



MINNESOTA JOB OUTLOOK TO 2026

The prime goal of employment projections is to provide details on projected job growth and employment prospects for 810 occupations in Minnesota. Projections of future job growth at the national, state, and substate level are widely used in career guidance, in planning education and training programs, and in workforce development efforts in the private and public sectors. Workforce development will be more important than ever in achieving a healthy economy in the future since slow labor force growth over the next decade is expected to keep the state's job picture extremely tight.

Changes in demand for goods and services, productivity advances, technological innovations, and shifts in business practices all combine to alter the mix of occupations that employers will be looking to fill over the next 10 years even with only moderate economic growth. The ongoing retirement of the Baby Boomers over the next 10 years will also heavily influence employment opportunities in Minnesota. Job openings arising from retirements and occupational transfers will be larger than job openings created by employment growth for most occupations.

Total jobs in Minnesota are projected to increase by 181,600 between 2016 and 2026, reaching over 3.2 million jobs by 2026 according to recently released 2016 – 2026 Minnesota employment projections.¹ The projected growth is about 28 percent higher than the previous decade (2006 – 2016) when the

state added 128,300 jobs with most of the growth occurring from 2011 to 2016 as the state's job market rebounded from the Great Recession. Job expansion over the last 10 years was severely trimmed by steep job cutbacks experienced during the Great Recession in 2008 – 2010.

Job creation in the state over the next decade while stronger than the previous decade will not accelerate to match job growth two decades ago. The state add 280,000 jobs between 1996 and 2006 even with a mild recession in 2001. While no repeat of the Great Recession is expected during the next 10 years, economic expansion and job growth nationally and in Minnesota will be limited by slow labor force growth as the Baby Boomers continue to retire. Minnesota's labor force participation has inched up over the last few years but remains way below its 2000 peak of 75.4 percent. The state's labor force participation rate, 70.2 percent in 2017, may continue to inch up over the next few years if the job market continues to tighten but any increase will be minimal as the baby boom retirement limits any significant increase in the rate.

When Baby Boomers entered the labor force between 1964 and 1980, they replaced a much smaller older generation in the workforce thus generating robust labor force expansion. A steady increase in female labor force participation between 1960 and 2000 boosted labor force growth even higher before it flattened out in 2000. Since Millennial numbers are just slightly larger than

¹Detailed 2016 – 2026 occupational and industry employment projections for Minnesota can be found at mn.gov/deed/data/data-tools/employment-outlook/.

Baby Boomers, labor force growth will be subdued as Millennials replace Baby Boomers in the labor force. Unless net immigration into the state increases significantly in the near future the state's labor force will record minimal growth between 2016 and 2026.

Projected jobs include wage and salary employment as well as self-employment with all jobs measured on an annual average basis. Projection employment plunged 4.8 percent between 2007 and 2010 with wage and salary jobs dropping 4.7 percent and self-employed jobs slipping by 6.9 percent. Wage and salary employment surpassed its 2007 peak in 2013, but self-employment continued to fall until 2014. Self-employed jobs were still 5.5 percent lower in 2016 when compared to 2007 while wage and salary jobs were 4.8 percent higher than in 2007. The breakdown of jobs showed that 6.6 percent of jobs in 2016 were self-employed as opposed to the 93.4 percent that were wage and salary jobs.

Job growth has averaged 1.5 percent since 2011 but is expected to decline gradually over the next 10 years to average just over 0.5 percent annually between 2016 and 2026. Most of the projected job expansion will occur over the next five years before tailing off during the second half of the decade as Baby Boomer retirements slow labor force growth and restrict job growth. The moderate job growth combined with slower labor force growth will continue to push Minnesota's unemployment down. Unemployment in the state is likely to fall below 3 percent for the first time since 1999 over the next few years unless a recession develops and demand for workers drops.

Minnesota's long-term industry and occupational employment projections (10-year timeframe) rely heavily on national industry and occupational employment projections produced by the U.S. Department of Labor's Bureau of Labor Statistics (BLS).² Minnesota, along with most other states, customizes national projections to reflect state specific industrial, occupational, and demographic traits. Historical employment trends for 290 industries in Minnesota are compared to corresponding national industry employment

trends using statistical techniques. The models produced are used with BLS's projections of 2026 national industry employment to produce industry projections for Minnesota.

The key macroeconomic assumptions driving the 2016 – 2026 national industry projections are:

1. Gross Domestic Product (GDP) growth will average 2.0 percent annually during the 10-year period, up from the 1.5 percent annual average experienced during the previous decade, but slower than the 3.3 percent growth achieved between 1996 and 2006.
2. Productivity growth will increase slightly over the next 10 years, averaging 1.6 percent between 2016 and 2026 compared to the 1.5 percent average experienced between 2006 and 2016. The 1.6 percent annual productivity gain will be down from the 2.8 percent achieved between 1996 and 2006.
3. U.S. labor force growth will inch up over the next 10 years, averaging 0.6 percent a year compared to the 0.5 percent annual average of the previous 10 years. Labor force growth between 1996 and 2006 averaged 1.2 percent annually.
4. Unemployment will average 4.7 percent in 2026 or about the same as the 4.9 percent average in 2016 and the 4.6 percent average in 2006.

Projected industry employment is converted to occupational employment projections based on industry staffing patterns and the distribution of industry employment across occupations. Staffing patterns for Minnesota industries are developed from estimates of occupational employment collected through the Minnesota Wage and Salary Survey, which is a product of the Occupational Employment Statistics (OES) program.³ Shifts in staffing patterns over the 2016 to 2026 period across industries are also projected as part of the BLS national projections. These shifts in staffing patterns are used in Minnesota's projections. The shifts project which occupations within an industry will be increasing or decreasing as a percent of total industrial employment.

²The BLS's main projection website is www.bls.gov/emp/. Projections for all states are available at www.projectionscentral.com/Projections/LongTerm.

³Information on the Minnesota Wage and Salary Survey is available at mn.gov/deed/data/data-tools/oes/. A condensed 2026 Minnesota staffing pattern matrix (810 occupations across 30 aggregated industries) is available at mn.gov/deed/data/data-tools/occupational-staffing/.



A majority of occupations, 631 in all, will experience employment growth over the next 10 years in Minnesota. The expected expansion of healthcare services over the next decade is a prime example of how changes in the demand for goods and services fuel demand for particular occupations. As the Baby Boomer generation enters their senior years, demand for healthcare services will increase steadily. Increasing healthcare service expenditures will in turn boost the demand for workers in healthcare related jobs like registered nurses, pharmacists, dental assistants, personal care aides, and home health aides both nationally and in Minnesota.

Nineteen occupations are expected to see no change in the number of workers. These are small specialized occupations (less than 100 positions in 2016) that are employed in industries that are expected to experience little employment change. Slightly less than 20 percent of all occupations, 162 to be exact, are projected to decline. Seventy percent of the declining occupations, however, are projected to decline by 10 percent or less.

The 162 shrinking occupations combined accounted for roughly 683,000 jobs or 22 percent of all jobs in 2016. The number of jobs in these occupations is projected to tail off to 651,000 by 2026, an

aggregated 7 percent drop. Declining occupations are concentrated in the production, office and administrative support, and management occupational groups. Almost all of the job loss in the managerial group is expected to be farmers, ranchers, and other agricultural managers which are included in the managerial occupation group. Minnesota farmers totaled 50,800 in 2016 and are projected to slip to 49,500 or a 2.7 percent decline over the next 10 years. Other occupations expected to see their numbers shrink the most over the next 10 years are team assemblers, executive secretaries, secretaries and administrative assistants, electrical and electronic equipment assemblers, and general office clerks.

Some occupations will decline as industries which employ workers in the declining occupations cut back their workforces. Electrical and electronic equipment assemblers is one such occupation. Continued reduction in Minnesota's computer and electronic product manufacturing is expected over the next 10 years, leading to a reduction in the number of electrical and electronic equipment assemblers (SOC 51-2022).

General office clerks, on the other hand, are employed across multiple industries yet are still expected to decline slightly with automation

of some of their work. For example, in 2016 an estimated 3,030 office clerks (SOC 43-9061) were working in the real estate industry (NAICS 531), accounting for 11 percent of the 27,000 workers in the industry. While this industry is expected to increase employment to 28,600 by 2026, office clerk positions within the industry will drop to 2,780 in 2026. Office clerk positions in the real estate industry will shrink by 8 percent by 2026 even though real estate employment is expected to expand by 6 percent.

Minnesota’s total employment is projected to climb 5.8 percent over the 2016 – 2026 period, compared to projected U.S. employment growth of 7.4 percent over the same time period. Minnesota’s employment growth trailed the U.S. pace during the previous 10 years, 4.3 percent for the state compared to 4.7 percent nationwide.

Most of the predicted job growth will occur in the 415 occupations projected to grow faster than overall employment. These fast growing occupations are anticipated to add roughly 180,100 new positions. The 216 occupations that will expand below the overall job growth rate will add a combined 34,000 jobs. Nineteen occupations are expected to experience no change in numbers over the next 10 years. The other 162 occupations are expected to be declining occupations. The combined loss of shrinking occupations is projected to be approximately 32,500, bringing net job growth to 181,600 jobs. So 180,100 jobs from fast

growing occupations + 34,000 jobs from slower growing occupations - 32,500 jobs from shrinking occupations = 181,600.

Three major occupational groups will experience job growth twice the rate of overall job growth over the next 10 years – personal care and service, healthcare support, and healthcare practitioners and technical. Growth in the fastest growing occupational groups will be fueled by climbing senior citizen numbers and their increasing health care demand. Eleven of the 22 major occupational groups are expected to grow faster than average but not twice as fast. The other eight occupational groups are projected to expand slower than overall employment growth. Two of the groups – office and administrative support and production occupations – are expected to see their workforces shrink slightly, with office and administrative support jobs slipping by 0.8 percent and production jobs decreasing by 2.0 percent.

When the occupational aggregation scheme is combined into only 10 super groups then the state’s two largest major occupational groups in 2016 – professional and related and service occupations – will add the most jobs in Minnesota from 2016 to 2026 (see Table 1 which lists projections for super occupational groups ranked by 2016 employment). These two super occupational groups, which tend to have occupations at the opposite ends of the educational attainment and earnings range, are projected to account for 71 percent of all net

Table 1. Projections for Super Occupational Groups 2016 - 2026

	Estimated 2016	Projected 2026	2016 - 2026 Numeric Change	2016 - 2026 Percent Change
Total Employment	3,097,300	3,278,900	181,600	5.9
Professional and Related	679,070	739,780	60,710	8.9
Service	633,790	702,320	68,530	10.8
Office and Administrative Support	423,740	420,510	-3,230	-0.8
Management, Business, and Financial	413,540	441,690	28,150	6.8
Sales and Related	295,310	300,900	5,590	1.9
Production	224,790	220,280	-4,510	-2.0
Transportation and Material Moving	188,100	196,340	8,240	4.4
Construction and Extraction	119,140	129,150	10,010	8.4
Installation, Maintenance, and Repair	103,310	109,970	6,660	6.5
Farming, Fishing, and Forestry	16,510	17,960	1,450	8.8

Source: DEED LMI Office Projections

employment growth over the next 10 years, adding 129,000 new positions. Professional and service occupations accounted for 42.4 percent of all employment and are projected to account for 44 percent of 2026 employment.

Service occupations will not only be adding the most jobs over the next decade but will also be the fastest growing occupational group. Service occupations, fueled by rapidly climbing healthcare support jobs and personal care and service jobs, are anticipated to expand 10.8 percent, adding roughly 68,500 workers. Production occupations are anticipated to decline the most in both absolute and percent terms. Production jobs are projected to decline by 4,500 positions or by 2.0 percent as manufacturers continue to find ways to increase production with fewer workers.

The top 50 occupations in terms of the number of workers employed accounted for 50.3 percent of all state employment in 2016. The largest occupations range from retail salespersons (86,800 jobs) to executive secretary and administrative assistant (14,580 jobs). Employment growth in these large occupations will account for 51.5 percent of all job growth over the next decade. The net result is that the share of total employment accounted for by the 50 largest occupations (50.4 percent in 2026) will remain virtually unchanged over the next 10 years. Ten of the largest occupations are expected to see their workforce numbers shrink with team

assemblers, executive secretaries and administrative assistants, secretaries and administrative secretaries, and office clerks anticipated to see the steepest declines.

The top 50 fastest growing occupations among occupations with employment of more than 500 workers in 2026 combined for 8.7 percent of the 2016 employment base but are anticipated to account for 35.4 percent of jobs created over the next 10 years. There are 526 occupations that employed more than 500 workers in 2016 and 286 occupations that employed below 500 workers. The 50 fastest expanding occupations are projected to grow on average by 20.4 percent or more than three times the anticipated overall job growth rate. The expected increases range from 39 percent for statisticians to 14.8 percent for production helpers.

As presented above, projected employment growth can be viewed from two perspectives – percent change and numerical change. Some occupations, which start with a large number of workers in 2016, are projected to grow slower than overall employment growth but will add a large number of workers by 2026. Other occupations, which have relatively small numbers of workers in 2016, are projected to grow rapidly over the next 10 years but will add relatively few new jobs. The distinction between occupations with fast employment growth and occupations expected to add the most jobs is apparent when the 50 fastest growing occupations



Table 2. Fastest Growing Occupations

	2016 - 2026 Percent Change	2016 - 2026 Numeric Change
Statisticians	39.1	360
Personal Care Aides	33.6	22,980
Physician Assistants	30.9	610
Home Health Aides	30.7	7,850
Nurse Practitioners	27.8	990
Magnetic Resonance Imaging Technologists	26.2	190
Phlebotomists	26.2	500
Medical Assistants	25.3	2,480
Hazardous Materials Removal Workers	24.5	150
Software Developers, Applications	23.8	3,600
Information Security Analysts	23.8	880
Massage Therapists	22.6	820
Operations Research Analysts	22.4	590
Veterinary Technologists and Technicians	22.3	560
Earth Drillers, Except Oil and Gas	22.3	120
Therapists, All Other	21.8	120
Health Specialties Teachers, Postsecondary	20.8	680
Veterinarians	20.7	360
Septic Tank Servicers and Sewer Pipe Cleaners	20.7	150
Athletic Trainers	20.5	160
Diagnostic Medical Sonographers	20.5	330
Computer Numerically Controlled Machine Tool Programmers	20.2	150
Market Research Analysts and Marketing Specialists	20.1	2,840
Marriage and Family Therapists	19.9	220
Veterinary Assistants and Laboratory Animal Caretakers	19.9	210
Occupational Therapy Assistants	19.2	100
Physical Therapist Assistants	18.6	280
Medical and Health Services Managers	18.5	1,470
Nursing Instructors and Teachers, Postsecondary	18.4	250
Self-Enrichment Education Teachers	18.2	1,650
Physical Therapists	17.8	760
Personal Financial Advisors	17.4	910
Telecommunications Line Installers and Repairers	17.3	240
Environmental Science and Protection Technicians, Including Health	17.3	130
Appraisers and Assessors of Real Estate	17.1	440
Mental Health Counselors	16.8	740
Financial Managers	16.8	2,580
Building Cleaning Workers, All Other	16.5	110
Nurse Anesthetists	16.0	290
Ophthalmic Medical Technicians	15.9	150
Optometrists	15.7	120
Community Health Workers	15.5	220
Mental Health and Substance Abuse Social Workers	15.4	470
Coaches and Scouts	15.4	720
Surgeons	15.2	200
Medical Secretaries	15.1	1,780
Anesthesiologists	15.1	90
Health Technologists and Technicians, All Other	14.9	190
Preschool Teachers, Except Special Education	14.9	1,040
Helpers--Production Workers	14.8	1,590

Source: DEED LMI Office Projections

(Table 2) are compared to the 50 occupations expected to add the most jobs (Table 3). Only 13 occupations appear on both Top 50 lists. The combined job growth of these occupations is 51,800 jobs or 28.5 percent of total projected job growth. A large share of the new jobs expected in this group of occupations will be personal care aide positions.

The occupations are:

- Financial Managers
- Production Workers Helpers
- Home Health Aides
- Market Research Analysts and Marketing Specialists
- Medical and Health Services Managers
- Medical Assistants
- Medical Secretaries
- Nurse Practitioners
- Personal Care Aides
- Personal Financial Advisors
- Preschool Teachers, Except Special Education
- Self-Enrichment Education Teachers
- Software Developers, Applications

Job opportunities tend to be better in occupations that are growing, but new openings created by employment growth are a tiny part of the future job opportunities across occupations. The chance of scoring a job in a particular occupation also depends on how many workers are leaving the occupation and on how many job seekers are looking to enter that occupation. Job openings created by workers leaving the labor force or transferring to a different occupation will far exceed openings generated by employment growth.

Over the 10 year projection period, openings generated by employment growth are projected to be around 181,600. Openings generated by workers exiting the labor force, primarily through retirement, are projected to be around 1,480,000. Job openings from workers transferring from one occupation to another will surpass exit openings with 1,950,300 occupational transfers anticipated over the decade. Only 5 percent of job openings over the next 10 years are expected to arise from employment growth.

Table 4 lists the 20 occupations expected to have the most openings over the decade. Even occupations that are anticipated to experience decline during the next 10 years will have thousands of exit and

transfer openings. For example, the number of workers employed as bookkeeping, accounting, and auditing clerks in Minnesota is projected to decline by 1,010 as technological change and automation reduce the demand for workers in this occupation.

Some of the 35,930 individuals working as bookkeeping, accounting, and auditing clerks in 2016 will still be working in that occupation in 2026 but many others will have retired or transferred to another occupation over the next 10 years thereby creating labor market exit and occupational transfer openings for bookkeepers, accounting, and auditing clerks. Over the 10 years 21,940 bookkeeping, accounting, and auditing clerks are expected to retire or leave the labor force for other reasons thereby creating openings in the occupation. Another 17,020 openings are expected to be generated by bookkeeping, accounting, and auditing clerks who take another job in different occupations. Even though the number of bookkeeping, accounting, and auditing clerks is expected to fall from 35,930 in 2016 to 34,920 in 2026, there will be a need for 37,950 workers to fill the openings in this occupation created by labor force exits and occupational transferring.

Looking at labor force exits and occupational separations on an annual average basis provides another way of understanding the job churning that occurs in Minnesota's job market. Each year roughly 2,200 workers leave their bookkeeping, accounting, and auditing clerk job by exiting the labor force while another 1,700 workers leave the occupation taking another job in a different occupation. That translates into about 11 percent of bookkeeping, accounting, and auditing clerks turning over each year.

The occupational turnover rate created from occupational separation openings (labor force exit and occupational transfer openings) for bookkeeping, accounting, and auditing clerks is about average among Minnesota's 810 occupations. Occupations that require extended years of education, like doctors and lawyers, have low occupational separation rates as few doctors or lawyers transfer out of their professions into some other occupation. The occupational turnover or separation rate for surgeons is 2.8 percent and 4.3 percent for lawyers.

Table 3. Occupations Adding the Most Jobs

	2016 - 2026 Percent Change	2016 - 2026 Numeric Change
Accountants and Auditors	9.4	2,830
Bus Drivers, School or Special Client	8.0	1,250
Business Operations Specialists, All Other	7.9	1,980
Carpenters	5.6	1,200
Childcare Workers	8.5	2,370
Combined Food Preparation and Serving Workers, Including Fast Food	12.0	7,980
Computer Systems Analysts	5.9	940
Construction Laborers	9.7	1,630
Cooks, Restaurant	7.2	1,830
Elementary School Teachers, Except Special Education	4.6	1,360
Financial Managers	16.8	2,580
General and Operations Managers	7.4	3,220
Hairdressers, Hairstylists, and Cosmetologists	6.9	1,090
Heavy and Tractor-Trailer Truck Drivers	6.4	2,460
Helpers--Production Workers	14.8	1,590
Home Health Aides	30.7	7,850
Industrial Engineers	10.8	940
Insurance Sales Agents	9.0	900
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	8.2	3,990
Laborers and Freight, Stock, and Material Movers, Hand	5.5	2,130
Landscaping and Groundskeeping Workers	8.9	1,700
Lawyers	9.2	1,160
Licensed Practical and Licensed Vocational Nurses	12.3	2,180
Light Truck or Delivery Services Drivers	5.6	920
Maids and Housekeeping Cleaners	8.0	1,540
Maintenance and Repair Workers, General	6.9	1,610
Management Analysts	11.1	1,770
Managers, All Other	6.7	1,080
Market Research Analysts and Marketing Specialists	20.1	2,840
Medical and Health Services Managers	18.5	1,470
Medical Assistants	25.3	2,480
Medical Secretaries	15.1	1,780
Nurse Practitioners	27.8	990
Nursing Assistants	5.8	1,890
Operating Engineers and Other Construction Equipment Operators	8.9	890
Personal Care Aides	33.6	22,980
Personal Financial Advisors	17.4	910
Plumbers, Pipefitters, and Steamfitters	13.1	1,250
Preschool Teachers, Except Special Education	14.9	1,040
Receptionists and Information Clerks	5.2	960
Registered Nurses	11.1	7,250
Sales Representatives, Services, All Other	8.0	1,630
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	5.8	1,960
Secondary School Teachers, Except Special and Career/Technical Education	4.7	1,010
Self-Enrichment Education Teachers	18.2	1,650
Social and Human Service Assistants	8.2	1,230
Software Developers, Applications	23.8	3,600
Stock Clerks and Order Fillers	3.4	1,150
Teacher Assistants	6.7	2,210
Waiters and Waitresses	2.5	1,270

Source: DEED LMI Office Projections

Occupations with high occupational separation rates tend to be jobs that require little training, are low paying, and usually considered entry level jobs. The jobs grouped together in the lifeguards, ski patrol, and other recreational protective service occupation have an occupational separation rate of 25 percent. That means that from one year to the next 25 percent of this occupation’s workforce moves on either exiting the labor force or taking another job in a new occupation. Other occupations with high numbers of occupational separation openings include: cashiers, waiters and waitresses, combined food preparation and serving workers, counter attendants at food places, amusement and recreation attendants, and ushers, lobby attendants, and ticket takers.

As shown at the top of Table 4 the 181,600 new jobs that are expected to be created over the next 10 years are only a small percent (5 percent) of the projected total job openings. The other 95 percent of job openings will be split between openings created by labor market exits (41 percent of all openings) and occupational transfers (54 percent). During each year between 2016 and 2026 roughly 4.7 percent of all jobs will need a replacement worker from labor market exits and another 6.3 percent of jobs will need a replacement worker from occupational transfers. When exploring career options using 2016-2026 employment projections, it is important to consider both employment growth generated openings and projected job openings created by labor force exits and occupational transfers.

by Dave Senf

Table 4. Occupations with the Most Job Openings

	2016 Employment	Job Openings from Employment Growth 2016 - 2026	Job Openings from Labor Market Exits 2016 - 2026	Job Openings from Occupational Transfers 2016 - 2026	Total Job Openings 2016 - 2026
Total Employment	3,097,300	181,600	1,480,000	1,950,300	3,611,900
Combined Food Preparation and Serving Workers, Including Fast Food	66,730	7,980	62,630	65,500	136,110
Personal Care Aides	68,410	22,980	63,770	48,040	134,790
Retail Salespersons	86,820	-850	54,700	68,560	122,410
Cashiers	64,170	-260	60,120	58,680	118,540
Waiters and Waitresses	50,540	1,270	37,880	58,040	97,190
Customer Service Representatives	57,600	400	29,550	43,360	73,310
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	48,830	3,990	33,080	31,970	69,040
Office Clerks, General	57,500	-1,370	33,340	32,480	64,450
Laborers and Freight, Stock, and Material Movers, Hand	38,660	2,130	19,680	33,960	55,770
Heavy and Tractor-Trailer Truck Drivers	38,400	2,460	16,800	24,890	44,150
Stock Clerks and Order Fillers	33,540	1,150	18,630	24,310	44,090
Childcare Workers	27,760	2,370	23,630	17,930	43,930
Registered Nurses	65,410	7,250	19,770	15,010	42,030
Home Health Aides	25,600	7,850	17,940	14,920	40,710
General and Operations Managers	43,540	3,220	9,360	26,930	39,510
Nursing Assistants	32,660	1,890	20,410	16,980	39,280
Cooks, Restaurant	25,610	1,830	15,540	21,220	38,600
Bookkeeping, Accounting, and Auditing Clerks	35,930	-1,010	21,940	17,020	37,950
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	33,950	1,960	11,530	23,400	36,880
Teacher Assistants	32,810	2,210	18,610	15,470	36,290

Source: DEED LMI Office Projections