

Where is Everyone Going?

Commuting Patterns in the Twin Cities

OnTheMap: Yes, It's One Word

While you're stuck in traffic, have you ever wondered where everybody is going?

With the U.S. Census Bureau's OnTheMap application, you can study that very question. According to the U.S. Census Bureau, OnTheMap is an online mapping and reporting application which shows where workers are employed and where they live.¹ Beyond basic resident and worker counts, the tool also allows users to break the data down by age, earnings, race, ethnicity, educational attainment, and industry characteristics. As an interactive online tool, OnTheMap's data can be used effectively by



local government bodies, economic development agencies, workforce development boards, and others interested in city emergency planning, transportation planning, site location, and economic development.² For just a teaser, OnTheMap's data can be used to answer the following questions³:

- Where do young workers live who are employed in a specific geographic area?
- Where are the workplace destinations for workers living in a particular community or neighborhood?
- How do specific employment areas compare in terms of worker origin

Features:

Minnesota Job Outlook to 2024

G is for Guard

H is for Home Health Aide

In this issue:

- 1 Regional Spotlight
- 5 Fun With Statistics
- 6 Local Area Unemployment Statistics
- 8 Industrial Analysis
- 10 Regional Analysis
- 11 Current Employment Statistics
- 14 Economic Indicators
- 16 What's Going On?

¹OnTheMap Help and Documentation. United States Census Bureau, Web. 6 June 2016. <http://lehdmap3.did.census.gov/applications/help/onthemap.html#!what_is_onthemap> .

²“OnTheMap: Local Employment Dynamics.” OnTheMap Help and Documentation. United States Census Bureau, Web. 6 June 2016. <<http://lehdmap3.did.census.gov/doc/help/onthemap/OnTheMapOnePager.pdf>> .

³“Getting Started With OnTheMap.” OnTheMap Help and Documentation. United States Census Bureau, Web. 6 June 2016. <http://lehdmap3.did.census.gov/applications/help/onthemap.html#!getting_started> .

patterns, worker ages, monthly earnings, and industry-sector employment? How are these areas changing over time and among different demographics?

- What percentage of high-wage workers live and work within a city versus those who commute to a nearby city?
- How many potential customers or employees live or work near a potential site location?

In the following a couple of these questions will be analyzed for the Twin Cities seven-county metro area.

Commuting Patterns in the Twin Cities

Overall, the Twin Cities metro area is a net importer for labor. In other words, the region has more available jobs than workers to fill them. As a result, more than 242,000 workers commuted into the Twin Cities from outside the seven county region in 2014. These commuters represented about one-in-seven workers employed in the Twin Cities (see Table 1). Of these commuters,

about half came in from Chisago, Isanti, Rice, Saint Croix, Sherburne, and Wright counties. It should also be noted that while total employment in the metro increased by 5.8 percent between 2004 and 2014, those workers commuting into the metro from outside increased by 12.6 percent during the same period. This trend supports the fact that the Twin Cities metro, which accounts for approximately 60 percent of the state’s total employment, continues to be a large draw for those seeking job opportunities.

While the Twin Cities metro draws in a significant number of commuters for work, the majority of workers in the area live in the region’s seven counties. Of these 1.4 million workers, nearly 60 percent live in Hennepin and Ramsey counties, with over 40 percent living in Hennepin County alone. Another quarter of these workers live in Dakota and Anoka counties, about 9 percent live in Washington County, and the remaining 8 percent live in Scott and Carver counties.

Beyond metro-wide statistics,

Table 1 also showcases labor sheds at the county level. Note that with strong commuting ties between the seven metro counties, their individual labor shed statistics should not be compared to the metro-wide statistics. For example, of the approximately 330,000 workers employed in Ramsey County, about two-thirds live outside its borders. As such, Ramsey County has the highest percentage of workers commuting in from outside its borders of any metro county. Of those workers, however, nearly 80 percent travel from another county in the metro area. At the other end of the spectrum, Hennepin County has the lowest percentage of its total workers commuting in from outside its borders. Even in this instance, 73 percent of those commuting into Hennepin County come from another metro county. Those counties with more workers coming in from outside the metro area include Anoka and Washington counties. Anoka County draws in a significant number of workers from Chisago, Isanti, Sherburne, and Wright counties, while Washington

Table 1: Inflow Job Counts by County, 2014

Geography	Employed in Selection Area	Employed in Selection Area but Living Outside		Employed and Living in Selection Area
		Total	Commuting in from Another Metro County	
Anoka County	123,779	68,106 (55.0%)	43,291 (63.6%)	55,673 (45.0%)
Carver County	34,787	20,791 (59.8%)	14,161 (68.1%)	13,996 (40.2%)
Dakota County	172,768	93,292 (54.0%)	69,267 (74.2%)	79,476 (46.0%)
Hennepin County	888,359	443,851 (50.0%)	323,281 (72.8%)	444,508 (50.0%)
Ramsey County	330,627	218,725 (66.2%)	174,130 (79.6%)	111,902 (33.8%)
Scott County	40,369	22,434 (55.6%)	16,064 (71.6%)	17,935 (44.4%)
Washington County	72,124	41,679 (57.8%)	26,519 (63.6%)	30,445 (42.2%)
Twin Cities Metro Area	1,662,813	242,165 (14.6%)	-	1,420,648 (85.4%)

Source: U.S. Census Bureau, OnTheMap program

County draws in workers from western Wisconsin.

Where Table 1 showcases those workers employed in the Twin Cities, Table 2 displays information on those workers living in the Twin Cities. From this data users can analyze where those living in particular geographies are commuting for work. As of 2014 there were 1.5 million workers living in the Twin Cities. Of these workers the vast majority (93.6 percent) were employed in the metro region.

Zooming in, users can study how well each metro county retains those workers living within their respective borders. Hennepin County leads the pack by a wide margin. As of 2014 nearly three-quarters of those workers residing in Hennepin County also worked in Hennepin County. Since the county has 53 percent of the metro region's total jobs, this should come as no surprise.⁴ From OnTheMap also note that 65 percent of workers living in Hennepin County had a commute distance of less than 10



miles. Only about 6 percent had a commute distance of more than 25 miles. Top destinations for those workers living in Hennepin County included Bloomington, Minneapolis, Minnetonka, Plymouth, and St. Paul.

As mentioned earlier, Ramsey County has a significant number of workers commuting in from surrounding counties. While these commuters stream in, those workers living in Ramsey County are streaming out. More

specifically, about 56 percent of those workers living in Ramsey County commute to surrounding areas, namely Anoka, Dakota, Hennepin, and Washington counties. Workers living in Hennepin and Ramsey County have shorter commutes than the rest of the metro (see Table 2).

Moving south, Dakota County retains just over 36 percent of those workers who reside within its borders. No other county in the metro but Hennepin and Ramsey

Table 2: Outflow Jobs Counts by County, 2014

Geography	Living in Selection Area	Living in Selection Area but Employed Outside	Living and Employed in Selection Area	Workers Commuting 25 Miles or Greater
Anoka County	186,550	130,877 (70.2%)	55,673 (29.8%)	12.7%
Carver County	51,360	37,364 (72.7%)	13,996 (27.3%)	18.1%
Dakota County	218,831	139,355 (63.7%)	79,476 (36.3%)	10.0%
Hennepin County	602,458	157,950 (26.2%)	444,508 (73.8%)	5.6%
Ramsey County	253,556	141,654 (55.9%)	111,902 (44.1%)	5.7%
Scott County	73,414	55,479 (75.6%)	17,935 (24.4%)	15.0%
Washington County	131,826	101,381 (76.9%)	30,445 (23.1%)	13.4%
Twin Cities Metro Area	1,517,995	97,347 (6.4%)	1,420,648 (93.6%)	8.7%

Source: U.S. Census Bureau, OnTheMap Program

⁴ Quarterly Census of Employment and Wages. Minnesota Department of Employment and Economic Development, Web. 7 June 2016. < mn.gov/deed/qcew > .

retains more than 30 percent of its respective resident workforce. With the major cities of Minneapolis and St. Paul drawing in workers from Anoka, Carver, Scott, and Washington counties, workers living in each of these counties contend with longer commutes. Nearly one in five workers living in Carver County, for example, has a commute of 25 miles or greater.

Driving the Data Further

Beyond simple commuting counts, OnTheMap’s data allow users to dig into the characteristics of those living and working in different geographies. For example, both Anoka County and Carver County have a significant share of people employed in Manufacturing. Meanwhile, Hennepin County has a significant share of people employed in Professional, Scientific, and Technical Services, while those employed in Ramsey County are concentrated in Educational Services and Management of Companies (see Table 3). As mentioned previously, OnTheMap’s

commuting data can also be broken down by age, earnings, race, ethnicity, and educational attainment.

Where do the Data Reside?

OnTheMap employment data come from several sources, including Unemployment Insurance (UI) Wage Records reported by employers, Quarterly Census of Employment and Wages (QCEW) data collected by each state, and the U.S. Census Bureau. Discover the OnTheMap application and tutorials for using the data at the following sites:

- U.S. Census Bureau’s Longitudinal Employer-Household Dynamics: <http://lehd.ces.census.gov/>
- OnTheMap application: <http://onthemap.ces.census.gov/>
- OnTheMap tutorial: http://lehd.ces.census.gov/applications/help/onthemap.html#!what_is_onthemap

And on a parting note, don’t use OnTheMap while driving...

Table 3: Top Industries by County, 2014, Percentage of Incoming Workers within each Industry

Geography	Industry Employing the Most Incoming Workers	Industry Employing the Second-Most Incoming Workers	Industry Employing the Third-Most Incoming Workers
Anoka County	Manufacturing (19.5%)	Retail Trade (15.1%)	Health Care and Social Assistance (12.7%)
Carver County	Manufacturing (28.6%)	Health Care and Social Assistance (12.6%)	Educational Services (10.9%)
Dakota County	Health Care and Social Assistance (12.0%)	Manufacturing (11.8%)	Retail Trade (10.5%)
Hennepin County	Health Care and Social Assistance (15.1%)	Professional, Scientific, and Technical Services (9.1%)	Retail Trade (8.2%)
Ramsey County	Health Care and Social Assistance (16.8%)	Educational Services (11.0%)	Management of Companies (8.7%)
Scott County	Accommodation and Food Services (16.8%)	Manufacturing (13.1%)	Retail Trade (10.1%)
Washington County	Health Care and Social Assistance (15.2%)	Retail Trade (14.1%)	Educational Services (11.2%)

Source: U.S. Census Bureau, OnTheMap Program

by Tim O’Neill
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New Hires, New Wages

Wage growth typically follows classic supply and demand curves, an increasing labor supply with a decreased demand for labor will decrease wages. Or, a more applicable example for our current and future reality is a constant labor supply with increasing demand, creating a situation that applies upward pressure on wages. Longitudinal Employer-Household Dynamics data from the U.S. Census Bureau uncover trends in average wages across different industries in Minnesota for all employees, and new hires provide an in-depth look at a changing labor market.

Year-to-year wage data are most reliably produced by industry average wages. A limitation of using industry wage data instead of occupational wage data is how the occupational density within an industry can change over time, possibly leading to higher or lower paying occupations, potentially shifting average wages.

Example: if the manufacturing industry increasingly automates welding and instead of hiring a large number of welders who have a typical wage of \$19.71, they increase the number of programmers in their ranks with a typical wage of \$26.04, average wages will increase, even though occupational wages within the industry might not have changed.

Twenty years ago the average annual wage of a newly hired worker in Minnesota was \$17,934 or 58.8% of the average wage for earned by all employees. By 2014 that ratio increased

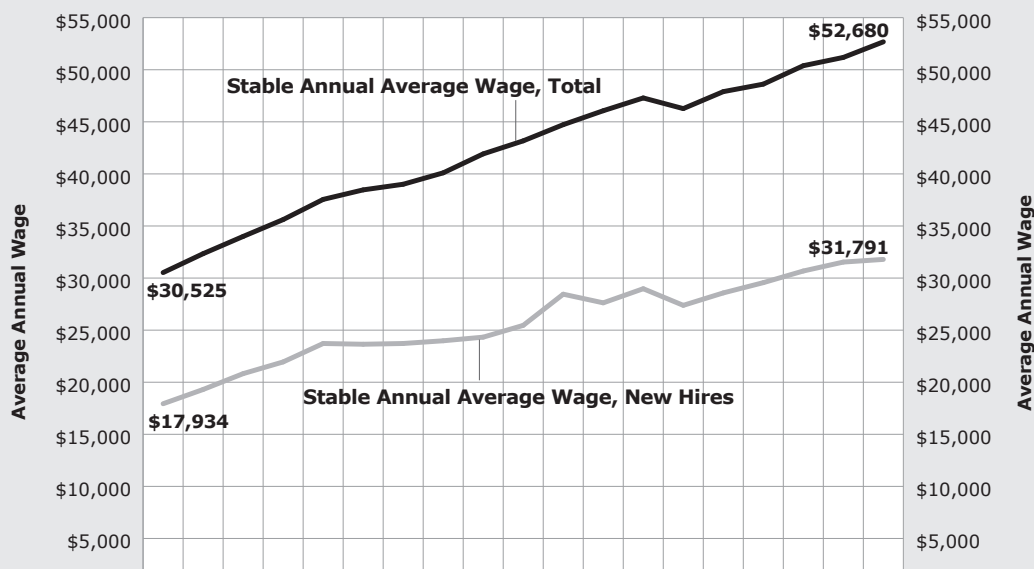
to 60.3% from an average annual wage of \$31,791. Over the course of that year the average wages earned by new hires is \$20,889 less than the average wage for all workers. New hires in Agriculture, Fishing, and Forestry, Finance and Insurance, Management of Companies, Mining, Retail Trade, and Utilities earn a lower ratio of average annual wages in 2014 compared to 1996.

The largest difference in wages for new hires is found in the Management of Companies sector where new hires earn, on average, \$44,232 less annually than the average wage for the industry. High average wages play a key role in the large gap in Management of Companies. The largest difference by percent is found rather in Educational Services, where new hires make 58.3% of the average wage. Workers can look to the Real Estate, Rental, and Leasing sector for the fastest growth in new hire wages, increasing 170% from 1996-2014.

The smallest percentage wage gap for new hires is in Construction where they earn \$46,083, 78% of the average Construction wage. Lower average wages in the Accommodation and Food Services industry provide the smallest annual difference of just \$5,016 less earned by new hires compared to the average for the industry. The slowest wage growth for new hires is found in the Retail Trade industry, increasing just 49.9% from 1996-2014, exactly one point less than inflation.

by Luke Greiner

Average Annual Wage Trends for All Industry Sectors



Source: U.S. Census Bureau, Quarterly Workforce Indicators

Industrial Analysis

Overview

Minnesota lost 1,900 jobs (0.1 percent) in May on a seasonally adjusted basis. The small loss came on the heels of the significant gains the state saw in April. While those gains were revised downward after the initial estimates, the state still added 14,300 on the month, making the loss of 1,900 in May look like a minor course correction. The monthly losses came entirely from goods producers (down 4,500 or 1.0 percent with losses in all of the component supersectors), as service providers added 2,600 jobs (0.1 percent). Over the year, employment remained decidedly up in the state, with 27,987 (1.0 percent) more jobs in May of 2016 than in May of 2015. Private employers accounted for 26,176 of those new jobs (up 1.1 percent for the year), while Government employers added 1,811 jobs (0.4 percent). Both Goods-Producing and Service-Providing industry groups added employment, up 2,492 (0.6 percent) and 25,495 (1.0 percent) respectively.

Mining and Logging

Employment in the Mining and Logging supersector was down in May, off by 300 jobs (4.9 percent) on a seasonally adjusted basis. The decline followed two straight months of growth for the supersector, the only such streak since March and April of 2015, and gave back all of the jobs added over those two months. Annually, the supersector lost 1,585 jobs (21.8 percent) from May of 2015.

Construction

Employment in Construction was down by 1,900 (1.6 percent) in May, which marks only the second time since October that the supersector lost jobs. Annually,

Construction employers added 4,295 jobs (3.6 percent). Specialty Trade Contractors remained the over-the-year driver of growth, adding 2,341 jobs (3.1 percent). However, Heavy and Civil Engineering also saw significant growth, up by 1,716 (9 percent), after having been flat over the year in April estimates.

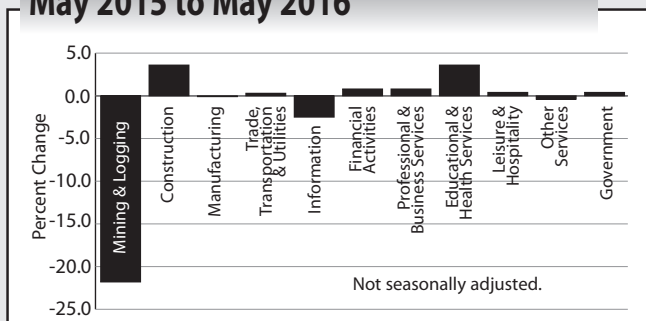
Manufacturing

Manufacturers lost 2,300 jobs (0.7 percent) in May. Durable Goods Manufacturers were responsible for the entirety of the declines, off by 2,800 (1.4 percent), while Non-Durable Goods Manufacturers added 500 jobs (0.4 percent). Over the year, Manufacturers lost 218 jobs (0.1 percent) after being up by 1,714 jobs in April. The May decline was also caused by a dip in Durable Goods Manufacturing employment (down 1,555, 0.8 percent). Transportation Equipment had the biggest losses among the component sectors, off by 635 (5.4 percent) on the year. On the flip side, Non-Durable Goods Manufacturers added 1,337 jobs (1.2 percent) thanks to growth of 2,385 (5.3 percent) in Food Manufacturing.

Trade, Transportation, and Utilities

Employment in Trade, Transportation, and Utilities was down by 800 (0.2 percent) in May. Wholesale Trade had a decent month, adding 1,400 jobs (1.1 percent), but those gains were erased by a loss of 2,100 jobs (0.7 percent) in Retail Trade. Transportation, Warehousing, and Utilities offered no help, losing 100 jobs (0.1 percent). Annually, the supersector added 1,558 jobs (0.3 percent). The component sectors had opposite roles over the year, with Retail Trade adding 2,923 jobs (1.0 percent) and Wholesale Trade losing 1,535 jobs (1.2 percent). Transportation, Warehousing, and Utilities added 170 jobs (0.2 percent) to the supersector's annual gains.

MN Employment Growth May 2015 to May 2016



Source: Department of Employment and Economic Development, Current Employment Statistics, 2016.

Information

The Information supersector added 200 jobs (0.4 percent) in May. Over the year, employment in the Information supersector lost 1,303 jobs (2.5 percent). Publishing Industries (except Internet) lost 471 jobs (2.4 percent), while Telecommunications lost 291 (2.3 percent). The rest of the losses came from unpublished component sectors, which include Motion Picture and Sound Recording Industries, Broadcasting (except Internet), and Data Processing, Hosting, and Related Services.

*Over-the-year data are not seasonally adjusted because of small changes in seasonal adjustment factors from year to year. Also, there is no seasonality in over-the-year changes.

Industrial Analysis

Financial Activities

The Financial Activities supersector lost 1,300 jobs (0.7 percent) in May. Real Estate and Rental and Leasing lost 900 jobs (2.2 percent), and Finance and Insurance lost 400 (0.3 percent). Over the year, the supersector added 1,510 jobs (0.8 percent). Real Estate and Rental and Leasing added 558 jobs (1.4 percent), while Finance and Insurance added 952 (0.7 percent). Insurance Carriers by themselves added 1,628 jobs (3.7 percent) although that component sector only accounts for roughly one-quarter of the jobs in the supersector.

Professional and Business Services

Professional and Business Services lost 500 jobs (0.1 percent) in May. The small decline came on the heels of gains of 6,300 and 1,600 jobs, respectively, in the previous two months. Professional, Scientific, and Technical Services lost 500 jobs (0.3 percent), while Administrative and Support and Waste Management and Remediation Services lost 100 jobs (0.1 percent), and Management of Companies and Enterprises added 100 (0.1 percent). Annually, employment in the Professional and Business Services supersector grew by 2,906 jobs (0.8 percent). Professional, Scientific, and Technical Services added 4,196 jobs (2.9 percent), while Management of Companies and Enterprises lost 841 (1.1 percent). Administrative and Support and Waste Management and Remediation Services lost 449 jobs (0.3 percent), largely thanks to a notable over-the-year loss of 3,539 jobs (5.8 percent) in Employment Services.

Educational and Health Services

May employment in Educational and Health Services was up by 3,900 jobs (0.7 percent). Educational Services was the primary driver of that growth, adding 3,300 jobs (4.8 percent), although Health Care and Social Assistance also saw some expansion on the month, adding 600 jobs (0.1 percent). Educational and Health Services maintained, and even slightly expanded on, its over-the-year growth, adding 18,533 jobs (3.6 percent) from May 2015 estimates. Educational Services added 6,408 jobs (9.4 percent) on the year. Health Care and Social Assistance added 12,125 jobs (2.7 percent) with most of that growth (10,479 jobs) coming in Ambulatory Health Care Services, which grew by 7.3 percent. Growth in the other component sectors was more modest, with Hospitals adding 1,425 jobs (1.4 percent), Nursing and Residential Care Facilities adding 365 jobs (0.3 percent), and Social Assistance losing employment, down 144 jobs (0.2 percent).

Leisure and Hospitality

Leisure and Hospitality lost 1,000 jobs (0.4 percent) in May, with all of that decline coming from the loss of 1,300 jobs (0.6 percent) in Accommodation and Food Services. Annually, the supersector remains in the black, up 986 jobs (0.4 percent) since 2015. Arts, Entertainment, and Recreation lost 479 jobs (1.1 percent), while Accommodation and Food Services added 1,465 (0.7 percent).

Other Services

Employment in Other Services was down by 600 (0.5 percent) in May. The supersector's over-the-year growth dipped into the red for the first time since 2014, losing 506 jobs (0.4 percent). The annual decline is in large part from a loss of 673 jobs in Religious, Grantmaking, Civic, Professional, and Similar Organizations (down 1.1 percent). Repair and Maintenance added 277 jobs (1.2 percent) while Personal and Laundry Services lost 110 (0.4 percent).

Government

Government employment was up by 2,700 (0.6 percent) in May, with all three levels adding employment. State Government was the biggest contributor, adding 1,300 jobs (1.3 percent). Annually, Government employers added 1,811 jobs (0.4 percent), its strong month pushing the supersector back into the black after dipping into negative over-the-year growth briefly in April. Local Government was the largest contributor to the growth, adding 1,502 jobs (0.5 percent), all of it coming in Educational Services (up 1,657, 1.1 percent).

by Nick Dobbins

Seasonally Adjusted Nonfarm Employment

In 1,000's

Industry	May 2016	April 2016	March 2016
Total Nonagricultural	2,888.6	2,890.5	2,876.2
Goods-Producing	442.7	447.2	444.1
Mining and Logging	5.8	6.1	6.0
Construction	120.6	122.5	121.2
Manufacturing	316.3	318.6	316.9
Service-Providing	2,445.9	2,443.3	2,432.1
Trade, Transportation, and Utilities	527.8	528.6	526.4
Information	50.0	49.8	50.1
Financial Activities	183.1	184.4	184.2
Professional and Business Services	361.4	361.9	355.6
Educational and Health Services	526.9	523.0	522.0
Leisure and Hospitality	260.5	261.5	260.0
Other Services	114.1	114.7	114.3
Government	422.1	419.4	419.5

Source: Department of Employment and Economic Development
Current Employment Statistics, 2016.

Regional Analysis

Minneapolis-St. Paul-Bloomington Metropolitan Statistical Area (MSA)

Employment in the Minneapolis-St. Paul MSA increased by 23,721 jobs (1.2 percent) in May. While the monthly growth is notable, changes of this size are fairly common for the month, as most of the seasonal expansion of employment tends to occur in April and May. In fact, the 1.2 percent growth rate on the month matches the employment change that occurred between April and May of 2015. As expected, the growth this year was driven by two highly seasonal supersectors, Leisure and Hospitality (up 7,546 jobs or 4.2 percent) and Mining, Logging, and Construction (up 5,762 or 7.8 percent). Professional and Business Services also showed notable growth for the month, adding 4,207 jobs (1.4 percent), thanks to the addition of 4,945 jobs (4.7 percent) in Administrative and Support and Waste Management and Remediation Services. Annually, employment in the metro area was up by 28,352 jobs or 1.5 percent. Unlike the over-the-month gain, this growth was spread across nearly every supersector. The only group to lose jobs on the year was the long-suffering Information supersector, which was off by 142 jobs or 0.4 percent. Educational and Health Services remained the biggest annual growth supersector, adding 10,419 jobs (3.3 percent), with both component sectors contributing to the expansion. Professional and Business Services remained strong on the year as well (up 4,325 or 1.4 percent) although Employment Services, a component industry group which some consider a bellwether for the market, was down by 3,095 jobs (6.1 percent) on the year.

Duluth-Superior MSA

The Duluth-Superior MSA added 1,944 jobs (1.5 percent) in May. As would be expected in the spring, the gains were led by an increase of 1,133 jobs (8.7 percent) in Leisure and Hospitality and 560 jobs (7 percent) in Mining,

Logging, and Construction. Government employers saw the sharpest declines in May, shedding 203 jobs (0.8 percent) from a loss of 362 jobs (4.7 percent) in State Government employment. Over the year, Duluth lost 1,740 jobs (1.3 percent) and is one of only two MSAs in the state to have lost jobs on the year, the other being Grand Forks – East Grand Forks. The loss was driven almost entirely by goods producers, as Manufacturing lost 713 jobs (9.5 percent) and Mining, Logging, and Construction lost 693 (7.5 percent). Professional and Business Services, Government, and Leisure and Hospitality also lost jobs on the year. Educational and Health Services had the largest numerical gains in the region, adding 426 jobs (1.4 percent), although this was well behind the annual statewide growth in the supersector. The largest proportional annual growth came in the Information supersector, which added 37 jobs, a 2.6 percent change.

Rochester MSA

Employment in the Rochester MSA was up by 1,025 jobs (0.9 percent) in May. The gains were widespread but largely driven by seasonal growth in Mining, Logging, and Construction (up 417, 9.8 percent) and Leisure and Hospitality (367 jobs, 3.8 percent). Trade, Transportation, and Utilities also had a strong month, adding 235 jobs (1.3 percent) on the back of Retail Trade, which added 232 jobs or 1.9 percent. The steepest drop in both proportional and absolute terms was in the Manufacturing supersector, which lost 151 jobs or 1.4 percent. Annually, Rochester added 1,733 jobs (1.5 percent). By itself, Educational and Health Services added 1,902 jobs (4.2 percent), the most growth of any supersector in a region known for its health services industry. At the other end of the spectrum, Leisure and Hospitality had the most lost jobs on the year, with employment off by 494 (4.7 percent).

St. Cloud MSA

The St. Cloud MSA grew by 704 jobs (0.6 percent) in May. The only supersectors to lose employment on the month were Manufacturing (down 279 or 1.9 percent), Professional and Business Services (down 38 or 0.4 percent), and Government (down 285, 1.8 percent). The most actual and proportional growth came in Mining, Logging, and Construction, which added 655 jobs or 10.3 percent. Over the year the area added 1,983 jobs (1.8 percent). Mining, Logging, and Construction was up by 645 jobs (10.1 percent), which was the largest proportional gain for a supersector, and Educational and Health Services added 1,229 jobs (5.8 percent), the largest numerical gain. The steepest drop came in Leisure and Hospitality, which lost 472 jobs or 5.3 percent.

Mankato-North Mankato MSA

Employment in the Mankato-North Mankato MSA was down in May as the area shed 193 jobs (0.3 percent) from April estimates. Service Providing industries lost 243 jobs (0.5 percent) while Goods Producers added just 50 (0.5 percent). Private Sector employment dipped by 78 (0.2 percent) in the area, and Government employers shed 115 jobs (1.2 percent). Annually, the MSA added 662 jobs (1.2 percent). Although Goods Producers lost 362 jobs (3.6 percent) and Government employers lost 19 (0.2 percent), Private Service Providers added 1,043 jobs (2.9 percent) which more than covered the losses.

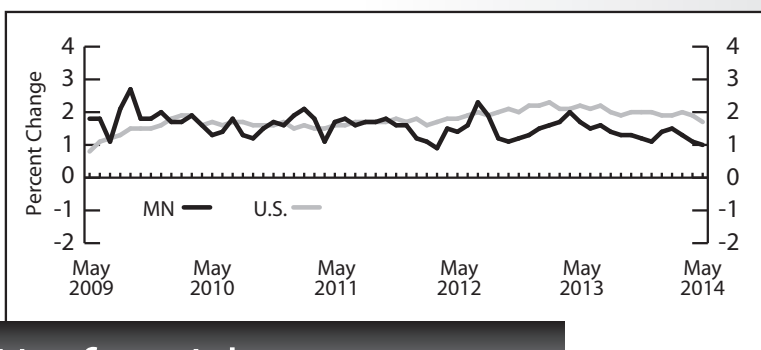
Fargo-Moorhead MSA

Employment in the Fargo-Moorhead MSA was up by 1,141 jobs (0.8 percent) in May. Mining, Logging, and Construction added 1,008 jobs (11.2 percent), and Leisure and Hospitality added 533 (3.8 percent). Professional and Business Services was the big loser on the month, shedding 380 jobs (2.3 percent). Annually, the Fargo-Moorhead area added 1,850 jobs (1.3 percent). Educational and Health Services was the big mover, as the supersector added 818 jobs or 3.7 percent.

Grand Forks-East Grand Forks MSA

Employment in the Grand Forks-East Grand Forks MSA was up by 573 (1 percent) in May. Mining, Logging, and Construction added 451 jobs (14.4 percent). However, the other usual seasonal grower, Leisure and Hospitality, actually shrank on the month, losing 14 jobs (0.2 percent). Annually, the area lost 146 jobs (0.3 percent), making it one of only two MSAs to see negative over-the-year growth. Notable losses came in Government employment (down 214 or 1.5 percent) and Leisure and Hospitality (down 193, 3.1 percent).

Source: Department of Employment and Economic Development, Current Employment Statistics, 2016; Bureau of Labor Statistics, U.S. Department of Labor, Current Employment Statistics, 2016.



Total Nonfarm Jobs U.S. and MN over-the-year percent change

by Nick Dobbins

Minnesota Economic Indicators

Highlights

The **Minnesota Index** downshifted slightly in May, advancing 0.2 percent after increasing 0.3 percent in April. The only component of the index to increase was real wage and salary disbursements. The unemployment rate was unchanged while wage and salary employment and average weekly manufacturing hours slipped slightly. The U.S. Index also increased by 0.2 percent in May.

The U.S. Index was up 3.0 percent from a year ago while Minnesota's index was up 2.4 percent over the same period. Economic growth in the state, as gauged by the Minnesota Index, has been slower than U.S. growth since the start of the year. Real GDP growth for Minnesota and the U.S., as reported by the Bureau of Economic Analysis (BEA), was 2.4 percent in 2015. Minnesota's annual average increase in GDP since 2011 is 2.2 percent compared to 1.8 percent nationally.

Adjusted **Wage and Salary Employment**, after surging in April, dropped by 1,900 positions in May. Private sector payroll numbers jumped by 14,400 in April but declined by 4,600 in May. Job loss in the private sector was partially offset by a gain of 2,700 public sector jobs with most of the hiring split between state and local government. Job losses were heavy in Manufacturing, Construction, Financial Activities, and Leisure and Hospitality. The only significant private sector hiring was in Educational and Health Services where 3,900 jobs were added.

Minnesota's unadjusted over-the-year job growth slipped to 1.0 percent in May, the lowest over-the-year gain since March 2014. The U.S. over-the-year job growth tailed off to 1.7 percent in May, the lowest over-the-year gain since February 2014. The pace of job growth has slowed in Minnesota and nationally during first half of the 2016. Over-the-year job growth through May averaged 1.7 percent last year in Minnesota compared to this year's 1.3 percent average.

Online Help-Wanted Ads dipped for the fourth consecutive month in May, sliding to 133,000, the lowest level since last September. The online job advertising decline was 4.0 percent in Minnesota and 5.5 percent nationally in May. The recent downward trend in online help-wanted ads may, however, be partially caused by Craigslist's increasing the price of job advertising which may be reducing job advertising.

Minnesota's **Purchasing Managers' Index (PMI)** continues to send mixed signals. Minnesota manufacturers added 1,700 jobs in April when the PMI ticked in at 49.8. In May the index jumped to 54.3, its highest level in 10 months, yet manufacturing employment slipped by 2,300 jobs. Minnesota's reading topped both the nine-state Mid-America Business Conditions Index (52.1) and the U.S. ISM (51.3). Manufacturing employment in the state has been flat during the first half of the year after increasing by 1.5 percent last year.

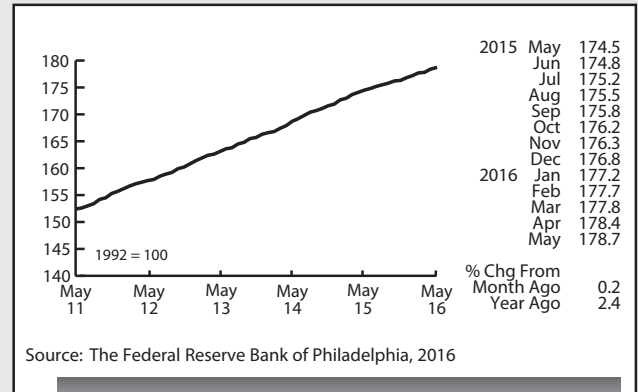
Adjusted **Manufacturing Hours** slipped for the second straight month in May, declining to 40.6. That is the same factory workweek averaged during 2015 but down significantly from the record 41.7 hour average in 2014. Average weekly **Manufacturing Earnings** stumbled for the second month in a row, tailing off to \$813.01. Real factory

paychecks are 2.8 percent lower than a year ago.

Adjusted **Residential Building Permits** zigzagged downwards to 1,597 in May. Permit numbers through the first five months this year are roughly the same as last year. More single-home permits are being issued, however, as apartment building activity slows after surging over the last three years. Residential building permits topped out around 40,000 in 2003 and then plunge to 8,000 in 2011. Homebuilders have gained ground over the last few years, but the home building recovery has been slow with 20,000 building permits issued in 2015. That permit level is still below the 25,000 annual average recorded over the last 35 years.

Adjusted **Initial Claims for Unemployment Benefits (UB)** rose for the second straight month but remained well below historical averages. May's 17,847 initial claims is 0.6 percent of total wage and salary employment. The ratio of initial claims to employment has been lower only 4 percent of the time since 1970. Initial claims have been declining since 2010 as the state's job market rebounded from the Great Recession. Claims declined by 4 percent in 2015 and are down 3 percent through the first five months of 2016 compared to last year. The low rate of layoffs associated with the ongoing low level of initial claims suggests that Minnesota job growth will remain positive but slowed by the tightening labor market.

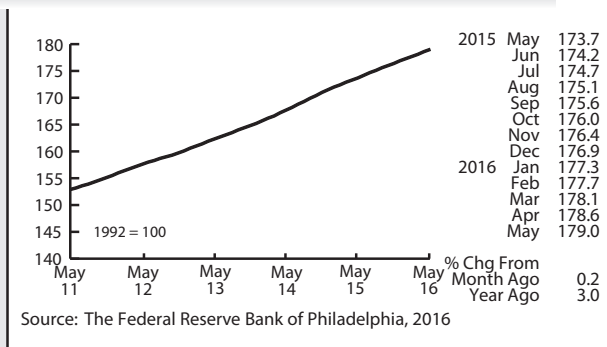
by Dave Senf



Source: The Federal Reserve Bank of Philadelphia, 2016

Minnesota Index

United States Index

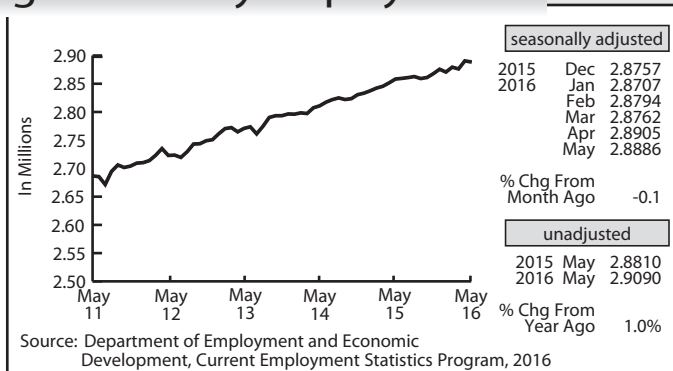


Source: The Federal Reserve Bank of Philadelphia, 2016

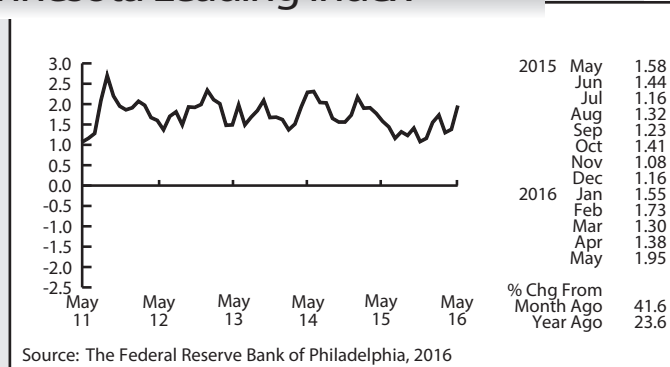
Note: All data except for Minnesota's PMI have been seasonally adjusted. See the feature article in the Minnesota Employment Review, May 2010, for more information on the Minnesota Index.

Minnesota Economic Indicators

Wage and Salary Employment



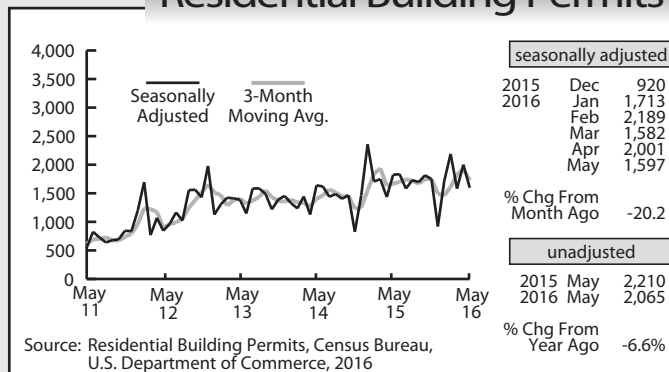
Minnesota Leading Index



Purchasing Managers' Index



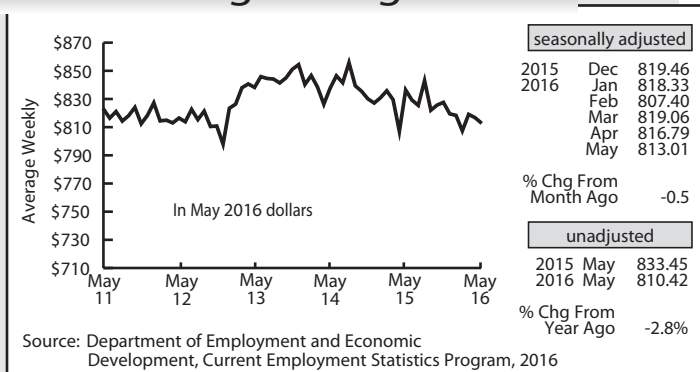
Residential Building Permits



Average Weekly Manufacturing Hours



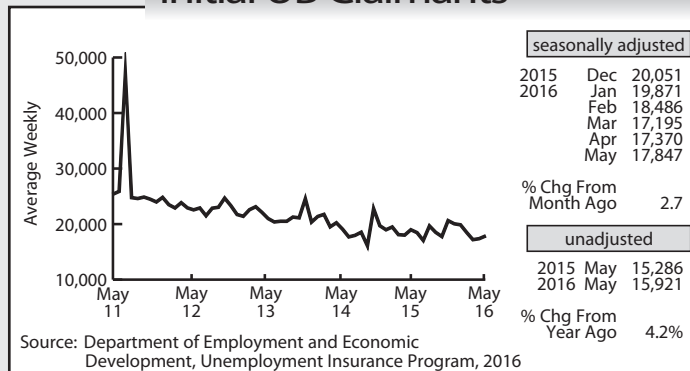
Manufacturing Earnings



Online Help-Wanted Advertising



Initial UB Claimants



Review

Minnesota Employment



DEED

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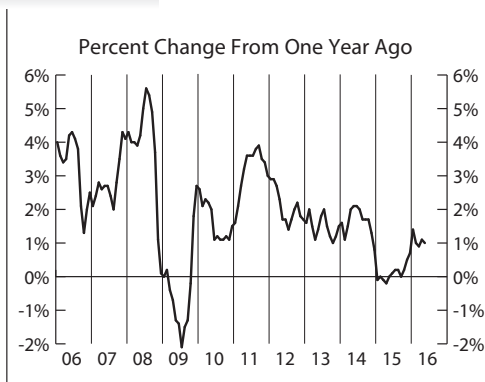
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U.S. Consumer Price Index for All Urban Consumers (CPI-U)

The Consumer Price Index for All Urban Consumers (CPI-U) increased 0.2 percent in May on a seasonally adjusted basis the U.S. Bureau of Labor Statistics reports. The food index declined, but the indices for energy and all items less food and energy rose, resulting in the all items increase.

The all items index rose 1.0 percent for the 12 months ending May, compared to a 1.1-percent increase for the 12 months ending April. The energy index has declined 10.1 percent over the past 12 months, with all major components falling over the span.

www.bls.gov/news.release/pdf/cpi.pdf



For more information
on the U.S. CPI
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What's Going On?

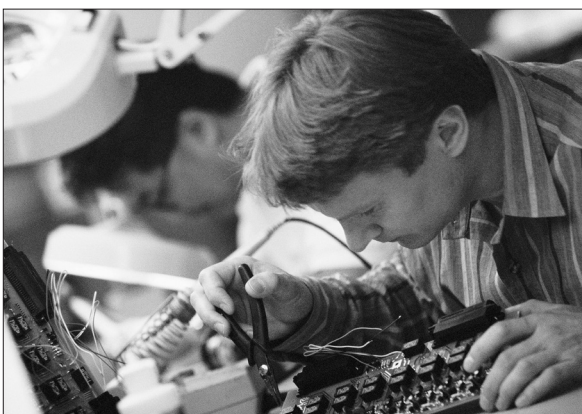
Find a Career That Makes You Happy
Every Morning with

GetMyFuture.org

GetMyFuture.org, a mobile-friendly website that helps youth plan their careers, explore education and training options, and search and apply for jobs has been launched by the U.S. Department of Labor.

GetMyFuture includes career interest assessments, interactive informational videos, job search engines, and tips and best practices. The website also connects young people to in-person career services and resources to overcome the challenges of addiction, homelessness, criminal records, or a lack of financial, family, or community support.

Minnesota Job Outlook to 2024



The main 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.

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. Another factor is the retirement of the baby boomers over the next 10 years. Job openings arising from retirements are higher than job openings created by employment growth for most occupations.

Total jobs in Minnesota are projected to increase by 130,000 between 2014 and 2024, reaching over 3.1 million jobs by 2024 according to recently released 2014 – 2024 Minnesota employment projections.¹ The projected growth is roughly 40 percent higher than the previous 10 years (2004 - 2014) when the state added just 94,000. Job expansion over the last 10 years was severely trimmed by steep job cutbacks experienced during the Great Recession. Minnesota's job machine won't return to the glory years of 1994 – 2004 when Minnesota added 350,000 jobs despite the mild 2001 recession. While no repeat of the Great Recession is expected, economic and job growth nationally and in Minnesota will be limited by slow labor force growth as the baby boomers begin to retire. Minnesota's labor force participation inched upwards in 2015 for the first time in 15 years as the job market heated up, but the uptick is likely to be temporary.

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 Baby Boomers, labor force growth will be subdued as Millennials replace Baby Boomers. Unless net immigration into the state increases significantly the state's labor force will record minimal growth between 2020 and 2030.

¹Detailed 2014 – 2024 occupational and industry employment projections for Minnesota can be found at <http://mn.gov/deed/data/data-tools/employment-outlook/>.

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 4.6 percent and self-employed jobs slipping by 6.2 percent. Wage and salary employment surpassed the 2007 peak in 2013, but self-employment continued to fall until last year and remains below its pre-recession peak.

Job growth has averaged 1.5 percent since 2011 but is expected to decline gradually over the next 10 years to average only 0.5 percent annually between 2014 and 2024. 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 2024 national industry employment to produce industry projections for Minnesota.

The key macroeconomic assumptions driving the 2014-2024 national industry projections are:

1. Gross Domestic Product (GDP) growth will average 2.2 percent annually during the 10-year period, up from the 1.6 percent annual average experienced during the previous decade, but slower than the 3.4 percent growth achieved between 1994 and 2004.
2. Productivity growth will increase slightly over the next 10 years, averaging 1.8 percent between 2014 and 2024 compared to the 1.5 percent average experienced between 2004 and 2014. The 1.8 percent annual productivity gain will be down from the 2.8 percent achieved between 1994 and 2004.
3. U.S. labor force growth will inch down over the next 10 years, averaging 0.5 percent a year compared to the 0.6 percent annual average of the previous 10 years. Labor force growth between 1994 and 2004 averaged 1.2 percent annually.
4. Unemployment will average 5.2 percent in 2024, an improvement over the 6.2 percent averaged in 2014 and the 5.6 percent 2004 average.

Projected industry employment is converted to occupational employment projections based on industry staffing patterns, the distribution of industry employment across occupations. Staffing patterns for Minnesota industries are developed from estimates of occupational employment

collected through the Minnesota Salary Survey, which is a product of the Occupational Employment Statistics (OES) program.³ Shifts in staffing patterns over the 2014 and 2024 period across industries are also projected as part of the BLS national projections. These shifts in staffing patterns are used in Minnesota's projections.

A majority of occupations, 562 in all, will experience employment growth over the next 10 years in Minnesota. The expected expansion of healthcare services over the next 10 years 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.

Twenty-three occupations are expected to see no change in the number of workers. Slightly more than 25 percent of all occupations, 225, are projected to decline. Seven of 10 declining occupations, however, are projected to decline by 10 percent or less.

The 225 shrinking occupations combined accounted for roughly 477,000 jobs or 16 percent of all jobs in 2014. The number of jobs in these occupations is projected to tail off to 444,000 by 2024, an aggregated 7 percent drop. Declining occupations are concentrated in the production, office and administrative support, and management occupational

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

³Information on the Minnesota Salary Survey is available at <http://mn.gov/deed/data/data-tools/oes/>. A condensed 2014 Minnesota staffing pattern matrix (810 occupations across 30 aggregated industries) is available at <http://mn.gov/deed/data/data-tools/occupational-staffing/>.

groups. Almost all of the job loss in the managerial group is expected to be farmers, ranchers, and other agricultural managers. Minnesota farmers totaled 50,900 in 2014 and are projected to slip to 47,900 over the next 10 years. They are included in the managerial occupation group. Other occupations expected to see their numbers shrink the most over the next 10 years are bookkeeping, accounting, and auditing clerks, postal service mail carriers, cutting, punching, and press setters and operators, executive secretaries, and computer programmers.

For example, in 2014 an estimated 2,250 bill and account collectors (SOC 43-3011) were working in the business support services industry (NAICS 5614) accounting for 18.9 percent of the 11,860 workers in the industry. While this industry is expected to increase employment to 12,190 by 2024, bill and account collector jobs will drop to 1,880 or 15.4 percent of industry employment. New software and automated calling systems should increase productivity and allow collectors to handle more accounts, thus decreasing demand for workers in this occupation.

Other occupations expected to shrink by more than half are office and administrative support occupations. Automation of duties performed by many office and administrative support occupations will increase productivity thereby reducing the need for employees in these occupations. The declining occupations include: bookkeeping, accounting, and auditing clerks, tellers, bill and account collectors, and shipping, receiving, and traffic clerks.

Minnesota's total employment is projected to climb 4.3 percent over



the 2014-24 period, compared to the 6.5 percent projected for U.S. employment over the same time period. Minnesota's employment growth trailed the U.S. pace during the previous 10 years, 3.2 percent for the state compared to 4.3 percent nationwide.

Job growth is predicted to be concentrated in the 315 occupations projected to grow faster than overall employment. These fast growing occupations are anticipated to account for roughly 80 percent of new jobs. The rest of the employment expansion will occur in the other 247 occupations expected to add workers during the next 10 years but at a slower pace than the 4.3 percent projected average. Twenty-two occupations are expected to experience no change in numbers over the next 10 years. The other 223 occupations are expected to be declining occupations. The combined loss of shrinking occupations is projected to be approximately 33,000 jobs.

Only four occupational groups will experience job growth above overall



job growth over the next 10 years – service, construction, professional and related, and installation, maintenance, and repair. Management, business, and financial jobs along with sales and related, and transportation and material moving occupations will

Table 1: Minnesota Industrial Employment Projections

	Estimated 2014	Projected 2024	2014 - 2024 Numeric Change	2014 - 2024 Percent Change
Total Employment	3,007,000	3,137,000	130,000	4.3
Self-Employed	196,800	201,300	4,500	2.3
Goods-Producing Sector	449,500	443,800	-5,700	-1.3
Natural Resources and Mining	29,900	28,400	-1,500	-5.0
Construction	107,600	117,900	10,300	9.6
Manufacturing	312,000	297,500	-14,500	-4.6
Private Service-Providing Sector	1,980,900	2,113,400	132,500	6.7
Trade, Transportation, and Utilities	516,500	530,000	13,400	2.6
Information	52,500	48,900	-3,700	-6.9
Financial Activities	177,400	187,700	10,300	5.8
Professional and Business Services	353,400	372,300	19,000	5.3
Educational and Health Services	485,800	563,500	77,600	16.0
Leisure and Hospitality	267,300	280,700	13,400	5.0
Other Services (Except Government)	128,000	130,300	2,300	1.8
Government	379,800	378,600	-1,200	-0.3

Source: DEED LMI Office Projections

continue to grow over the next decade but slower than average job growth.

The two largest major occupational groups in Minnesota - professional and related occupations and service occupations – will add the most jobs in Minnesota from 2014 to 2024 (see Table 1). These two major occupational groups, which tend to have occupations at the opposite ends of the educational attainment and earnings range are projected to account for 74 percent of all net employment growth over the next 10 years.

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 8.9 percent or more than twice as fast as the overall job growth rate.

The top 50 occupations in terms of the number of workers employed accounted for 50.3 percent of all employment in Minnesota in 2014. The largest occupations range from retail salespersons (87,600 jobs) to computer systems analysts (13,700 jobs). Employment growth in these large occupations will account for 60.3 percent of the new jobs. Four of the largest occupations, however, are expected to see their workforce numbers shrink – bookkeeping, accounting, and auditing clerks, farmers, ranchers, and other agricultural managers, executive secretaries and executive administrative assistants, and shipping, receiving, and traffic clerks.

Three major occupational groups are expected to see their workforce numbers decrease between 2014 and 2024. Declining manufacturing employment will result in fewer production jobs. Automation of duties performed by many office and administrative support occupations is anticipated to lead to fewer office and administrative support jobs by 2024. Farm, fishing, and forestry occupations are also projected to continue their gradual decline.

The top 50 fastest growing occupations among occupations with employment of more than 500 workers in 2014 combined for just over 7 percent of the 2014 employment base but are anticipated to account for slightly more than 37 percent of jobs created over the next 10 years. These

Table 2: Minnesota Occupational Employment Projections

	Estimated 2014	Projected 2024	2014 - 2024 Numeric Change	2014 - 2024 Percent Change
Total Employment	3,007,000	3,137,000	130,000	4.3
Management	228,500	233,600	5,100	2.2
Business and Financial Operations	170,500	180,000	9,600	5.6
Computer and Mathematical	93,500	101,300	7,800	8.3
Architecture and Engineering	52,300	52,600	300	0.6
Life, Physical, and Social Science	26,000	27,300	1,400	5.0
Community and Social Services	59,900	65,400	5,500	9.2
Legal	21,100	22,100	1,000	4.7
Education, Training, and Library	164,200	168,200	4,000	2.4
Arts, Design, Entertainment, Sports, and Media	54,300	55,100	800	1.5
Healthcare Practitioners and Technical	163,600	183,800	20,100	12.3
Healthcare Support	91,500	107,600	16,100	17.6
Protective Service	47,800	49,000	1,200	2.5
Food Preparation and Serving Related	231,500	243,300	11,800	5.1
Building and Grounds Cleaning and Maintenance	99,200	103,900	4,700	4.7
Personal Care and Service	157,800	179,600	21,800	13.8
Sales and Related	289,100	299,900	10,800	3.7
Office and Administrative Support	425,400	421,300	-4,000	-1.0
Farming, Fishing, and Forestry	16,000	15,200	-800	-5.0
Construction and Extraction	111,900	120,600	8,700	7.8
Installation, Maintenance, and Repair	102,900	107,500	4,600	4.5
Production	223,600	219,000	-4,600	-2.1
Transportation and Material Moving	176,500	180,600	4,200	2.3

Source: DEED LMI Office Projections

fast growing occupations are projected to grow by 14.4 percent or more which is over three times faster than overall job growth.

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 2014, are projected to grow slower than overall employment growth but will add a large number of workers by 2024. Other occupations, which have relatively small numbers of worker in 2014, 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) are compared to the 50 occupations expected to add the most jobs (Table 3).



Only 13 of the 87 occupations listed in the tables are in both tables. These occupations are:

- Computer and Information Systems Managers
- Computer Systems Analysts
- Computer-Controlled Machine Tool Operators
- Emergency Medical Technicians and Paramedics
- Home Health Aides
- Industrial Machinery Mechanics
- Massage Therapists
- Medical and Health Services Managers
- Medical Assistants
- Personal Care Aides
- Personal Financial Advisors
- Physical Therapists
- Self-Enrichment Education Teachers

Job opportunities tend to be better in occupations that are growing, but new openings created by employment growth are not even half 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.

An estimated 87,600 workers were employed in Minnesota's largest occupation, retail salespersons, in 2014. By 2024 the state is expected to have nearly 92,600 retail salespersons. The 5,000 new retail salesperson jobs expected over the next 10 years will represent roughly 5 percent of all retail salesperson jobs in 2024; the other 85 percent of retail salesperson jobs already exist.

Many of the 85,800 individuals working as retail salespersons in 2014, however, will not be working as retail salespersons in 2024. Workers will switch occupations, retire, or leave the labor force for other reasons thereby creating retail salesperson job openings. More of these openings, termed net openings, are projected than job openings arising from employment growth for most occupations. An estimated 30,400 net replacement openings are projected for retail salespersons over the next

10 years as current retail salespersons leave the occupation while only 5,000 retail salespersons openings are expected over the same period from growth in the occupation.

Even occupations that are expected to decline in numbers over the next 10 years will have replacement openings. Fewer bookkeeping, accounting, and auditing clerks are projected to be employed in Minnesota in 2024 than in 2014 (35,830 vs. 39,740), but many of the workers employed as bookkeeping, accounting, and auditing clerks in 2024 will have been hired over the last 10 years, filling the clerk jobs that opened as workers moved to other occupations or retired. More than 3,900 net replacement bookkeeping, accounting, and auditing clerk openings will need to be filled over the next 10 years.

Because of the importance of replacement needs, estimates of net replacement openings for each occupation over the next 10 years are included in the 2014 – 2024 employment projections for Minnesota. Net replacement openings, entrants minus separations, are based on nationwide census

Table 3: Occupations Adding the Most Jobs

	2014 - 2024 Numeric Change	2014 - 2024 Percent Change
Personal Care Aides	16,520	25.8
Home Health Aides	9,250	30.1
Registered Nurses	6,720	11.8
Combined Food Preparation and Serving Workers	5,320	8.3
Retail Salespersons	4,920	5.6
Cooks, Restaurant	2,700	11.2
Computer Systems Analysts	2,470	18.0
Nursing Assistants	2,450	8.2
Customer Service Representatives	2,400	4.4
Social and Human Service Assistants	2,210	14.2
Licensed Practical and Licensed Vocational Nurses	2,060	11.4
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	2,030	4.4
Accountants and Auditors	1,930	7.0
Market Research Analysts and Marketing Specialists	1,670	13.3
General and Operations Managers	1,590	4.2
Maids and Housekeeping Cleaners	1,580	6.3
Medical Assistants	1,540	17.9
Heavy and Tractor-Trailer Truck Drivers	1,510	4.0
Computer and Information Systems Managers	1,450	14.4
Carpenters	1,430	7.2
Business Operations Specialists, All Other	1,350	4.6
Construction Laborers	1,310	9.4
First-Line Supervisors of Office and Administrative Support Workers	1,260	5.3
Childcare Workers	1,260	4.0
Software Developers, Applications	1,250	10.4
Management Analysts	1,250	8.6
Computer User Support Specialists	1,200	9.2
Electricians	1,180	10.6
Medical Secretaries	1,150	13.0
First-Line Supervisors of Food Preparation and Serving Workers	1,120	7.4
Self-Enrichment Education Teachers	1,120	15.0
Machinists	1,110	10.0
Bartenders	1,060	6.1
Cashiers	1,020	1.7
Recreation Workers	1,020	12.1
First-Line Supervisors of Retail Sales Workers	980	4.3
Industrial Machinery Mechanics	960	16.3
Maintenance and Repair Workers, General	960	4.3
Medical and Health Services Managers	950	14.9
Computer-Controlled Machine Tool Operators	930	20.1
Hairdressers, Hairstylists, and Cosmetologists	900	5.6
Insurance Sales Agents	890	10.7
Physical Therapists	880	23.2
Receptionists and Information Clerks	870	4.1
Personal Financial Advisors	840	16.6
Massage Therapists	820	24.0
Sales Representatives, Wholesale and Manufacturing	800	2.5
Plumbers, Pipefitters, and Steamfitters	800	8.3
Bus and Truck Mechanics and Diesel Engine Specialists	790	11.9
Emergency Medical Technicians and Paramedics	770	17.4

Source: DEED LMI Office Projections

Table 4: Most Net Replacement Openings

	Net Replacement Openings 2014 - 2024	Job Openings from Employment Growth 2014 - 2024
Retail Salespersons	30,380	4,920
Cashiers	25,890	1,020
Combined Food Preparation and Serving Workers, Including Fast Food	20,660	5,320
Waiters and Waitresses	23,320	180
Personal Care Aides	5,180	16,520
Registered Nurses	13,390	6,720
Home Health Aides	6,940	9,250
Customer Service Representatives	13,440	2,400
Office Clerks, General	12,400	380
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	9,230	2,030
General and Operations Managers	9,510	1,590
Stock Clerks and Order Fillers	10,340	550
Laborers and Freight, Stock, and Material Movers, Hand	10,080	680
Childcare Workers	9,210	1,260
Accountants and Auditors	7,330	1,930
Nursing Assistants	6,730	2,450
Cooks, Restaurant	6,360	2,700
Farmers, Ranchers, and Other Agricultural Managers	8,680	0
Teacher Assistants	7,590	680
Heavy and Tractor-Trailer Truck Drivers	6,410	1,510

Source: DEED LMI Office Projections

data which track the entrants and separations of an occupation by age cohorts. The net replacement opening estimates understate the total number of job openings in an occupation over the next 10 years but are the best available estimates of job openings available to new labor force entrants.

In addition to the 130,000 job openings projected to be created through employment growth over

the next 10 years, approximately 697,000 net replacement openings are projected. Occupations with high numbers of net replacement openings tend to be occupations with large employment bases in 2014 and high turnover rates (see Table 4). Over 94 percent the occupations are projected to have more net replacement openings than openings from employment growth. Net replacement openings

should be considered when exploring the future prospects of any occupation. The need to fill replacement openings will only increase later in the decade ahead as Baby Boomer retirements increase between now and 2024.

by Dave Senf
Labor Market Information Office
Minnesota Department of Employment
and Economic Development

G is for Guard

Guards protect people, places, and things. Crossing Guards protect children going to school, Lifeguards protect children and adults participating in water activities, and Security Guards protect people and property in a variety of public and private places. While each of these types of Guards has an important role in safeguarding the public, several other occupations belong to the Protective Services occupation group and share guard-like responsibilities. These occupations include Corrections Officers and Jailers, Recreation Attendants, Game Wardens, Police and Sheriff Patrol Officers, and even some

Receptionists. Because of the amount of available data, this article will focus on the occupations found in the Protective Services group.

Wage and Employment Outlook

Over 42,000 Minnesotans work in Protective Service Occupations. While over half are employed in the Seven County Metro Area, higher wages, for a variety of reasons, are often found in Greater Minnesota. According to DEED's 2016 Occupation and Employment Statistics (OES), Protective Service workers earn a higher median wage in Northwest,

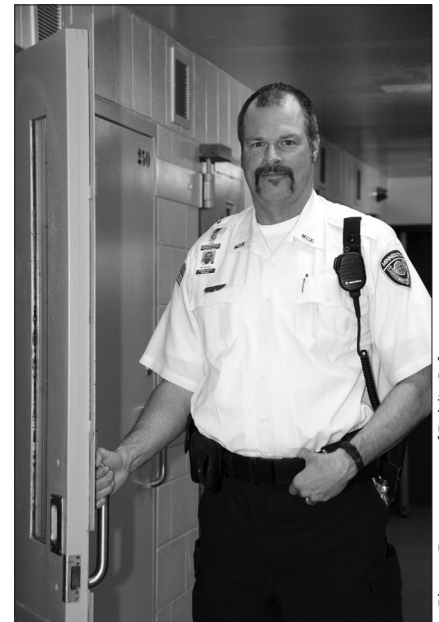


Photo: Department of Public Safety

Table 1

Occupation	Functions	Degree Required	Education Attainment of workers in occupation (MN)						
Correctional Officers and Jailers	Guard inmates in penal or rehabilitative institutions in accordance with established regulations and procedures. May guard prisoners in transit between jail, courtroom, prison, or other point. Includes deputy sheriffs and police who spend the majority of their time guarding prisoners in correctional institutions.	High School Diploma or Equivalent Professional Certification 1. American Correctional Association 2. American Jail Association	<table border="1"> <tr> <td>High School or Less</td> <td>20.2%</td> </tr> <tr> <td>Some College or Associate Degree</td> <td>34.6%</td> </tr> <tr> <td>Bachelor's Or Advanced Degree</td> <td>45.3%</td> </tr> </table>	High School or Less	20.2%	Some College or Associate Degree	34.6%	Bachelor's Or Advanced Degree	45.3%
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Police and Sheriff Patrol Officer	Maintain order and protect life and property by enforcing local, tribal, State, or Federal laws and ordinances. Perform a combination of the following duties: patrol a specific area; direct traffic; issue traffic summonses; investigate accidents; apprehend and arrest suspects, or serve legal processes of courts.	High school Diploma or Equivalent Professional Certification 1. National Association for Search and Rescue 2. Accreditation Commission for Traffic Accident Reconstruction	<table border="1"> <tr> <td>High School or Less</td> <td>4.9%</td> </tr> <tr> <td>Some College or Associate Degree</td> <td>40.2%</td> </tr> <tr> <td>Bachelor's Or Advanced Degree</td> <td>54.9%</td> </tr> </table>	High School or Less	4.9%	Some College or Associate Degree	40.2%	Bachelor's Or Advanced Degree	54.9%
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Source: 2016 CAREERwise, Minnesota State Colleges and Universities; U.S. Census Bureau's American Community Survey

Central, and Southeast Minnesota than in the Metro Area. Through 2022 Protective Service jobs are expected to grow fastest in Central Minnesota, but Northwest, Southeast, and the Metro Area also have positive growth projections.

Graduate Employment Outcomes

Although most Protective Service occupations require only a high school education, over 75 percent of those who graduated in 2013 with a post-secondary award in criminal justice were gainfully employed in 2015. Workers with one-year certificates were making more per hour in 2015 (\$19.61) than graduates with Associate’s (\$16.64) and Bachelor’s degrees (\$18.47). Certificate holders might also have Associate or Bachelor’s degrees earned in a prior year, and this may explain the higher wage earned by Certificate Holders. As with all Protective Service workers, over 50 percent of recent graduates are working in the Seven County Metro Area (see Figure 1).

Conclusion

Protective Service occupational opportunities are available throughout Minnesota. Relatively low education requirements for employment allow Protective Service workers to carve out a career path in many ways. There are opportunities for employment in multiple industries and in various jobs with different levels of responsibility. Upward mobility in these Protective Service occupations will likely require professional certification training and work experience which is readily available for current Protective Service professionals and prospective job seekers.

Table 2

2016 Minnesota Occupation and Employment Statistics, Protective Services Occupations

Geography	OES Employment	Median Wage	Projections 2012-2022
Northwest Minnesota	4,980	\$20.26	5.1%
Northeast Minnesota	2,800	\$18.47	-0.1%
Central Minnesota	2,340	\$23.46	7.4%
Seven County Metro	25,100	\$19.05	5.0%
Southwest Minnesota	3,210	\$18.16	-1.6%
Southeast Minnesota	4,010	\$21.41	1.9%

Source: 2016 DEED Occupation and Employment Statistics

Table 3

Minnesota Statewide Graduate Employment Outcomes, Criminal Justice and Corrections Programs

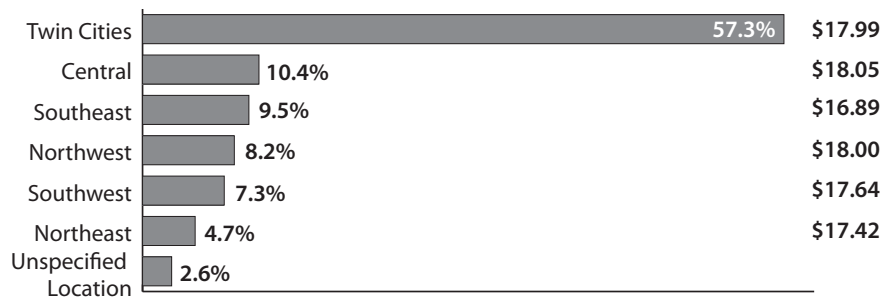
Post-Secondary Award	2013 Graduates	Two years after Graduating	
		Percent Earning Wages in MN	Median Hourly Wage
Certificates (less than Bachelor’s Degrees)	273	81.3%	\$19.61
Associate’s Degrees	990	78.4%	\$16.64
Bachelor’s Degrees	853	75.3%	\$18.47

Source: DEED Graduate Employment Outcomes

Figure 1

Regions of Employment 24 Months After Graduation, Criminal Justice and Corrections Graduates

Figure 1: Regions of Employment 24 Months After Graduation, Criminal Justice and Corrections Graduates



by Chet Bodin
Regional Analyst, Northwest Minnesota
Department of Employment and Economic Development

H *is for Home Health Aide*

Home Health Aides are similar to other Healthcare Support Professionals, but typically work in their client’s home or in a care facility as opposed to a hospital or clinic. In addition to administering some medical care, Home Health Aides assist patients with daily activities like helping them dress or feed themselves.

The demand for Home Health Aides is increasing as a large number of Minnesotans age and require regular medical attention. Today there are approximately 27,550 Home Health Aides working in the state. This makes it the 20th largest occupation in the state, and it is projected to grow by 30.1 percent (9,254 jobs) from 2014-2024. This is the second highest projected growth rate among all occupations in Minnesota. However it still might not be enough given the projected increase of the state’s population 65 years and older. The population of Minnesotans 65 years of age and older will increase by over 50 percent between 2014 and 2024 or nearly 400,000 people.

Despite the projected increase in Home Health Aides, their statewide proportion to the population 65 years and older will increase from one for every 25 senior residents to one for every 29. As it is, the projected occupation growth of 30.1 percent may result in a shortage of Home



Table 1
2014-2024 Proportion of Home Health Care Jobs to Population 65 Years and Older, Minnesota

	2014	2024	Numeric Change	Percent Change
Home Health Care Jobs	30,739	39,993	9,254	30.1%
Population 65 Years and Over	780,142	1,173,707	393,565	50.4%
Proportion	25:1	29:1	--	--

Source: DEED Employment Projections; MN State Demographer

Health Aides as a generation of Minnesotans enter their golden years.

According to DEED’s Occupations in Demand, Home Health Aides are in the top 40 of in-demand occupations in every economic development region throughout the state, and statewide it is the 17th

ranked in-demand occupation. There are expected to be 16,000 job openings for Home Health Aides in Minnesota through 2022.

Part-Time Opportunities

Employment in Home Health Care occupations is a great opportunity for those seeking part-

time work regardless of professional experience. From 2010-2015, 78 percent of Home Health Aid job vacancies in Minnesota were for part-time work, averaging 956 part-time openings per year. The vast majority of Home Health Aide positions require less than a high school education, and skills are learned on the job. This allows nearly anyone to perform the type of work required, from family members to new job seekers to those with experience outside of healthcare. In addition to serving elders and those with disabilities, home health care offers a chance for workers of nearly any background to earn additional income.

Conclusion

The Home Health Care industry is growing. The industry paid nearly \$500 million in wages in the first three quarters of 2015. The industry is projected to grow by 48.7 percent by 2024 or 11,291 workers, making it the second fastest growing industry in Minnesota. Many of the jobs added in the industry will be Home Health Aides. Further projections indicate that by 2035 more Minnesotans will be over 65 than under 18, signaling a long-term need for Home Health Aides. Overall, it's clear that the demand for Home Health Aides is on the rise and will remain high for the foreseeable future and can provide consistent, full- or part-time, long-term employment opportunities for many across the state.

by Chet Bodin
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Table 2

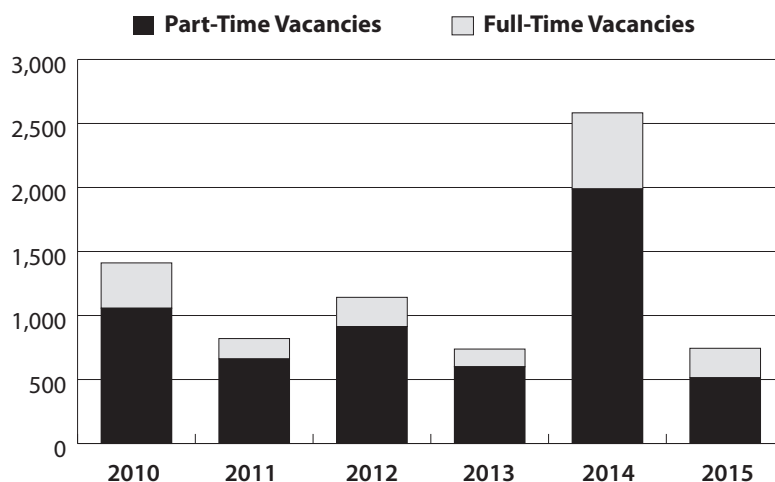
Regional Demand, Employment and Projections for Home Health Aides

Region	Current Demand Rank	Median Hourly Wage	Estimated Regional Employment	10-Year Percent Change	10-Year Total Openings
Minnesota	★★★★★	\$11.99	27,550	30.1%	16,190
Central	★★★★★	\$11.29	3,770	33.1%	2,860
Northeast	★★★★★	\$12.01	2,320	21.7%	1,300
Northwest	★★★★★	\$11.89	1,540	22.4%	1,420
Southeast	★★★★★	\$11.13	3,460	21.1%	1,210
Southwest	★★★★★	\$11.03	2,200	17.2%	1,370
Twin Cities Metro	★★★★★	\$12.69	14,990	34.5%	8,070

Source: DEED Occupations in Demand, Occupational Employment Statistics, Employment Outlook

Figure 1

2010-2015 Home Health Aide Job Vacancies, Minnesota



Source: DEED Job Vacancy Survey