DEMAND ANALYSIS

Transportation
2020

AUTOMOTIVE TECHNOLOGY

Demand Analysis
2020

MINNESOTA STATE
Transportation Center of Excellence

RealTime Talent
Using data to build the
world's best workforce

Introduction and Sector Overview

This report highlights the importance of the Automotive Technology career pathway for Minnesota's Transportation Industry. Professionals in Automotive Technology work in diverse roles from automotive service technicians to farm equipment mechanics, serving industries as diverse as Navigational Manufacturing and Automobile Dealerships. In all, about 21,959 people work in Automotive Technology roles in Minnesota as of the second quarter of 2020.

Over the next 5 years, total employment in Minnesota is projected to expand by about 49,053 jobs under official baseline forecasts to model growth beyond the initial impacts of COVID-19, or up to 89,792 in an optimistic outlook that estimates moderate economic recovery by late 2023. During this time frame, growth in Automotive Technology jobs is anticipated to remain flat or drop moderately in Minnesota by about 71 total jobs. Total demand for Automotive Technology talent is anticipated to be around 9,454 professionals needed to fill positions due to job exits and transfers, such as retirements and job changes.

Transportation Pathways in Minnesota - COVID, 2020Q2[1]

Occupation	Current						5-Year History		5-Year Forecast				
	Empl	Avg Ann Wages[2]	LQ	Unempl	Unempl Rate	Online Job Ads[3]	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
Automotive Technology Pathway	21,959	$60,100	1.00	722	3.2%	870	1,057	1.0%	9,454	2,679	6,847	-71	-0.1%
Collision Repair Pathway	6,880	$46,200	1.11	371	5.2%	280	-165	-0.5%	3,732	1,061	2,519	153	0.4%
Aviation Pathway	6,377	$94,000	0.92	157	2.5%	55	211	0.7%	3,253	868	2,158	228	0.7%
Marine and Power Sports Pathway	5,354	$40,900	1.10	367	6.6%	47	319	1.2%	3,274	997	2,215	62	0.2%
Diesel Equipment and Truck Pathway	13,249	$54,600	1.15	559	4.2%	396	-71	-0.1%	6,861	1,996	4,558	307	0.5%
Truck Driving Pathway	99,222	$43,000	1.00	4,799	4.8%	6,250	5,015	1.0%	61,110	23,917	34,411	2,783	0.6%
Total - All Occupations	**3,012,855**	**$56,600**	**1.00**	**140,926**	**4.6%**	**155,869**	**48,618**	**0.3%**	**1,819,042**	**661,016**	**1,068,234**	**89,792**	**0.6%**

Source: JobsEQ®
Data as of 2020Q2 unless noted otherwise
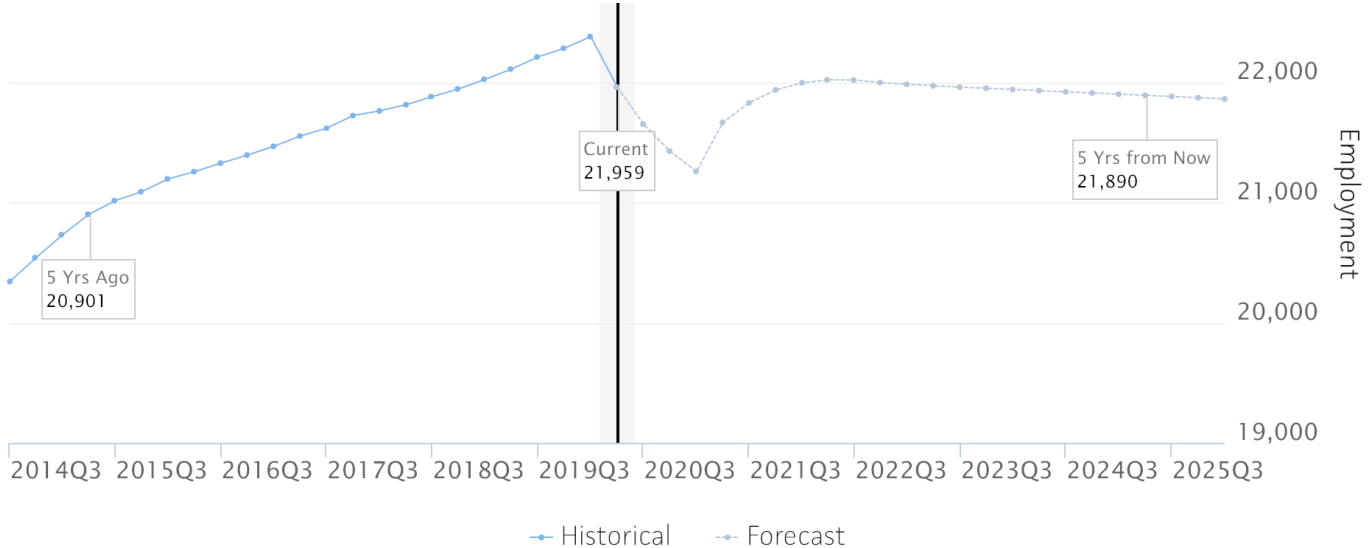Note: Figures may not sum due to rounding.
1. Data based on a four-quarter moving average unless noted otherwise.
2. Wage data are as of 2019 and represent the average for all Covered Employment
3. Data represent found online ads active within the last thirty days in the selected region; data represents a sampling rather than the complete universe of postings. Ads lacking zip code information but designating a place (city, town, etc.) may be assigned to the zip code with greatest employment in that place for queries in this analytic. Due to alternative county-assignment algorithms, ad counts in this analytic may not match that shown in RTI (nor in the popup window ad list).

As Minnesota looks to the future recovery from the pandemic's heavy blow to our economy and public health, forecasts made today may look very different from realities seen in years to come. Supply chain impacts, the drive to automation and technological innovation mean that the transportation industry, in particular, may look very different in five years from what it looks like today. The componding impacts of a tight labor market prior to the start of the pandemic and significant, rapid layoffs of non-essential workers across service industry positions creates a complex landscape of employer demand and an available workforce. Forecasting future needs under current conditions with an eye to anticipated talent pipelines into Automotive Technology suggest that there may be shortages of talent across a large share of occupations in this career pathway unless more talent decides to enter the field.

Automotive Technology Employment Forecast Under Optimistic COVID-19 Scenario, Minnesota
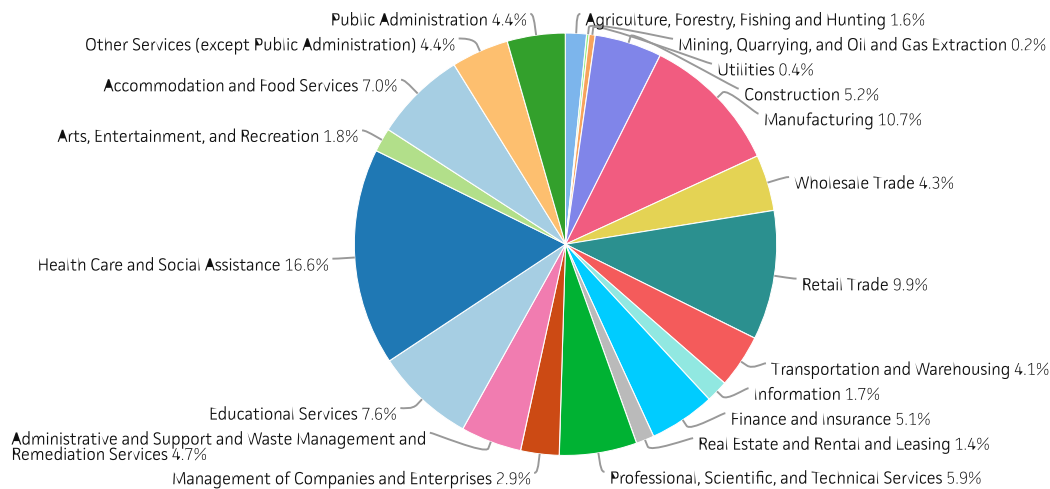

Source: JobsEQ®,Data as of 2020Q2,The shaded areas of the graph represent national recessions.

Industry/Occupation Mix

The largest industry in Minnesota is Health Care and Social Assistance, employing 500,608 workers. The next-largest industries in the region are Manufacturing (323,587 workers) and Retail Trade (298,251). Industries in Minnesota with the highest average wages per worker are Management of Companies and Enterprises ($127,764), Utilities ($113,213), and Finance and Insurance ($108,049). Regional industries with the best job growth (or most moderate job losses) over the last 5 years are Health Care and Social Assistance (+28,897 jobs), Professional, Scientific, and Technical Services (+15,102), and Transportation and Warehousing (+13,687).

Total Workers for Minnesota by Industry

Public Administration 4.4%
Other Services (except Public Administration) 4.4%
Accommodation and Food Services 7.0%
Arts, Entertainment, and Recreation 1.8%
Health Care and Social Assistance 16.6%
Educational Services 7.6%
Administrative and Support and Waste Management and Remediation Services 4.7%
Management of Companies and Enterprises 2.9%
Agriculture, Forestry, Fishing and Hunting 1.6%
Mining, Quarrying, and Oil and Gas Extraction 0.2%
Utilities 0.4%
Construction 5.2%
Manufacturing 10.7%
Wholesale Trade 4.3%
Retail Trade 9.9%
Transportation and Warehousing 4.1%
Information 1.7%
Finance and Insurance 5.1%
Real Estate and Rental and Leasing 1.4%
Professional, Scientific, and Technical Services 5.9%

| NAICS | Industry | Current | | | 5-Year History | | 5-Year Forecast | | | | |
		Empl	Avg Ann Wages	LQ	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
62	Health Care and Social Assistance	500,608	$55,109	1.14	28,897	1.2%	274,539	119,208	123,230	32,101	1.3%
31	Manufacturing	323,587	$68,280	1.30	2,136	0.1%	153,273	60,975	104,408	-12,109	-0.8%
44	Retail Trade	298,251	$31,708	0.97	-6,491	-0.4%	194,732	87,450	110,495	-3,213	-0.2%
61	Educational Services	229,169	$51,171	0.93	4,567	0.4%	109,648	51,226	55,274	3,147	0.3%
72	Accommodation and Food Services	211,482	$21,617	0.84	-13,014	-1.2%	181,949	76,946	96,911	8,092	0.8%
54	Professional, Scientific, and Technical Services	178,834	$94,855	0.86	15,102	1.8%	87,704	29,033	49,147	9,524	1.0%
23	Construction	155,232	$66,499	0.89	11,053	1.5%	84,336	27,816	49,767	6,753	0.9%
52	Finance and Insurance	152,296	$108,049	1.24	10,280	1.4%	72,480	26,947	44,238	1,294	0.2%
56	Administrative and Support and Waste Management and Remediation Services	140,485	$42,665	0.74	-5,819	-0.8%	84,945	34,586	47,177	3,182	0.4%
92	Public Administration	133,826	$60,783	0.92	6,357	1.0%	60,075	25,862	35,190	-978	-0.1%
81	Other Services (except Public Administration)	132,398	$31,779	1.00	-3,589	-0.5%	75,430	34,356	41,016	58	0.0%
42	Wholesale Trade	129,293	$85,494	1.12	-5,695	-0.9%	65,121	25,321	41,964	-2,164	-0.3%

NAICS	Industry	Current			5-Year History		5-Year Forecast				
		Empl	Avg Ann Wages	LQ	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
48	**Transportation and Warehousing**	123,264	$55,195	0.87	13,687	2.4%	66,808	27,963	37,839	1,006	0.2%
55	Management of Companies and Enterprises	88,576	$127,764	1.90	9,653	2.3%	41,604	14,844	25,335	1,426	0.3%
71	Arts, Entertainment, and Recreation	55,324	$35,821	0.99	-2,550	-0.9%	40,504	17,557	21,685	1,262	0.5%
51	Information	50,849	$81,466	0.85	-7,182	-2.6%	23,453	8,762	15,536	-845	-0.3%
11	Agriculture, Forestry, Fishing and Hunting	48,479	$49,439	1.19	-2,442	-1.0%	24,433	11,010	14,848	-1,425	-0.6%
53	Real Estate and Rental and Leasing	41,580	$57,134	0.79	-4,646	-2.1%	21,988	9,638	11,543	807	0.4%
22	Utilities	13,528	$113,213	0.86	-975	-1.4%	5,585	2,173	3,828	-415	-0.6%
21	Mining, Quarrying, and Oil and Gas Extraction	5,794	$91,766	0.46	-711	-2.3%	2,900	956	1,984	-40	-0.1%
	Total - All Industries	3,012,855	$59,182	1.00	48,618	0.3%	1,701,217	706,144	946,020	49,053	0.3%

Source: JobsEQ®
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 2019Q4 with preliminary estimates updated to 2020Q2. Forecast employment growth uses national projections adapted for regional growth patterns.

Automotive Technology talent is primarily concentrated in the Automotive Repair and Maintenance industry (22.5%), and Automobile Dealers (19.9%), but are important across a wide range of transportation, manufacturing, and agriculture sub-industries.

Top Industry Distribution for Automotive Technology Pathway in Minnesota - COVID

NAICS Code	Industry Title	CURRENT			5-YEAR DEMAND			
		% of Occ Empl	Empl	Avg Ann Wages	Exits	Transfers	Empl Growth	Total Demand
8111	Automotive Repair and Maintenance	22.5%	4,942	$43,300	669	1,738	59	2,466
4411	Automobile Dealers	19.9%	4,367	$49,100	576	1,493	-109	1,960
5413	Architectural, Engineering, and Related Services	5.8%	1,273	$85,300	136	332	22	490
4413	Automotive Parts, Accessories, and Tire Stores	4.9%	1,068	$40,500	134	353	-69	418
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	4.5%	993	$87,800	99	245	-45	299
4853	Taxi and Limousine Service	3.6%	793	$41,600	105	271	-5	371
3339	Other General Purpose Machinery Manufacturing	2.6%	580	$83,700	60	148	6	214
5511	Management of Companies and Enterprises	2.5%	552	$84,800	61	148	13	222
4471	Gasoline Stations	2.0%	439	$42,200	51	133	-64	120
3331	Agriculture, Construction, and Mining Machinery Manufacturing	1.7%	376	$83,700	39	96	5	140
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	1.5%	333	$51,400	43	112	2	157
5613	Employment Services	1.4%	305	$71,400	37	90	28	155
3391	Medical Equipment and Supplies Manufacturing	1.1%	248	$77,600	28	66	7	100
9211	Executive, Legislative, and Other General Government Support	1.1%	238	$53,100	28	75	-14	90
5417	Scientific Research and Development Services	1.1%	233	$90,700	25	61	2	89
3335	Metalworking Machinery Manufacturing	1.0%	209	$69,500	24	60	32	115
3344	Semiconductor and Other Electronic Component Manufacturing	1.0%	209	$88,100	20	50	-12	59
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	0.9%	206	$69,500	22	54	11	87
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	0.9%	195	$79,500	21	53	-1	73
3369	Other Transportation Equipment Manufacturing	0.8%	185	$76,300	19	47	-8	57
n/a	All Others	19.2%	4,213	n/a	481	1,223	61	1,764

Source: JobsEQ®
Data as of 2020Q2 except wages which are as of 2019. Note that occupation-by-industry wages represent adjusted national data and may not be consistent with regional, all-industry occupation wages shown elsewhere in JobsEQ.
Note: Figures may not sum due to rounding.

Source: RealTime Talent analysis of Chmura Economics JobsEQ®, http://www.chmuraecon.com/jobseq
Gartner TalentNeuron Recruit Job posting data 11/1/2019 – 10/31/2020
https://www.wantedanalytics.com/wa/counts?country=US&exclude=anonymous%2Cduplicates%2Cbulk%2Cexpired&jloc=state-24&jocc=493023%2C172141%2C493031%2C119041%2C493042%2C493021%2C536031%2C493041%2C172072%2C173027%2C492093%2C17302907%2C493022%2C172131%2C492096&methodology=new&require=&saved_search_id=61739&t%5Btimeframe%5D=f2019-11-01-2020-10-31&timeframe=f2019-11-01-2020-10-31#saved_search_id=&jocc=493023,172141,173027,492093,17302907,172131,492096&restrict=&exclude=anonymous,duplicates,bulk,expired

6

Pathway Detail

Of all occupations found in the Automotive Technology pathway, the specific occupations of Mechanical Engineers and Mechanical Engineering Technicians are uniquely concentrated in Minnesota to a higher degree than seen in the nation overall. On average, Automotive Technology careers pay about $60,100 per year—about $4,000 higher than the average wage statewide across all positions.

Automotive Technology Pathway in Minnesota - COVID, 2020Q2[1]

SOC	Occupation	Current						5-Year History		5-Year Forecast				
		Empl	Avg Ann Wages[2]	LQ	Unempl	Unempl Rate	Online Job Ads[3]	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
49-3023	Automotive Service Technicians and Mechanics	13,300	$45,800	0.91	533	3.9%	632	258	0.4%	6,183	1,765	4,576	-159	-0.2%
17-2141	Mechanical Engineers	7,102	$86,800	1.19	139	2.0%	215	902	2.8%	2,528	679	1,751	98	0.3%
17-3027	Mechanical Engineering Technologists and Technicians	1,199	$63,500	1.39	32	2.7%	6	59	1.0%	591	198	384	9	0.2%
49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles	186	$40,600	0.99	11	5.4%	13	-85	-7.3%	72	21	74	-24	-2.7%
49-2093	Electrical and Electronics Installers and Repairers, Transportation Equipment	172	$64,800	0.93	6	3.8%	4	-77	-7.1%	80	15	61	4	0.5%
	Automotive Technology Pathway	21,959	$60,100	1.00	722	3.2%	870	1,057	1.0%	9,454	2,679	6,847	-71	-0.1%
	Total - All Occupations	3,012,855	$56,600	1.00	140,926	4.6%	124,655	48,618	0.3%	1,819,042	661,016	1,068,234	89,792	0.6%

Source: JobsEQ®

Data as of 2020Q2 unless noted otherwise

Note: Figures may not sum due to rounding.

1. Data based on a four-quarter moving average unless noted otherwise.

2. Wage data are as of 2019 and represent the average for all Covered Employment
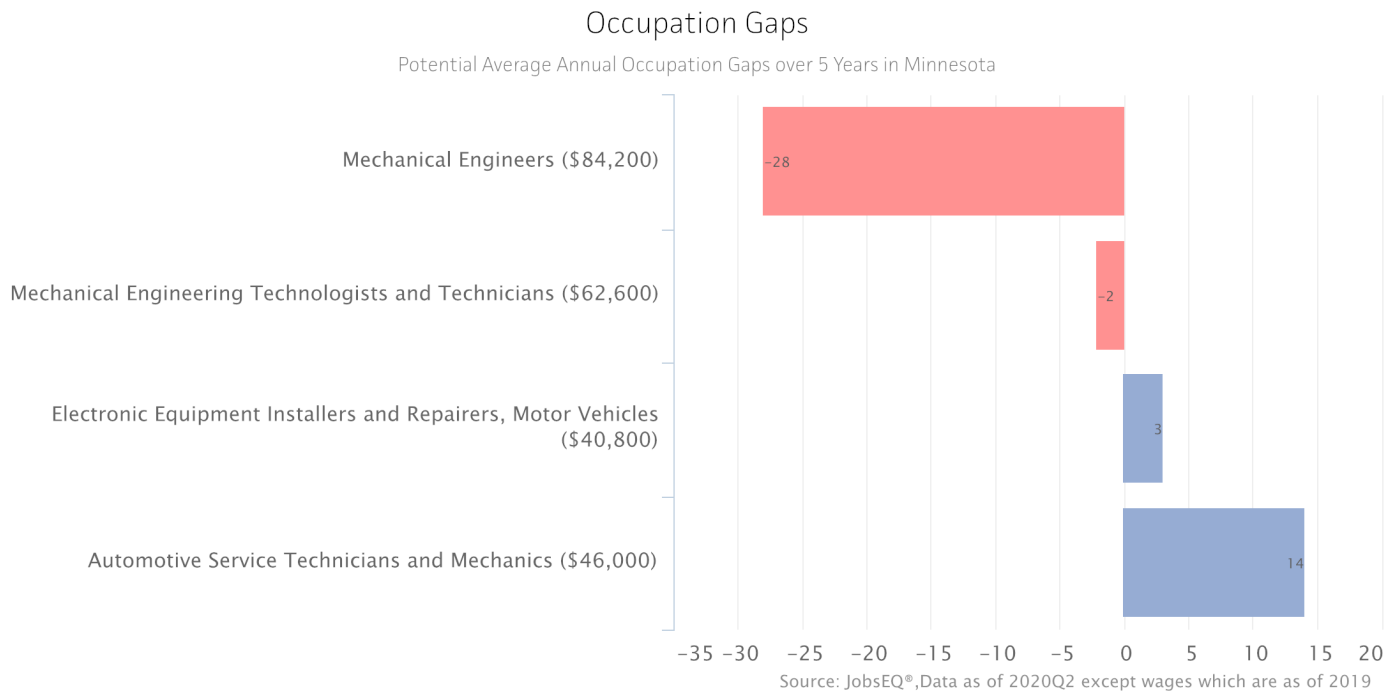
3. Data represent found online ads active within the last thirty days in the selected region; data represents a sampling rather than the complete universe of postings. Ads lacking zip code information but designating a place (city, town, etc.) may be assigned to the zip code with greatest employment in that place for queries in this analytic. Due to alternative county-assignment algorithms, ad counts in this analytic may not match that shown in RTI (nor in the popup window ad list).

By 2025, it is likely that Minnesota will see a growing shortage of Mechanical Engineers and Mechanical Engineering Technologists and Technicians (shown in red below).
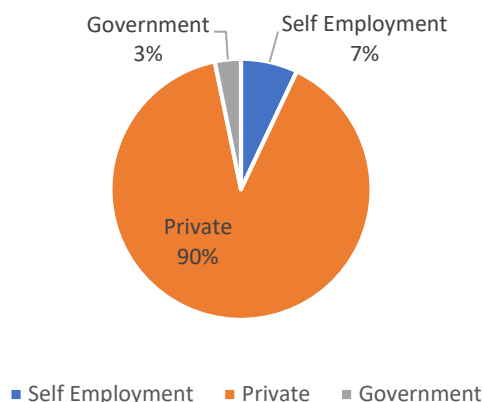
Occupation Gaps
Potential Average Annual Occupation Gaps over 5 Years in Minnesota

Occupation	Gap
Mechanical Engineers ($84,200)	−28
Mechanical Engineering Technologists and Technicians ($62,600)	−2
Electronic Equipment Installers and Repairers, Motor Vehicles ($40,800)	3
Automotive Service Technicians and Mechanics ($46,000)	14

Source: JobsEQ®,Data as of 2020Q2 except wages which are as of 2019

Looking out the next ten years, all but one occupation in the Automotive Technology pathway are anticipated to experience talent shortages.

Occupation Gaps
Potential Average Annual Occupation Gaps over 10 Years in Minnesota

Occupation	Gap
Mechanical Engineers ($84,200)	−35
Automotive Service Technicians and Mechanics ($46,000)	−13
Mechanical Engineering Technologists and Technicians ($62,600)	−4
Electrical and Electronics Installers and Repairers, Transportation Equipment ($61,200)	−1
Electronic Equipment Installers and Repairers, Motor Vehicles ($40,800)	3

Source: JobsEQ®,Data as of 2020Q2 except wages which are as of 2019

Employment Types

About 90% of people employed in Automotive Technology in Minnesota work for private employers, while an estimated 7% are self-employed. The remaining 3% work for state, federal, or local government entities.
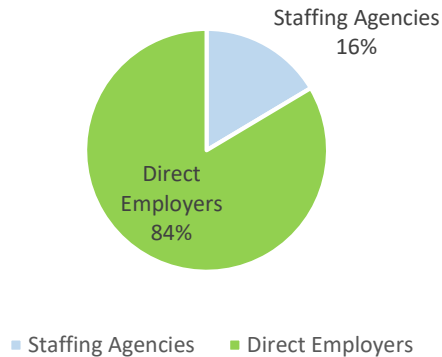
Employment Types, Minnesota 2020Q2

Government 3%
Self Employment 7%
Private 90%

■ Self Employment   ■ Private   ■ Government

Job Posting Trends

Data in this section focuses on jobs newly advertised between November 1, 2019 and October 31, 2020 in Automotive Technology roles across Minnesota. All data in this section comes from Gartner TalentNeuron. Overall, there were 6,822 new jobs advertised in Automotive Technology during this time frame, a decline of almost 15% from the prior 12-month period.

Top Employers by Volume of New Job Postings, With Change from Prior Year

1. Valvoline: 643 (+41%)
2. Allstate: 367 (+56%)
3. Bridgestone: 196 (-43%)
4. Aerotek: 132 (-3%)
5. Army: 116 (+61%)
6. Tires Plus: 100 (+39%)
7. TBC Corporation: 91 (+0%)
8. Medtronic: 81 (-8%)
9. Walser Automotive Group: 79 (+65%)
10. Mills Fleet Farm: 71 (-10%)

Source: RealTime Talent analysis of Chmura Economics JobsEQ®, http://www.chmuraecon.com/jobseq
Gartner TalentNeuron Recruit Job posting data 11/1/2019 – 10/31/2020
https://www.wantedanalytics.com/wa/counts?country=US&exclude=anonymous%2Cduplicates%2Cbulk%2Cexpired&jloc=state-24&jocc=493023%2C172141%2C493031%2C119041%2C493042%2C493021%2C536031%2C493041%2C172072%2C173027%2C492093%2C17302907%2C493022%2C172131%2C492096&methodology=new&require=&saved_search_id=61739&t%5Btimeframe%5D=f2019-11-01-2020-10-31&timeframe=f2019-11-01-2020-10-31#saved_search_id=&jocc=493023,172141,173027,492093,17302907,172131,492096&restrict=&exclude=anonymous,duplicates,bulk,expired

9

New Job Postings Advertised in Minnesota by Employer Type

Staffing Agencies
16%

Direct Employers
84%

- Staffing Agencies - Direct Employers

Top Skills by Volume of New Job Postings, With Change from Prior Year

1. Dedication (-16%)
2. Engineering (-26%)
3. Design (-24%)
4. Manufacturing (-14%)
5. Scheduling (-13%)
6. Communication (-25%)
7. Analysis (-24%)
8. Changing Oil (-15%)
9. Innovation (-24%)
10. Evaluation (-21%)

Top Certifications by Volume of New Job Postings, With Change from Prior Year

1. Class D Driver's License (+7%)
2. Automotive Service Excellence (+0%)
3. Professional Engineer (-24%)
4. OSHA (+10%)
5. Autodesk Certified User – Autodesk Inventor (+129%)

Top Sites Used by Volume of New Job Postings, With Change from Prior Year

1. The Job Network (+16%)
2. Indeed (+20%)
3. Snag (+54%)
4. JobsHQ (+89%)
5. Corporate Site (-11%)

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 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 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.

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. The first two digits define the top level category, known as the "sector," which is the level examined in this report.

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.

Who created this report?

This report was developed by RealTime Talent for the Transportation Center of Excellence. 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 or visit the RealTime Talent website at www.realtimetalent.org

Source: RealTime Talent analysis of Chmura Economics JobsEQ®, http://www.chmuraecon.com/jobseq
Gartner TalentNeuron Recruit Job posting data 11/1/2019 – 10/31/2020
https://www.wantedanalytics.com/wa/counts?country=US&exclude=anonymous%2Cduplicates%2Cbulk%2Cexpired&jloc=state-24&jocc=493023%2C172141%2C493031%2C119041%2C493042%2C493021%2C536031%2C493041%2C172072%2C173027%2C492093%2C17302907%2C493022%2C172131%2C492096&methodology=new&require=&saved_search_id=61739&t%5Btimeframe%5D=f2019-11-01-2020-10-31&timeframe=f2019-11-01-2020-10-31#saved_search_id=&jocc=493023,172141,173027,492093,17302907,172131,492096&restrict=&exclude=anonymous,duplicates,bulk,expired

11

AVIATION

Demand Analysis
2020

MINNESOTA STATE
Transportation Center of Excellence

RealTime Talent
Using data to build the
world's best workforce

Introduction and Sector Overview

This report highlights the importance of the Automotive Technology career pathway for Minnesota's Transportation Industry. Professionals in Aviation work in diverse roles from piloting, air traffic controlling, and aircraft maintenance technician. In all, about 6,377 people work in Aviation roles in Minnesota as of the second quarter of 2020.

Over the next 5 years, total employment in Minnesota is projected to expand by about 49,053 jobs under official baseline forecasts to model growth beyond the initial impacts of COVID-19, or up to 89,792 in an optimistic outlook that estimates moderate economic recovery by late 2023. During this time frame, growth in Aviation jobs is anticipated to rise moderately in Minnesota by about 64 to 228 total jobs. Total demand for Aviation talent is anticipated to be around 3,250 professionals needed to fill positions due to job exits and transfers, such as retirements and job changes.

Transportation Pathways in Minnesota - COVID, 2020Q2[1]

Occupation	Current						5-Year History		5-Year Forecast				
	Empl	Avg Ann Wages[2]	LQ	Unempl	Unempl Rate	Online Job Ads[3]	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
Automotive Technology Pathway	45,919	$65,800	1.03	1,713	3.7%	2,577	1,718	0.8%	21,150	6,021	14,876	253	0.1%
Collision Repair Pathway	6,880	$46,200	1.11	371	5.2%	280	-165	-0.5%	3,732	1,061	2,519	153	0.4%
Aviation Pathway	6,377	$94,000	0.92	157	2.5%	55	211	0.7%	3,253	868	2,158	228	0.7%
Marine and Power Sports Pathway	5,354	$40,900	1.10	367	6.6%	47	319	1.2%	3,274	997	2,215	62	0.2%
Diesel Equipment and Truck Pathway	13,249	$54,600	1.15	559	4.2%	396	-71	-0.1%	6,861	1,996	4,558	307	0.5%
Truck Driving Pathway	99,222	$43,000	1.00	4,799	4.8%	6,250	5,015	1.0%	61,110	23,917	34,411	2,783	0.6%
Total - All Occupations	**3,012,855**	**$56,600**	**1.00**	**140,926**	**4.6%**	**125,738**	**48,618**	**0.3%**	**1,819,042**	**661,016**	**1,068,234**	**89,792**	**0.6%**

Source: JobsEQ®
Data as of 2020Q2 unless noted otherwise
Note: Figures may not sum due to rounding.
1. Data based on a four-quarter moving average unless noted otherwise.
2. Wage data are as of 2019 and represent the average for all Covered Employment
3. Data represent found online ads active within the last thirty days in the selected region; data represents a sampling rather than the complete universe of postings. Ads lacking zip code information but designating a place (city, town, etc.) may be assigned to the zip code with greatest employment in that place for queries in this analytic. Due to alternative county-assignment algorithms, ad counts in this analytic may not match that shown in RTI (nor in the popup window ad list). *NOTE: Aviation excludes Flight Attendants.
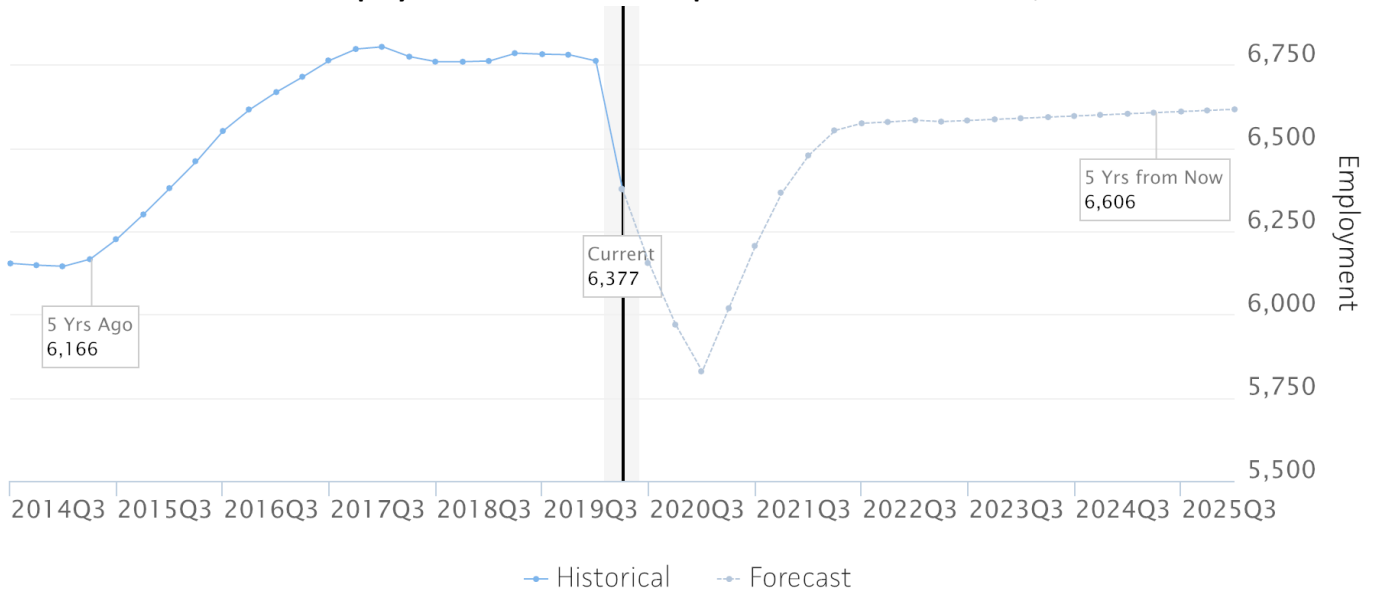
As Minnesota looks to the future recovery from the pandemic's heavy blow to our economy and public health, forecasts made today may look very different from realities seen in years to come. Supply chain impacts, the drive to automation and technological innovation mean that the transportation industry, in particular, may look very different in five years from what it looks like today. The componding impacts of a tight labor market prior to the start of the pandemic and significant, rapid layoffs of non-essential workers across service industry positions creates a complex landscape of employer demand and an available workforce. Forecasting future needs under current conditions with an eye to anticipated talent pipelines into Aviation suggest that there may be shortages of talent across a large share of occupations in this career pathway unless more talent decides to enter the field.

Aviation Employment Forecast Under Optimistic COVID-19 Scenario, Minnesota

5 Yrs Ago
6,166

Current
6,377

5 Yrs from Now
6,606

Employment

6,750
6,500
6,250
6,000
5,750
5,500

2014Q3 2015Q3 2016Q3 2017Q3 2018Q3 2019Q3 2020Q3 2021Q3 2022Q3 2023Q3 2024Q3 2025Q3
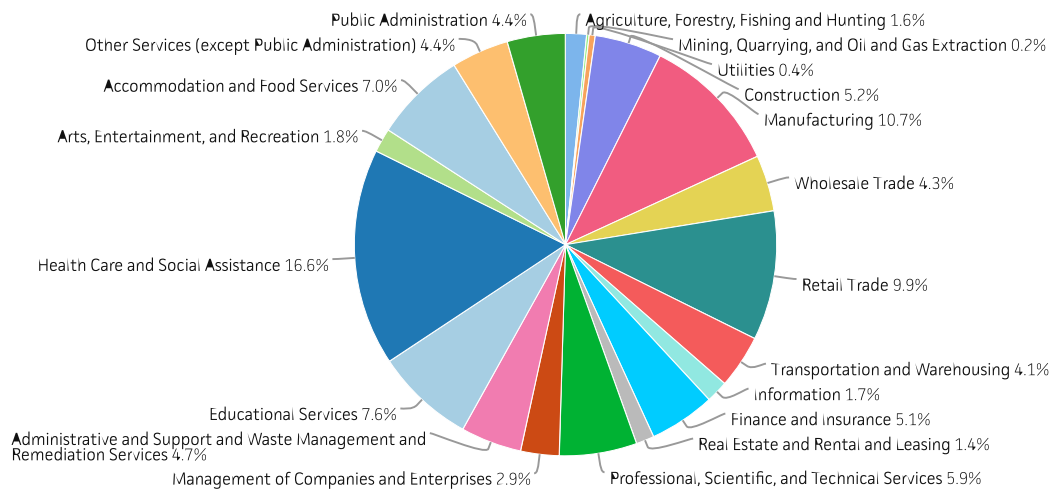
—•— Historical   —•— Forecast

Source: JobsEQ®,Data as of 2020Q2,The shaded areas of the graph represent national recessions.

Industry/Occupation Mix

The largest industry in Minnesota is Health Care and Social Assistance, employing 500,608 workers. The next-largest industries in the region are Manufacturing (323,587 workers) and Retail Trade (298,251). Industries in Minnesota with the highest average wages per worker are Management of Companies and Enterprises ($127,764), Utilities ($113,213), and Finance and Insurance ($108,049). Regional industries with the best job growth (or most moderate job losses) over the last 5 years are Health Care and Social Assistance (+28,897 jobs), Professional, Scientific, and Technical Services (+15,102), and Transportation and Warehousing (+13,687).

Total Workers for Minnesota by Industry

| NAICS | Industry | Current | | | 5-Year History | | 5-Year Forecast | | | | |
		Empl	Avg Ann Wages	LQ	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
62	Health Care and Social Assistance	500,608	$55,109	1.14	28,897	1.2%	274,539	119,208	123,230	32,101	1.3%
31	Manufacturing	323,587	$68,280	1.30	2,136	0.1%	153,273	60,975	104,408	-12,109	-0.8%
44	Retail Trade	298,251	$31,708	0.97	-6,491	-0.4%	194,732	87,450	110,495	-3,213	-0.2%
61	Educational Services	229,169	$51,171	0.93	4,567	0.4%	109,648	51,226	55,274	3,147	0.3%
72	Accommodation and Food Services	211,482	$21,617	0.84	-13,014	-1.2%	181,949	76,946	96,911	8,092	0.8%
54	Professional, Scientific, and Technical Services	178,834	$94,855	0.86	15,102	1.8%	87,704	29,033	49,147	9,524	1.0%
23	Construction	155,232	$66,499	0.89	11,053	1.5%	84,336	27,816	49,767	6,753	0.9%
52	Finance and Insurance	152,296	$108,049	1.24	10,280	1.4%	72,480	26,947	44,238	1,294	0.2%
56	Administrative and Support and Waste Management and Remediation Services	140,485	$42,665	0.74	-5,819	-0.8%	84,945	34,586	47,177	3,182	0.4%
92	Public Administration	133,826	$60,783	0.92	6,357	1.0%	60,075	25,862	35,190	-978	-0.1%
81	Other Services (except Public Administration)	132,398	$31,779	1.00	-3,589	-0.5%	75,430	34,356	41,016	58	0.0%
42	Wholesale Trade	129,293	$85,494	1.12	-5,695	-0.9%	65,121	25,321	41,964	-2,164	-0.3%
48	**Transportation and Warehousing**	**123,264**	**$55,195**	**0.87**	**13,687**	**2.4%**	**66,808**	**27,963**	**37,839**	**1,006**	**0.2%**

NAICS	Industry	Current			5-Year History		5-Year Forecast				
		Empl	Avg Ann Wages	LQ	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
55	Management of Companies and Enterprises	88,576	$127,764	1.90	9,653	2.3%	41,604	14,844	25,335	1,426	0.3%
71	Arts, Entertainment, and Recreation	55,324	$35,821	0.99	-2,550	-0.9%	40,504	17,557	21,685	1,262	0.5%
51	Information	50,849	$81,466	0.85	-7,182	-2.6%	23,453	8,762	15,536	-845	-0.3%
11	Agriculture, Forestry, Fishing and Hunting	48,479	$49,439	1.19	-2,442	-1.0%	24,433	11,010	14,848	-1,425	-0.6%
53	Real Estate and Rental and Leasing	41,580	$57,134	0.79	-4,646	-2.1%	21,988	9,638	11,543	807	0.4%
22	Utilities	13,528	$113,213	0.86	-975	-1.4%	5,585	2,173	3,828	-415	-0.6%
21	Mining, Quarrying, and Oil and Gas Extraction	5,794	$91,766	0.46	-711	-2.3%	2,900	956	1,984	-40	-0.1%
	Total - All Industries	**3,012,855**	**$59,182**	**1.00**	**48,618**	**0.3%**	**1,701,217**	**706,144**	**946,020**	**49,053**	**0.3%**

Source: JobsEQ®

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 2019Q4 with preliminary estimates updated to 2020Q2. Forecast employment growth uses national projections adapted for regional growth patterns.

Aviation talent is primarily concentrated in the Scheduled Air Transportation Industry (56.3%), but are critical to a wide range of air transportation and aerospace industries in Minnesota.

Top Industry Distribution for Aviation Pathway in Minnesota - COVID

NAICS Code	Industry Title	CURRENT			5-YEAR DEMAND			
		% of Occ Empl	Empl	Avg Ann Wages	Exits	Transfers	Empl Growth	Total Demand
4811	Scheduled Air Transportation	56.3%	3,588	$100,500	505	1,268	184	1,957
4881	Support Activities for Air Transportation	12.1%	773	$67,300	107	240	52	400
9261	Administration of Economic Program	6.3%	402	$128,900	48	137	-6	178
4812	Nonscheduled Air Transportation	3.1%	197	$88,500	28	68	9	105
3364	Aerospace Product and Parts Manufacturing	2.5%	162	$65,100	16	45	-18	43
4921	Couriers and Express Delivery Services	2.4%	154	$82,400	21	49	-6	65
5613	Employment Services	2.1%	134	$60,900	17	42	7	65
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	1.8%	116	$67,900	14	29	-5	38
5511	Management of Companies and Enterprises	1.6%	104	$98,600	14	36	2	53
6219	Other Ambulatory Health Care Services	1.2%	79	$82,800	11	27	1	38
9211	Executive, Legislative, and Other General Government Support	1.2%	76	$84,200	10	25	0	35
6115	Technical and Trade Schools	0.9%	58	$101,500	8	20	1	28
9281	National Security and International Affairs	0.9%	57	$112,500	7	18	-1	24
9221	Justice, Public Order, and Safety Activities	0.8%	51	$100,000	6	16	0	22
9231	Administration of Human Resource Programs	0.8%	49	$100,700	6	16	0	22
5413	Architectural, Engineering, and Related Services	0.6%	37	$81,500	5	12	1	17
9241	Administration of Environmental Quality Programs	0.5%	32	$103,000	4	10	-1	13
n/a	All Others	4.8%	307	n/a	42	98	8	147

Source: JobsEQ®
Data as of 2020Q2 except wages which are as of 2019. Note that occupation-by-industry wages represent adjusted national data and may not be consistent with regional, all-industry occupation wages shown elsewhere in JobsEQ.
Note: Figures may not sum due to rounding.

Pathway Detail

Of all occupations found in the Aviation pathway, the specific occupations of Airline Pilots, Copilots, Flight Engineers, and Air Traffic Controllers are all uniquely concentrated in Minnesota to a higher degree than seen in the nation overall. On average, Aviation careers pay about $94,000 per year—nearly $40,000 higher than the average wage statewide across all positions.

Aviation Pathway in Minnesota - COVID, 2020Q2[1]

		Current					5-Year History		5-Year Forecast				
SOC	Occupation	Empl	Avg Ann Wages[2]	LQ	Unempl	Unempl Rate	Online Job Ads[3]	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
53-2011	Airline Pilots, Copilots, and Flight Engineers	2,705	$104,000	1.68	64	2.4%	1	-49	-0.4%	1,578	388	1,026	164	1.2%
49-3011	Aircraft Mechanics and Service Technicians	1,888	$75,900	0.74	39	2.1%	21	102	1.1%	827	256	522	49	0.5%
53-2021	Air Traffic Controllers	603	$132,100	1.44	8	1.4%	2	3	0.1%	282	72	210	0	0.0%
53-2012	Commercial Pilots	454	$113,900	0.60	12	2.7%	9	44	2.0%	253	65	171	17	0.7%
49-2091	Avionics Technicians	220	$58,000	0.51	6	2.8%	10	20	1.9%	81	25	54	2	0.2%
51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	188	$59,100	0.23	18	9.0%	8	51	6.6%	59	17	58	-16	-1.8%
53-2022	Airfield Operations Specialists	188	$60,400	0.98	4	2.0%	2	14	1.6%	99	23	67	8	0.9%
53-1041	Aircraft Cargo Handling Supervisors	131	$60,300	0.72	6	4.2%	2	27	4.7%	75	21	50	4	0.6%
	Aviation Pathway	6,377	$94,000	0.92	157	2.5%	55	211	0.7%	3,253	868	2,158	228	0.7%
	Total - All Occupations	**3,012,855**	**$56,600**	**1.00**	**140,926**	**4.6%**	**126,481**	**48,618**	**0.3%**	**1,819,042**	**661,016**	**1,068,234**	**89,792**	**0.6%**

Source: JobsEQ®
Data as of 2020Q2 unless noted otherwise
Note: Figures may not sum due to rounding.
1. Data based on a four-quarter moving average unless noted otherwise.
2. Wage data are as of 2019 and represent the average for all Covered Employment
3. Data represent found online ads active within the last thirty days in the selected region; data represents a sampling rather than the complete universe of postings. Ads lacking zip code information but designating a place (city, town, etc.) may be assigned to the zip code with greatest employment in that place for queries in this analytic. Due to alternative county-assignment algorithms, ad counts in this analytic may not match that shown in RTI (nor in the popup window ad list).

By 2025, it is likely that Minnesota will see a growing shortage several core occupations, including Aircraft Mechanics and Service Technicians, as well as Pilots (shown in red below).
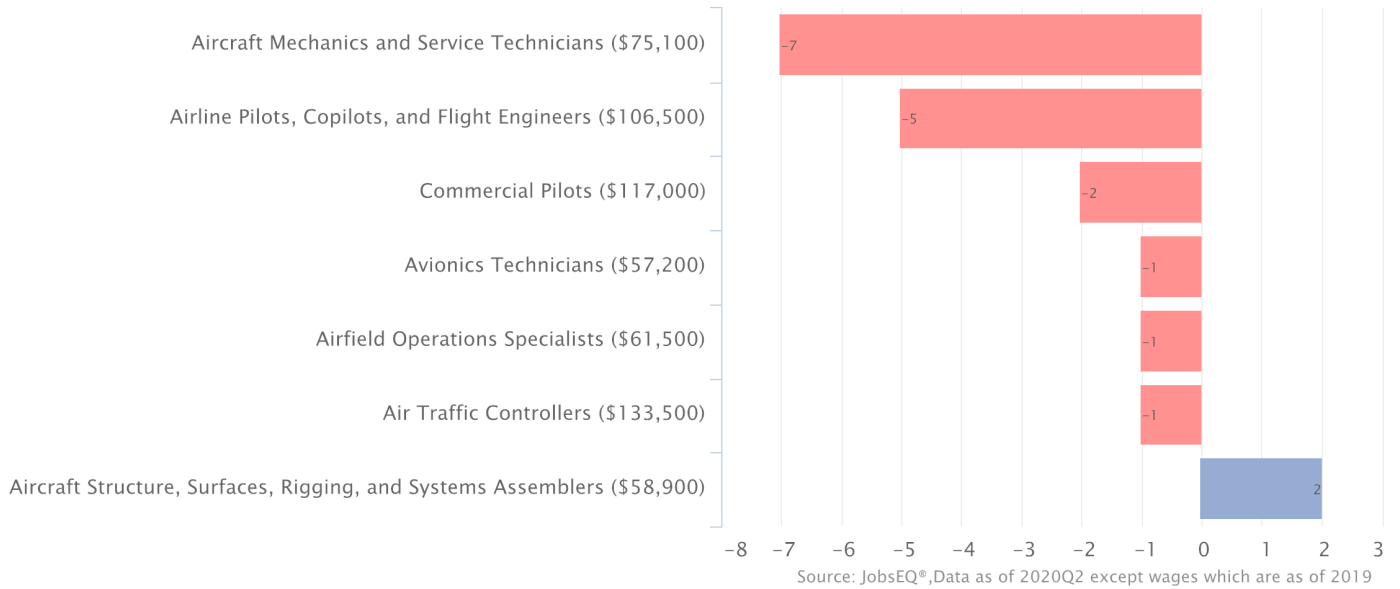
Occupation Gaps

Potential Average Annual Occupation Gaps over 5 Years in Minnesota

Occupation	Gap
Aircraft Mechanics and Service Technicians ($75,100)	-7
Airline Pilots, Copilots, and Flight Engineers ($106,500)	-5
Commercial Pilots ($117,000)	-2
Avionics Technicians ($57,200)	-1
Airfield Operations Specialists ($61,500)	-1
Air Traffic Controllers ($133,500)	-1
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers ($58,900)	2

Looking out the next ten years, these same occupations are forecast to experience even greater shortages.

Occupation Gaps

Potential Average Annual Occupation Gaps over 10 Years in Minnesota

Occupation	Gap
Aircraft Mechanics and Service Technicians ($75,100)	-9
Airline Pilots, Copilots, and Flight Engineers ($106,500)	-8
Commercial Pilots ($117,000)	-2
Airfield Operations Specialists ($61,500)	-1
Avionics Technicians ($57,200)	-1
Air Traffic Controllers ($133,500)	-1
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers ($58,900)	2
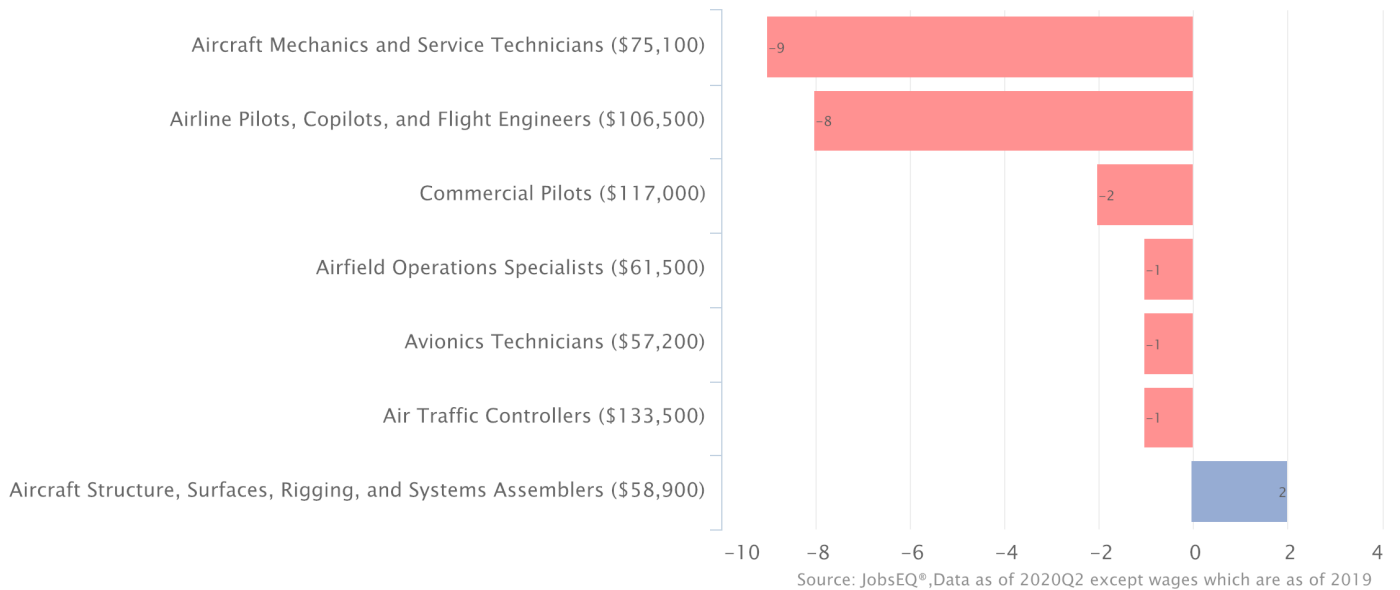
Employment Types

About 82% of people employed in Automotive Technology in Minnesota work for private employers, while only about 1% are self-employed. The remaining 17% work for state, federal, or local government entities (mostly federal).

Employment Types, Minnesota 2020Q2
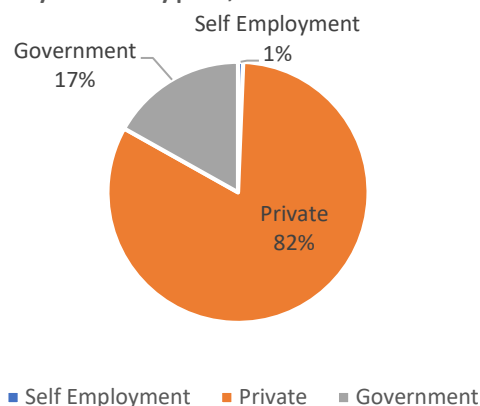
- Self Employment
- Private
- Government

Job Posting Trends

Data in this section focuses on jobs newly advertised between November 1, 2019 and October 31, 2020 in Aviation roles across Minnesota. All data in this section comes from Gartner TalentNeuron. Overall, there were 634 new jobs advertised in Aviation during this time frame, a decline of 6% from the prior 12-month period.

Top Employers by Volume of New Job Postings, With Change from Prior Year

1. Army: 148 (+6%)
2. DAL Global Services: 41 (+46%)
3. Delta Airlines: 32 (+68%)
4. Navy: 30 (0%)
5. North Memorial Health Care: 64 (+155%)
6. Aerotek: 18 (+6%)
7. Air National Guard: 16 (-20%)
8. Reliance Aerotech: 16 (0%)
9. GPAC: 15 (-42%)
10. Sun County Airlines: 14 (+600%)

New Job Postings Advertised in Minnesota by Employer Type

Staffing Agencies
18%

Direct
Employers
82%

■ Staffing Agencies ■ Direct Employers
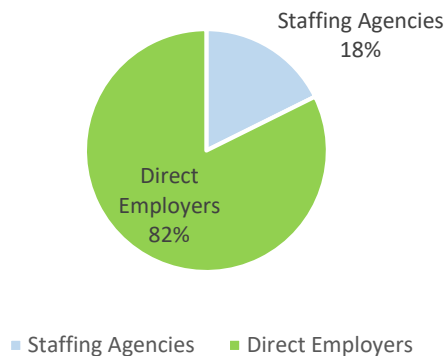
Top Skills by Volume of New Job Postings, With Change from Prior Year
1. Operations (+1%)
2. Troubleshooting (+27%)
3. Security (+26%)
4. Supervision (-7%)
5. Mechanics (+22%)
6. Responsibility (-43%)
7. Scheduling (+2%)
8. Testing (+29%)
9. Installing (+19%)
10. Aviation Maintenance (+17%)

Top Certifications by Volume of New Job Postings, With Change from Prior Year
1. Class D Driver's License (+31%)
2. Security Clearance (+13%)
3. HAZMAT (+90%)
4. Aircraft Maintenance Technician (+173%)
5. Airline Transport Pilot (-3%)

Top Sites Used by Volume of New Job Postings, With Change from Prior Year
1. JobsInLogistics (+127%)
2. The Job Network (+16%)
3. JobsHQ (+205%)
4. CareerBuilder (-27%)
5. Corporate Site (-4%)

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 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 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.

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. The first two digits define the top level category, known as the "sector," which is the level examined in this report.

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.

Who created this report?

This report was developed by RealTime Talent for the Transportation Center of Excellence. 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 or visit the RealTime Talent website at www.realtimetalent.org

COLLISION REPAIR

Demand Analysis 2020

MINNESOTA STATE
Transportation Center of Excellence

RealTime Talent
Using data to build the
world's best workforce

Introduction and Sector Overview

This report highlights the importance of the Collision Repair career pathway for Minnesota's Transportation Industry. Professionals in Collision Repair work in diverse roles from autobody repairers and glass installers to autobody painting, serving industries as diverse as Navigational Manufacturing and Automobile Dealerships. In all, about 6,880 people work in Collision Repair roles in Minnesota as of the second quarter of 2020.

Over the next 5 years, total employment in Minnesota is projected to expand by about 49,053 jobs under official baseline forecasts to model growth beyond the initial impacts of COVID-19, or up to 89,792 in an optimistic outlook that estimates moderate economic recovery by late 2023. During this time frame, growth in Collision Repair jobs is anticipated to grow moderately by up to 153 total jobs. Total demand for Collision Repair talent is anticipated to be around 3,732 professionals needed to fill positions due to job exits and transfers, such as retirements and job changes.

Transportation Pathways in Minnesota - COVID, 2020Q2[1]

| Occupation | Current | | | | | | 5-Year History | | 5-Year Forecast | | | | |
	Empl	Avg Ann Wages[2]	LQ	Unempl	Unempl Rate	Online Job Ads[3]	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
Automotive Technology Pathway	21,959	$60,100	1.00	722	3.2%	870	1,057	1.0%	9,454	2,679	6,847	-71	-0.1%
Collision Repair Pathway	6,880	$46,200	1.11	371	5.2%	280	-165	-0.5%	3,732	1,061	2,519	153	0.4%
Aviation Pathway	6,377	$94,000	0.92	157	2.5%	55	211	0.7%	3,253	868	2,158	228	0.7%
Marine and Power Sports Pathway	5,354	$40,900	1.10	367	6.6%	47	319	1.2%	3,274	997	2,215	62	0.2%
Diesel Equipment and Truck Pathway	13,249	$54,600	1.15	559	4.2%	396	-71	-0.1%	6,861	1,996	4,558	307	0.5%
Truck Driving Pathway	99,222	$43,000	1.00	4,799	4.8%	6,250	5,015	1.0%	61,110	23,917	34,411	2,783	0.6%
Total - All Occupations	**3,012,855**	**$56,600**	**1.00**	**140,926**	**4.6%**	**155,869**	**48,618**	**0.3%**	**1,819,042**	**661,016**	**1,068,234**	**89,792**	**0.6%**

As Minnesota looks to the future recovery from the pandemic's heavy blow to our economy and public health, forecasts made today may look very different from realities seen in years to come. Supply chain impacts, the drive to automation and technological innovation mean that the transportation industry, in particular, may look very different in five years from what it looks like today. The componding impacts of a tight labor market prior to the start of the pandemic and significant, rapid layoffs of non-essential workers across service industry positions creates a complex landscape of employer demand and an available workforce. Forecasting future needs under current conditions with an eye to anticipated talent pipelines into Collision Repair suggest that there may be shortages of talent in several occupations of this career pathway unless more talent decides to enter the field.
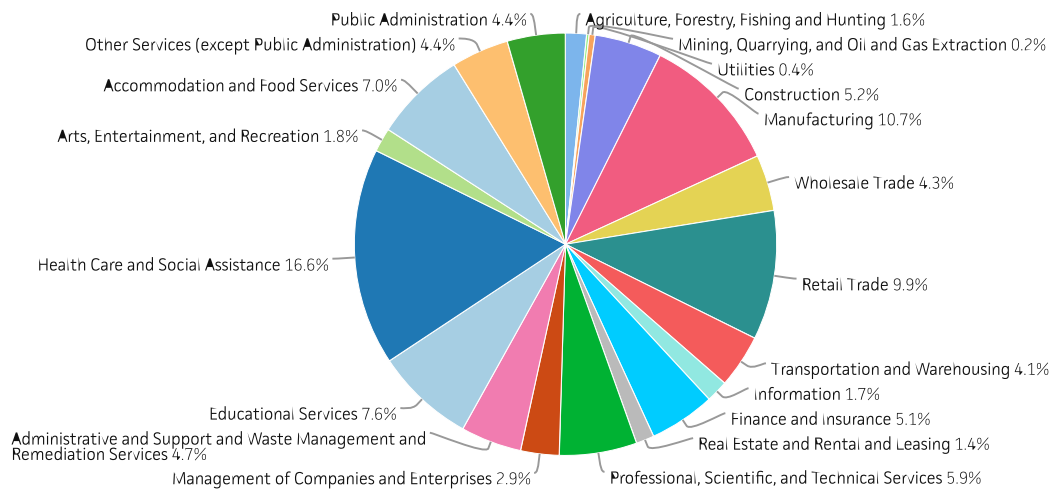
Collision Repair Employment Forecast Under Optimistic COVID-19 Scenario, Minnesota

5 Yrs Ago
7,045

Current
6,880

5 Yrs from Now
7,034

Source: JobsEQ®,Data as of 2020Q2,The shaded areas of the graph represent national recessions.

Industry/Occupation Mix

The largest industry in Minnesota is Health Care and Social Assistance, employing 500,608 workers. The next-largest industries in the region are Manufacturing (323,587 workers) and Retail Trade (298,251). Industries in Minnesota with the highest average wages per worker are Management of Companies and Enterprises ($127,764), Utilities ($113,213), and Finance and Insurance ($108,049). Regional industries with the best job growth (or most moderate job losses) over the last 5 years are Health Care and Social Assistance (+28,897 jobs), Professional, Scientific, and Technical Services (+15,102), and Transportation and Warehousing (+13,687).

Total Workers for Minnesota by Industry

| NAICS | Industry | Current | | | 5-Year History | | 5-Year Forecast | | | | |
		Empl	Avg Ann Wages	LQ	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
62	Health Care and Social Assistance	500,608	$55,109	1.14	28,897	1.2%	274,539	119,208	123,230	32,101	1.3%
31	Manufacturing	323,587	$68,280	1.30	2,136	0.1%	153,273	60,975	104,408	-12,109	-0.8%
44	Retail Trade	298,251	$31,708	0.97	-6,491	-0.4%	194,732	87,450	110,495	-3,213	-0.2%
61	Educational Services	229,169	$51,171	0.93	4,567	0.4%	109,648	51,226	55,274	3,147	0.3%
72	Accommodation and Food Services	211,482	$21,617	0.84	-13,014	-1.2%	181,949	76,946	96,911	8,092	0.8%
54	Professional, Scientific, and Technical Services	178,834	$94,855	0.86	15,102	1.8%	87,704	29,033	49,147	9,524	1.0%
23	Construction	155,232	$66,499	0.89	11,053	1.5%	84,336	27,816	49,767	6,753	0.9%
52	Finance and Insurance	152,296	$108,049	1.24	10,280	1.4%	72,480	26,947	44,238	1,294	0.2%
56	Administrative and Support and Waste Management and Remediation Services	140,485	$42,665	0.74	-5,819	-0.8%	84,945	34,586	47,177	3,182	0.4%
92	Public Administration	133,826	$60,783	0.92	6,357	1.0%	60,075	25,862	35,190	-978	-0.1%
81	Other Services (except Public Administration)	132,398	$31,779	1.00	-3,589	-0.5%	75,430	34,356	41,016	58	0.0%
42	Wholesale Trade	129,293	$85,494	1.12	-5,695	-0.9%	65,121	25,321	41,964	-2,164	-0.3%

NAICS	Industry	Current			5-Year History		5-Year Forecast				
		Empl	Avg Ann Wages	LQ	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
48	**Transportation and Warehousing**	**123,264**	**$55,195**	**0.87**	**13,687**	**2.4%**	**66,808**	**27,963**	**37,839**	**1,006**	**0.2%**
55	Management of Companies and Enterprises	88,576	$127,764	1.90	9,653	2.3%	41,604	14,844	25,335	1,426	0.3%
71	Arts, Entertainment, and Recreation	55,324	$35,821	0.99	-2,550	-0.9%	40,504	17,557	21,685	1,262	0.5%
51	Information	50,849	$81,466	0.85	-7,182	-2.6%	23,453	8,762	15,536	-845	-0.3%
11	Agriculture, Forestry, Fishing and Hunting	48,479	$49,439	1.19	-2,442	-1.0%	24,433	11,010	14,848	-1,425	-0.6%
53	Real Estate and Rental and Leasing	41,580	$57,134	0.79	-4,646	-2.1%	21,988	9,638	11,543	807	0.4%
22	Utilities	13,528	$113,213	0.86	-975	-1.4%	5,585	2,173	3,828	-415	-0.6%
21	Mining, Quarrying, and Oil and Gas Extraction	5,794	$91,766	0.46	-711	-2.3%	2,900	956	1,984	-40	-0.1%
	Total - All Industries	**3,012,855**	**$59,182**	**1.00**	**48,618**	**0.3%**	**1,701,217**	**706,144**	**946,020**	**49,053**	**0.3%**

Source: JobsEQ®
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 2019Q4 with preliminary estimates updated to 2020Q2. Forecast employment growth uses national projections adapted for regional growth patterns.

Collision Repair talent is primarily concentrated in the Automotive Repair and Maintenance industry (45.9%), but are important across a wide range of transportation, manufacturing, and agriculture sub-industries.

Top Industry Distribution for Collision Repair Pathway in Minnesota - COVID

NAICS Code	Industry Title	CURRENT			5-YEAR DEMAND			
		% of Occ Empl	Empl	Avg Ann Wages	Exits	Transfers	Empl Growth	Total Demand
8111	Automotive Repair and Maintenance	45.9%	3,159	$49,800	494	1,096	105	1,694
4411	Automobile Dealers	7.5%	514	$49,100	81	169	0	251
3328	Coating, Engraving, Heat Treating, and Allied Activities	6.3%	430	$36,300	65	171	8	244
3323	Architectural and Structural Metals Manufacturing	3.2%	223	$43,000	34	90	6	130
3339	Other General Purpose Machinery Manufacturing	2.7%	183	$43,000	27	72	-1	98
3331	Agriculture, Construction, and Mining Machinery Manufacturing	1.7%	119	$43,000	18	47	0	64
3222	Converted Paper Product Manufacturing	1.6%	111	$46,200	16	42	-5	53
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	1.5%	105	$43,000	16	42	3	62
3399	Other Miscellaneous Manufacturing	1.4%	99	$43,100	15	40	4	60
3362	Motor Vehicle Body and Trailer Manufacturing	1.4%	95	$39,800	15	39	6	60
3391	Medical Equipment and Supplies Manufacturing	1.4%	94	$43,000	14	38	3	55
5613	Employment Services	1.2%	80	$37,500	13	33	7	53
3261	Plastics Product Manufacturing	1.2%	79	$38,300	12	32	2	45
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	1.1%	78	$48,700	12	26	0	38
3219	Other Wood Product Manufacturing	1.1%	77	$36,600	11	30	0	41
3369	Other Transportation Equipment Manufacturing	1.0%	67	$43,200	10	25	-3	32
3324	Boiler, Tank, and Shipping Container Manufacturing	0.9%	65	$43,000	10	26	2	39
3329	Other Fabricated Metal Product Manufacturing	0.9%	64	$43,000	10	26	1	36
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	0.9%	63	$37,900	10	26	4	40
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	0.8%	55	$43,000	8	21	0	29
n/a	All Others	16.3%	1,120	n/a	169	428	8	605

Source: JobsEQ®
Data as of 2020Q2 except wages which are as of 2019. Note that occupation-by-industry wages represent adjusted national data and may not be consistent with regional, all-industry occupation wages shown elsewhere in JobsEQ.
Note: Figures may not sum due to rounding.

Pathway Detail

Of all occupations found in the Collision Repair pathway, the specific occupations of Coating, Painting, and Spraying Machine Setters, Operators, and Tenders and Automotive Glass Installers and Repairers are uniquely concentrated in Minnesota to a higher degree than seen in the nation overall. On average, Collision Repair careers pay about $46,200 per year—about $10,400 less than the average wage statewide across all positions at all education and experience levels.

Collision Repair Pathway in Minnesota - COVID, 2020Q2[1]

SOC	Occupation	Current						5-Year History		5-Year Forecast				
		Empl	Avg Ann Wages[2]	LQ	Unempl	Unempl Rate	Online Job Ads[3]	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
51-9124	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	3,600	$43,000	1.26	182	4.9%	127	-82	-0.4%	2,041	545	1,434	63	0.3%
49-3021	Automotive Body and Related Repairers	2,852	$50,400	0.96	165	5.6%	126	-88	-0.6%	1,465	463	927	75	0.5%
49-3022	Automotive Glass Installers and Repairers	428	$44,500	1.12	24	5.4%	27	5	0.2%	226	53	158	15	0.7%
	Collision Repair Pathway	6,880	$46,200	1.11	371	5.2%	280	-165	-0.5%	3,732	1,061	2,519	153	0.4%
	Total - All Occupations	3,012,855	$56,600	1.00	140,926	4.6%	124,655	48,618	0.3%	1,819,042	661,016	1,068,234	89,792	0.6%

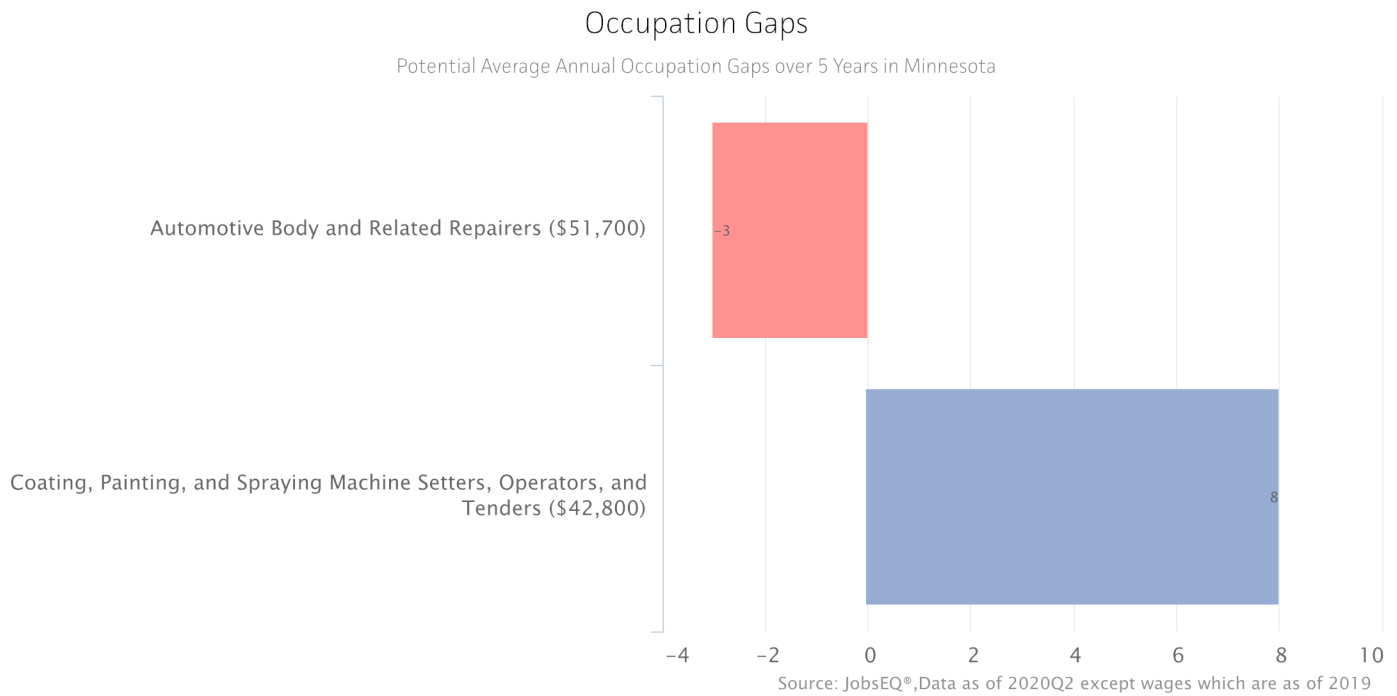Source: JobsEQ®
Data as of 2020Q2 unless noted otherwise
Note: Figures may not sum due to rounding.
1. Data based on a four-quarter moving average unless noted otherwise.
2. Wage data are as of 2019 and represent the average for all Covered Employment
3. Data represent found online ads active within the last thirty days in the selected region; data represents a sampling rather than the complete universe of postings. Ads lacking zip code information but designating a place (city, town, etc.) may be assigned to the zip code with greatest employment in that place for queries in this analytic. Due to alternative county-assignment algorithms, ad counts in this analytic may not match that shown in RTI (nor in the popup window ad list).

By 2025, Minnesota may have a shortage of Automotive Body Repairers (shown in red below) and a surplus of Autobody Painters.

Occupation Gaps

Potential Average Annual Occupation Gaps over 5 Years in Minnesota

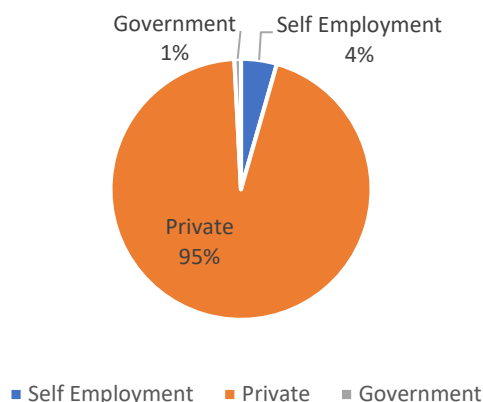
Source: JobsEQ®,Data as of 2020Q2 except wages which are as of 2019

However, looking out the next ten years, all occupations in the Collision Repair pathway are anticipated to experience talent shortages.

Occupation Gaps

Potential Average Annual Occupation Gaps over 10 Years in Minnesota

Source: JobsEQ®,Data as of 2020Q2 except wages which are as of 2019
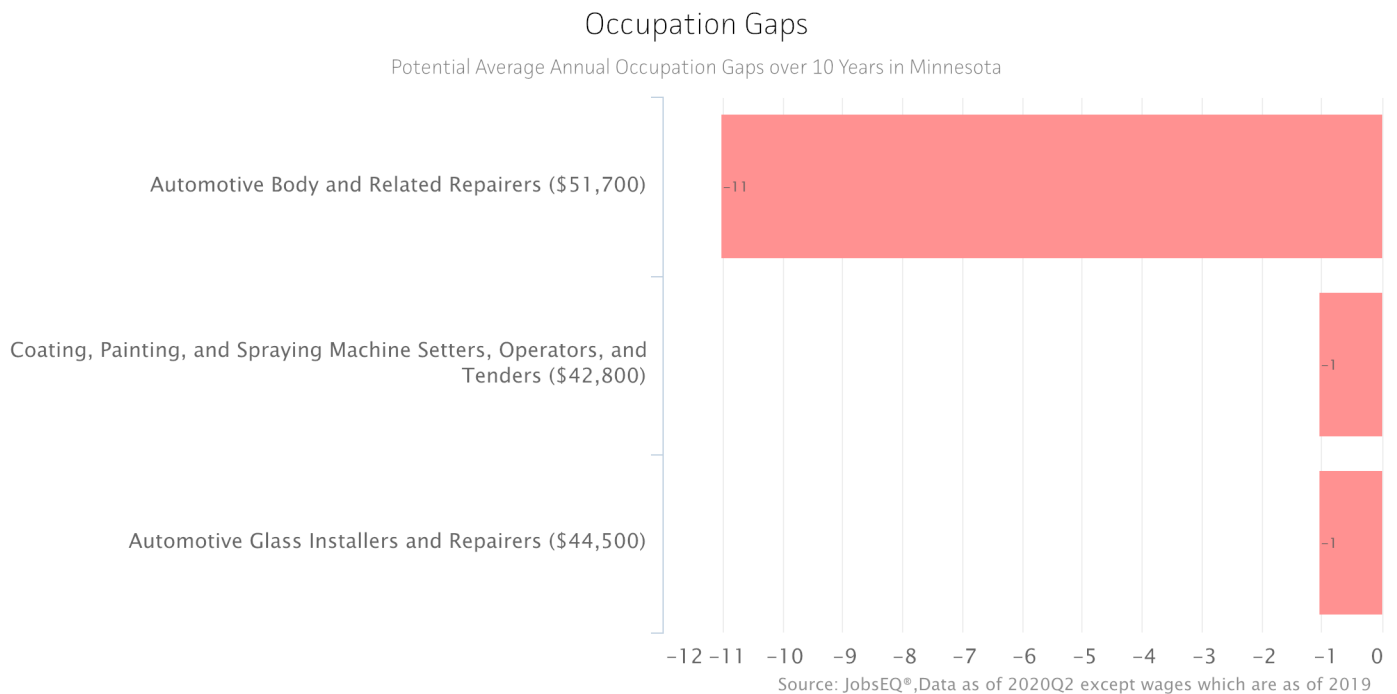
Employment Types

About 95% of people employed in Collision Repair in Minnesota work for private employers, while an estimated 4% are self-employed. The remaining 1% work for state, federal, or local government entities.

Employment Types, Minnesota 2020Q2

Government 1% Self Employment 4%

Private 95%

■ Self Employment ■ Private ■ Government

Job Posting Trends

Data in this section focuses on jobs newly advertised between November 1, 2019 and October 31, 2020 in Collision Repair roles across Minnesota. All data in this section comes from Gartner TalentNeuron. Overall, there were 885 new jobs advertised in Collision Repair during this time frame, a decline of almost 25% from the prior 12-month period.

Top Employers by Volume of New Job Postings, With Change from Prior Year

1. Caliber Collision Centers: 143 (+4%)
2. ABRA Auto Body and Glass: 63 (-66%)
3. Safelite Autoglass: 59 (-21%)
4. J.N. Phillips Glass: 50 (+2,400%)
5. Express Employment Professionals: 37 (-8%)
6. Aerotek: 33 (+38%)
7. Carvana: 23 (0%)
8. Pro Staff: 19 (-52%)
9. Walser Collision and Glass: 16 (+33%)
10. Twin City Staffing: 15 (+275%)

New Job Postings Advertised in Minnesota by Employer Type

Staffing Agencies
22%

Direct Employers
78%

■ Staffing Agencies ■ Direct Employers
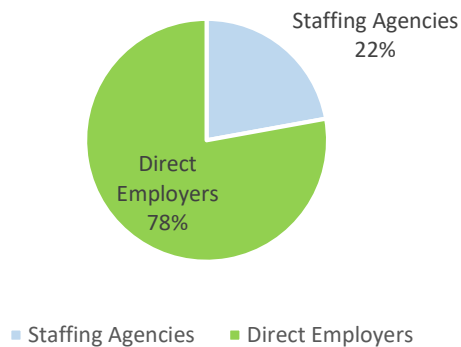
Top Skills by Volume of New Job Postings, With Change from Prior Year
1. Dedication (-30%)
2. Customer Service (-15%)
3. Lifting (-4%)
4. Communication (+14%)
5. Compliance (+2%)
6. Welding (+13%)
7. Multitasking (+38%)
8. Scheduling (-27%)
9. Friendliness (+24%)
10. Quality-Driven (+23%)

Top Certifications by Volume of New Job Postings, With Change from Prior Year
1. Class D Driver's License (-22%)
2. Auto Glass Technician (-24%)
3. Automotive Service Excellence (-41%)
4. OSHA (-26%)
5. I-CAR (-67%)

Top Sites Used by Volume of New Job Postings, With Change from Prior Year
1. The Job Network (-13%)
2. Indeed (+10%)
3. Snag (+69%)
4. Corporate Site (-8%)
5. MinnesotaWorks (-32%)

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 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 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.

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. The first two digits define the top level category, known as the "sector," which is the level examined in this report.

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.

Who created this report?

This report was developed by RealTime Talent for the Transportation Center of Excellence. 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 or visit the RealTime Talent website at www.realtimetalent.org

Source: RealTime Talent analysis of Chmura Economics JobsEQ®, http://www.chmuraecon.com/jobseq
Gartner TalentNeuron Recruit Job posting data 11/1/2019 – 10/31/2020
https://www.wantedanalytics.com/wa/counts?country=US&exclude=anonymous%2Cduplicates%2Cbulk%2Cexpired&jloc=state-24&jocc=493023%2C172141%2C493031%2C119041%2C493042%2C493021%2C536031%2C493041%2C172072%2C173027%2C492093%2C17302907%2C493022%2C172131%2C492096&methodology=new&require=&saved_search_id=61739&t%5Btimeframe%5D=f2019-11-01-2020-10-31&timeframe=f2019-11-01-2020-10-31#saved_search_id=&jocc=519121,493021,493022&restrict=&exclude=anonymous,duplicates,bulk,expired

11

DIESEL EQUIPMENT & TRUCK

Demand Analysis
2020

MINNESOTA STATE
Transportation Center of Excellence

RealTime Talent
Using data to build the
world's best workforce

Introduction and Sector Overview

This report highlights key opportunities in the Diesel, Equipment, and Truck career pathway for Minnesota's Transportation Industry. Professionals in Diesel, Equipment, and Truck careers work as Truck Mechanics, Diesel Specialists, Crane Operators, and Farm Equipment Mechanics serving a variety of industries. In all, about 13,249 people work in Diesel, Equipment, and Truck roles in Minnesota as of the second quarter of 2020.

Over the next 5 years, total employment in Minnesota is projected to expand by about 49,053 jobs under official baseline forecasts to model growth beyond the initial impacts of COVID-19, or up to 89,792 in an optimistic outlook that estimates moderate economic recovery by late 2023. During this time frame, opportunities in Diesel, Equipment, and Truck jobs are anticipated to grow by up to 307 total jobs. Total demand for Diesel, Equipment, and Truck talent is anticipated to be around 6,861 professionals needed to fill positions due to job exits and transfers, such as retirements and job changes.

Transportation Pathways in Minnesota - COVID, 2020Q2[1]

Occupation	Current						5-Year History		5-Year Forecast				
	Empl	Avg Ann Wages[2]	LQ	Unempl	Unempl Rate	Online Job Ads[3]	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
Automotive Technology Pathway	21,959	$60,100	1.00	722	3.2%	870	1,057	1.0%	9,454	2,679	6,847	-71	-0.1%
Collision Repair Pathway	6,880	$46,200	1.11	371	5.2%	280	-165	-0.5%	3,732	1,061	2,519	153	0.4%
Aviation Pathway	6,377	$94,000	0.92	157	2.5%	55	211	0.7%	3,253	868	2,158	228	0.7%
Marine and Power Sports Pathway	5,354	$40,900	1.10	367	6.6%	47	319	1.2%	3,274	997	2,215	62	0.2%
Diesel Equipment and Truck Pathway	13,249	$54,600	1.15	559	4.2%	396	-71	-0.1%	6,861	1,996	4,558	307	0.5%
Truck Driving Pathway	99,222	$43,000	1.00	4,799	4.8%	6,250	5,015	1.0%	61,110	23,917	34,411	2,783	0.6%
Total - All Occupations	**3,012,855**	**$56,600**	**1.00**	**140,926**	**4.6%**	**155,869**	**48,618**	**0.3%**	**1,819,042**	**661,016**	**1,068,234**	**89,792**	**0.6%**

Source: JobsEQ®
Data as of 2020Q2 unless noted otherwise
Note: Figures may not sum due to rounding.
1. Data based on a four-quarter moving average unless noted otherwise.
2. Wage data are as of 2019 and represent the average for all Covered Employment
3. Data represent found online ads active within the last thirty days in the selected region; data represents a sampling rather than the complete universe of postings. Ads lacking zip code information but designating a place (city, town, etc.) may be assigned to the zip code with greatest employment in that place for queries in this analytic. Due to alternative county-assignment algorithms, ad counts in this analytic may not match that shown in RTI (nor in the popup window ad list).

As Minnesota looks to the future recovery from the pandemic's heavy blow to our economy and public health, forecasts made today may look very different from realities seen in years to come. Supply chain impacts, the drive to automation and technological innovation mean that the transportation industry, in particular, may look very different in five years from what it looks like today. The componding impacts of a tight labor market prior to the start of the pandemic and significant, rapid layoffs of non-essential workers across service industry positions creates a complex landscape of employer demand and an available workforce. Forecasting future needs under current conditions with an eye to anticipated talent pipelines into Diesel, Equipment, and Truck careers suggest that there may be shortages of talent in several occupations of this career pathway unless more talent decides to enter the field.

Diesel, Equipment, and Truck Employment Forecast Under Optimistic COVID-19 Scenario, Minnesota

5 Yrs Ago 13,319
Current 13,249
5 Yrs from Now 13,557

Source: JobsEQ®, Data as of 2020Q2, The shaded areas of the graph represent national recessions.

Industry/Occupation Mix

The largest industry in Minnesota is Health Care and Social Assistance, employing 500,608 workers. The next-largest industries in the region are Manufacturing (323,587 workers) and Retail Trade (298,251). Industries in Minnesota with the highest average wages per worker are Management of Companies and Enterprises ($127,764), Utilities ($113,213), and Finance and Insurance ($108,049). Regional industries with the best job growth (or most moderate job losses) over the last 5 years are Health Care and Social Assistance (+28,897 jobs), Professional, Scientific, and Technical Services (+15,102), and Transportation and Warehousing (+13,687).

Total Workers for Minnesota by Industry

Pie chart: Total Workers for Minnesota by Industry

- Public Administration 4.4%
- Other Services (except Public Administration) 4.4%
- Accommodation and Food Services 7.0%
- Arts, Entertainment, and Recreation 1.8%
- Health Care and Social Assistance 16.6%
- Educational Services 7.6%
- Administrative and Support and Waste Management and Remediation Services 4.7%
- Management of Companies and Enterprises 2.9%
- Agriculture, Forestry, Fishing and Hunting 1.6%
- Mining, Quarrying, and Oil and Gas Extraction 0.2%
- Utilities 0.4%
- Construction 5.2%
- Manufacturing 10.7%
- Wholesale Trade 4.3%
- Retail Trade 9.9%
- Transportation and Warehousing 4.1%
- Information 1.7%
- Finance and Insurance 5.1%
- Real Estate and Rental and Leasing 1.4%
- Professional, Scientific, and Technical Services 5.9%

		Current			5-Year History		5-Year Forecast				
NAICS	Industry	Empl	Avg Ann Wages	LQ	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
62	Health Care and Social Assistance	500,608	$55,109	1.14	28,897	1.2%	274,539	119,208	123,230	32,101	1.3%
31	Manufacturing	323,587	$68,280	1.30	2,136	0.1%	153,273	60,975	104,408	-12,109	-0.8%
44	Retail Trade	298,251	$31,708	0.97	-6,491	-0.4%	194,732	87,450	110,495	-3,213	-0.2%
61	Educational Services	229,169	$51,171	0.93	4,567	0.4%	109,648	51,226	55,274	3,147	0.3%
72	Accommodation and Food Services	211,482	$21,617	0.84	-13,014	-1.2%	181,949	76,946	96,911	8,092	0.8%
54	Professional, Scientific, and Technical Services	178,834	$94,855	0.86	15,102	1.8%	87,704	29,033	49,147	9,524	1.0%
23	Construction	155,232	$66,499	0.89	11,053	1.5%	84,336	27,816	49,767	6,753	0.9%
52	Finance and Insurance	152,296	$108,049	1.24	10,280	1.4%	72,480	26,947	44,238	1,294	0.2%
56	Administrative and Support and Waste Management and Remediation Services	140,485	$42,665	0.74	-5,819	-0.8%	84,945	34,586	47,177	3,182	0.4%
92	Public Administration	133,826	$60,783	0.92	6,357	1.0%	60,075	25,862	35,190	-978	-0.1%
81	Other Services (except Public Administration)	132,398	$31,779	1.00	-3,589	-0.5%	75,430	34,356	41,016	58	0.0%
42	Wholesale Trade	129,293	$85,494	1.12	-5,695	-0.9%	65,121	25,321	41,964	-2,164	-0.3%
48	**Transportation and Warehousing**	**123,264**	**$55,195**	**0.87**	**13,687**	**2.4%**	**66,808**	**27,963**	**37,839**	**1,006**	**0.2%**
55	Management of Companies and Enterprises	88,576	$127,764	1.90	9,653	2.3%	41,604	14,844	25,335	1,426	0.3%
71	Arts, Entertainment, and Recreation	55,324	$35,821	0.99	-2,550	-0.9%	40,504	17,557	21,685	1,262	0.5%
51	Information	50,849	$81,466	0.85	-7,182	-2.6%	23,453	8,762	15,536	-845	-0.3%
11	Agriculture, Forestry, Fishing and Hunting	48,479	$49,439	1.19	-2,442	-1.0%	24,433	11,010	14,848	-1,425	-0.6%
53	Real Estate and Rental and Leasing	41,580	$57,134	0.79	-4,646	-2.1%	21,988	9,638	11,543	807	0.4%
22	Utilities	13,528	$113,213	0.86	-975	-1.4%	5,585	2,173	3,828	-415	-0.6%
21	Mining, Quarrying, and Oil and Gas Extraction	5,794	$91,766	0.46	-711	-2.3%	2,900	956	1,984	-40	-0.1%
	Total - All Industries	**3,012,855**	**$59,182**	**1.00**	**48,618**	**0.3%**	**1,701,217**	**706,144**	**946,020**	**49,053**	**0.3%**

Source: RealTime Talent Analysis of Chmura Economics JobsEQ®, http://www.chmuraecon.com/jobseq
Gartner TalentNeuron Recruit Job posting data 11/1/2019 – 10/31/2020
https://www.wantedanalytics.com/wa/counts?country=US&exclude=anonymous%2Cduplicates%2Cbulk%2Cexpired&jloc=state-24&jocc=493023%2C172141%2C493031%2C119041%2C493042%2C493021%2C536031%2C493041%2C172072%2C173027%2C492093%2C17302907%2C493022%2C172131%2C492096&methodology=new&require=&saved_search_id=61739&t%5Btimeframe%5D=f2019-11-01-2020-10-31&timeframe=f2019-11-01-2020-10-31#saved_search_id=&jocc=493031,493041,493042,493043,537021,475021&restrict=&exclude=anonymous,duplicates,bulk,expired

5

Diesel, Equipment, and Truck pathway talent is primarily employed in the Machinery, Equipment, and Supplies Merchant Wholesaler (18.4%) industry.

Top Industry Distribution for Diesel Equipment and Truck Pathway in Minnesota - COVID

| NAICS Code | Industry Title | CURRENT | | | 5-YEAR DEMAND | | | |
		% of Occ Empl	Empl	Avg Ann Wages	Exits	Transfers	Empl Growth	Total Demand
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	18.4%	2,432	$51,500	368	811	-24	1,155
4841	General Freight Trucking	8.1%	1,074	$52,700	151	352	12	515
2389	Other Specialty Trade Contractors	5.6%	739	$58,400	123	290	34	447
2373	Highway, Street, and Bridge Construction	4.5%	596	$59,100	97	220	27	344
8111	Automotive Repair and Maintenance	4.1%	541	$50,000	78	181	22	281
4854	School and Employee Bus Transportation	4.1%	540	$52,000	78	181	49	307
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	4.0%	536	$53,900	78	182	29	289
9211	Executive, Legislative, and Other General Government Support	3.6%	474	$55,100	70	159	10	239
4821	Rail Transportation	3.1%	411	$78,400	65	143	19	227
4882	Support Activities for Rail Transportation	3.0%	398	$61,500	63	140	16	219
2122	Metal Ore Mining	3.0%	394	$66,100	61	136	-4	193
4842	Specialized Freight Trucking	2.5%	337	$52,800	48	112	8	169
4851	Urban Transit Systems	2.3%	306	$54,600	44	101	9	154
5621	Waste Collection	1.8%	240	$52,700	36	82	12	130
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	1.6%	212	$54,900	32	72	2	107
6111	Elementary and Secondary Schools	1.3%	174	$52,600	24	57	2	84
2371	Utility System Construction	1.3%	172	$58,500	30	67	14	110
2123	Nonmetallic Mineral Mining and Quarrying	1.3%	169	$54,600	29	64	2	95
5321	Automotive Equipment Rental and Leasing	1.1%	150	$52,000	22	51	12	85
5511	Management of Companies and Enterprises	1.0%	138	$57,600	21	47	3	71
n/a	All Others	24.3%	3,215	n/a	479	1,109	41	1,629

Source: JobsEQ®
Data as of 2020Q2 except wages which are as of 2019. Note that occupation-by-industry wages represent adjusted national data and may not be consistent with regional, all-industry occupation wages shown elsewhere in JobsEQ.
Note: Figures may not sum due to rounding.

Pathway Detail

Of all occupations found in the Diesel, Equipment, and Truck pathway, Farm Equipment Mechanics and Service Technicians and Rail Car Repairers are uniquely concentrated in Minnesota to a higher degree than seen in the nation overall. On average, Diesel, Equipment, and Truck careers pay about $54,600 per year—about $2,000 less than the average wage statewide across all positions at all education and experience levels.

Diesel Equipment and Truck Pathway in Minnesota - COVID, 2020Q2[1]

SOC	Occupation	Current						5-Year History		5-Year Forecast				
		Empl	Avg Ann Wages[2]	LQ	Unempl	Unempl Rate	Online Job Ads[3]	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	6,390	$52,600	1.17	264	4.1%	327	144	0.5%	3,203	908	2,107	188	0.6%
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	3,164	$60,000	1.08	122	3.9%	3	252	1.7%	1,640	495	1,087	59	0.4%
49-3041	Farm Equipment Mechanics and Service Technicians	1,619	$47,100	1.89	46	2.8%	51	-139	-1.6%	766	246	540	-20	-0.2%
49-3043	Rail Car Repairers	827	$62,300	1.66	33	4.0%	7	-182	-3.9%	459	132	289	38	0.9%
53-7021	Crane and Tower Operators	627	$57,100	0.69	39	5.9%	4	22	0.7%	395	100	273	22	0.7%
47-5022	Excavating and Loading Machine and Dragline Operators, Surface Mining	622	$54,800	0.70	54	8.2%	4	-168	-4.7%	397	115	261	21	0.7%
	Diesel Equipment and Truck Pathway	13,249	$54,600	1.15	559	4.2%	396	-71	-0.1%	6,861	1,996	4,558	307	0.5%
	Total - All Occupations	**3,012,855**	**$56,600**	**1.00**	**140,926**	**4.6%**	**124,655**	**48,618**	**0.3%**	**1,819,042**	**661,016**	**1,068,234**	**89,792**	**0.6%**

Source: JobsEQ®
Data as of 2020Q2 unless noted otherwise
Note: Figures may not sum due to rounding.
1. Data based on a four-quarter moving average unless noted otherwise.
2. Wage data are as of 2019 and represent the average for all Covered Employment
3. Data represent found online ads active within the last thirty days in the selected region; data represents a sampling rather than the complete universe of postings. Ads lacking zip code information but designating a place (city, town, etc.) may be assigned to the zip code with greatest employment in that place for queries in this analytic. Due to alternative county-assignment algorithms, ad counts in this analytic may not match that shown in RTI (nor in the popup window ad list).
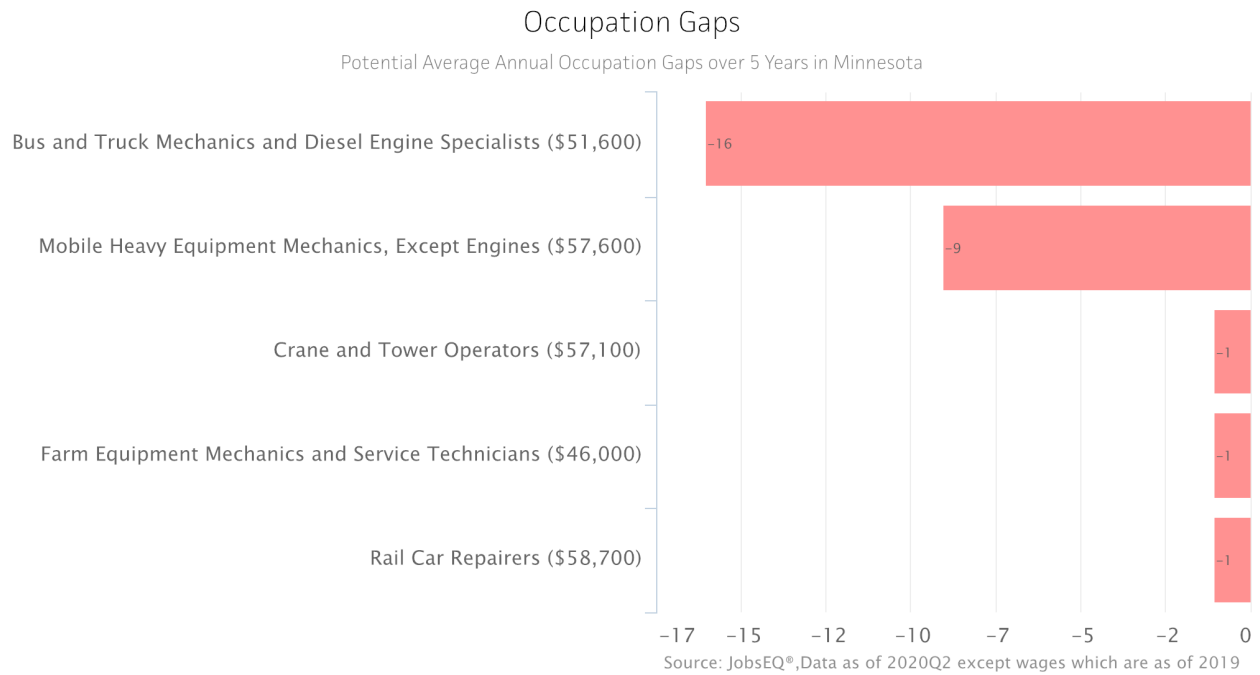
By 2025, Minnesota may have a small shortage of Bus and Truck Mechanics, Mobile Heavy Equipment Maintenance, Crane and Tower Operators, Farm Equipment Mechanics, and Rail Car Repairers (shown in red below).

Occupation Gaps

Potential Average Annual Occupation Gaps over 5 Years in Minnesota

Source: JobsEQ®,Data as of 2020Q2 except wages which are as of 2019

Looking out the next ten years, these shortages are anticipated to grow two to three times in volume.

Occupation Gaps

Potential Average Annual Occupation Gaps over 10 Years in Minnesota

Source: JobsEQ®,Data as of 2020Q2 except wages which are as of 2019
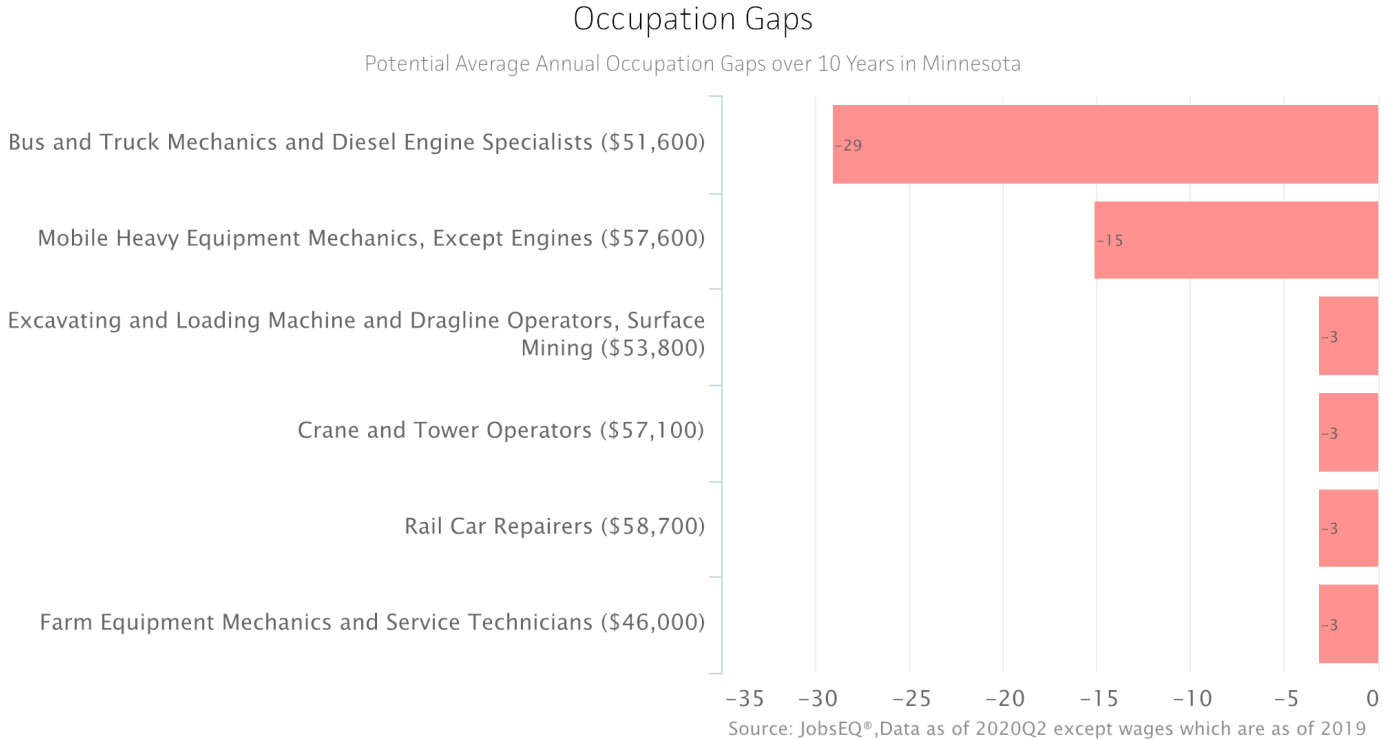
Employment Types

About 84% of people employed in Diesel, Equipment, and Truck occupations in Minnesota work for private employers, while an estimated 12% work for state, federal or local government. The remaining 4% are self employed.
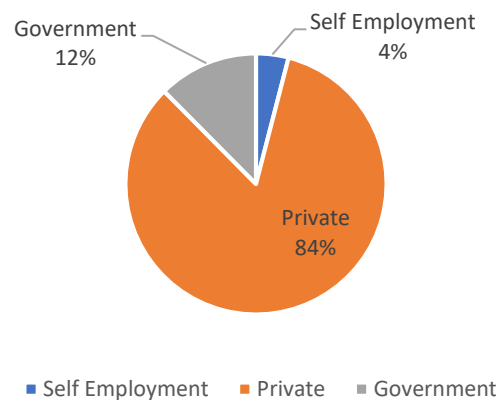
Employment Types, Minnesota 2020Q2

Legend: ■ Self Employment ■ Private ■ Government

Job Posting Trends

Data in this section focuses on jobs newly advertised between November 1, 2019 and October 31, 2020 in Diesel, Equipment, and Truck roles across Minnesota. All data in this section comes from Gartner TalentNeuron. Overall, there were 6,926 new jobs advertised in Diesel, Equipment and Truck careers during this time frame, an increase of about 22% from the prior 12-month period.

Top Employers by Volume of New Job Postings, With Change from Prior Year

1. Titan Machinery: 1,604 (+38%)
2. Boyer Trucks: 1,230 (+8,686%)
3. True North Equipment: 463 (+2,337%)
4. Allstate: 247 (+502%)
5. C & B Operations: 221 (-19%)
6. Waste Management: 145 (-76%)
7. Penske: 114 (+87%)
8. Sysco: 110 (-21%)
9. Ryder: 101 (-15%)

Source: RealTime Talent Analysis of Chmura Economics JobsEQ®, http://www.chmuraecon.com/jobseq
Gartner TalentNeuron Recruit Job posting data 11/1/2019 – 10/31/2020
https://www.wantedanalytics.com/wa/counts?country=US&exclude=anonymous%2Cduplicates%2Cbulk%2Cexpired&jloc=state-
24&jocc=493023%2C172141%2C493031%2C119041%2C493042%2C493021%2C536031%2C493041%2C172072%2C173027%2C492093%2C17302907%2C493022%2C172131%2C492096
&methodology=new&require=&saved_search_id=61739&t%5Btimeframe%5D=f2019-11-01-2020-10-31&timeframe=f2019-11-01-2020-10-
31#saved_search_id=&jocc=493031,493041,493042,493043,537021,475021&restrict=&exclude=anonymous,duplicates,bulk,expired

9

New Job Postings Advertised in Minnesota by Employer Type

Staffing Agencies
6%

Direct
Employers
94%

■ Staffing Agencies   ■ Direct Employers

Top Skills by Volume of New Job Postings, With Change from Prior Year
1. Diagnosing (-1%)
2. Mechanics (+6%)
3. Problem Solving (+40%)
4. Detail-Oriented (+37%)
5. Product Knowledge (+42%)
6. Customer-Oriented (+40%)
7. Computer Applications (+19%)
8. Heavy Trucks (+169%)
9. Responsibility (+93%)
10. Dedication (-3%)

Top Certifications by Volume of New Job Postings, With Change from Prior Year
1. Class A Commercial Driver's License (+41%)
2. Class D Driver's License (-11%)
3. Automotive Service Excellence (+9%)
4. OSHA (-58%)
5. EPA Certification (+133%)

Top Sites Used by Volume of New Job Postings, With Change from Prior Year
1. The Job Network (+203%)
2. Snag (+358%)
3. Jobs in the US (+128%)
4. MinnesotaWorks (-24%)
5. Local Job Network (+145%)

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 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 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.

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. The first two digits define the top level category, known as the "sector," which is the level examined in this report.

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.

Who created this report?

This report was developed by RealTime Talent for the Transportation Center of Excellence. 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 or visit the RealTime Talent website at www.realtimetalent.org

Source: RealTime Talent Analysis of Chmura Economics JobsEQ®, http://www.chmuraecon.com/jobseq
Gartner TalentNeuron Recruit Job posting data 11/1/2019 – 10/31/2020
https://www.wantedanalytics.com/wa/counts?country=US&exclude=anonymous%2Cduplicates%2Cbulk%2Cexpired&jloc=state-24&jocc=493023%2C172141%2C493031%2C119041%2C493042%2C493021%2C536031%2C493041%2C172072%2C173027%2C492093%2C17302907%2C493022%2C172131%2C492096&methodology=new&require=&saved_search_id=61739&t%5Btimeframe%5D=f2019-11-01-2020-10-31&timeframe=f2019-11-01-2020-10-31#saved_search_id=&jocc=493031,493041,493042,493043,537021,475021&restrict=&exclude=anonymous,duplicates,bulk,expired

11

MARINE & POWERSPORTS

Demand Analysis
2020

Introduction and Sector Overview

This report highlights key opportunities in the Marine and Power Sports career pathway for Minnesota's Transportation Industry. Professionals in Marine and Power Sports work in diverse roles from industrial equipment maintenance, outdoor power equipment maintenance, and small engine, motorboat, and motorcycle mechanics, serving a variety of industries. In all, about 5,354 people work in Marine and Power Sports roles in Minnesota as of the second quarter of 2020.

Over the next 5 years, total employment in Minnesota is projected to expand by about 49,053 jobs under official baseline forecasts to model growth beyond the initial impacts of COVID-19, or up to 89,792 in an optimistic outlook that estimates moderate economic recovery by late 2023. During this time frame, growth in Marine and Power Sports jobs is anticipated to grow moderately by up to 62 total jobs. Total demand for Marine and Power Sports talent is anticipated to be around 3,274 professionals needed to fill positions due to job exits and transfers, such as retirements and job changes.

Transportation Pathways in Minnesota - COVID, 2020Q2[1]

Occupation	Current						5-Year History		5-Year Forecast				
	Empl	Avg Ann Wages[2]	LQ	Unempl	Unempl Rate	Online Job Ads[3]	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
Automotive Technology Pathway	21,959	$60,100	1.00	722	3.2%	870	1,057	1.0%	9,454	2,679	6,847	-71	-0.1%
Collision Repair Pathway	6,880	$46,200	1.11	371	5.2%	280	-165	-0.5%	3,732	1,061	2,519	153	0.4%
Aviation Pathway	6,377	$94,000	0.92	157	2.5%	55	211	0.7%	3,253	868	2,158	228	0.7%
Marine and Power Sports Pathway	5,354	$40,900	1.10	367	6.6%	47	319	1.2%	3,274	997	2,215	62	0.2%
Diesel Equipment and Truck Pathway	13,249	$54,600	1.15	559	4.2%	396	-71	-0.1%	6,861	1,996	4,558	307	0.5%
Truck Driving Pathway	99,222	$43,000	1.00	4,799	4.8%	6,250	5,015	1.0%	61,110	23,917	34,411	2,783	0.6%
Total - All Occupations	**3,012,855**	**$56,600**	**1.00**	**140,926**	**4.6%**	**155,869**	**48,618**	**0.3%**	**1,819,042**	**661,016**	**1,068,234**	**89,792**	**0.6%**

Source: JobsEQ®
Data as of 2020Q2 unless noted otherwise
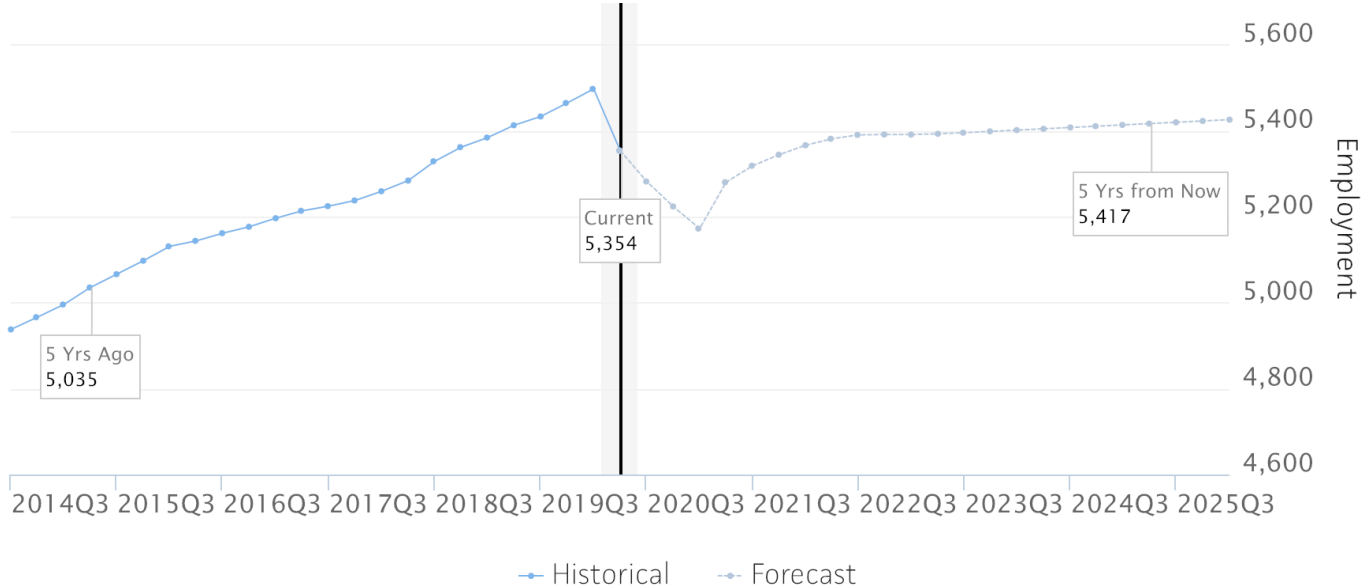Note: Figures may not sum due to rounding.
1. Data based on a four-quarter moving average unless noted otherwise.
2. Wage data are as of 2019 and represent the average for all Covered Employment
3. Data represent found online ads active within the last thirty days in the selected region; data represents a sampling rather than the complete universe of postings. Ads lacking zip code information but designating a place (city, town, etc.) may be assigned to the zip code with greatest employment in that place for queries in this analytic. Due to alternative county-assignment algorithms, ad counts in this analytic may not match that shown in RTI (nor in the popup window ad list).

Source: RealTime Talent analysis of Chmura Economics JobsEQ®, http://www.chmuraecon.com/jobseq
Gartner TalentNeuron Recruit Job posting data 11/1/2019 – 10/31/2020
https://www.wantedanalytics.com/wa/counts?country=US&exclude=anonymous%2Cduplicates%2Cbulk%2Cexpired&jloc=state-24&jocc=493023%2C172141%2C493031%2C119041%2C493042%2C493021%2C536031%2C493041%2C172072%2C173027%2C492093%2C17302907%2C493022%2C172131%2C492096&methodology=new&require=&saved_search_id=61739&t%5Btimeframe%5D=f2019-11-01-2020-10-31&timeframe=f2019-11-01-2020-10-31#saved_search_id=&jocc=492094,536031,493051,493053,535022&restrict=&exclude=anonymous,duplicates,bulk,expired

3

As Minnesota looks to the future recovery from the pandemic's heavy blow to our economy and public health, forecasts made today may look very different from realities seen in years to come. Supply chain impacts, the drive to automation and technological innovation mean that the transportation industry, in particular, may look very different in five years from what it looks like today. The componding impacts of a tight labor market prior to the start of the pandemic and significant, rapid layoffs of non-essential workers across service industry positions creates a complex landscape of employer demand and an available workforce. Forecasting future needs under current conditions with an eye to anticipated talent pipelines into Marine and Power Sports suggest that there may be shortages of talent in several occupations of this career pathway unless more talent decides to enter the field.

Marine and Power Sports Employment Forecast Under Optimistic COVID-19 Scenario, Minnesota
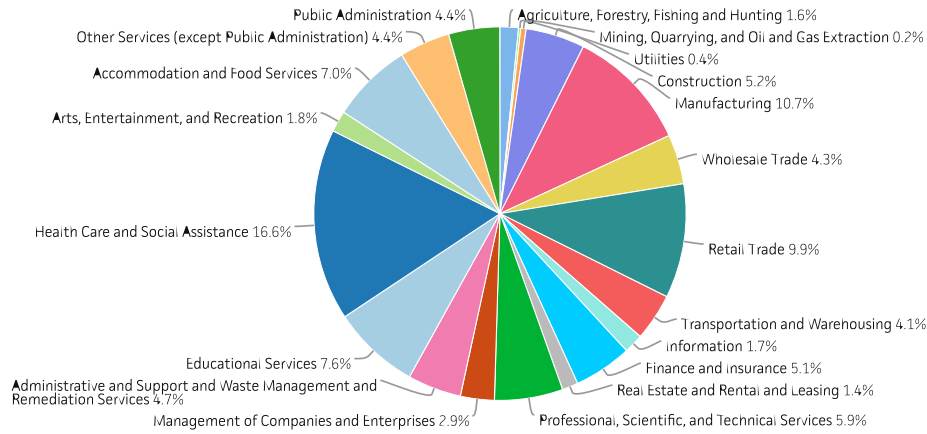

Source: JobsEQ®,Data as of 2020Q2,The shaded areas of the graph represent national recessions.

Industry/Occupation Mix

The largest industry in Minnesota is Health Care and Social Assistance, employing 500,608 workers. The next-largest industries in the region are Manufacturing (323,587 workers) and Retail Trade (298,251). Industries in Minnesota with the highest average wages per worker are Management of Companies and Enterprises ($127,764), Utilities ($113,213), and Finance and Insurance ($108,049). Regional industries with the best job growth (or most moderate job losses) over the last 5 years are Health Care and Social Assistance (+28,897 jobs), Professional, Scientific, and Technical Services (+15,102), and Transportation and Warehousing (+13,687).

Total Workers for Minnesota by Industry

Pie chart: Total Workers for Minnesota by Industry
- Public Administration 4.4%
- Other Services (except Public Administration) 4.4%
- Accommodation and Food Services 7.0%
- Arts, Entertainment, and Recreation 1.8%
- Health Care and Social Assistance 16.6%
- Educational Services 7.6%
- Administrative and Support and Waste Management and Remediation Services 4.7%
- Management of Companies and Enterprises 2.9%
- Professional, Scientific, and Technical Services 5.9%
- Real Estate and Rental and Leasing 1.4%
- Finance and Insurance 5.1%
- Information 1.7%
- Transportation and Warehousing 4.1%
- Retail Trade 9.9%
- Wholesale Trade 4.3%
- Manufacturing 10.7%
- Construction 5.2%
- Utilities 0.4%
- Mining, Quarrying, and Oil and Gas Extraction 0.2%
- Agriculture, Forestry, Fishing and Hunting 1.6%

| NAICS | Industry | Current | | | 5-Year History | | 5-Year Forecast | | | | |
		Empl	Avg Ann Wages	LQ	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
62	Health Care and Social Assistance	500,608	$55,109	1.14	28,897	1.2%	274,539	119,208	123,230	32,101	1.3%
31	Manufacturing	323,587	$68,280	1.30	2,136	0.1%	153,273	60,975	104,408	-12,109	-0.8%
44	Retail Trade	298,251	$31,708	0.97	-6,491	-0.4%	194,732	87,450	110,495	-3,213	-0.2%
61	Educational Services	229,169	$51,171	0.93	4,567	0.4%	109,648	51,226	55,274	3,147	0.3%
72	Accommodation and Food Services	211,482	$21,617	0.84	-13,014	-1.2%	181,949	76,946	96,911	8,092	0.8%
54	Professional, Scientific, and Technical Services	178,834	$94,855	0.86	15,102	1.8%	87,704	29,033	49,147	9,524	1.0%
23	Construction	155,232	$66,499	0.89	11,053	1.5%	84,336	27,816	49,767	6,753	0.9%
52	Finance and Insurance	152,296	$108,049	1.24	10,280	1.4%	72,480	26,947	44,238	1,294	0.2%
56	Administrative and Support and Waste Management and Remediation Services	140,485	$42,665	0.74	-5,819	-0.8%	84,945	34,586	47,177	3,182	0.4%
92	Public Administration	133,826	$60,783	0.92	6,357	1.0%	60,075	25,862	35,190	-978	-0.1%
81	Other Services (except Public Administration)	132,398	$31,779	1.00	-3,589	-0.5%	75,430	34,356	41,016	58	0.0%
42	Wholesale Trade	129,293	$85,494	1.12	-5,695	-0.9%	65,121	25,321	41,964	-2,164	-0.3%
48	**Transportation and Warehousing**	**123,264**	**$55,195**	**0.87**	**13,687**	**2.4%**	**66,808**	**27,963**	**37,839**	**1,006**	**0.2%**
55	Management of Companies and Enterprises	88,576	$127,764	1.90	9,653	2.3%	41,604	14,844	25,335	1,426	0.3%
71	Arts, Entertainment, and Recreation	55,324	$35,821	0.99	-2,550	-0.9%	40,504	17,557	21,685	1,262	0.5%
51	Information	50,849	$81,466	0.85	-7,182	-2.6%	23,453	8,762	15,536	-845	-0.3%
11	Agriculture, Forestry, Fishing and Hunting	48,479	$49,439	1.19	-2,442	-1.0%	24,433	11,010	14,848	-1,425	-0.6%
53	Real Estate and Rental and Leasing	41,580	$57,134	0.79	-4,646	-2.1%	21,988	9,638	11,543	807	0.4%
22	Utilities	13,528	$113,213	0.86	-975	-1.4%	5,585	2,173	3,828	-415	-0.6%
21	Mining, Quarrying, and Oil and Gas Extraction	5,794	$91,766	0.46	-711	-2.3%	2,900	956	1,984	-40	-0.1%
	Total - All Industries	**3,012,855**	**$59,182**	**1.00**	**48,618**	**0.3%**	**1,701,217**	**706,144**	**946,020**	**49,053**	**0.3%**

Source: JobsEQ® 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 2019Q4 with preliminary estimates updated to 2020Q2. Forecast employment growth uses national projections adapted for regional growth patterns.

Source: RealTime Talent analysis of Chmura Economics JobsEQ®, http://www.chmuraecon.com/jobseq
Gartner TalentNeuron Recruit Job posting data 11/1/2019 – 10/31/2020
https://www.wantedanalytics.com/wa/counts?country=US&exclude=anonymous%2Cduplicates%2Cbulk%2Cexpired&jloc=state-24&jocc=493023%2C172141%2C493031%2C119041%2C493042%2C493021%2C536031%2C493041%2C172072%2C173027%2C492093%2C17302907%2C493022%2C172131%2C492096&methodology=new&require=&saved_search_id=61739&t%5Btimeframe%5D=f2019-11-01-2020-10-31&timeframe=f2019-11-01-2020-10-31#saved_search_id=&jocc=492094,536031,493051,493053,535022&restrict=&exclude=anonymous,duplicates,bulk,expired

5

Marine and Power Sports talent is primarily employed in Gasoline Stations (12.7%), Automotive Repair and Maintenance (12.5%), and Other Motor Vehicle Dealers (12.2%) industries.

NAICS Code	Industry Title	CURRENT			5-YEAR DEMAND			
		% of Occ Empl	Empl	Avg Ann Wages	Exits	Transfers	Empl Growth	Total Demand
4471	Gasoline Stations	12.7%	678	$25,600	142	333	-34	440
8111	Automotive Repair and Maintenance	12.5%	667	$27,900	152	356	35	543
4412	Other Motor Vehicle Dealers	12.2%	651	$45,200	133	200	12	345
4411	Automobile Dealers	8.1%	434	$30,900	95	223	0	318
8114	Personal and Household Goods Repair and Maintenance	5.6%	299	$43,400	60	91	7	159
4523	General Merchandise Stores, including Warehouse Clubs and Supercenters	4.6%	245	$28,800	55	126	6	187
7139	Other Amusement and Recreation Industries	4.5%	241	$37,800	52	94	36	182
4442	Lawn and Garden Equipment and Supplies Stores	4.0%	216	$42,000	42	64	-6	100
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	3.6%	192	$68,000	16	64	-9	71
4522	Department Stores	2.4%	128	$28,800	28	64	1	93
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	1.8%	96	$48,100	16	30	-1	45
3344	Semiconductor and Other Electronic Component Manufacturing	1.6%	84	$70,100	7	28	-5	30
2382	Building Equipment Contractors	1.5%	78	$60,700	7	28	2	37
4451	Grocery Stores	1.4%	77	$28,100	18	41	3	62
5617	Services to Buildings and Dwellings	1.3%	68	$40,800	14	21	4	39
4441	Building Material and Supplies Dealers	1.1%	60	$39,500	12	19	2	33
9211	Executive, Legislative, and Other General Government Support	1.1%	60	$50,300	9	23	1	32
4413	Automotive Parts, Accessories, and Tire Stores	0.9%	47	$30,700	10	21	-3	29
8112	Electronic and Precision Equipment Repair and Maintenance	0.8%	40	$57,500	3	14	0	18
3221	Pulp, Paper, and Paperboard Mills	0.7%	38	$69,900	3	12	-5	9
n/a	All Others	17.9%	957	n/a	122	362	12	496

Source: JobsEQ®
Data as of 2020Q2 except wages which are as of 2019. Note that occupation-by-industry wages represent adjusted national data and may not be consistent with regional, all-industry occupation wages shown elsewhere in JobsEQ.
Note: Figures may not sum due to rounding.

Pathway Detail

Of all occupations found in the Marine and Power Sports pathway, the specific occupations of Automotive and Watercraft Service Attendants, Outdoor Power Equipment Mechanics, Motorboat Mechanics, and Motorcycle Mechanics are all uniquely concentrated in Minnesota to a higher degree than seen in the nation overall. On average, Marine and Power Sports careers pay about $40,900 per year—almost $16,000 less than the average wage statewide across all positions at all education and experience levels.

Marine and Power Sports Pathway in Minnesota - COVID, 2020Q2[1]

SOC	Occupation	Empl	Avg Ann Wages[2]	LQ	Unempl	Unempl Rate	Online Job Ads[3]	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
			Current					**5-Year History**		**5-Year Forecast**				
53-6031	Automotive and Watercraft Service Attendants	2,533	$28,100	1.12	203	7.6%	4	345	3.0%	1,895	559	1,309	26	0.2%
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	1,124	$66,100	1.01	67	5.9%	18	-120	-2.0%	470	94	388	-12	-0.2%
49-3053	Outdoor Power Equipment and Other Small Engine Mechanics	729	$40,800	1.10	40	5.3%	11	18	0.5%	386	148	221	17	0.5%
49-3051	Motorboat Mechanics and Service Technicians	523	$45,000	1.11	33	6.1%	12	51	2.1%	289	107	161	22	0.8%
49-3052	Motorcycle Mechanics	419	$46,200	1.32	23	5.1%	1	34	1.7%	220	85	127	8	0.4%
53-5022	Motorboat Operators	26	$39,300	0.64	1	5.6%	1	-9	-5.7%	15	4	9	2	1.6%
	Marine and Power Sports Pathway	5,354	$40,900	1.10	367	6.6%	47	319	1.2%	3,274	997	2,215	62	0.2%
	Total - All Occupations	3,012,855	$56,600	1.00	140,926	4.6%	124,655	48,618	0.3%	1,819,042	661,016	1,068,234	89,792	0.6%

Source: JobsEQ®
Data as of 2020Q2 unless noted otherwise
Note: Figures may not sum due to rounding.
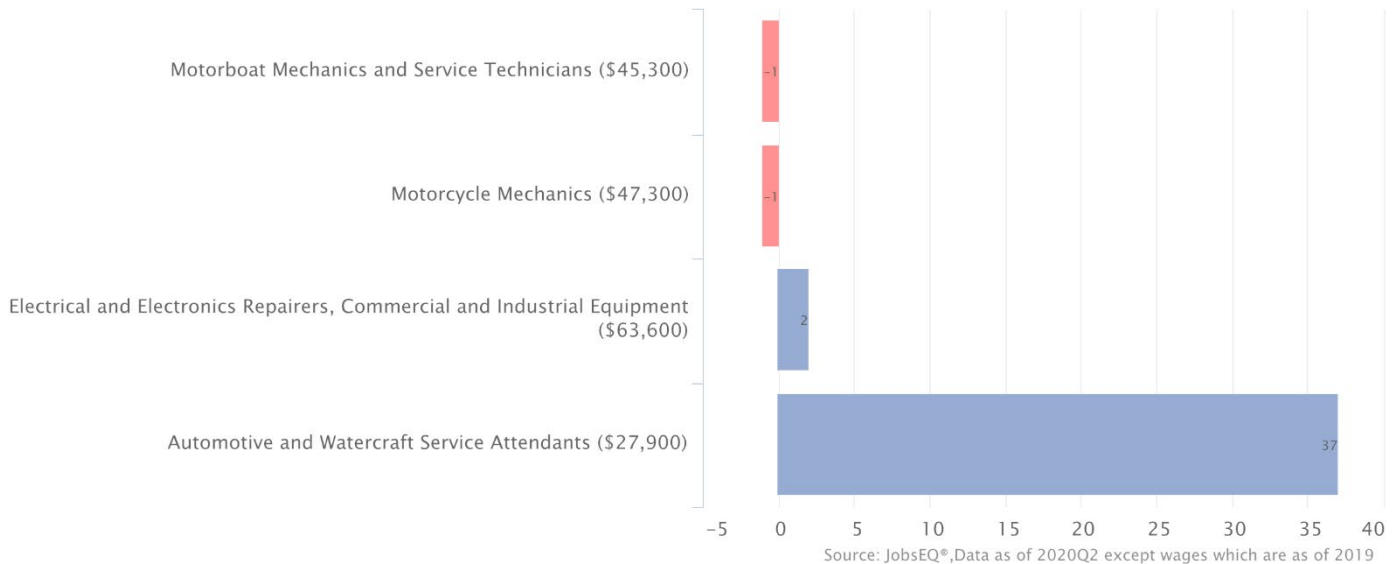1. Data based on a four-quarter moving average unless noted otherwise.
2. Wage data are as of 2019 and represent the average for all Covered Employment
3. Data represent found online ads active within the last thirty days in the selected region; data represents a sampling rather than the complete universe of postings. Ads lacking zip code information but designating a place (city, town, etc.) may be assigned to the zip code with greatest employment in that place for queries in this analytic. Due to alternative county-assignment algorithms, ad counts in this analytic may not match that shown in RTI (nor in the popup window ad list).

By 2025, Minnesota may have a small shortage of Motorboat Mechanics and Service Technicians and Motorcycle Mechanics (shown in red below) and a surplus of Commercial and Industrial Equipment Electrical and Electronics Repairers and Automotive and Watercraft Service Attendants.

Occupation Gaps
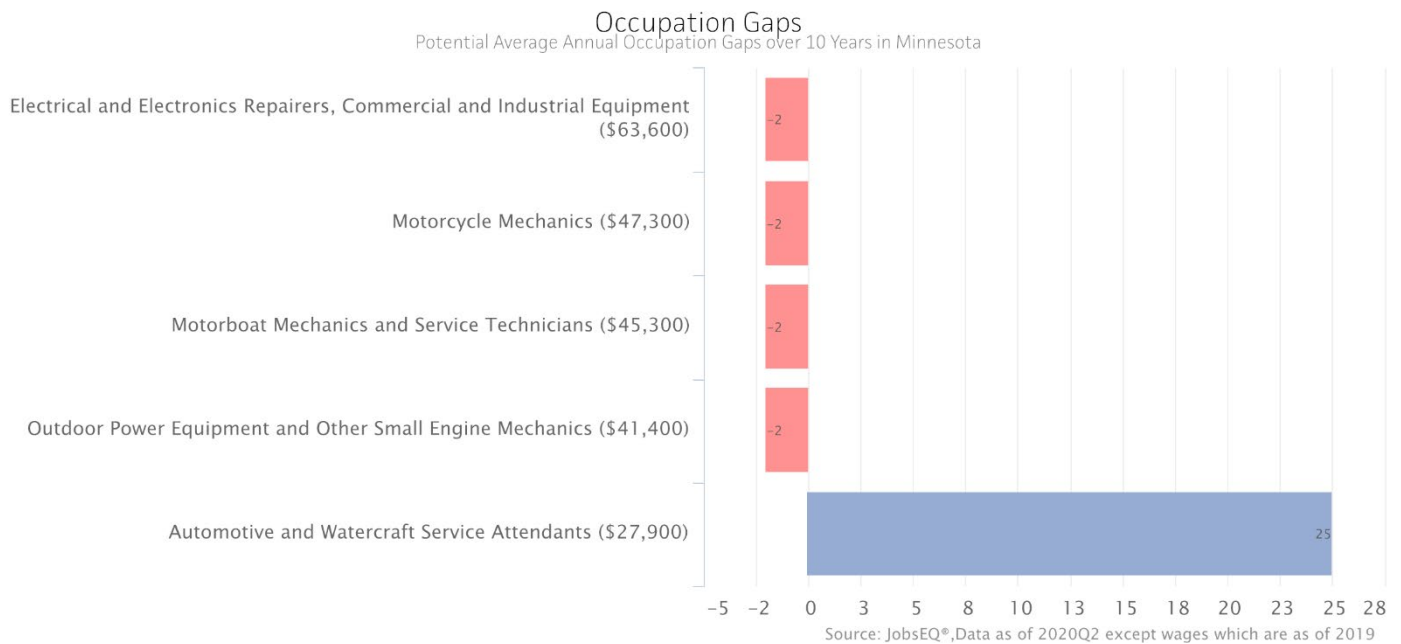### Potential Average Annual Occupation Gaps over 5 Years in Minnesota

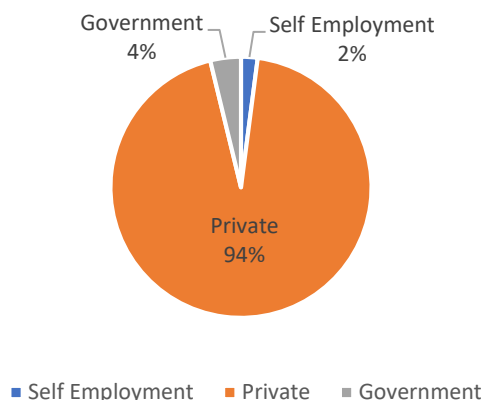Source: JobsEQ®,Data as of 2020Q2 except wages which are as of 2019

Looking out the next ten years, Outdoor Power Equipment and Other Small Engine Mechanics join the list of occupations of possible shortage.

Occupation Gaps
Potential Average Annual Occupation Gaps over 10 Years in Minnesota

Occupation	Gap
Electrical and Electronics Repairers, Commercial and Industrial Equipment ($63,600)	-2
Motorcycle Mechanics ($47,300)	-2
Motorboat Mechanics and Service Technicians ($45,300)	-2
Outdoor Power Equipment and Other Small Engine Mechanics ($41,400)	-2
Automotive and Watercraft Service Attendants ($27,900)	25

−5 −2 0 3 5 8 10 13 15 18 20 23 25 28

Source: JobsEQ®,Data as of 2020Q2 except wages which are as of 2019

Employment Types

About 94% of people employed in Marine and Power Sports in Minnesota work for private employers, while an estimated 2% are self-employed. The remaining 4% work for state, federal, or local government entities.

Employment Types, Minnesota 2020Q2

Government
4%

Self Employment
2%

Private
94%

■ Self Employment ■ Private ■ Government

Job Posting Trends

Data in this section focuses on jobs newly advertised between November 1, 2019 and October 31, 2020 in Marine and Power Sports roles across Minnesota. All data in this section comes from Gartner TalentNeuron. Overall, there were 532 new jobs advertised in Marine and Power Sports during this time frame, an increase of about 10% from the prior 12-month period.

Top Employers by Volume of New Job Postings, With Change from Prior Year

1. Walmart: 133 (+3,225%)
2. Penske: 37 (+117%)
3. Army: 29 (+7%)
4. FirstGroupAmerica: 11 (+120%)
5. Northern Tool and Equipment 11 (+57%)
6. L&M Fleet Supply: 10 (+150%)
7. Naturescape: 7 (+250%)
8. Express Employment Professionals: 7 (-36%)
9. American Crystal Sugar Company: 6 (+200%)
10. Midwest Machinery Company: 6 (+0%)

New Job Postings Advertised in Minnesota by Employer Type

Staffing Agencies
11%

Direct
Employers
89%

■ Staffing Agencies ■ Direct Employers
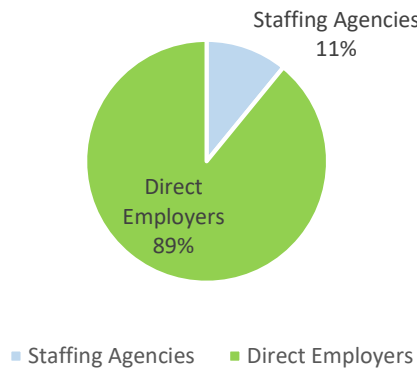
Top Skills by Volume of New Job Postings, With Change from Prior Year

1. Operations (+228%)
2. Independent Work (+200%)
3. Compliance (+367%)
4. Troubleshooting (-6%)
5. Communication (+1%)
6. Initiating Action (+800%)
7. Sustainability (+2,000%)
8. Merchandising (+4,333%)
9. Finance (+2,540%)
10. Customer Service (+14%)

Top Certifications by Volume of New Job Postings, With Change from Prior Year

1. Class D Driver's License (+20%)
2. Commercial Driver's License (+400%)
3. Security Clearance (+65%)
4. CIP Compliance (+0%)
5. National Electrical Code (-87%)

Top Sites Used by Volume of New Job Postings, With Change from Prior Year

1. The Job Network (-34%)
2. Snag (+41%)
3. MinnesotaWorks (+1%)
4. Indeed (+1%)
5. Corporate Site (+38%)

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 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 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.

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. The first two digits define the top level category, known as the "sector," which is the level examined in this report.

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.

Who created this report?

This report was developed by RealTime Talent for the Transportation Center of Excellence. 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 or visit the RealTime Talent website at www.realtimetalent.org

Source: RealTime Talent analysis of Chmura Economics JobsEQ®, http://www.chmuraecon.com/jobseq
Gartner TalentNeuron Recruit Job posting data 11/1/2019 – 10/31/2020
https://www.wantedanalytics.com/wa/counts?country=US&exclude=anonymous%2Cduplicates%2Cbulk%2Cexpired&jloc=state-24&jocc=493023%2C172141%2C493031%2C119041%2C493042%2C493021%2C536031%2C493041%2C172072%2C173027%2C492093%2C17302907%2C493022%2C172131%2C492096&methodology=new&require=&saved_search_id=61739&t%5Btimeframe%5D=f2019-11-01-2020-10-31&timeframe=f2019-11-01-2020-10-31#saved_search_id=&jocc=492094,536031,493051,493053,535022&restrict=&exclude=anonymous,duplicates,bulk,expired

11

PROFESSIONAL TRUCK DRIVING

Demand Analysis
2020

MINNESOTA STATE
Transportation Center of Excellence

RealTime Talent
Using data to build the
world's best workforce

Introduction and Sector Overview

This report highlights key opportunities in the Truck Driving career pathway for Minnesota's Transportation Industry. Professionals in these careers work as heavy truck drivers, tractor drivers, bus drivers, sales truck drivers, and tank car drivers serving a variety of industries. In all, about 99,222 people work in Truck Driving roles in Minnesota as of the second quarter of 2020.

Over the next 5 years, total employment in Minnesota is projected to expand by about 49,053 jobs under official baseline forecasts to model growth beyond the initial impacts of COVID-19, or up to 89,792 in an optimistic outlook that estimates moderate economic recovery by late 2023. During this time frame, opportunities in Truck Driving are anticipated to grow by up to 2,783 total jobs. Total demand for Truck Driving talent is anticipated to be around 61,110 professionals needed to fill positions due to job exits and transfers, such as retirements and job changes.

Transportation Pathways in Minnesota - COVID, 2020Q2[1]

Occupation	Current						5-Year History		5-Year Forecast				
	Empl	Avg Ann Wages[2]	LQ	Unempl	Unempl Rate	Online Job Ads[3]	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
Automotive Technology Pathway	21,959	$60,100	1.00	722	3.2%	870	1,057	1.0%	9,454	2,679	6,847	-71	-0.1%
Collision Repair Pathway	6,880	$46,200	1.11	371	5.2%	280	-165	-0.5%	3,732	1,061	2,519	153	0.4%
Aviation Pathway	6,377	$94,000	0.92	157	2.5%	55	211	0.7%	3,253	868	2,158	228	0.7%
Marine and Power Sports Pathway	5,354	$40,900	1.10	367	6.6%	47	319	1.2%	3,274	997	2,215	62	0.2%
Diesel Equipment and Truck Pathway	13,249	$54,600	1.15	559	4.2%	396	-71	-0.1%	6,861	1,996	4,558	307	0.5%
Truck Driving Pathway	99,222	$43,000	1.00	4,799	4.8%	6,250	5,015	1.0%	61,110	23,917	34,411	2,783	0.6%
Total - All Occupations	**3,012,855**	**$56,600**	**1.00**	**140,926**	**4.6%**	**155,869**	**48,618**	**0.3%**	**1,819,042**	**661,016**	**1,068,234**	**89,792**	**0.6%**

As Minnesota looks to the future recovery from the pandemic's heavy blow to our economy and public health, forecasts made today may look very different from realities seen in years to come. Supply chain impacts, the drive to automation and technological innovation mean that the transportation industry, in particular, may look very different in five years from what it looks like today. The componding impacts of a tight labor market prior to the start of the pandemic and significant, rapid layoffs of non-essential workers across service industry positions creates a complex landscape of employer demand and an available workforce. Forecasting future needs under current conditions with an eye to anticipated talent pipelines into Truck Driving careers suggest that there may be shortages of talent in several occupations of this career pathway unless more talent decides to enter the field.
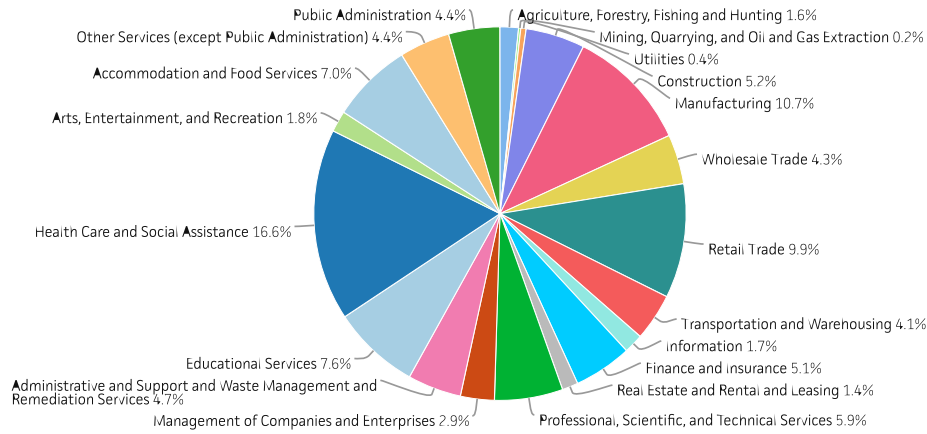
Truck Driving Employment Forecast Under Optimistic COVID-19 Scenario, Minnesota

Source: JobsEQ®,Data as of 2020Q2,The shaded areas of the graph represent national recessions.

Industry/Occupation Mix

The largest industry in Minnesota is Health Care and Social Assistance, employing 500,608 workers. The next-largest industries in the region are Manufacturing (323,587 workers) and Retail Trade (298,251). Industries in Minnesota with the highest average wages per worker are Management of Companies and Enterprises ($127,764), Utilities ($113,213), and Finance and Insurance ($108,049). Regional industries with the best job growth (or most moderate job losses) over the last 5 years are Health Care and Social Assistance (+28,897 jobs), Professional, Scientific, and Technical Services (+15,102), and Transportation and Warehousing (+13,687).

Total Workers for Minnesota by Industry

NAICS	Industry	Current			5-Year History		5-Year Forecast				
		Empl	Avg Ann Wages	LQ	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
62	Health Care and Social Assistance	500,608	$55,109	1.14	28,897	1.2%	274,539	119,208	123,230	32,101	1.3%
31	Manufacturing	323,587	$68,280	1.30	2,136	0.1%	153,273	60,975	104,408	-12,109	-0.8%
44	Retail Trade	298,251	$31,708	0.97	-6,491	-0.4%	194,732	87,450	110,495	-3,213	-0.2%
61	Educational Services	229,169	$51,171	0.93	4,567	0.4%	109,648	51,226	55,274	3,147	0.3%
72	Accommodation and Food Services	211,482	$21,617	0.84	-13,014	-1.2%	181,949	76,946	96,911	8,092	0.8%
54	Professional, Scientific, and Technical Services	178,834	$94,855	0.86	15,102	1.8%	87,704	29,033	49,147	9,524	1.0%
23	Construction	155,232	$66,499	0.89	11,053	1.5%	84,336	27,816	49,767	6,753	0.9%
52	Finance and Insurance	152,296	$108,049	1.24	10,280	1.4%	72,480	26,947	44,238	1,294	0.2%
56	Administrative and Support and Waste Management and Remediation Services	140,485	$42,665	0.74	-5,819	-0.8%	84,945	34,586	47,177	3,182	0.4%
92	Public Administration	133,826	$60,783	0.92	6,357	1.0%	60,075	25,862	35,190	-978	-0.1%
81	Other Services (except Public Administration)	132,398	$31,779	1.00	-3,589	-0.5%	75,430	34,356	41,016	58	0.0%
42	Wholesale Trade	129,293	$85,494	1.12	-5,695	-0.9%	65,121	25,321	41,964	-2,164	-0.3%
48	**Transportation and Warehousing**	**123,264**	**$55,195**	**0.87**	**13,687**	**2.4%**	**66,808**	**27,963**	**37,839**	**1,006**	**0.2%**
55	Management of Companies and Enterprises	88,576	$127,764	1.90	9,653	2.3%	41,604	14,844	25,335	1,426	0.3%
71	Arts, Entertainment, and Recreation	55,324	$35,821	0.99	-2,550	-0.9%	40,504	17,557	21,685	1,262	0.5%
51	Information	50,849	$81,466	0.85	-7,182	-2.6%	23,453	8,762	15,536	-845	-0.3%
11	Agriculture, Forestry, Fishing and Hunting	48,479	$49,439	1.19	-2,442	-1.0%	24,433	11,010	14,848	-1,425	-0.6%
53	Real Estate and Rental and Leasing	41,580	$57,134	0.79	-4,646	-2.1%	21,988	9,638	11,543	807	0.4%
22	Utilities	13,528	$113,213	0.86	-975	-1.4%	5,585	2,173	3,828	-415	-0.6%
21	Mining, Quarrying, and Oil and Gas Extraction	5,794	$91,766	0.46	-711	-2.3%	2,900	956	1,984	-40	-0.1%
	Total - All Industries	**3,012,855**	**$59,182**	**1.00**	**48,618**	**0.3%**	**1,701,217**	**706,144**	**946,020**	**49,053**	**0.3%**

Truck Driving pathway talent is primarily employed in the General Freight Trucking (14.9%) industry, but critically important for other industries like school transportation and sales.

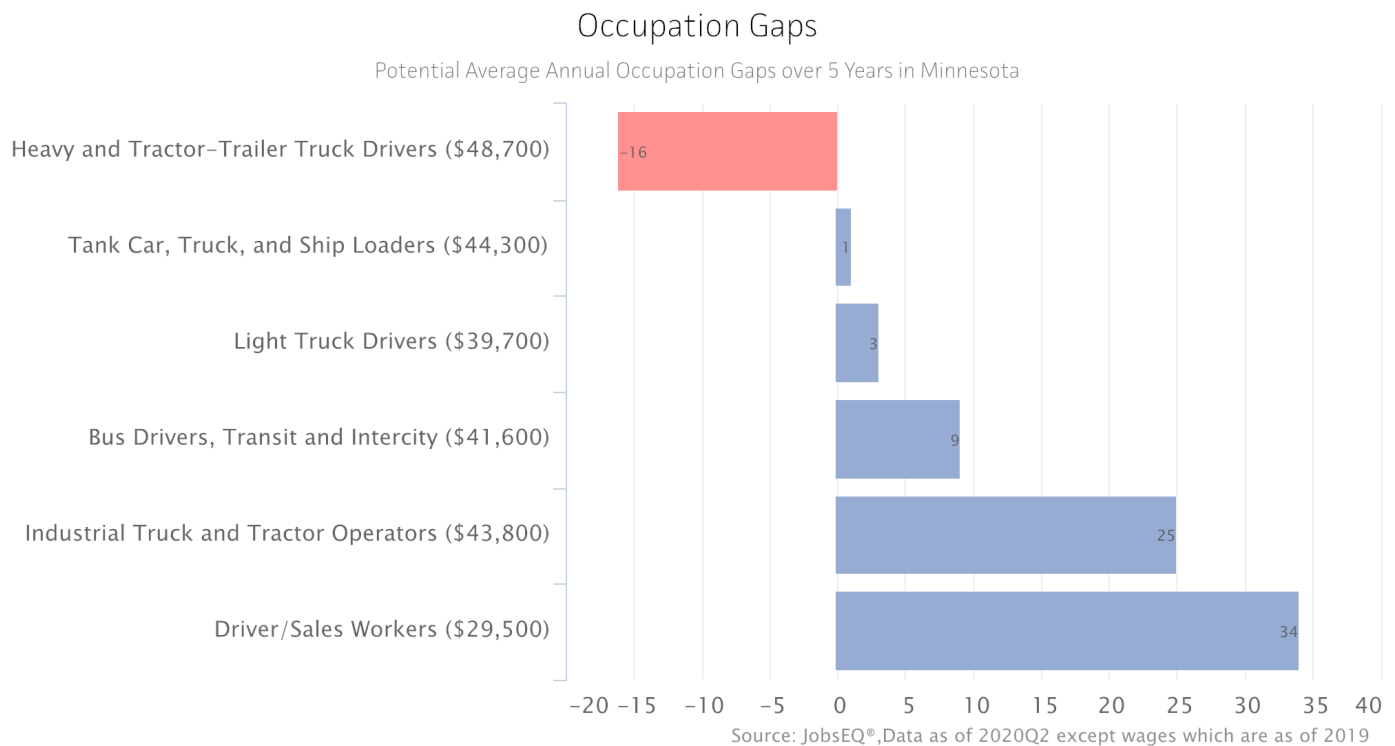Top Industry Distribution for Truck Driving Pathway in Minnesota - COVID

NAICS Code	Industry Title	CURRENT			5-YEAR DEMAND			
		% of Occ Empl	Empl	Avg Ann Wages	Exits	Transfers	Empl Growth	Total Demand
4841	General Freight Trucking	14.9%	14,812	$49,500	3,056	5,483	311	8,850
4854	School and Employee Bus Transportation	9.0%	8,930	$39,400	3,313	2,361	945	6,618
4842	Specialized Freight Trucking	4.9%	4,857	$49,500	1,007	1,808	135	2,951
4921	Couriers and Express Delivery Services	4.8%	4,770	$59,300	976	1,743	0	2,719
7225	Restaurants and Other Eating Places	3.9%	3,896	$25,600	788	1,401	23	2,212
4244	Grocery and Related Product Merchant Wholesalers	3.8%	3,757	$40,000	760	1,403	77	2,240
6111	Elementary and Secondary Schools	3.2%	3,203	$36,900	1,108	811	-9	1,910
4922	Local Messengers and Local Delivery	2.9%	2,908	$41,700	584	1,040	-75	1,549
4931	Warehousing and Storage	2.7%	2,678	$48,300	457	1,079	27	1,563
4853	Taxi and Limousine Service	2.4%	2,334	$33,300	897	643	259	1,799
4851	Urban Transit Systems	2.2%	2,219	$42,100	866	561	68	1,495
4859	Other Transit and Ground Passenger Transportation	1.9%	1,934	$34,100	738	536	204	1,478
5613	Employment Services	1.7%	1,689	$41,400	321	700	157	1,179
9211	Executive, Legislative, and Other General Government Support	1.6%	1,563	$40,500	540	425	22	987
4543	Direct Selling Establishments	1.6%	1,541	$43,000	303	541	-57	787
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	1.5%	1,445	$45,700	282	516	-40	758
5621	Waste Collection	1.3%	1,302	$48,900	277	501	67	844
2373	Highway, Street, and Bridge Construction	1.3%	1,256	$50,800	265	477	58	800
4413	Automotive Parts, Accessories, and Tire Stores	1.2%	1,171	$27,700	226	404	-63	567
2389	Other Specialty Trade Contractors	1.1%	1,044	$50,400	222	400	58	680
n/a	All Others	32.2%	31,911	n/a	6,922	11,567	531	19,021

Source: JobsEQ®
Data as of 2020Q2 except wages which are as of 2019. Note that occupation-by-industry wages represent adjusted national data and may not be consistent with regional, all-industry occupation wages shown elsewhere in JobsEQ.
Note: Figures may not sum due to rounding.

Pathway Detail

Of all occupations found in the Truck Driving pathway, Passenger Vehicle Drivers are uniquely concentrated in Minnesota to a higher degree than seen in the nation overall. On average, Truck Driving careers pay about $43,000 per year—about $13,000 less than the average wage statewide across all positions at all education and experience levels. However, the average wage for Heavy and Tractor-Trailer Truck Drivers is just over $50,000.
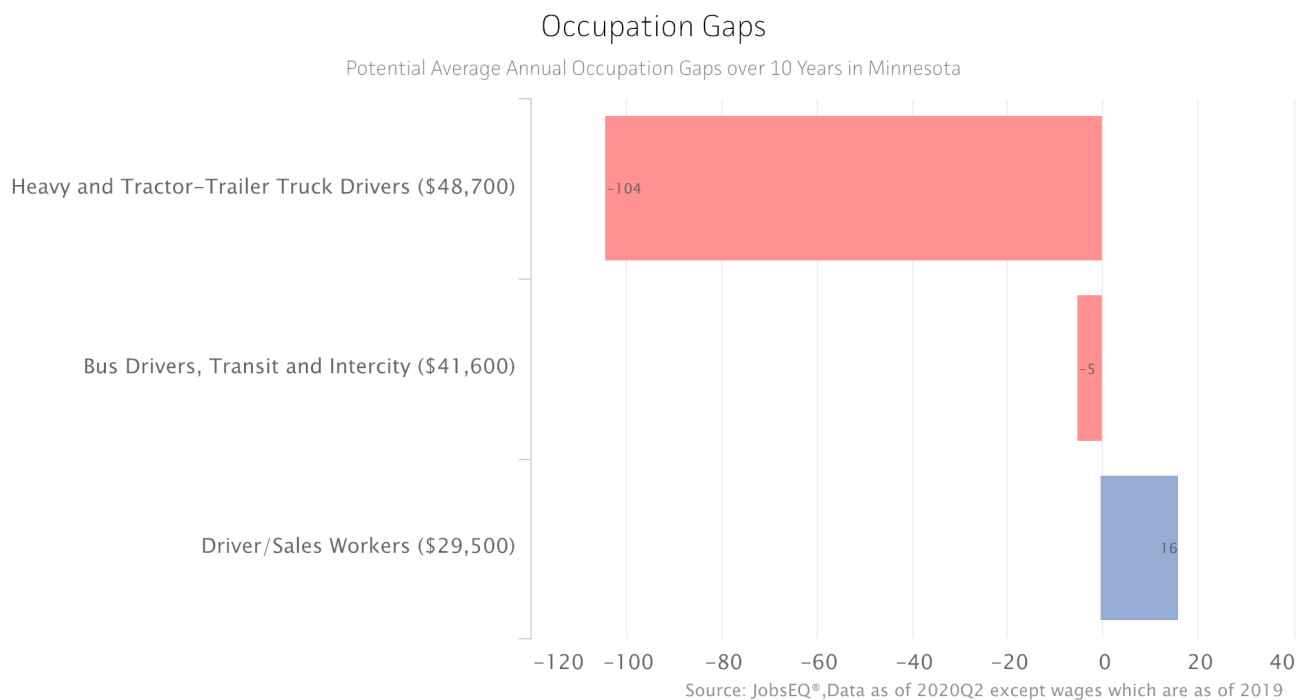
Truck Driving Pathway in Minnesota - COVID, 2020Q2[1]

SOC	Occupation	Current						5-Year History		5-Year Forecast				
		Empl	Avg Ann Wages[2]	LQ	Unempl	Unempl Rate	Online Job Ads[3]	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
53-3032	Heavy and Tractor-Trailer Truck Drivers	37,379	$50,200	0.98	1,756	4.6%	2,800	2,185	1.2%	22,310	7,749	13,798	763	0.4%
53-3058	Passenger Vehicle Drivers, Except Bus Drivers, Transit and Intercity	19,511	$36,800	1.21	993	4.9%	314	914	1.0%	13,919	7,211	5,155	1,553	1.5%
53-3033	Light Truck Drivers	18,729	$41,400	0.96	770	4.2%	1,415	1,788	2.0%	10,830	3,845	6,847	138	0.1%
53-3031	Driver/Sales Workers	9,770	$30,000	1.09	355	3.6%	1,472	26	0.1%	5,498	1,980	3,525	-7	0.0%
53-7051	Industrial Truck and Tractor Operators	9,520	$45,400	0.76	637	6.5%	225	62	0.1%	5,590	1,440	3,985	165	0.3%
53-3052	Bus Drivers, Transit and Intercity	4,147	$40,800	1.07	273	6.4%	16	55	0.3%	2,858	1,651	1,037	170	0.8%
53-7121	Tank Car, Truck, and Ship Loaders	165	$47,700	0.68	15	7.2%	8	-15	-1.7%	105	40	64	1	0.2%
	Truck Driving Pathway	99,222	$43,000	1.00	4,799	4.8%	6,250	5,015	1.0%	61,110	23,917	34,411	2,783	0.6%
	Total - All Occupations	3,012,855	$56,600	1.00	140,926	4.6%	124,160	48,618	0.3%	1,819,042	661,016	1,068,234	89,792	0.6%

Source: JobsEQ®

Data as of 2020Q2 unless noted otherwise

Note: Figures may not sum due to rounding.

1. Data based on a four-quarter moving average unless noted otherwise.

2. Wage data are as of 2019 and represent the average for all Covered Employment

3. Data represent found online ads active within the last thirty days in the selected region; data represents a sampling rather than the complete universe of postings. Ads lacking zip code information but designating a place (city, town, etc.) may be assigned to the zip code with greatest employment in that place for queries in this analytic. Due to alternative county-assignment algorithms, ad counts in this analytic may not match that shown in RTI (nor in the popup window ad list).

By 2025, Minnesota may have a moderate shortage of Heavy and Tractor-Trailer Truck Drivers (shown in red below).

Occupation Gaps

Potential Average Annual Occupation Gaps over 5 Years in Minnesota

Occupation	Gap
Heavy and Tractor-Trailer Truck Drivers ($48,700)	−16
Tank Car, Truck, and Ship Loaders ($44,300)	1
Light Truck Drivers ($39,700)	3
Bus Drivers, Transit and Intercity ($41,600)	9
Industrial Truck and Tractor Operators ($43,800)	25
Driver/Sales Workers ($29,500)	34

Source: JobsEQ®,Data as of 2020Q2 except wages which are as of 2019

Looking out the next ten years, this shortage of Heavy and Tractor-Trailer Truck Drivers is anticipated to increase by nearly tenfold.

Occupation Gaps

Potential Average Annual Occupation Gaps over 10 Years in Minnesota

Occupation	Gap
Heavy and Tractor-Trailer Truck Drivers ($48,700)	−104
Bus Drivers, Transit and Intercity ($41,600)	−5
Driver/Sales Workers ($29,500)	16

Source: JobsEQ®,Data as of 2020Q2 except wages which are as of 2019

Employment Types

About 84% of people employed in Truck Driving occupations in Minnesota work for private employers, while an estimated 10% work for state, federal or local government. The remaining 6% are self employed.
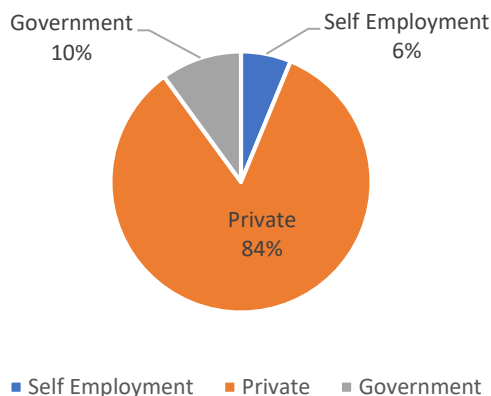
Employment Types, Minnesota 2020Q2

Government 10%
Self Employment 6%
Private 84%

■ Self Employment   ■ Private   ■ Government

Job Posting Trends

Data in this section focuses on jobs newly advertised between November 1, 2019 and October 31, 2020 in Truck Driving roles across Minnesota. All data in this section comes from Gartner TalentNeuron. Overall, there were 141,606 new jobs advertised in Truck Driving careers during this time frame, an increase of about 16% from the prior 12-month period.

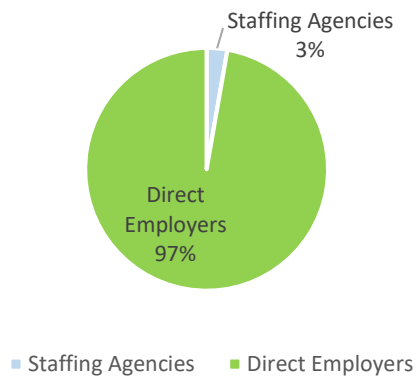## Top Employers by Volume of New Job Postings, With Change from Prior Year

1. U.S. Xpress: 8,029 (+356%)
2. Marten Transport: 4,271 (+96%)
3. Dart Transit: 3,617 (+145%)
4. Koch Trucking: 3,522 (+420%)
5. Crete Carrier Corporation: 3,495 (-27%)
6. Pride Transport: 3,457 (+723%)
7. A.D. Transport: 3,449 (+791%)
8. Roehl Transport: 3,370 (+190%)
9. Van Lines: 3,005 (+114%)
10. Prime Inc: 2,829 (1,350%)

Source: RealTime Talent analysis of Chmura Economics JobsEQ®, http://www.chmuraecon.com/jobseq
Gartner TalentNeuron Recruit Job posting data 11/1/2019 – 10/31/2020
https://www.wantedanalytics.com/wa/counts?country=US&exclude=anonymous%2Cduplicates%2Cbulk%2Cexpired&jloc=state-24&jocc=492094%2C536031%2C493051%2C493053%2C535022&methodology=new&require=&restrict=&saved_search_id=61767&t%5Btimeframe%5D=f2019-11-01-2020-10-31&timeframe=f2019-11-01-2020-10-31#saved_search_id=&jocc=533032,533033,533031,537051,537121,533021

9

New Job Postings Advertised in Minnesota by Employer Type

Staffing Agencies
3%

Direct
Employers
97%

■ Staffing Agencies ■ Direct Employers

Top Skills by Volume of New Job Postings, With Change from Prior Year

1. Dedication (+21%)
2. Scheduling (+27%)
3. Inverters (+81%)
4. Friendliness (+91%)
5. Logistics (+6%)
6. Customer Service (-3%)
7. Productivity (+38%)
8. Dependability (-25%)
9. Relationships (-1%)
10. Distribution (+24%)

Top Certifications by Volume of New Job Postings, With Change from Prior Year

1. Class A Commercial Driver's License (+12%)
2. Tanker and HAZMAT Endorsement (+17%)
3. Class D Driver's License (+55%)
4. DOT Medical Card (-9%)
5. Transportation Worker Identification Credential (+72%)

Top Sites Used by Volume of New Job Postings, With Change from Prior Year

1. CareersInGear (-17%)
2. ClassADrivers.com (+97%)
3. Snag (+104%)
4. The Job Network (+38%)
5. MinnesotaWorks (-22%)

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 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 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.

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. The first two digits define the top level category, known as the "sector," which is the level examined in this report.

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.

Who created this report?

This report was developed by RealTime Talent for the Transportation Center of Excellence. 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 or visit the RealTime Talent website at www.realtimetalent.org

Source: RealTime Talent analysis of Chmura Economics JobsEQ®, http://www.chmuraecon.com/jobseq
Gartner TalentNeuron Recruit Job posting data 11/1/2019 – 10/31/2020
https://www.wantedanalytics.com/wa/counts?country=US&exclude=anonymous%2Cduplicates%2Cbulk%2Cexpired&jloc=state-24&jocc=492094%2C536031%2C493051%2C493053%2C535022&methodology=new&require=&restrict=&saved_search_id=61767&t%5Btimeframe%5D=f2019-11-01-2020-10-31&timeframe=f2019-11-01-2020-10-31#saved_search_id=&jocc=533032,533033,533031,537051,537121,533021

11