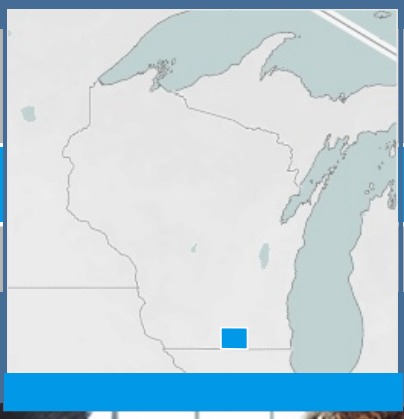
2019 WORKFORCE PROFILE

Rock County



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STATE OF WISCONSIN DWD Department of Workforce Development

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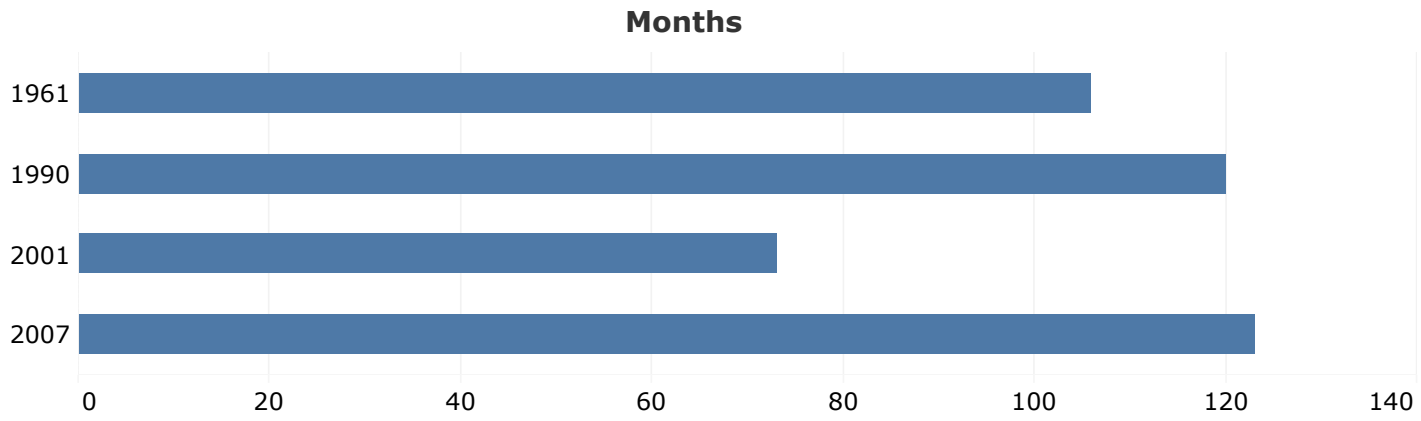
2019 Wisconsin Overview

The county workforce profiles provide snapshots of the labor market for each of the 72 Wisconsin counties. In addition to a static PDF version, each county profile will be available as an interactive document in which the reader can do additional manipulation of some tables. The profiles begin with an overview of the entire state's labor market outlook. From there, the profiles highlight the respective labor market with analyses of the current and projected population and labor force, community patterns, industries, occupations, and wages. We conclude each profile with an examination of the impact of automation on the county's workforce.

Record Economic Expansion

The economic expansion is now the longest on record. This current expansion surpassed the previous mark of 120 months set in the 1991-2001 stretch in June 2019. What has been good for the country has been good for Wisconsin and most other states.



*Bureau of Labor Statistics, OEA

Wisconsin's workforce and employment numbers have attained new highs. Employment exceeded the 3 million mark in the summer of 2016. Wisconsin jobs reached new highs in 2019 with not-seasonally adjusted, total non-farm jobs breaking through 3 million at 3.026 million in June 2019. The state's unemployment rate has reached lows not seen since at least 1976, 2.8% in the months of April and May of 2019. New unemployment rate lows were also recorded for the U.S. as a whole at 3.6%. Thirty of 72 Wisconsin counties reached new job highs in the last two years. Thirty state counties hit new unemployment rate lows. Initial and continued unemployment insurance claims have been tracking at 40-year lows over the past three years.

Given that new records are being set largely across the board for expansion longevity, employment highs, and unemployment lows, the question turns to when will the trends reverse.

Economic expansions don't die of old age. Expansions are usually curtailed by decreasing jobs, spending, investments, inflation, or interest rate pressures. Decreasing jobs lead to lower incomes that result in less consumption, which is the driving force in the U.S. economy. Employment numbers are not good indicators of pending recessions. In fact, they are a lagging indicator of economic downturns and recoveries.

What's next in the short-run?

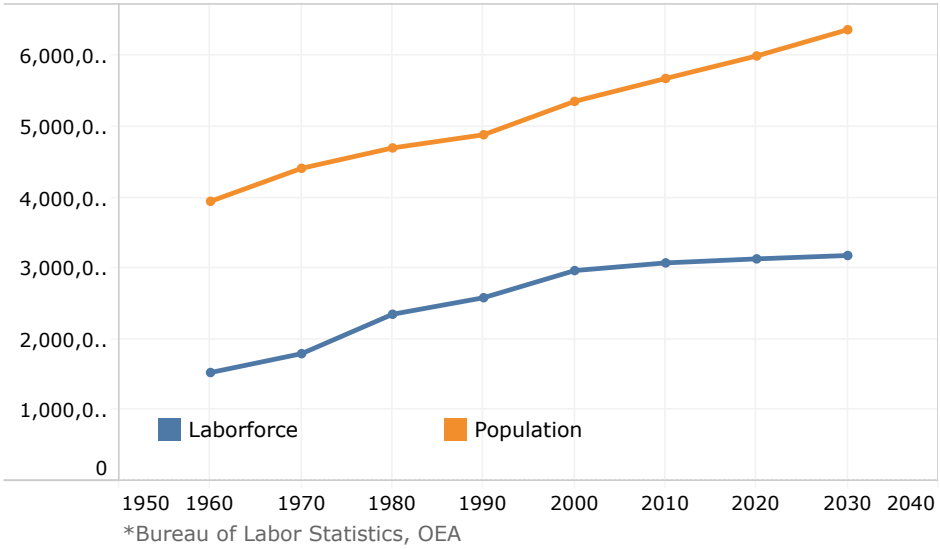
As this is being written in November 2019, job numbers are still climbing, earnings and income are rising, retail sales are expanding, debt-to-income ratio is low, and inflation is subdued at about 2%. Housing sales are relatively flat, vehicle sales have leveled off, and some European countries' economies are sagging. The primary unknown at the moment is the status of tariff and trade policy on the North American countries' trade agreement and trade with China. The uncertainty is dampening capital investment, injecting volatility in the equity markets, and causing household cogitation.

What are the long-run influences?

The primary long-term challenge facing Wisconsin's economic future is its workforce quantity. The demographic situation facing the state, other upper Midwest states, and most western state economies will advance unaltered in the coming decades. The number of retiring baby boomers nearly match the influx of new workers, resulting in a slow growing workforce that is constraining employers' abilities across industries to secure talent. Many businesses report the lack of available workers have hindered expansion and, in some cases, even curtailed their ability to meet current product orders.

The blue-line, orange-line graph to the right portrays the labor force facing Wisconsin and other upper-Midwest states. While Wisconsin's population will continue to grow over the next 20 years, the workforce faces serious constraints. The curve began to flatten in 2008 as the first baby boomers (those born in 1946) reached age 62 and began to leave the workforce.

Wisconsin Population and Labor Force



*Bureau of Labor Statistics, OEA

Baby boomers continue to exit the workforce in great numbers. However, the labor force participation rates for workers over 55 years of age have risen significantly. The need or want to remain in the workforce has assisted in staving off more severe worker shortages.

Our analysis shows a marked decrease in per capita personal income growth in the coming decades. The consequences for shared tax burden will be real and require new policy discussions about the social contract for infrastructure and government services.

One of the remedies for labor scarcity and increased productivity is the incorporation of labor-saving technology in the workplace. As such, not only does Wisconsin have a quantity challenge, the state must also make all available workers technologically savvy. The propensity for automation varies by occupation, but routine activities are the most susceptible to displacement.

To summarize, the state needs to find every body it can and get everybody trained up to their maximum potential.

Rock County
Population and Demographics

Rock County ranks ninth in population and has a population density more than double the state, ranking 13th among Wisconsin counties in population density. Though part of the Madison Metropolitan Statistical Area, which has experienced vibrant economic growth, Rock County's population growth has remained stagnant from April 2010 to January 2018. The table below lists Rock County's most populous municipalities. Janesville is the largest municipality in the county, with 40% of the county's population, and is also the largest municipality in the Southwest Workforce Development Area (WDA). The City of Beloit is the second largest municipality in both the WDA and the county with 23% of the county's population.

10 Most Populous Municipalities in County

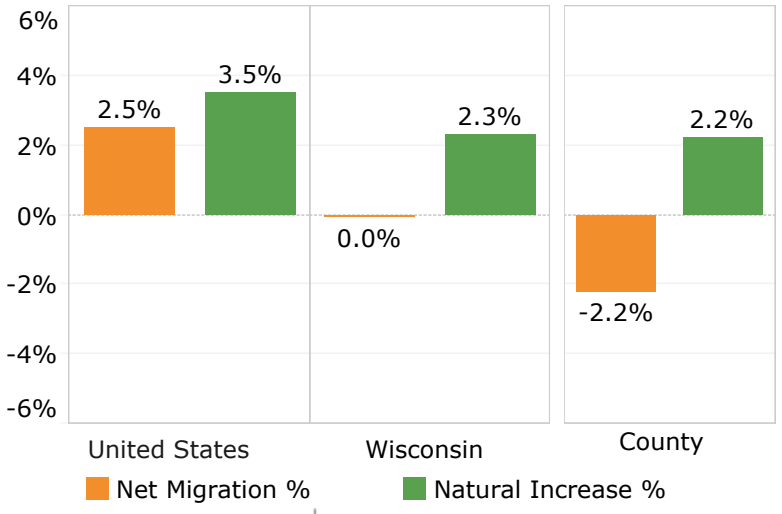
	2010 Census	2018 Final Estimate D	Numeric Change	Percent Change
Janesville, City	63,575	63,570	-5	-0.01%
Beloit, City	36,966	36,683	-283	-0.77%
Beloit, Town	7,662	7,613	-49	-0.64%
Milton, City	5,546	5,546	0	0.00%
Edgerton, City	5,364	5,477	113	2.11%
Evansville, City	5,012	5,317	305	6.09%
Janesville, Town	3,434	3,489	55	1.60%
Fulton, Town	3,252	3,337	85	2.61%
Rock, Town	3,196	3,182	-14	-0.44%
Milton, Town	2,923	2,979	56	1.92%
Rock County	160,331	160,349	18	0.01%
United States	308,400,408	327,167,434	18,767,026	6.09%
Wisconsin	5,686,986	5,816,231	129,245	2.27%

Source: Demographic Services Center, Wisconsin Department of Administration

Components of Change

Population change is driven by two factors: natural change and migration. A natural increase of the population occurs when there are more births than deaths. Migration affects net population change in an area positively when the number of people moving into the area is larger than the number of people moving out. Rock County has experienced a natural increase and out-migration at rates equal to 2.2%, resulting in zero population growth from April 2010 to January 2018. Both Rock County and the state have a median age of almost 40.

Components of Population Change

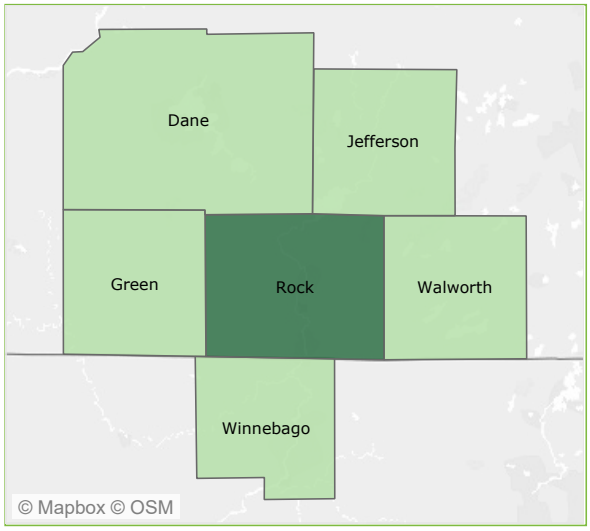


Source: Demographic Services Center, Wisconsin Department of Administration

Rock County Worker Commute

Residents Work

Just over 69% of Rock County residents stay in the county to work. This is higher than the median percentage (65%) across all Wisconsin counties. The other five counties pictured are where the other Rock County residents commute in the greatest number to work. Almost 13% of Rock County residents work in Dane County. This is not surprising since Dane County offers more employment opportunities and pays higher annual wages as compared to Rock County.



Where Rock County Residents Work

Illinois	Winnebago	5.81%
Wisconsin	Rock	69.52%
	Dane	12.71%
	Walworth	4.26%
	Jefferson	2.12%
	Green	1.60%

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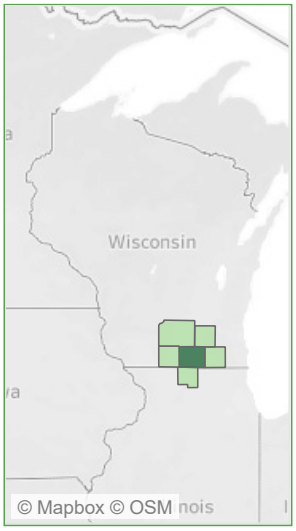
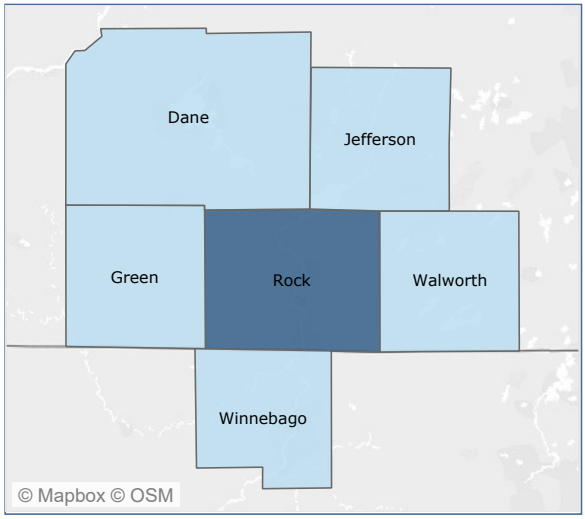
Workers in Commuting Flow





Where Rock County Workers Reside

Illinois	Winnebago	6.49%
Wisconsin	Rock	82.14%
	Dane	3.01%
	Walworth	2.64%
	Green	1.44%
	Jefferson	1.33%

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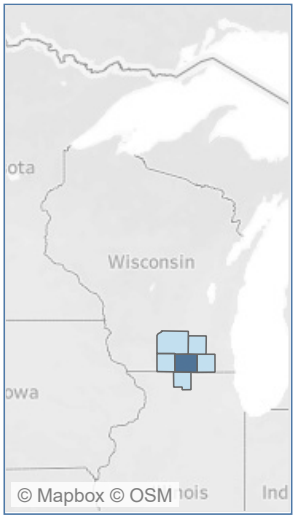
Workers in Commuting Flow



Workers Reside

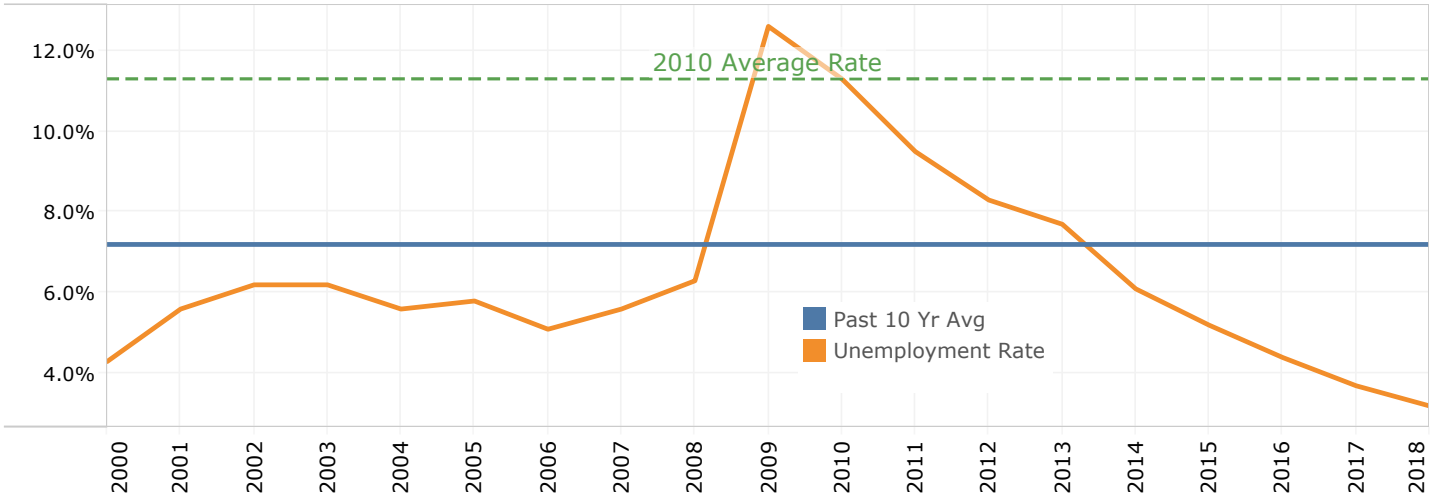
Another way to examine county-level worker flows is to look at which areas supply workers to Rock County. The five other counties pictured are where Rock County workers reside in the greatest number. A large percentage of the workers in Rock County (82%) reside in Rock County. This percentage is higher than the median percentage (72%) across all Wisconsin counties. Not surprising since the employment growth has been healthy in the county since 2010.

*source: 2011-2015 5-Year American Community Survey Commuting Flows, US Census Bureau

Labor Force Dynamics

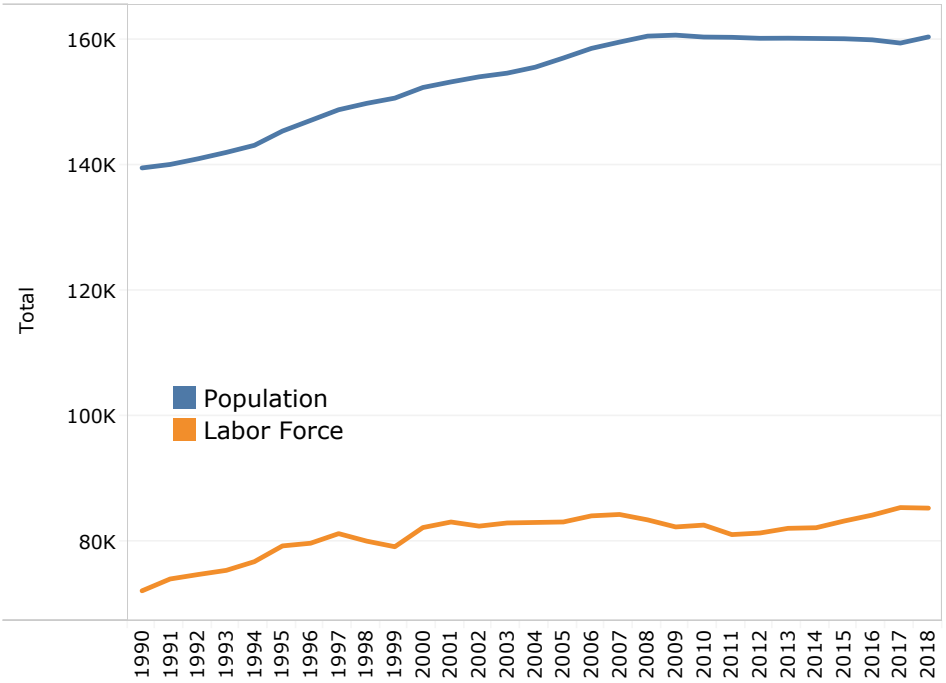
The graph below reveals changes in the local unemployment rate since 2000. The unemployment rate spiked in the early 2000s following the dot-com bubble and then again after the financial crisis. Rock County's current rate of 3.2% is significantly lower than the 10 year average of 7.2% and the 2009 peak of 12.6%. The unemployment dynamics of Rock County have followed state and national trends in general. However, the unemployment rate of Rock County was generally higher than the state and national rate since 2000. Since 2014, the Rock County unemployment rate became more closely aligned with the state and lower than the US rates.

Rock County Unemployment Rates - Not Seasonally Adjusted



Source: Local Area Unemployment Statistics, Bureau of Labor Statistics

Population and Labor Force



Rock County Labor Force Components

Rock County's labor force growth has been fairly flat during the 2000s. There has been an upward trend in the size of the labor force since 2011 due to the robust demand for labor. The percentage increase in the labor force in Rock County (3.3%) exceeds the state increase (1.7%) but falls short of the national increase (5.3%) between 2010 and 2018. The labor force participation rates of Rock County, the state, and the nation have fallen since 2000.

Source: Local Area Unemployment Statistics, Bureau of Labor Statistics and Wisconsin Deparment of Administration

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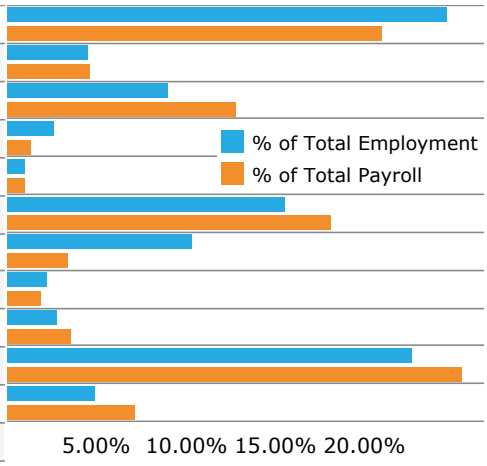
Industry Employment and Wages
2018 Employment and Wage Distribution by Industry
Rock County

	2018 Annual Average Employment	1-year change	Total Payroll (2018)
Trade, Transportation, Utilities	16,475	205	$646,261,631
Public Administration	3,007	2	$143,401,192
Professional & Business Services	6,024	24	$395,193,878
Other services	1,721	43	$41,590,271
Natural Resources	649	3	$30,711,056
Manufacturing	10,415	207	$559,148,791
Leisure & Hospitality	6,920	40	$103,430,827
Information	1,488	-40	$58,094,384
Financial Activities	1,859	54	$110,952,098
Education & Health	15,144	-86	$783,551,435
Construction	3,265	466	$218,226,476
All industries	66,966	917	$3,090,562,039



Source: WI DWD, Labor Market Information, QCEW, June 2019

The largest industry sectors in Rock County based on employment and payroll are Trade, Transportation, & Utilities; Education & Health; and Manufacturing. These three sectors represent 63% of total employment. Rock County is the home of a two-year campus located in Janesville that is now a satellite campus of UW-Whitewater. Blackhawk Technical College also has campuses located in Rock County.

Mercy Health and Beloit Health Systems are major employers in Rock County. The county features a diverse manufacturing sector with large employers, including SSI Technologies and Frito-Lay. In addition to major brick and mortar retail, the headquarters of regional grocer Woodman's is also in Rock County. Employment growth in Rock County (1.4%) was greater than the state (0.9%) between 2017 and 2018.

2018 Average Annual Wage by Industry

	Wisconsin Average Annual Wage	County Average Annual Wage	2018 % Wisconsin	1-Year % Change*
Trade, Transportation, Utilities	$41,901	$39,227	93.6%	-0.1%
Public Administration	$47,859	$47,689	99.6%	2.0%
Professional & Business Services	$60,729	$65,603	108.0%	5.7%
Other services	$30,674	$24,166	78.8%	-2.0%
Natural Resources	$39,444	$47,321	120.0%	2.1%
Manufacturing	$58,048	$53,687	92.5%	-0.5%
Leisure & Hospitality	$18,757	$14,947	79.7%	0.9%
Information	$73,577	$39,042	53.1%	-2.0%
Financial Activities	$71,474	$59,684	83.5%	1.4%
Education & Health	$49,185	$51,740	105.2%	0.8%
Construction	$61,909	$66,838	108.0%	3.7%
All Industries	$48,891	$46,151	94.4%	1.2%

Source: WI DWD, Labor Market Information, QCEW, June 2019
*Difference in the 2018 share of Wisconsin and the 2017 share of Wisconsin

The industry sectors of Trade, Transportation, & Utilities; Manufacturing; and Construction experienced considerable growth in employment over the past year representing 84% of total growth. The county average wage is greater than the state average wage in four sectors-- Construction, Education & Health; Natural Resources; and Professional & Business Services. These higher salaries may be the result of robust local demand and may be the reason for the upward trend in the labor force since 2011 despite flat population growth.

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Industry Employment Projections
Southwest WDA - Industry Projections 2016-2026
Grant, Green, Iowa, Lafayette, Richland, and Rock Counties

Industry	2016 Employment	Projected 2026 Employment	Employment Change	Percent Change
Total All Industries	135,566	141,827	6,261	4.6%
Natural Resources and Mining	5,423	5,869	446	8.2%
Construction	4,656	5,107	451	9.7%
Manufacturing	18,779	18,902	123	0.7%
Trade, Transportation, and Utilities	29,900	31,200	1,300	4.3%
Information	2,664	2,471	-193	-7.2%
Financial Activities	3,607	3,730	123	3.4%
Professional and Business Services	8,849	9,785	936	10.6%
Education and Health Services	27,394	28,491	1,097	4.0%
Leisure and Hospitality	10,871	11,618	747	6.9%
Other Services (except Government)	4,940	5,117	177	3.6%
Public Administration	7,514	7,665	151	2.0%
Self Employed and Unpaid Family Workers	10,969	11,872	903	8.2%

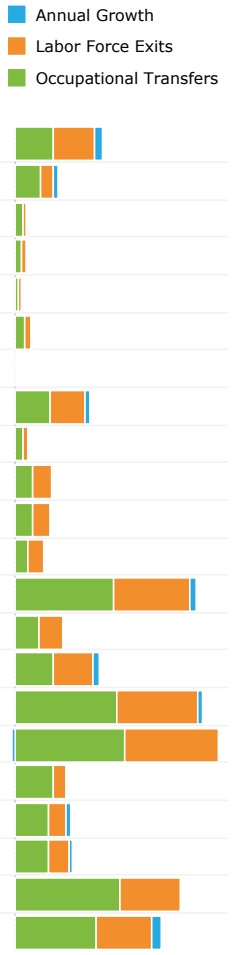
Source: Office of Economic Advisors, Wisconsin Department of Workforce Development, December 2018

Even though there is much to be gained from understanding past and current trends, Department of Workforce Development (DWD) also produces projections of industry and occupational employment to identify areas of future growth. The data presented above and on the next page have been produced as part of DWD's two-year long employment projections cycle, with the current cycle projecting employment from 2016 to 2026. Future employment estimates are calculated by using historical employment data from several different sources, including the Quarterly Census of Employment and Wages (QCEW) and Current Employment Statistics (CES) programs as well as the Population Survey (CPS). These projections are presented for the six-county Southwest Area Workforce Development Area, The Southwest WDA ranks ninth in percentage growth in employment amongst the 11 WDAs over the 2016 to 2026 time period.

In 2016, the area's three largest industry sectors by jobs were Trade, Transportation, & Utilities; Education & Health Services; and Manufacturing. Together, these sectors represented 56.1% of jobs in 2016 and are expected to be the three largest industries in 2026. The share of total jobs by industry sector is projected to change little through 2026. The only sector with negative growth is the Information sector with a projected decrease of 7.2%. The Manufacturing sector has the lowest positive numeric and percentage change in projected employment. Although the growth in manufacturing employment is slight, there will be many opportunities for a new generation of workers in manufacturing because retirements in the sector are going to outpace employment declines due to economic and demographic shifts. This will continue into the foreseeable future. The Trade, Transportation & Utilities sector is projected to have the largest numeric gain in jobs. The Professional & Business Services sector has the highest projected percentage change. All sectors, except for the Information sector, are projected to gain jobs by 2026.

Occupational Employment Projections
Southwest WDA - Occupation Projections 2016-2026
Grant, Green, Iowa, Lafayette, Richland, and Rock Counties

Occupation Title	2016 Employment	2026 Projected Employment	Occupational Openings	Percent Change (2016-2026)
Total, All	135,570	141,830	16,030	4.6%
Management	10,570	11,350	900	7.4%
Business and Financial Operations	4,300	4,650	440	8.1%
Computer and Mathematical	1,760	1,960	140	11.4%
Architecture and Engineering	1,390	1,510	120	8.6%
Life, Physical, and Social Science	620	730	70	17.7%
Community and Social Service	1,390	1,520	170	9.4%
Legal	430	430	30	0.0%
Education, Training, and Library	8,560	8,970	770	4.8%
Arts, Design, Entertainment, Sports, and Media	1,470	1,480	140	0.7%
Healthcare Practitioners and Technical	7,260	7,400	390	1.9%
Healthcare Support	3,230	3,320	380	2.8%
Protective Service	2,370	2,470	300	4.2%
Food Preparation and Serving Related	10,400	11,140	1,880	7.1%
Building and Grounds Cleaning and Maintenan..	3,900	4,080	510	4.6%
Personal Care and Service	5,200	6,040	880	16.2%
Sales and Related	13,210	13,750	1,940	4.1%
Office and Administrative Support	18,710	18,330	2,060	-2.0%
Farming, Fishing, and Forestry	3,360	3,610	550	7.4%
Construction and Extraction	5,120	5,510	570	7.6%
Installation, Maintenance, and Repair	5,750	6,100	600	6.1%
Production	15,410	15,300	1,700	-0.7%
Transportation and Material Moving	11,190	12,190	1,510	8.9%

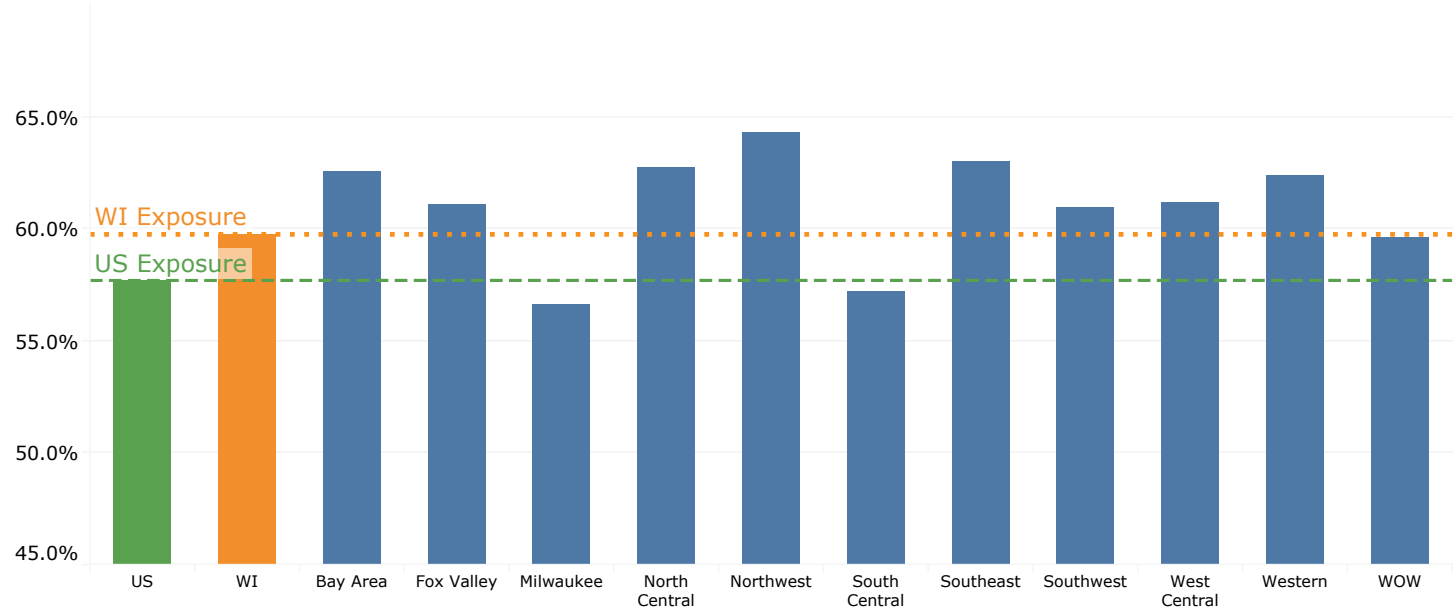


Source: Office of Economic Advisors, Wisconsin Department of Workforce Development, December 2018

The table above provides insight into the types of occupations that will be in demand in the future. Occupational projections are used for workforce and career planning. This current cycle of projections is the first to implement the new separations methodology, which seeks to more accurately capture labor market dynamics by estimating the number of openings as a results of workers leaving the labor force entirely (exits), workers changing jobs and leaving an occupation (transfers) and growth. Across all occupations in the Southwest, 55% are expected from transfers, 41% from exits, and 4% from growth.

Five occupations account for 51% of all jobs in 2016. These five continue to remain in the top five when projected out to 2026. Personal Care & Service occupations are projected to have the largest employment share gain. While the Life, Physical, and Social Science occupations are projected to have the largest percentage gain. Transportation and Material Moving occupations will experience the greatest growth in number of jobs. The occupational groups with the greatest number of openings include Office and Administrative Support; Sales; Food Preparation and Serving; Production; and Transportation and Material Moving. Office and Administrative Support has the greatest number of workers who will exit the occupation by 2026. The Legal occupation group remains constant. All other occupation groups are projected to add jobs.

Automation Exposure by Workforce Development Area



Source: The Future of Employment: How Susceptible are Jobs to Computerisation, C.B. Frey and M.A. Osborne, September 17, 2013, Oxford Martin School, University of Oxford; OES

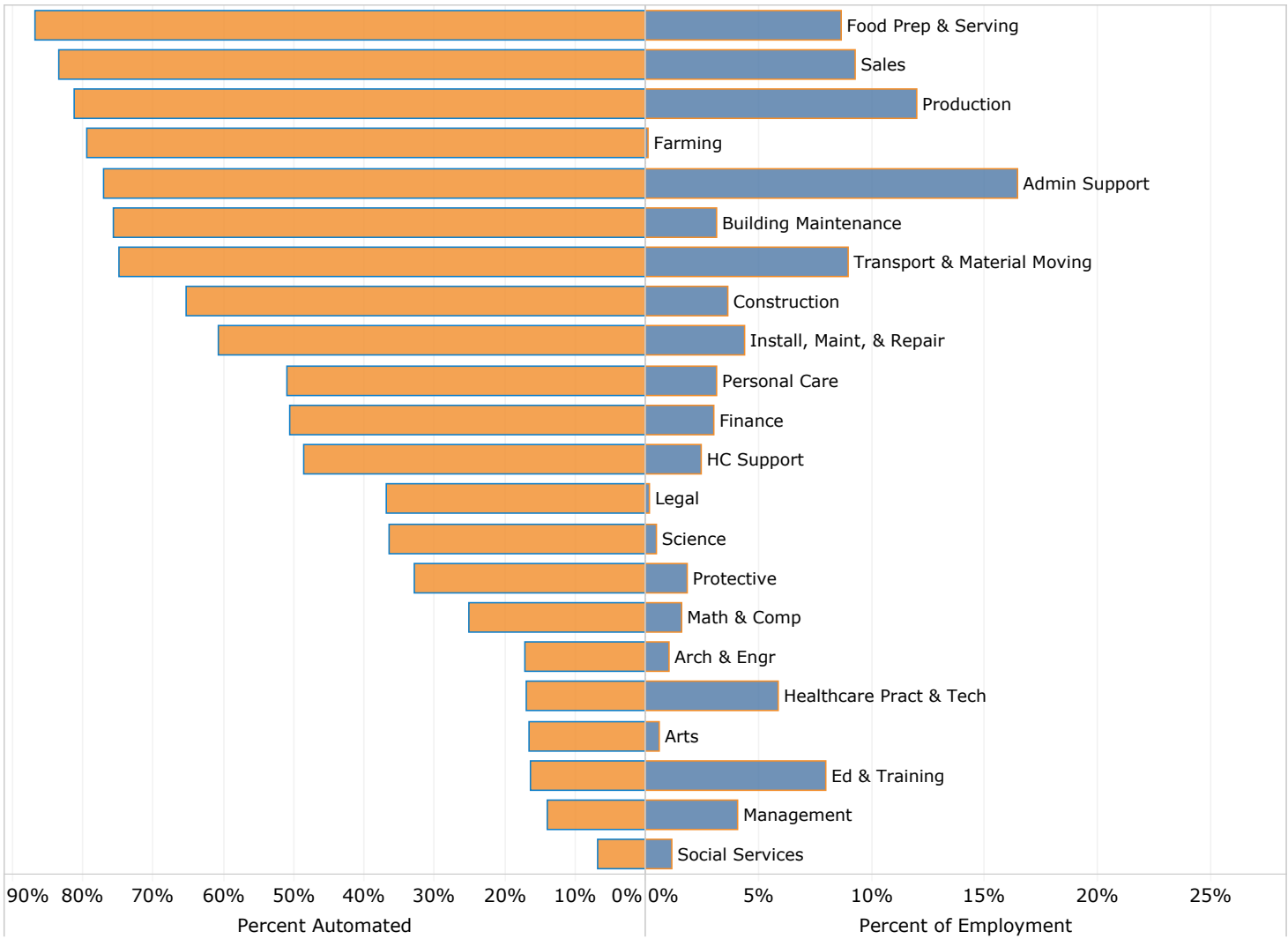
Technological advancements are changing the occupational landscape of the nation and Wisconsin is no exception. Developments in the fields of artificial intelligence, the internet of things (ability of electronic devices to communicate with each other), autonomous transportation, and many others are widely expected to have significant impacts on the nature of work, both in terms of the job mix and the skillsets needed to succeed in the labor market. By merging occupational-level probabilities of automation from a 2013 Oxford study with employment data from the Occupational Employment Statistics data set, we are able to estimate the overall level of exposure to automation and compare it across different geographies, which is identified in the chart above.

In the chart above we see that the overall level of automation exposure is slightly higher in Wisconsin (60%) as compared to the US (58%) and the Southwest is slightly higher (61%) as compared to Wisconsin (60%). Milwaukee and South Central are the only WDAs with lower automation exposure than the US and Wisconsin. This difference is largely accounted for by comparing the occupational compositions between areas. Milwaukee and South Central have lower percentages of employment in Production and Transportation and Material Moving occupations, which tend to have higher automation probabilities. Despite the fact that areas depicted above have different occupational mixes, the range from high (Northwest WDA, 64.2%) to low (Milwaukee WDA, 56.6%) is only 7.6 percentage points, so all areas of the state are affected relatively equally in aggregate.

Further analysis of the interactions between automation and other occupational characteristics yields some interesting conclusions that have broad implications on the labor market. Automation exposure is anticipated to continue contributing to inequality both in terms of wages and education. In other words, automation exposure has a strong tendency to decrease as wages and educational requirements associated with the job increase. Technological advancements can also help mitigate the workforce quantity challenge by enhancing labor productivity, which is essential for continued economic prosperity without increasing labor force. Of note, these developments are also anticipated to accelerate the evolution of workplace skills, which puts additional emphasis on the roles of postsecondary education and upskilling while still on the job.

Automation Exposure by Occupation Group for Southwest WDA

Grant, Green, Iowa, Lafayette, Richland, and Rock Counties



Source: The Future of Employment: How Susceptible are Jobs to Computerisation, C.B. Frey and M.A. Osborne, September 17, 2013, Oxford Martin School, University of Oxford; OES

The chart ranks 22 occupational groups by their propensity for automation. Both the level of automation exposure (on the left) and the local share of employment (on the right) are displayed across the occupations. The entries are sorted by automation exposure in descending order. These differences are mainly due to the skillsets needed to do various jobs. For example, repetitive tasks that do not require a high degree of manual dexterity, problem solving, creativity, or adaption are more likely to be automated. It is evident from the chart above that the impacts of automation are not expected to be evenly distributed across different occupations and will vary across different regions of Wisconsin depending on regional labor market composition. The ability of the workforce to adapt to these rapid changes will be essential for economic prosperity. A noteworthy observation for the Southwest WDA is that there are occupations with high levels of automation exposure and high levels of local employment, such as Food Preparation and Serving, Sales, Production, Office and Administrative Support, and Transport and Material Moving. Going down the list, there are occupations with lower shares of employment that also have lower levels of automation exposure. These occupations include Mathematical and Computer, Architecture and Engineering, Science, Arts, and Social Services.