwater | 25,693 | 20,528 | 79.9 | 5,165 | 20.1 | 2,468 | 9.6 | 2,697 | 10.5 |
| Teton | 28,554 | 13,253 | 46.4 | 15,301 | 53.6 | 2,100 | 7.4 | 13,201 | 46.2 |
| Uinta | 10,023 | 7,698 | 76.8 | 2,325 | 23.2 | 913 | 9.1 | 1,412 | 14.1 |
| Washakie | 4,134 | 3,285 | 79.5 | 849 | 20.5 | 605 | 14.6 | 244 | 5.9 |
| Weston | 2,654 | 1,988 | 74.9 | 666 | 25.1 | 336 | 12.7 | 330 | 12.4 |
| Unknown[c] | 4,425 | | | | | 2,641 | 59.7 | 1,784 | 40.3 |
| **Total** | **321,174** | **240,517** | **74.9** | **80,657** | **25.1** | **32,433** | **10.1** | **48,224** | **15.0** |

[a]Resident inflow refers to workers commuting into a county for employment from another Wyoming county.
[b]Nonresident inflow refers to workers commuting into a county for employment from another state.
[c]Unknown refers to individuals working for a Wyoming employer whose location could not be identified.
Source: Research & Planning, Wyoming Department of Workforce Services. (2017). Wyoming Intercounty Commuting Patterns by Year and Quarter, 1992Q1 to 2017Q3.
Prepared by M. Moore, Research & Planning, WY DWS, 4/4/18.

**Find it Online: Intercounty Commuting Data for Wyoming**
**http://doe.state.wy.us/LMI/commute.htm**

Chapter 11

# A New Way to View Employment Data for Occupations in Wyoming

*by: Lynae Mohondro, Senior Economist*

The Occupational Employment Statistics (OES) survey, conducted by the Research & Planning (R&P) section of the Wyoming Department of Workforce Services in cooperation with the U.S. Bureau of Labor Statistics (BLS), collects data from a sample of employers in May and November each year. The data provide estimates of occupational employment and wage data for the Unemployment Insurance (UI) covered wage and salary jobs in non-farm establishments. Employment estimates provide the number of occupations that might be available and wage estimates provide hourly and annual wages which can highlight the higher paying occupations in the state and region, and county[1]. OES data that have been updated to the September 2017 Employment Cost Index can be found at http://doe.state.wy.us/LMI/LEWISSept2017ECI/toc000.htm.

New tables containing OES data allow for easier and faster searches of specific occupations, statewide or in state regions or counties. A PDF version of the tables can be downloaded at http://doe.state.wy.us/LMI/OES/OES_WY_2016.pdf. Upon opening the tables, users can search for the Standard Occupational Classification (SOC) code, area, county, occupation, or wage in which they are interested using the "find" command under the "edit" menu of their browser. The tables are in alphabetical order by the area name, from Albany County to Wyoming.

The new tables provide employment and wage data for the occupations that exist statewide, in each Wyoming county and region. A map of Wyoming's substate regions can be found in Figure 11.1. The county data are not official BLS data and have not been

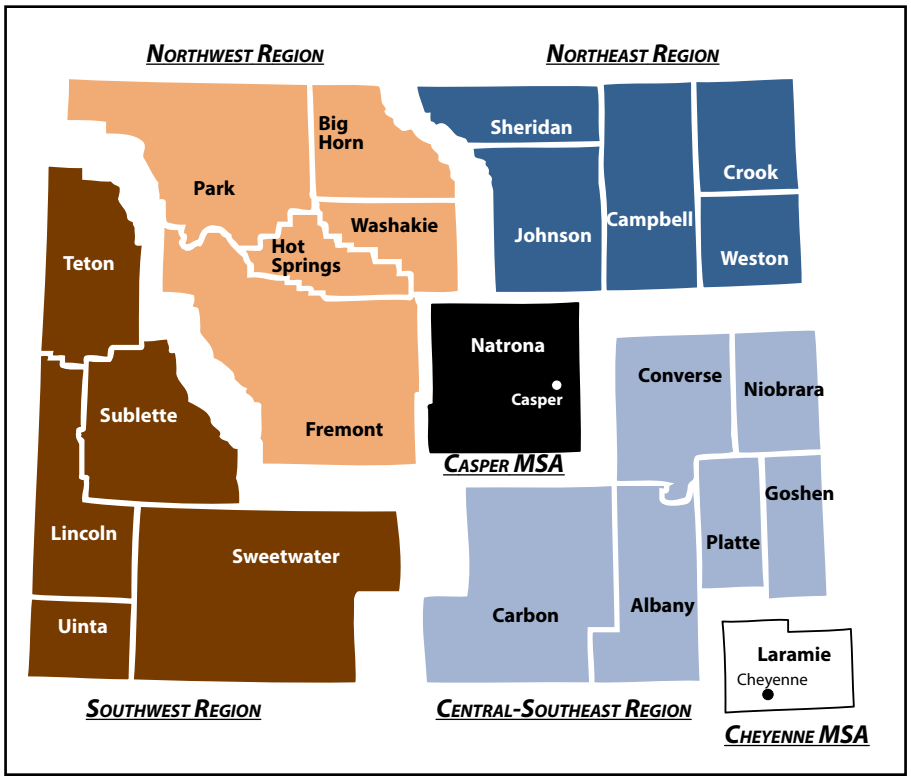



Figure 11.1: **Map of Wyoming's Substate Regions**

1 The county data were produced using the LEWIS system and are not official BLS data. County data have not been validated by BLS.

validated by BLS.

If an occupation is listed in the table, it exists in the area. Blank cells indicate data that cannot be disclosed due to confidentiality. While the data for smaller occupations may not be available for single counties, expanding the area from county to region may provide the user with the desired information in a smaller area than the state. For example, as shown in Table 11.1, the data for financial managers (SOC 11-3031) in Sublette County are not disclosable due to confidentiality. By expanding the area to the southwest region, the region of which Sublette County is a part, data are available and show that the 100 financial managers in the region were paid an average annual wage of $110,080. The 25th and 75th percentile wages provide the wages that 25% and 75% of employees earn less than, respectively. For example, 25% of financial managers in the southwest region earn less than $74,599 annually and 75% earn less than $117,147 annually.

Individuals interested in working in an occupation may benefit from reviewing employment numbers in their areas and industries. Occupations within areas or industries with high employment numbers may represent industries with more available positions than areas or industries with lower employment. In Wyoming, 2,590 computer specialists (SOC 15-1000) work in all industries (see Table 11.2, page 49). Public administration employs the highest number of computer specialists (660) earning $59,116 annually on average. The utilities industry employed the fewest computer specialists (20). Computer specialists working in the utilities industry earned the highest wage of all industries ($75,948). This suggests that individuals might be more successful in obtaining employment as a computer specialist in public administration. Other industries with high employment of computer specialists include professional, scientific, & technical services (510); educational services (460), and health care & social services (250).

Similarly, the area in which an individual desires to work can affect the chances of obtaining employment. For example, 4,970 registered nurses

**Table 11.1: Employment and Wages for Financial Managers (SOC[a] 11-3031) in Wyoming, May 2016 Data**

| Area | Employment | Mean Wage | | 25th Percentile Wage | | 75th Percentile Wage | |
|---|---|---|---|---|---|---|---|
| | | Hourly | Annual | Hourly | Annual | Hourly | Annual |
| **State** | **560** | **$52.03** | **$108,219** | **$36.85** | **$76,641** | **$60.12** | **$125,058** |
| Southwest Region | 100 | $52.92 | $110,080 | $35.86 | $74,599 | $56.32 | $117,147 |
| Lincoln County | | | | | | | |
| Sublette County | | | | | | | |
| Sweetwater County | 20 | $48.90 | $101,702 | $37.83 | $78,687 | $54.57 | $113,514 |
| Teton County | 40 | $55.20 | $114,809 | $40.69 | $84,633 | $59.20 | $123,136 |
| Uinta County | 30 | | | | | | |

[a]Standard Occupational Classification.
Blank cells indicate data that cannot be disclosed due to confidentiality.
Source: Occupational Employment Statistics (OES) estimates produced using the Local Employment and Wage Information System.
Prepared by M. Moore, Research & Planning, WY DWS, 4/6/18.

work in Wyoming, with the majority employed in more populated counties such as Laramie (1,020) and Natrona (980) counties. It may be easier for individuals to obtain employment as a registered nurse in these counties than in less populated counties with lower employment in registered nursing, such as Niobrara (20) and Johnson (50) counties.

The industry of an occupation can affect wages. An occupation with a high statewide average wage may not pay as well in certain counties or industries. For example, as shown in Table 11.2, 2,910 engineers (SOC 17-2000) worked in Wyoming and were paid an average annual wage of $92,080. While engineers in the mining industry were paid an average annual wage of $112,610, individuals working in the same occupation in the construction industry were paid $73,432. Additionally, occupations may earn more in certain counties or areas than others. In Wyoming, electricians (SOC 47-2111) were paid $58,741 annually. In Fremont County, electricians were paid an average wage of $46,098 while electricians in Lincoln County were paid $77,263.

Research & Planning's customers frequently inquire about the employment and wages of specific occupations, especially in a time when training unemployed individuals and incumbent workers for high paying positions is important to the state's economy. As stated earlier, every occupation in Wyoming is listed in R&P's new occupational employment and wage tables. With just a few clicks, anyone searching for data on specific occupations can find the most recent employment and wage data, as long as it's disclosable, from any area of the state.

**Table 11.2: Employment and Mean Annual Wages for Selected Occupations by County and Industry in Wyoming, May 2016 Data**

| SOC[a] Code | Occupation | Area | Industry | Employment | Mean Annual Wage |
|---|---|---|---|---|---|
| 47-2111 | Electricians | Wyoming | All | 2,480 | $58,741 |
| | | Fremont County | All | 100 | $46,098 |
| | | Lincoln County | All | 30 | $77,263 |
| 17-2000 | Engineers | Wyoming | All | 2,910 | $92,080 |
| | | Wyoming | Mining | 850 | $112,610 |
| | | Wyoming | Construction | 90 | $73,432 |
| 15-1000 | Computer Specialists | Wyoming | All | 2,590 | $61,963 |
| | | Wyoming | Public Admin. | 660 | $59,116 |
| | | Wyoming | Utilities | 20 | $75,948 |
| 29-1141 | Registered Nurses | Wyoming | All | 4,970 | $62,984 |
| | | Laramie County | All | 1,020 | $67,720 |
| | | Niobrara County | All | 20 | $71,055 |

[a]Standard Occupational Classification.
Source: Occupational Employment Statistics (OES) estimates produced using the Local Employment and Wage Information System.
Prepared by L. Mohondro, Research & Planning, WY DWS, 4/6/18.

**Find it Online: Occupational Employment Statistics**
**http://doe.state.wy.us/LMI/oes.htm**

Chapter 12

# Results from the Wyoming Benefits Survey

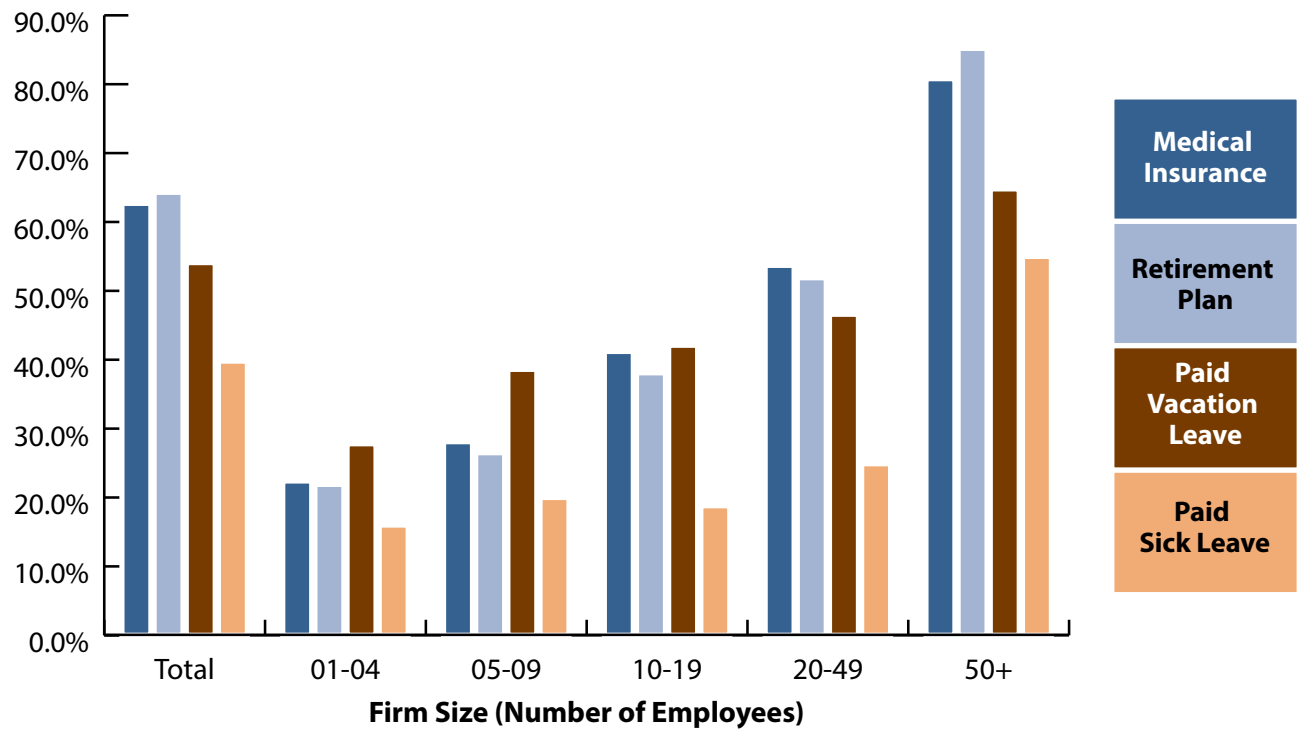
*by: Lisa Knapp, Senior Economist*

Benefits

The Wyoming Benefits Survey provides important insight into changes in the state's economy by allowing benefit offerings to be measured by using a standardized methodology, revealing trends in benefits by full- or part-time status, employer size, industry, and other characteristics.

Figure 12.1 shows the proportion of Wyoming jobs offered selected benefits in third quarter 2016 (2016Q3). Overall, more than half of all jobs were offered retirement plans (64.3%), medical insurance (62.6%), and paid vacation leave (54.1%), while 39.8% of all jobs were offered paid sick leave. In general, the proportion of jobs that were offered a benefit increased as the number of workers employed by the company increased. For example, only 22.4% of jobs with employers of 1-4 workers were offered medical insurance compared to 41.2% of jobs with employers of 10-19 employees and 80.8% of jobs with employers of 50 or more workers.

Figure 12.2 (see page 51) shows the proportion of jobs offered selected benefits by industry. The industries with

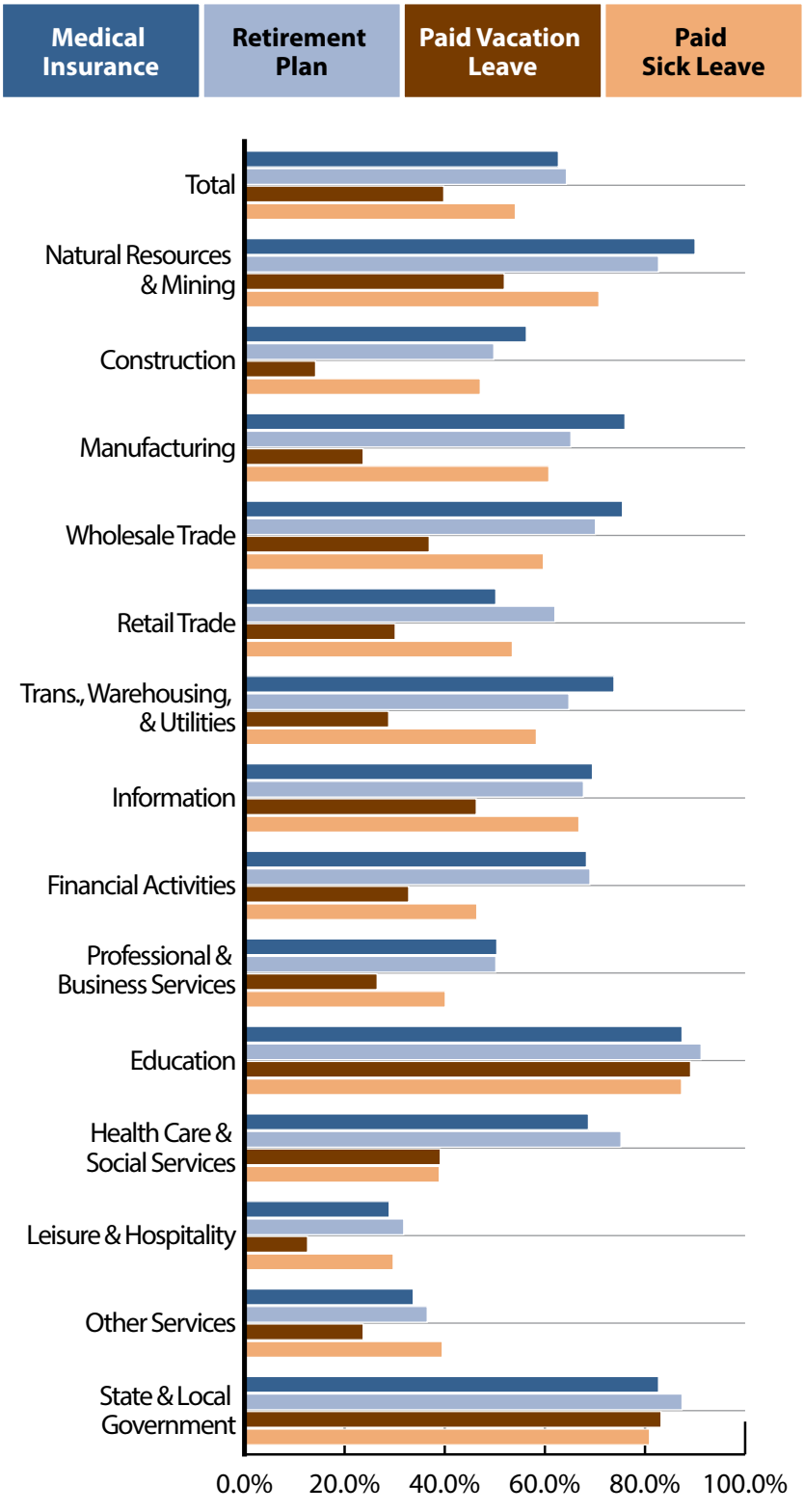



Source: Wyoming Benefits Survey 2016.
Prepared by L. Knapp, Research & Planning, WY DWS, 4/2/18.

Figure 12.1: **Percent of Wyoming Jobs Offered Selected Benefits by Employer Size Class, 2016Q3**

the largest proportion of jobs offered benefits were natural resources & mining, educational services, and state & local government. In natural resources & mining, 90.0% of all jobs were offered medical insurance and 82.7% were offered retirement plans. In educational services, 87.4% of jobs were offered medical insurance and 91.2% were offered retirement plans. Within state & local government jobs, 82.7% were offered medical insurance and 87.4% were offered retirement plans. In comparison, the leisure & hospitality and other services industries had the lowest proportions of jobs offered these benefits. Only 28.9% of jobs in leisure & hospitality and 33.7% of those in the other services industry were offered medical insurance. Similarly, 31.8% of jobs in leisure & hospitality and 36.5% of those in other services were offered retirement plans.

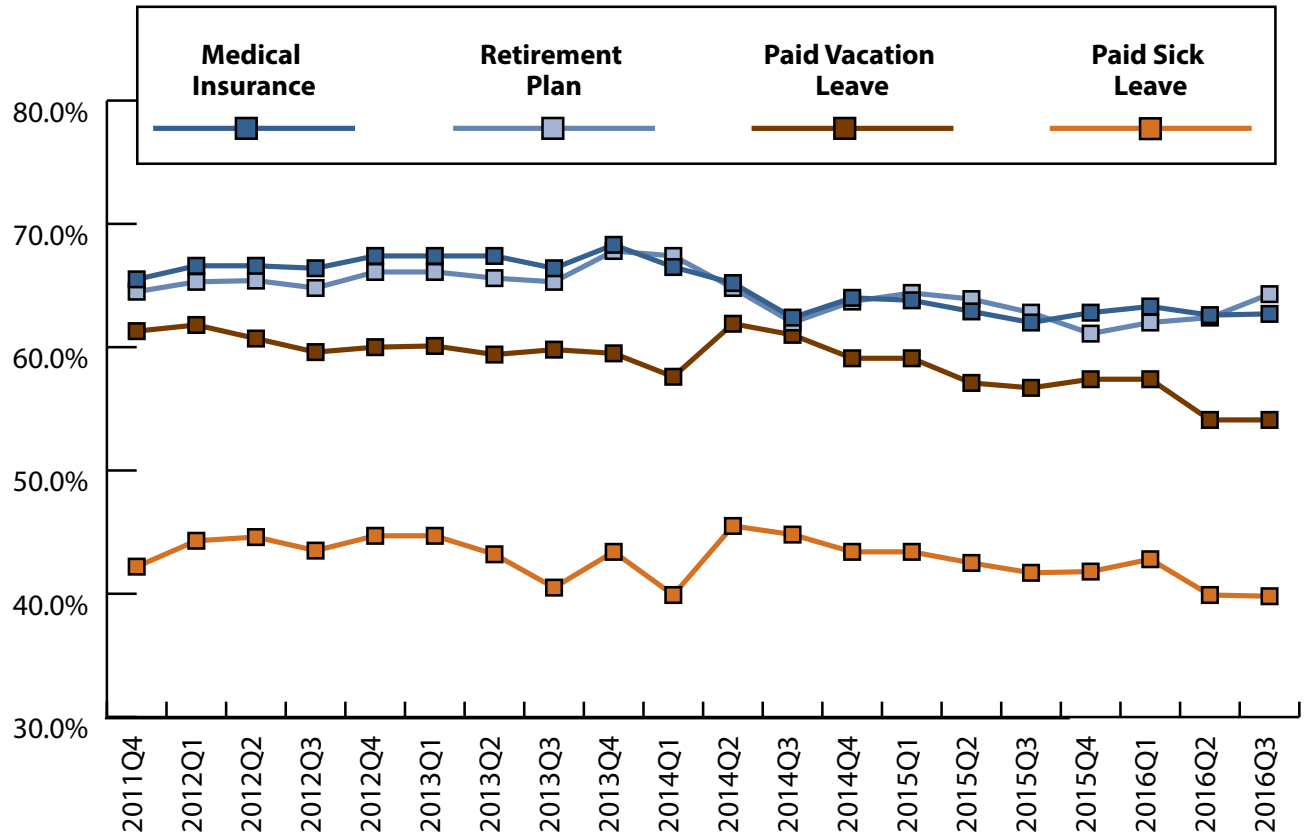
Figure 12.3 (see page 52) shows a 20-quarter moving average of the proportion of jobs offered these selected benefits from 2011Q4 through 2016Q3. The proportion of jobs offered medical insurance, paid vacation leave, and paid sick leave declined slightly




Source: Wyoming Wage Records database.
Prepared by M. Moore, Research & Planning, WY DWS, 3/20/18.

Figure 12.2: **Percent of Total Wyoming Jobs Offered Selected Benefits by Industry, 2016Q3**

during this time while the proportion of those offered retirement plans stayed stable overall. The proportion of jobs offered medical insurance declined slightly from 65.5% in 2011Q4 to 62.7% in 2016Q3. The proportion of jobs offered retirement plans decreased from 64.5% in 2011Q4 to 61.1% in 2015Q4 but increased back to 64.3% in 2016Q3. Only 54.1% of jobs in 2016Q3 were offered paid vacation leave, compared to 61.3% in 2011Q4, and only 39.8% of jobs were offered paid sick leave compared to 42.2% in 2011Q4.




Source: Wyoming Benefits Survey 2016.
Prepared by L. Knapp, Research & Planning, WY DWS, 4/2/18.

Figure 12.3: **Percent of Total Wyoming Jobs Offered Selected Benefits by Year and Quarter, 2011Q4-2016Q3**

**Find it Online: Wyoming Benefits Survey**
**http://doe.state.wy.us/LMI/benefits.htm**

Chapter 13

# Wyoming Employers Add 107,180 New Hires in 2016

*by: Lisa Knapp, Senior Research Analyst*

New Hires

The Wyoming New Hires Job Skills Survey, also referred to as the New Hires survey, is conducted by the Wyoming Department of Workforce Services' Research & Planning office on a quarterly basis. The purpose of this survey is to collect information about jobs that are filled in the state, such as occupation, typical job duties, wages and benefits, license and certification requirements, and necessary job skills. The survey is based on a sample of new hires, which is defined as an employee who, during a particular quarter, started working for an employer he or she had not worked for in the past. This article examines the characteristics of new hires in the 10 occupations with the largest number of new hires in 2016. To see data for all occupations, please visit http://doe.state.wy.us/LMI/newhires.htm.

> *New hires* are defined as workers who had not previously worked for a particular employer since 1992, the first year for which wage records are available for analyses.

In total, there were 107,180 new hires in 2016 (see Table 13.1). The largest number of these were retail

Table 13.1: **Top 10 Most Frequently Occurring Occupations for New Hires in Wyoming, Median Wage, and Turnover Rate One Quarter After Hire, 2016**

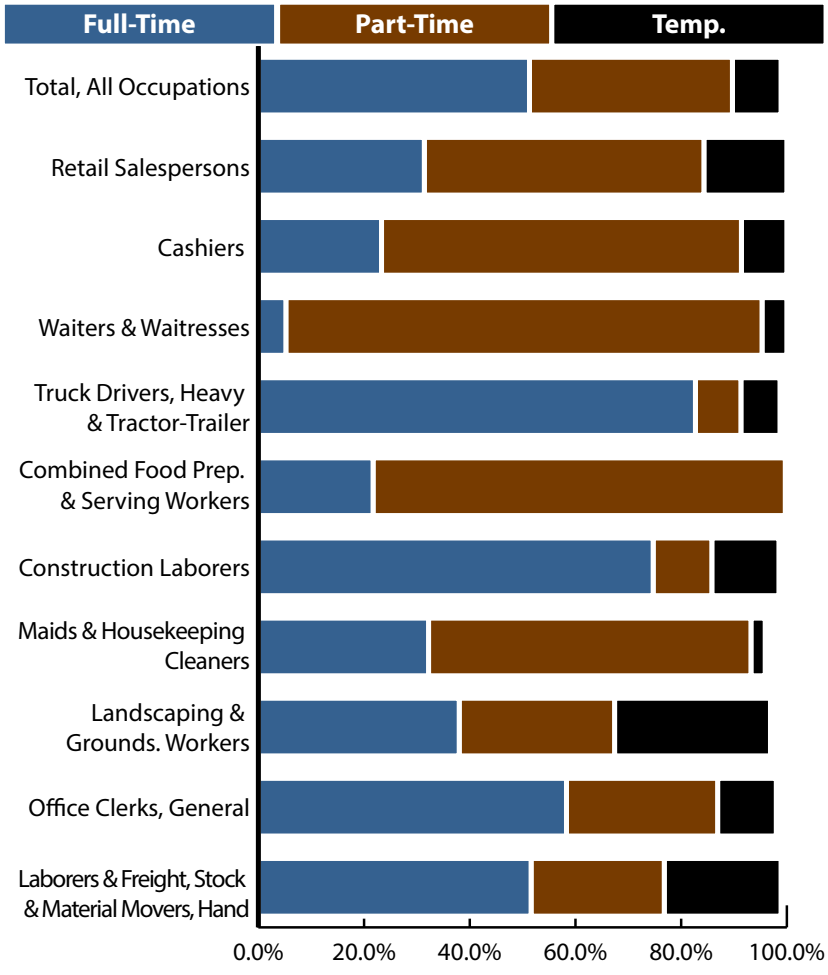
| Occupation and SOC[a] Code | Estimate N | Median Wage | Turnover Rate 1 Quarter After Hire |
|---|---|---|---|
| **Total All Occupations** | **107,180** | **$12.00** | **22.1** |
| Retail Salespersons (41-2031) | 6,119 | $10.00 | 15.2 |
| Cashiers (41-2011) | 5,261 | $9.00 | 18.1 |
| Waiters and Waitresses (35-3031) | 5,026 | $3.50 | 40.5 |
| Truck Drivers, Heavy and Tractor-Trailer (53-3032) | 3,863 | $18.00 | 18.0 |
| Combined Food Preparation and Serving Workers (35-3021) | 3,732 | $8.50 | 34.6 |
| Construction Laborers (47-2061) | 3,492 | $15.00 | 38.0 |
| Maids and Housekeeping Cleaners (37-2012) | 3,449 | $9.00 | 30.6 |
| Landscaping and Groundskeeping Workers (37-3011) | 3,065 | $12.75 | 31.3 |
| Office Clerks, General (43-9061) | 2,858 | $12.00 | 8.1 |
| Laborers & Freight, Stock & Material Movers, Hand (53-7062) | 2,473 | $13.00 | 24.1 |

Estimates are based on the eight-quarter period from 2014Q3 to 2016Q2.
[a]Standard Occupational Classification.
Source: Wyoming New Hires Job Skills Survey.
Prepared by L. Knapp, Research & Planning, WY DWS, 4/12/18.

**Find it Online: Wyoming New Hires Job Skills Survey**
**http://doe.state.wy.us/LMI/new_hires.htm**

Table 13.2: **Work Status of Wyoming New Hires by Occupation, 2016**

| Occupation and SOC[a] Code | N | Full-Time | Part-Time | Temp. |
|---|---|---|---|---|
| **Total All Occupations** | **107,180** | **51.3** | **38.4** | **9.2** |
| Retail Salespersons (41-2031) | 6,119 | 31.4 | 52.9 | 15.7 |
| Cashiers (41-2011) | 5,261 | 23.3 | 68.1 | 8.6 |
| Waiters & Waitresses (35-3031) | 5,026 | 5.2 | 90.1 | 4.7 |
| Truck Drivers, Heavy & Tractor-Trailer (53-3032) | 3,863 | 82.7 | 8.6 | 7.4 |
| Combined Food Prep. & Serving Workers (35-3021) | 3,732 | 21.7 | 78.0 | 0.3 |
| Construction Laborers (47-2061) | 3,492 | 74.7 | 11.1 | 12.7 |
| Maids & Housekeeping Cleaners (37-2012) | 3,449 | 32.2 | 61.0 | 2.7 |
| Landscaping & Groundskeeping Workers (37-3011) | 3,065 | 38.0 | 29.4 | 29.5 |
| Office Clerks, General (43-9061) | 2,858 | 58.3 | 28.6 | 11.1 |
| Laborers & Freight, Stock & Material Movers, Hand (53-7062) | 2,473 | 51.6 | 25.2 | 22.1 |




Estimates are based on the eight-quarter period from 2014Q3 to 2016Q2.
[a]Standard Occupational Classification.
Source: Wyoming New Hires Job Skills Survey.
Prepared by L. Knapp, Research & Planning, WY DWS, 4/12/18.

salespersons (6,119), followed by cashiers (5,261) and waiters & waitresses (5,026). The median wage for all new hires was $12.00 per hour. Some of the 10 largest occupations had a higher median hourly wage, such as truck drivers, heavy & tractor trailer ($18.00) and construction laborers ($15.00), while others had a lower median hourly wage, including cashiers ($9.00) and maids & housekeeping cleaners ($9.00). The turnover rate for all new hires one quarter after hire was 22.1%. Waiters and waitresses had a higher turnover rate of 40.5%, while the turnover rate for office clerks, general, was only 8.1%.

Tables 13.2-13.4 show selected characteristics for new hires. Overall, slightly more than half of new hires (51.3%) were hired for full-time jobs, nearly half (48.5%) were men, and one-quarter (25.4%) were ages 25 to 34. The occupations with the largest proportion of full-time new hires included truck drivers, heavy & tractor trailer (82.7%) and construction laborers (74.7%), while 90.1% of waiter & waitress new hires were hired for part-time jobs (see Table 13.2).

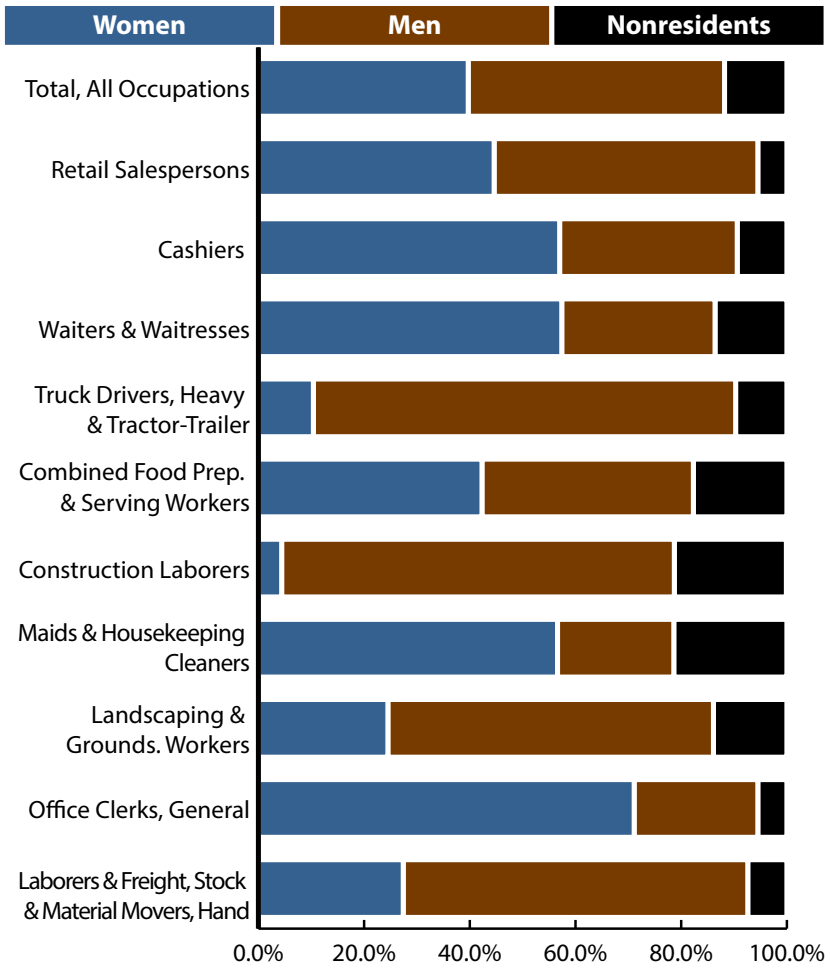
Approximately three in four truck drivers, heavy & tractor trailer (79.9%) and construction laborers (74.3%) were men (see Table 13.3). In comparison, 71.1% of office clerks, general, and 57.4% of waiters & waitresses were women.

As shown in Table 13.4 (see page 56), just over one in five new hires ages 20 to 24 were combined food preparation & serving workers (22.0%) and the largest proportion of new hires who were ages 35-44 were office clerks, general (23.4%).

The job skills survey contains five questions where employers can rate the level of importance of a selection of job skills in terms of performing a job's duties and activities (see Job Skills Definitions, page 57). Table 13.5 (see page 57) shows the proportion of employers who marked each skill as important. In all, 77.4% of employers felt service orientation was important and 76.2% felt critical thinking was important, but only 35.6% indicated technology design was important. Among the 10 largest occupations, nine out of 10 employers felt service orientation was an important skill for retail salespersons (97.3%),

**Table 13.3: Wyoming New Hires by Occupation and Gender, 2016**

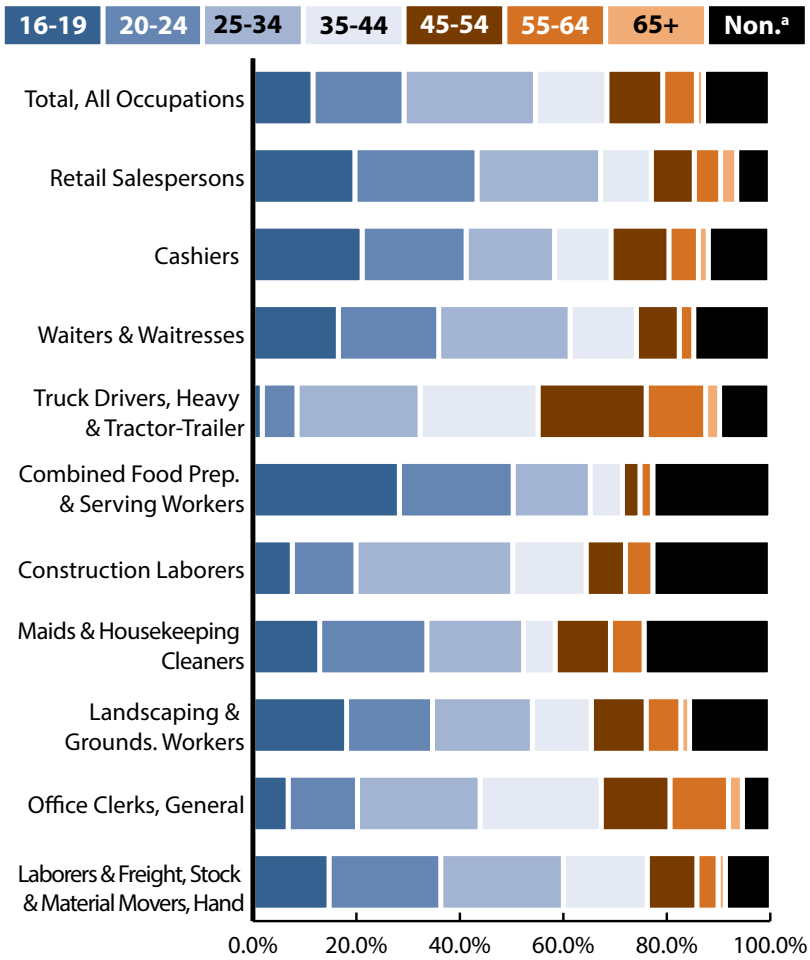
| Occupation and SOC[a] Code | N | Women | Men | Non.[b] |
|---|---|---|---|---|
| **Total All Occupations** | **107,180** | **39.7** | **48.5** | **11.8** |
| Retail Salespersons (41-2031) | 6,119 | 44.6 | 49.9 | 5.5 |
| Cashiers (41-2011) | 5,261 | 57.0 | 33.6 | 9.4 |
| Waiters & Waitresses (35-3031) | 5,026 | 57.4 | 29.0 | 13.6 |
| Truck Drivers, Heavy & Tractor-Trailer (53-3032) | 3,863 | 10.4 | 79.9 | 9.7 |
| Combined Food Prep. & Serving Workers (35-3021) | 3,732 | 42.3 | 40.0 | 17.7 |
| Construction Laborers (47-2061) | 3,492 | 4.4 | 74.3 | 21.2 |
| Maids & Housekeeping Cleaners (37-2012) | 3,449 | 56.6 | 22.0 | 21.4 |
| Landscaping & Groundskeeping Workers (37-3011) | 3,065 | 24.5 | 61.6 | 13.9 |
| Office Clerks, General (43-9061) | 2,858 | 71.1 | 23.4 | 5.5 |
| Laborers & Freight, Stock & Material Movers, Hand (53-7062) | 2,473 | 27.4 | 65.2 | 7.4 |




Estimates are based on the eight-quarter period from 2014Q3 to 2016Q2.
[a]Standard Occupational Classification.
[b]Nonresident, or individuals for whom demographic data are not available.
Source: Wyoming New Hires Job Skills Survey.
Prepared by L. Knapp, Research & Planning, WY DWS, 4/12/18.

Table 13.4: **Wyoming New Hires by Occupation and Age, 2016**

| Occupation and SOC[a] Code | N | 16-19 | 20-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65+ | Non. |
|---|---|---|---|---|---|---|---|---|---|
| **Total All Occupations** | **107,180** | **11.6** | **17.6** | **25.4** | **13.8** | **10.8** | **6.5** | **1.4** | **12.9** |
| Retail Salespersons (41-2031) | 6,119 | 19.7 | 23.6 | 23.9 | 9.8 | 8.3 | 5.1 | 3.1 | 6.5 |
| Cashiers (41-2011) | 5,261 | 21.1 | 20.1 | 17.1 | 10.9 | 11.2 | 5.7 | 1.9 | 11.9 |
| Waiters & Waitresses (35-3031) | 5,026 | 16.5 | 19.4 | 25.4 | 12.8 | 8.3 | 2.8 | N/A | 14.8 |
| Truck Drivers, Heavy & Tractor-Trailer (53-3032) | 3,863 | 1.8 | 6.7 | 23.8 | 22.8 | 20.9 | 11.5 | 2.7 | 9.7 |
| Combined Food Prep. & Serving Workers (35-3021) | 3,732 | 28.3 | 22.0 | 14.9 | 6.2 | 3.4 | 2.4 | 0.1 | 22.8 |
| Construction Laborers (47-2061) | 3,492 | 7.6 | 12.3 | 30.3 | 14.2 | 7.6 | 5.3 | N/A | 22.7 |
| Maids & Housekeeping Cleaners (37-2012) | 3,449 | 12.9 | 20.7 | 18.7 | 6.1 | 10.7 | 6.5 | N/A | 24.4 |
| Landscaping & Grounds. Workers (37-3011) | 3,065 | 18.1 | 16.6 | 19.3 | 11.4 | 10.6 | 6.7 | 1.7 | 15.6 |
| Office Clerks, General (43-9061) | 2,858 | 6.8 | 13.4 | 23.7 | 23.4 | 13.3 | 11.3 | 2.7 | 5.5 |
| Laborers & Freight, Stock & Material Movers, Hand (53-7062) | 2,473 | 14.7 | 21.6 | 23.7 | 16.2 | 9.6 | 4.1 | 1.4 | 8.9 |




Estimates are based on the eight-quarter period from 2014Q3 to 2016Q2.
[a]Standard Occupational Classification.
[b]Nonresidents, or individuals for whom demographic data are not available.
Source: Wyoming New Hires Job Skills Survey.
Prepared by L. Knapp, Research & Planning, WY DWS, 4/12/18.

waiters & waitresses (96.2%), cashiers (92.7%), and maids and housekeeping cleaners (90.0%). In comparison, 94.5% of employers felt operation and control was an important skill for truck drivers, heavy & tractor trailer and 74.7% felt it was an important skill for landscaping & groundskeeping workers. Reading comprehension was considered important for office clerks, general by 89.2% of employers.

PHOTO CREDIT: Stockbyte/iStock/Thinkstock

## Job Skills Definitions

**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.

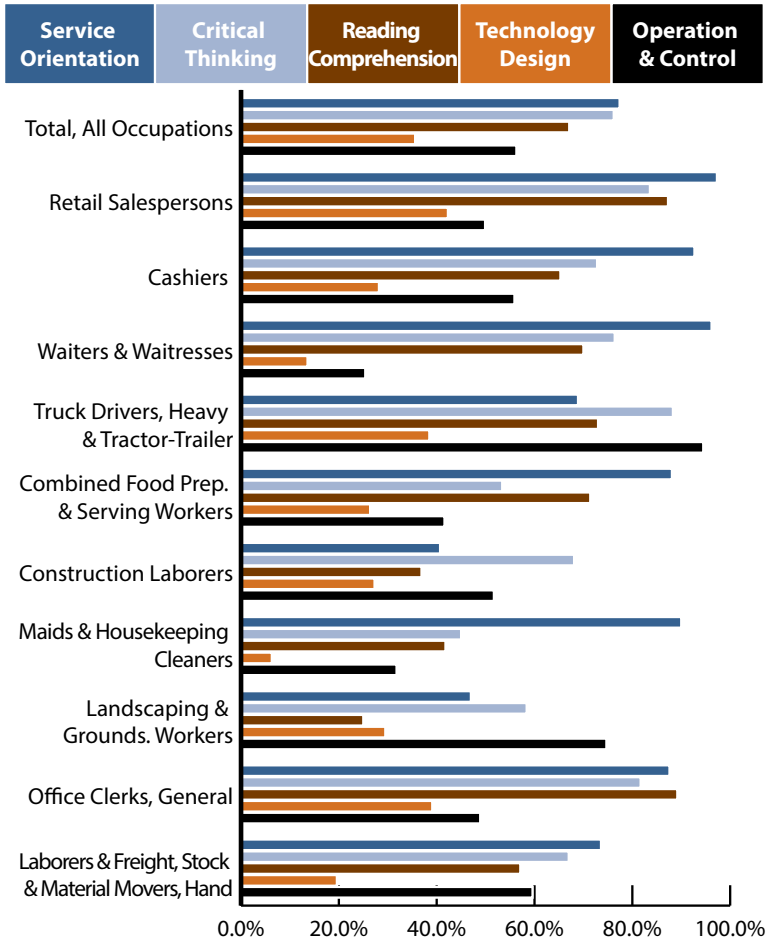
**Technology Design:** Generating or adapting equipment and technology to serve user needs.

**Operation and Control:** Controlling operations of equipment or systems.

Source: O*Net Online (http://www.onetonline.org/skills/).

Table 13.5: **Percent of Employers Who Identified Skills as Important by Occupation, 2016**

| Occupation and SOC[a] Code | N | Service Orientation | Critical Thinking | Reading Comprehension | Tech. Design | Operation & Control |
|---|---|---|---|---|---|---|
| **Total All Occupations** | **107,180** | **77.4** | **76.2** | **67.1** | **35.6** | **56.3** |
| Retail Salespersons (41-2031) | 6,119 | 97.3 | 83.6 | 87.3 | 42.3 | 49.9 |
| Cashiers (41-2011) | 5,261 | 92.7 | 72.8 | 65.3 | 28.2 | 55.9 |
| Waiters & Waitresses (35-3031) | 5,026 | 96.2 | 76.4 | 70.0 | 13.6 | 25.4 |
| Truck Drivers, Heavy & Tractor-Trailer (53-3032) | 3,863 | 68.9 | 88.3 | 73.0 | 38.5 | 94.5 |
| Combined Food Prep. & Serving Workers (35-3021) | 3,732 | 88.1 | 53.4 | 71.4 | 26.4 | 41.6 |
| Construction Laborers (47-2061) | 3,492 | 40.7 | 68.1 | 36.9 | 27.3 | 51.7 |
| Maids & Housekeeping Cleaners (37-2012) | 3,449 | 90.0 | 45.0 | 41.8 | 6.3 | 31.8 |
| Landscaping & Grounds. Workers (37-3011) | 3,065 | 47.0 | 58.4 | 25.0 | 29.5 | 74.7 |
| Office Clerks, General (43-9061) | 2,858 | 87.6 | 81.7 | 89.2 | 39.1 | 48.9 |
| Laborers & Freight, Stock & Material Movers, Hand (53-7062) | 2,473 | 73.6 | 67.0 | 57.1 | 19.6 | 59.6 |




Estimates are based on the eight-quarter period from 2014Q3 to 2016Q2.
[a]Standard Occupational Classification.
Source: Wyoming New Hires Job Skills Survey.
Prepared by L. Knapp, Research & Planning, WY DWS, 4/12/18.

Chapter 14

# Wyoming New Business Formation Down During Recent Economic Downturn

*by: Sherry Wen, Principal Economist*

New business formation and the rate of business formation are important indicators of economic growth. They represent new sources of jobs, wages, and tax revenues for the state and local communities. The Research and Planning (R&P) section of the Wyoming Department of Workforce Services has conducted new business formation research since 1995.

A *new business* is defined as a business that did not exist before but now actively provides goods or services, and hires employees and pays them wages. New branches of existing firms or the reopening of firms after temporarily closing are not considered new firms. By law, if a person or a cooperative plans to start a new business in Wyoming and hire workers, that business must register with the Unemployment Insurance (UI) division of the Wyoming Department of Workforce Services and indicate what kind of business activity the firm plans to conduct, the county or counties in which the firm will locate, and other related information. The UI division will then set up a new UI account for the business.

A total of 2,114 new firms opened in Wyoming in 2016, compared to 2,543 in 2015 and 2,054 in 2014 (see Table 14.1). There is much fluctuation in new business formation from year to year during these three years; for example, the number of new firms increased by 489 (23.8%) from 2014 to 2015. However, this large change was mainly due to a non-economic code change and some regulation change. The research presented in this article focuses on 2016 data, and data from 2014 and 2015 are provided in tables and charts for comparison purposes, except for health care & social assistance.

The new business formation rate (number of new firms divided by total firms) in Wyoming was 8.1% in 2016. Excluding 2015 due to administrative and regulation changes, the new business formation rate for the years discussed in this chapter continued the trend that began in 2010, with rates ranging from 7.9% to 8.1%. Wyoming's new business formation rate has yet to return

**Table 14.1: New Business Formation in Wyoming, 2007-2016**

| Year | New Firms | Over-the-Year Change in New Firms N | Over-the-Year Change in New Firms % | Total, All Firms in WY | New Business Formation Rate[a] |
|---|---|---|---|---|---|
| 2007 | 2,352 | 10 | 0.4 | 24,456 | 9.6 |
| 2008 | 2,225 | -127 | -5.4 | 25,018 | 8.9 |
| 2009 | 1,832 | -393 | -17.7 | 25,056 | 7.3 |
| 2010 | 1,945 | 113 | 6.2 | 24,996 | 7.8 |
| 2011 | 1,987 | 42 | 2.2 | 25,096 | 7.9 |
| 2012 | 2,008 | 21 | 1.1 | 25,429 | 7.9 |
| 2013 | 2,049 | 41 | 2.0 | 25,495 | 8.0 |
| 2014 | 2,054 | 5 | 0.2 | 25,519 | 8.0 |
| 2015 | 2,543 | 489 | 23.8 | 26,100 | 9.7 |
| 2016 | 2,114 | -429 | -16.9 | 26,050 | 8.1 |

[a]Number of new firms divided by total firms.

Note: The large change from 2014 to 2015 was mainly due to a non-economic code change and some regulation change.

Shaded areas indicate periods of economic downturn: 2009Q1-2010Q1 and 2015Q2-2016Q4.

Source: Unemployment Insurance tax records.

Prepared by S. Wen, Research & Planning, WY DWS.

to the levels that were seen prior to the previous downturn from 2009Q1 to 2010Q1 (approximately 9.5%). However, the state's new business formation rate did not decrease during the recent downturn either, which may be seen as good news for Wyoming's economy.

New firms contributed 7,474 initial jobs in 2016, or 2.7% of the state's employment. New firms also contributed $173.19 million in wages, or 1.4% of total wages. Tables 14.2 and 14.3 show a decrease in the number of initial jobs and initial wages associated with new firms from 2014 to 2016. However, these declines were much less severe compared to the previous downturn, when initial jobs decreased by 37.1% and initial wages decreased by 40.3% from 2007 to 2009.

New firms in 2016 provided an average of 3.5 initial jobs per firm, the second lowest number from 2007 to 2016. During the past five years (2012 to 2016), the highest average number of initial jobs per firm was seen in 2012 (4.1), while the smallest was seen in 2015 (3.0 jobs).

As shown in Figure 14.1, in 2016, more than half (57.3%) of Wyoming's 2,114 new firms started their businesses in one of three industries: professional & business services (NAICS 54-56; 480 firms, or 22.7%), health

**Table 14.2: Initial Jobs Associated with New Business Formation in Wyoming, 2007-2016**

| Year | New Firms | Total Initial Jobs | Over-the-Year Change in Jobs N | Over-the-Year Change in Jobs % | Initial Jobs Per Firm | Total, All Jobs in Wyoming | New Business Initial Jobs as a % of Total Jobs |
|---|---|---|---|---|---|---|---|
| 2007 | 2,352 | 10,475 | 799 | 8.3 | 4.5 | 277,776 | 3.8 |
| 2008 | 2,225 | 8,478 | -1,997 | -19.1 | 3.8 | 286,337 | 3.0 |
| 2009 | 1,832 | 6,588 | -1,890 | -22.3 | 3.6 | 274,760 | 2.4 |
| 2010 | 1,945 | 7,801 | 1,213 | 18.4 | 4.0 | 271,144 | 2.9 |
| 2011 | 1,987 | 6,991 | -810 | -10.4 | 3.5 | 274,743 | 2.5 |
| 2012 | 2,008 | 8,283 | 1,292 | 18.5 | 4.1 | 278,595 | 3.0 |
| 2013 | 2,049 | 7,786 | -497 | -6.0 | 3.8 | 279,754 | 2.8 |
| 2014 | 2,054 | 7,974 | 188 | 2.4 | 3.9 | 284,390 | 2.8 |
| 2015 | 2,543 | 7,671 | -303 | -3.8 | 3.0 | 282,650 | 2.7 |
| 2016 | 2,114 | 7,474 | -197 | -2.6 | 3.5 | 271,823 | 2.7 |

Note: The large change from 2014 to 2015 was mainly due to a non-economic code change and some regulation change.
Shaded areas indicate periods of economic downturn: 2009Q1-2010Q1 and 2015Q2-2016Q4.
Source: Unemployment Insurance tax records.
Prepared by S. Wen, Research & Planning, WY DWS.

**Table 14.3: Initial Wages Associated with New Business Formation in Wyoming, 2007-2016**

| Year | New Firms | Initial Wages (in Millions) | Over-the-Year Change in Wages $ | Over-the-Year Change in Wages % | Total, All Wages (in Billions) | Wage Impact[a] |
|---|---|---|---|---|---|---|
| 2007 | 2,352 | $214.9 | $39.2 | 22.3 | $10.9 | 2.0 |
| 2008 | 2,225 | $176.0 | -$38.8 | -18.1 | $11.9 | 1.5 |
| 2009 | 1,832 | $128.3 | -$47.7 | -27.1 | $11.2 | 1.1 |
| 2010 | 1,945 | $170.6 | $42.3 | 32.9 | $11.5 | 1.5 |
| 2011 | 1,987 | $141.4 | -$29.2 | -17.1 | $11.9 | 1.2 |
| 2012 | 2,008 | $184.0 | $42.6 | 30.1 | $12.4 | 1.5 |
| 2013 | 2,049 | $170.4 | -$13.6 | -7.4 | $12.6 | 1.4 |
| 2014 | 2,054 | $192.9 | $22.5 | 13.2 | $13.2 | 1.5 |
| 2015 | 2,543 | $181.0 | -$11.9 | -6.2 | $13.1 | 1.4 |
| 2016 | 2,114 | $173.2 | -$7.8 | -4.3 | $12.2 | 1.4 |

[a]Initial wages as a percentage of total wages in Wyoming.
Note: The large change from 2014 to 2015 was mainly due to a non-economic code change and some regulation change.
Shaded areas indicate periods of economic downturn: 2009Q1-2010Q1 and 2015Q2-2016Q4.
Source: Unemployment Insurance tax records.
Prepared by S. Wen, Research & Planning, WY DWS.

care & social assistance (NAICS 62; 371, or 17.5%), and construction (NAICS 23; 362, or 17.1%). These same industries were also the top three wage contributors in 2016, and accounted for 58.1% of the total initial wages: construction ($40.1 million, or 23.1%), health care & social assistance ($32.2 million, or 18.6%), and professional & business services ($28.3 million, or 16.4%).

Three industries combined to contribute more than half (51.3%) of all initial jobs: leisure & hospitality (NAICS 71-72; 1,679 jobs, or 22.5%); construction (NAICS 23; 1,320, or 17.7%), and health care & social assistance (NAICS 62; 1,306, or 17.5%).

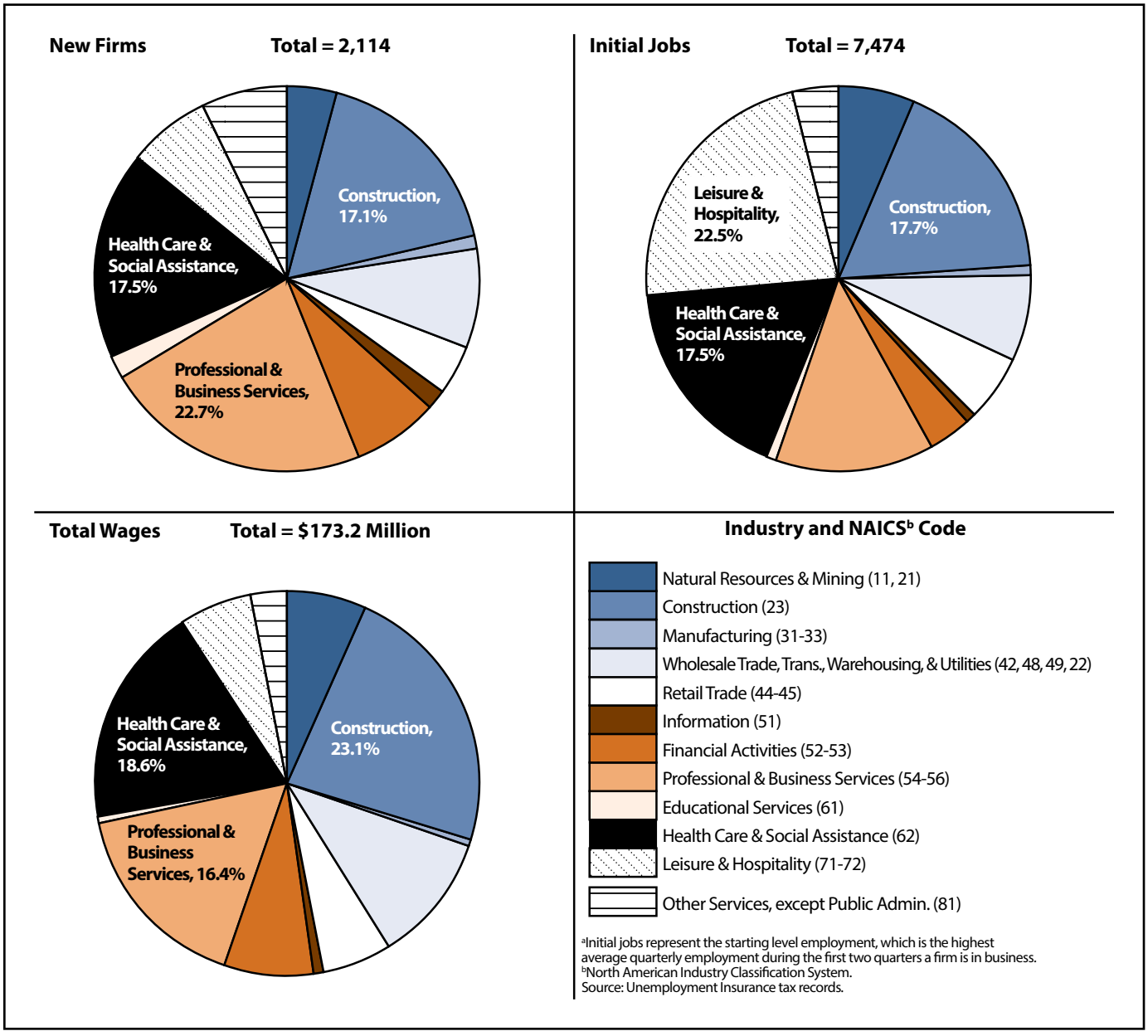



Figure 14.1: **Percent of New Firms, Initial Jobs, and Total Wages in Wyoming by Industry, 2016**

**Find it Online: New Business Formation**
**http://doe.state.wy.us/LMI/UI/new_business_2016.pdf**

Chapter 15

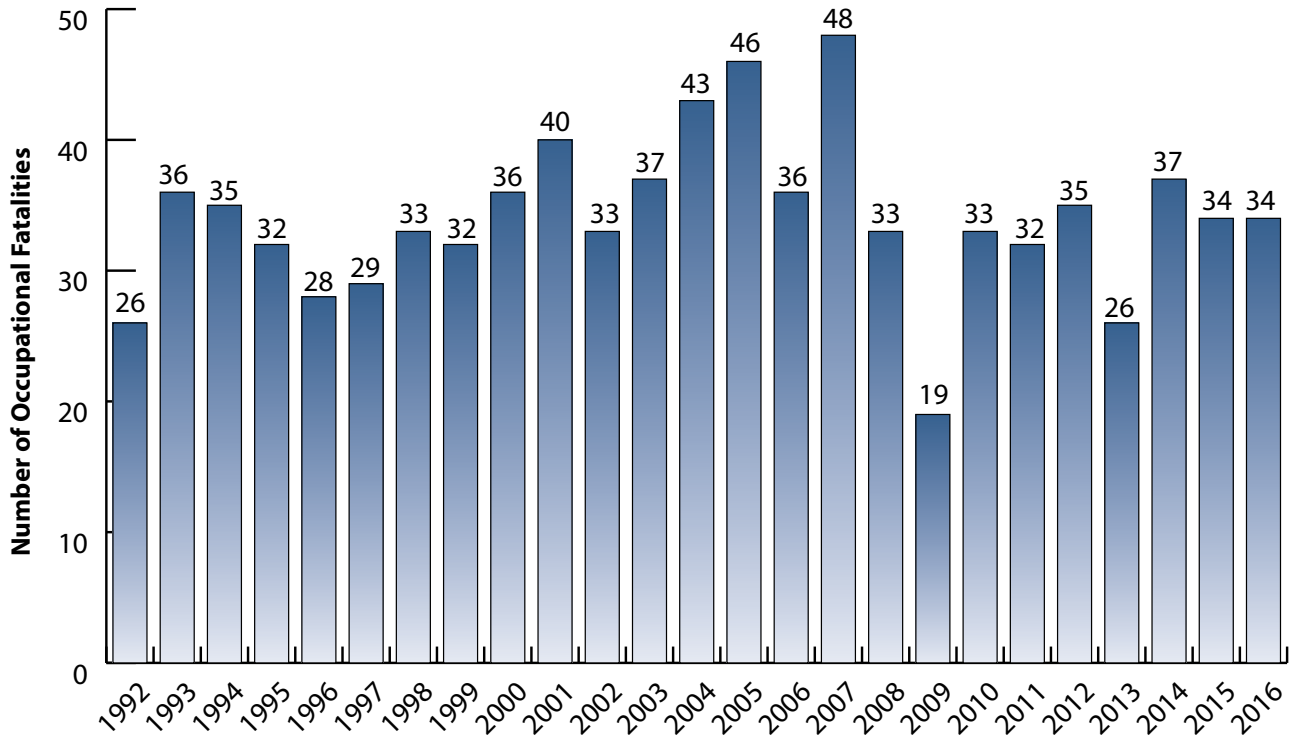
# Occupational Fatalities Unchanged from 2015 to 2016

CFOI

*by: David Bullard, Senior Economist*

There were 34 occupational fatalities in 2016, unchanged from 2015, according to the Census of Fatal Occupational Injuries (CFOI; see Figure 15.1). Variations in fatalities from year to year are, to some extent, the result of the random nature of work-related accidents. Furthermore, there is not always a direct relationship between workplace fatalities and workplace safety. For example, suicides and homicides that occur in the workplace are included as occupational fatalities. Occupational fatalities are counted in the state where the injury occurred, not necessarily the state of residence or the state of death.

In 2016, 10 deaths occurred in natural resources & mining (or 29.4% of all deaths; see Table 15.1, page 62). Within that category, six deaths were in agriculture (17.6%) and four deaths (11.8%) were in mining (including oil & gas). Trade, transportation, & utilities accounted for 10 deaths (29.4%), with six deaths in transportation & warehousing (17.6%). There were three deaths each in construction (8.8%), professional & business services




Source: U.S. Department of Labor, Bureau of Labor Statistics, Census of Fatal Occupational Injuries, in cooperation with State and Federal Agencies.

Figure 15.1: **Wyoming Occupational Fatalities, 1992-2016**

**Table 15.1: Wyoming Occupational Fatalities by Selected Industry, 2016**

| Industry | N | Column % |
|---|---|---|
| **Total** | **34** | **100.0** |
| Total Private | 31 | 91.2 |
| Natural Resources & Mining | 10 | 29.4 |
| Agriculture, Forestry, Fishing, & Hunting | 6 | 17.6 |
| Mining, Quarrying, & Oil & Gas Extraction | 4 | 11.8 |
| Construction | 3 | 8.8 |
| Trade, Transportation, & Utilities | 10 | 29.4 |
| Transportation & Warehousing | 6 | 17.6 |
| Professional & Business Services | 3 | 8.8 |
| All Other Industries | 5 | 14.7 |
| Government | 3 | 8.8 |

Source: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State and Federal Agencies, Census of Fatal Occupational Injuries.

(8.8%), and government (8.8%).

Approximately two-fifths (41.2%) of workplace fatalities were the result of transportation incidents. From 2003-2016, transportation incidents made up 56.4% of all workplace deaths. Transportation incidents include highway crashes as well as incidents involving aircraft and other vehicles.

## About CFOI

The fatality counts featured in this chapter are compiled by the Census of Fatal Occupational Injuries (CFOI) program (a joint effort of R&P and the Bureau of Labor Statistics or BLS) and may not match those from other programs, such as the Occupational Safety and Health Administration (OSHA) because of differences in scope and methodology. The CFOI data in this chapter also differ from data published by Wyoming's State Occupational Epidemiologist. One major reason for differences is that CFOI is a national program with data being collected for all 50 states. States regularly share information in order to obtain the most complete counts of workplace fatalities.

The State Occupational Epidemiologist Program and the CFOI program complement each other with their two different goals: the State-run program allows for a more detailed look at workplace deaths, while the CFOI program allows for the collection of national data across states. The report from the State Occupational Epidemiologist is typically released before the CFOI report, thus providing more current data. Reports from the State Occupational Epidemiologist are available at http://wyomingworkforce.org/data/epidemiology/.

In addition to regular employees, CFOI includes volunteer workers and self-employed individuals. The CFOI program utilizes a wide variety of data sources, such as OSHA reports, workers' compensation, vital records, coroner's reports, media reports, and police and highway patrol reports of vehicle crashes. Additionally, similar data sources from other states are routinely used to identify workplace fatalities. That information is made available to R&P as part of confidential data sharing agreements between the states and federal government (BLS).

**Find it Online: Census of Fatal Occupational Injuries**
**Wyoming Data: http://doe.state.wy.us/LMI/CFOI/toc.htm**
**National Data: https://www.bls.gov/iif/oshcfoi1.htm**

## Chapter 16

# Wyoming's Nonfatal Occupational Injury and Illness Incidence Rate Essentially Unchanged in 2016

SOII

*by: Chris McGrath, Senior Statistician*

According to the Survey of Occupational Injuries and Illnesses (SOII) in cooperation with the Bureau of Labor Statistics, Wyoming's nonfatal occupational injury and illness incidence rate for 2016 was 3.6 compared to 3.5 in 2015. Private industry for Wyoming in 2016 recorded an incidence rate of 3.4. The incidence rate in 2015 was 3.3. Incidence rates represent the number of injuries and illnesses per 100 full-time workers. The SOII is conducted annually by the Research & Planning (R&P) section of the Wyoming Department of Workforce Services.

Within private industry, the goods-producing sectors had an injury and illness incidence rate of 3.0 (see Table 16.1) compared to 3.5 in 2015. Injury and illness incidence rates in goods-producing industries in 2016 ranged from 1.4 in natural resources & mining to 4.5 in construction. Manufacturing had an incidence rate of 3.8 in 2016 compared to 5.0 in 2015.

Table 16.1: **Incidence Rates[1] per 100 Full-Time Workers for Total Nonfatal Occupational Injuries and Illnesses by Major Industry Sector, Wyoming, 2015 & 2016**

| Sector and NAICS[2] | 2015 | 2016 |
|---|---|---|
| **All Industries** | **3.5** | **3.6** |
| Private Industry[3] | 3.3 | 3.4 |
| Goods-Producing | 3.5 | 3.0 |
| Natural Resources and Mining[4] | 2.1 | 1.4 |
| Construction | 4.7 | 4.5 |
| Manufacturing | 5.0 | 3.8 |
| Service-Providing | 3.2 | 3.6 |
| Trade, Transportation, and Utilities[5] | 3.6 | 4.1 |
| Information | - | - |
| Finance, Insurance, and Real Estate | 0.6 | - |
| Professional and Business Services | - | - |
| Educational and Health Services | 4.4 | 4.6 |
| Leisure, Entertainment, and Hospitality | 3.1 | 4.4 |
| Other Services (Except Public Administration) | - | - |
| State and Local Government | 4.2 | 4.4 |

[1]Incidence rates represent the number of injuries and illnesses per 100 full-time workers and were calculated as: (N/EH) x 200,000 where
N = number of injuries and Illnesses
EH = total hours worked by all employees during the calendar year
200,000 = base for 100 equivalent full-time workers (working 40 hours per week, 50 weeks per year).

[2]North American Industry Classification System — United States, 2012.

[3]Excludes farms with fewer than 11 employees.

[4]Data for mining (Sector 21 in the North American Industry Classification System, 2012 edition) include establishments not governed by the Mine Safety and Health Administration (MSHA) rules and reporting, such as those in oil and gas extraction and related support activities. Data for mining operators in coal, metal, and nonmetal mining are provided to BLS by the Mine Safety and Health Administration, U.S. Department of Labor. Independent mining contractors are excluded from the coal, metal, and nonmetal mining industries. These data do not reflect the changes OSHA made to its recordkeeping requirements effective January 1, 2002; therefore estimates for these industries are not comparable to estimates in other industries.

[5]Data for employers in railroad transportation are provided to BLS by the Federal Railroad Administration, U.S. Department of Transportation.

NOTE: Because of rounding, components may not add to totals. Dash indicates data do not meet publication guidelines.

Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, Survey of Occupational Injuries and Illnesses in cooperation with participating state agencies, November 09, 2017

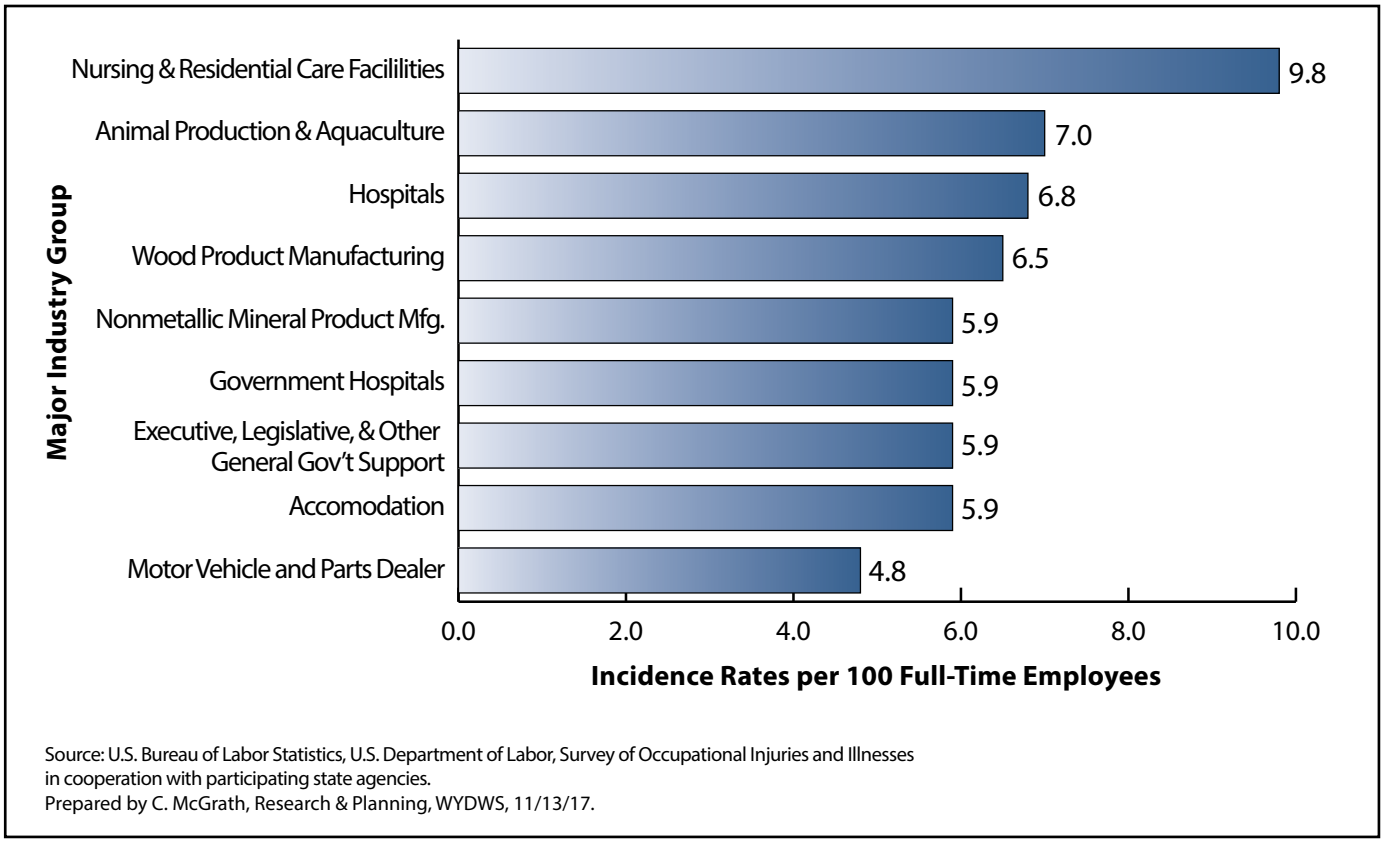
Prepared by C. McGrath, Senior Statistician, Research & Planning, WY DWS, November 2017.

Within private industry, service-providing sectors (such as trade, transportation, & utilities and educational & health services) had an incidence rate of 3.6 per 100 full-time workers in 2016 compared to 3.2 in 2015. Rates for service-providing industries varied from 4.1 in trade, transportation, & utilities to 4.6 in educational & health services (see Table 16.1).

Among detailed industries, nursing and residential care facilities had the highest incidence rate in 2016 at 9.8 (see Figure 16.1), followed by animal production and aquaculture at 7.0 and hospitals at 6.8.

These estimates are all recordable nonfatal occupational injuries and illnesses which include days away from work cases, days of job transfer or restriction cases, and other recordable cases. Non-recordable cases include, but are not limited to first aid cases, such as an adhesive strip on a cut, or a water flush of an eye to remove a foreign object. For further information on recordable and nonrecordable cases, visit https://www.bls.gov/iif/oshdef.htm.

For additional information about 2016 and earlier years of occupational injury and illness data in Wyoming, please see http://doe.state.wy.us/LMI/OSH/toc.htm.




Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, Survey of Occupational Injuries and Illnesses in cooperation with participating state agencies.
Prepared by C. McGrath, Research & Planning, WYDWS, 11/13/17.

**Figure 16.1: Detailed Private Industries with the Highest Incidence Rates of Total Nonfatal Occpuational Injuries and Illnesses in Wyoming, 2016**

**Find it Online: Survey of Occupational Injuries and Illnesses**
**http://doe.state.wy.us/LMI/OSH/toc.htm**

Chapter 17

# Workers' Comp Claims Continue Downward Trend

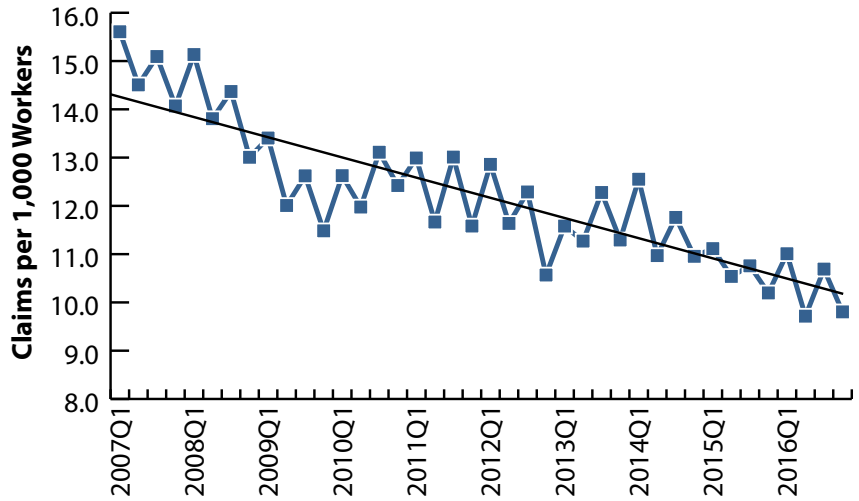
*by: Patrick Manning, Principal Economist*

Over the last decade, workers' compensation claims continued to decrease in Wyoming (see Figure 17.1). From first quarter 2007 (2007Q1) to fourth quarter 2016 (2016Q4), the average injury rate across this time period was 12.2 claims per 1,000 workers. These rates of injury are based on the Wyoming Workers' Compensation Claimant Database; therefore, minor injuries or injuries occurring in industries not covered by Workers' Compensation are not included.

The highest rate of injury was 15.6 per 1,000 workers in 2007Q1. In 2016Q2, the injury rate dropped below 10 injuries per 1,000 workers (9.7) for the first time in the in over a decade.

Table 17.1 shows the rate of injury by industry from 2007Q1 to 2016Q4. The manufacturing industry experienced the most injuries per 1,000 workers at 19.9, while the financial activities sector had the lowest injury rate of 4.8 per 1,000 workers.

Figure 17.2 (see page 66) shows the rate of injury for selected industries by year and quarter. In addition to having the highest injury rate, the




Wyoming Workers' Compensation Claimant Database
Prepared by P. Manning, Research & Planning, WY DWS, 2/13/18.

Figure 17.1: **Rate of Injury per 1,000 Workers Across All Industries in Wyoming, 2007Q1-2016Q4**

Table 17.1: **Average Rate of Injury per 1,000 Workers for Selected Industries in Wyoming, 2007Q1-2016Q4**

| NAICS Group | Average Rate of Injury per 1,000 Workers[a] | Average Employment[b] |
|---|---|---|
| Manufacturing | 19.9 | 9,478 |
| Construction | 15.7 | 23,378 |
| Natural Resources & Mining | 12.4 | 28,483 |
| Education & Health Services | 11.7 | 61,246 |
| Trade, Transportation, Warehousing, & Utilities | 11.3 | 53,128 |
| Other Services | 11.1 | 8,496 |
| Leisure & Hospitality | 10.7 | 35,955 |
| Public Administration | 7.7 | 23,970 |
| Professional & Business Services | 7.3 | 18,367 |
| Information | 6.9 | 4,513 |
| Financial Activities | 4.8 | 11,187 |
| **Total** | **12.2** | **278,201** |

[a]Source: Wyoming Workers' Compensation Claimant Database
[b]Source: Quarterly Census of Employment and Wages.
Prepared by P. Manning, Research & Planning, WY DWS, 2/13/18.

manufacturing sector also experienced the most variation in injury rateover the last decade, along with natural resources & mining. Educational & health services, the largest sector in terms of average employment, demonstrated little variation in injury rates over the past decade relative to manufacturing and natural resources & mining. While injury rates in manufacturing are still the highest of all industries, they have also been falling at the greatest rate.

Figure 17.3 displays five most frequently occurring injuries from 2007Q1 through 2016Q4. These five injuries accounted for nearly two-thirds of all injuries, with sprains and strains accounting for slightly over one-third of all injuries. The most common types of injury were not strongly affected by the age of the worker or by the industry in which the injury occurred. Additionally, there does not seem to be a pattern of seasonality to the injury rate overall or within industry sectors.

While not all factors that cause workplace accidents can be completely controlled, safety efforts by businesses and the Wyoming Occupational Safety and Health Administration (OSHA) appear to be reducing workplace injury rates.

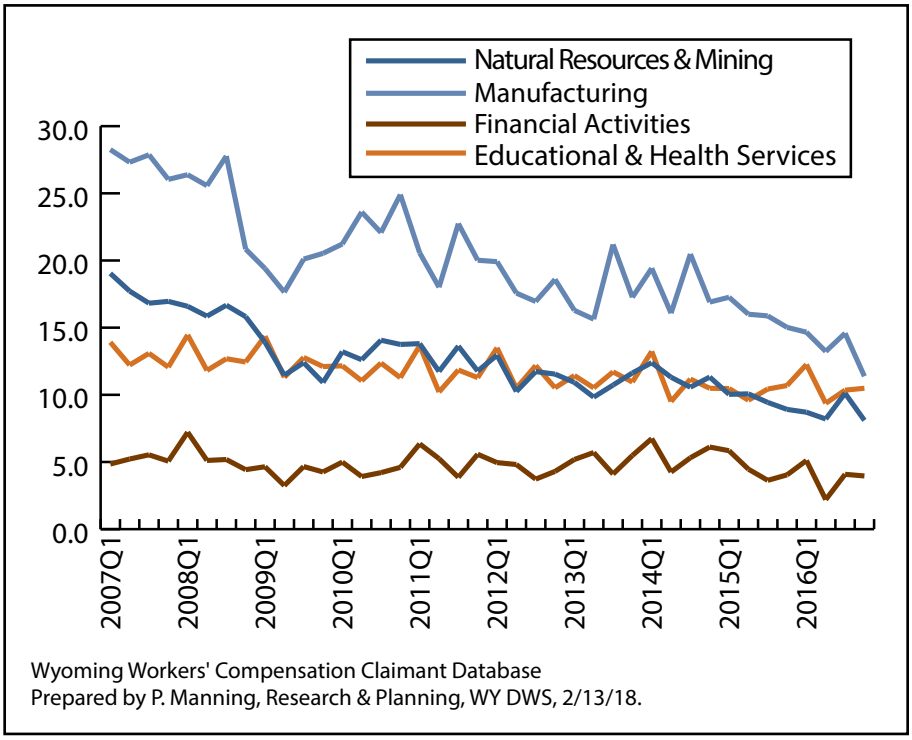



Figure 17.2: **Rate of Injury per 1,000 Workers for Selected Industries in Wyoming, 2007Q1-2016Q4**

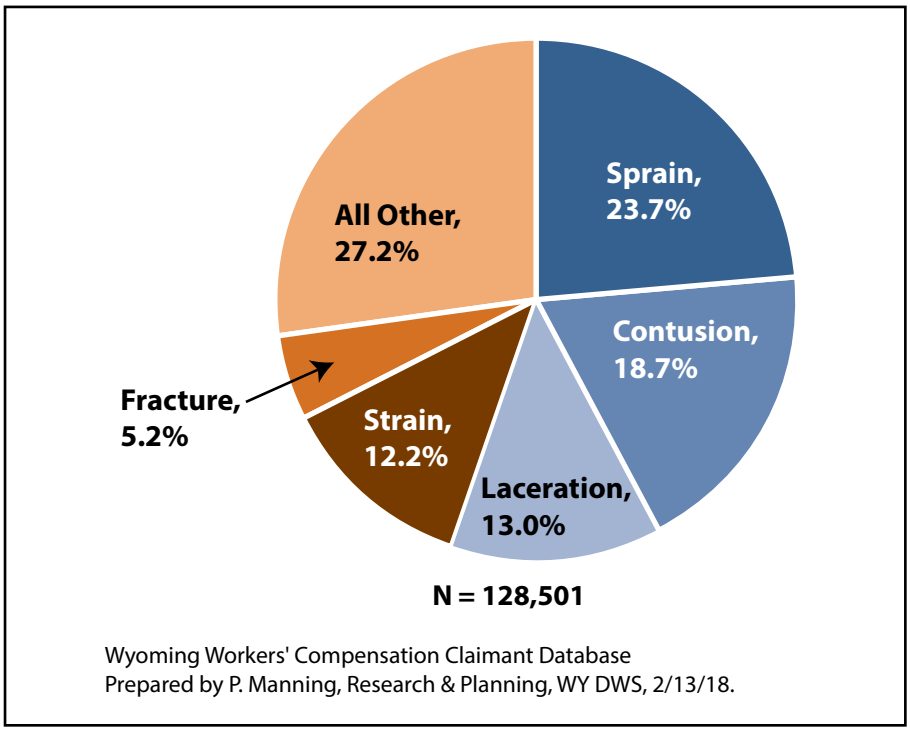
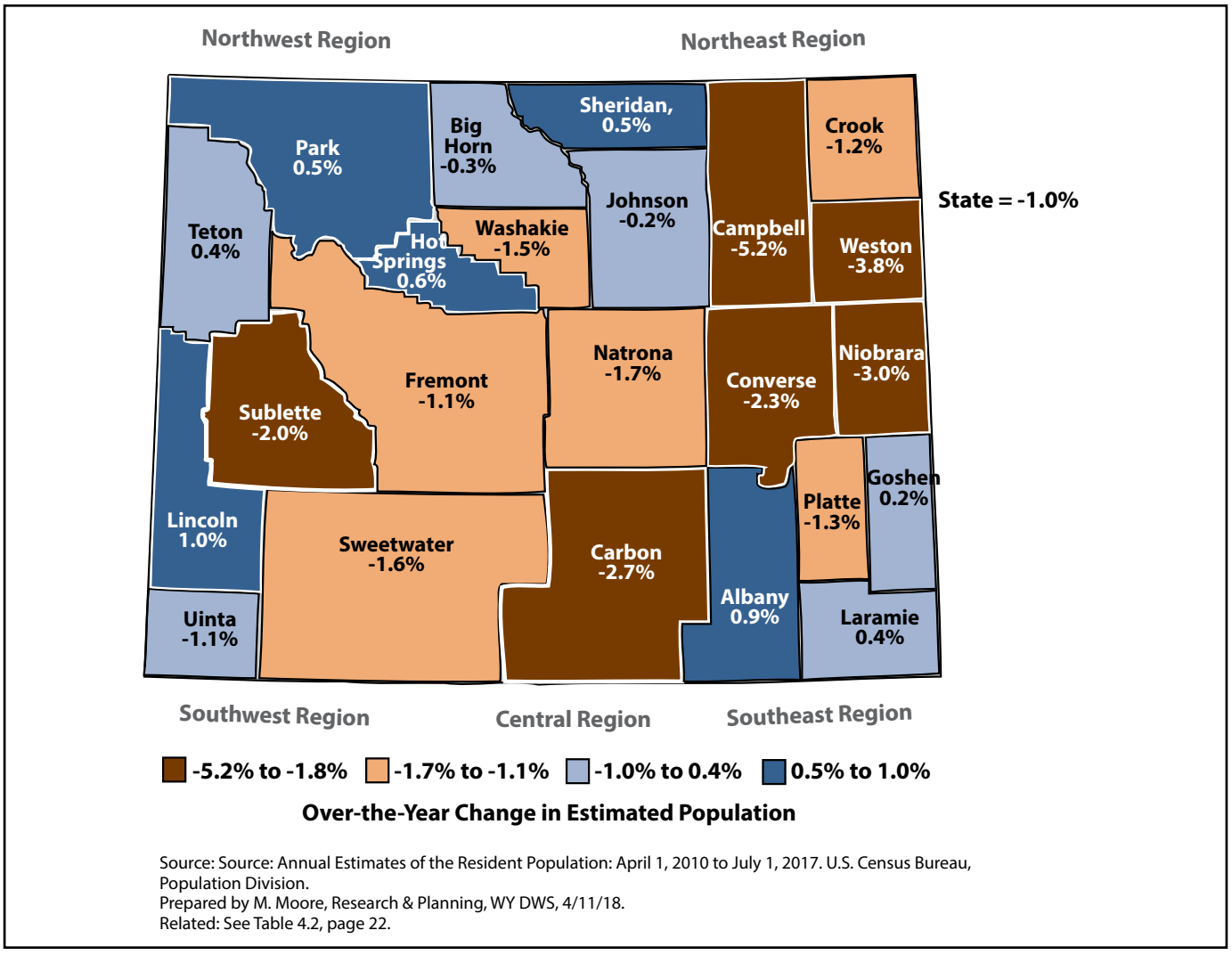



Figure 17.3: **Most Frequently Occurring Injuries in Wyoming, 2007Q1-2016Q4**

# Just the Facts

| | |
|---|---|
| State Capital | Cheyenne |
| Governor | Governor Matt Mead, 32nd Governor, Assumed Office Jan. 3, 2011 – Cheyenne |
| Most Liveable State – National Ranking[1] | 7th in 2016 - 11th in 2015 |
| Nicknames | Equality State – Big Wyoming – Cowboy State |
| State Dinosaur & State Fossil | Triceratops & Knightia |
| State Flower & State Tree | Indian Paintbrush & Plains Cottonwood |
| State Bird & State Fish | Western Meadowlark & Cutthroat Trout |
| State Butterfly & Reptile | Sheridan's Green Hairstreak & Horned Toad |
| State Mammal & State Gemstone | Bison & Jade |
| 1st National Park | Yellowstone - Established March 1, 1872 |
| 1st National Monument | Devil's Tower - Established September 24, 1906 |
| Admitted to Statehood - Date & Rank | July 10, 1890 – 44th State |

Excerpted from *Wyoming 2017 – Just the Facts*, published May 12, 2018, by the Wyoming Department of Administration & Information, Economic Analysis Division. Prepared by Amy Bittner, Senior Economist. See page 71 for footnotes.




Source: Source: Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2017. U.S. Census Bureau, Population Division.
Prepared by M. Moore, Research & Planning, WY DWS, 4/11/18.
Related: See Table 4.2, page 22.

Figure 1: **Estimated Change in Population in Wyoming by County, July 2016 to July 2017.**

# Just the Facts

Table 1: **Selected Vital Statistics for Wyoming, 2012-2016**

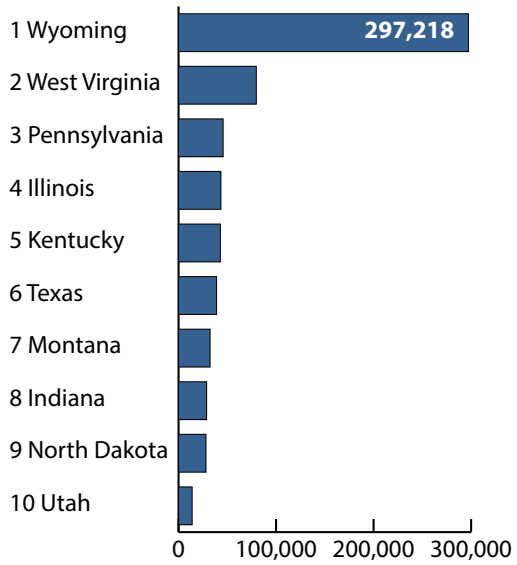
| | Vital Events | | | | Teenage Birth Rate (per 1,000) | | Death Rate (per 100,000) | |
|---|---|---|---|---|---|---|---|---|
| Year | Births | Deaths | Marriages | Divorces | WY | U.S. | WY | U.S. |
| 2012 | 7,576 | 4,468 | 4,507 | 2,564 | 34.6 | 29.4 | 775 | 810.2 |
| 2013 | 7,617 | 4,469 | 4,400 | 2,482 | 30.2 | 26.5 | 767 | 821.5 |
| 2014 | 7,693 | 4,633 | 4,476 | 2,443 | 30.6 | 24.2 | 793 | 823.7 |
| 2015 | 7,716 | 4,744 | 4,306 | 2,435 | 27.8 | 22.3 | 809 | 828 |
| 2016 | 7,384 | 4,706 | 4,145 | 2,462 | 26.2 | 20.3 | 803.8 | Not Available |

Excerpted from *Vital Statistics Services - 2016 Annual Report*, published December 31, 2017, by the Wyoming Department of Health, Vital Statistics Services. Prepared by Beaudoin, G., and Storey, M.

Table 2: **Wyoming Rank in United States in Energy Consumption, Expenditures, Production, Prices, and Environment**

| | Wyoming Rank |
|---|---|
| **Consumption** | |
| Total Energy per Capita | 2 |
| **Expenditures** | |
| Total Energy per Capita | 2 |
| **Production** | |
| Total Energy | 2 |
| Crude Oil | 8 |
| Natural Gas | 6 |
| Coal | 1 |
| Electricity | 32 |
| **Prices** | |
| Natural Gas | 38 |
| Electricity | 33 |
| **Environment** | |
| Carbon Dioxide Emissions | 29 |

Source: Energy Information Administration. Retrieved from http://www.eia.gov/state/?sid=WY. Updated April 11, 2018.




Source: U.S Energy Information Administration. Retrieved April 11, 2018, from http://www.eia.gov/state/rankings/#/series/48

Figure 2: **Ranking of Top 10 Coal-Producing States in the U.S., 2016**

**Find it Online: Just the Facts**
**http://eadiv.state.wy.us/Wy_facts/facts2017.pdf**

# Just the Facts

| | Most Recent Period | | |
|---|---|---|---|
| | Year | Value | Rank |
| **Demography** | | | |
| Total Population[2] | 2017 | 579,315 | 50 |
| Total Male Population[2] | 2016 | 298,942 | 50 |
| Total Female Population[2] | 2016 | 286,559 | 50 |
| % of Population - Under 18 Years Old[2] | 2016 | 23.7% | 13 |
| % of Population - 65 Years & Older[2] | 2016 | 15.0% | 37 |
| Median Age[2] | 2016 | 37.1 | 37 |
| *Note: Population data are July 1 estimates unless otherwise noted.* | | | |
| **Weather & Geography** | | | |
| Total Area (sq. miles)[2] | 2010 | 97,813 | 10 |
| Water Area (sq. miles)[2] | 2010 | 720 | 37 |
| Mean Elevation (ft)[3] | 2016 | 6,700 | 2 |
| % of Land in Rural Areas[2] | 2010 | 99.8% | 2 |
| % of Land Owned by the Federal Government[4] | 2015 | 48.4% | 6 |
| % of Land Owned by State Government[5] | 2014 | 6.2% | - |
| **Recreation & Tourism** | | | |
| Land Ownership in Wyoming (sq. miles): | | | |
| National Park Service[6] | 2015 | 3,664 | 5 |
| U.S. Forest Service[7] | 2016 | 14,398 | 10 |
| Bureau of Land Management[8] | 2016 | 28,711 | 4 |
| Visitors to State Parks & Recreational Areas[9] | 2016 | 4,153,782 | - |
| WY Lodging Sales (millions of dollars)[10] | FY17 | $573.8 | - |
| *Note: FY - Fiscal Year (July 1 - June 30)* | | | |
| **Crime & Law Enforcement** | | | |
| Crimes[11] | 2015 | 12,405 | 49 |
| Crimes per 100,000 Persons[11] | 2015 | 2,117 | 41 |
| Violent Crimes per 100,000 Persons[11] | 2015 | 213.9 | 43 |
| **Education** | | | |
| % of Population, 25 yrs. & older, completed high-school[12] | 2016 | 93.2% | 1 |
| % of Population, 25 yrs. & older, with a Bachelor's Degree[12] | 2016 | 27.1% | 41 |
| ACT Average Composite Score (range 1-36)[13] | 2016 | 20.0 | 38 |
| Estimated Average Salary of Teachers ($)[14] | 2016 | $57,761 | 16 |
| Average Teacher's Salary as % of Average Annual Wages[15] | 2015 | 124.4% | 5 |
| **Health & Social Welfare** | | | |
| % of Persons not Covered by Health Insurance[12] | 2016 | 11.5% | 7 |
| % of Private Sector Establishments that Offer Health Insurance[16] | 2015 | 38.0% | 47 |
| % of Population Enrolled in Medicare[17] | 2015 | 16.2% | 39 |
| **Housing** | | | |
| Residential Building Permits[2] | 2016 | 1,727 | 48 |
| Existing Home Sales, Single family homes[19] | 2015 | 6,526 | - |
| Median Housing Value of Owner-Occupied Housing Units ($)[12] | 2016 | $209,500 | 22 |
| Homeownership Rate[2] | 2016 | 70.2% | 11 |

Excerpted from *Wyoming 2017 – Just the Facts*, publishedNovember 2017 by the Wyoming Department of Administration & Information, Economic Analysis Division. Prepared by Amy Bittner, Senior Economist. See footnotes, page 71.

# Just the Facts

| | Most Recent Period | | |
|---|---|---|---|
| | Year | Value | Rank |
| **Wyoming's Economy** | | | |
| Median Household Income[12] | 2016 | $59,882 | 20 |
| Personal Bankruptcies per 100,000 Persons[39] | 2016 | 153 | 36 |
| Retail and Food Services Taxable Sales (billions $)[10] | FY17 | $5.95 | - |
| Wyoming Annual Inflation Rate[22] | 2017 | 1.1% | - |
| Exports - Origin of Movement Series (billions $)[23] | 2016 | $1.10 | 50 |
| **Employment & Labor** | | | |
| Average Annual Pay ($)[24] | 2016 | $44,974 | 34 |
| State Minimum Wage Rate ($ per hour)[25] | 2017 | $5.15 | 44 |
| Civilian Labor Force[26] | 2016 | 302,331 | 50 |
| Employed[26] | 2016 | 286,373 | 50 |
| Unemployed[26] | 2016 | 15,958 | 47 |
| Unemployment Rate[24, 26] | 2016 | 5.3% | 36* |
| Total Non-farm Employment (jobs)[24, 26] | 2016 | 280,800 | 50 |
| % of Job in Mining[24, 26] | 2016 | 6.7% | 1 |
| **Ranking of unemployment rate is lowest rate to highest* | | | |
| **Tax Environment** | | | |
| Individual Income Tax Rate[18, 27] | 2017 | 0.0% | 44 |
| Corporate Income Tax Rate[18, 27] | 2017 | 0.0% | 47 |
| State Sales Tax Rate[18, 27] | 2017 | 4.0% | 40 |
| Gasoline Tax Rate ($/gallon)[18,27] | 2017 | $0.24 | 33 |
| Cigarette Tax Rate ($/pack)[18, 27] | 2017 | $0.60 | 42 |
| State & Local Excise Collections Per Capita[2, 27] | FY14 | $341 | 46 |
| Estimated Burden of Major Taxes for a 3-Person Family with Income of $50,000 - Cheyenne[28, **] | 2015 | $1,944 | 50 |
| ***Compares the largest city in each state. Major taxes include state income, property, sales, and auto.* | | | |
| **Mining, Energy & the Environment** | | | |
| Coal Production (millions of short tons)[29] | 2016 | 392.75 | 1 |
| Natural Gas Production (billions of cubic feet)[30, 31] | 2016 | 1,980 | 5 |
| Crude Oil Production (millions of barrels)[30, 31] | 2016 | 76.1 | 8 |
| Trona Production (millions of short tons)[29] | 2016 | 17.1 | 1 |
| % of Electricity Generated Through Renewable Resources[31] | 2015 | 8.9% | 19 |
| Avg. Monthly Electric Bill for Residential Customers[31] | 2016 | $94.66 | 44 |
| Toxic Releases: Total Pollution Released (millions of pounds)[32] | 2015 | 17.2 | 39 |
| **Agriculture** | | | |
| Number of Farms and Ranches[33] | 2016 | 11,600 | 39 |
| Average Farm Size (acres)[33] | 2015 | 2,612 | 1 |
| U.S. Agriculture Exports (millions $)[34] | 2015 | $313.3 | 40 |
| **Government** | | | |
| Per Capita State & Local Gov't Total Expenditures[35] | 2014 | $15,067 | 3 |
| Per Capita Homeland Security Grants[36] | 2016 | $6.38 | 3 |
| Population per State Legislator[37] | 2016 | 6,506 | 47 |
| % of Eligible Population Reported Voting[2] | 2014 | 40.3% | 36 |

Excerpted from *Wyoming 2017 – Just the Facts*, publishedNovember 2017 by the Wyoming Department of Administration & Information, Economic Analysis Division. Prepared by Amy Bittner, Senior Economist. See footnotes, page 71.

[1]Congressional Quarterly (CQ) Press, State Rankings
[2]U.S. Census Bureau
[3]U.S. Department of the Interior, U.S. Geological Survey
[4]Congressional Research Office
[5]University of Wyoming, Department of Geography & Recreation
[6]National Park Service (NPS)
[7]U.S. Forest Service (USFS)
[8]Bureau of Land Management (BLM)
[9]National Association of State Park Directors
[10]Wyoming Economic Analysis Division using data from WY Dept. of Revenue
[11]CQ Press using data from Federal Bureau of Investigation (FBI)
[12]U.S. Census Bureau, American Community Survey (ACS), 1-year estimates
[13]The American College Testing Program
[14]National Education Association (NEA), Washington D.C.
[15]CQ Press using data from National Education Association, Washington D.C.
[16]U.S. Department of HHS, Agency for Healthcare Research & Quality
[17]U.S. Department of HHS, Centers for Medicare & Medicaid Services
[18]U.S. Department of HHS, National Center for Health Statistics
[19]Wyoming Department of Revenue
[20]CQ Press using data from Administrative Office of the U.S. Courts
[21]CQ Press using data from U.S. Small Business Administration
[22]Wyoming Economic Analysis Division
[23]U.S. Census Bureau, Foreign Trade Division
[24]U.S. Department of Labor, Bureau of Labor Statistics (BLS)
[25]U.S. Dept. of Labor, Employment Standards Administration
[26]Wyoming Department of Workforce Services, Research and Planning
[27]Tax Foundation
[28]Government of the District of Columbia, Tax Rates and Tax Burdens publication
[29]Wyoming State Inspector of Mines
[30]Wyoming Oil and Gas Conservation Commission
[31]U.S. Department of Energy, Energy Information Administration
[32]U.S. Environmental Protection Agency, Office of Pollution, Prevention, & Toxics Info. Mgmt.
[33]USDA, National Agricultural Statistics Service (NASS)
[34]USDA, Economic Research Service
[35]CQ Press using data from U.S. Census Bureau, Governments Division
[36]CQ Press using data from U.S. Department of Homeland Security
[37]CQ Press using data from National Conference of State Legislators

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