

# CAREER & TECHNICAL EDUCATION BEYOND 2020

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## Workforce Trends & Economic Impacts

### **RealTime Talent**

370 Wabasha Street, Suite 900  
St. Paul, MN 55102

Erin Olson, Research Strategist  
[Erin@realtimetalentmn.org](mailto:Erin@realtimetalentmn.org)

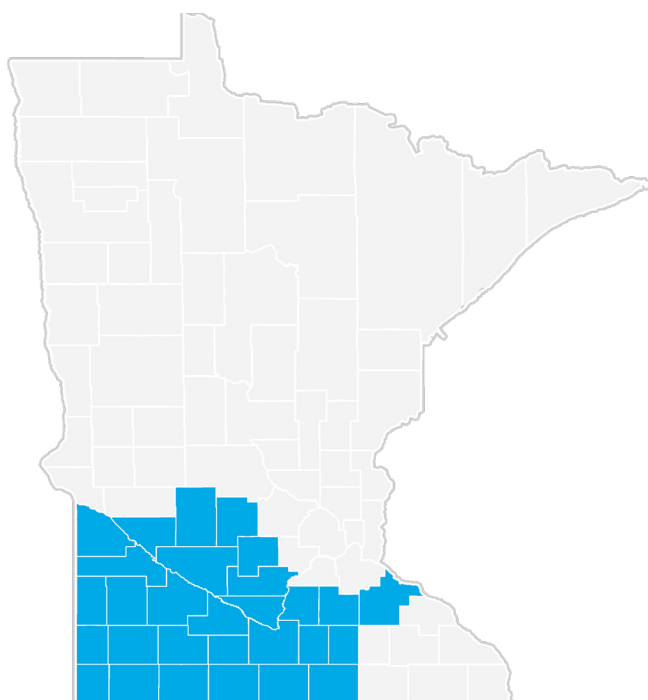
### **Minnesota State**

30 East 7<sup>th</sup> Street  
St. Paul, MN 55101



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# Southwest Minnesota



**October 2020**

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**Authors:**

Erin Olson, Research Strategist  
Brooke Dirtzu, Research Analyst

# Workforce Trends & Economic Impacts

## Introduction

In the first five and a half months of the economic impact of COVID-19, 928,038 Minnesota residents applied for unemployment insurance—about 29% of the state’s employed workforce in the first quarter of 2020.<sup>1</sup> At the county level, anywhere from 9.2% (Wilkin County) to 63.7% (Roseau County) of the local workforce applied for unemployment insurance. Although the employment impacts of the pandemic have been forecast to be sharp and short by most economists, recovery is unlikely to be felt equally across the state.

This report aims to support Consortia in navigating changes in their local labor market due to COVID-19 and exploring how these changes may impact enrollment, industry, career advancement, and the needed programs of study by region. Each of the five regional reports include:

- Regional economic and demographic overview
- Economic Vulnerability Analysis due to COVID-19: Industries and occupations greatest and least impacted
- Review of remote work opportunities, impacts, and mid-term regional projections
- Mapping of significant labor market needs, including forecasted regional talent shortages and workforce skill mismatches over the next 3-5 years
- Identification of key priorities and barriers for youth and adult career pathways in 6 career clusters for the Perkins Comprehensive Local Needs Assessment:
  - Health Science Technology
  - Engineering, Manufacturing, and Technology
  - Arts, Communications, and Information Systems
  - Agriculture, Food, and Natural Resources
  - Business, Management, and Administration
  - Human Services

## *About This Report*

This report was developed by RealTime Talent for the Career and Technical Education Consortia of Minnesota with funding provided by Minnesota State. If you have questions about the data found in this report, or are interested in learning more, please contact Research Strategist Erin Olson at [erin@realtimetalentmn.org](mailto:erin@realtimetalentmn.org)

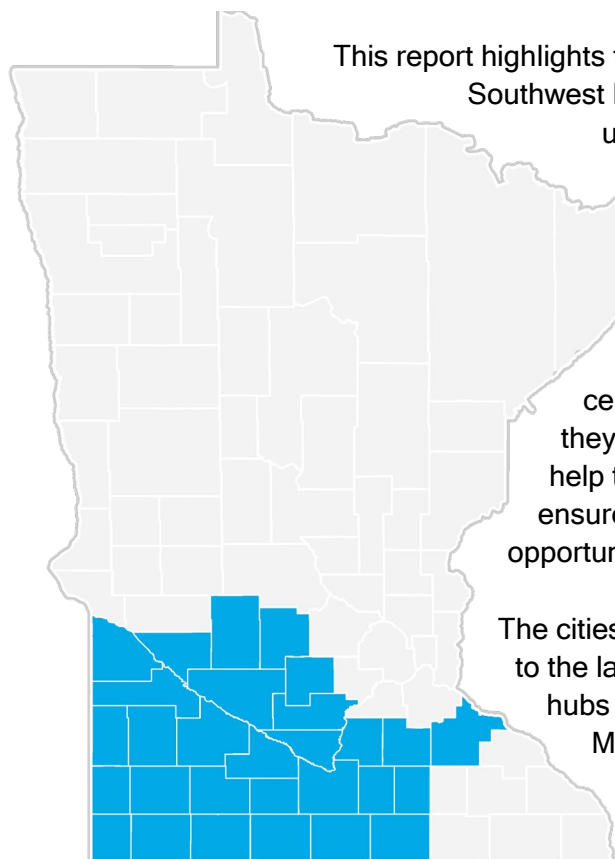
<sup>1</sup> Unemployment Statistics, MN Department of Employment and Economic Development. March 16, 2020 - August 27, 2020. Accessed 9/4/2020 at <https://mn.gov/deed/data/data-tools/unemployment-insurance-statistics/>

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# Southwest Minnesota

## Introduction

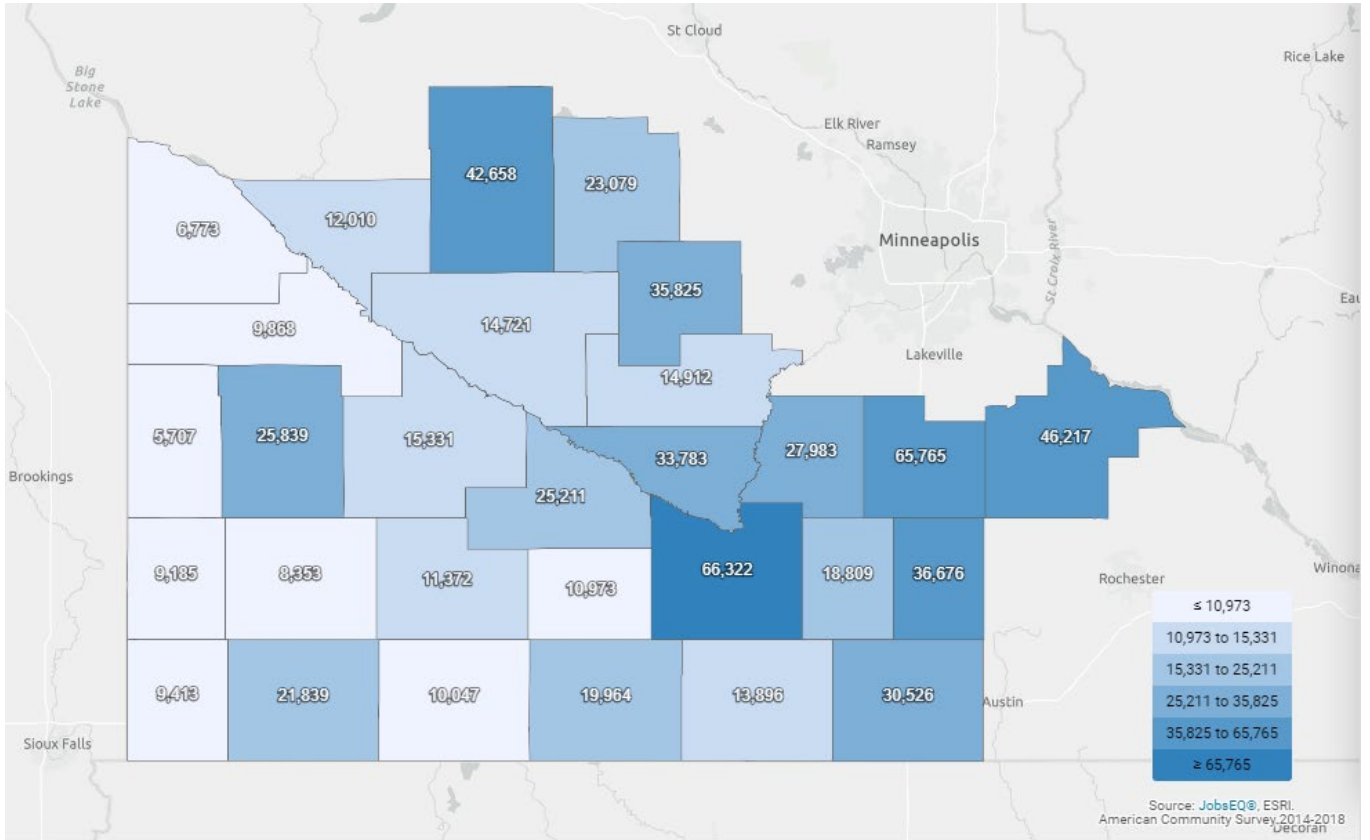


This report highlights the current and future talent needs in the 29 counties of Southwest Minnesota.<sup>2</sup> Starting from the community demographics, unique vulnerabilities and opportunities, and the critical occupations and industries underpinning the regional economy, this macroeconomic overview is intended to support educators and administrators who seek to go beyond compliance to impact both student lives and local businesses most pressing needs. Identifying the skills, certifications, and qualifications for positions today—and how they have been disparately impacted by the pandemic—will help the education community anticipate community needs and ensure that curriculum prepares students for relevant job opportunities of the future here in Southwest Minnesota.

The cities of Mankato, Willmar, Owatonna, and Faribault are home to the largest local concentrations of population and are economic hubs for the region. In all, 673,057 people live in Southwest Minnesota, according to 2014-2018 American Community Survey Estimates, with an estimated population of 674,357 for the region using the average annual growth rate since 2009.

<sup>2</sup> Blue Earth, Brown, Chippewa, Cottonwood, Faribault, Freeborn, Goodhue, Jackson, Kandiyohi, Lac Qui Parle, Le Sueur, Lincoln, Lyon, McLeod, Martin, Meeker, Murray, Nicollet, Nobles, Pipestone, Redwood, Renville, Rice, Rock, Sibley, Steele, Waseca, Watonwan, and Yellow Medicine Counties.

## Resident Population Southwest Minnesota

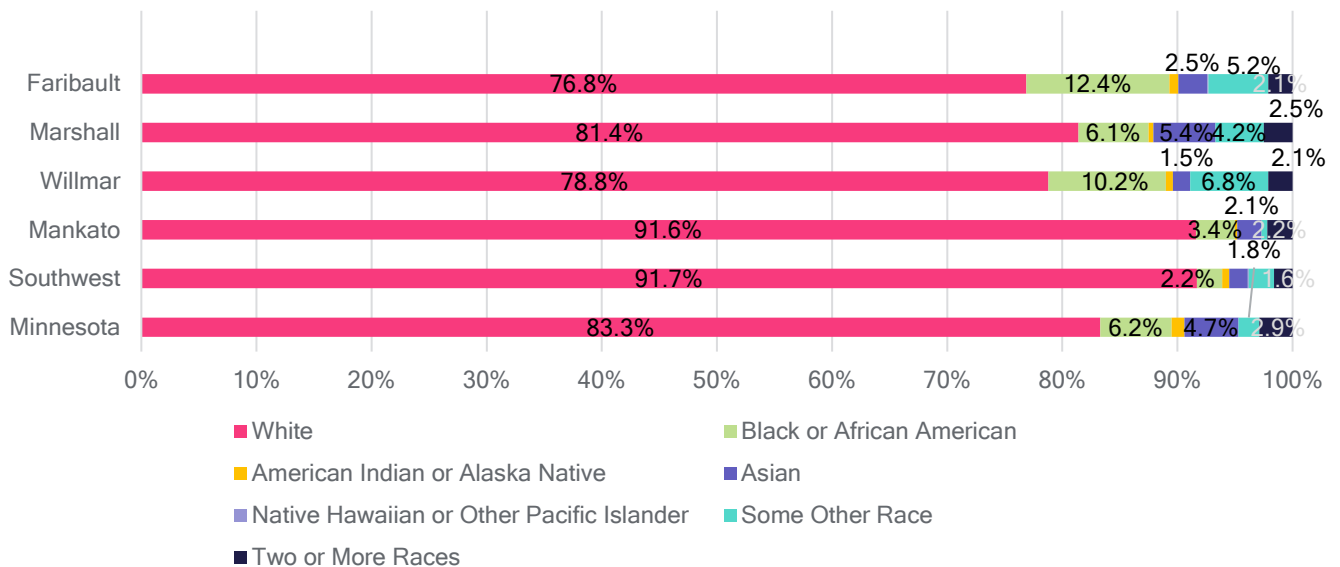


# Community Profile

## Demographics

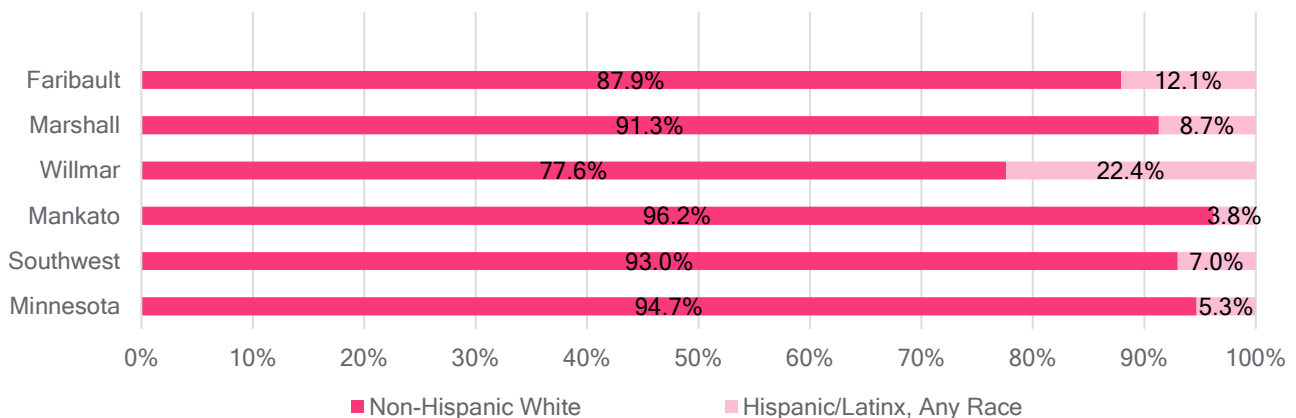
Communities across Southwest Minnesota are diverse in unique ways. Across the region overall, only about 8.3% of the population identify as Black, Asian, American Indian, Native Hawaiian, or some other race. The demographic makeup of communities across Southwest Minnesota are fairly similar to Marshall, although Faribault and Willmar have a greater share of Black and African American residents than the other larger cities in the region. Approximately 7.0% of Southwest Minnesota's residents are Hispanic or Latinx. For reference, Southwest Minnesota's share of Hispanic or Latinx residents is about 2.2 percentage points higher than in the Southeast, 3.7 percentage points higher than the Northwest and 4.3 percentage points higher than the in Central Minnesota.

Population Race, All Ages



American Community Survey 2014-2018.

Population Ethnicity, All Ages



American Community Survey 2014-2018.

## Community Demographics

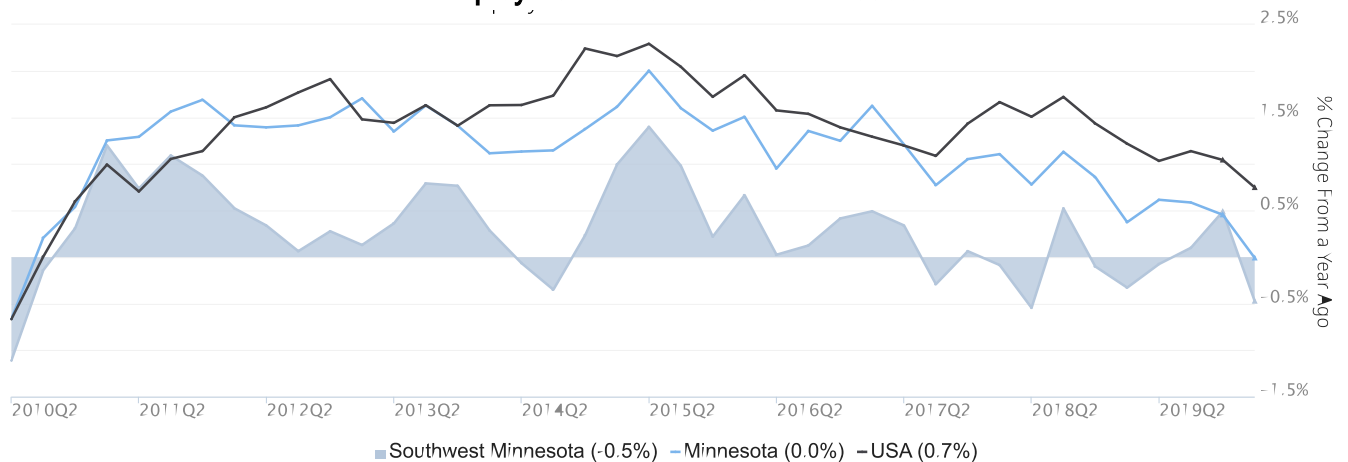
Demographics	Percent			Value		
	Southwest Minnesota	Minnesota	USA	Southwest Minnesota	Minnesota	USA
Population (ACS)	—	—	—	673,057	5,527,358	322,903,030
Male	50.2%	49.8%	49.2%	337,606	2,751,748	158,984,190
Female	49.8%	50.2%	50.8%	335,451	2,775,610	163,918,840
Median Age	—	—	—	39.7	37.9	37.9
Under 18 Years	23.0%	23.4%	22.8%	154,555	1,291,607	73,553,240
18 to 24 Years	10.2%	9.1%	9.6%	68,395	503,989	30,903,719
25 to 34 Years	11.6%	13.6%	13.8%	78,304	752,944	44,567,976
35 to 44 Years	11.2%	12.4%	12.6%	75,066	685,568	40,763,210
45 to 54 Years	12.4%	13.1%	13.2%	83,216	725,714	42,589,573
55 to 64 Years	13.9%	13.3%	12.8%	93,409	737,424	41,286,731
65 to 74 Years	9.3%	8.5%	8.8%	62,685	470,691	28,535,419
75 Years, and Over	8.5%	6.5%	6.4%	57,427	359,421	20,703,162
Race: White	91.7%	83.3%	72.7%	617,459	4,606,044	234,904,818
Race: Black or African American	2.2%	6.2%	12.7%	15,137	342,186	40,916,113
Race: American Indian and Alaska Native	0.6%	1.1%	0.8%	4,063	58,982	2,699,073
Race: Asian	1.6%	4.7%	5.4%	10,684	262,359	17,574,550
Race: Native Hawaiian and Other Pacific Islander	0.1%	0.0%	0.2%	353	2,187	582,718
Race: Some Other Race	2.2%	1.8%	4.9%	14,833	97,833	15,789,961
Race: Two or More Races	1.6%	2.9%	3.2%	10,528	157,767	10,435,797
Hispanic or Latino (of any race)	7.0%	5.3%	17.8%	47,385	292,764	57,517,935

American Community Survey 2014-2018 unless noted otherwise.

## Employment

As of 2020Q1, total employment for the Southwest Minnesota was 335,584 (based on a four-quarter moving average). Over the year ending 2020Q1, employment declined 0.5% in the region.

### Employment for Southwest Minnesota

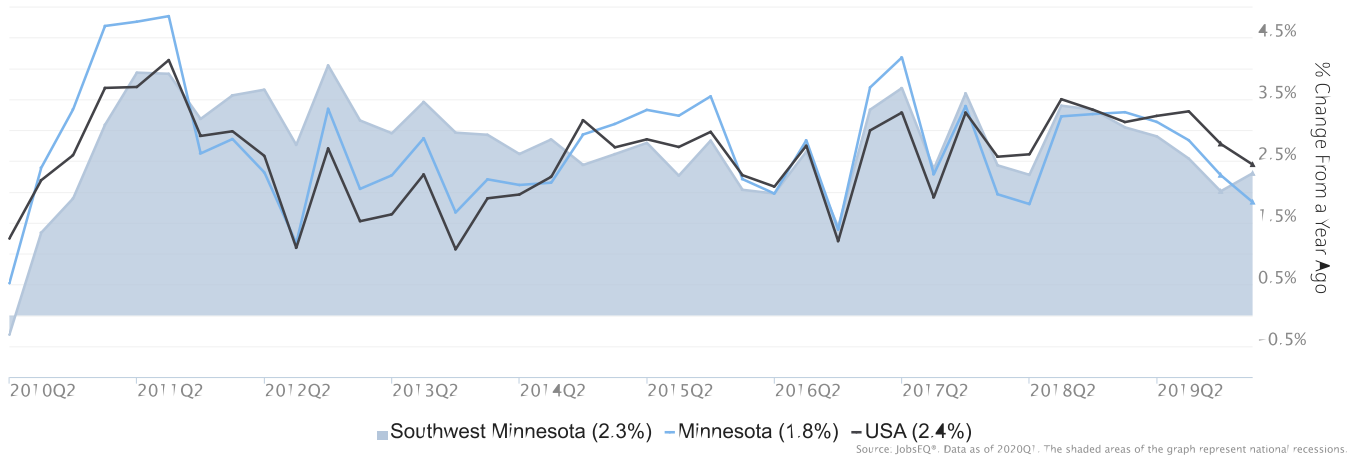


Employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and imputed where necessary. Data are updated through 2019Q3 with preliminary estimates updated to 2020Q1.



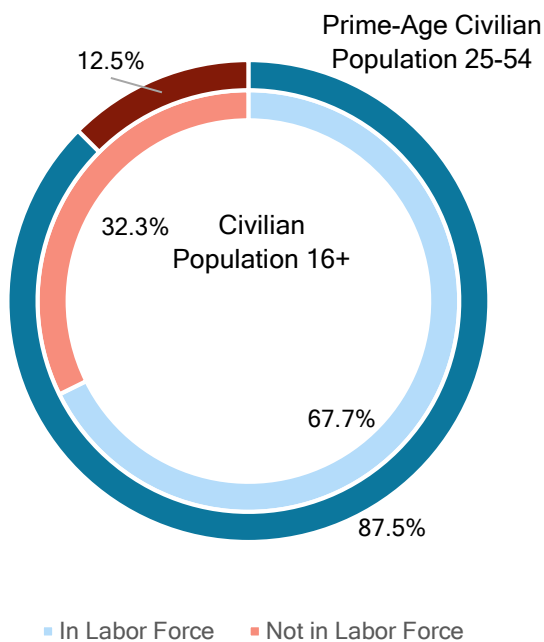
The average worker in the Southwest Minnesota earned annual wages of \$44,415 as of 2020Q1. Average annual wages per worker increased 2.3% in the region over the preceding four quarters. For comparison purposes, annual average wages were \$57,624 in the nation as of 2020Q1.

**Average Annual Wages for Southwest Minnesota**



Annual average wages per worker data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and imputed where necessary. Data are updated through 2019Q3 with preliminary estimates updated to 2020Q1.

**Labor Force Participation Rate**



The region has a civilian labor force of 362,678 with a participation rate of 67.7%, which is lower than Minnesota's labor force participation rate for the population over 16 (69.7%). The median age in Central Minnesota (39.7 years) is higher than other parts of the state (37.9 years statewide). Furthermore, the participation rate of the prime working age population (between the ages of 25 and 64) lower to the statewide rate—88.2%.

The Southwest region has a slightly higher share of veterans in the region, at 4.3% of the regional population compared to 4.1% broadly across the state. The veteran labor force participation rate is only 82.4% in the Southwest, compared to 79.5% statewide.

## Economic and Social Characteristics of Southwest Minnesota

Economic and Social Characteristics	Percent			Values		
	Southwest Minnesota	Minnesota	USA	Southwest Minnesota	Minnesota	USA
Labor Force Participation Rate and Size (civilian population 16 years and over)	67.7%	69.7%	63.2%	362,678	3,050,676	162,248,196
Prime-Age Labor Force Participation Rate and Size (civilian population 25-54)	87.5%	88.2%	81.8%	207,021	1,906,910	104,136,254
Armed Forces Labor Force	0.0%	0.1%	0.4%	116	2,329	1,028,133
Veterans, Age 18-64	4.3%	4.1%	4.7%	17,050	138,077	9,398,789
Veterans Labor Force Participation Rate and Size, Age 18-64	82.4%	79.5%	76.3%	14,049	109,835	7,168,168
Median Household Income*	—	—	—	\$59,001	\$68,411	\$60,293
Per Capita Income	—	—	—	\$30,252	\$36,245	\$32,621
Poverty Level (of all people)	11.1%	10.1%	14.1%	72,060	547,442	44,257,979
Households Receiving Food Stamps/SNAP	7.7%	8.2%	12.2%	20,817	178,604	14,635,287
Enrolled in Grade 12 (% of total population)	1.4%	1.4%	1.4%	9,213	79,941	4,442,295
Disconnected Youth**	1.6%	1.8%	2.6%	577	5,025	438,452
Children in Single Parent Families (% of all children)	28.8%	28.0%	34.3%	42,649	348,224	23,973,249
Uninsured	4.9%	4.7%	9.4%	32,673	254,764	29,752,767
With a Disability, Age 18-64	8.6%	8.7%	10.3%	33,786	292,907	20,240,504
With a Disability, Age 18-64, Labor Force Participation Rate and Size	54.1%	52.5%	41.6%	18,278	153,894	8,421,018
Foreign Born	5.0%	8.4%	13.5%	33,675	461,758	43,539,499

American Community Survey 2014-2018 unless noted otherwise.

\*Median values for certain aggregate regions (such as MSAs) may be estimated as the weighted averages of the median values from the composing counties. \*\*Disconnected Youth are 16-19 year olds who are (1) not in school, (2) not high school graduates, and (3) either unemployed or not in the labor force.

## Education



**92.8%** of prime working age adult residents have at least a high school diploma or GED.

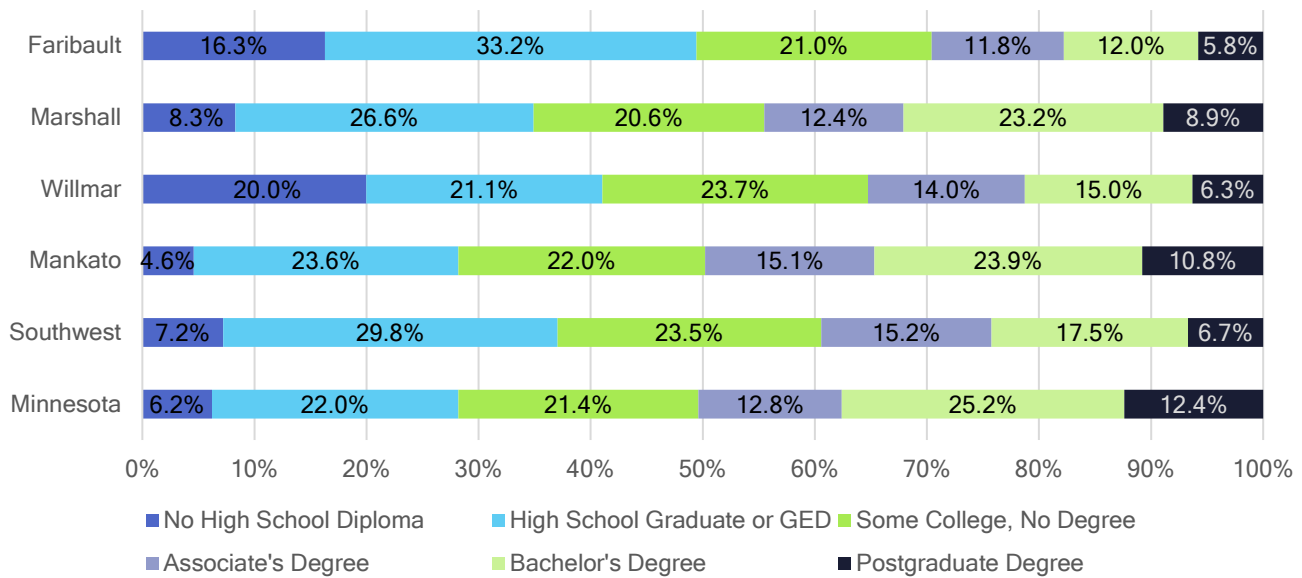
In Southwest Minnesota 7.2% of adults between the ages of 25 and 64 do not have a high school diploma or equivalent, and about 29.8% have a high school diploma as their highest level of education (compared with 22% statewide and 11.2% nationwide). In contrast, some communities of the Minneapolis-Saint Paul Metro have as high as 20% of prime working age adults in a neighborhood with no high school diploma or GED credential. The prime working age population of Faribault and Willmar have larger shares of residents with a high school diploma or less, 49.5% and 41.1%, respectively, while Mankato has a smaller share of residents with lower educational attainment (28.2%).

## Educational Characteristics of Southwest Minnesota

Educational Characteristics	Percent			Values		
	Southwest Minnesota	Minnesota	USA	Southwest Minnesota	Minnesota	USA
No High School Diploma	7.2%	6.2%	11.2%	23,859	178,547	18,885,967
High School Graduate	29.8%	22.0%	25.8%	98,455	639,601	43,699,272
Some College, No Degree	23.5%	21.4%	21.0%	77,484	620,252	35,525,113
Associate's Degree	15.2%	12.8%	9.1%	50,314	372,692	15,389,737
Bachelor's Degree	17.5%	25.2%	20.8%	57,787	731,462	35,261,652
Postgraduate Degree	6.7%	12.4%	12.1%	22,096	359,096	20,445,749

American Community Survey 2014-2018 unless noted otherwise.

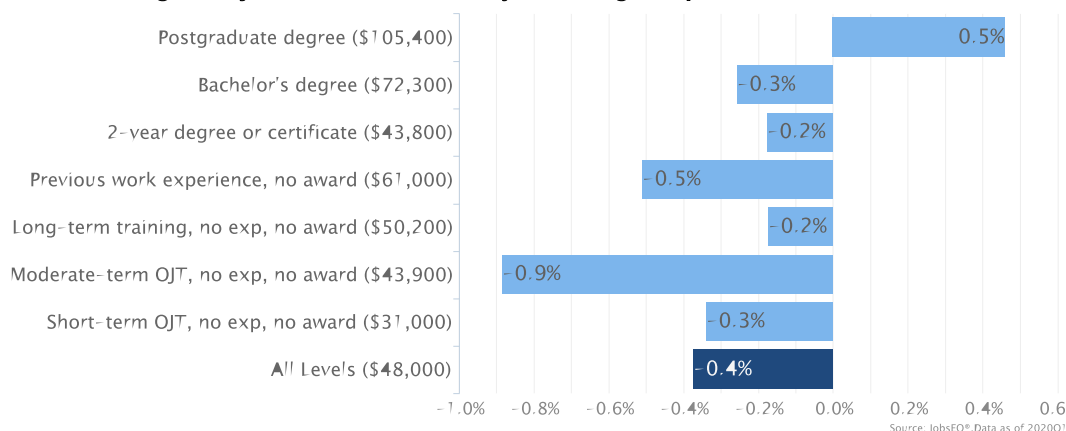
## Educational Attainment, Age 25-64



American Community Survey 2014-2018.

Expected growth rates for occupations vary by the education and training required. While all employment in the Southwest Minnesota is projected to contract 0.4% over the next ten years, occupations typically requiring a postgraduate degree are expected to grow 0.5% per year, those requiring a bachelor's degree are forecast to contract 0.3% per year, and occupations typically needing a 2-year degree or certificate are expected to contract 0.2% per year.

## Annual Average Projected Job Growth by Training Required for Southwest Minnesota



Employment by occupation data are estimates as of 2020Q1. Education levels of occupations are based on BLS assignments. Forecast employment growth uses national projections from the Bureau of Labor Statistics adapted for regional growth patterns.

### Regional Colleges and Universities

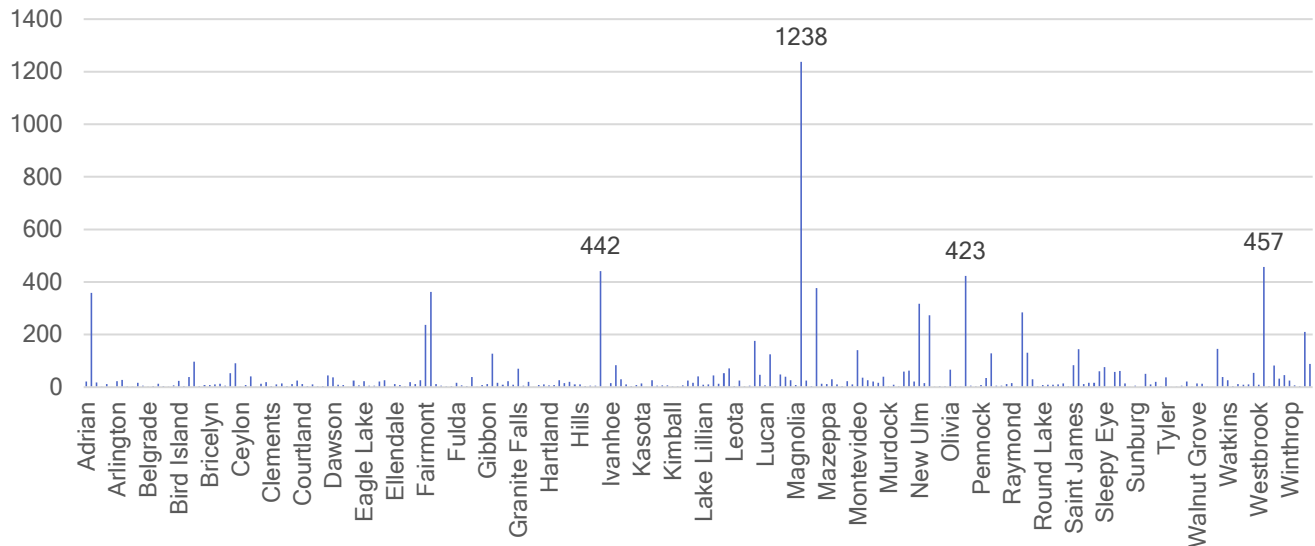
Southwest Minnesota has 11 institutions of higher education that offer non-degree awards, two-year degrees, and four-year degrees. The table below shows these postsecondary institutions sorted by enrollment size in during the 2017-18 school year.

School	Certificates and 2yr Awards	4yr Awards	Total School Enrollment	Avg Net Price
Minnesota State University-Mankato	169	2,616	14,374	\$14,519
Southwest Minnesota State University	13	488	7,167	\$14,604
Minnesota West Community and Technical College	987	0	3,362	\$10,068
Ridgewater College	839	0	3,298	\$11,782
St Olaf College	0	920	3,048	\$26,894
South Central College	643	0	2,746	\$9,753
Gustavus Adolphus College	0	621	2,241	\$23,906
Carleton College	0	512	2,097	\$32,336
Martin Luther College	45	190	972	\$19,244
Bethany Lutheran College	3	135	739	\$17,546
Avalon School of Cosmetology	11	0	25	\$5,445
<b>Total</b>	<b>2,710</b>	<b>5,482</b>	<b>40,069</b>	<b>n/a</b>

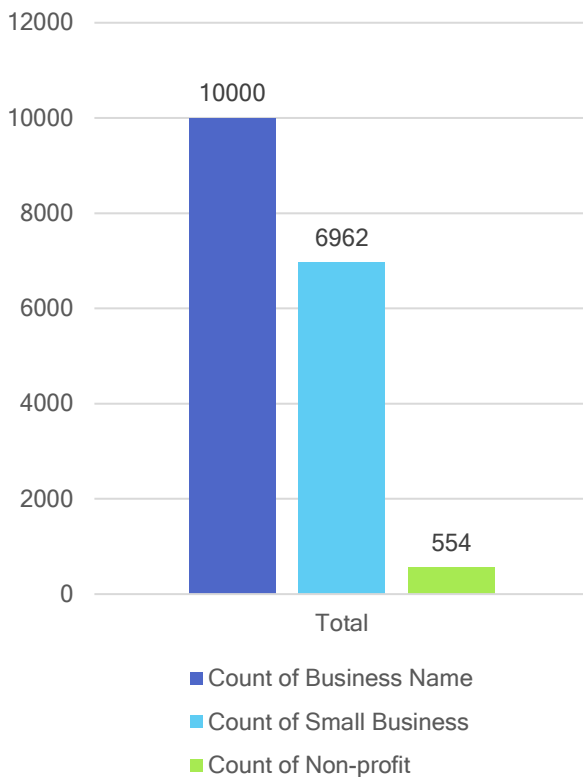
## Businesses

According to DatabaseUSA's sample of 10,000 businesses located in Southwest Minnesota, nearly 12% (1,238 businesses) are located Mankato; Willmar has the second highest concentration of businesses with 457 (5%). Of the sample Southwest Minnesota businesses, 411 are confirmed to be female-owned, and 44 are confirmed to be "minority-owned."

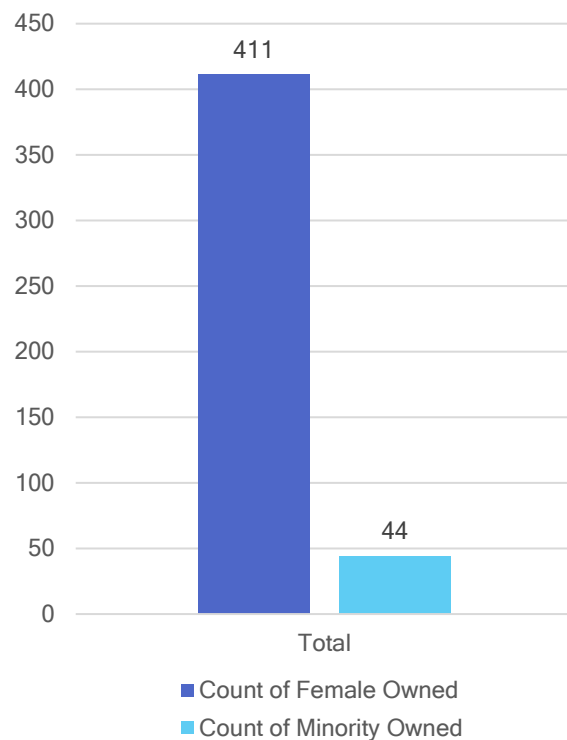
Businesses by City in Southwest MN



Small Businesses and Non-Profits in Southwest MN

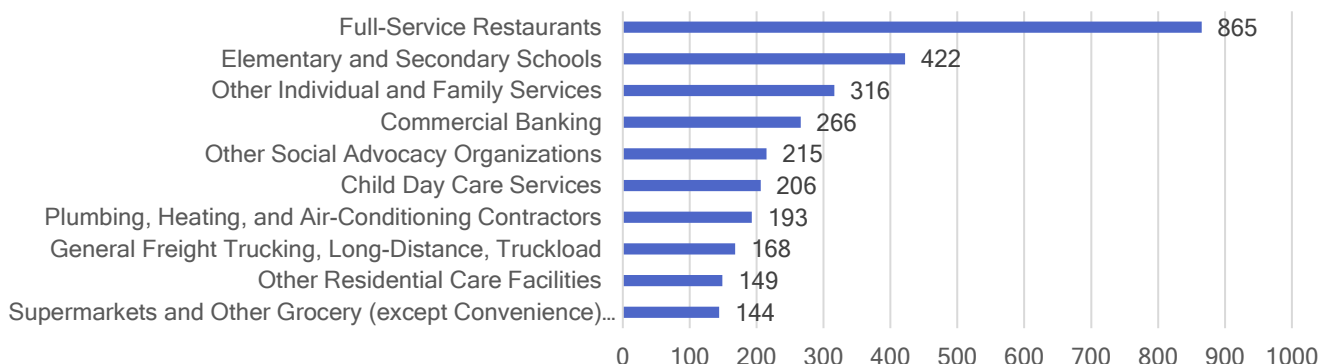


Female & Minority-Owned Businesses in Southwest MN



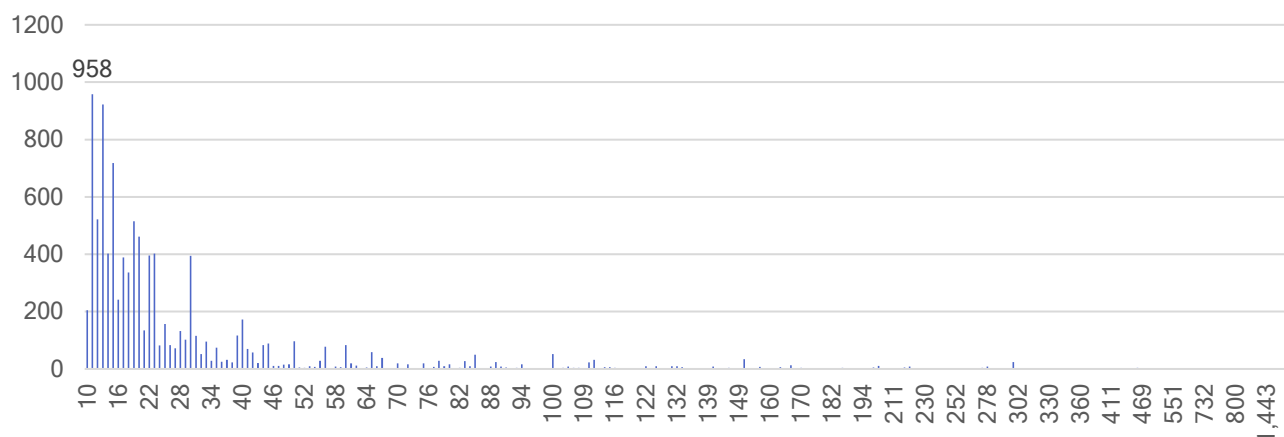
Among the 10,000 local businesses in the sample, the industries with the largest number of establishments are Full-Service Restaurants, Elementary and Secondary Schools, and Individual and Family Services.

**Businesses by Industry (Top 10 by Number) in Southwest Minnesota**

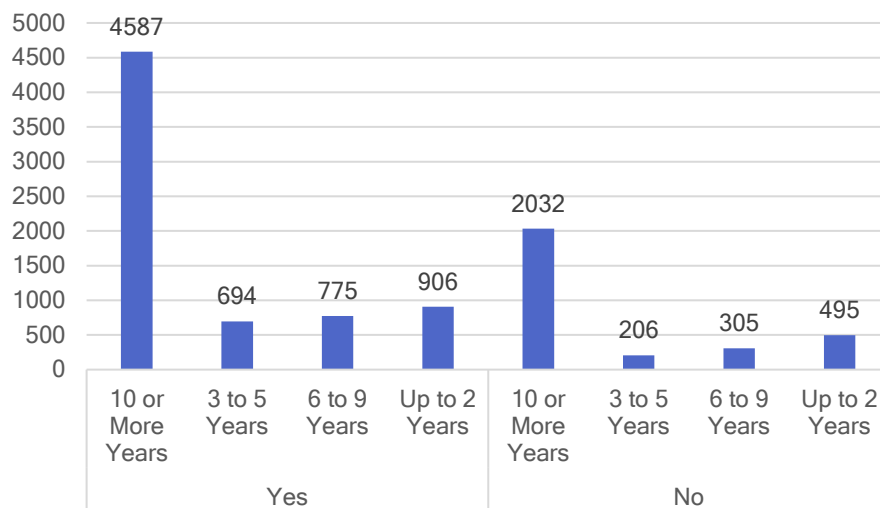


About 10% (958) of sample of businesses in Southwest Minnesota have just eleven employees. With a high volume of small businesses in the region, it is notable that about 66% of all regional businesses have been in business for ten or more years.

**Businesses by Size in Southwest Minnesota**



**Businesses by Small Business Status and Number of Years in Business in Southwest Minnesota**



NOTE: "Yes" implies small business status.

# Workforce Impacts of COVID-19

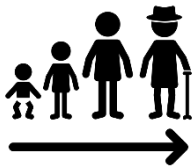
## *Community Vulnerability*

Because COVID-19 is a new disease, more work is needed to better understand the risk factors for severe illness or complications. Potential risk factors that have been identified by the Center for Disease Control (CDC) to date include:

- Age
- Race/ethnicity
- Gender
- Some medical conditions
- Use of certain medications
- Poverty and crowding
- Certain occupations
- Pregnancy

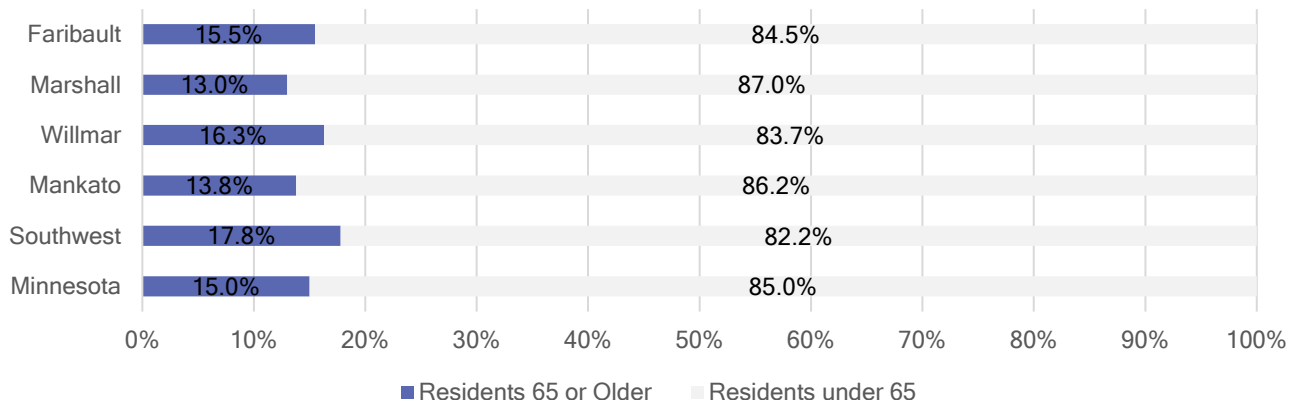
Older adults and people with medical conditions are at increased risk for severe illness. People who may need extra precautions, as prevalence of the virus is higher for these groups, include racial and ethnic minority groups, people living in rural communities, and people experiencing homelessness. Additional groups advised by the CDC to take additional precautions are those who may have more complex treatment needs if they were to fall seriously ill, such as people who are pregnant or breastfeeding, people with disabilities, and people with developmental or behavioral disorders.

## AGE



Southwest MN has a **HIGHER** share of residents 65 or older (17.8% of residents).

### Residents 65+



American Community Survey 2014-2018.

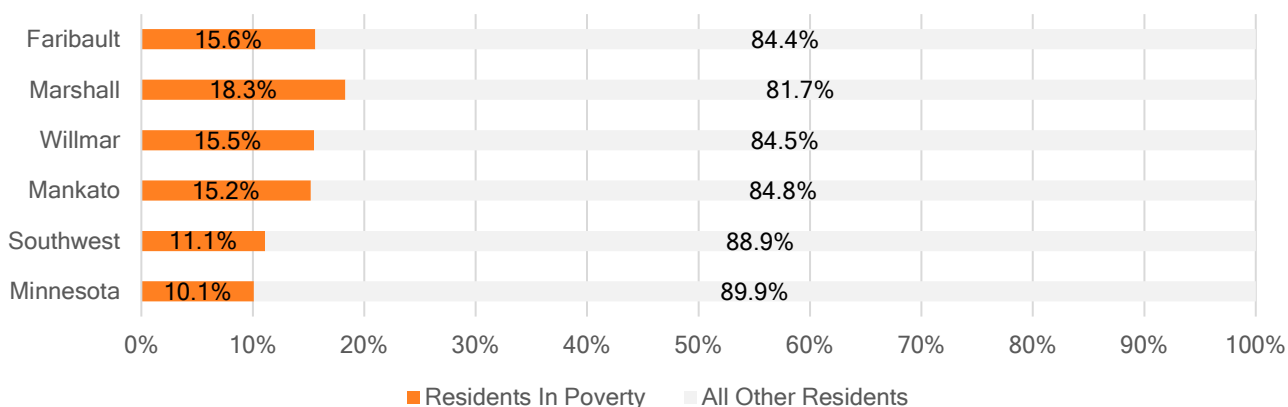
## POVERTY



Southwest MN has a **HIGHER** share of residents living in poverty (11.1%).

The per-capita income of residents of Southwest Minnesota is \$30,252, which is about \$5,993 lower than the per-capita income of Minnesota residents overall (\$36,245). The per capita income of residents in Marshall is \$29,809, which is over \$6,000 less than the statewide per-capita income. About one in nine (11.1%) Southwest Minnesota residents live in poverty and about one in six of Marshall residents live in poverty (18.3%). About 7.7% of households in Southwest Minnesota receive food stamps, compared to 8.2% and 12.2% in Minnesota and nationwide, respectively.

### Residents in Poverty



American Community Survey 2014-2018.

## DISCONNECTED YOUTH

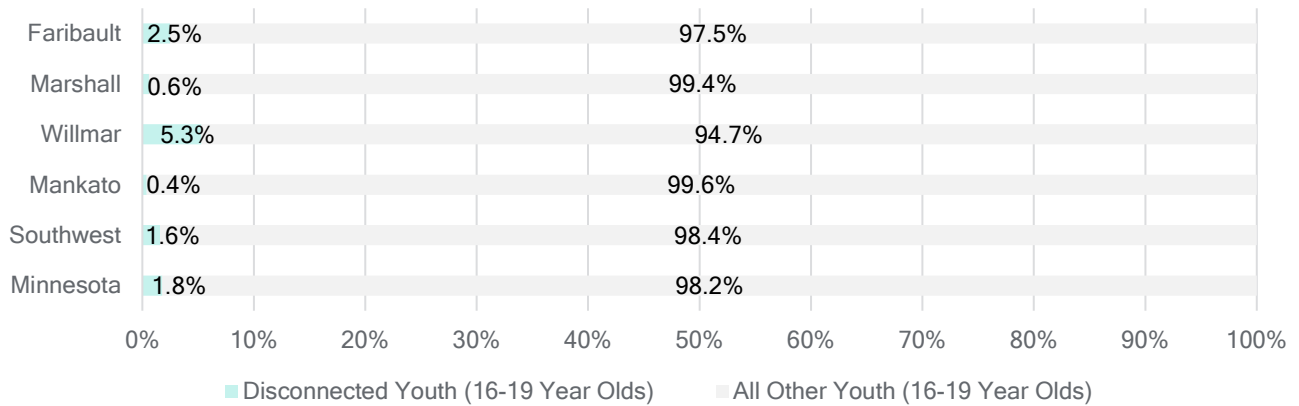


Southwest MN has a **LOWER** share of disconnected youth (1.6%).

There are an estimated 577 disconnected youth living in Southwest Minnesota, which is about 1.6% of the total population of people between the ages of 16 and 19. These youth are not in school, not high school graduates, and are either unemployed or not in the labor force. The Southwest Minnesota's disconnected youth represent about 11% of all disconnected youth in the state (5,025 total statewide). Willmar has a greater share of disconnected youth than other cities in the Southwest.



## Disconnected Youth



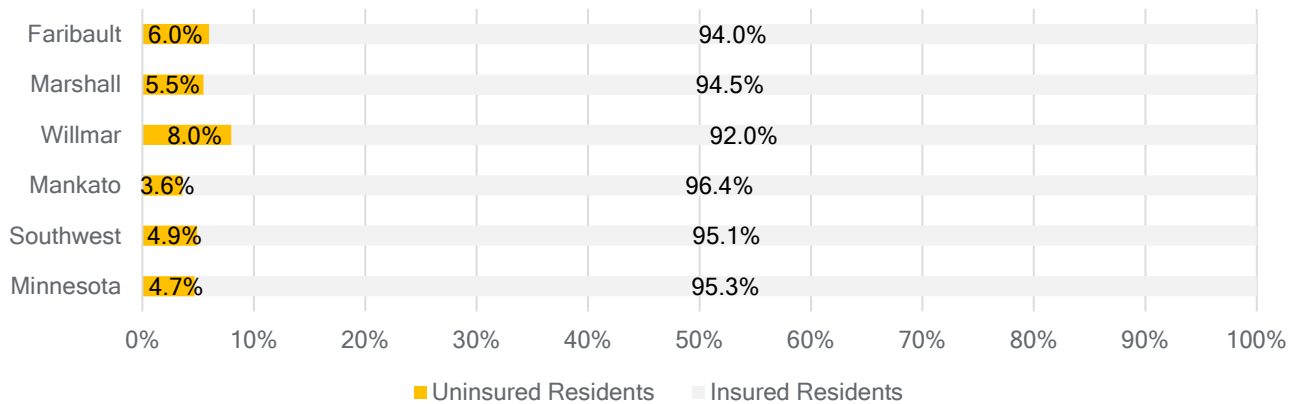
American Community Survey 2014-2018.

## UNINSURED



Southwest MN has a **HIGHER** share of residents without health insurance (4.9%).

## Uninsured Residents



American Community Survey 2014-2018.

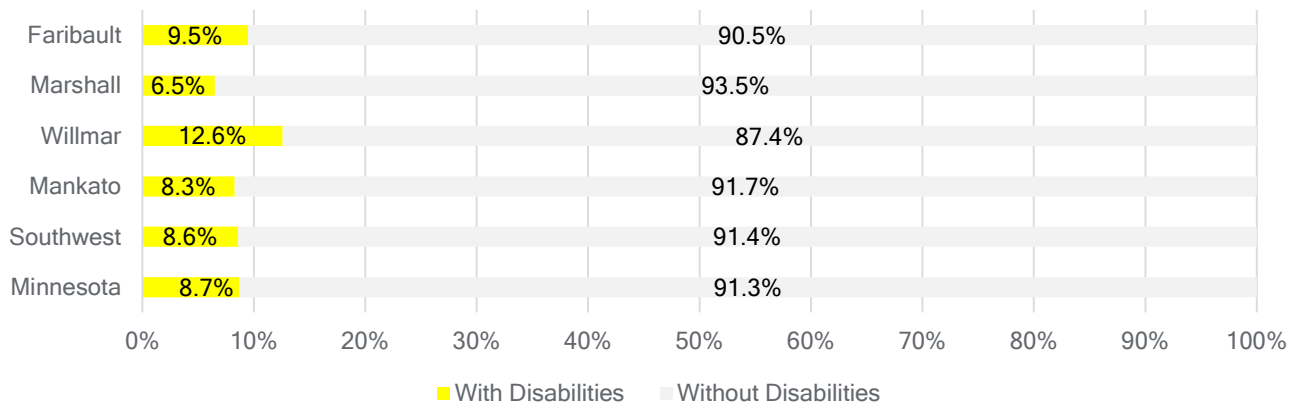
## DISABILITY



Southwest MN has a **LOWER** share of residents with disabilities (8.6%).

Southwest Minnesota has a greater share of residents ages 18 to 64 with a disability compared to Minnesota as a whole (8.7%) and the nation overall (10.3%). In all, about 33,786 adults (8.6%) between the ages 18 to 64 living in Southwest Minnesota have some form of disability. Of these, 54.1% participate in the labor force (18,278 total working or seeking work), compared to 52.5% statewide.

### Residents with Disabilities, Ages 18-64



American Community Survey 2014-2018.

## Industry Vulnerability

The Economic Vulnerability Index is a measurement developed by Chmura Economics to estimate the negative impact that the coronavirus crisis can have on employment based upon a community's mix of industries.<sup>3</sup> For example, accommodation and food services are projected to lose more jobs as a result of the coronavirus (over half of jobs lost, on average across the broad industry category) compared to utilities and education services (with mild or no job contractions in most cases). Overall, this index measures the possible impact in a community dependent upon the local industry mix—it does not take into account variation due to a region's rate of viral infection, health services, policies, or other considerations.

According to Chmura Economics, “the average Vulnerability Index score is 100, representing the average job loss expected in the United States. Higher scores indicate the degree to which job losses may be greater—an index of 200, for example, means the rate of job loss can be twice as large as the national average. Conversely, an index of 50 would mean a possible job loss of half the national average.” In Southwest Minnesota, Yellow Medicine County may have over a tenth of the job losses than the national average (ranking #405 from the top nationwide in possible negative economic impact), while Sibley County may have about half of job losses than the national average.

**Economic Vulnerability of Southwest Counties by Industry Mix, July 2020**

	Southwest Minnesota	Vulnerability Index	National Rank
27173	Yellow Medicine County, Minnesota	110.22	405
27049	Goodhue County, Minnesota	109.38	418
27013	Blue Earth County, Minnesota	104.49	570
27131	Rice County, Minnesota	92.33	1206
27129	Renville County, Minnesota	89.05	1381
27091	Martin County, Minnesota	89.04	1382
27047	Freeborn County, Minnesota	87.63	1472
27015	Brown County, Minnesota	85.87	1573
27147	Steele County, Minnesota	84.78	1624
27083	Lyon County, Minnesota	82.31	1771
27133	Rock County, Minnesota	81.48	1805
27067	Kandiyohi County, Minnesota	79.35	1917
27085	McLeod County, Minnesota	78.77	1944
27165	Watonwan County, Minnesota	78.63	1954
27161	Waseca County, Minnesota	76.14	2090
27023	Chippewa County, Minnesota	75.96	2100
27081	Lincoln County, Minnesota	74.92	2154
27117	Pipestone County, Minnesota	73.13	2245
27093	Meeker County, Minnesota	72.79	2260
27127	Redwood County, Minnesota	71.68	2315
27079	Le Sueur County, Minnesota	70.18	2380
27101	Murray County, Minnesota	67.75	2483
27105	Nobles County, Minnesota	67.62	2492

<sup>3</sup> Chmura Economics, April 2020. <http://www.chmuraecon.com/interactive/covid-19-economic-vulnerability-index/>

27103	Nicollet County, Minnesota	67.2	2512
27033	Cottonwood County, Minnesota	64.26	2608
27043	Faribault County, Minnesota	64.17	2614
27063	Jackson County, Minnesota	61.93	2678
27073	Lac Qui Parle County, Minnesota	57.85	2808
27143	Sibley County, Minnesota	55.88	2864

Economic Vulnerability Index model from Chmura Economics & Analytics

Industries like Accommodation and Food Services and Arts, Entertainment, and Recreation have been hardest-hit by the impacts of COVID-19. In fact, losses as high as 60% are anticipated short-term impacts in both of these industries. An estimated 13% of local occupations by industry in the Southwest region are vulnerable to the immediate-term impacts of COVID-19.

### Short-Term Industry Vulnerability to the COVID-19 Pandemic, Southwest Minnesota

Industry	Anticipated Short-Term Job Loss from COVID-19	Total Local Employment	Total Vulnerable Jobs
Accommodation and Food Services	60%	23,334	14,000
Arts, Entertainment, and Recreation	60%	4,830	2,898
Other Services (except Public Administration)	25%	14,916	3,729
Transportation and Warehousing	20%	13,160	2,632
Retail Trade	20%	36,096	7,219
Wholesale Trade	20%	12,382	2,476
Information	15%	3,945	592
Manufacturing	7%	59,879	4,192
Construction	7%	17,317	1,212
Mining, Quarrying, and Oil and Gas Extraction	5%	421	21
Real Estate and Rental and Leasing	5%	2,971	149
Health Care and Social Assistance	5%	53,821	2,691
Finance and Insurance	5%	10,359	518
Educational Services	5%	26,394	1,320
Administrative and Support and Waste Management and Remediation Services	2%	10,166	203
Agriculture, Forestry, Fishing and Hunting	2%	17,964	359
Public Administration	1%	16,518	165
Professional, Scientific, and Technical Services	1%	6,871	69
Management of Companies and Enterprises	1%	1,991	20
Utilities	1%	2,249	22
<b>Total Jobs</b>	<b>13%</b>	<b>335,584</b>	<b>44,488</b>

Economic Vulnerability Index model from Chmura Economics & Analytics

## *Occupational Vulnerability*

Research by Dingel and Neiman<sup>4</sup> and by Leibovici, Santacreu, and Famiglietti<sup>5</sup> highlight occupations that cannot be done from home and are consistently high contact-intensity. Following their models, a combination of occupational employment estimates as of the fourth quarter of 2020, coupled with an index of occupational contact-intensity from O\*NET, gives us a picture of local occupations in high vulnerability due to their level of close proximity to patients or the general public. O\*NET classifies positions based on a rating system of job requirements in close physical proximity to other people. The possible answers and corresponding scores are:

- I don't work near other people (beyond 100 ft.): 0
- I work with others but not closely (e.g. private office): 25
- Slightly close (e.g. shared office): 50
- Moderately close (at arm's length): 75
- Very close (near touching): 100

All occupations are then classified into low-medium and high contact-intensity categories based on scores of 0-50 (low), 50-75 (medium), and 75+ (high). Fifteen out of 107 occupations at the four-digit Standard Occupation Level (SOC) are considered high contact-intensity. The occupation cluster of highest contact intensity are Barbers, Hairstylists, and Cosmetologists, with a physical proximity index of 92.17. Other occupations that are contact-intensive include teachers, health care workers, and a multitude of roles in the service industry. Minnesota has around 21% of workers in high contact-intensity roles, on the lower end of states ranging from 20% to 25% overall.

The Southwest region has higher share of high contact-intensity positions than Minnesota overall, at about 25% of individuals employed in the first quarter of 2020 being employed in high contact-intensity positions. The majority of these were in direct health care support roles, food and beverage service roles, motor vehicle operators, health diagnosing and treating roles, and educators. Of these, the Home Health and Personal Care Aides roles are expecting the greatest volume in annual growth. In all, about 26% of new positions opening due to job exits, job changes, or job growth under normal economic conditions would be for high contact-intensity positions in the region. Across Minnesota, these high contact-intensity roles pay an average \$51,000 per year compared to just \$45,600 for jobs located in Southwest Minnesota.

<sup>4</sup> Dingel, C. L., and B. Neiman (2020): "How Many Jobs Can be Done at Home?" *NBER Working Paper No. 26948*.

<sup>5</sup> Leibovici, F., A. M. Santacreu, and M. Famiglietti (2020): "Social Distancing and Contact-Intensive Occupations," FRB St. Louis Technical Report, URL: <https://www.stlouisfed.org/on-the-economy/2020/march/social-distancing-contact-intensive-occupations#:~:text=Food%20and%20beverage%20serving%20workers%20are%20at%20the%20bottom%20of,K%20to%2012th%20grade%20teachers.>

## Summary Statistics of High Contact-Intensity Positions in Southwest Minnesota, 2020Q1

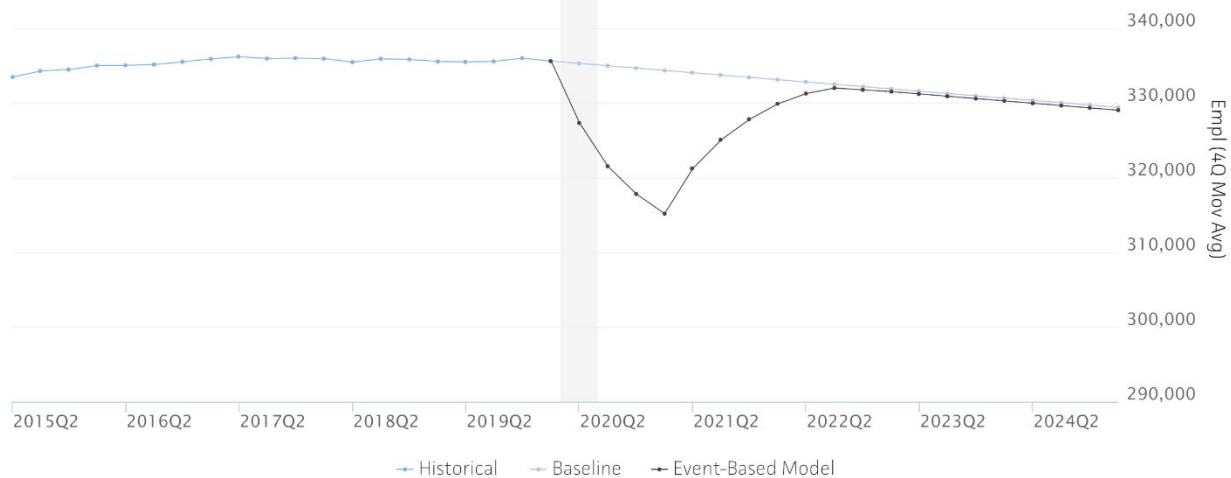
SOC	Occupation	Proximity Index	Annual Supply Gap	Current Empl. 2020Q1	Annual Growth Demand	Annual Sep Demand	Total Annual Demand	Projected Empl 2030	Accum. Supply 2025	Accum. Demand 2025	Avg Wages
31-2000	Occupational Therapy and Physical Therapist Assistants and Aides	90.5	(2)	324	4	55	59	365	132	142	\$49,600
31-1100	Home Health and Personal Care Aides; and Nursing Assistants, Orderlies, and Psychiatric Aides	90.3	0	13,975	163	2,751	2,913	15,601	6,222	6,224	\$29,100
35-1000	Supervisors of Food Preparation and Serving Workers	88.0	6	2,089	5	408	413	2,140	988	960	\$37,600
29-1000	Healthcare Diagnosing or Treating Practitioners	86.2	(124)	11,700	40	872	912	12,099	1,737	2,356	\$102,600
39-1000	Supervisors of Personal Care and Service Workers	84.5	(3)	745	1	111	112	753	258	275	\$39,000
29-2000	Health Technologists and Technicians	82.7	(45)	6,113	2	625	627	6,132	1,395	1,618	\$46,800
31-9000	Other Healthcare Support Occupations	80.2	(15)	2,657	21	440	461	2,870	1,005	1,079	\$39,600
25-2000	Preschool, Elementary, Middle, Secondary, and Special Education Teachers	79.5	5	9,540	-68	999	930	8,856	2,494	2,469	\$54,300
25-3000	Other Teachers and Instructors	79.0	0	2,245	-6	380	374	2,184	835	836	\$39,300
53-3000	Motor Vehicle Operators	75.6	(6)	12,670	-45	2,046	2,001	12,216	4,641	4,673	\$40,500
39-9000	Other Personal Care and Service Workers	75.5	36	4,717	-3	1,042	1,039	4,688	2,466	2,288	\$28,100
35-3000	Food and Beverage Serving Workers	75.2	225	15,838	58	4,127	4,185	16,418	9,810	8,688	\$24,600
<b>All High Contact-Intensity Occupations</b>				<b>82,613</b>	<b>172</b>	<b>13,856</b>	<b>14,026</b>	<b>84,322</b>	<b>31,983</b>	<b>31,608</b>	<b>\$45,600</b>
<b>Total - All Occupations</b>				<b>335,579</b>	<b>-1,224</b>	<b>52,780</b>	<b>51,550</b>	<b>323,328</b>	<b>126,481</b>	<b>123,532</b>	<b>\$48,000</b>
<b>Share High Contact-Intensity</b>				<b>25%</b>	<b>MOD</b>	<b>26%</b>	<b>27%</b>	<b>26%</b>	<b>25%</b>	<b>26%</b>	

The ongoing pandemic affects each of these occupations, though in different ways: for instance, with hospitality and food service roles being largely eliminated during the first three months of the pandemic, while essential occupations remained in high demand and experienced dramatic shortages of workers. Health Diagnosing and Treating Practitioners is one occupation area that has had extremely varied experiences, as some medical procedures not deemed essential were placed on hold for a period of time and sending many into furlough. Long-term, Health Diagnosing and Treating Practitioners are expected to be in shortage in the Southwest region and experiencing higher than average growth demand. Average wages for these roles are \$102,600 in this region and positions typically require a college degree. See more on detailed occupation impacts in the immediate-term through local unemployment application trends and the mid-term based on occupation supply-demand analysis.

## General Workforce Impact Trend

Overall, impacts of COVID-19 have been expected to be sharp and short, with an eventual return to the forecasted trends anticipated prior to the impact of the virus. Future employment in the region is forecasted to decline by about 0.4% annually through 2025, under official forecasts by the Bureau of Labor Statistics and the MN Department of Employment and Economic Development. In comparison, official forecasts for Southeast Minnesota forecast a decline of about 0.1% employment annually through 2025.

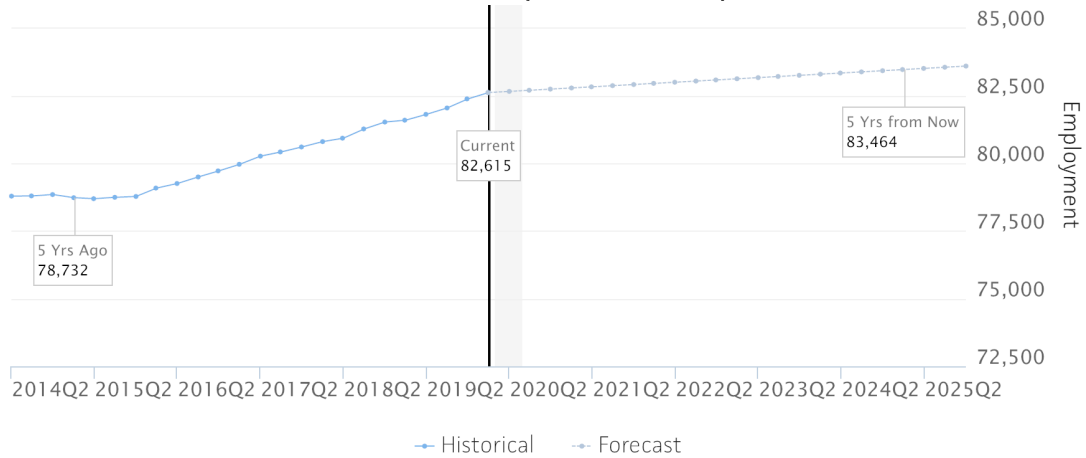
5-Year Forecast Comparison in Southwest Minnesota



Source: JobsEQ®, Data as of 2020Q1

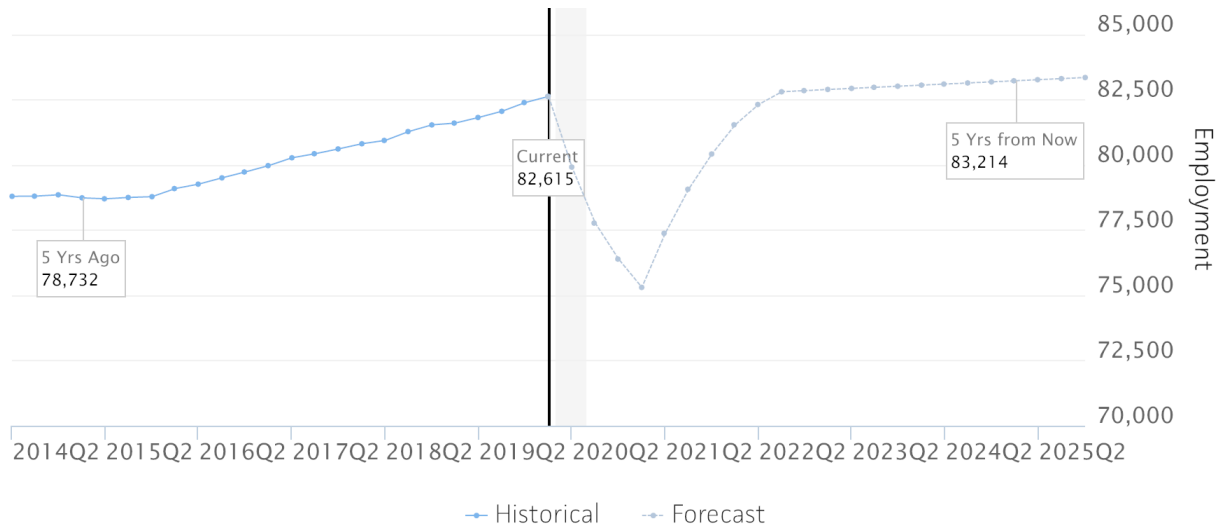
For roles that require close contact with the public, moderate growth was forecast in Southwest Minnesota. Across the Southwest region, it is anticipated that from the 82,615 people employed locally in high contact-intensity roles during the first quarter of 2020 will see a dramatic drop of 7,313 (-8.9%) by the first quarter of 2021, and then gradually rise through the third and fourth quarters of 2022 to return to a similar annual growth rate for these positions that was anticipated prior to the pandemic. An estimated drop from 0.21% annual growth formerly forecast for Southwest Minnesota's high contact-intensity roles down to about 0.15% average annual growth over five years in these positions is a reasonable estimated impact.

### Baseline High Contact-Intensity Occupation Employment 5-Year Forecast in Southwest Minnesota (Pre-COVID-19)



Source: JobsEQ®, Data as of 2020Q1, The shaded areas of the graph represent national recessions.

### COVID-19-Impacted High Contact-Intensity Occupation Employment 5-Year Forecast in Southwest Minnesota



Source: JobsEQ®, Data as of 2020Q1, The shaded areas of the graph represent national recessions.

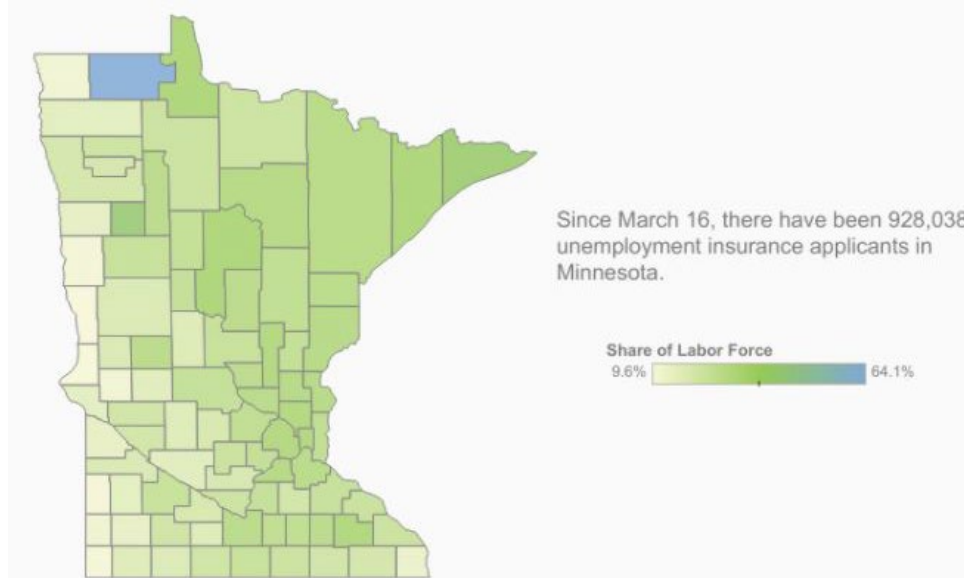


## *Immediate-Term Occupational Impacts*

Non-essential occupations that require a high-degree of close physical interaction have been hit hardest in the early weeks of the pandemic, as consumers reduced demand in pursuit of social distancing and regulation at state and local levels shut down business functions in high-contact roles. According to Leibovici and collaborating authors, “these occupations are likely to be more vulnerable to the shock, leading either to layoffs of nonessential workers or to an increase in the risk of contagion among those workers that have to stay in the workplace to perform essential activities. Carrying out some of these occupations remotely, when plausible, is likely to allow them to better absorb the negative shock.”<sup>6</sup>

Across Minnesota, there have been 928,038 applicants for unemployment insurance since March 16, 2020 according to the MN Department of Employment and Economic Development. Among the Southwest Minnesota counties, Blue Earth County has had the greatest share of its overall labor force apply for unemployment insurance since March 16, 2020. Over the past five and a half months, Blue Earth County saw 29.9% of its existing workforce apply for unemployment insurance.

### Unemployment Insurance Applicants as a Share of Total Labor Force by County



MN DEED, Unemployment Insurance Statistics. Accessed 9/3/2020 at <https://mn.gov/deed/data/data-tools/unemployment-insurance-statistics/>

Construction Trades Workers and Food and Beverage Serving Workers had the most applicants for unemployment in Southwest Minnesota since the beginning of the COVID-19 Pandemic, representing nearly 15.5% of all applications, or a total of 11,591 workers. These two occupation groups account for 8% of total employment in the Southwest region.

<sup>6</sup> Unemployment Insurance Applications, MN Department of Employment and Economic Development.

**Unemployment Insurance Applicants and Employment in Top 20 Occupations Requesting Insurance in Southwest Minnesota from March 16, 2020 - August 27, 2020**

<b>Occupations, March 16 - August 27, 2020</b>	<b>Total UI Applicants in Southwest MN</b>	<b>% of Total Applicants in Southwest MN*</b>	<b>2020Q1 Empl in Southwest MN</b>	<b>% of Total Empl in Southwest MN</b>	<b>% of Total Workforce Applying for UI Relief**</b>
Construction Trades Workers	5970	8.0%	11,209	3.5%	53.3%
Food and Beverage Serving Workers	5621	7.5%	15,838	4.9%	50.1%
Other Production Occupations	5281	7.1%	10,958	3.4%	47.1%
Retail Sales Workers	4512	6.0%	19,018	5.9%	40.3%
Cooks and Food Preparation Workers	3303	4.4%	5,772	1.8%	29.5%
Other Healthcare Support Occupations	2890	3.9%	2,657	0.8%	25.8%
Information and Record Clerks	2510	3.4%	9,990	3.1%	22.4%
Health Technologists and Technicians	2345	3.1%	6,113	1.9%	20.9%
Health Diagnosing and Treating Practitioners	2314	3.1%	11,700	3.6%	20.6%
Personal Appearance Workers	2198	2.9%	1,471	0.5%	19.6%
Metal Workers and Plastic Workers	1957	2.6%	6,231	1.9%	17.5%
Nursing, Psychiatric, and Home Health Aides	1915	2.6%	13,975	4.3%	17.1%
Other Food Preparation and Serving Related Workers	1866	2.5%	2,051	0.6%	16.6%
Motor Vehicle Operators	1860	2.5%	12,670	3.9%	16.6%
Assemblers and Fabricators	1790	2.4%	5,406	1.7%	16.0%
Other Office and Administrative Support Workers	1773	2.4%	6,963	2.1%	15.8%
Building Cleaning and Pest Control Workers	1467	2.0%	7,014	2.2%	13.1%
Other Education, Training, and Library Occupations	1424	1.9%	4,712	1.5%	12.7%
Other Personal Care and Service Workers	1291	1.7%	4,717	1.5%	11.5%
Other Management Occupations	1171	1.6%	16,525	5.1%	10.4%
<b>Grand Total - All Occupations</b>	<b>74,620</b>	<b>100.0%</b>	<b>324,816</b>	<b>100.0%</b>	<b>23.0%</b>

\*Fields marked in orange have a higher than anticipated concentration of UI applicants relative to the size of the existing workforce in that occupation, or higher than the overall ratio of unemployment insurance applicants to total workforce (\*\*)

By demographic, employed Southwest Minnesota residents between the ages of 20 and 44 years had their careers disproportionately negatively impacted by COVID-19, applying for unemployment insurance at higher rates than would be expected based on the overall share of all workers they represent. In the Southwest region, there is a greater share of people under the age of 34 in high contact-intensity roles than when compared to overall employment across all occupations. Individuals in these groups may be more likely to be exposed to the virus in their place of work, or experience layoffs associated with being in proximity to the public.

Occupations requiring no education, a high school diploma, or only some college education were disproportionately impacted by COVID-19 across Southwest Minnesota. This region has a less educated workforce, with a higher percent of the local workforce with a High School degree or Some College than the rates seen statewide—primarily due to a smaller share of residents with less Four-Year or Advanced degrees. People with higher levels of educational attainment saw greater job stability, based on what can be inferred by unemployment insurance application rates by worker educational background.

By sex, females have applied for unemployment insurance at higher rates in the Southwest region than males. In addition, females were employed in high contact intensity positions at higher rates than male workers; although females comprise a smaller share of Southwest Minnesota's workforce, they represent 65.9% of local workers in high contact-intensity occupation groups. Black, Indigenous, and Hispanic workers have applied for unemployment insurance at higher rates than would be expected by their local employment rate in this region. Although Black workers comprise only 1.9% of local employment as of the fourth quarter of 2020, they represent 4.3% of all regional unemployment insurance applications since the pandemic began. In the Southwest region, there is a relatively higher share of Black/African American and Asian talent working in high contact-intensity occupations in comparison to their share of overall employment.

**Unemployment Insurance Applicant Demographics from March 16 - August 27, 2020 in Southwest Minnesota, with Employment in High Contact-Intensity Occupations**

	Minnesota		Southwest MN				
	Workers Filing for Unemployment between March 16 and August 27, 2020	Percent of Total Filing for Unemployment	Workers Filing for Unemployment between March 16 and August 27, 2020	Percent of Total Filing for Unemployment	Share of Total 2020Q1 Empl	Difference (> 0 Indicates Higher Than Expected UI App by Group)	Share of Empl in High Contact-Intensity Occupations**
<b>Age Group</b>							
16-19	27,240	3.0%	2,560	2.9%	5.3%	-2.4%	7.5%
20-24	114,325	12.7%	11,217	12.8%	11.1%	1.7%	12.8%
25-34	224,175	25.0%	19,735	22.6%	18.9%	3.7%	19.3%
35-44	187,084	20.8%	18,184	20.8%	18.4%	2.4%	17.8%
45-54	149,831	16.7%	14,626	16.7%	20.1%	-3.4%	18.7%
55-64	143,557	16.0%	15,317	17.5%	19.7%	-2.2%	18.1%
65+	51,385	5.7%	5,698	6.5%	6.4%	0.1%	5.8%
<b>Education Level</b>							
Less than HS	56,001	6.2%	6,814	7.8%	6.6%	1.2%	4.7%
HS	276,623	30.8%	30,701	35.2%	30.1%	5.1%	26.4%
Some college	253,846	28.3%	26,541	30.4%	20.6%	9.8%	20.6%
2-year degree	89,039	9.9%	9,190	10.5%	16.8%	-6.3%	19.5%
4-year degree	169,303	18.9%	11,188	12.8%	19.0%	-6.2%	18.8%
Advanced	52,766	5.9%	2,899	3.3%	6.9%	-3.6%	9.9%
<b>Gender</b>							
Female	469,818	52.3%	47,799	54.7%	47.4%	7.3%	65.9%
Male	427,792	47.7%	39,541	45.3%	52.6%	-7.3%	34.1%
<b>Race and Ethnicity</b>							
American Indian Alaska Native	10,359	1.2%	575	0.7%	0.5%	0.1%	0.5%
Asian	51,032	5.7%	1,509	1.7%	1.8%	0.0%	1.9%
Black	94,085	10.5%	3,787	4.3%	1.9%	2.5%	2.5%
Hispanic	46,315	5.2%	6,008	6.9%	6.4%	0.5%	4.7%
Non-Hispanic White	634,637	70.7%	71,386	81.7%	94.7%	-12.9%	93.8%
<b>Total UI Applications with Demographics</b>	<b>897,631</b>		<b>87,342</b>				

Note: Totals may not sum due to rounding and incomplete demographic reporting. Total shown on this table indicates the total UI applicants reporting demographics. The actual total number of applicants during this period according to MN DEED was 928,038.

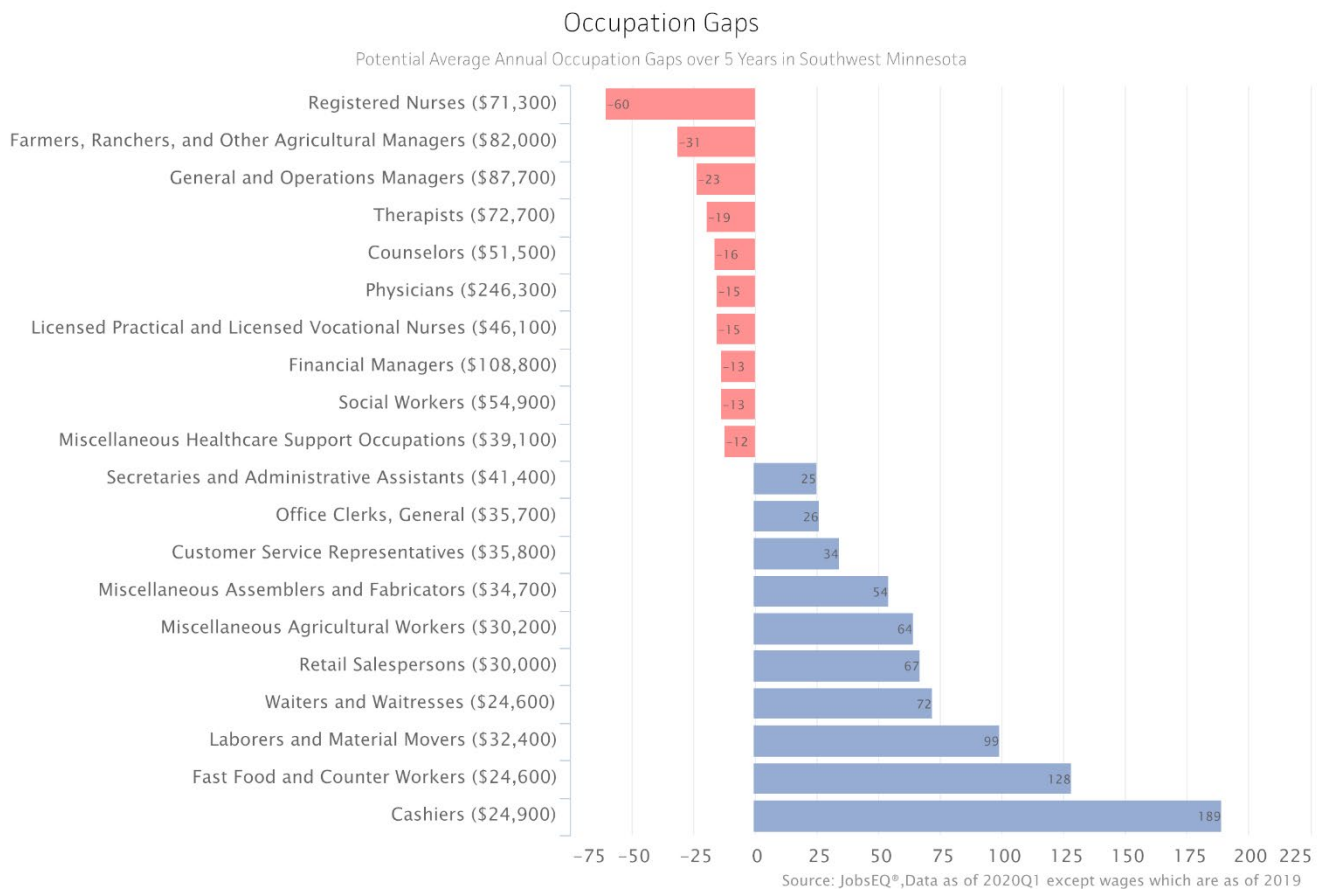
\*Race percent are of those who indicated a race/ethnicity. Some race data was not available online at the county level through the UI Applicant Data Tool.

\*\*Fields marked in orange are found in greater concentration in High-Contact Intensity occupations than in all occupations broadly.

## Mid-Term Occupational Impacts

Estimation of mid-term and long-term recovery of critical local occupations is based on our most reasonable hypothesis given current conditions. In Southwest Minnesota, an analysis of local labor market occupational gaps as of the first quarter of 2020 showed that there was a shortage of local Nurses, General and Agricultural Managers, Therapists, Counselors, Physicians, Financial Managers, Social Workers, and Healthcare Support Workers, Software Developers. Based on forecasted growing demand for health, education, human services, and remote work-friendly management positions, these occupations of shortage are likely to rebound and grow in demand as the pandemic subsides, possibly beyond initial forecasts. Nine of the top ten positions of highest forecasted talent shortage over the next five years pay wages of over \$46,000 per year. Most occupations of shortage require an Associate's degree or higher, though several—such as some of the Licensed Practical Nurse—have industry credential pathways that do not require an advanced degree.

Conversely, the six out of the ten positions forecast to have the highest surplus of talent as of the first quarter of 2020 require less than a high school diploma on average, and generally pay under \$41,000 per year. Seven out of ten of these positions typically cannot be done remotely, and two out of ten of these positions are considered high contact-intensity. Given the impacts of the COVID-19 pandemic on local industry, these occupations of anticipated high talent excess will likely decline in overall local demand and shift dramatically in how work is done on a daily basis.



## Shifting Opportunities

An analysis of current opportunities in Southwest Minnesota reveals that approximately 67.4% of all jobs offered in the community are non-remote, and just 7.9% of positions in the Southwest region are able to be made fully remote. The remaining positions (24.7%) may be able to function as partially-remote but will still require in-person activities.

Faribault, Willmar, and Mankato (MSA) have a mix of remote, partially-remote, and non-remote job opportunities similar to the mix region-wide, while Marshall has a larger share of jobs that can be done remotely or at least partially remotely.

**Remote, Partial, and Non-Remote Jobs by Place of Employment, Central Minnesota, 2020Q1**

	Faribault	Marshall	Willmar	Mankato MSA	Southwest
Remote	940	1,159	1,209	5,193	26,664
Partially-Remote	3,080	2,809	4,437	15,486	82,736
Non-Remote	8,710	7,060	11,801	38,751	226,183
<b>All Occupations</b>	<b>12,730</b>	<b>11,028</b>	<b>17,448</b>	<b>59,430</b>	<b>335,584</b>

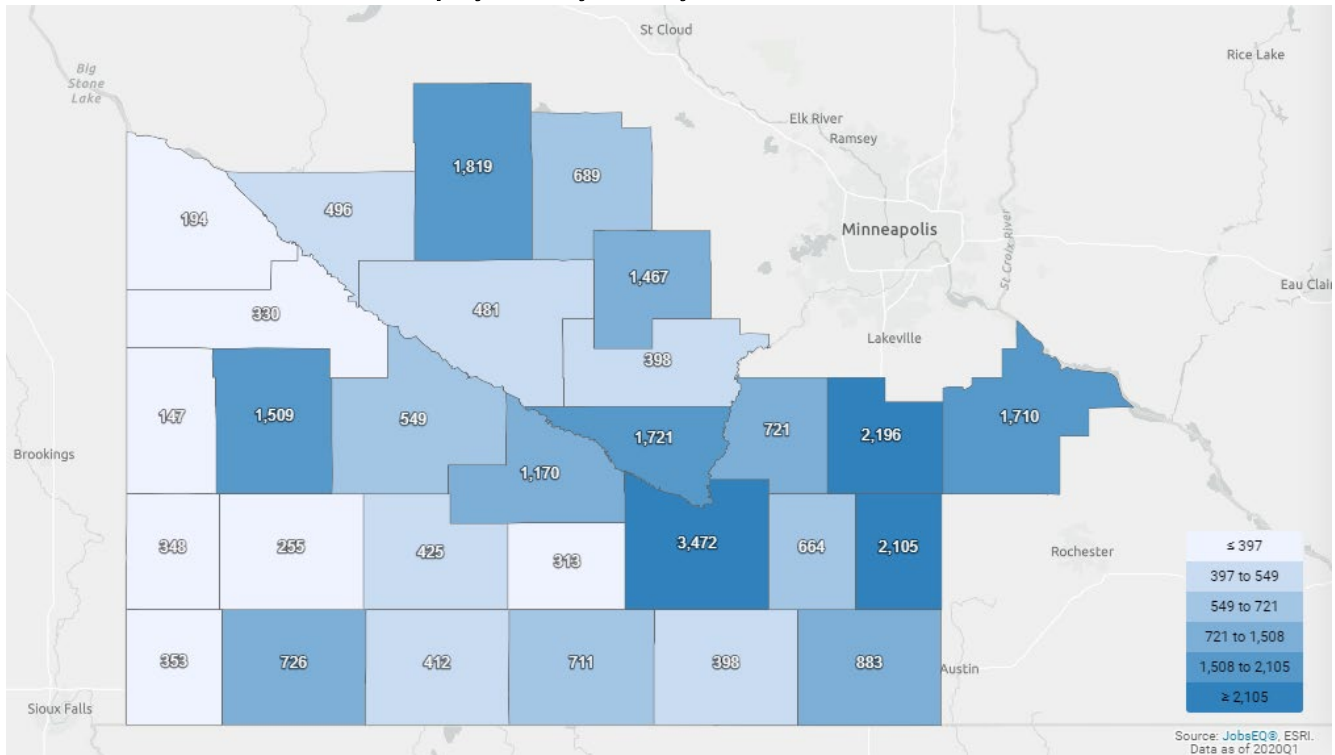
  

	Faribault	Marshall	Willmar	Mankato MSA	Southwest
Remote	7.4%	10.5%	6.9%	8.7%	7.9%
Partially-Remote	24.2%	25.5%	25.4%	26.1%	24.7%
Non-Remote	68.4%	64.0%	67.6%	65.2%	67.4%
<b>All Occupations</b>	<b>12,730</b>	<b>11,028</b>	<b>17,448</b>	<b>59,430</b>	<b>335,584</b>

## Remote Work

Across the 335,584 positions employing people in Southwest Minnesota, about 7.9% are either remote full-time or able to be made fully remote without dramatic changes to the occupational role. Across the 29 counties comprising Southwest Minnesota, Blue Earth County has the greatest number of remote work positions and non-remote positions. Overall, Watonwan County (74.3%), Nobles County (72.1%), and Le Sueur County (71.1%) have the greatest shares of non-remote work positions out of the total number of positions employing workers in their counties. In addition, Nicollet County (10.3%), Lyon County (10.1%), and Waseca County (9.6%) have the greatest shares of remote work positions out of the total number of positions employing workers in their counties.

Remote Work Employment by County in Southwest Minnesota, 2020Q1



County	Remote Work Empl 2020Q1	Partially-Remote Work Empl 2020Q1	Non-Remote Work Empl 2020Q1	Total Empl 2020Q1	% Remote
<b>Southwest Minnesota</b>	26,664	82,736	226,183	335,584	7.9%
Blue Earth County, Minnesota	3,472	10,581	28,722	42,775	8.1%
Brown County, Minnesota	1,170	3,441	10,412	15,023	7.8%
Chippewa County, Minnesota	496	1,650	4,177	6,323	7.8%
Cottonwood County, Minnesota	425	1,499	3,933	5,858	7.3%
Faribault County, Minnesota	398	1,281	3,589	5,268	7.6%
Freeborn County, Minnesota	883	2,774	9,671	13,329	6.6%
Goodhue County, Minnesota	1,710	5,106	16,958	23,773	7.2%
Jackson County, Minnesota	412	1,732	3,566	5,709	7.2%
Kandiyohi County, Minnesota	1,819	6,617	17,582	26,018	7.0%
Lac Qui Parle County, Minnesota	194	803	1,734	2,731	7.1%
Le Sueur County, Minnesota	721	2,161	7,095	9,978	7.2%
Lincoln County, Minnesota	147	616	1,379	2,142	6.9%
Lyon County, Minnesota	1,509	3,920	9,494	14,923	10.1%
McLeod County, Minnesota	1,467	3,924	11,895	17,287	8.5%
Martin County, Minnesota	711	2,461	6,285	9,458	7.5%
Meeker County, Minnesota	689	2,232	5,830	8,750	7.9%
Murray County, Minnesota	255	947	2,337	3,539	7.2%
Nicollet County, Minnesota	1,721	4,905	10,029	16,655	10.3%
Nobles County, Minnesota	726	2,451	8,223	11,400	6.4%
Pipestone County, Minnesota	348	1,255	3,539	5,142	6.8%
Redwood County, Minnesota	549	1,763	4,517	6,830	8.0%
Renville County, Minnesota	481	1,570	4,490	6,541	7.4%
Rice County, Minnesota	2,196	7,090	18,421	27,707	7.9%
Rock County, Minnesota	353	1,144	2,368	3,866	9.1%
Sibley County, Minnesota	398	1,414	3,328	5,140	7.7%
Steele County, Minnesota	2,105	5,270	15,531	22,907	9.2%
Waseca County, Minnesota	664	1,835	4,410	6,908	9.6%
Watonwan County, Minnesota	313	936	3,611	4,861	6.4%
Yellow Medicine County, Minnesota	330	1,357	3,056	4,744	7.0%

Analysis of employment by race, ethnicity, and gender reveal that a disproportionately large share of Asian and non-Hispanic talent is employed in remote work roles, whereas all other race and ethnic groups have a smaller share of local workers in these roles. Among the top twenty remote work positions by volume of residents employed, all had a higher than baseline concentration of non-Hispanic employees by ethnicity. Project Management Specialists and Business Operations Specialists have a higher concentration of American Indian talent than seen on average in Southwest Minnesota; Insurance Claims and Policy Processing Clerks have a higher concentration of Black or African American talent than seen on average in the region.

Among the top 20 remote work positions by volume in this region, 18 require some college or higher. Additionally, 17 out of the 20 positions require a Bachelor's degree or higher, but little to no prior experience or on-the-job training. Remote work positions in Southwest Minnesota pay an average annual salary of \$76,000 compared to \$48,000 across all local employment. Overall, remote work positions in Southwest Minnesota are forecast to decline over the next five years.



## Top 20 Remote Work Occupation Talent by Place of Residence in Southwest Minnesota, 2020Q1

SOC	Occupation	Total Empl 2020Q1	White	Black	American Indian	Asian	Two or More Races	Non- Hispanic/Latino	Hispanic or Latino (of any race)	Male	Female
43-3031	Bookkeeping, Accounting, and Auditing Clerks	3,299	96.9%	0.8%	0.2%	1.5%	0.6%	96.6%	3.4%	11.5%	88.5%
13-2011	Accountants and Auditors	1,936	94.2%	1.2%	0.2%	3.6%	0.8%	97.6%	2.4%	38.1%	61.9%
13-1198	Project Management Specialists and Business Operations Specialists, All Other	1,696	93.1%	1.5%	1.0%	3.4%	1.0%	97.1%	2.9%	42.1%	57.9%
11-9198	Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other	1,423	96.0%	1.0%	0.3%	2.0%	0.7%	97.0%	3.0%	63.3%	36.7%
15-1256	Software Developers and Software Quality Assurance Analysts and Testers	1,316	84.8%	1.0%	0.2%	13.1%	0.9%	98.7%	1.3%	81.3%	18.7%
11-3031	Financial Managers	1,058	94.6%	1.2%	0.2%	2.9%	1.1%	96.7%	3.3%	46.3%	53.7%
15-1211	Computer Systems Analysts	896	90.4%	1.5%	0.2%	6.5%	1.3%	97.8%	2.2%	59.6%	40.4%
13-1161	Market Research Analysts and Marketing Specialists	857	95.4%	0.8%	0.0%	3.3%	0.4%	98.1%	1.9%	43.1%	56.9%
23-1011	Lawyers	825	96.9%	0.8%	0.2%	1.6%	0.6%	98.5%	1.5%	62.9%	37.1%
13-1111	Management Analysts	769	93.4%	1.2%	0.1%	4.6%	0.7%	97.6%	2.4%	57.8%	42.2%
11-2022	Sales Managers	742	96.7%	0.8%	0.1%	1.6%	0.8%	97.6%	2.4%	50.9%	49.1%
13-2072	Loan Officers	660	95.9%	1.6%	0.4%	1.4%	0.8%	96.7%	3.3%	46.1%	53.9%
27-1024	Graphic Designers	592	95.9%	0.7%	0.2%	2.3%	0.9%	97.5%	2.5%	45.8%	54.2%
11-1011	Chief Executives	554	97.3%	0.5%	0.1%	1.7%	0.4%	98.3%	1.7%	72.0%	28.0%
41-1012	First-Line Supervisors of Non-Retail Sales Workers	518	96.8%	0.8%	0.1%	1.6%	0.7%	96.2%	3.8%	72.1%	27.9%
13-2098	Financial and Investment Analysts, Financial Risk Specialists, and Financial Specialists, All Other	478	93.7%	1.6%	0.1%	3.8%	0.8%	97.4%	2.6%	64.3%	35.7%
43-9041	Insurance Claims and Policy Processing Clerks	474	95.7%	2.9%	0.3%	0.7%	0.4%	95.6%	4.4%	18.5%	81.5%
11-3013	Facilities Managers	469	95.9%	1.3%	0.3%	0.9%	1.5%	97.2%	2.8%	58.4%	41.6%
13-1051	Cost Estimators	465	98.0%	0.3%	0.0%	1.4%	0.2%	98.1%	1.9%	85.4%	14.6%
15-1244	Network and Computer Systems Administrators	447	93.8%	1.2%	0.3%	3.3%	1.4%	98.0%	2.0%	73.9%	26.1%
<b>Remote Jobs</b>		<b>24,620</b>	<b>94.5%</b>	<b>1.2%</b>	<b>0.3%</b>	<b>3.3%</b>	<b>0.8%</b>	<b>97.4%</b>	<b>2.6%</b>	<b>49.0%</b>	<b>51.0%</b>
<b>Total - All Occupations</b>		<b>343,893</b>	<b>94.7%</b>	<b>1.9%</b>	<b>0.5%</b>	<b>1.8%</b>	<b>1.1%</b>	<b>93.6%</b>	<b>6.4%</b>	<b>52.6%</b>	<b>47.4%</b>

Note: Employment estimates as of 2020Q1 by place of residence, derived from the Chmura Industry/Occupation Matrix and industry employment data from the Quarterly Census of Employment and Wages (QCEW) provided by the Bureau of Labor Statistics. They will not directly match with employment estimates in other parts of this report which refer to place of work.

### Wages, Forecast, and Experience Requirements of Remote Work Talent by Occupation and Place of Residence in Southwest Minnesota, 2020Q1

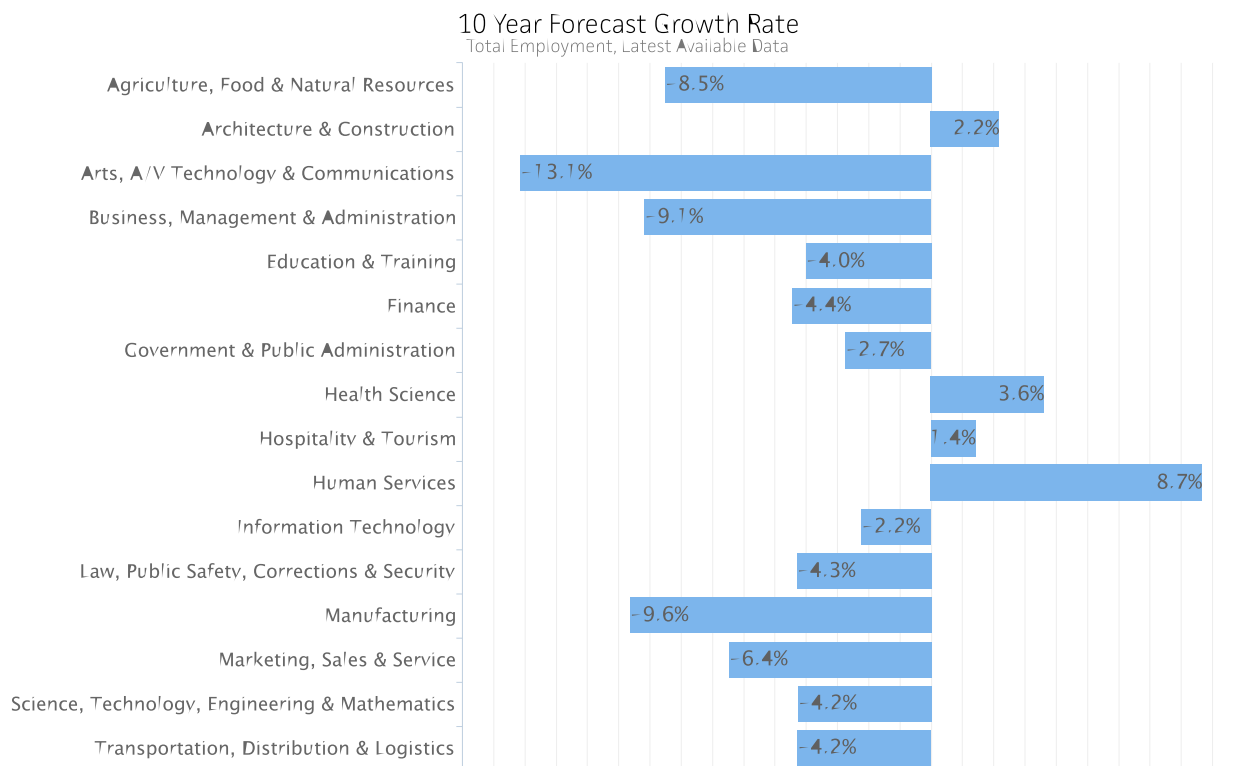
SOC	Occupation	Total Empl 2020Q1	Avg Ann Wages	Forecast Ann Growth	Typical Entry-Level Education	Previous Work Experience	Typical On-the-Job Training
43-3031	Bookkeeping, Accounting, and Auditing Clerks	3,299	\$40,300	-1.3%	Some college, no degree	None	Moderate-term on-the-job training
13-2011	Accountants and Auditors	1,936	\$65,800	-0.3%	Bachelor's degree	None	None
13-1198	Project Management Specialists and Business Operations Specialists, All Other	1,696	\$56,400	-0.2%	Bachelor's degree	None	None
11-9198	Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other	1,423	\$95,100	-0.1%	Bachelor's degree	Less than 5 years	None
15-1256	Software Developers and Software Quality Assurance Analysts and Testers	1,316	\$89,900	-0.2%	Bachelor's degree	None	None
11-3031	Financial Managers	1,058	\$108,800	0.5%	Bachelor's degree	5 years or more	None
15-1211	Computer Systems Analysts	896	\$80,800	-0.2%	Bachelor's degree	None	None
13-1161	Market Research Analysts and Marketing Specialists	857	\$58,300	0.7%	Bachelor's degree	None	None
23-1011	Lawyers	825	\$93,700	-0.1%	Doctoral or professional degree	None	None
13-1111	Management Analysts	769	\$68,200	0.2%	Bachelor's degree	Less than 5 years	None
11-2022	Sales Managers	742	\$114,000	-0.5%	Bachelor's degree	Less than 5 years	None
13-2072	Loan Officers	660	\$77,500	-0.3%	Bachelor's degree	None	Moderate-term on-the-job training
27-1024	Graphic Designers	592	\$40,400	-1.1%	Bachelor's degree	None	None
11-1011	Chief Executives	554	\$182,900	-1.3%	Bachelor's degree	Less than 5 years	None
41-1012	First-Line Supervisors of Non-Retail Sales Workers	518	\$76,400	-1.1%	High school diploma or equivalent	Less than 5 years	None
13-2098	Financial and Investment Analysts, Financial Risk Specialists, and Financial Specialists, All Other	478	\$82,000	-0.3%	Bachelor's degree	None	None
43-9041	Insurance Claims and Policy Processing Clerks	474	\$42,900	-0.6%	High school diploma or equivalent	None	Moderate-term on-the-job training
11-3013	Facilities Managers	469	\$83,200	0.1%	Bachelor's degree	Less than 5 years	None
13-1051	Cost Estimators	465	\$65,300	0.0%	Bachelor's degree	None	Moderate-term on-the-job training
15-1244	Network and Computer Systems Administrators	447	\$76,400	-0.4%	Bachelor's degree	None	None
	<b>Remote Jobs</b>	<b>24,620</b>	<b>\$76,000</b>	<b>-0.4%</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>
	<b>Total - All Occupations</b>	<b>343,893</b>	<b>\$48,000</b>	<b>-0.4%</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>

Note: Average Annual Wages as of 2019 by the Bureau of Labor Statistics and imputed by Chmura as necessary. Forecast employment growth uses projections from the Bureau of Labor Statistics for 2016-2026, adapted for regional growth patterns by Chmura.

## *Future Growth by Field and Cluster*

With hundreds of occupations, it can be difficult for educators to pinpoint the most promising high-demand and high-wage occupations in their region that provide rewarding careers for their students. Analysis of the sixteen CTE Clusters provides an entryway into career pathways.

Of the sixteen career clusters, four are expected to grow and twelve are expected to decline in Southwest Minnesota over the next ten years. The clusters expecting the greatest growth are Human Services (8.7%), Health Science (3.6%), and Architecture and Construction (2.2%)—the same three clusters anticipating the most growth in Northwest, Northeast, Central Minnesota as well. In contrast, Arts, Audio/Video Technology and Communications (-13.1%) and Manufacturing (-9.6%) are anticipating the greatest declines in overall employment.



Cluster forecasts estimated using Chmura, JobsEQ, based on 2020Q1 employment data. All clusters are distinct occupations except for Agriculture, Food, and Natural Resources, which overlaps with other clusters.

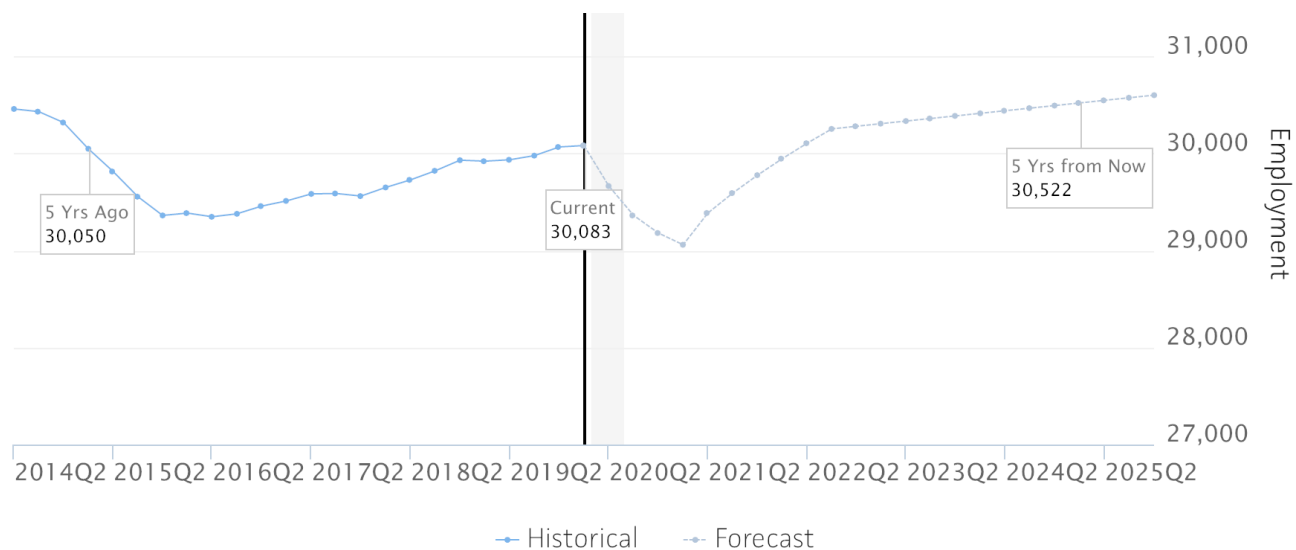
An accurate assessment of future occupation demand requires that both future growth and the number of people retiring be taken into account. In Southwest Minnesota, Hospitality & Tourism, Business, Management & Administration, and Marketing, Sales, and Service clusters are expected to have the highest annual job demand, by volume of opportunities—due to retirements and job changes.

Science, Technology, Engineering & Mathematics has the highest wages of the Career Clusters followed by the Information Technology and Finance clusters.

Career Cluster	Employment	Avg Ann Wages	Job Ads	Ann Empl Growth	Ann Total Demand
Science, Technology, Engineering & Mathematics	3,719	\$87,600	172	-17	252
Information Technology	4,897	\$76,300	345	-12	345
Finance	9,377	\$67,700	627	-43	813
Health Science	30,083	\$65,200	2,329	103	2,507
Agriculture, Food & Natural Resources	31,413	\$55,700	754	-186	3,435
Government & Public Administration	2,680	\$57,200	79	-8	226
Law, Public Safety, Corrections & Security	7,838	\$53,600	294	-35	676
Architecture & Construction	20,689	\$52,800	561	43	2,282
Business, Management & Administration	46,396	\$52,000	1,647	-447	4,447
Education & Training	21,178	\$51,800	392	-89	1,796
Arts, A/V Technology & Communications	5,389	\$43,800	101	-76	492
Marketing, Sales & Service	34,472	\$42,000	2,576	-232	4,422
Manufacturing	43,167	\$41,900	1,560	-438	4,266
Transportation, Distribution & Logistics	28,391	\$40,800	1,676	-125	3,207
Human Services	20,316	\$37,600	1,561	167	2,792
Hospitality & Tourism	37,737	\$27,700	2,548	50	6,238
<b>Total - All Occupations</b>	<b>335,584</b>	<b>\$48,000</b>	<b>16,797</b>	<b>-1,273</b>	<b>36,915</b>

Cluster forecasts estimated using Chmura, JobsEQ, based on 2020Q1 employment data. All clusters are distinct occupations except for Agriculture, Food, and Natural Resources, which overlaps with other clusters.

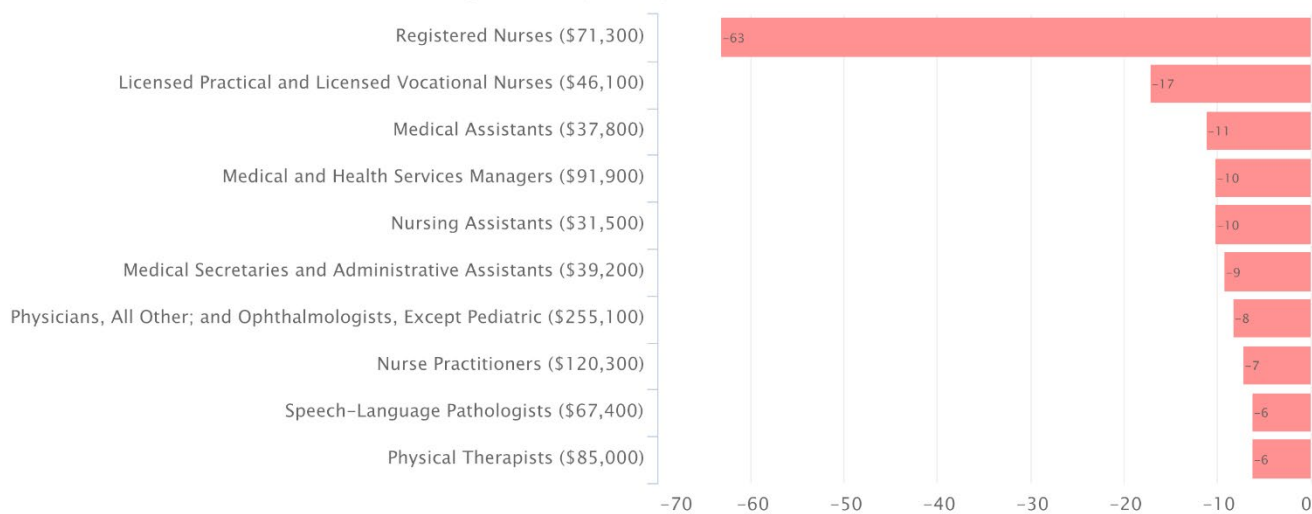
## HEALTH SCIENCE TECHNOLOGY



Source: JobsEQ®, Data as of 2020Q1, The shaded areas of the graph represent national recessions.

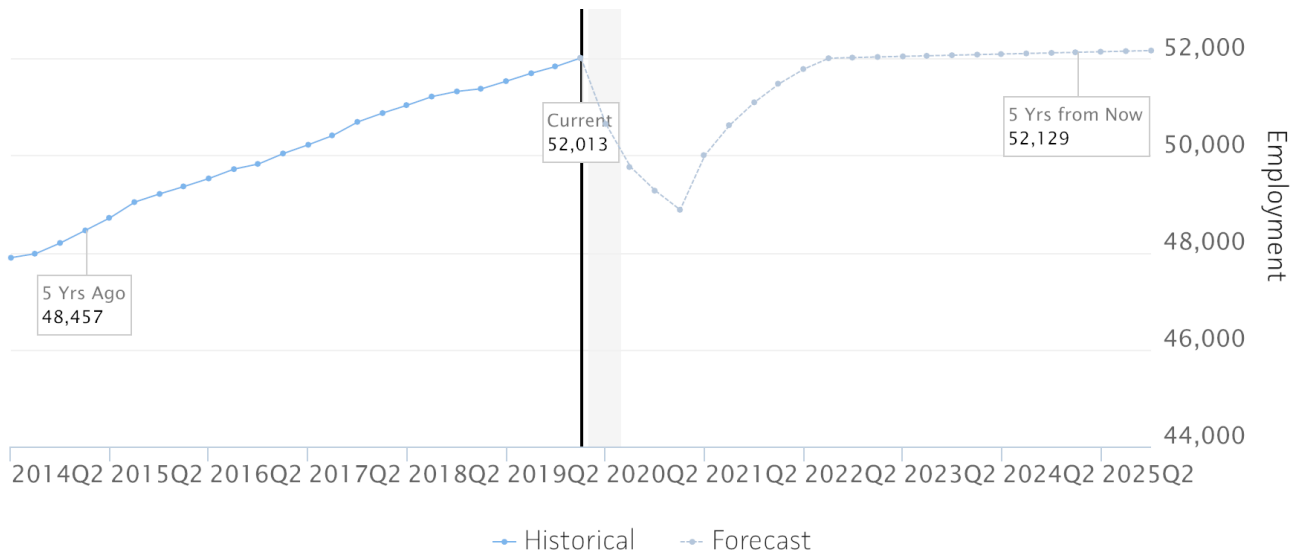
## Occupation Gaps

Potential Average Annual Occupation Gaps over 10 Years in Southwest Minnesota



Source: JobsEQ®, Data as of 2020Q1 except wages which are as of 2019

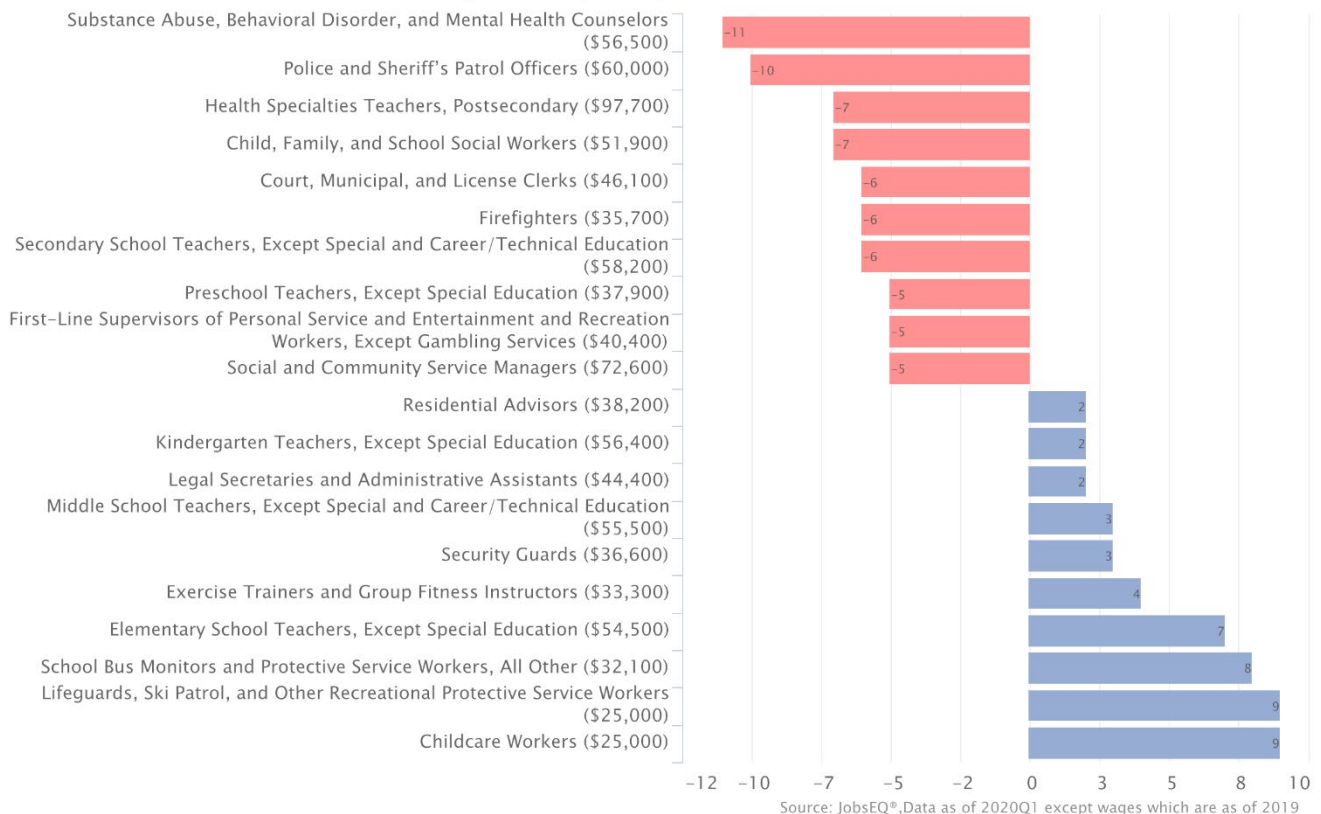
## HUMAN SERVICES



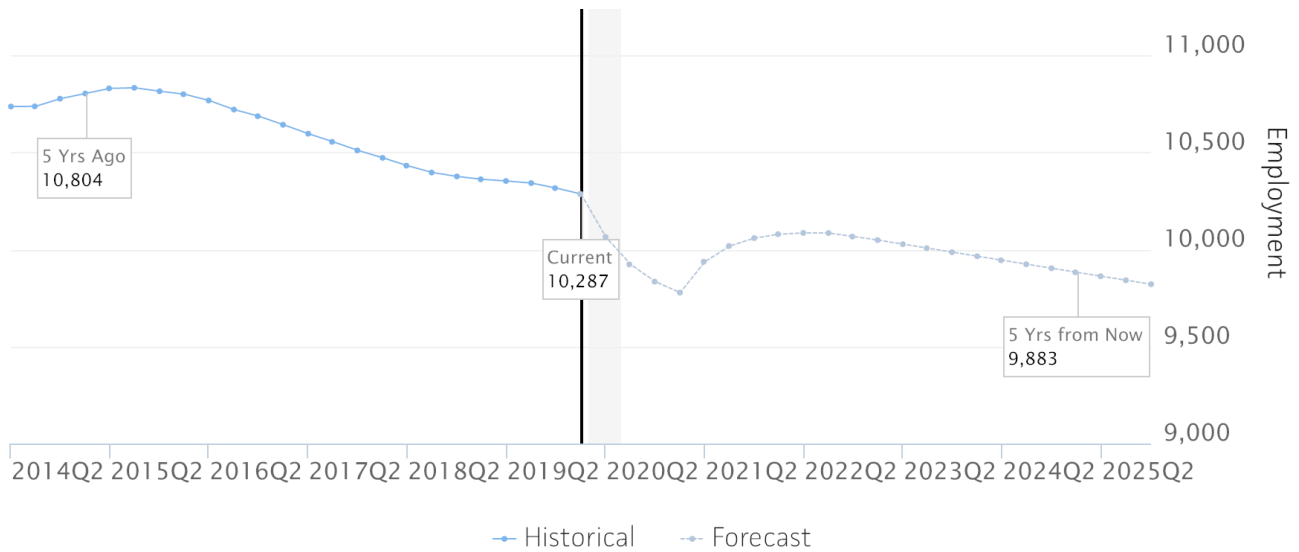
Source: JobsEQ®, Data as of 2020Q1, The shaded areas of the graph represent national recessions.

### Occupation Gaps

Potential Average Annual Occupation Gaps over 10 Years in Southwest Minnesota



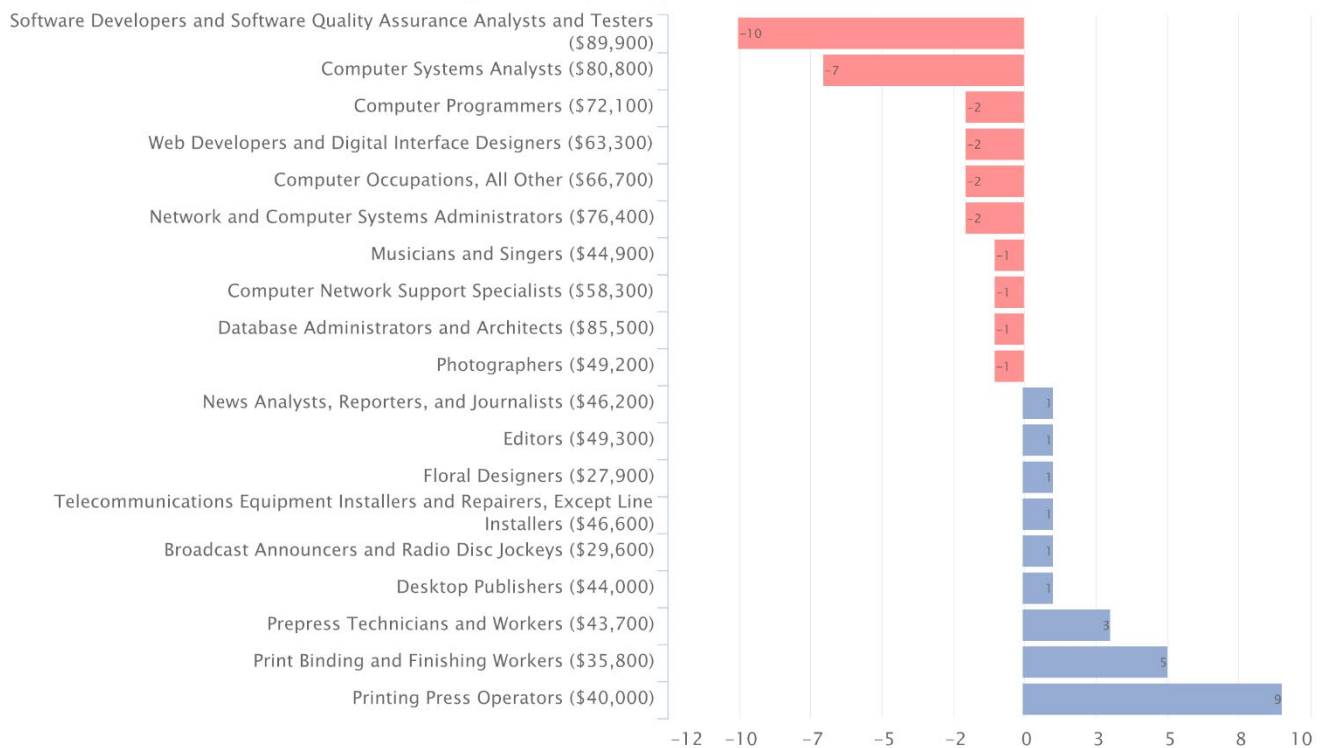
## ARTS, COMMUNICATIONS, AND INFORMATION SYSTEMS



Source: JobsEQ®, Data as of 2020Q1, The shaded areas of the graph represent national recessions.

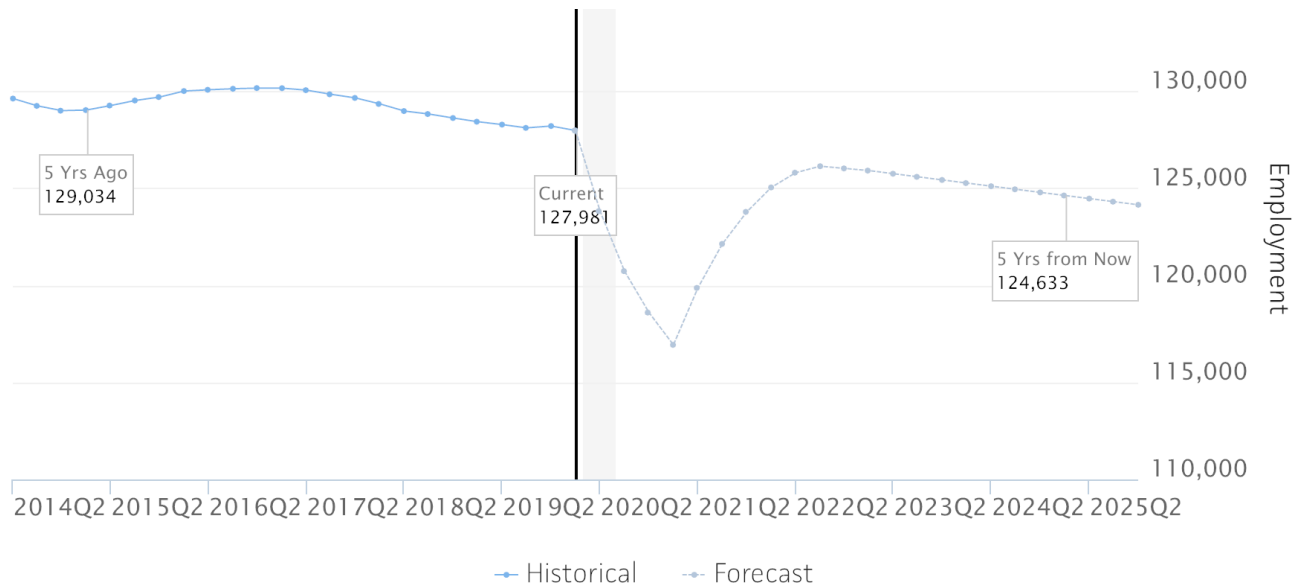
### Occupation Gaps

Potential Average Annual Occupation Gaps over 10 Years in Southwest Minnesota



Source: JobsEQ®, Data as of 2020Q1 except wages which are as of 2019

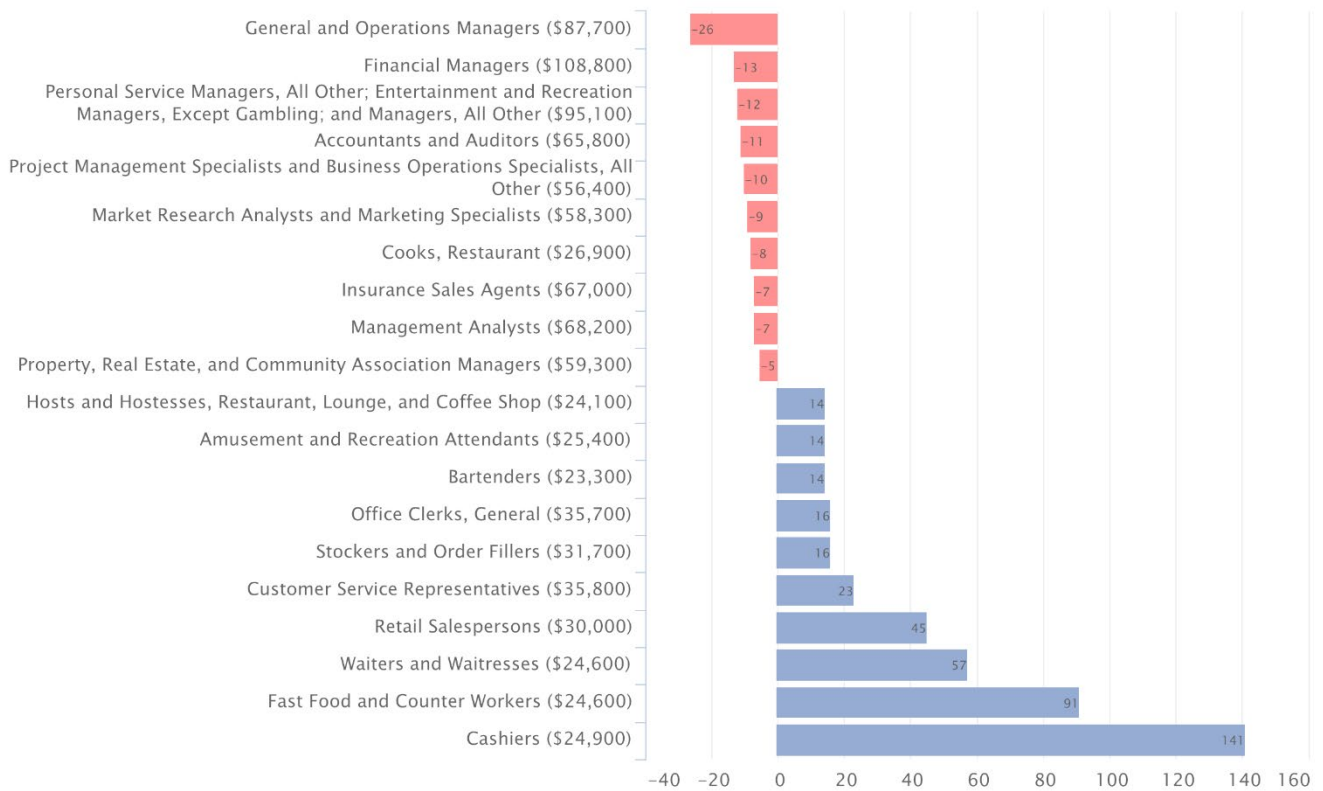
## BUSINESS, MANAGEMENT, AND ADMINISTRATION



Source: JobsEQ®, Data as of 2020Q1, The shaded areas of the graph represent national recessions.

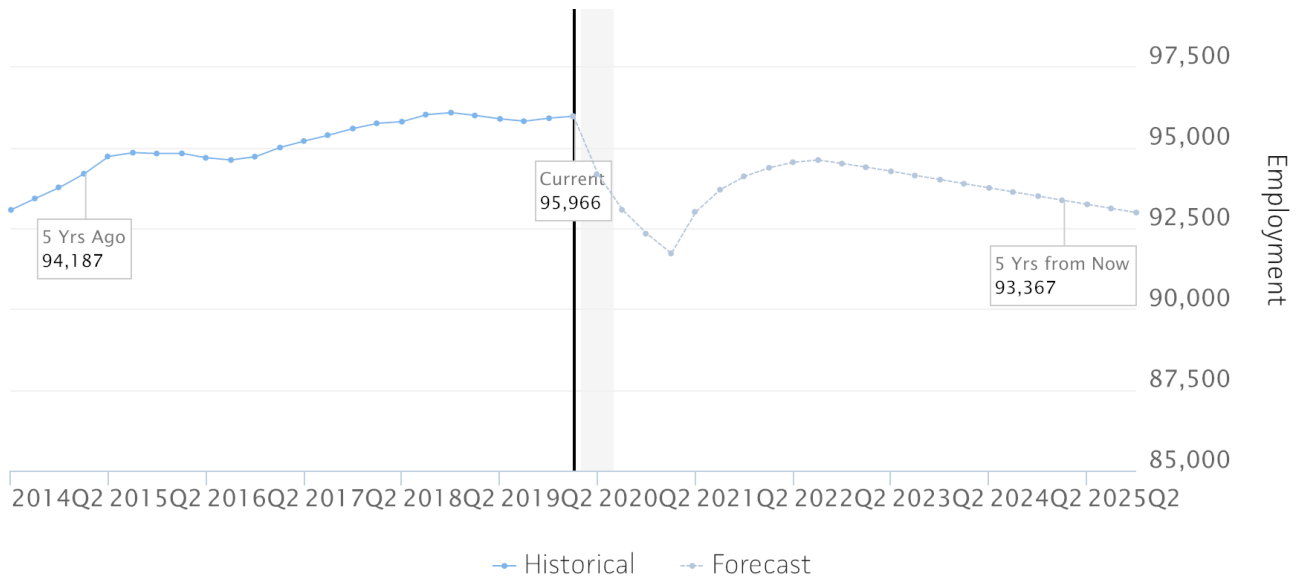
### Occupation Gaps

Potential Average Annual Occupation Gaps over 10 Years in Southwest Minnesota





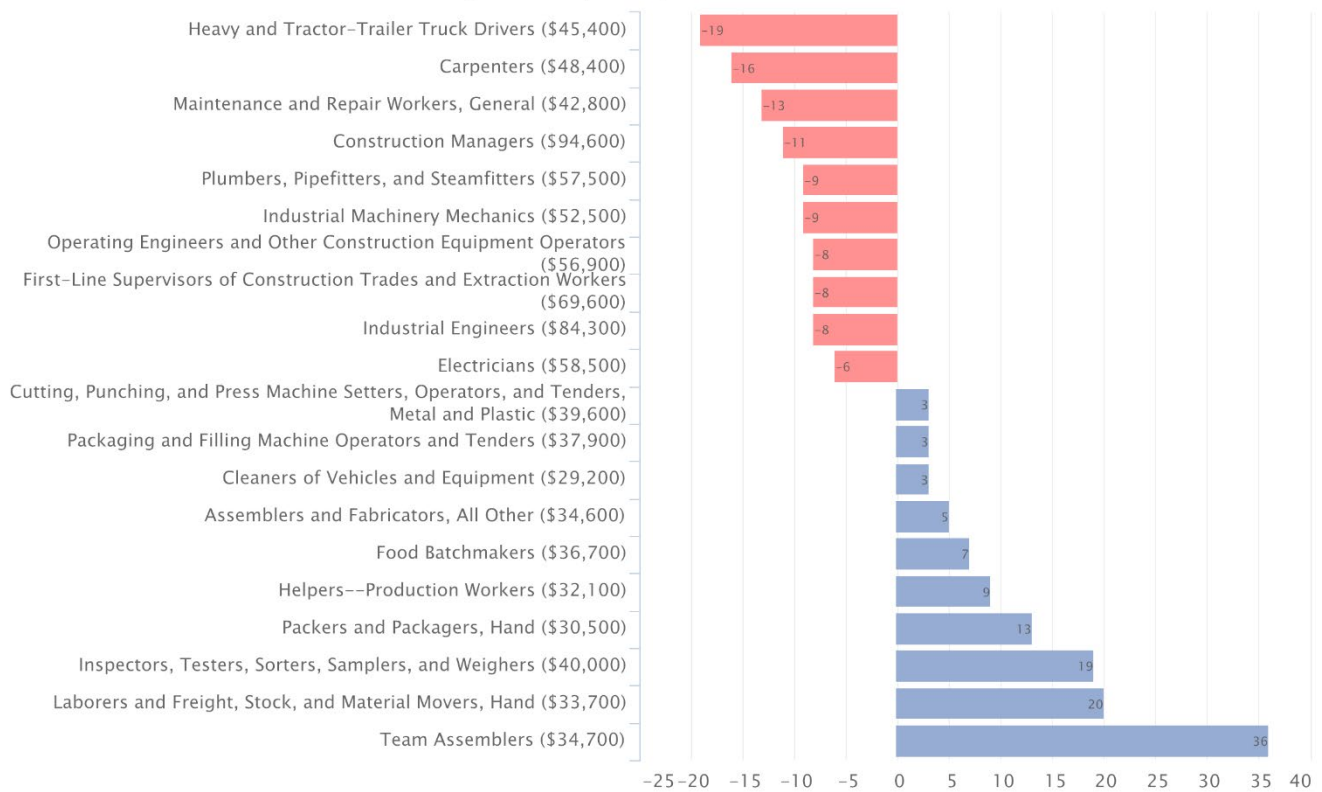
## ENGINEERING, MANUFACTURING, AND TECHNOLOGY



Source: JobsEQ®, Data as of 2020Q1, The shaded areas of the graph represent national recessions.

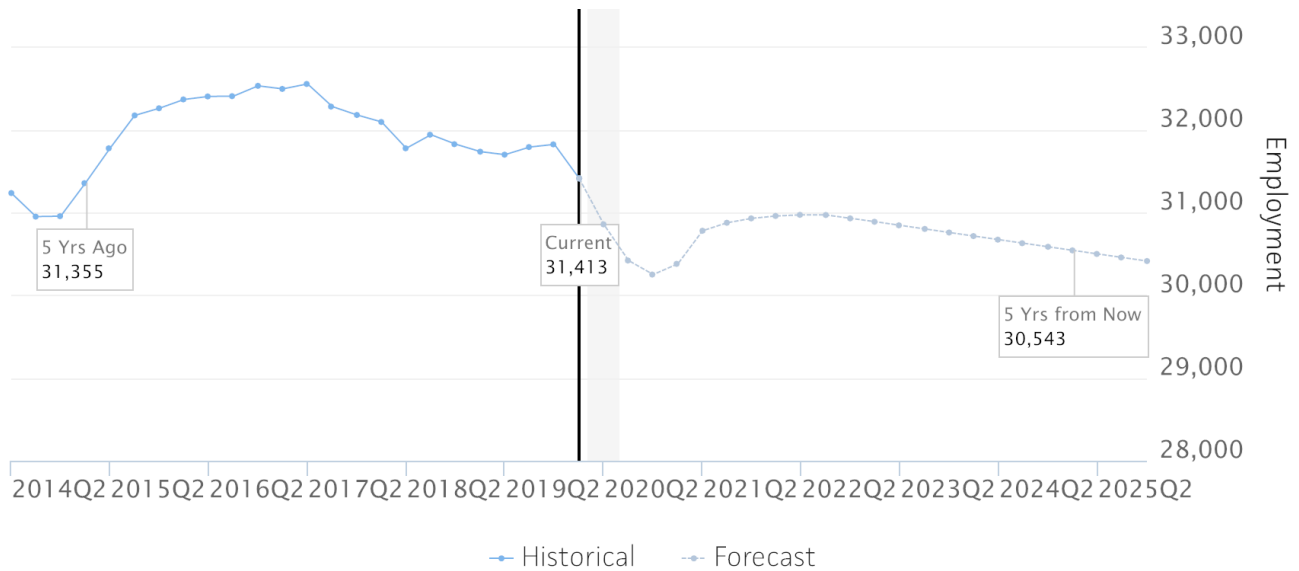
### Occupation Gaps

Potential Average Annual Occupation Gaps over 10 Years in Southwest Minnesota



Source: JobsEQ®, Data as of 2020Q1 except wages which are as of 2019

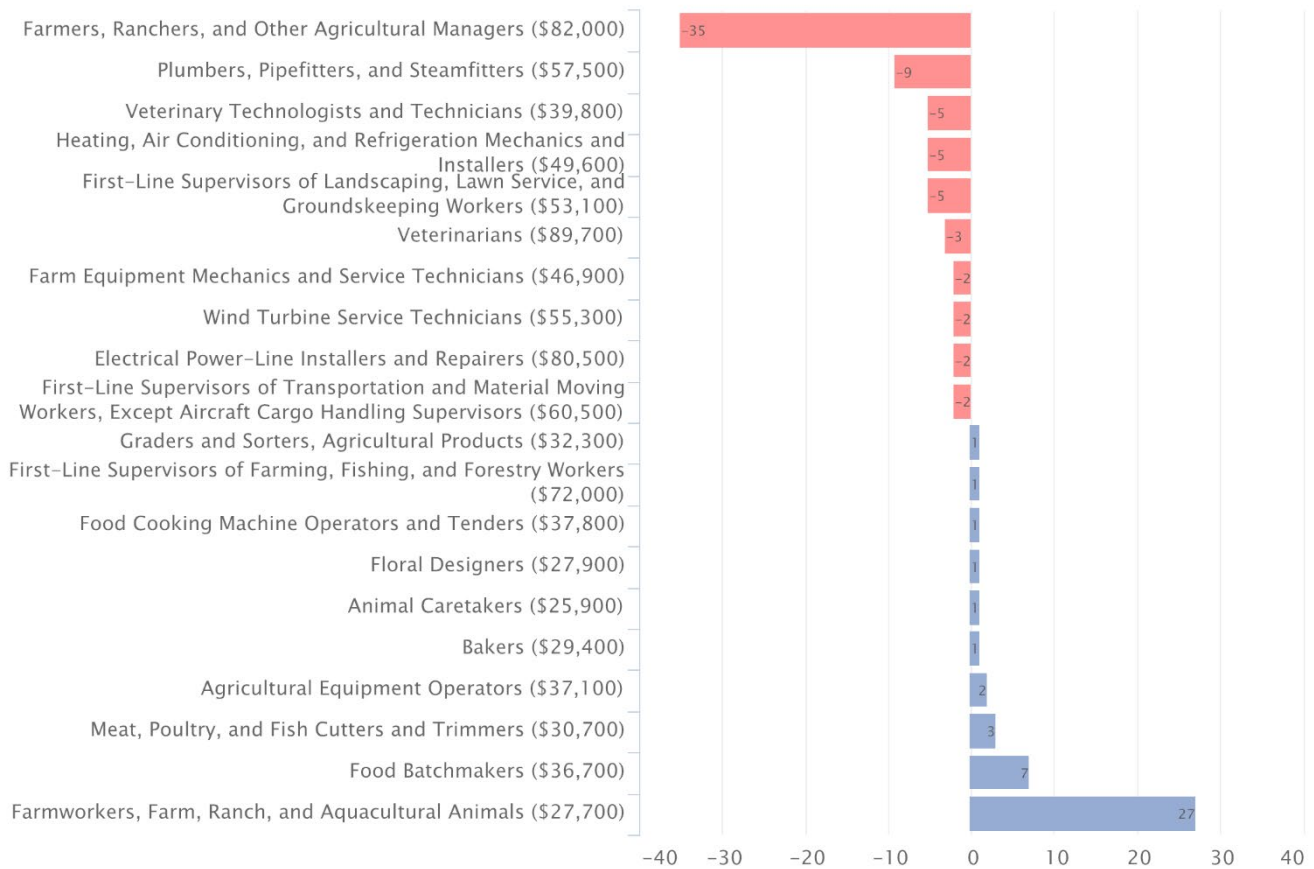
## AGRICULTURE, FOOD, AND NATURAL RESOURCES



Source: JobsEQ®, Data as of 2020Q1, The shaded areas of the graph represent national recessions.

### Occupation Gaps

Potential Average Annual Occupation Gaps over 10 Years in Southwest Minnesota



Source: JobsEQ®, Data as of 2020Q1 except wages which are as of 2019

## *Emerging Career Paths*

Online job posting data can tell us a lot about employer demand for certain skills, certifications, qualifications, and occupational competencies. There is rich data available by city, county, and even by specific employer. However, it can be challenging to pinpoint exactly which positions advertised would be physically located in a specific geography without a complete address being included in a job post—or, when job postings are only advertised in a local newspaper, physical job board, or on a street corner.

Despite these limitations, there are still a sufficient number of job postings that do include a city, address, or a zip code for the location of the job opportunity being advertised. Looking at positions in this way will favor employers that have the particular practice of including the business' physical location in the posting. Although attempting to use these approximation for local job opportunities may not be a complete picture of all demand in the community, it can give a glimpse into the trending opportunities and how they compare to opportunities in the past.

During the first five months of the COVID-19 pandemic,<sup>7</sup> there were 57,049 new jobs advertised in the region—an increase of 15% from the same six months in 2019. The top three positions advertised by volume were for Heavy Truck Drivers, Personal Care Aides, and Registered Nurses. The most significant increases in demand were among Laborers and Freight Movers, and Personal Care Aides. This reflects the sudden and growing local demand for goods distribution and personal care services in response to the pandemic.

### **Top Emerging Occupations in Central Minnesota, March 1-August 31, 2020**

1. **Heavy and Tractor-Trailer and Truck Drivers (+46%)**
2. **Personal Care Aides (+159%)**
3. **Registered Nurses (+22%)**
4. **Laborers and Freight, Stock, and Material Movers (+180%)**
5. **Retail Salespersons (+57%)**
6. **Customer Service Representatives (+49%)**
7. **Production Workers, All Other (+29%)**
8. **Nursing Assistants (+21%)**
9. **Insurance Sales Agents (+75%)**
10. **Sales Representatives, Services (+28%)**

The certifications and technical skills in demand locally match in particular to the transportation, distribution and entry-level health care positions identified above, with Commercial Driver's License, Certified Registered Nurse, Direct Support Professional, and DOT Medical Card in high volumes in local job postings during this period compared to a full year prior. Skills like dedication, customer service, and operations were mentioned in job postings as required competencies for candidates in higher volumes from March through August in comparison to early 2020 or any point in 2019.

### **Top Emerging Skills in Central Minnesota in Order of Frequency in Job Postings, March 1-August 31, 2020**

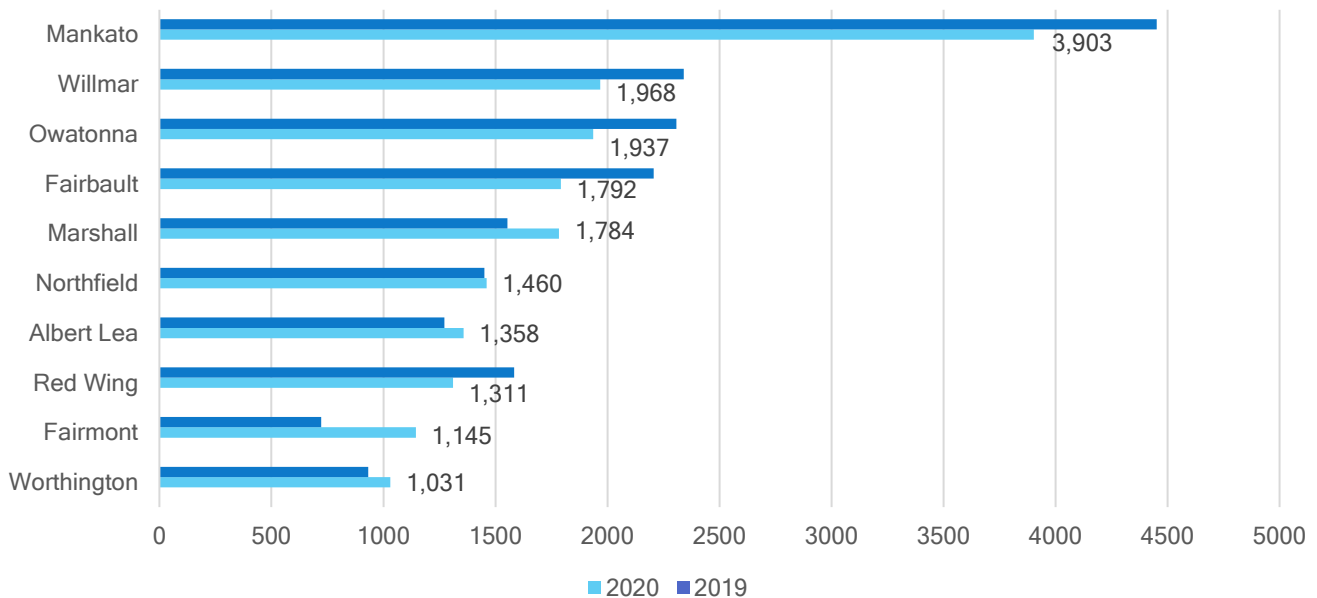
1. **Dedication (+26% from pre-COVID-19)**
2. **Communication (-3% from pre-COVID-19)**

<sup>7</sup> March 15-August 31, 2020.

3. Customer Service (+3% from pre-COVID-19)
4. Friendliness (+50% from pre-COVID-19)
5. Operations (+1% from pre-COVID-19)
6. Innovation (+43% from pre-COVID-19)
7. Leadership (+25% from pre-COVID-19)
8. Relationship Development (+29% from pre-COVID-19)
9. Flexibility (+146% from pre-COVID-19)
10. Passion (+38% from pre-COVID-19)

By city, Marshall, Northfield, Albert Lea, Fairmont, Worthington, and Windom saw small increases in total volume of new job postings advertised in their communities between March and August 2020 compared to 2019. Most other cities and towns in Southwest Minnesota saw drops in total volume of new positions.

**Top Cities by Job Posting Volume, March 1-August 31, 2020**



There are over 800 defined occupations at the detailed level. Among those occupations that support a living wage, Substance Abuse, Behavioral Disorder, and Mental Health Counselors are expected to add the most jobs over the next ten years in Southwest Minnesota.

Occupation	Employment	Avg Ann Wages	Job Ads	Hist 10yr Change	Proj 10yr Growth
Substance Abuse, Behavioral Disorder, and Mental Health Counselors	792	\$56,500	93	251	144
Medical Assistants	1,134	\$37,800	33	370	137
Social and Human Service Assistants	1,286	\$38,100	536	56	111
Construction Laborers	2,501	\$42,400	89	527	98
Registered Nurses	6,253	\$71,300	457	100	94
Health Specialties Teachers, Postsecondary	350	\$97,700	5	57	76
Plumbers, Pipefitters, and Steamfitters	1,019	\$57,500	16	29	75
Market Research Analysts and Marketing Specialists	929	\$58,300	26	418	72
Medical Secretaries and Administrative Assistants	1,169	\$39,200	83	173	71
Financial Managers	1,145	\$108,800	46	122	65

Of occupations supporting a living wage, Farmers, Ranchers, and Other Agricultural Managers and Team Assemblers are projected to have the largest decline in employment locally over the next ten years.

Occupation	Employment	Avg Ann Wages	Job Ads	Hist 10yr Change	Proj 10yr Growth
Farmers, Ranchers, and Other Agricultural Managers	10,164	\$82,000	13	-1,998	-1,015
Team Assemblers	3,473	\$34,700	32	640	-829
Office Clerks, General	5,602	\$35,700	34	233	-625
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	3,604	\$39,300	103	110	-585
Customer Service Representatives	4,683	\$35,800	195	623	-559
Inspectors, Testers, Sorters, Samplers, and Weighers	1,738	\$40,000	14	464	-431
Bookkeeping, Accounting, and Auditing Clerks	3,147	\$40,300	48	-814	-388
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	3,387	\$68,000	1	-52	-273
Laborers and Freight, Stock, and Material Movers, Hand	5,703	\$33,700	273	1,133	-250
Elementary School Teachers, Except Special Education	3,005	\$54,500	26	256	-245

## *Skill and Certification Gaps*

Below are the top 10 skill and certification gaps (supply shortfalls) among occupations which support a living wage within Southwest Minnesota. These data are based on online resumes and job ads live as of September 2020 that reflect local supply and demand.

**Top 10 Skill Gaps in Southwest Minnesota**

Name	Candidates	Openings	Gap
Merchandising	104	223	-119
Keyboarding/Typing	363	468	-105
Finance	245	323	-78
Animal Care/Animal Handling	15	93	-78
iOS	8	71	-64
SAP	152	207	-55
Scissor Lifts	10	60	-50
Power Tools	248	290	-42
Patient Care	48	82	-35
Bookkeeping	98	131	-32

**Top 10 Certification Gaps in Southwest Minnesota**

Name	Candidates	Openings	Gap
Licensed Practical Nurse (LPN)	112	159	-46
Certified Nursing Assistant (CNA)	35	46	-11
Medical Laboratory Technician (MLT)	3	14	-10
Registered Medical Assistant	1	11	-10
Pediatric Advanced Life Support (PALS)	33	42	-9
Certified Management Accountant (CMA)	3	12	-9
Basic Life Support (BLS)	215	223	-8
Advanced Cardiac Life Support Certification (ACLS)	64	71	-7
Certified Information Systems Auditor (CISA)	1	7	-6
Medical Technologist (Medical Technologists)	5	11	-6

# Accessible Career Pathways

## Local Careers for People with an Associate's Degree or Less

Taking a holistic look at high-wage, accessible career opportunities in Southwest Minnesota reveal a large number of opportunities are 1) uniquely concentrated in this community, 2) have seen high historic employment growth, 3) are trending in job postings since March 2020, and 3) could see shortages in talent in the next five to ten years.

A significant share of the certificate shortages in the region are in the Health Science Technology field, which saw an increase of 24% overall—mostly in occupations that require an Associate's Degree or less. Positions requiring Direct Support Professional certification, HAZMAT certification, or a commercial driver's license are anticipated to exceed local talent supply within the year, and match to occupations anticipating shortages through 2025.

Human Services careers including janitors, cleaners, and hairdressers have all seen extreme volatility, with sharp drops in demand followed by spikes due to the rapidly changing pandemic landscape. Demand for insurance and finance roles, such as Insurance Sales Agents, more than doubled in recent months in comparison to 2019 levels.

Some Engineering, Manufacturing, and Technology Career Field opportunities may not be fully captured in current vacancy estimates or official forecasts, due to the complex nature of the job advertising landscape in Southwest Minnesota. Transportation and logistics roles in diesel mechanics and equipment repair, including agricultural equipment, are in demand and may see longer-term shortages through 2025 and beyond. Entry-level Agriculture, Food, and Natural Resources careers across multiple pathways saw a 24% increase in new online job post volumes between March and August 2020 compared to 2019.

**Lower Education Pathways and Occupations in Demand by Career Field**

Career Field	Top Pathway(s) In Demand	Top Occupations in Shortage Over 10 years	Top Occupations Advertised March 1, 2020 - August 31, 2020	Top Employers Recruiting
<b>Health Science Technology</b>	<ul style="list-style-type: none"> <li>Therapeutic Services</li> <li>Support Services</li> <li>Health Informatics</li> </ul>	<ul style="list-style-type: none"> <li>Licensed Practical and Licensed Vocational Nurses</li> <li>Medical Assistants</li> <li>Nursing Assistants</li> <li>Medical Secretaries and Administrative Assistants</li> </ul>	<ul style="list-style-type: none"> <li>Personal Care Aides</li> <li>Nursing Assistants</li> <li>Licensed Practical Nurses</li> <li>Home Health Aides</li> <li>Medical Assistants</li> <li>Pharmacy Technicians</li> <li>Medical Secretaries</li> <li>Medical and Clinical Laboratory Technicians</li> <li>Emergency Medical Technicians and Paramedics</li> </ul>	<ol style="list-style-type: none"> <li>The Mentor Network</li> <li>REM Hennepin, Inc.</li> <li>Mayo Clinic</li> <li>Avera Health</li> <li>Christus Health</li> </ol>
<b>Engineering, Manufacturing, &amp; Technology</b>	<ul style="list-style-type: none"> <li>Facility and Mobile Equipment Maintenance</li> <li>Logistics Planning and Management Services</li> <li>Production</li> <li>Transportation Operations</li> <li>Construction</li> <li>Maintenance/Operations</li> </ul>	<ul style="list-style-type: none"> <li>Heavy and Tractor-Trailer Truck Drivers</li> <li>Carpenters</li> <li>Maintenance and Repair Workers, General</li> <li>Construction Managers</li> <li>Plumbers, Pipefitters, and Steamfitters</li> <li>Industrial Machinery Mechanics</li> </ul>	<ul style="list-style-type: none"> <li>Heavy and Tractor-Trailer Truck Drivers</li> <li>Laborers and Freight, Stock, and Material Movers</li> <li>Production Workers, All Other</li> <li>Supervisors of Production Workers</li> <li>Maintenance and Repair Workers, General</li> <li>Helpers—Production Workers</li> </ul>	<ol style="list-style-type: none"> <li>U.S. Express</li> <li>Post Holdings</li> <li>A.D. Transport</li> <li>Roehl Transport, Inc.</li> <li>Midnite Express</li> </ol>

		<ul style="list-style-type: none"> <li>Operating Engineers and Other Construction Equipment Operators</li> <li>Supervisors of Construction Trades and Extraction Workers</li> </ul>	<ul style="list-style-type: none"> <li>Bus and Truck Mechanics and Diesel Engine Specialists</li> </ul>	
<b>Arts, Communications, &amp; Information Systems</b>	<ul style="list-style-type: none"> <li>Network Systems</li> <li>Visual Arts</li> </ul>	<ul style="list-style-type: none"> <li>Computer Network Support Specialists</li> <li>Musicians and Singers</li> <li>Photographers</li> </ul>	<ul style="list-style-type: none"> <li>Merchandise Displayers and Window Trimmers</li> <li>Computer User Support Specialists</li> <li>Coaches and Scouts</li> <li>Web Developers</li> <li>Photographers</li> </ul>	<ol style="list-style-type: none"> <li>Home Depot</li> <li>Lawrence Merchandising Services</li> <li>Acosta Inc.</li> <li>Driveline Retail Merchandising</li> <li>CrossMark</li> </ol>
<b>Agriculture, Food, &amp; Natural Resources</b>	<ul style="list-style-type: none"> <li>Animal Systems (*Pork)</li> <li>Food Products and Processing Systems</li> <li>Environmental Service Systems</li> <li>Power, Structural, and Technical Systems</li> <li>Agribusiness</li> <li>Natural Resources Systems</li> </ul>	<ul style="list-style-type: none"> <li>Farmers, Ranchers, and Other Agricultural Managers</li> <li>Plumbers, Pipefitters, and Steamfitters</li> <li>Veterinary Technologists and Technicians</li> <li>Heating, AC and Refrigeration Mechanics and Installers</li> <li>Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers</li> <li>Farm Equipment Mechanics and Service Technicians</li> <li>Wind Turbine Service Technicians</li> <li>Electrical Power-Line Installers and Repairers</li> </ul>	<ul style="list-style-type: none"> <li>Supervisors of Production and Operating Workers</li> <li>Maintenance and Repair Workers</li> <li>Supervisors of Retail Sales Workers</li> <li>Customer Service Representatives</li> <li>Farmworkers, Farm, Ranch, and Aquacultural Animals</li> <li>Insurance Sales Agents</li> <li>Demonstrators and Product Promoters</li> <li>Farm Equipment Mechanics and Service Technicians</li> <li>Environmental Science and Protection Workers</li> </ul>	<ol style="list-style-type: none"> <li>Post Holdings</li> <li>Kwik Trip</li> <li>Sam's Club</li> <li>JBS</li> <li>Prime Pork LLC</li> </ol>
<b>Business, Management, &amp; Administration</b>	<ul style="list-style-type: none"> <li>General Management</li> <li>Insurance</li> <li>Operations Management</li> <li>General Management</li> <li>Professional Sales</li> <li>Restaurants and Food/Beverage Services</li> </ul>	<ul style="list-style-type: none"> <li>Personal Service Managers, All Other</li> <li>Cooks, Restaurant</li> <li>Insurance Sales Agents</li> <li>Management Analysts</li> <li>Property, Real Estate, and Community Association Managers</li> </ul>	<ul style="list-style-type: none"> <li>Retail Salespersons</li> <li>Supervisors of Retail Sales Workers</li> <li>Customer Service Representatives</li> <li>Insurance Sales Agents</li> <li>Sales Representatives, Services</li> <li>Cashiers</li> </ul>	<ol style="list-style-type: none"> <li>Platinum Supplemental Insurance</li> <li>Home Depot</li> <li>Target Corporation</li> <li>Walmart</li> <li>Schwan Food Company</li> </ol>
<b>Human Services</b>	<ul style="list-style-type: none"> <li>Public Management and Administrative</li> <li>Security and Protective Services</li> <li>Personal Care Services</li> <li>Consumer Services</li> <li>Early Childhood Development and Services</li> </ul>	<ul style="list-style-type: none"> <li>Police and Sheriff's Patrol Officers</li> <li>Court, Municipal, and License Clerks</li> <li>Firefighters</li> <li>Preschool Teachers</li> <li>Supervisors of Personal Service and Entertainment and Recreation Workers</li> </ul>	<ul style="list-style-type: none"> <li>Janitors and Cleaners</li> <li>Social and Human Service Assistants</li> <li>Hairdressers, Hairstylists, and Cosmetologists</li> <li>Supervisors of Food Preparation and Serving Workers</li> <li>Maids and Housekeeping Cleaners</li> </ul>	<ol style="list-style-type: none"> <li>Great Clips</li> <li>Target Corporation</li> <li>Lutheran Social Services</li> <li>Compass Group</li> <li>The Mentor Network</li> </ol>

\* The occupations by job posting and employer data shown in this section is based on content found in jobs newly posted online during the period identified. Data from Gartner TalentNeuron Recruit, accessed 9/6/2020 at [www.wantedanalytics.com](http://www.wantedanalytics.com).



## Local Careers for People with a Bachelor's Degree or Higher

The Southwest region will see a growing shortage of Health Science Technology and Engineering, Manufacturing, and Technology talent if it does not address opportunities to expand the local talent pipeline. Therapeutic Services pathway talent in particular will maintain and grow demand over the next five years and beyond. Registered Nurses are the number one occupation of shortage in the region by 2025, and rank high in regional job posting volume.

Volumes of job postings for Engineering, Manufacturing and Technology talent with a Bachelor's degree or higher are up by about 50% in the Southwest compared to 2019. Arts, Communications, and Information Systems job postings have increased by about 4% between March and August 2020 compared to 2019, with top employers spanning healthcare, manufacturing, production, technology, and business companies. New job postings for Human Services careers were down locally in this period by about 21% compared to 2019. Agriculture, Food, and Natural Resources postings were up 15% from 2019 overall, but high education positions saw a drop in new postings of about 1%.

**Higher Education Pathways and Occupations in Demand by Career Field**

Career Field	Top Pathway(s) In Demand	Top Occupations in Shortage Over 10 years	Top Occupations Advertised March 1, 2020 - August 31, 2020	Top Employers Recruiting
<b>Health Science Technology</b>	<ul style="list-style-type: none"> <li>Therapeutic Services</li> <li>Diagnostic Services</li> <li>Biotechnology R&amp;D</li> </ul>	<ul style="list-style-type: none"> <li>Registered Nurses</li> <li>Medical and Health Services Managers</li> <li>Physicians, All Other</li> <li>Nurse Practitioners</li> <li>Speech-Language Pathologists</li> <li>Physical Therapists</li> </ul>	<ul style="list-style-type: none"> <li>Registered Nurses</li> <li>Speech-Language Pathologists</li> <li>Physical Therapists</li> <li>Medical and Health Services Managers</li> <li>Family and General Practitioners</li> <li>Mental Health and Substance Abuse Counselors</li> <li>Nurse Practitioners</li> <li>Mental Health Counselors</li> <li>Physicians and Surgeons</li> </ul>	<ol style="list-style-type: none"> <li>Sanford Health</li> <li>Soliant</li> <li>BetterHelp</li> <li>Christus Health</li> <li>Avera Health</li> </ol>
<b>Engineering, Manufacturing, &amp; Technology</b>	<ul style="list-style-type: none"> <li>Construction</li> <li>Maintenance/Operations</li> <li>Production</li> <li>Manufacturing Production Process Development</li> <li>Engineering and Technology</li> </ul>	<ul style="list-style-type: none"> <li>Industrial Engineers</li> <li>Electricians</li> </ul>	<ul style="list-style-type: none"> <li>Industrial Engineers</li> <li>Industrial Production Managers</li> <li>Civil Engineers</li> <li>Industrial Safety and Health Engineers</li> <li>Mechanical Engineers</li> <li>Quality Control Systems Managers</li> </ul>	<ol style="list-style-type: none"> <li>BH Trans Corporation</li> <li>U.S. Express</li> <li>Bayer</li> <li>GPAC</li> <li>Prime Pork LLC</li> </ol>
<b>Arts, Communications, &amp; Information Systems</b>	<ul style="list-style-type: none"> <li>Programming and Software Development</li> <li>Network Systems</li> <li>Web and Digital Communications</li> </ul>	<ul style="list-style-type: none"> <li>Software Developers, Applications</li> <li>Computer Systems Analysts</li> <li>Computer Programmers</li> <li>Web Developers and Digital Interface Designers</li> <li>Computer Occupations, All Other</li> <li>Network and Computer Systems Administrators</li> <li>Database Administrators and Architects</li> </ul>	<ul style="list-style-type: none"> <li>Software Developers, Applications</li> <li>Computer Systems Engineers/Architects</li> <li>Computer Systems Analysts</li> <li>Information Security Analysts</li> <li>Information Technology Project Managers</li> <li>Coaches and Scouts</li> <li>Network and Computer Systems Administrators</li> </ul>	<ol style="list-style-type: none"> <li>Humana Inc.</li> <li>Change Health Care Inc.</li> <li>Oracle</li> <li>Bayer</li> <li>CrowdStrike</li> </ol>



<b>Agriculture, Food, &amp; Natural Resources</b>	<ul style="list-style-type: none"> <li>• Food Products and Processing Systems</li> <li>• Animal Systems</li> <li>• Agribusiness</li> </ul>	<ul style="list-style-type: none"> <li>• Veterinarians</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisors of Production and Operating Workers</li> <li>• Accountants</li> <li>• Marketing Managers</li> <li>• Sales Managers</li> <li>• Industrial Safety and Health Engineers</li> <li>• Quality Control Systems Managers</li> <li>• Sales Representatives, Wholesale Manufacturing</li> <li>• Agricultural Technicians</li> <li>• Agricultural Inspectors</li> <li>• Loan Officers</li> <li>• Veterinarians</li> </ul>	<ol style="list-style-type: none"> <li>1. Bayer</li> <li>2. Humana Inc.</li> <li>3. Prime Pork LLC</li> <li>4. Post Holdings</li> <li>5. Pipestone System</li> </ol>
<b>Business, Management, &amp; Administration</b>	<ul style="list-style-type: none"> <li>• Insurance</li> <li>• Professional Sales</li> <li>• Business Finance</li> <li>• Banking Services</li> <li>• Accounting</li> <li>• Human Resources Management</li> <li>• Management</li> <li>• General Management</li> </ul>	<ul style="list-style-type: none"> <li>• General and Operations Managers</li> <li>• Financial Managers</li> <li>• Accountants and Auditors</li> <li>• Project Management Specialists and Business Operations Specialists</li> <li>• Market Research Analysts and Marketing Specialists</li> <li>• Management Analysts</li> </ul>	<ul style="list-style-type: none"> <li>• Sales Agents, Wholesale Manufacturing, Technical, and Scientific Products</li> <li>• Accountants</li> <li>• Sales Agents, Financial Services</li> <li>• General and Operations Managers</li> <li>• Sales Managers</li> <li>• Human Resources Managers</li> <li>• Managers, All Other</li> <li>• Loan Officers</li> <li>• Management Analysts</li> </ul>	<ol style="list-style-type: none"> <li>1. Bayer</li> <li>2. Allstate</li> <li>3. Humana Inc.</li> <li>4. Robert Half International</li> <li>5. GPAC</li> </ol>
<b>Human Services</b>	<ul style="list-style-type: none"> <li>• Counseling and Mental Health Services</li> <li>• Teaching/Training</li> <li>• Family and Community Services</li> </ul>	<ul style="list-style-type: none"> <li>• Substance Abuse, Behavioral Disorder, and Mental Health Counselors</li> <li>• Health Specialties Teachers, Postsecondary</li> <li>• Child, Family, and School Social Workers</li> <li>• Secondary School Teachers</li> </ul>	<ul style="list-style-type: none"> <li>• Social and Human Service Assistants</li> <li>• Social and Community Service Managers</li> <li>• Recreation Workers</li> <li>• Educational, Guidance, School, and Vocational Counselors</li> <li>• Substance Abuse and Behavioral Disorder Counselors</li> </ul>	<ol style="list-style-type: none"> <li>1. State of Minnesota</li> <li>2. Navy</li> <li>3. MN Department of Human Services</li> <li>4. Chipotle</li> <li>5. Lutheran Social Services</li> </ol>

\* The occupations by job posting and employer data shown in this section is based on content found in jobs newly posted online during the period identified. Data from Gartner TalentNeuron Recruit, accessed 9/6/2020 at [www.wantedanalytics.com](http://www.wantedanalytics.com).

## Conclusion

Southwest Minnesota is poised to see changes in demand for talent over the next five years and beyond as the region responds to the impacts of COVID-19 on the local population, economy, and business infrastructure. Many of the workforce needs of businesses are in flux, with occupation and skill gaps once anticipated for 10 years out now hitting employers hard. The pandemic may influence some Southwest businesses to automate, modernize, and reskill their workforce to a rapidly changing world and regional economy.

The region's most in-demand occupations of the future require a 2-year degree or higher, offer high average wages, and will likely experience talent shortages by 2025 due to low qualified talent pool located within the region. Occupations that typically require a postgraduate degree are anticipating growth regionally, while positions that require less education are forecast to decline based on official estimates and COVID-19 impact trends. All six career and technical education Career Field areas will experience talent shortages and oversupply in certain occupations and skill areas. Overall, digital skills, human skills, and business enablers will be the foundational skills of the future in Southwest Minnesota.

# Region Definitions

## Northwest MN

Northwest Minnesota is comprised of 19 counties:

Becker County, Minnesota	Norman County, Minnesota
Beltrami County, Minnesota	Otter Tail County, Minnesota
Clay County, Minnesota	Pennington County, Minnesota
Clearwater County, Minnesota	Polk County, Minnesota
Douglas County, Minnesota	Red Lake County, Minnesota
Grant County, Minnesota	Roseau County, Minnesota
Hubbard County, Minnesota	Todd County, Minnesota
Kittson County, Minnesota	Wadena County, Minnesota
Mahnomen County, Minnesota	Wilkin County, Minnesota
Marshall County, Minnesota	

## Northeast MN

Northeast Minnesota is comprised of:

Aitkin County, Minnesota	Itasca County, Minnesota
Carlton County, Minnesota	Koochiching County, Minnesota
Cass County, Minnesota	Lake County, Minnesota
Cook County, Minnesota	Lake of The Woods County, Minnesota
Crow Wing County, Minnesota	St. Louis County, Minnesota

## Central MN

Central Minnesota is comprised of 15 counties:

Benton County, Minnesota	Pine County, Minnesota
Big Stone County, Minnesota	Pope County, Minnesota
Chisago County, Minnesota	Sherburne County, Minnesota
Isanti County, Minnesota	Stearns County, Minnesota
Kanabec County, Minnesota	Stevens County, Minnesota
Mille Lacs County, Minnesota	Swift County, Minnesota
Morrison County, Minnesota	Traverse County, Minnesota
	Wright County, Minnesota

# Southeast MN

Southeast Minnesota is comprised of 7 counties:

Dodge County, Minnesota	Olmsted County, Minnesota
Fillmore County, Minnesota	Wabasha County, Minnesota
Houston County, Minnesota	Winona County, Minnesota
Mower County, Minnesota	

# Southwest MN

Southwest Minnesota is comprised of 29 counties:

Blue Earth County, Minnesota	Meeker County, Minnesota
Brown County, Minnesota	Murray County, Minnesota
Chippewa County, Minnesota	Nicollet County, Minnesota
Cottonwood County, Minnesota	Nobles County, Minnesota
Faribault County, Minnesota	Pipestone County, Minnesota
Freeborn County, Minnesota	Redwood County, Minnesota
Goodhue County, Minnesota	Renville County, Minnesota
Jackson County, Minnesota	Rice County, Minnesota
Kandiyohi County, Minnesota	Rock County, Minnesota
Lac Qui Parle County, Minnesota	Sibley County, Minnesota
Le Sueur County, Minnesota	Steele County, Minnesota
Lincoln County, Minnesota	Waseca County, Minnesota
Lyon County, Minnesota	Watonwan County, Minnesota
McLeod County, Minnesota	Yellow Medicine County, Minnesota
Martin County, Minnesota	

# MSP Metro MN

The MSP Metro is comprised of 7 counties:

Anoka County, Minnesota	Ramsey County, Minnesota
Carver County, Minnesota	Scott County, Minnesota
Dakota County, Minnesota	Washington County, Minnesota
Hennepin County, Minnesota	

# Sources and Data Notes

- Demographic data comes from the 2014-2018 American Community Survey 5-year estimates provided by the US Census Bureau, unless otherwise noted.
- Graduate awards, enrollment, and average net price data are provided by National Center for Education Statistics (NCES) IPEDS data from the 2017-18 school year, unless otherwise noted.
- Occupation employment is imputed by Chmura to 2020Q1 based on industry employment and local staffing patterns calculated by Chmura and utilizing BLS Occupation Employment Statistics (OES) base data. Occupation wages are per the BLS OES data and are as of 2018. Occupation employment forecasts are modeled by Chmura and are consistent with BLS national-level 10-year forecasts to the identified geography. Alternate forecasts based on COVID-19 impacts are modeled by RealTime Talent utilizing Chmura Economics JobsEQ software for specific geographies.
- Job ads data are online job posts from Gartner TalentNeuron Recruit's legacy platform accessed in September 2020 at [www.wantedanalytics.com](http://www.wantedanalytics.com). These job posting data are scraped from over 30,000 unique websites and deduplicated for accuracy. Most reference to job posting data in the Accessible Career Pathways section of this report reflects newly-advertised, unique and deduplicated jobs posted from March 1, 2020 - August 31, 2020. Data found in summary tables reflect ads active during the twelve month period from 08/31/2019 through 09/01/2020 and advertised for any Zip Code Tabulation Area in or intersecting with the region for which this report was produced. Staffing agency job postings are included in results.
- For skill and certification gaps, openings and candidates are based upon regional occupation demand (growth plus separations) and the percent of skill demand and supply. Skill demand mix data are per a one-year sample of Chmura Economics RTI (job posting) data; skill supply data are estimated using a four-year sample of resumes data scraped from online candidate profiles.
- Figures may not sum due to rounding.

# FAQ

## **What is a location quotient?**

A location quotient (LQ) is a measurement of concentration in comparison to the nation. An LQ of 1.00 indicates a region has the same concentration of an industry (or occupation) as the nation. An LQ of 2.00 would mean the region has twice the expected employment compared to the nation and an LQ of 0.50 would mean the region has half the expected employment in comparison to the nation.

## **What is a cluster?**

A cluster is a geographic concentration of interrelated industries or occupations. If a regional cluster has a location quotient of 1.25 or greater, the region is considered to possess a competitive advantage in that cluster.

## **What is the difference between industry wages and occupation wages?**

Industry wages and occupation wages are estimated via separate data sets, often the time periods being reported do not align, and wages are defined slightly differently in the two systems (for example, certain bonuses are included in the industry wages but not the occupation wages). It is therefore common that estimates of the average industry wages and average occupation wages in a region do not match exactly.

## **How are industries, occupations, and the CTE career fields and clusters defined?**

Industries are defined via the North American Industry Classification System (NAICS). “Sectors” in this report represent 2-digit NAICS codes and industries in the “Industry Analysis” section of this report represent 4-digit NAICS codes. Occupations are defined via the Standard Occupational Classification System (SOC). Occupations in the “Occupation Analysis” section of this report represent 6-digit SOC codes. “CTE Clusters” are collections of 6-digit SOC occupations as defined through the National Career Clusters® Framework. The only exception to this is the Agriculture, Food, and Natural Resources Cluster, which is more inclusive of occupations that fall under respective career pathways and thus overlaps with other career clusters. All other clusters used in this report have distinct classifications of occupations.

## **What is NAICS?**

The North American Industry Classification System (NAICS) is used to classify business establishments according to the type of economic activity. The NAICS Code comprises six levels, from the “all industry” level to the 6-digit level.

## **What is SOC?**

The Standard Occupational Classification system (SOC) is used to classify workers into occupational categories. All workers are classified into one of over 804 occupations according to their occupational definition. To facilitate classification, occupations are combined to form 22 major groups, 95 minor groups, and 452 occupation groups. Each occupation group includes detailed occupations requiring similar job duties, skills, education, or experience.

**How is “Ann Total Demand” defined?**

Annual total employment demand is forecast job demand that includes job needs due to growth, exits (such as retirements), and transfers (individuals moving from one career into another).

**What is separation demand?**

Separation demand is the number of jobs required due to separations—labor force exits (including retirements) and turnover resulting from workers moving from one occupation into another. Note that separation demand does not include all turnover—it does not include when workers stay in the same occupation but switch employers. The total projected demand for an occupation is the sum of the separation demand and the growth demand (which is the increase or decrease of jobs in an occupation expected due to expansion or contraction of the overall number of jobs in that occupation).

**What is the Living Wage used in this report?**

The living wage in the United States is \$16.14 per hour in 2018, before taxes for a family of four (two working adults, two children) - MIT Living Wage Calculator.