UNDERSTANDING WISCONSIN'S JOB OUTLOOK
Industry and Occupation Projections, 2018-2028 in Brief

STATE OF WISCONSIN
DWD
Department of Workforce Development
Office of Economic Advisors
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Introduction

The Projections Unit of the Office of Economic Advisors (OEA) develops long-term 10-year period and short-term 2-year period outlooks of employment in approximately 270 industries and 800 occupations. Wage information and typical education and training paths are also included for each occupation. This report highlights some of the findings for Long-Term 2018-2028 projections.

The Long-Term 2018-2028 projections are estimates based on historic data and do not include any impact COVID-19 may have on industry employment in the future.

Wisconsin is expected to create 111,926 new jobs between 2018 and 2028. With 3.5% growth, employment is projected to increase from 3.2 to 3.3 million jobs. As Figure 1 shows, employment has been rising since 1990, except for the periods around the Recession of 2001 and the Great Recession from 2007-2009. In addition to newly created jobs, 380,269 annual openings will occur due to people leaving an occupation or exiting the labor force entirely.

Figure 1: Wisconsin Total Employment

Source: Wisconsin Department of Workforce Development, Office of Economic Advisors, Wisconsin Employment Projections 2018-2028

DID YOU KNOW?

What should you know when looking at industry projections?

What are super-sectors and sectors?

*As a way to put structure around the collection of industry data, the North American Industry Classification System (NAICS) was developed. The broadest NAICS category is the **Super-sector**. Under each **Super-sector** there are individual **Sectors** (see figure A).*

Figure A: NAICS Example	
Super-sector	*Education and Health Services*
Sector (62)	*Health Care and social assistance*
Subsector (621)	*Ambulatory health care services*
Industry group (6211)	*Offices of physicians*

*This paper reports the information at the two broadest NAICS categories: **Super-sector and Sector**.*

What is the difference between an establishment, a firm and an industry?

(1) An establishment is typically at one physical location and engaged in one type of economic activity, such as a farm, a mine, a factory, or a store, that produces goods or services.

(2) A firm is a business and may consist of one or more establishments, where each establishment may participate in a different predominant economic activity.

(3) An industry is assigned to a NAICS based on the information given from an employer regarding the economic activity that takes place there.

What should you know when looking at occupational projections?

What are the key components of the occupational projections?

*(1) Expected annual job openings which are based on historic growth within the occupation. Included in this are **TRANSFERS** which are those who are changing jobs and leaving an occupation, and **EXITS** which are those who are leaving the labor force entirely, and*

*(2) Job growth are **NEW JOBS** projected to develop within the decade 2018-2028.*

What does a large number of openings mean?

It means that many in those occupations are leaving the occupation, changing occupations or have lot of growth opening. Therefore it may be relatively easy to find a job within that occupation (given you have the right skills).
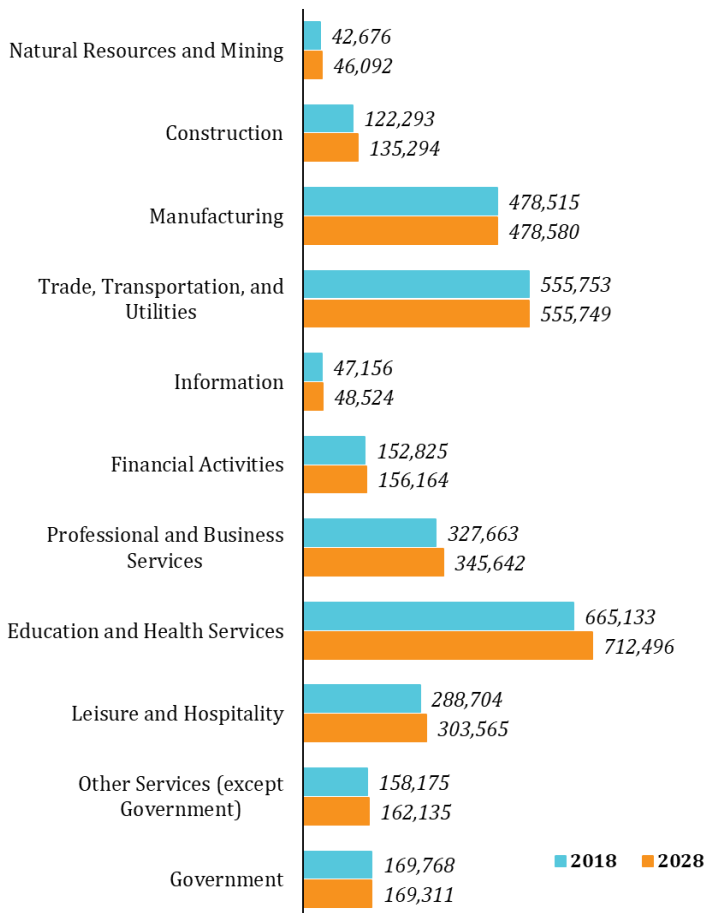
*Data outlining the 2018-2028 employment outlook for 270 industries and 800 occupations is now available in **Wisconomy.com**, Wisconsin's source for economic and labor market information.*

Wage and typical education and training paths are also included for each occupation. Long-term projections by Workforce Development Areas (WDA) are also available on the website above.
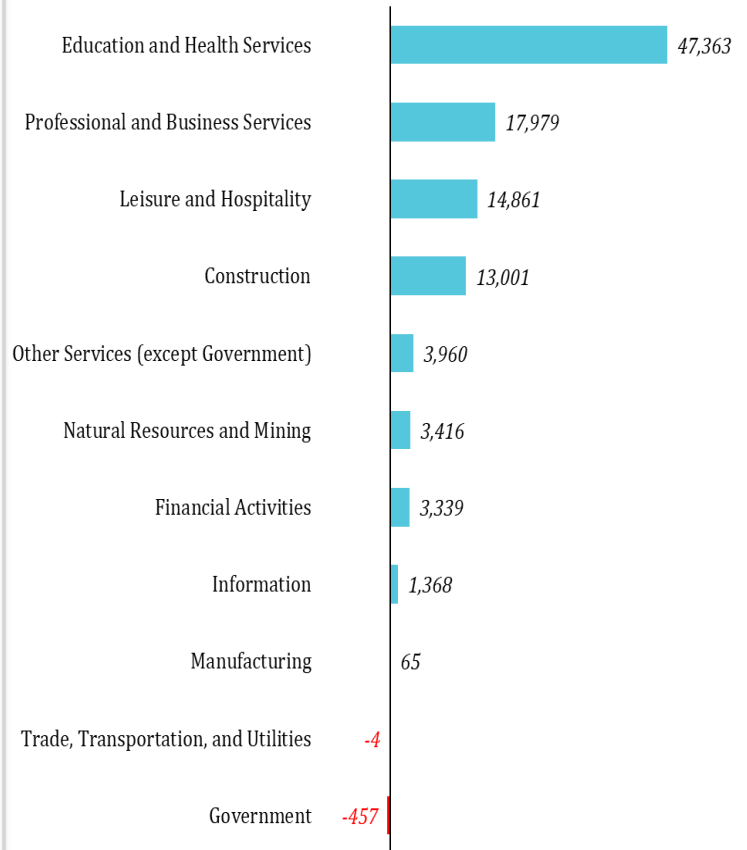
Industry Employment

Education and Health Services leads the way within the top five industry super-sectors with an anticipated 47,363 new jobs over the 2018-2028 period (see figures 2 and 3). The driving force behind the growth of *Education and Health Services* is the *Health Care and Social Assistance* sector - the largest sector in Wisconsin - which has a projected increase of 30,923 new jobs. Many of the industries in the sector are based on the educational degree of the practitioners included in the industry. Some examples are *Ambulatory Health Care Services*, *Social Assistance, Hospitals, Offices of Physicians,* and *Offices of Dentists.*

Figure 2: Employment 2018 and Projected Employment 2028

Super Sector	2018	2028
Natural Resources and Mining	42,676	46,092
Construction	122,293	135,294
Manufacturing	478,515	478,580
Trade, Transportation, and Utilities	555,753	555,749
Information	47,156	48,524
Financial Activities	152,825	156,164
Professional and Business Services	327,663	345,642
Education and Health Services	665,133	712,496
Leisure and Hospitality	288,704	303,565
Other Services (except Government)	158,175	162,135
Government	169,768	169,311

Source: Wisconsin Department of Workforce Development, Office of Economic Advisors, Wisconsin Employment Projections 2018-2028

Figure 3: Super Sector by Numeric Change, 2018-2028

Super Sector	Numeric Change
Education and Health Services	47,363
Professional and Business Services	17,979
Leisure and Hospitality	14,861
Construction	13,001
Other Services (except Government)	3,960
Natural Resources and Mining	3,416
Financial Activities	3,339
Information	1,368
Manufacturing	65
Trade, Transportation, and Utilities	-4
Government	-457

Source: Wisconsin Department of Workforce Development, Office of Economic Advisors, Wisconsin Employment Projections 2018-2028

The sector projected to add the most jobs in the *Professional and Business Services* super-sector (+17,979 new jobs) is *Professional, Scientific, and Technical Services* with 9,213. Establishments in the sector perform essential activities such as: legal advice and representation; accounting, bookkeeping, and payroll; architectural, engineering, and specialized design; computer; consulting; research; advertising; photographic; translation and interpretation; veterinary; and other professional, scientific, and technical services. In the case of *Leisure and Hospitality* (+14,861 new jobs), the growth is mainly explained by the sector *Accommodation and Food Services,* which shows an expected increase of 11,766 jobs. The industries in this sector provide customers with lodging and/or make meals,

snacks, and beverages for direct consumption. Some examples are *Food Services and Drinking Places;* and *Restaurants and Other Eating Places.*

Construction (+13,001 new jobs); contains establishments mainly involved in the construction of buildings or engineering projects (such as highways and utility systems). *Specialty Trade Contractors* is the subsector projected to add the most with 6,006 new jobs. This subsector comprises establishments whose main activity is performing specific activities involved in building construction or other activities that are similar for all types of construction, but that are not responsible for the entire project.

Other Services (except Government) is projected to grow by 3,960 jobs, with *Religious, Grantmaking, Civic, Professional, and Similar Organizations* adding the most new jobs (+3,631). Industries in this subsector group are establishments that organize and promote religious activities; support various causes through grantmaking; advocate various social and political causes; and promote and defend the interests of their members.

Trade, Transportation, and Utilities is projected to stay constant over the 10-year period. The only super-sector projected to decrease during the 10-year period is *Government,* which shows a decline of 457 jobs.

Figure 4 shows the projected percent job change by super-sector; most are expected to increase over the 2018-28 decade. The fastest growing is *Construction* (+10.6%), mainly explained by the expansion of *Heavy and Civil Engineering Construction* (+18.1%), and *Residential Building Construction* (+17.3%). The remaining super-sectors expected to grow at a higher rate than the state average (+3.5%) are *Natural Resources and Mining* (+8.0%); *Education and Health Services* (+7.1%); *Professional and Business Services* (+5.5%); and *Leisure and Hospitality* (+5.2%).

Information (+2.9%); *Other Services (except Government)* (+2.5%); *Financial Activities* (+2.2%); *Manufacturing* (+0.01%);

Figure 4: Percent Change by Industry Sector

Source: Wisconsin Department of Workforce Development, Office of Economic Advisors, Wisconsin Employment Projections 2018-2028
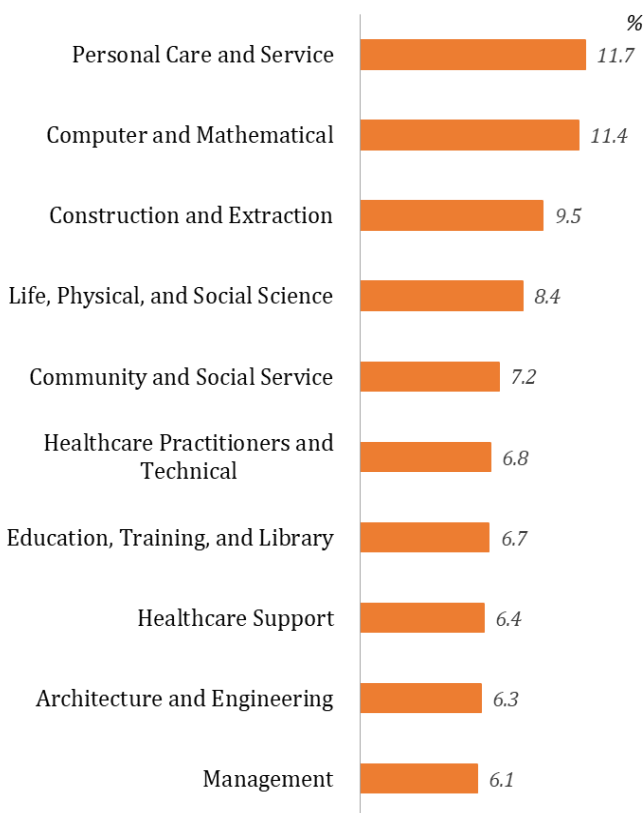
Trade, Transportation and Utilities (0.0%), and *Government* (-0.3%) have lower projected growth rates than the state rate.

Occupational Employment

There are several factors that determine the need for a certain occupation. Industry growth and decline have a direct impact on employment change and technological factors affect skills demanded. Occupations are grouped by 22 broad occupational categories.

Figure 5 shows the ten occupational groups projected to grow faster than the statewide average (3.5%). The *Personal Care and Service* occupational group leads with +11.7% job growth followed by *Computer and Mathematical* (+11.4%); Construction and Extraction (+9.5%); *Life, Physical, and Social Science* (+8.4%); and *Community and Social Service* (+7.2%) groups.

Overall, 220 out of Wisconsin's 800 occupations are expected to have at least 300 job openings during the decade. While high-skill jobs that are in demand tend to exhibit large percentage growth, many relatively low-skills jobs contribute to a significant number of openings due to their relative size and high turnover. The occupations expected to have the most openings are outlined in Figure 6. These ten occupations are expected to account for 26% of the state's openings. Many people in the occupations in this list hold these jobs for a relatively short periods of time before moving on to other occupations.

Figure 5: Top Ten Occupational Groups by Percent Change, 2018-2028

Occupational Group	%
Personal Care and Service	11.7
Computer and Mathematical	11.4
Construction and Extraction	9.5
Life, Physical, and Social Science	8.4
Community and Social Service	7.2
Healthcare Practitioners and Technical	6.8
Education, Training, and Library	6.7
Healthcare Support	6.4
Architecture and Engineering	6.3
Management	6.1

Source: Wisconsin Department of Workforce Development, Office of Economic Advisors, Wisconsin Employment Projections 2018-2028 and estimates from May 2018 BLS Occupational Employment and Wage Statistics data

Figure 6: Occupations with Most Annual Openings, 2018-2028

Occupation	Openings
Combined Food Preparation and Serving Workers, Including Fast Food	14,781
Personal Care Aides	11,691
Cashiers	11,677
Retail Salespersons	11,276
Office Clerks, General	8,973
Customer Service Representatives	8,755
Waiters and Waitresses	8,460
Laborers and Freight, Stock, and Material Movers, Hand	8,089
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	6,658
Heavy and Tractor-Trailer Truck Drivers	6,593

Source: Wisconsin Department of Workforce Development, Office of Economic Advisors, Wisconsin Employment Projections 2018-2028 and estimates from May 2018 BLS Occupational Employment and Wage Statistics data

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Typical Education

Each occupation is assigned to one of eight typical education levels that most workers need to enter an occupation. The assignment only gives a general indication. There may be other pathways into the occupation, as well as additional educational, training, or licensing requirements.
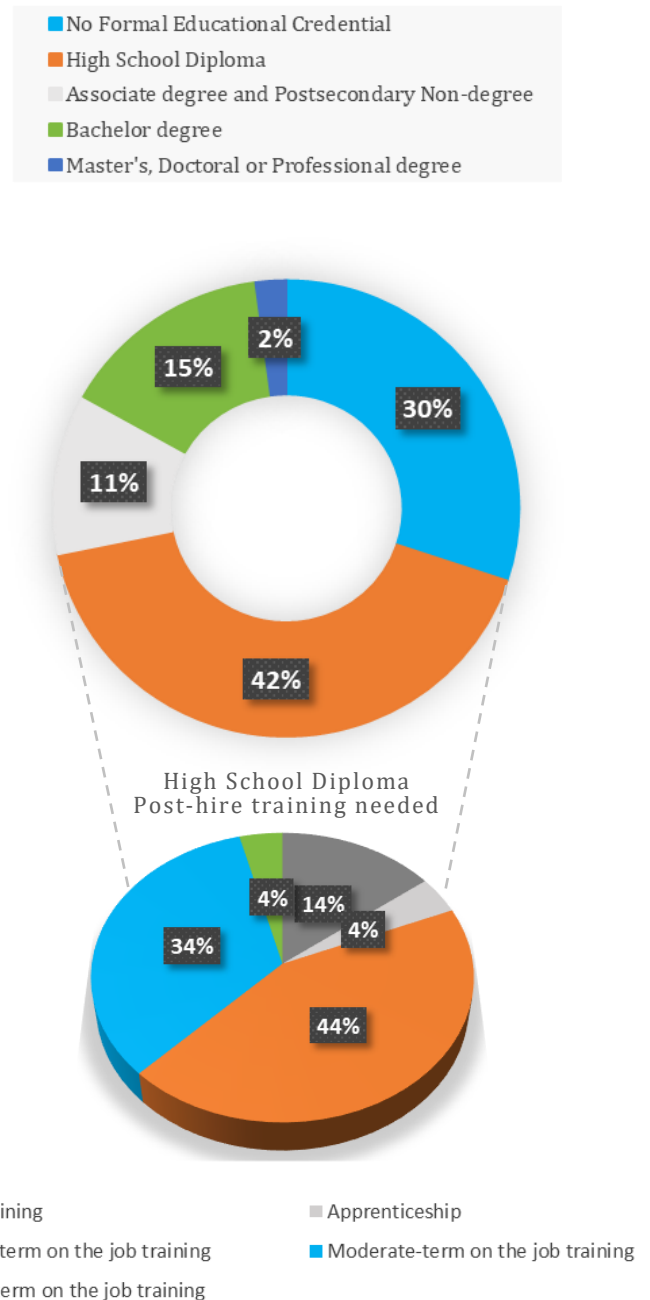
Figure 7 illustrates the percentage of job openings anticipated in each education and training group.

Among the job openings expected between 2018 and 2028, 28% fall into the Associate, Bachelor, Master's, or Doctoral degree education categories. Some examples of occupations growing quickly inside these categories are: *Software Developers, Applications* (+26.2%); *Physician Assistants* (+25.6%); and *Nursing Instructors and Teachers, Postsecondary* (+22.9%). About 30% of openings will generally require no formal educational credential. Examples of occupations growing quickly inside this category are: *Taxi Drivers and Chauffeurs* (+18.5%); *Cooks, Restaurant* (+15.1%); and *Agricultural Equipment Operators* (+14.7%). However, a lack of education needed to enter an occupation does not indicate a lack of requirements and/or training.

Within this category nearly all workers require some type of post-hire training. The remaining 42% of openings will generally require a high school diploma. Included in this category are: *Personal Care Aides* (+21.0%); *Nonfarm Animal Caretakers* (+21.0%); and *Operating Engineers and Other Construction Equipment Operators* (+13.3%). Within the 42% of the annual openings typically requiring a high school diploma or equivalent credential, 86.0% would require additional training or preparation, to attain competency, once employed in the occupation. These types of training are broken out into four different categories: *Apprenticeships, Short-term on the job training, Moderate-term on the job training or Long-term on the job training.*

BLS detail education definitions link.

Figure 7: Percentage of Job Openings by Typical Education, 2018-2028

Legend (top chart):
- No Formal Educational Credential
- High School Diploma
- Associate degree and Postsecondary Non-degree
- Bachelor degree
- Master's, Doctoral or Professional degree

Values: 2%, 15%, 30%, 11%, 42%

High School Diploma
Post-hire training needed

Values: 4%, 14%, 4%, 34%, 44%

Legend (bottom chart):
- No training
- Apprenticeship
- Short-term on the job training
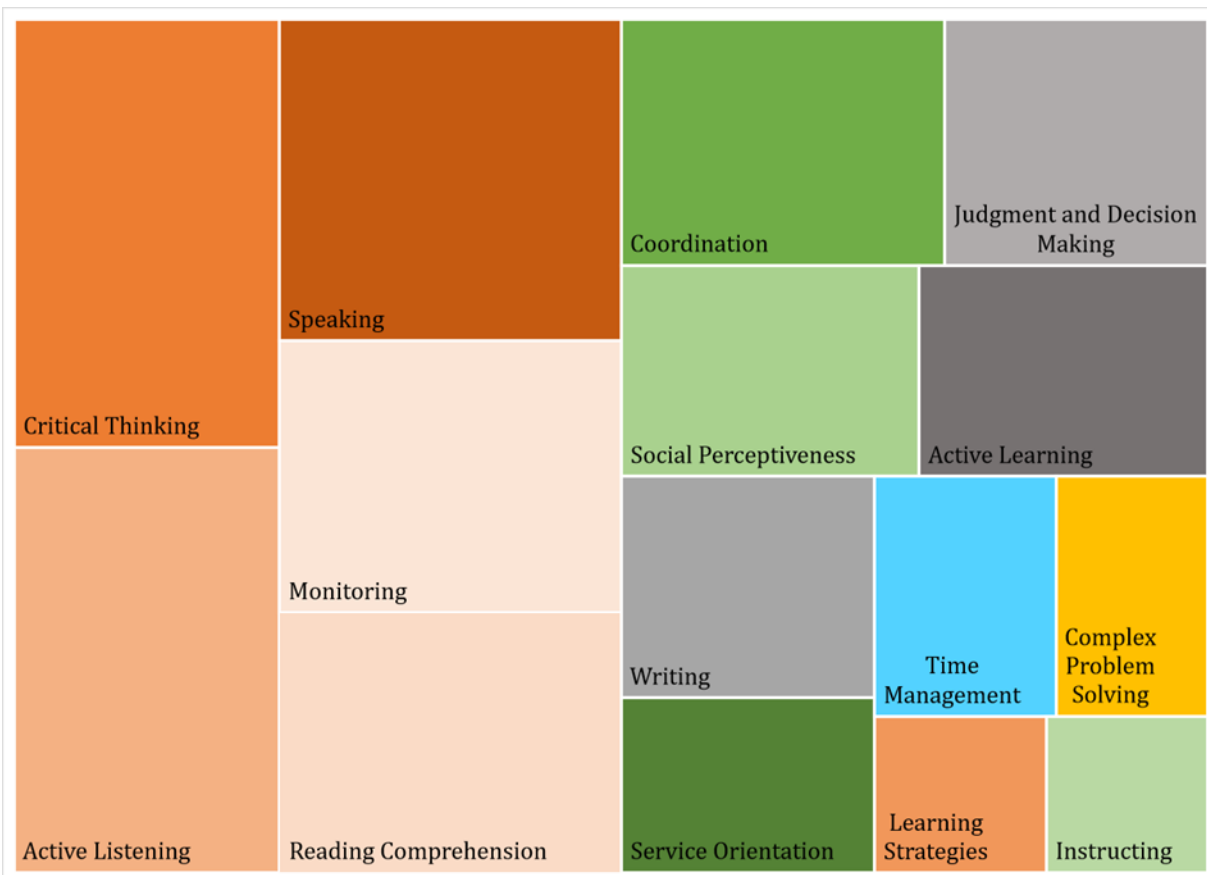- Moderate-term on the job training
- Long-term on the job training

Source: Wisconsin Department of Workforce Development, Office of Economic Advisors, Wisconsin Employment Projections 2018-2028 and estimates from May 2018 BLS Occupational Employment and Wage Statistics data

Skills

Two sources are used for the skill-based projections: (1) WI Long-term Employment Projections 2018-2028 and (2) the Occupational Information Network (O*Net). O*Net has 35 different types of skills. For this analysis a skill descriptor is assigned to an occupation when it is deemed at least moderately important and when at least a moderate level of competence is required. Projected employment levels are then calculated for each skill. Figure 8 below indicates the skills expected to be associated with most new job opportunities through 2028. Most of these are basic skills that facilitate learning or the more rapid acquisition of knowledge. Among these are *Active Listening, Speaking, and Critical Thinking*.

Also prominent are social skills that enable people to work together to achieve common goals, such as *Coordination and Social Perceptiveness*. Next are the system skills that help individuals understand, monitor, and improve socio-technical systems. Finally, resource management skills, which are developed capacities used to allocate resources efficiently; and complex problem-solving skills, which are used to solve novel, ill-defined problems in complex, real-world settings, are also included.

Figure 8: Fifteen Skills expected for Projected Employment Growth 2028

*Source: Wisconsin Department of Workforce Development, Office of Economic Advisors, Wisconsin Employment Projections 2018-2028 and O*net*

Notes

Employment projections are prepared by the Office of Economic Advisors in the Bureau of Workforce Information and Technical Support.

Long-Term projections are updated every two years. The current projections are for the 2018-2028 time period.

Long-Term projections are used by individuals seeking employment or career opportunities and businesses considering future staffing needs. These projections are also used as a planning tool by policymakers, economic developers, and academic authorities.

The projections are constructed using a methodology that combines econometric models, state economic variables, national projections and analytical judgment. Information is derived using the May 2018 *Occupational Employment and Wage Statistics* (OEWS) survey, and 2018 annual data from the *Quarterly Census of Employment and Wages* (QCEW) and *Current Employment Statistics* (CES) programs. Unpublished data from the *US Bureau of Labor Statistics*, *Current Population Survey* (CPS) and *US Census Bureau* are also used.

To the extent possible, the projections take into account anticipated changes in Wisconsin's economy from 2018 to 2028. It is important to note that unanticipated events may affect the accuracy of these projections.

Disclaimer: The Long-Term 2018-2028 projections are estimates based on historic data and do not include any impact COVID-19 *may have on industry employment in the future.*

If you have questions about this publication or need more detailed projections data, please contact:

Blania Calderón Cancel

Economist Advanced

Blania.Calderon@dwd.wisconsin.gov/(608) 733-3857

María del Pilar Casal, PhD

Research Analyst Senior

Maria.Casal@dwd.wisconsin.gov/(608) 733-3859

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