

Minnesota Job Outlook to 2014



Total employment in Minnesota will expand by 370,000 jobs during the 10-year period from 2004 to 2014, reaching 3.3 million jobs by 2014, according to recently released Minnesota employment projections.¹ The projected increase is slightly more than the 352,000 jobs added during the previous 10-year period (1994-2004). The rate of job growth, however, is expected to be slightly slower during the next 10 years compared to the previous 10 years. Job growth averaged 1.3 percent each year between 1994 and 2004 but is expected to be slightly lower, 1.2 percent annually, between 2004 and 2014.

Minnesota's long-term employment projections (10-year timeframe) are based primarily on national projections developed by the Bureau of Labor Statistics (BLS).² The BLS projects GDP (Gross Domestic Product) growth will average 3.1 percent annually during the 2004-14 projection period, down from the 3.2 percent average annual increase achieved over the 1994-2004 period.

Minnesota, like all other states, customizes national projections to reflect the state's unique industrial and occupational mixes. Historical employment trends for 290 industries in Minnesota are compared to corresponding national industry employment trends using statistical models. The models are used in conjunction with BLS's projections of national industry employment to produce industry projections for Minnesota.

Projected industry employment is converted into occupational employment projections based on industry staffing patterns—distribution of industry employment across occupations. Staffing patterns for Minnesota industries are developed from estimates of occupational employment collected by the *Minnesota Salary Survey*, which is a product of the Occupational Employment Statistics (OES) program.³

The main goal of employment projections is to provide details on projected job growth and employment prospects for 780 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.

Changes in the demand for goods and services, productivity advances, and shifts in business practices combine to alter occupational employment and affect job prospects. The expected expansion of health care services during the next 10 years is a reliable example of how changes in the demand for goods and services fuel demand for particular occupations. As the baby boom generation enters its senior years, demand for health care services will steadily increase. Expanding health care service will in turn boost the number of workers in health care related jobs like registered nurses, pharmacists, dental assistants, and home health aides.

While most occupations will experience varying rates of employment growth over the next 10 years, 15 percent of occupations concentrated in the office and administrative support and production occupational groups will decline. **Occupations expected to see the most job decline over the next 10 years are:**

- Farmers
- Stock clerks
- File clerks
- Order clerks

1 Detailed 2004 - 2014 occupational and industry employment projections for Minnesota can be found at www.deed.state.mn.us/lmi/tools/projections.htm.

2 The BLS's main projection web site is www.bls.gov/emp/home.htm.

3 Information on the *Minnesota Salary Survey* is available at www.deed.state.mn.us/lmi/tools/oes.htm.

Employment projections attempt to incorporate all the demand, business practice, and technology trends. But trends can and do change unexpectedly. Offshoring—the practice of U.S. firms sending service-related work overseas—is one such trend that will affect job opportunities in a number of occupations in the future. Occupations that are most likely to be at risk for offshoring have been identified by the BLS. Projected job growth rates for occupations likely to be offshored, such as information technology occupations, have been scaled back from previous projection rounds.

Minnesota's total employment is projected to increase 12.8 percent over the 2004-14 period, just below the 13 percent projected increase for U.S. employment. During the previous 10-year period, Minnesota's employment expanded slightly more than the nation's, increasing 13.8 percent in Minnesota and 12.7 percent nationally.

The two largest major occupational groups in Minnesota—professional and related occupations and service occupations—will increase the fastest and add the most jobs in Minnesota from 2004 to 2014 (see Table 1). These two major occupational groups, which tend to have occupations at the opposite ends of the educational attainment and earnings spectrum, are projected to account for more than half of all employment growth over the next 10 years. Employment in management, business, and financial occupations is also projected to grow faster than overall employment.

All major occupational groups are projected to add jobs between 2004 and 2014 but job growth in the state's smallest occupational group, the farming, fishing, and forestry group, will be minimal. Production occupations constitute another occupational group that is expected to experience slow growth over the next 10 years. Production occupations are concentrated in Minnesota's manufacturing sector which is expected to increase employment by only 1 percent over the projection period. Office and administrative support occupations will increase half as fast as overall job growth but employment will still expand by nearly 27,000 jobs during the next 10 years since this occupational group is employed in almost every industrial corner in the state.

Sales and related occupations, construction and extraction occupations, and transportation and material moving occupations are all projected to grow by more than 10 percent but below the state's projected 12.8 percent total employment increase.

Almost 80 percent of projected job growth is predicted to occur across 377 occupations that are expected to increase faster than the projected 12.8 percent overall employment expansion. The remaining 20 percent of employment growth will occur across 278 occupations that are projected to increase but by less than 12.8 percent by 2014. Roughly 23,000 positions are expected to be lost across 116 occupations that are projected to decline in workers over the next 10 years. The occupations projected to decline accounted for 272,000 jobs in 2004.

Table 1: Minnesota Employment Outlook by Major Occupational Group

Major Occupational Group	2004 Estimated Employment	2014 Projected Employment	2004-2014 Percent Change	2004-2014 Numeric Change
Total	2,895,658	3,265,658	12.8	370,000
Professional and Related Occupations	576,133	685,091	18.9	108,958
Service Occupations	549,060	650,547	18.5	101,487
Management, Business, and Financial	337,172	386,597	14.7	49,425
Sales and Related Occupations	298,985	329,462	10.2	30,477
Office and Administrative Support	449,733	476,423	5.9	26,690
Transportation and Material Moving	182,646	200,840	10.0	18,194
Construction and Extraction	139,262	156,196	12.2	16,934
Installation, Maintenance, and Repair	104,791	115,125	9.9	10,334
Production Occupations	237,254	244,334	3.0	7,080
Farming, Fishing, and Forestry	20,622	21,043	2.0	421

The top 50 occupations, in terms of the number of workers, accounted for roughly 50 percent of all employment in Minnesota in 2004. Employment growth in these large occupations will generate roughly half of the new jobs. Three of the largest occupations, however, are expected to decline in size—farmers, stock clerks and order fillers, and secretaries

not including legal, medical, and executive secretaries. The 50 fastest-growing occupations (with employment of more than 500 workers in 2004) combined for roughly 10 percent of total employment in 2004. These fast-growing occupations are projected to account for about 25 percent of net new jobs created by 2014.

Projected employment growth can be viewed from two perspectives—percent change and numerical change. Some occupations, which started with a large number of workers in 2004, are projected to grow slower than overall employment growth but will add a large number of workers by 2014. Other occupations, which had relatively small numbers of workers in 2004, 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 20 fastest-growing occupations (Table 2) are compared to the 20 occupations expected to add the most jobs (Table 3). Only four occupations make both lists:

- Home health aides
- Social and human service assistants
- Personal and home care aides
- Computer software application engineers

Fast-growing occupations tend to be health care, education, or information technology occupations. Occupations adding the most jobs tend to be occupations that are spread across most industries, had a relatively large base of employees in 2004, and are projected to experience average employment growth over the next 10 years.

Job opportunities tend to be better in occupations that are growing but new openings created by employment growth are only part of the future job opportunity story. 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.

Table 2: Fastest Growing Occupations, 2004 - 2014

	Percent Change	Numeric Change
Physician Assistants	53.7	631
Network Systems and Data Communications Analysts	52.8	2,546
Home Health Aides	51.7	11,548
Computer Software Engineers, Applications	47.4	7,593
Biomedical Engineers	45.3	233
Medical Assistants	42.3	2,809
Personal and Home Care Aides	42.1	10,306
Medical Scientists, Except Epidemiologists	42.0	672
Athletic Trainers	41.0	100
Dental Hygienists	38.1	1,318
Database Administrators	37.7	1,082
Dental Assistants	37.6	1,935
Community and Social Service Specialists, All Other	36.4	1,595
Diagnostic Medical Sonographers	35.4	289
Computer Software Engineers, Systems Software	35.3	2,202
Network and Computer Systems Administrators	35.3	2,143
Social and Human Service Assistants	32.7	5,247
Medical and Clinical Laboratory Technicians	32.3	1,115
Medical Records and Health Information Technicians	31.9	1,170
Computer Systems Analysts	31.0	2,794

Table 3: Occupations Adding the Most Jobs, 2004 - 2014

	Percent Change	Numeric Change
Retail Salespersons	17.2	14,952
Registered Nurses	28.0	13,762
Combined Food Preparation and Serving Workers	25.4	13,217
Business Operations Specialists, All Other	27.9	12,084
Home Health Aides	51.7	11,548
Personal and Home Care Aides	42.1	10,306
Customer Service Representatives	21.2	8,302
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	17.4	7,624
Computer Software Engineers, Applications	47.4	7,593
Waiters and Waitresses	13.6	6,526
General and Operations Managers	16.4	5,576
Social and Human Service Assistants	32.7	5,247
Office Clerks, General	6.8	5,051
Accountants and Auditors	18.7	4,842
Truck Drivers, Heavy and Tractor-Trailer	13.5	4,612
Receptionists and Information Clerks	18.1	4,416
Nursing Aides, Orderlies, and Attendants	14.7	4,392
Sales Representatives, Wholesale and Manufacturing	11.2	3,505
Maids and Housekeeping Cleaners	13.2	3,455
Carpenters	11.4	3,403

An estimated 87,000 workers were employed in Minnesota's largest occupation, retail salespersons, in 2004. By 2014 the state is expected have 102,000 retail salespersons. The 15,000 new retail salesperson jobs expected over the next 10 years will represent only 15 percent of all retail salesperson jobs in 2014; the other 85 percent of employment in this occupation already exists.

Many of the 87,000 individuals working as retail salespersons in 2004, however, will not be working as retail salespersons in 2014. They will switch occupations, retire, or leave the labor force for other reasons. An estimated 32,000 net replacement openings for retail salespersons will develop over the next 10 years as current retail salespersons leave the occupation. For most occupations the number of job openings arising from the need to replace workers, net replacement openings, is projected to be higher than job openings from employment growth.

Even occupations that are expected to decline in numbers over the next 10 years will have replacement openings. There will be fewer file clerks employed in Minnesota in 2014 than in 2004, but some of the file clerks in 2014 will be new to the occupation, having been hired to replace retiring file clerks.

Because of the importance of replacement needs, estimates of net replacement openings for each occupation over the next 10 years are included in the 2004-2014 employment projections for Minnesota. Net replacement openings (entrants minus separations) are based on nationwide census data, which track the entrants and separations of an occupation by age cohorts. Net replacement openings understate the total number of job openings in an occupation, but it best represents job openings available to new labor force entrants.

Table 4: Occupations with the Most Net Replacement Openings, 2004 - 2014

	Net Replacement Openings	Job Openings from Employment Growth
Retail Salespersons	31,613	14,952
Cashiers	30,639	956
Waiters and Waitresses	24,647	6,526
Combined Food Preparation and Serving Workers	22,538	13,217
Office Clerks, General	16,489	5,051
Stock Clerks and Order Fillers	12,913	-2,424
Laborers and Freight, Stock, and Material Movers	11,608	2,130
Registered Nurses	10,278	13,762
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	8,298	7,624
Sales Representatives, Wholesale and Manufacturing	8,194	3,505
Team Assemblers	7,790	2,406
Child Care Workers	7,739	1,676
Business Operations Specialists, All Other	7,361	12,084
Bookkeeping, Accounting, and Auditing Clerks	7,213	2,110
Secondary School Teachers, Except Special and Vocational Education	6,803	1,325
General and Operations Managers	6,405	5,576
Bartenders	6,280	757
Receptionists and Information Clerks	5,997	4,416
First-Line Supervisors/Managers of Office and Administrative Support Workers	5,830	2,032
Customer Service Representatives	5,814	8,302

In addition to the 370,000 job openings projected to be created through employment growth over the next 10 years, 679,000 net replacement openings are projected. Occupations with a high number of net replacement openings tend to be occupations with large employment bases in 2004 and high turnover rates (see Table 4). About 70 percent of the occupations are projected to have more net replacement openings than openings from employment growth. Net replacement openings need to be included when exploring the future prospects of any occupation. The need to fill replacement openings will only increase over the next decade as the first wave of baby boomers begin to retire.

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