WIN
WORKFORCE INTELLIGENCE NETWORK

WIN REGION

16 COUNTIES IN SOUTHEAST MI

Quarterly Labor Market Report

Report Contents

About This Report

The Workforce Intelligence Network for Southeast Michigan (WIN) partnership is a collaboration of Michigan Works! Agencies (MWAs) and community colleges across a 16-county region in Michigan. The counties in the WIN partnership include: Genesee, Hillsdale, Huron, Jackson, Lapeer, Lenawee, Livingston, Macomb, Monroe, Oakland, Saint Clair, Sanilac, Shiawassee, Tuscola, Washtenaw, and Wayne, along with the City of Detroit.

This report highlights labor market information and real-time job posting data for the entire 16-county region of southeast Michigan. A workforce overview is provided within identifying key components of the area's labor market including labor force status, demographic, and commuting data. WIN's analysis of online job postings, a proxy for employer demand, is a pioneering method for tracking the health of the labor market. This data is used to provide a real-time demand overview, detailing posting related findings for both employers and job seekers. WIN's data and research team analyzes job posting data at the occupation level within eleven customized occupation groups built using specific Standard Occupational Classification (SOC) codes to provide more contextualized information. Occupation groups combine data for jobs with similar skillsets, educational attainment, and experience requirements, which provides a more in-depth snapshot of the current labor market when compared to traditional industry data based upon North American Industry Classification System (NAICS) codes. Occupation outlook sections utilize these metrics to identify and display the top in-demand jobs, their entry requirements, and their earning potential. WIN produces a 16-county region report quarterly using data from all eleven occupation groups. A report focused on the city of Detroit is also produced quarterly, focusing on five occupation groups related to Detroit's labor market. County reports are produced annually and focus on five occupation groups chosen to reflect the labor market specific to the county.

This report analyzes data from the fourth quarter of 2019 in the 16-county WIN region and includes summative data for October, November, and December of 2019. All eleven occupation groups are analyzed for the WIN region.

For more information pertaining to the labor market in southeast Michigan, the custom occupation groups within this report, or any other workforce-related data projects, please visit www.WINintelligence.org or contact the data and research team directly at research@WINintelligence.org. For more information about jobseeker resources and our partners, please visit www.micareertraining.org.

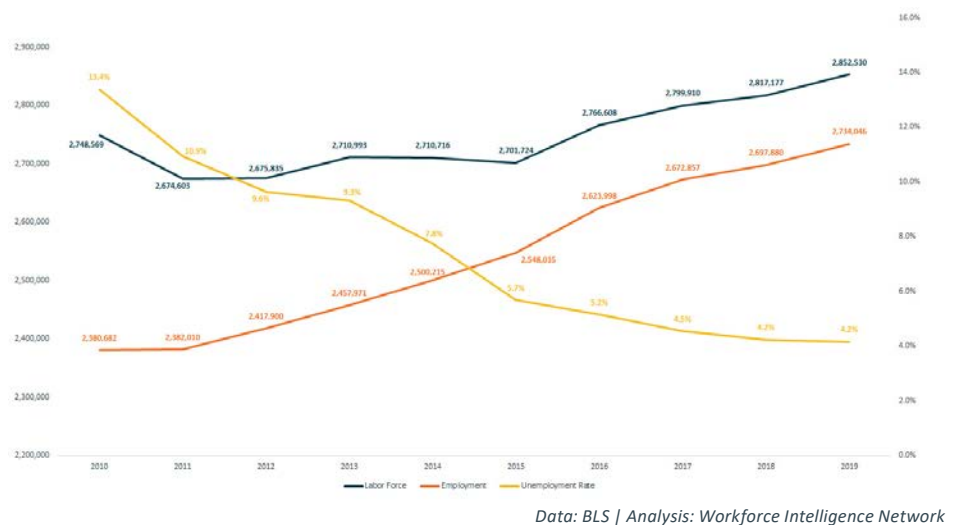**WIN** WORKFORCE INTELLIGENCE NETWORK

State of the Labor Market in the 16-County WIN Region

In the fourth quarter of 2019, the size of the labor force decreased in southeast Michigan, though employment figures increased. The combination of a declining labor force with rising employment numbers caused the proportion of unemployed individuals to decrease significantly in the region. The unemployment rate fell from the 4.6 percent quarterly rate in Q3 2019 to the current rate of 3.5 percent in Q4 2019. Employer demand for all occupation groups analyzed by WIN fell during Q4 2019, though most are finishing the year stronger than they started it. The information technology occupation group experienced an 8.2 percent increase in postings since Q1 2019.

Annual Labor Market Information

Considering annual, rather than quarterly, figures, the labor force in southeast Michigan continued to grow. It increased by 35,354 individuals between 2018 and 2019 annual levels. Employment increased by 36,166 workers between 2018 and 2019. As the increase in employment just surpassed the increase in the labor force, the unemployment rate fell by 0.1 percentage points for a 2019 annual rate of 4.2 percent in the 16-county WIN region.

Annual Labor Force, Employment, Unemployment Rate
2010–2019

Data: BLS | Analysis: Workforce Intelligence Network

Quarterly Employer Demand Overview

Data from the fourth quarter of 2019, including posting information from October, November, and December, showed slowing employer demand in southeast Michigan. There were 104,895 fewer postings during Q4 2019 than the unusually high 438,640 postings made by employers during Q3 2019. There were also 14,598 fewer postings than in Q4 2018.

Quarterly Posting Analysis, WIN Region
Q4 2019

Data: Emsi | Analysis: Workforce Intelligence Network
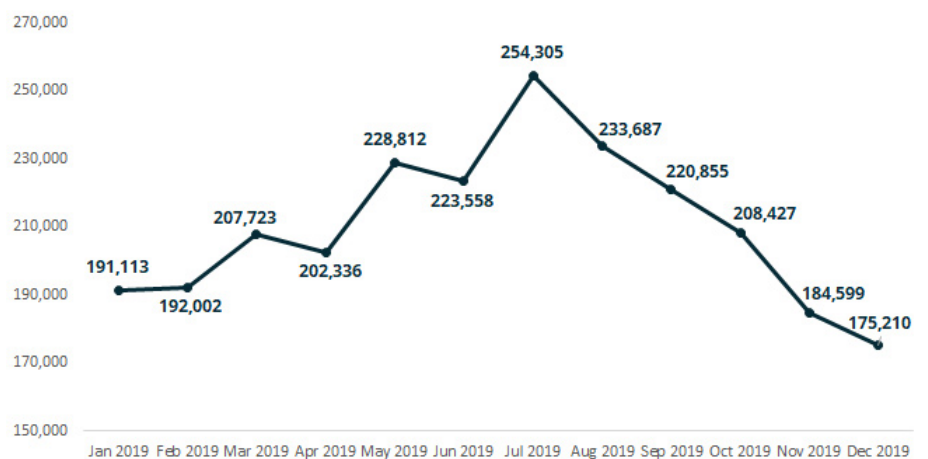
Following steady growth in job postings throughout 2019, employer demand sinks to 333,745 jobs posted during Q4 2019.

During Q4 2019, there were 333,745 job postings, 104,895 fewer than the 438,640 postings made during Q3 2019 in the 16-county WIN region. Though postings often increase throughout the year and peak in the third quarter, the sustained growth of ten percent per quarter was unusual and most of the decline into Q4 can be seen as a return to normal levels. There were just 14,598 fewer postings (4.2 percent) in Q4 2019 than in Q4 2018. Seasonal changes in job postings for each occupation group throughout 2019 can be seen to the right. Note that much of the decline in TDL postings is related to improvement in duplicate posting removal methodology. For more information about quarterly job postings, see page 9.

Posting Trends by Occupation Group
Q4 2019
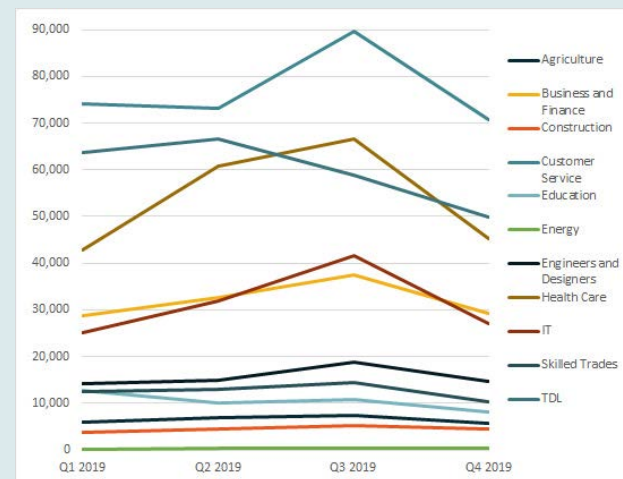
Job postings made by employers in southeast Michigan indicate a bachelor's degree remains the most in-demand minimum education level during Q4 2019.

While only 58 percent of job postings identified a minimum education level, nearly half (41.5 percent) of the southeast Michigan postings requiring specific education indicated the need for a bachelor's degree. Another 22.2 percent of these postings were seeking applicants with a high school diploma or equivalent, a lower percentage than the 34 percent during Q3 2019. In many cases, employers' posted job requirements may be different than the BLS-indicated entry education information, suggesting that in some cases, certifications and work experience may be considered alongside degrees. For more information about in-demand minimum education levels, see each occupation group.

Education Levels In-Demand
Q4 2019
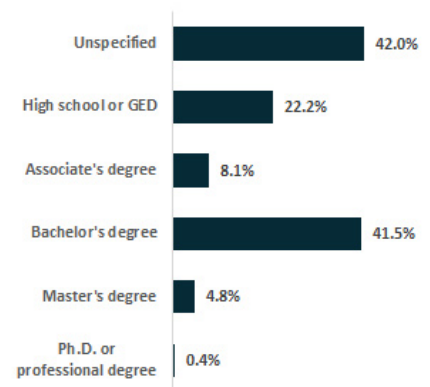
Annual Labor Market Data		2010 Annual	2011 Annual	2012 Annual	2013 Annual	2014 Annual	2015 Annual	2016 Annual	2017 Annual	2018 Annual	2019 Annual	Change from 2018	Percent Change from 2018
	Labor Force	2,748,569	2,674,603	2,675,835	2,710,993	2,710,716	2,701,724	2,766,608	2,799,910	2,817,177	2,852,530	35,354	1.2%
	Employment	2,380,682	2,382,010	2,417,900	2,457,971	2,500,215	2,548,035	2,623,998	2,672,857	2,697,880	2,734,046	36,166	1.3%
	Unemployment	367,888	292,593	257,935	253,021	210,500	153,690	142,610	127,053	119,297	118,484	-812	-0.7%
	Unemployment Rate	13.4%	10.9%	9.6%	9.3%	7.8%	5.7%	5.2%	4.5%	4.2%	4.2%	-0.1%	n/a

Data: Bureau of Labor Statistics

During the fourth quarter of 2019, employment in the 16-county WIN region grew by 5,448 workers.

Following the strong growth in the labor force during the first three quarters of 2019, labor force participation declined slightly during the fourth quarter, but employment continued to rise. During Q4 2019, labor force figures were 0.9 percent smaller (24,748 individuals) than in Q3 2019, yet 0.9 percent greater (25,716 individuals) than in Q4 2018. Employment has continued to rise: in Q4 2019, 5,448 more individuals in southeast Michigan found employment. This represents a 0.2 percent increase from Q3 2019 and a 1.4 percent increase over Q4 2018 employment levels. The growth in employment and fall in labor force caused the unemployment rate to drop from 4.6 percent in Q3 2019 to 3.5 percent in Q4 2019. For more information about this year's unemployment rate and other labor market indicators, see page 4.

Data: Emsi | Analysis: Workforce Intelligence Network

Labor Force, Employment, and Unemployment

The labor market in southeast Michigan has experienced relative stability since 2010. The labor force fell by 24,748 workers (0.9 percent) between Q3 2019 and Q4 2019, following the major growth into Q3 2019. Employment in the 16-county area increased from Q3 2019 to Q4 2019 however, by 5,448 workers. More dramatically, this represents an increase of 36,870 workers (1.4 percent) over Q4 2018. With labor force declining while employment grows, the unemployment rate decreased dramatically this quarter: the quarterly unemployment rate dropped by 1.02 percentage points between Q3 2019 and Q4 2019 to 3.5 percent.

Labor Force, Employment, Unemployment Rate
1990-2019
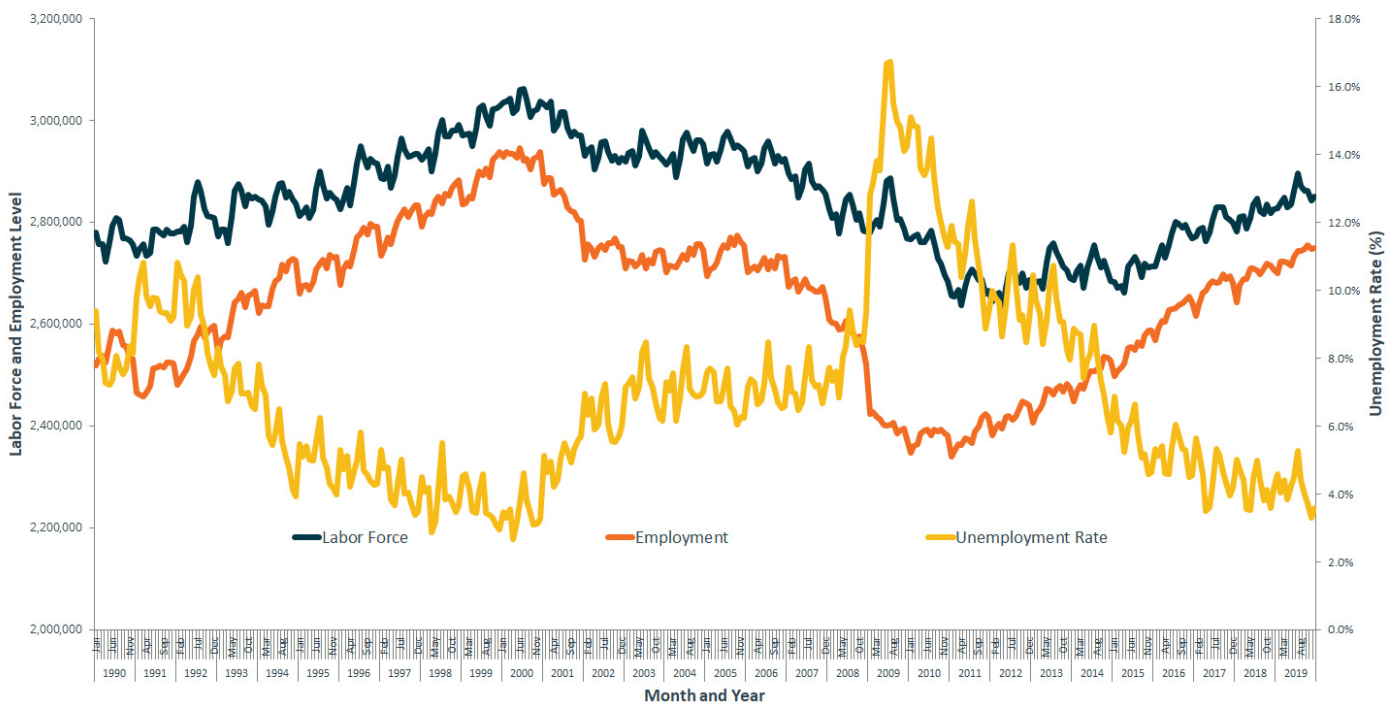
Data: BLS | Analysis: Workforce Intelligence Network

Quarterly Labor Market Data
Q4 2018 - Q4 2019

	4th Quarter 2018	1st Quarter 2019	2nd Quarter 2019	3rd Quarter 2019	4th Quarter 2019	Change from 3rd Quarter 2019	Percent Change from 3rd Quarter 2019	Change from 4th Quarter 2018	Percent Change from 4th Quarter 2018
Labor Force	2,826,255	2,838,767	2,842,665	2,876,719	2,851,971	-24,748	-0.9%	25,716	0.9%
Employment	2,714,391	2,715,547	2,723,564	2,745,813	2,751,261	5,448	0.2%	36,870	1.4%
Unemployment	111,864	123,220	119,100	130,906	100,710	-30,196	-23.1%	-11,154	-10.0%
Unemployment Rate	4.0%	4.3%	4.2%	4.6%	3.5%	-1.0%	na	-0.4%	na

Note: Monthly data averaged by quarter | Data: BLS

Population Demographics

According to data from the most recent Census Bureau 2018 ACS Five Year estimates, the population in southeast Michigan increased by nearly 0.3 percent between 2017 and 2018. During 2018, 5,740,079 people were living in the region. The sex of the populace was split almost evenly, with about 51 percent of the population identifying as female, and the other 49 percent identifying as male. The majority of the population identified as white (73 percent) with the second largest number of individuals identifying as black or African American (19 percent). The region as a whole is facing an aging population; 29.7 percent of population was over the age of 55, compared to 31.5 percent aged 24 or under.

5,740,079
People in the Region

0.3% Increase
from 2017

Population Race Demographics

- White, 72.9%
- Black or African American, 19.3%
- American Indian or Alaska Native, 0.3%
- Asian, 3.9%
- Native Hawaiian or Other Pacific Islander, 0.0%
- Other Race, 1.0%
- Two or More Races, 2.6%
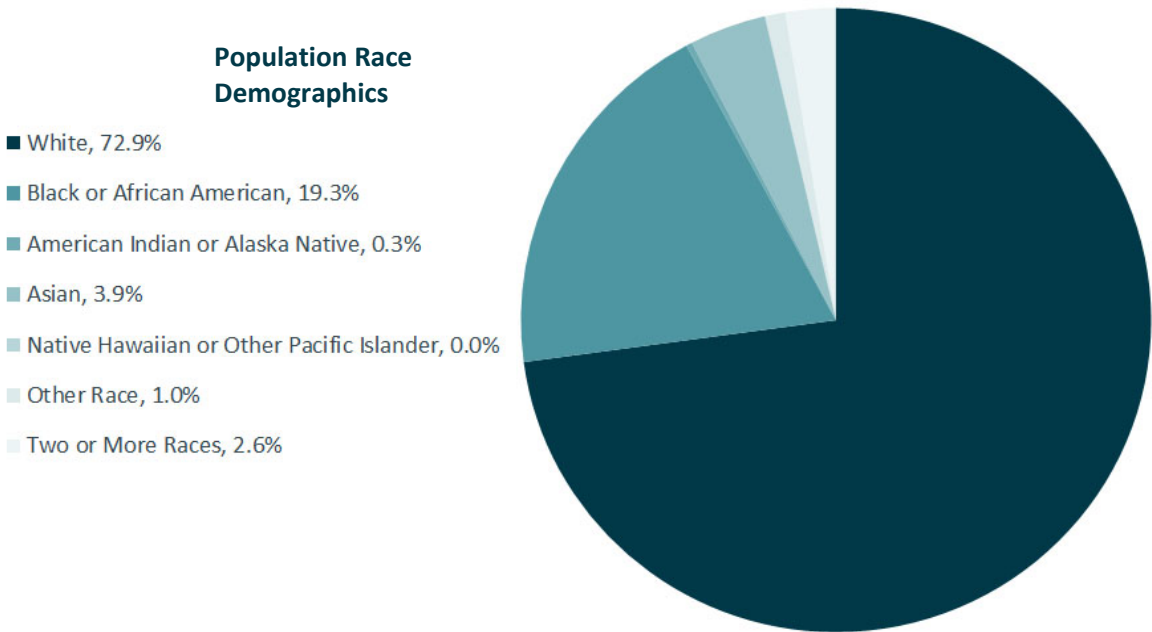
Population Gender Demographics

51% Females

49% Males

| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
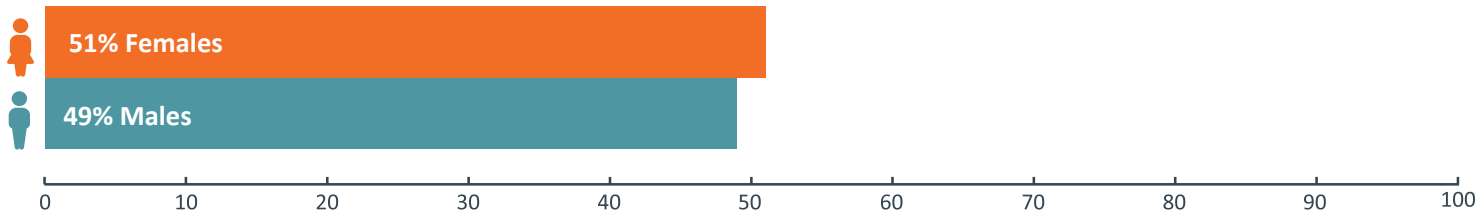
Population Age Demographics

| Age 14 and Under 18.1% | Age 15-24 13.4% | Age 25-54 38.8% | Age 55+ 29.7% |

Data: American Community Survey 5-Year Estimates | Analysis: Workforce Intelligence Network

Labor Market Demographics

During 2018, the most recent census year, there were about 2.85 million people in the labor force, meaning they were either working or looking for work, in southeast Michigan. Slightly less than half of the population, or about 2,650,327 individuals (46.2 percent), living in the region were actively working. The highest unemployment rates were seen in those aged 24 years old or younger. Males under the age of 19 face an unemployment rate of 24.5 percent. Black or African American job seekers also have a difficult time finding employment, facing an unemployment rate of 15.0 percent.

Civilian Labor Force by Demographic Group				
Demographic Group	**Civilian Labor Force**	**Total Employment**	**Total Unemployment**	**Unemployment Rate**
Total Population 16 +	2,848,717	2,650,105	198,612	7.0%
Sex				
Male 16+	1,489,883	1,382,915	106,968	7.2%
16-19	62,691	48,704	13,987	22.3%
20-24	152,604	131,923	20,681	13.6%
25-54	948,896	890,460	58,436	6.2%
55-64	252,572	241,437	11,135	4.4%
65 Plus	73,120	70,391	2,729	3.7%
Female 16+	1,358,834	1,267,190	91,644	6.7%
16-19	63,662	51,957	11,705	18.4%
20-24	146,529	129,901	16,628	11.3%
25-54	854,968	802,799	52,169	6.1%
55-64	232,811	223,793	9,018	3.9%
65 Plus	60,864	58,740	2,124	3.5%
Race				
White	2,137,524	2,025,722	111,802	5.2%
Black / African American	504,949	429,023	75,926	15.0%
Native American	8,354	7,622	732	8.8%
Asian	116,731	111,362	5,370	4.6%
Native Hawaiian / Pacific Islander	906	885	021	2.3%
Some Other Race	27,086	25,031	2,056	7.6%
Two or More Races	53,840	48,286	5,554	10.3%
Ethnicity				
Hispanic	168,259	155,048	13,211	7.9%

Data: American Community Survey 5-Year Es mates | Analysis: Workforce Intelligence Network

Current Workforce Demographics

While the Census Bureau data is lagged by about two years, Emsi uses predictive modeling to estimate workforce information for the previous year, allowing for more current analysis. In 2019, there were a total of 2,531,090 individuals working in southeast Michigan. A slight majority (51.1 percent or 1,293,170 workers) were male, while 48.9 percent (1,237,919 workers) of the workforce was female. Most of those working in the region were white, accounting for 73.4 percent of the workforce, while African American or black workers accounted for 16.3 percent of the workforce. Those identifying as having a Hispanic or Latino ethnicity accounted for 4.1 percent. Only 13.9 percent of workers were under the age of 25 compared to 22.6 percent over the age of 55, indicating an aging workforce in southeast Michigan.

Workforce Race and Ethnicity Demographics

- White, 73.4%
- Black or African American, 16.3%
- Hispanic or Latino, 4.1%
- Asian, 4.3%
- Two or More Races, 1.6%
- American Indian or Alaska Native, 0.3%
- Native Hawaiian or Other Pacific Islander, 0.04%
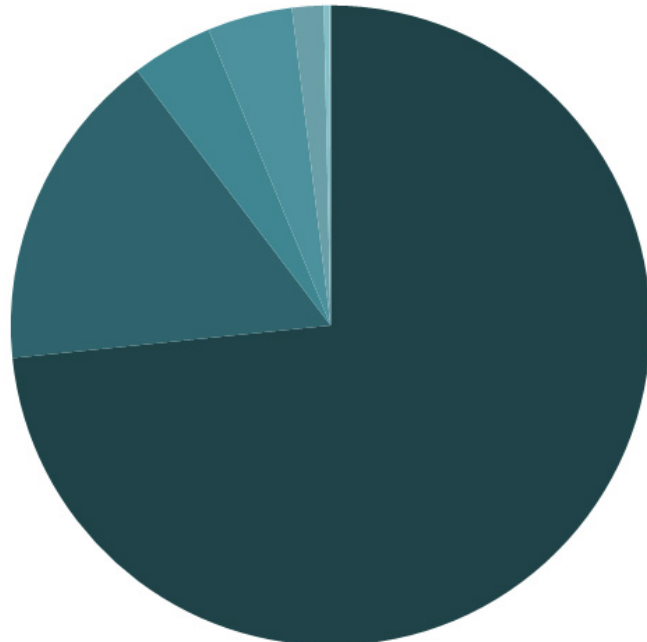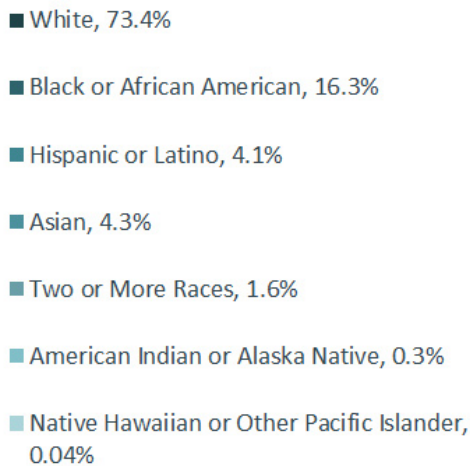
Workforce Gender Demographics

51% Males

49% Females

Workforce Age Demographics

| Age 14-24 13.9% | Age 25-54 63.6% | Age 55+ 22.6% |

Data: Emsi | Analysis: Workforce Intelligence Network
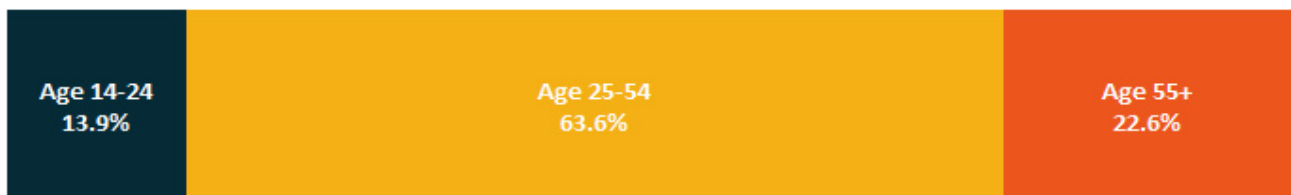
Regional Commuting Patterns

According to the most recent OnTheMap data set available from the Census Bureau, during 2015, the region's workforce consisted of 2,295,900 residents. 2,088,193 (91.0 percent) of the residents lived and worked within the 16-county region, while the remaining 207,707 residents (9.0 percent) traveled outside of the region for work. There were 2,269,629 workers employed in the region during 2015. Of those, 181,436 workers (8.0 percent) lived outside of the region's borders and commuted in. From this information, we can see that the southeast Michigan area is a net exporter of jobs, with more workers leaving the area for employment than inwardly commuting.

Where 16-County WIN Region Residents Work

Where 16-County WIN Region Workers Live

181,436

Live Outside of the 16 County WIN Partnership and Commute In

2,088,193

Live and Work in the 16 County WIN Partnership

207,707

Live in the 16 County WIN Partnership and Commute Out

Data: U.S. Census OnTheMap, 2015 | Analysis: Workforce Intelligence Network

Top Posted Jobs
Q4 2019

Occupation	Postings
Heavy and Tractor-Trailer Truck Drivers	26,820
Registered Nurses	16,323
Retail Salespersons	10,318
First-Line Supervisors of Retail Sales Workers	9,623
Software Developers, Applications	7,360
Customer Service Representatives	6,811
Light Truck or Delivery Services Drivers	5,918
Mechanical Engineers	4,616
First-Line Supervisors of Food Preparation and Serving Workers	4,314
Computer Occupations, All Other	4,283
Industrial Engineers	4,053
First-Line Supervisors of Office and Administrative Support Workers	4,017
Combined Food Preparation and Serving Workers, Including Fast Food	3,897
Accountants and Auditors	3,793
Maintenance and Repair Workers, General	3,648
Childcare Workers	3,573
Stock Clerks and Order Fillers	3,446
General and Operations Managers	3,135
Cashiers	2,824
Sales Managers	2,771

Typical Entry Education
- No formal educational credential
- High school diploma or equivalent
- Postsecondary nondegree award
- Bachelor's degree

Top Posted Jobs: Q4 2019

Despite another slight decline in postings, Heavy and Tractor-Trailer Truck Drivers remained the highest in-demand occupation for the entirety of 2019, with 26,820 online job postings. Of the top five overall in-demand occupations, two typically require a bachelor's degree for entry. Registered Nurses (16,323 postings) and Software Developers, Applications (7,360 postings) also offer higher wages than many top jobs. Customer service occupations round out the remaining top five posted jobs with Retail Salespersons (10,318 postings) and First-Line Supervisors of Retail Sales Workers (9,623 postings). Customer Service Representatives (6,811 postings) were also in high demand during Q4 2019.

Data: Emsi | Analysis: Workforce Intelligence Network

Top Posted Entry-Level Jobs
Q4 2019

Typical Entry Education
- No formal educational credential
- High school diploma or equivalent
- Some college, no degree
- Postsecondary nondegree award
- Bachelor's degree

Occupation	Value
Registered Nurses	9,213
Heavy and Tractor-Trailer Truck Drivers	6,800
First-Line Supervisors of Retail Sales Workers	3,489
Software Developers, Applications	2,160
Customer Service Representatives	2,057
Retail Salespersons	1,744
Mechanical Engineers	1,493
Light Truck or Delivery Services Drivers	1,298
First-Line Supervisors of Office and Administrative Support Workers	1,209
Industrial Engineers	1,070
First-Line Supervisors of Food Preparation and Serving Workers	1,023
Computer User Support Specialists	980
Computer Occupations, All Other	967
Accountants and Auditors	845
Maintenance and Repair Workers, General	842
General and Operations Managers	798
Social and Human Service Assistants	778
Insurance Sales Agents	762
Medical Assistants	736
Computer Systems Analysts	708

Top Posted Entry-Level Jobs: Q4 2019

Over a quarter of overall postings in the region, or 83,841 online job ads, were open to individuals with zero to two years of previous work experience. These entry-level jobs represent the top posted occupations for this experience level, and many reflect the overall top jobs. Seven of the top 20 occupations typically require candidates to have a bachelor's degree. Health Care positions are more heavily represented among entry-level openings than overall top jobs. Many applicants for these entry level occupations, regardless of education requirement, could benefit from taking some coursework to develop the skills requested in job postings.

Data: Emsi | Analysis: Workforce Intelligence Network
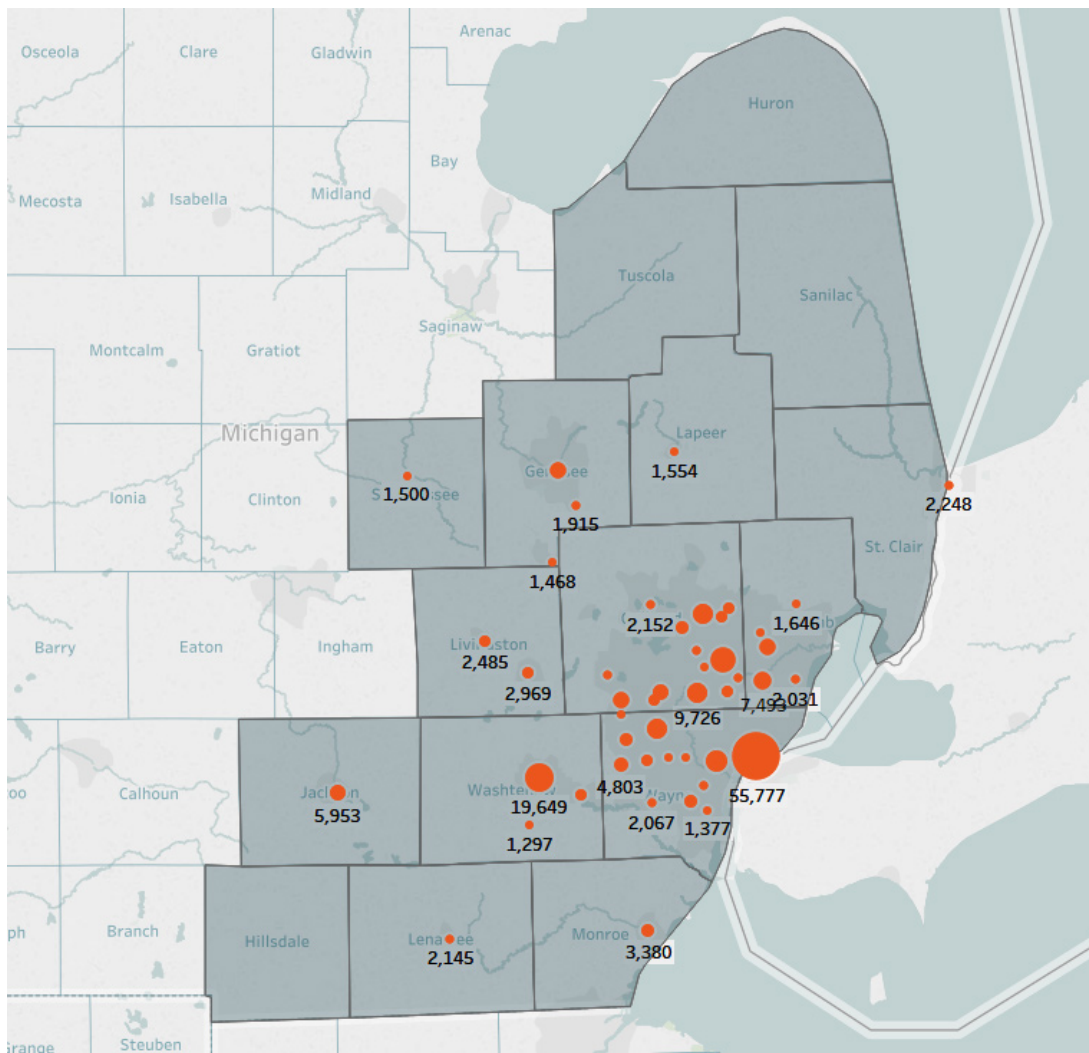
Employer Demand by City

Top In-Demand Qualifications

- Commercial Driver's License (CDL)
- Licensed Practical Nurse
- Certified Nursing Assistant
- Automotive Service Excellence (ASE) Certification
- Critical Care Registered Nurse (CCRN)
- Nurse Practitioner
- Certified Public Accountant
- Project Management Professional Certification
- Certificate of Clinical Competence in Speech-Language Pathology (CCC-SLP)
- ServSafe Certification

Top In-Demand Skills

- Merchandising
- Restaurant Operation
- Selling Techniques
- Nursing
- Auditing
- Accounting
- Customer Experience
- Customer Satisfaction
- Basic Life Support
- Cash Register

Top Posting Employers*

- CRST International, Inc.
- Henry Ford Health System
- General Healthcare Resources, Inc.
- University of Michigan
- U.S. Xpress, Inc.
- Shipt LLC
- Trinity Health Corporation
- Care.com, Inc.
- McDonald's Corporation
- The Home Depot

*Employer names are listed as they appear in online job postings.

Introduction

WIN's agriculture occupation group brings together occupations that require knowledge of the farming, livestock, the environment, and natural sciences. Occupations range from Farm Workers, to Environmental Engineers, to Meat Butchers, to Recreation Workers. There are approximately 10,700 openings for these positions each year in Southeast Michigan.
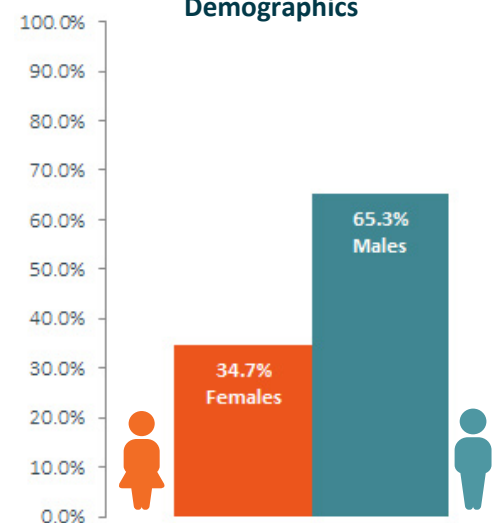
68,992
Agriculture Workers
0.3% Increase
from 2018

Employment Over Time
2001–2019

Worker Gender Demographics

65.3% Males
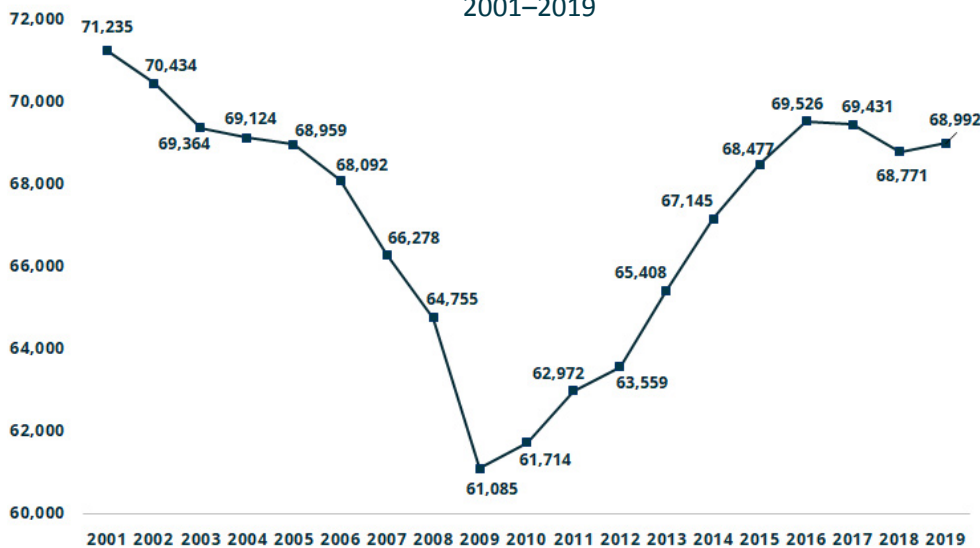
34.7% Females

Agriculture Worker Demographics

According to the most recent Emsi data set available (2019), the 69,000 workers in agriculture occupations are not very diverse. A large majority of workers are white males between the ages of 25 and 54. Only 35 percent of agriculture workers identify as women. Only 14 percent of workers were under the age of 25, compared to 23 percent of workers who are age 55 or older.

Race and Ethnicity Demographics

76.7% White | 11.9% Black or African American | 6.8% Hispanic or Latino

Worker Age Demographics

Age 14-24 14.3%	Age 25-54 63.3%	Age 55+ 22.4%

Data: Emsi | Analysis: Workforce Intelligence Network

**Agriculture
Top Posted Jobs**
Q4 2019

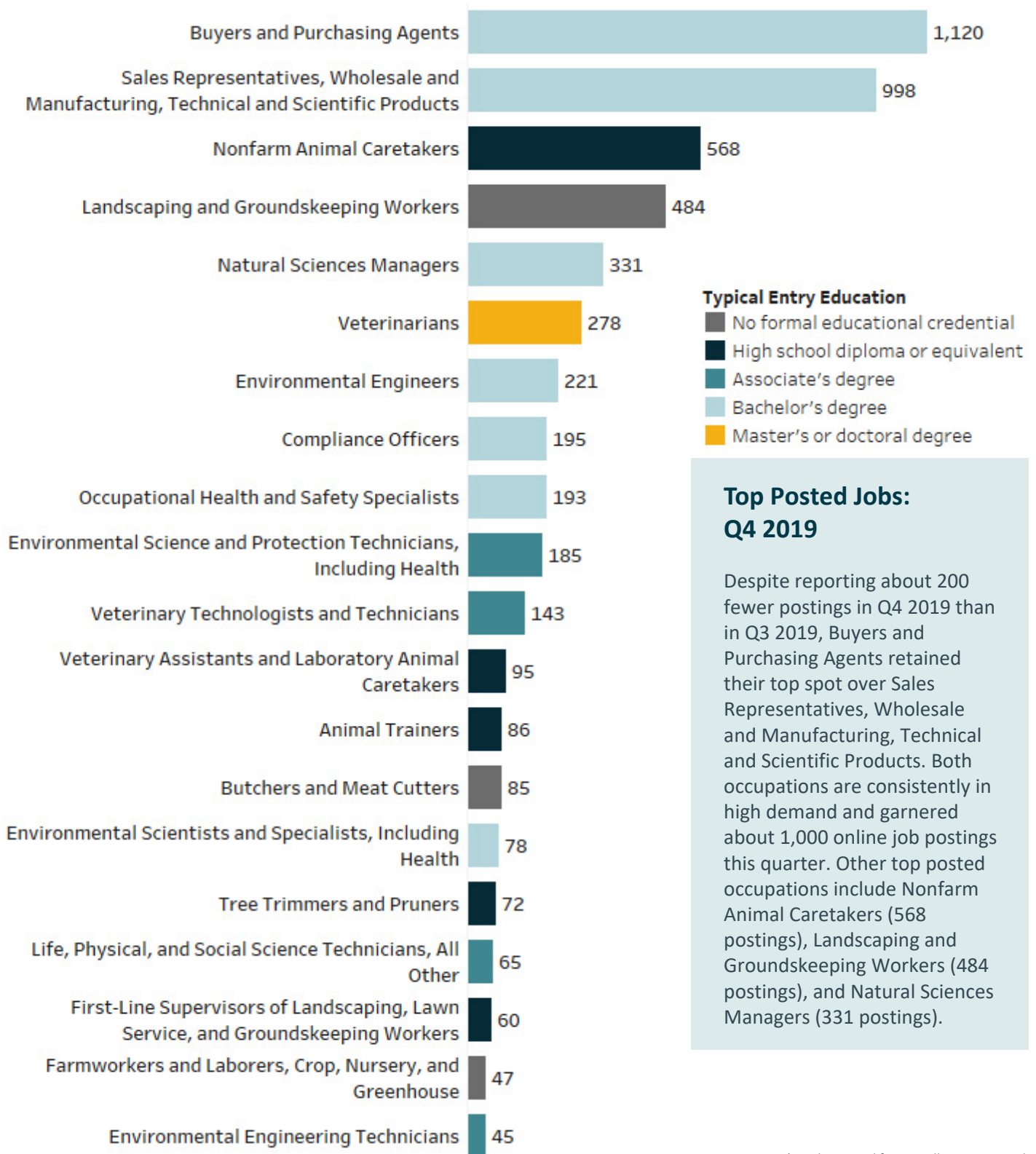| Occupation	Postings
Buyers and Purchasing Agents	1,120
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	998
Nonfarm Animal Caretakers	568
Landscaping and Groundskeeping Workers	484
Natural Sciences Managers	331
Veterinarians	278
Environmental Engineers	221
Compliance Officers	195
Occupational Health and Safety Specialists	193
Environmental Science and Protection Technicians, Including Health	185
Veterinary Technologists and Technicians	143
Veterinary Assistants and Laboratory Animal Caretakers	95
Animal Trainers	86
Butchers and Meat Cutters	85
Environmental Scientists and Specialists, Including Health	78
Tree Trimmers and Pruners	72
Life, Physical, and Social Science Technicians, All Other	65
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	60
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	47
Environmental Engineering Technicians	45

Typical Entry Education
- No formal educational credential
- High school diploma or equivalent
- Associate's degree
- Bachelor's degree
- Master's or doctoral degree

Top Posted Jobs: Q4 2019

Despite reporting about 200 fewer postings in Q4 2019 than in Q3 2019, Buyers and Purchasing Agents retained their top spot over Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products. Both occupations are consistently in high demand and garnered about 1,000 online job postings this quarter. Other top posted occupations include Nonfarm Animal Caretakers (568 postings), Landscaping and Groundskeeping Workers (484 postings), and Natural Sciences Managers (331 postings).

Data: Emsi | Analysis: Workforce Intelligence Network

Agriculture Wage Overview

Of the top posted agriculture-related jobs, seven of the ten offer median wages of more than $30 per hour according to the Bureau of Labor Statistics (BLS). The top posted job, Buyers and Purchasing Agents, offers median hourly earnings of $33.25, which translates to annual earnings of approximately $69,200. With such a broad array of skillsets represented, Agriculture wages tend to scale with education and experience needs. .

Wage Overview for Top Posted Agriculture Jobs in Q4 2019

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
13-1028	Buyers and Purchasing Agents	$19.95	$25.29	$33.25	$43.56	$54.85
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	$22.97	$28.37	$37.92	$54.34	$71.73
39-2021	Nonfarm Animal Caretakers	$9.36	$9.89	$10.79	$11.98	$13.57
37-3011	Landscaping and Groundskeeping Workers	$10.06	$11.39	$13.60	$16.25	$19.60
11-9121	Natural Sciences Managers	$34.26	$40.84	$50.21	$64.86	$81.64
29-1131	Veterinarians	$29.95	$33.60	$39.56	$52.71	$91.13
17-2081	Environmental Engineers	$29.35	$35.47	$44.62	$56.00	$65.50
13-1041	Compliance Officers	$19.85	$26.72	$35.81	$44.51	$49.11
29-9011	Occupational Health and Safety Specialists	$21.69	$27.15	$35.33	$44.71	$52.98
19-4091	Environmental Science and Protection Technicians, Including Health	$14.57	$16.71	$22.19	$28.45	$33.37

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills
- Purchasing
- Selling Techniques
- Procurement
- Auditing
- Landscaping

In-Demand Foundational Skills
- Management
- Sales
- Leadership
- Communications
- Operations

In-Demand Education Level*
- High School Diploma: 16.2%
- Associate Degree: 5.8%
- Bachelor's Degree: 35.0%
- Master's Degree: 8.7%

Not all job postings indicate the required educational attainment level, therefore the percentages found here may not add up to 100 percent

In-Demand Qualifications
- Certified Veterinary Technician
- Commercial Driver's License (CDL)
- Pesticide Applicator License
- Certified Arborist
- HAZWOPER Certification

Introduction

Jobs in the business and finance occupation group can be found in nearly every type of establishment throughout the region. These workers need strong mathematical and accounting abilities along with project management and planning skills. Workers in this occupation group are in high demand in the region, with 29,358 online postings reported for Q4 2019.
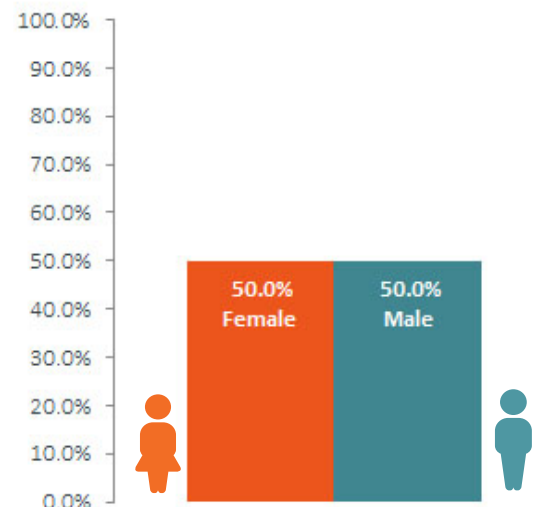
204,482
Business and Finance Workers
0.6% Increase from 2018

Employment Over Time
2001–2019

Worker Gender Demographics

50.0% Female   50.0% Male
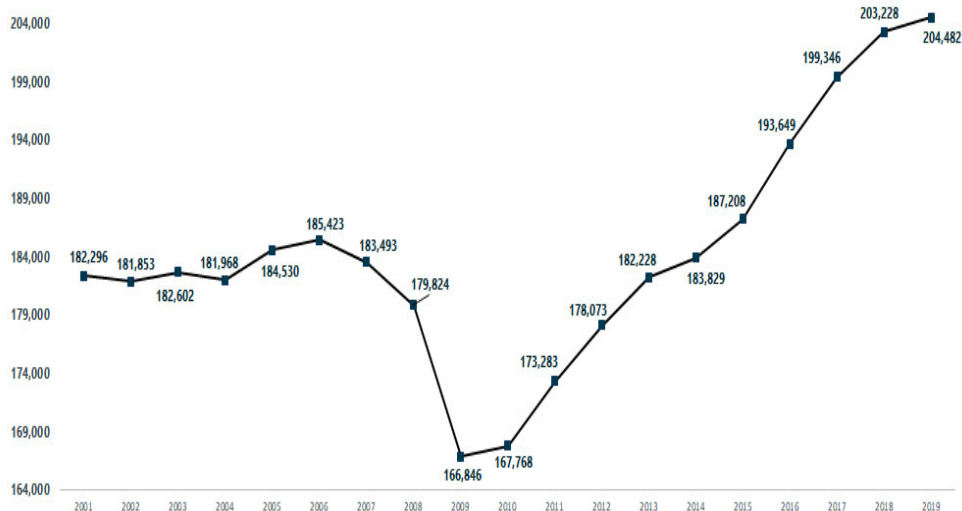
Business and Finance Worker Demographics

According to the most recent Emsi data set available (2019), the business and finance occupation group is in some ways a relatively diverse occupation group with respect to its 204,482 workers. Half the working population identify as female (50.0 percent), but 80.5 percent of workers identified as white, indicating less diversity with respect to race than to gender. Only five percent of the working population in business and finance is under the age of 25, compared to 25.9 percent age 55 and older, indicating a large aging population of business and finance workers.

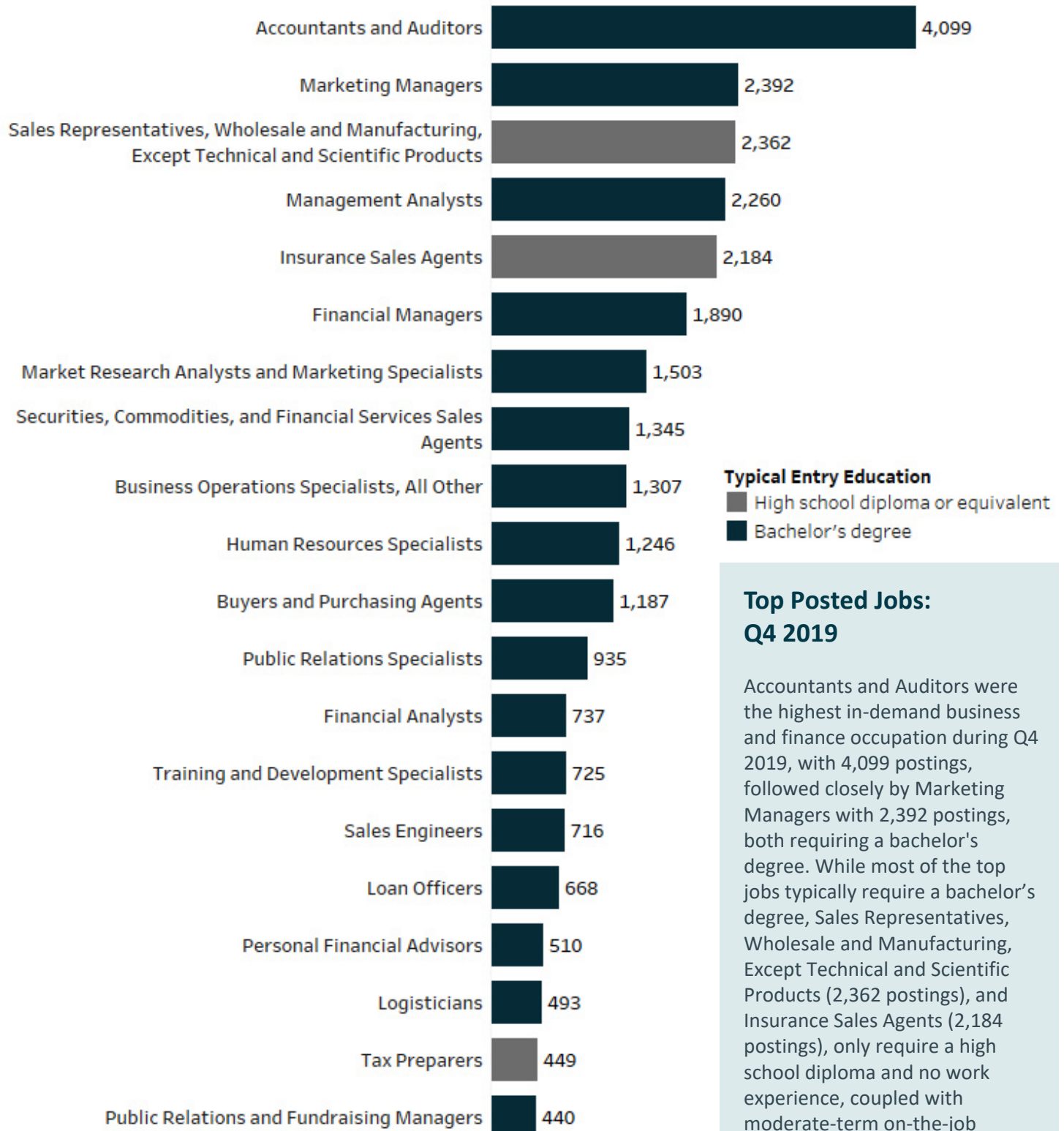### Race and Ethnicity Demographics

80.5% White | 10.9% Black or African American | 2.7 % Hispanic or Latino

Worker Age Demographics

| Age 14-24 5.0% | Age 25-54 69.1% | Age 55+ 25.9% |

Data: Emsi | Analysis: Workforce Intelligence Network

**Business and Finance
Top Posted Jobs**
Q4 2019

Occupation	Postings
Accountants and Auditors	4,099
Marketing Managers	2,392
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	2,362
Management Analysts	2,260
Insurance Sales Agents	2,184
Financial Managers	1,890
Market Research Analysts and Marketing Specialists	1,503
Securities, Commodities, and Financial Services Sales Agents	1,345
Business Operations Specialists, All Other	1,307
Human Resources Specialists	1,246
Buyers and Purchasing Agents	1,187
Public Relations Specialists	935
Financial Analysts	737
Training and Development Specialists	725
Sales Engineers	716
Loan Officers	668
Personal Financial Advisors	510
Logisticians	493
Tax Preparers	449
Public Relations and Fundraising Managers	440

Typical Entry Education
- High school diploma or equivalent
- Bachelor's degree

Top Posted Jobs: Q4 2019

Accountants and Auditors were the highest in-demand business and finance occupation during Q4 2019, with 4,099 postings, followed closely by Marketing Managers with 2,392 postings, both requiring a bachelor's degree. While most of the top jobs typically require a bachelor's degree, Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products (2,362 postings), and Insurance Sales Agents (2,184 postings), only require a high school diploma and no work experience, coupled with moderate-term on-the-job training.

Data: Emsi | Analysis: Workforce Intelligence Network

Business and Finance Wage Overview

Most business and finance related jobs offer high wages, making for a lucrative opportunity for job seekers willing to attain the necessary education. The top posted business and finance job, Accountants and Auditors, offers median hourly wages of $33.12, translating to annual earnings of approximately $66,240. Additional experience may lead to a role as a Marketing or Financial Manager, opening the door to median wages around $61.74 hourly, or about $123,480 annually. Entry level occupations also see high median wages of $32.56, earning about $65,120 annually.

Wage Overview for Top Posted Business and Finance Jobs in Q4 2019

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
13-2011	Accountants and Auditors	$20.60	$25.51	$33.12	$43.98	$59.90
11-2021	Marketing Managers	$35.80	$45.82	$61.74	$79.39	$119.06
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	$15.38	$21.55	$32.56	$48.38	$63.37
13-1111	Management Analysts	$22.25	$28.85	$39.51	$55.82	$81.89
41-3021	Insurance Sales Agents	$13.84	$18.57	$25.70	$39.25	$63.32
11-3031	Financial Managers	$35.61	$44.59	$59.20	$76.90	$111.35
13-1161	Market Research Analysts and Marketing Specialists	$16.45	$23.25	$32.13	$45.14	$58.60
41-3031	Securities, Commodities, and Financial Services Sales Agents	$13.74	$16.86	$24.38	$43.04	$86.21
13-1199	Business Operations Specialists, All Other	$17.95	$23.95	$32.68	$45.41	$58.11
13-1071	Human Resources Specialists	$17.35	$22.09	$29.22	$38.39	$49.44

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills
- Accounting
- Auditing
- Selling Techniques
- Financial Statements
- Forecasting

In-Demand Foundational Skills
- Sales
- Management
- Communications
- Leadership
- Customer Service

In-Demand Education Level*
- High School Diploma: 16.1%
- Associate Degree: 5.8%
- Bachelor's Degree: 55.2%
- Master's Degree: 13.2%

Not all job postings indicate the required educational attainment level, therefore the percentages found here may not add up to 100 percent
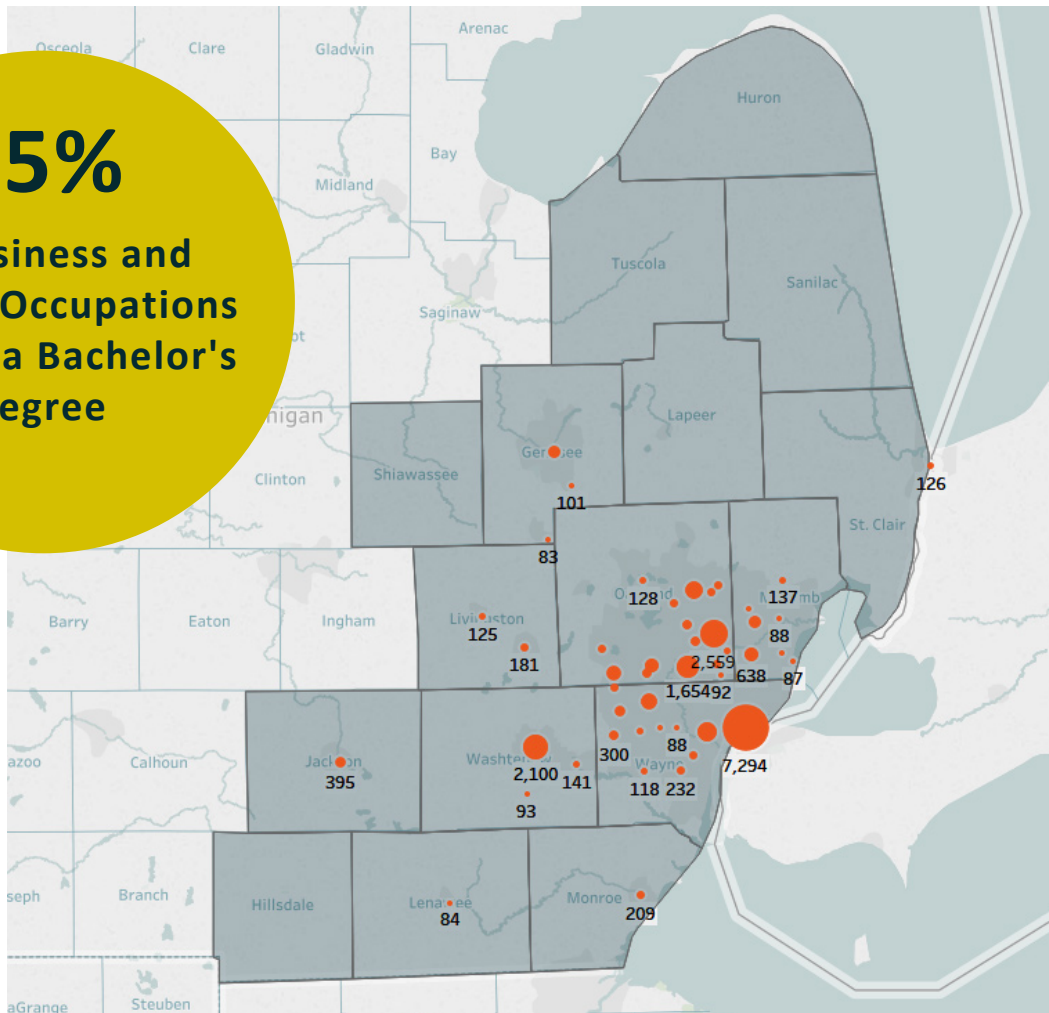
In-Demand Certifications
- Certified Public Accountant
- Series 7 General Securities Representative License
- Series 6 Investment Company And Variable Contracts License
- Certified Internal Auditor
- Series 63 Uniform Securities Agent State Law License

Employer Demand by City

55%

Of Business and Finance Occupations Require a Bachelor's Degree

Map labels: 126, 101, 83, 128, 137, 125, 88, 181, 2,559, 638, 87, 1,654 92, 395, 300, 88, 2,100, 141, 118, 232, 7,294, 93, 84, 209

Top Posting Employers*

- H&R Block, Inc.
- Robert Half International Inc.
- National Agents Alliance
- Deloitte LLP
- Assurance
- Citizens Financial Group, Inc.
- Oracle Corporation
- Anthem, Inc.
- JPMorgan Chase & Co.
- Flagstar Bancorp, Inc.

Employer names are listed as they appear in online job postings.

Job Postings by City

1. Detroit: 7,294 Postings
2. Troy: 2,559 Postings
3. Ann Arbor: 2,100 Postings
4. Southfield: 1,654 Postings
5. Dearborn: 1,250 Postings
6. Auburn Hills: 1,029 Postings
7. Livonia: 860 Postings
8. Novi: 711 Postings
9. Farmington Hills: 642 Postings
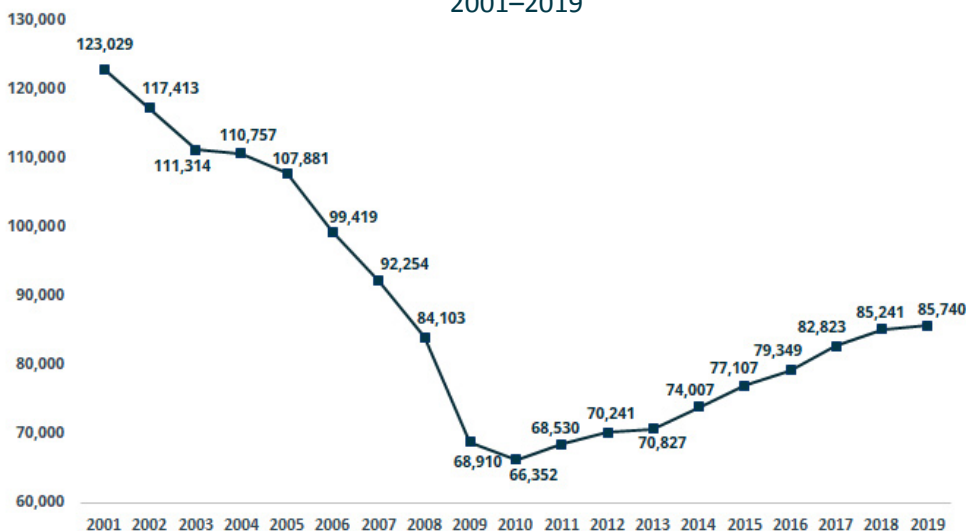10. Warren: 638 Postings

Introduction

Jobs in the WIN construction occupation group are associated with the skilled trades, engineering, management, and planning. Many construction employers are slowly adopting online job search methods, so online job ads may not provide a complete picture of demand for these workers. Even so, it is an important and in-demand occupation group for southeast Michigan, with about 14,000 annual job openings and posting data provides a glimpse into employer needs.
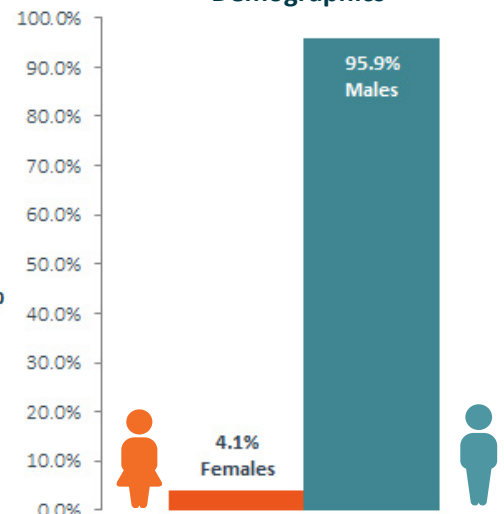
85,740
Construction Workers

499 Worker Increase from 2018

Employment Over Time
2001–2019

Year	Employment
2001	123,029
2002	117,413
2003	111,314
2004	110,757
2005	107,881
2006	99,419
2007	92,254
2008	84,103
2009	68,910
2010	66,352
2011	68,530
2012	70,241
2013	70,827
2014	74,007
2015	77,107
2016	79,349
2017	82,823
2018	85,241
2019	85,740

Worker Gender Demographics
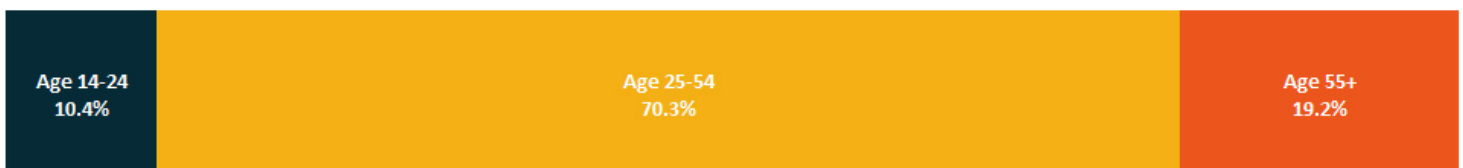
95.9% Males
4.1% Females

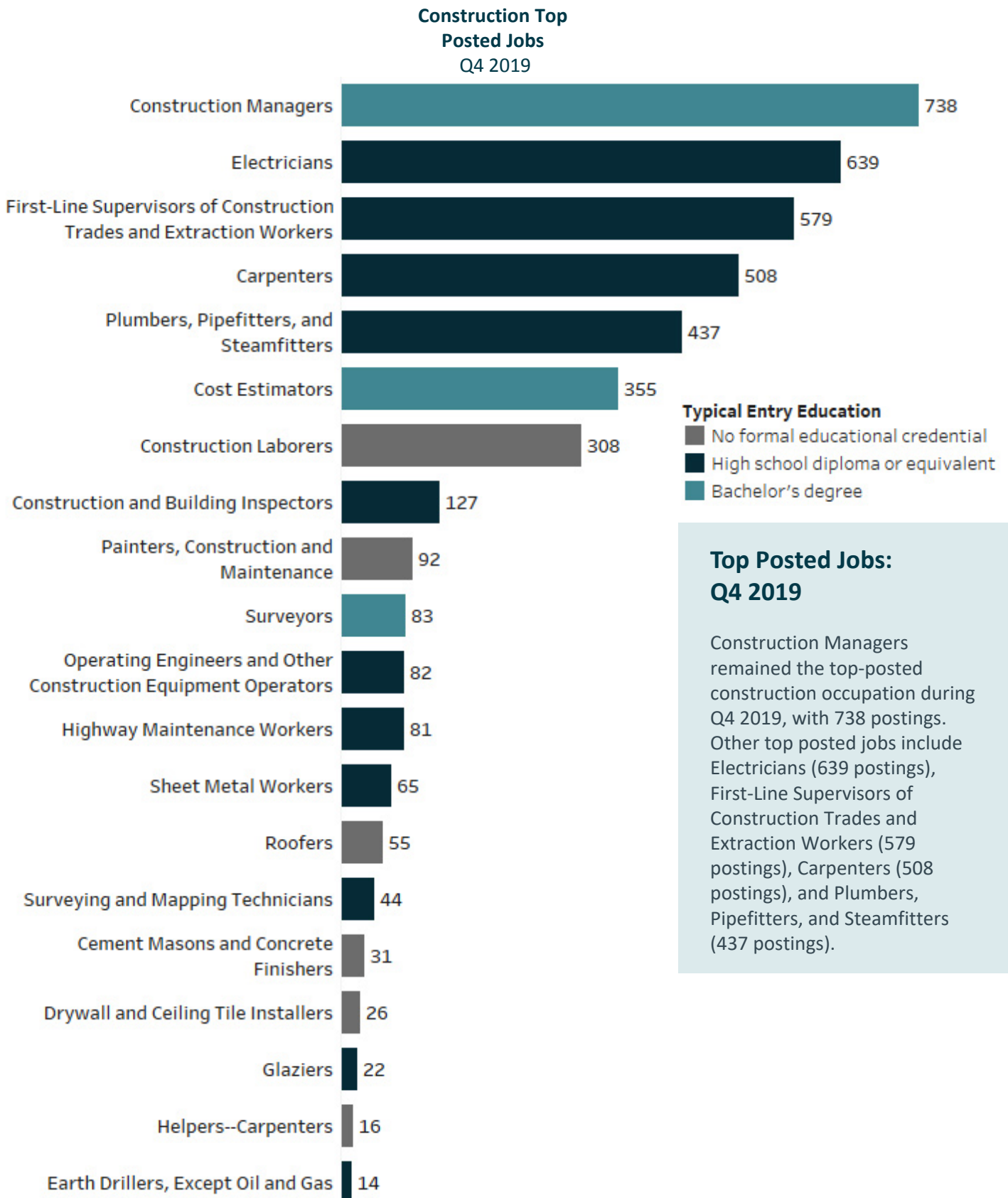## Construction Worker Demographics

According to the most recent Emsi worker demographic data set available (2019), despite having nearly 86,000 workers, the workers in the construction occupation group are not very diverse. A large majority of workers are white males between the ages of 25 and 54. Only four percent of workers identified as female, and only 14 percent identified as race other than white. With just under ten percent of workers under the age of 25, this group has a slightly greater proportion of young workers than other groups.

Race and Ethnicity Demographics

84.0% White | 7.0% Black or African American | 6.6% Hispanic or Latino

Worker Age Demographics

Age 14-24 10.4%	Age 25-54 70.3%	Age 55+ 19.2%

Data: Emsi | Analysis: Workforce Intelligence Network

Construction Top Posted Jobs
Q4 2019

Occupation	Postings
Construction Managers	738
Electricians	639
First-Line Supervisors of Construction Trades and Extraction Workers	579
Carpenters	508
Plumbers, Pipefitters, and Steamfitters	437
Cost Estimators	355
Construction Laborers	308
Construction and Building Inspectors	127
Painters, Construction and Maintenance	92
Surveyors	83
Operating Engineers and Other Construction Equipment Operators	82
Highway Maintenance Workers	81
Sheet Metal Workers	65
Roofers	55
Surveying and Mapping Technicians	44
Cement Masons and Concrete Finishers	31
Drywall and Ceiling Tile Installers	26
Glaziers	22
Helpers--Carpenters	16
Earth Drillers, Except Oil and Gas	14

Typical Entry Education
- No formal educational credential
- High school diploma or equivalent
- Bachelor's degree

Top Posted Jobs: Q4 2019

Construction Managers remained the top-posted construction occupation during Q4 2019, with 738 postings. Other top posted jobs include Electricians (639 postings), First-Line Supervisors of Construction Trades and Extraction Workers (579 postings), Carpenters (508 postings), and Plumbers, Pipefitters, and Steamfitters (437 postings).

Data: Emsi | Analysis: Workforce Intelligence Network

Construction Wage Overview

The top posted construction job, Construction Managers, offers a median wage of $47.23 per hour or $98,200 per year. According to the Bureau of Labor Statistics (BLS), those working in apprentice-able occupations can expect even higher wage potential, such as Plumbers, Pipefitters, and Steamfitters, which report a median wage of $34.03 per hour or $70,800 annually.

Wage Overview for Top Posted Construction Jobs in 2019

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
11-9021	Construction Managers	$28.67	$36.42	$47.23	$61.37	$77.32
47-2111	Electricians	$15.60	$21.05	$31.50	$37.56	$43.27
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	$19.20	$26.02	$32.93	$43.21	$51.41
47-2031	Carpenters	$14.02	$18.01	$25.04	$32.36	$37.88
47-2152	Plumbers, Pipefitters, and Steamfitters	$16.08	$26.48	$34.03	$38.02	$40.96
13-1051	Cost Estimators	$16.48	$21.81	$30.09	$41.38	$50.27
47-2061	Construction Laborers	$12.38	$14.83	$19.12	$24.65	$29.62
47-4011	Construction and Building Inspectors	$13.01	$19.02	$27.21	$32.78	$37.78
47-2141	Painters, Construction and Maintenance	$13.16	$15.79	$20.59	$26.95	$31.22
17-1022	Surveyors	$17.33	$21.42	$27.69	$34.17	$40.65

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills

- Subcontracting
- Carpentry
- Plumbing
- Construction Management
- Estimators

In-Demand Foundational Skills

- Construction
- Management
- Valid Driver's License
- Operations
- Communications

In-Demand Education Level*

- High School Diploma: 22.6%
- Associate Degree: 6.2%
- Bachelor's Degree: 17.7%
- Master's Degree: 1.5%

Not all job postings indicate the required educational attainment level, therefore the percentages found here may not add up to 100 percent
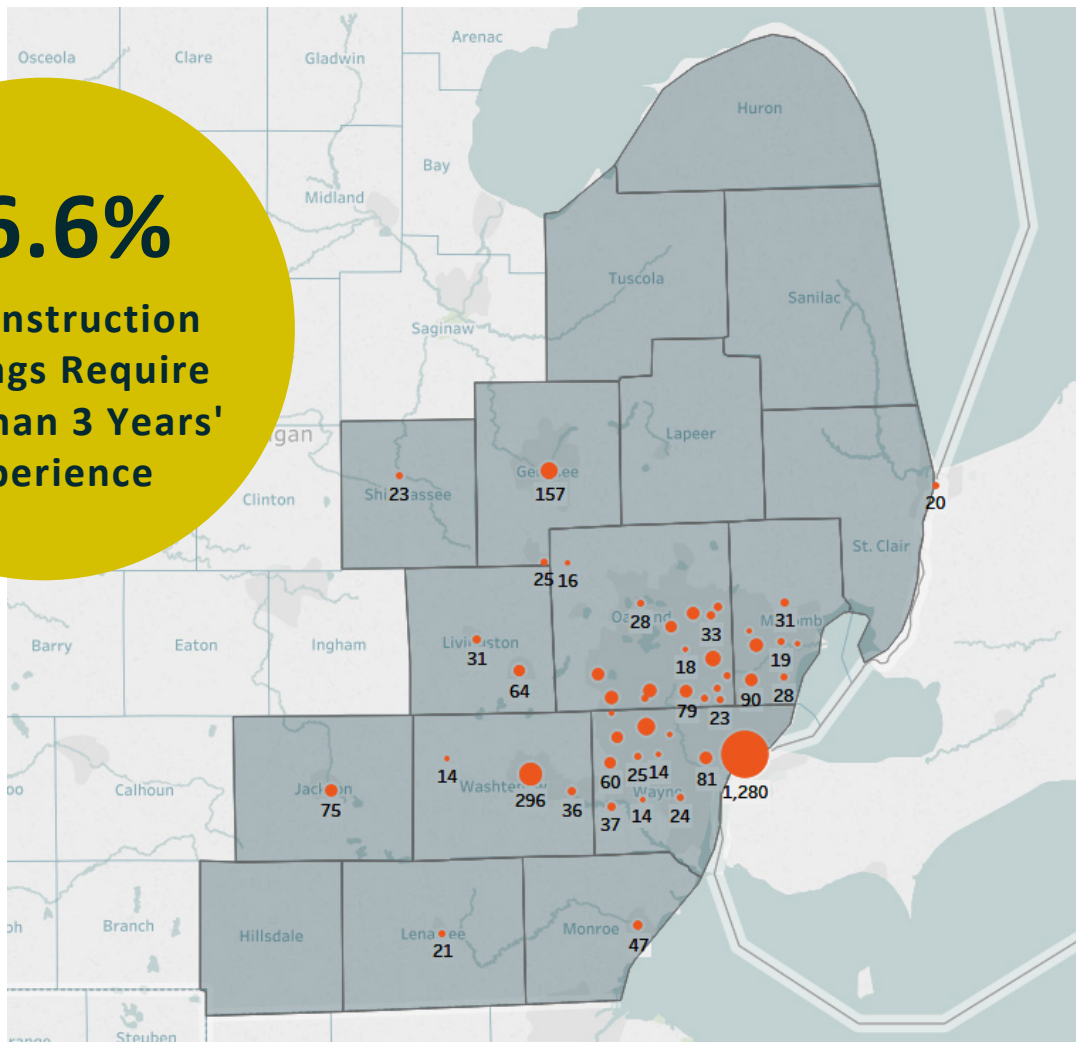
In-Demand Certifications

- Commercial Driver's License (CDL)
- Project Management Professional Certification
- LEED Accredited Professional (AP)
- National Apprenticeship Certificate
- Operator Certification

Employer Demand by City

26.6%

Of Construction Postings Require Less Than 3 Years' Experience

Top Posting Employers*

- HomeAdvisor, Inc.
- Tradesmen International, LLC
- Michael Page International, Inc.
- Growing People and Companies
- DTE Energy Company
- City of Detroit
- Aerotek, Inc.
- Walbridge Aldinger LLC
- CyberCoders, Inc.
- TEC Group Inc

Employer names are listed as they appear in online job postings.

Job Postings by City

1. Detroit: 1,280 Postings
2. Ann Arbor: 296 Postings
3. Livonia: 168 Postings
4. Flint: 157 Postings
5. Troy: 131 Postings
6. Novi: 99 Postings
7. Sterling Heights: 99 Postings
8. Farmington Hills: 98 Postings
9. Auburn Hills: 92 Postings
10. Warren: 90 Postings

Introduction

The customer service group is the largest occupation group that WIN analyzes, both in terms of employment and online job postings. This group is very important to the region because it is often a leading indicator, being the first to grow when the economy expands and the first to contract in a downturn. As defined by WIN, this group encompasses all customer service occupations, with skills transferrable across the retail sector, the hotel industry, food and beverage service industry, call centers, and other areas.
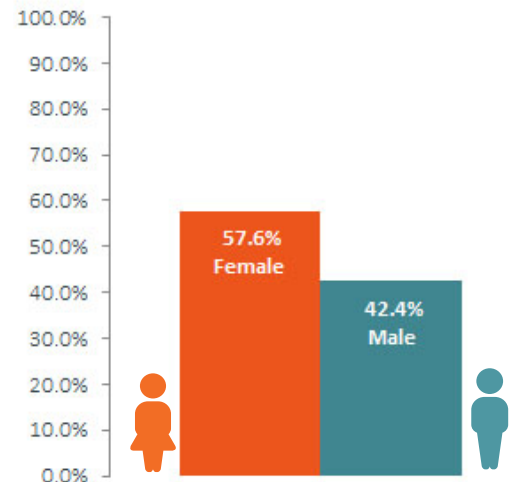
663,017
Customer Service Workers
0.1% Increase from 2018

Employment Over Time
2001–2019

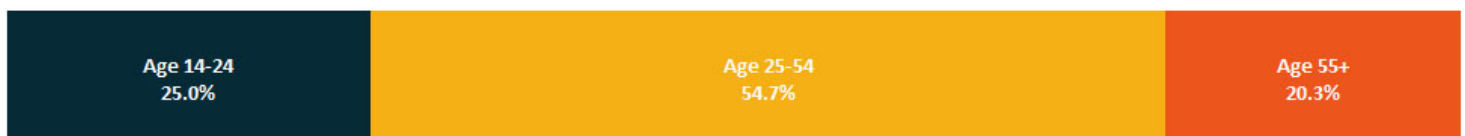### Worker Gender Demographics

57.6% Female

42.4% Male
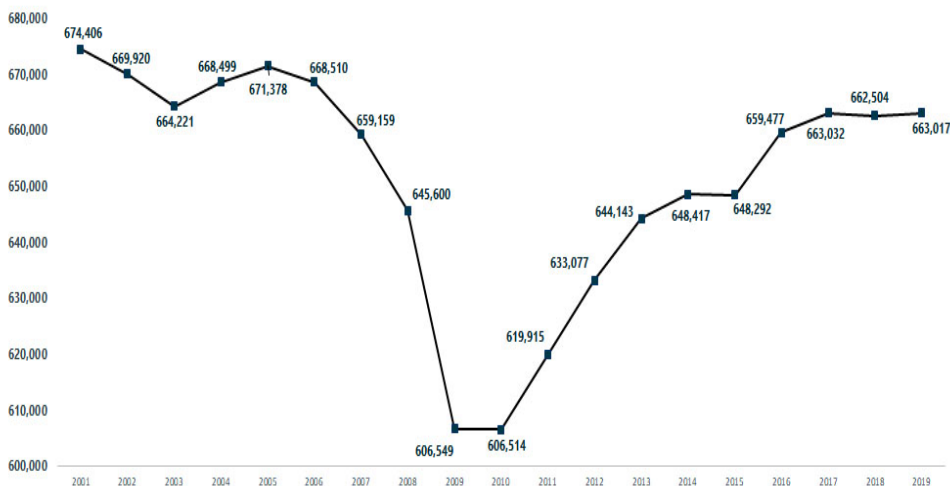
Customer Service Worker Demographics

According to the most recent Emsi data set available (2019), the customer service occupation group is more diverse than any other occupation group, having 663,017 workers. During 2019, 57.6 percent of workers identified as female, while just under half identified as male. In the region, 72.4 percent of workers in the customer service occupation group identified as white, while 17.3 percent and 4.7 percent identified as black or African American and Hispanic or Latino respectively. The 25-54 age group has the most customer service workers, with 38.8 percent.
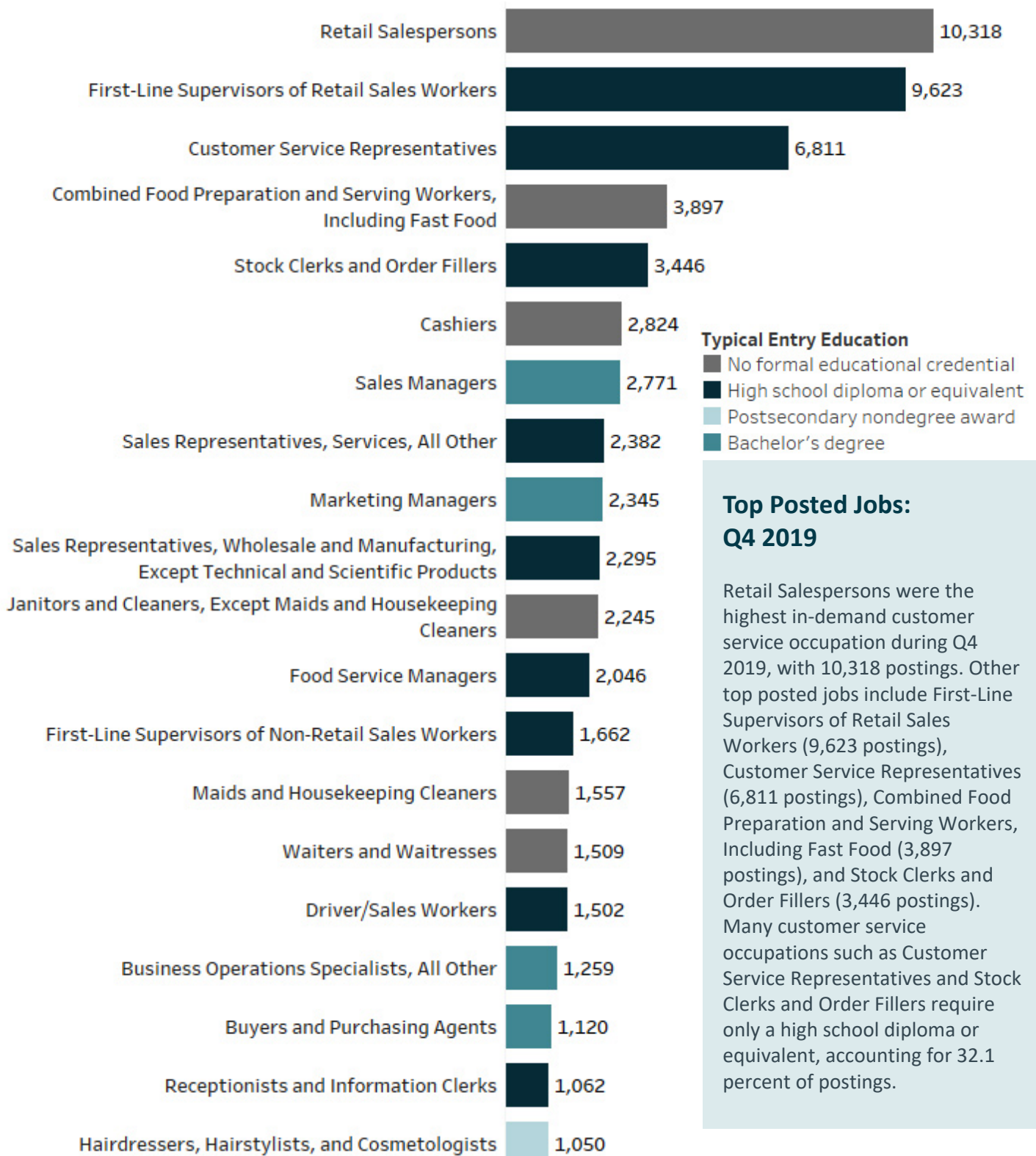
Race and Ethnicity Demographics

72.4% White | 17.3% Black or African American | 4.7% Hispanic or Latino

Worker Age Demographics

Age 14-24 25.0%	Age 25-54 54.7%	Age 55+ 20.3%

Data: Emsi | Analysis: Workforce Intelligence Network

**Customer Service
Top Posted Jobs**
Q4 2019

Occupation	Postings
Retail Salespersons	10,318
First-Line Supervisors of Retail Sales Workers	9,623
Customer Service Representatives	6,811
Combined Food Preparation and Serving Workers, Including Fast Food	3,897
Stock Clerks and Order Fillers	3,446
Cashiers	2,824
Sales Managers	2,771
Sales Representatives, Services, All Other	2,382
Marketing Managers	2,345
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	2,295
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	2,245
Food Service Managers	2,046
First-Line Supervisors of Non-Retail Sales Workers	1,662
Maids and Housekeeping Cleaners	1,557
Waiters and Waitresses	1,509
Driver/Sales Workers	1,502
Business Operations Specialists, All Other	1,259
Buyers and Purchasing Agents	1,120
Receptionists and Information Clerks	1,062
Hairdressers, Hairstylists, and Cosmetologists	1,050

Typical Entry Education
- No formal educational credential
- High school diploma or equivalent
- Postsecondary nondegree award
- Bachelor's degree

Top Posted Jobs: Q4 2019

Retail Salespersons were the highest in-demand customer service occupation during Q4 2019, with 10,318 postings. Other top posted jobs include First-Line Supervisors of Retail Sales Workers (9,623 postings), Customer Service Representatives (6,811 postings), Combined Food Preparation and Serving Workers, Including Fast Food (3,897 postings), and Stock Clerks and Order Fillers (3,446 postings). Many customer service occupations such as Customer Service Representatives and Stock Clerks and Order Fillers require only a high school diploma or equivalent, accounting for 32.1 percent of postings.

Data: Emsi | Analysis: Workforce Intelligence Network

Customer Service Wage Overview

Despite being in high demand, most customer service-related occupations offer relatively low wages according to the Bureau of Labor Statistics (BLS). However, six of the top ten posted occupations report median wages over $15 per hour, many of which are management roles requiring both education and experience. Entry-level occupations such as Customer Service Representatives offer a median salary of $16.13, or a salary of $32,260, coupled with short-term on-the-job training.

Wage Overview for Top Posted Customer Service Jobs in Q4 2019

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
41-2031	Retail Salespersons	$9.33	$9.89	$11.31	$14.20	$19.80
41-1011	First-Line Supervisors of Retail Sales Workers	$10.79	$13.62	$18.37	$25.61	$36.44
43-4051	Customer Service Representatives	$10.20	$12.58	$16.13	$20.99	$28.16
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	$9.32	$9.54	$9.90	$11.08	$12.34
43-5081	Stock Clerks and Order Fillers	$9.54	$10.43	$12.12	$15.62	$19.56
41-2011	Cashiers	$9.35	$9.64	$10.42	$11.94	$14.67
11-2022	Sales Managers	$33.23	$46.90	$64.04	$80.71	$120.25
41-3099	Sales Representatives, Services, All Other	$12.00	$17.29	$27.42	$39.65	$56.32
11-2021	Marketing Managers	$35.80	$45.82	$61.74	$79.39	$119.06
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	$15.38	$21.55	$32.56	$48.38	$63.37

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills

- Merchandising
- Selling Techniques
- Restaurant Operation
- Cash Register
- Customer Experience

In-Demand Foundational Skills

- Sales
- Customer Service
- Management
- Communications
- Leadership

In-Demand Education Level*

- High School Diploma: 32.1%
- Associate Degree: 4.3%
- Bachelor's Degree: 16.0%
- Master's Degree: 2.3%

Not all job postings indicate the required educational attainment level, therefore the percentages found here may not add up to 100 percent
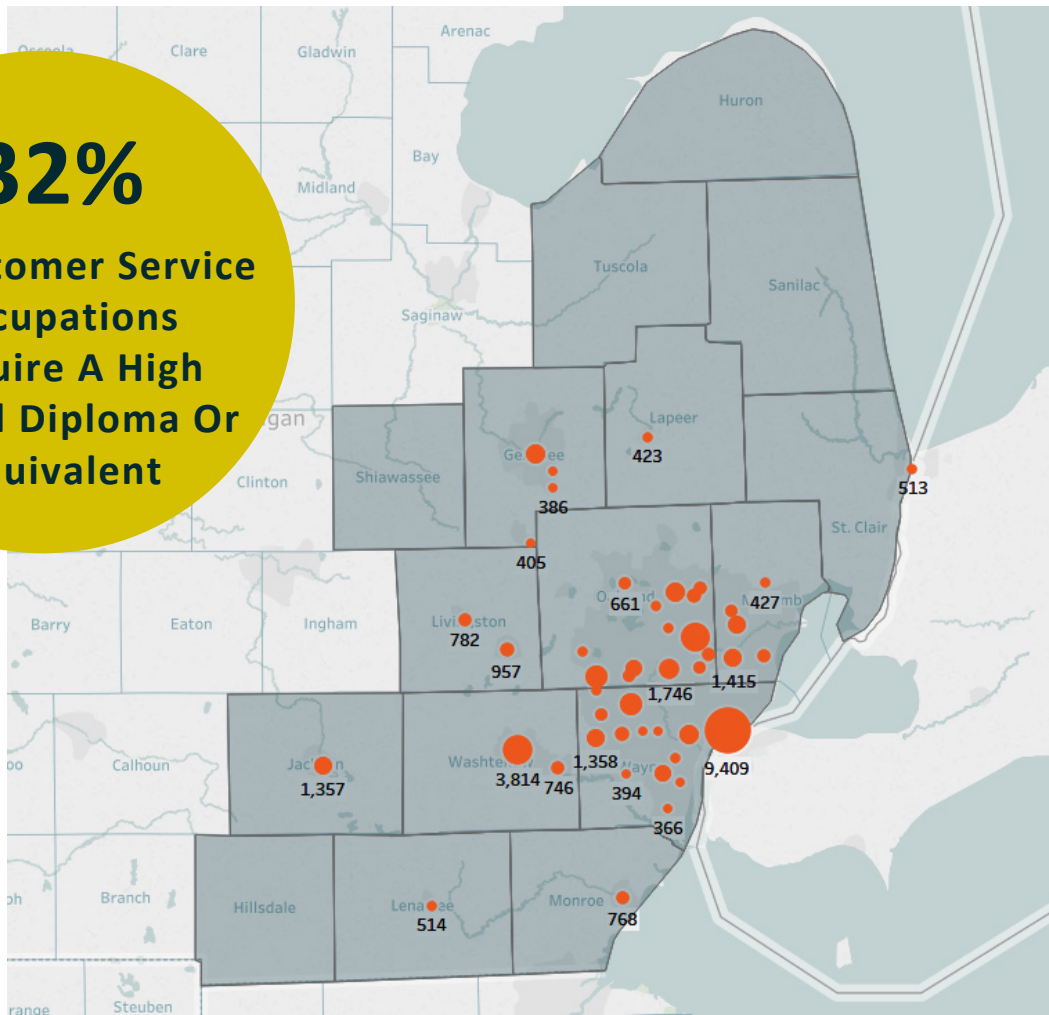
In-Demand Certifications

- Automotive Service Excellence (ASE) Certification
- Cosmetology License
- ServSafe Certification
- Food Handler's Card
- Certified Forklift Operator

Employer Demand by City

32%

Of Customer Service Occupations Require A High School Diploma Or Equivalent

Top Posting Employers*

- Dollar General Corporation
- The Home Depot
- Shipt LLC
- McDonald's Corporation
- CVS Health Corporation
- Meijer, Inc.
- Target Corporation
- Wal-Mart, Inc.
- Taco Bell Corp
- Lowe's Companies, Inc.

Employer names are listed as they appear in online job postings.

Job Postings by City

1. Detroit: 9,409 Postings
2. Ann Arbor: 3,814 Postings
3. Troy: 3,643 Postings
4. Novi: 2,157 Postings
5. Livonia: 1,979 Postings
6. Southfield: 1,746 Postings
7. Flint: 1,635 Postings
8. Auburn Hills: 1,632 Postings
9. Dearborn: 1,514 Postings
10. Warren: 1,415 Postings

Introduction

Education-related jobs can be found both in the private and public sectors. Teachers and other education related workers are employed in public schools, private schools, and training institutions, and there are about 15,000 openings for these positions annually. Jobs in the education occupation group require a variety of skills and credentials dependent on the target age group and topic area for the educator. From elementary school teachers to college professors, educators are the backbone of training the future workforce.

129,508
Education Workers
366 Worker Increase from 2018

Employment Over Time
2001–2019

Worker Gender Demographics
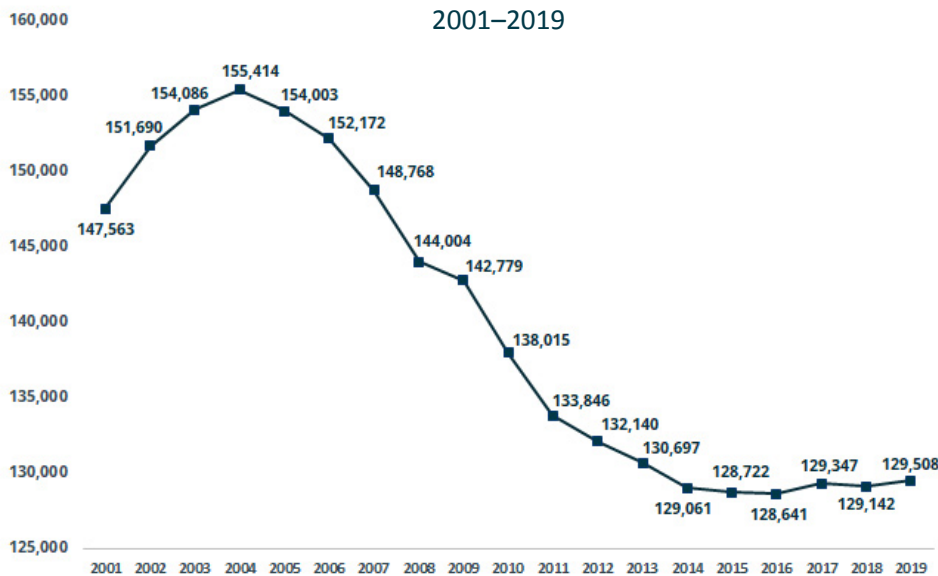
72.6% Females
27.4% Males
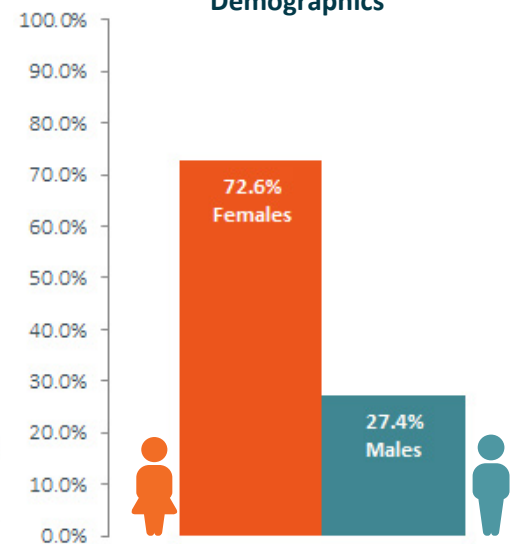
Education Worker Demographics

According to the most recent Emsi data set available (2019), among its 129,500 workers, the education occupation group is composed primarily of white females between the ages of 25 and 54. Only 27 percent of workers are males, and only 19 percent of workers are of a minority race.

Race and Ethnicity Demographics

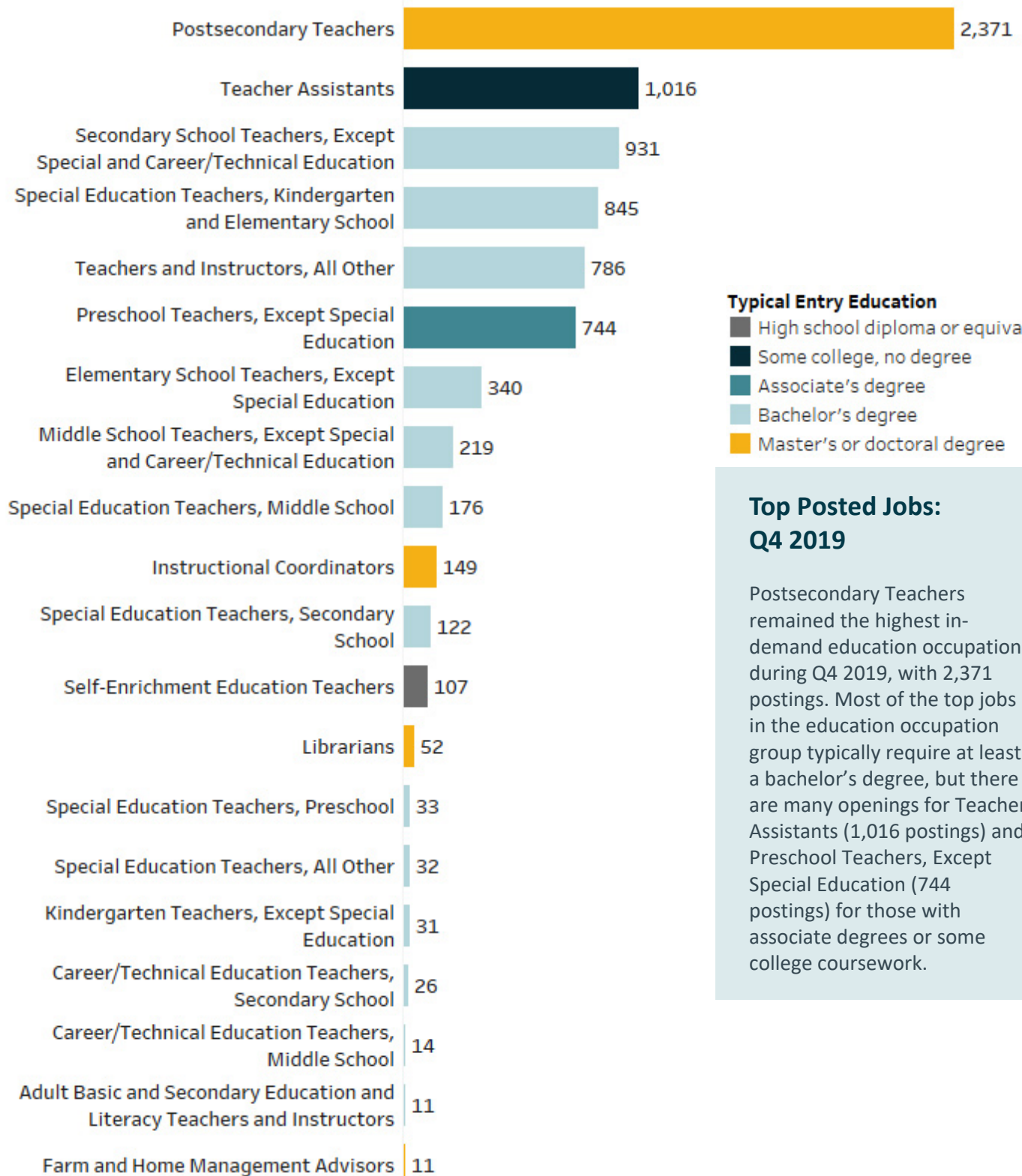**81.4% White | 9.4% Black or African-American | 4.4% Asian**

Worker Age Demographics

Age 14-24 9.5%	Age 25-54 63.4%	Age 55+ 27.1%

Data: Emsi | Analysis: Workforce Intelligence Network

Education Top Posted Jobs
Q4 2019

Occupation	Postings
Postsecondary Teachers	2,371
Teacher Assistants	1,016
Secondary School Teachers, Except Special and Career/Technical Education	931
Special Education Teachers, Kindergarten and Elementary School	845
Teachers and Instructors, All Other	786
Preschool Teachers, Except Special Education	744
Elementary School Teachers, Except Special Education	340
Middle School Teachers, Except Special and Career/Technical Education	219
Special Education Teachers, Middle School	176
Instructional Coordinators	149
Special Education Teachers, Secondary School	122
Self-Enrichment Education Teachers	107
Librarians	52
Special Education Teachers, Preschool	33
Special Education Teachers, All Other	32
Kindergarten Teachers, Except Special Education	31
Career/Technical Education Teachers, Secondary School	26
Career/Technical Education Teachers, Middle School	14
Adult Basic and Secondary Education and Literacy Teachers and Instructors	11
Farm and Home Management Advisors	11

Typical Entry Education
- High school diploma or equivalent
- Some college, no degree
- Associate's degree
- Bachelor's degree
- Master's or doctoral degree

Top Posted Jobs: Q4 2019

Postsecondary Teachers remained the highest in-demand education occupation during Q4 2019, with 2,371 postings. Most of the top jobs in the education occupation group typically require at least a bachelor's degree, but there are many openings for Teacher Assistants (1,016 postings) and Preschool Teachers, Except Special Education (744 postings) for those with associate degrees or some college coursework.

Data: Emsi | Analysis: Workforce Intelligence Network

Education Wage Overview

Many education-related jobs, particularly permanent positions that require teaching older students, offer competitive median wages with growth potential. These positions provide an excellent opportunity for job seekers willing to attain the necessary credentials and experience. According to the Bureau of Labor Statistics (BLS), six of the top ten posted education jobs offer median wages of over $30 per hour. The top posted job, Postsecondary Teachers, offers a median wage of $32.08 hourly, translating to annual earnings of about $66,700.

Wage Overview for Top Posted Education Jobs in 2019

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
25-1099	Postsecondary Teachers	$12.84	$18.46	$32.08	$51.90	$78.37
25-9041	Teacher Assistants	$9.56	$10.63	$12.71	$14.99	$17.84
25-2031	Secondary School Teachers, Except Special and Career/Technical Education	$19.06	$23.36	$31.51	$38.98	$45.87
25-2052	Special Education Teachers, Kindergarten and Elementary School	$19.89	$25.03	$32.41	$40.13	$47.05
25-3097	Teachers and Instructors, All Other	$10.13	$12.14	$18.69	$28.60	$38.64
25-2011	Preschool Teachers, Except Special Education	$9.87	$11.51	$15.28	$21.48	$27.65
25-2021	Elementary School Teachers, Except Special Education	$18.47	$23.12	$32.38	$41.57	$50.00
25-2022	Middle School Teachers, Except Special and Career/Technical Education	$17.26	$22.17	$31.48	$38.17	$44.92
25-2053	Special Education Teachers, Middle School	$18.74	$22.48	$29.70	$36.17	$40.22
25-9031	Instructional Coordinators	$16.93	$21.69	$31.05	$39.28	$48.17

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills
- Lesson Planning
- Preschool Education
- Cardiopulmonary Resuscitation (CPR)
- Child Development
- Language Arts

In-Demand Foundational Skills
- Teaching
- Leadership
- Mentorship
- Communications
- Mathematics

In-Demand Education Level*
- High School Diploma: 19.3%
- Associate Degree: 8.3%
- Bachelor's Degree: 38.8%
- Master's Degree: 11.5%

Not all job postings indicate the required educational attainment level, therefore the percentages found here may not add up to 100 percent
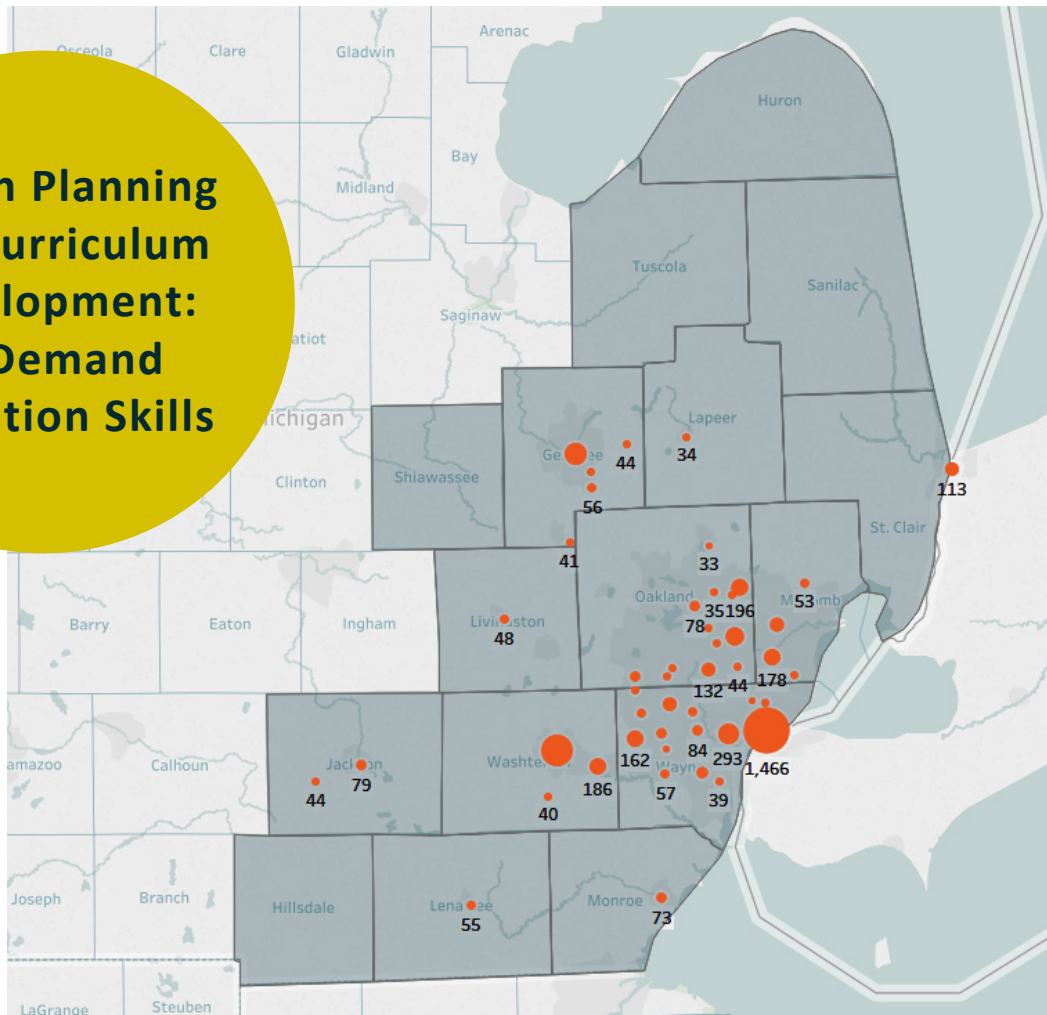
In-Demand Certifications
- NHA Certified
- Teaching English As A Foreign Language
- Math Endorsement
- Licensed Practical Nurse
- Certificate in English Language Teaching to Adults (CELTA)

Employer Demand by City

Lesson Planning and Curriculum Development: In-Demand Education Skills

Top Posting Employers*

- VIPKID
- Soliant Health, Inc
- University of Michigan
- Wayne County Schools
- Sunbelt Staffing, LLC
- Teach For America, Inc.
- Ef Education First, Inc.
- KinderCare Learning Centers
- C.R. England, Inc.
- Tutorgroup Inc.

Job Postings by City

1. Detroit: 1,466 Postings
2. Ann Arbor: 690 Postings
3. Flint: 336 Postings
4. Dearborn: 293 Postings
5. Troy: 232 Postings
6. Rochester: 196 Postings
7. Ypsilanti: 186 Postings
8. Warren: 178 Postings
9. Canton: 162 Postings
10. Sterling Heights: 140 Postings

*Employer names are listed as they appear in online job postings.

Introduction

Energy-related occupations encompass jobs in engineering, science, mining, and extraction. Workers in this field have a range of skills all related to keeping businesses and homes powered. Energy companies employ workers in a variety of occupations, many of which are also included in other WIN occupation groups. Posting data referenced in this section pertain only to job postings from energy-related businesses, while employment and wage data apply for these workers in every industry.
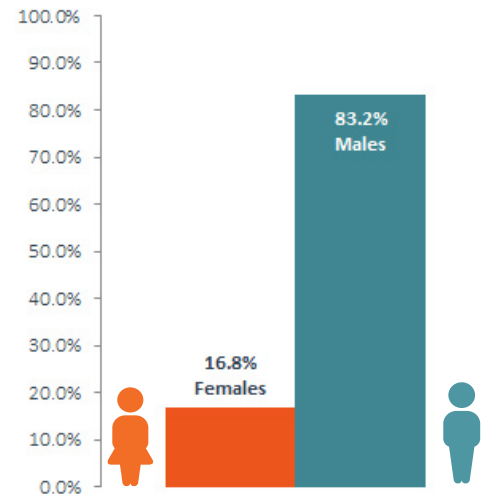
214,779
Energy Workers
1.3% Increase from 2018

Employment Over Time
2001–2019
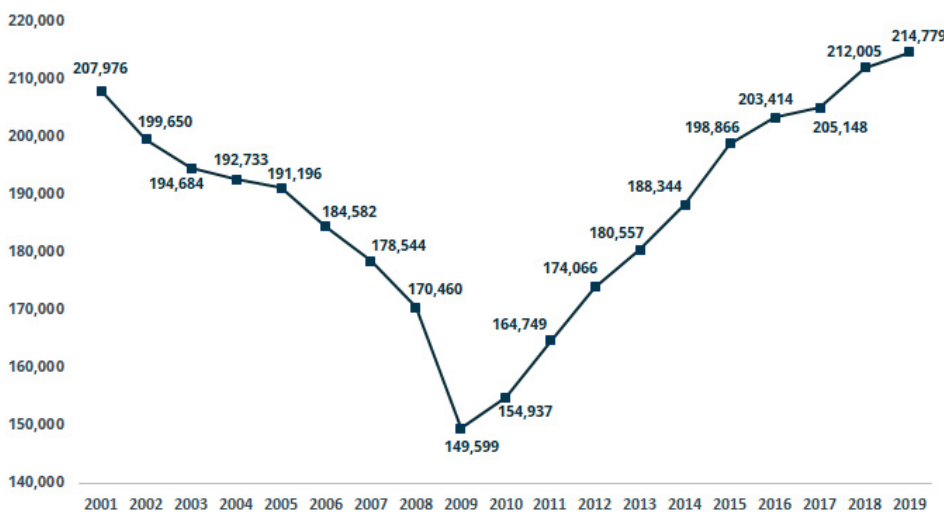
Worker Gender Demographics

Energy Worker Demographics

According to the most recent Emsi data set available (2019), The roughly 215,000 workers in the energy occupation group are primarily white males between the ages of 25 and 54, with 16.8 percent of workers identifying as female and just 20.7 percent identifying as a racial minority. Only 5.4 percent of the workers in the occupation group are under the age of 25 compared to 24.2 percent over 55, indicating that the energy field faces a particular threat from the region's aging workforce.
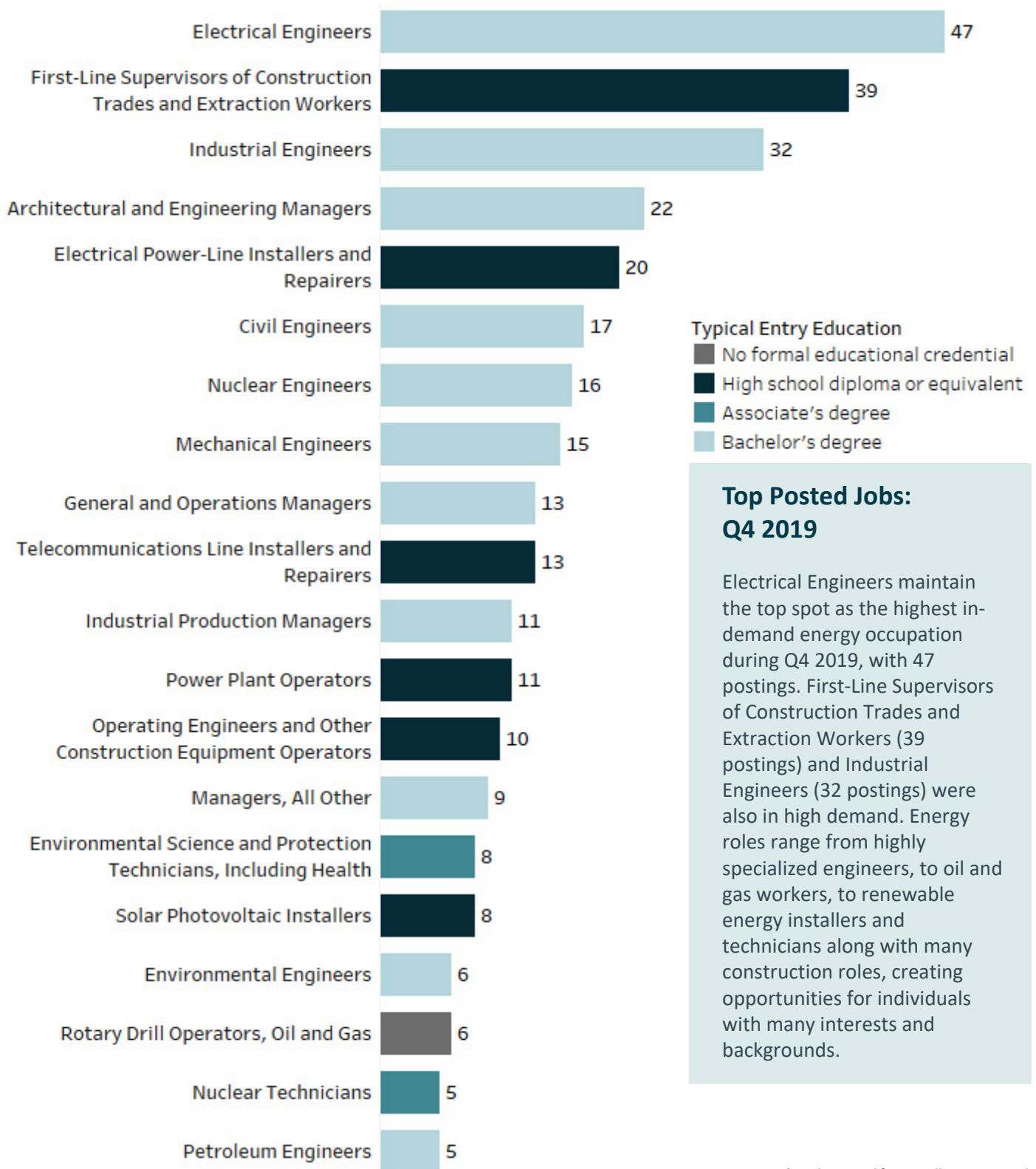
Race and Ethnicity Demographics

79.3% White | 9.7% Black or African American | 6.3% Asian

Worker Age Demographics

Age 14-24 5.4%	Age 25-54 70.4%	Age 55+ 24.2%

Data: Emsi | Analysis: Workforce Intelligence Network

**Energy Top
Posted Jobs**
Q4 2019

Occupation	Postings
Electrical Engineers	47
First-Line Supervisors of Construction Trades and Extraction Workers	39
Industrial Engineers	32
Architectural and Engineering Managers	22
Electrical Power-Line Installers and Repairers	20
Civil Engineers	17
Nuclear Engineers	16
Mechanical Engineers	15
General and Operations Managers	13
Telecommunications Line Installers and Repairers	13
Industrial Production Managers	11
Power Plant Operators	11
Operating Engineers and Other Construction Equipment Operators	10
Managers, All Other	9
Environmental Science and Protection Technicians, Including Health	8
Solar Photovoltaic Installers	8
Environmental Engineers	6
Rotary Drill Operators, Oil and Gas	6
Nuclear Technicians	5
Petroleum Engineers	5

Typical Entry Education
- No formal educational credential
- High school diploma or equivalent
- Associate's degree
- Bachelor's degree

Top Posted Jobs: Q4 2019

Electrical Engineers maintain the top spot as the highest in-demand energy occupation during Q4 2019, with 47 postings. First-Line Supervisors of Construction Trades and Extraction Workers (39 postings) and Industrial Engineers (32 postings) were also in high demand. Energy roles range from highly specialized engineers, to oil and gas workers, to renewable energy installers and technicians along with many construction roles, creating opportunities for individuals with many interests and backgrounds.

Data: Emsi | Analysis: Workforce Intelligence Network

Energy Wage Overview

The demand for engineers and highly specialized trades in the energy field create lucrative opportunities for job seekers willing to achieve the education or training related to these jobs. Nine of the top ten energy occupations have median wages over $30 per hour. According to the Bureau of Labor Statistics (BLS), the top posted energy job, Electrical Engineers, offers a median hourly wage of $44.64, or annual earnings of approximately $93,000. Technician and construction-focused positions related to energy generally have shorter term educational requirements than engineers and pay somewhat higher than similar occupations in other industries.

Wage Overview for Top Posted Energy Jobs in 2019

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
17-2071	Electrical Engineers	$29.87	$35.92	$44.64	$54.53	$62.78
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	$19.20	$26.02	$32.93	$43.21	$51.41
17-2112	Industrial Engineers	$30.91	$36.28	$44.44	$53.69	$61.27
11-9041	Architectural and Engineering Managers	$46.09	$54.16	$64.15	$76.55	$91.66
49-9051	Electrical Power-Line Installers and Repairers	$20.63	$28.20	$36.13	$43.67	$52.01
17-2051	Civil Engineers	$25.49	$30.03	$36.80	$46.34	$58.06
17-2161	Nuclear Engineers	$36.95	$42.98	$49.04	$55.95	$61.86
17-2141	Mechanical Engineers	$30.21	$35.72	$44.40	$54.95	$63.76
11-1021	General and Operations Managers	$21.78	$33.71	$52.86	$82.24	$115.87
49-9052	Telecommunications Line Installers and Repairers	$12.24	$14.35	$18.28	$26.32	$39.03

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills

- Electrical Engineering
- Electrical Systems
- Voltage
- Project Management
- Electric Power Distribution

In-Demand Foundational Skills

- Management
- Operations
- Problem Solving
- Presentations
- Investigation

In-Demand Education Level*

- High School Diploma: 34.5%
- Associate Degree: 17.9%
- Bachelor's Degree: 55.2%
- Master's Degree: 17.9%

Not all job postings indicate the required educational attainment level, therefore the percentages found here may not add up to 100 percent
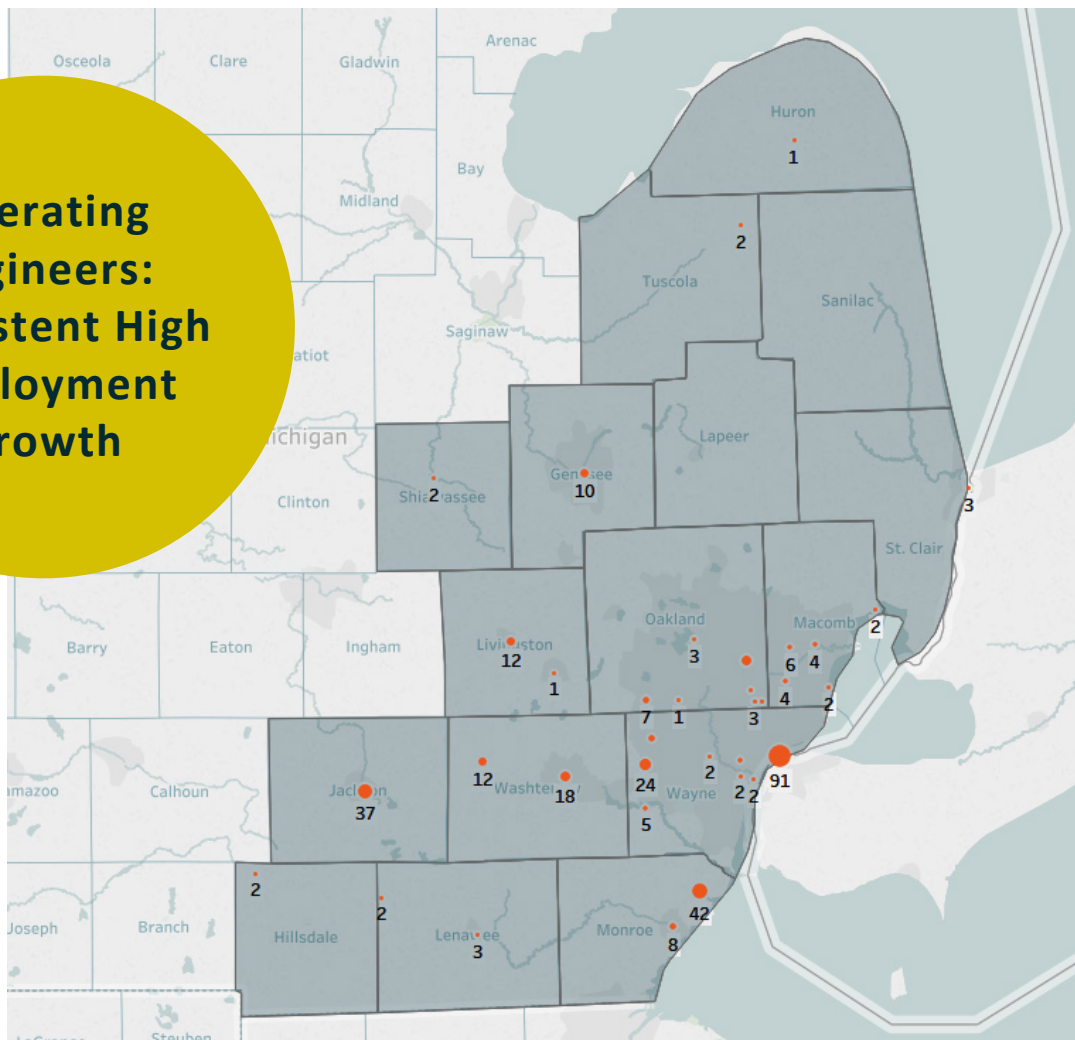
In-Demand Certifications

- Journeyman Lineman
- Operator Certification
- Licensed Professional Engineer
- NABCEP Certified Energy Practitioner
- Professional Engineer

Employer Demand by City

**Operating Engineers: Consistent High Employment Growth**

Top Posting Employers*

- DTE Energy Company
- CMS Energy Corporation
- Henkels & McCoy, Inc.
- Lg Electronics
- Black Hills Corporation
- Service Electric Company
- Aegion Corporation
- Itc Holdings Corp.
- Schlumberger Limited
- ROYAL DUTCH SHELL PLC

Employer names are listed as they appear in online job postings.

Job Postings by City

1. Detroit: 91 Postings
2. Newport: 42 Postings
3. Jackson: 37 Postings
4. Canton: 24 Postings
5. Ann Arbor: 18 Postings
6. Troy: 17 Postings
7. Chelsea: 12 Postings
8. Howell: 12 Postings
9. Flint: 10 Postings
10. Monroe: 8 Postings
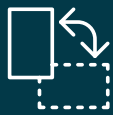
Introduction

Jobs in the manufacturing industry can range from assembly and production, to skilled trades and technicians, designers and engineers, and even computer-related occupations such as software development. Demand for engineers in the region has been consistent, and employment has been growing quickly. There are about 8,500 openings annually for engineers in southeast Michigan.
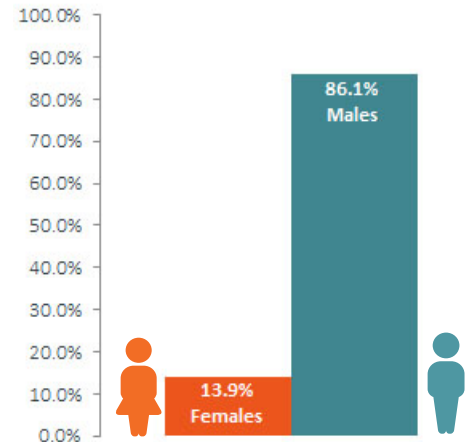
97,672
Engineering Workers
1.0% Increase from 2018

Employment Over Time
2001–2019
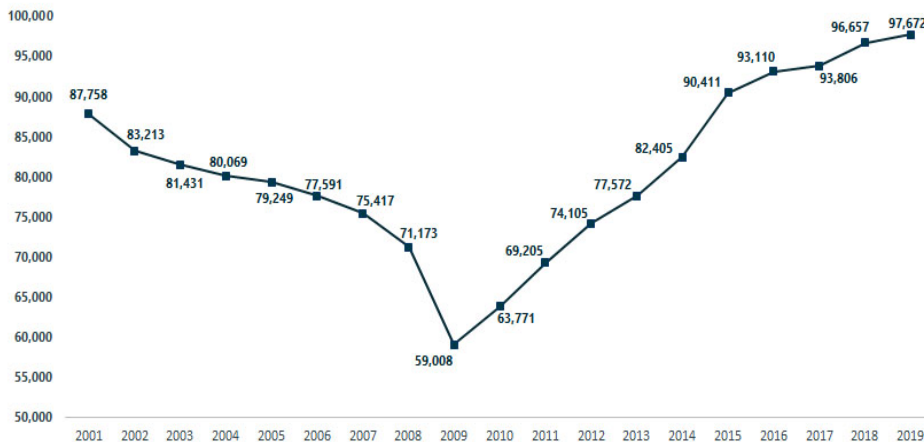
Worker Gender Demographics

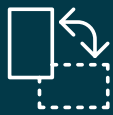## Engineering and Design Worker Demographics

According to the most recent Emsi data set available (2019), the nearly 100,000 workers in the engineering and design group are not particularly diverse. Just 5.4 percent of the related workforce is under 25, likely due to the consistently high educational requirements. 13.9 percent of current workers are female, and 21 percent identify as a race other than white; as the labor force overall continues to change, this is one field that could benefit from seeking more diverse talent.
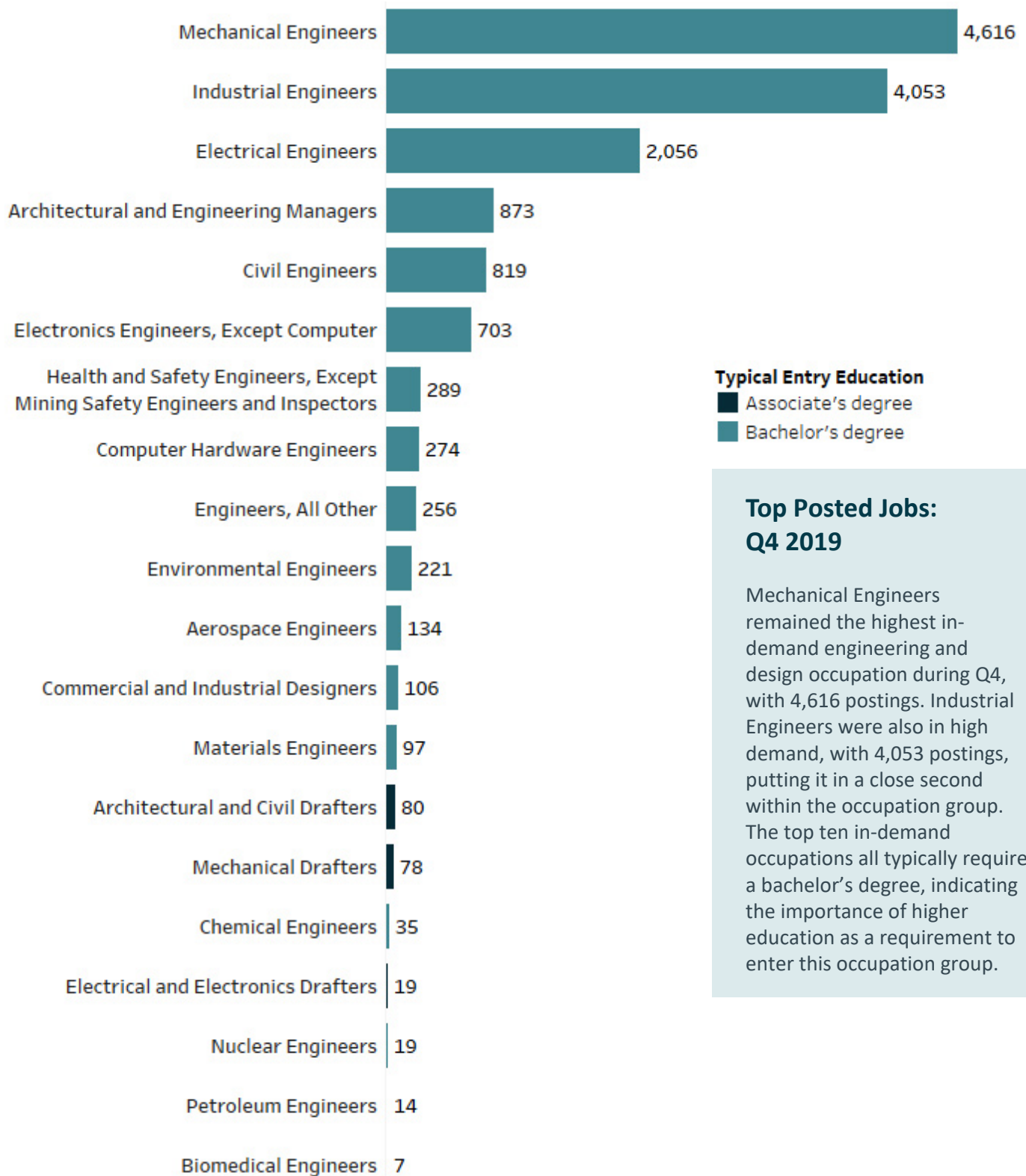
Race and Ethnicity Demographics

**79.0% White | 9.8% Asian | 7.1% Black or African American**

Worker Age Demographics

Age 14-24 5.4%	Age 25-54 70.0%	Age 55+ 24.5%

Data: Emsi | Analysis: Workforce Intelligence Network

**Engineering and Design
Top Posted Jobs
Q4 2019**

Occupation	Postings
Mechanical Engineers	4,616
Industrial Engineers	4,053
Electrical Engineers	2,056
Architectural and Engineering Managers	873
Civil Engineers	819
Electronics Engineers, Except Computer	703
Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	289
Computer Hardware Engineers	274
Engineers, All Other	256
Environmental Engineers	221
Aerospace Engineers	134
Commercial and Industrial Designers	106
Materials Engineers	97
Architectural and Civil Drafters	80
Mechanical Drafters	78
Chemical Engineers	35
Electrical and Electronics Drafters	19
Nuclear Engineers	19
Petroleum Engineers	14
Biomedical Engineers	7

Typical Entry Education
■ Associate's degree
■ Bachelor's degree

Top Posted Jobs: Q4 2019

Mechanical Engineers remained the highest in-demand engineering and design occupation during Q4, with 4,616 postings. Industrial Engineers were also in high demand, with 4,053 postings, putting it in a close second within the occupation group. The top ten in-demand occupations all typically require a bachelor's degree, indicating the importance of higher education as a requirement to enter this occupation group.

Data: Emsi | Analysis: Workforce Intelligence Network
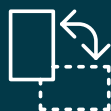
Engineering and Design Wage Overview

Most engineering and design related jobs offer high wages, providing a lucrative opportunity to job seekers willing to meet the minimum education requirements related to these jobs. Median wages are near $40 per hour across the group, and the top posted engineering and design job, Mechanical Engineers, offers a median hourly wage of $44.40. This reflects an annual salary of approximately $92,000 according to the Bureau of Labor Statistics (BLS).

Wage Overview for Top Posted Engineering and Design Jobs in Q4 2019

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
17-2141	Mechanical Engineers	$30.21	$35.72	$44.40	$54.95	$63.76
17-2112	Industrial Engineers	$30.91	$36.28	$44.44	$53.69	$61.27
17-2071	Electrical Engineers	$29.87	$35.92	$44.64	$54.53	$62.78
11-9041	Architectural and Engineering Managers	$46.09	$54.16	$64.15	$76.55	$91.66
17-2051	Civil Engineers	$25.49	$30.03	$36.80	$46.34	$58.06
17-2072	Electronics Engineers, Except Computer	$30.14	$35.82	$43.74	$53.60	$63.73
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	$26.69	$30.41	$39.41	$52.79	$63.67
17-2061	Computer Hardware Engineers	$20.18	$28.68	$43.64	$56.25	$65.13
17-2199	Engineers, All Other	$23.56	$33.63	$43.72	$55.47	$63.70
17-2081	Environmental Engineers	$29.35	$35.47	$44.62	$56.00	$65.50

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills

- Electrical Engineering
- Mechanical Engineering
- New Product Development
- Computer-Aided Design
- AutoCAD

In-Demand Foundational Skills

- Management
- Problem Solving
- Communications
- Leadership
- Presentations

In-Demand Education Level*

- High School Diploma: 3.8%
- Associate Degree: 5.0%
- Bachelor's Degree: 68.4%
- Master's Degree: 18.2%

Not all job postings indicate the required educational attainment level, therefore the percentages found here may not add up to 100 percent
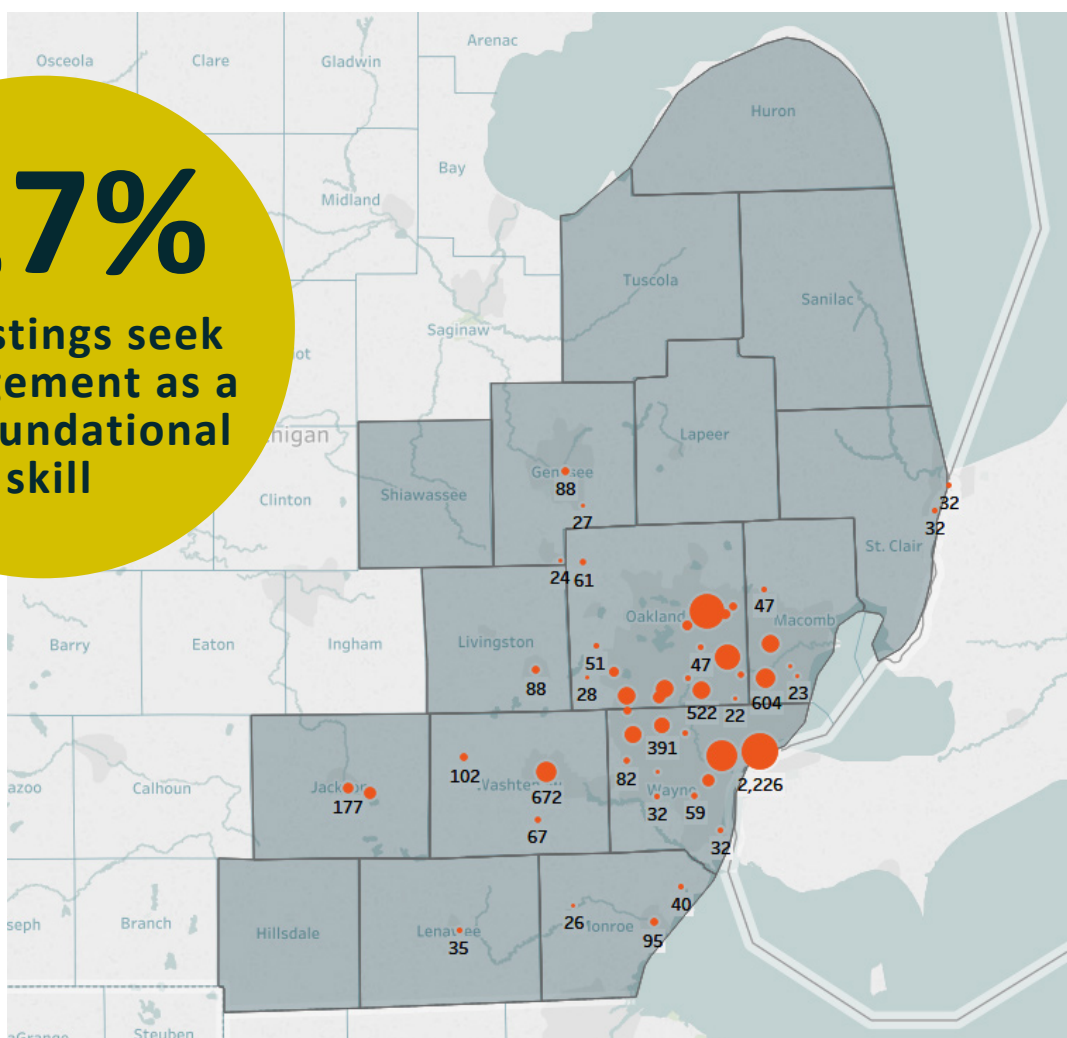
In-Demand Certifications

- Professional Engineer
- Six Sigma Green Belt Certification
- Licensed Professional Engineer
- Six Sigma Black Belt Certification
- Certified Quality Engineer
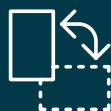
Employer Demand by City

27%

of postings seek management as a top foundational skill

Top Posting Employers*

- Ford Motor Company
- FCA US LLC
- ALTAIR ENGINEERING, INC.
- General Motors Company
- Advantage Resourcing
- Wilson, Jeff Chrysler Automobiles, Inc
- Gtech Services, Inc
- Advantage Technical Resourcing, Inc.
- Kelly Services, Inc.
- Fca, Inc.

Job Postings by City

- Detroit: 2,226 Postings
- Auburn Hills: 1,994 Postings
- Dearborn: 1,555 Postings
- Troy: 1,032 Postings
- Ann Arbor: 672 Postings
- Warren: 604 Postings
- Novi: 558 Postings
- Farmington Hills: 535 Postings
- Southfield: 522 Postings
- Sterling Heights: 497 Postings

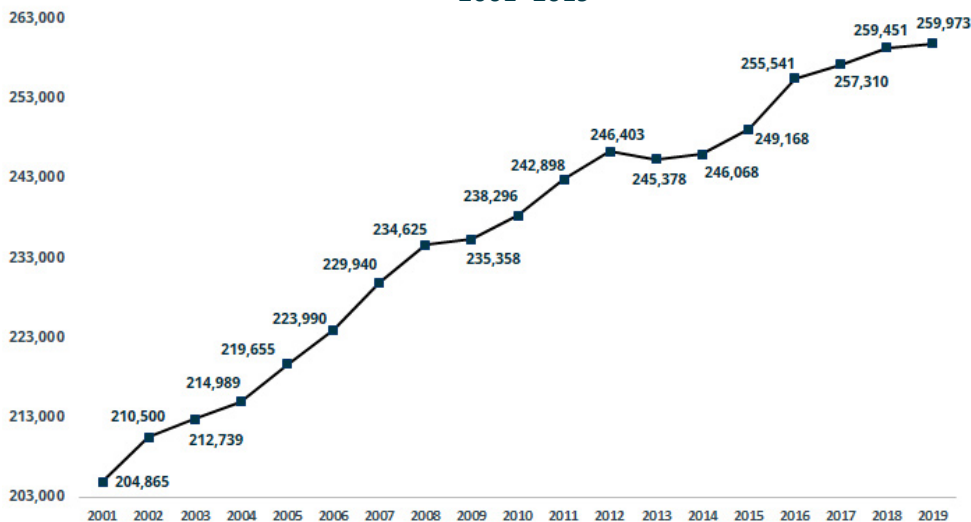** Employer names are listed as they appear in online job postings.*

Introduction

WIN's health care occupation group includes jobs related to health care support and practitioners. Employment in this group has been consistently growing, more health care workers needed to care for Michigan's aging population and in response to regulatory and other changes. Registered nurses are routinely the most in-demand job in this group. Annually, there are about 23,600 job openings for these positions, and this is projected to continue increasing.
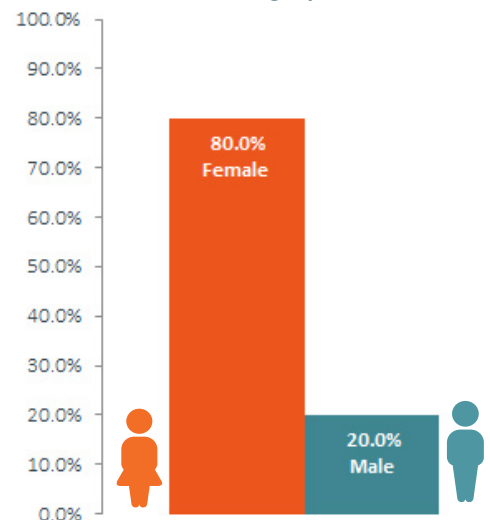
259,973
Health Care Workers

522 Worker Increase
from 2018

Employment Over Time
2001–2019

263,000
253,000
243,000
233,000
223,000
213,000
203,000

204,865
210,500
212,739
214,989
219,655
223,990
229,940
234,625
235,358
238,296
242,898
246,403
245,378
246,068
249,168
255,541
257,310
259,451
259,973

2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

Worker Gender Demographics

100.0%
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
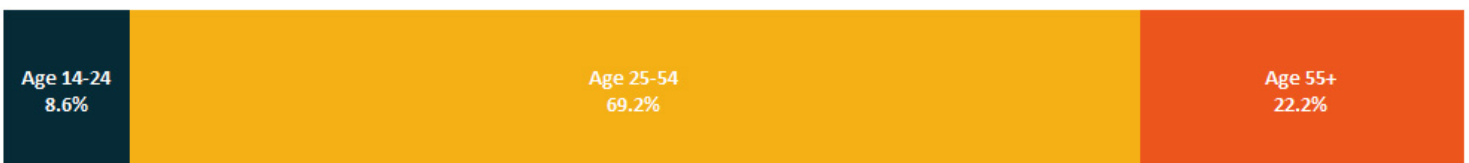0.0%

80.0% Female

20.0% Male

Health Care Worker Demographics

According to the most recent Emsi data set available (2019), the health care occupation group employs around 259,973 workers, who are overwhelmingly female (80 percent) and between the ages of 25 and 54 (69 percent), although 23 percent of workers are over 55. The group has a similar proportion of racial minorities as the workforce as a whole, with 69 percent of workers identifying as white, 20 percent identifying as Black or African American, and 11 percent identifying otherwise.

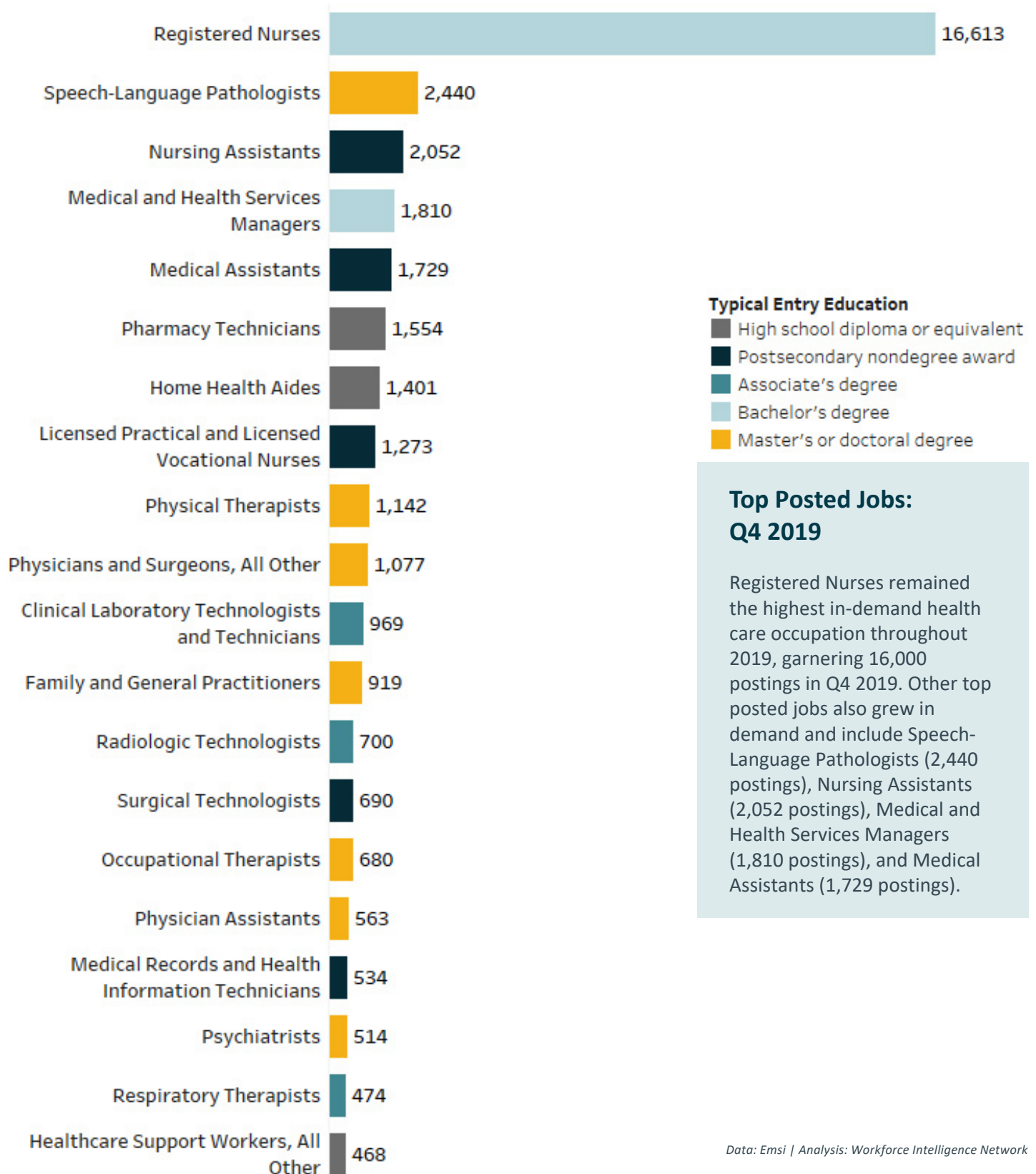### Race and Ethnicity Demographics

69.0% White | 19.8% Black or African American | 6.8% Asian

Worker Age Demographics

Age 14-24 8.6%	Age 25-54 69.2%	Age 55+ 22.2%

Data: Emsi | Analysis: Workforce Intelligence Network

Health Care Top Posted Jobs
Q4 2019

Occupation	Postings
Registered Nurses	16,613
Speech-Language Pathologists	2,440
Nursing Assistants	2,052
Medical and Health Services Managers	1,810
Medical Assistants	1,729
Pharmacy Technicians	1,554
Home Health Aides	1,401
Licensed Practical and Licensed Vocational Nurses	1,273
Physical Therapists	1,142
Physicians and Surgeons, All Other	1,077
Clinical Laboratory Technologists and Technicians	969
Family and General Practitioners	919
Radiologic Technologists	700
Surgical Technologists	690
Occupational Therapists	680
Physician Assistants	563
Medical Records and Health Information Technicians	534
Psychiatrists	514
Respiratory Therapists	474
Healthcare Support Workers, All Other	468

Typical Entry Education
- High school diploma or equivalent
- Postsecondary nondegree award
- Associate's degree
- Bachelor's degree
- Master's or doctoral degree

Top Posted Jobs: Q4 2019

Registered Nurses remained the highest in-demand health care occupation throughout 2019, garnering 16,000 postings in Q4 2019. Other top posted jobs also grew in demand and include Speech-Language Pathologists (2,440 postings), Nursing Assistants (2,052 postings), Medical and Health Services Managers (1,810 postings), and Medical Assistants (1,729 postings).

Data: Emsi | Analysis: Workforce Intelligence Network

Health Care Wage Overview

Wages in the high-demand health care field tend to scale with both education and experience. The health care occupation group offers a relatively broad array of entry requirements and a high volume of jobs are open to candidates with less than a bachelor's degree. However, most of the top-posted jobs that require less than a bachelor's degree pay under than the region's median wage of $17.81 per hour. Registered Nurses, the top posted health care job, offers a median hourly wage of $35.31 per hour or annual salary of about $73,400 according to the Bureau of Labor Statistics (BLS).

Wage Overview for Top Posted Health Care Jobs in 2019

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
29-1141	Registered Nurses	$26.81	$30.63	$35.31	$40.12	$46.97
29-1127	Speech-Language Pathologists	$27.02	$32.03	$37.71	$46.85	$65.81
31-1014	Nursing Assistants	$11.45	$12.91	$14.51	$16.65	$18.73
11-9111	Medical and Health Services Managers	$27.37	$34.18	$46.16	$62.33	$93.45
31-9092	Medical Assistants	$12.36	$13.55	$15.46	$18.06	$20.22
29-2052	Pharmacy Technicians	$10.48	$12.42	$15.56	$18.96	$23.12
31-1011	Home Health Aides	$9.45	$9.91	$11.15	$13.01	$14.99
29-2061	Licensed Practical and Licensed Vocational Nurses	$20.01	$22.06	$25.25	$28.32	$30.46
29-1123	Physical Therapists	$31.34	$36.97	$43.91	$50.49	$66.82
29-1069	Physicians and Surgeons, All Other	$22.88	$29.46	$69.42	$107.50	$134.85

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills

- Nursing
- Basic Life Support
- Advanced Cardiovascular Life Support (ACLS)
- Cardiopulmonary Resuscitation (CPR)
- Nursing Care

In-Demand Foundational Skills

- Management
- Leadership
- Customer Service
- Communications
- Operations

In-Demand Education Level*

- High School Diploma: 18.1%
- Associate Degree: 15.1%
- Bachelor's Degree: 19.5%
- Master's Degree: 8.7%

Not all job postings indicate the required educational attainment level, therefore the percentages found here may not add up to 100 percent
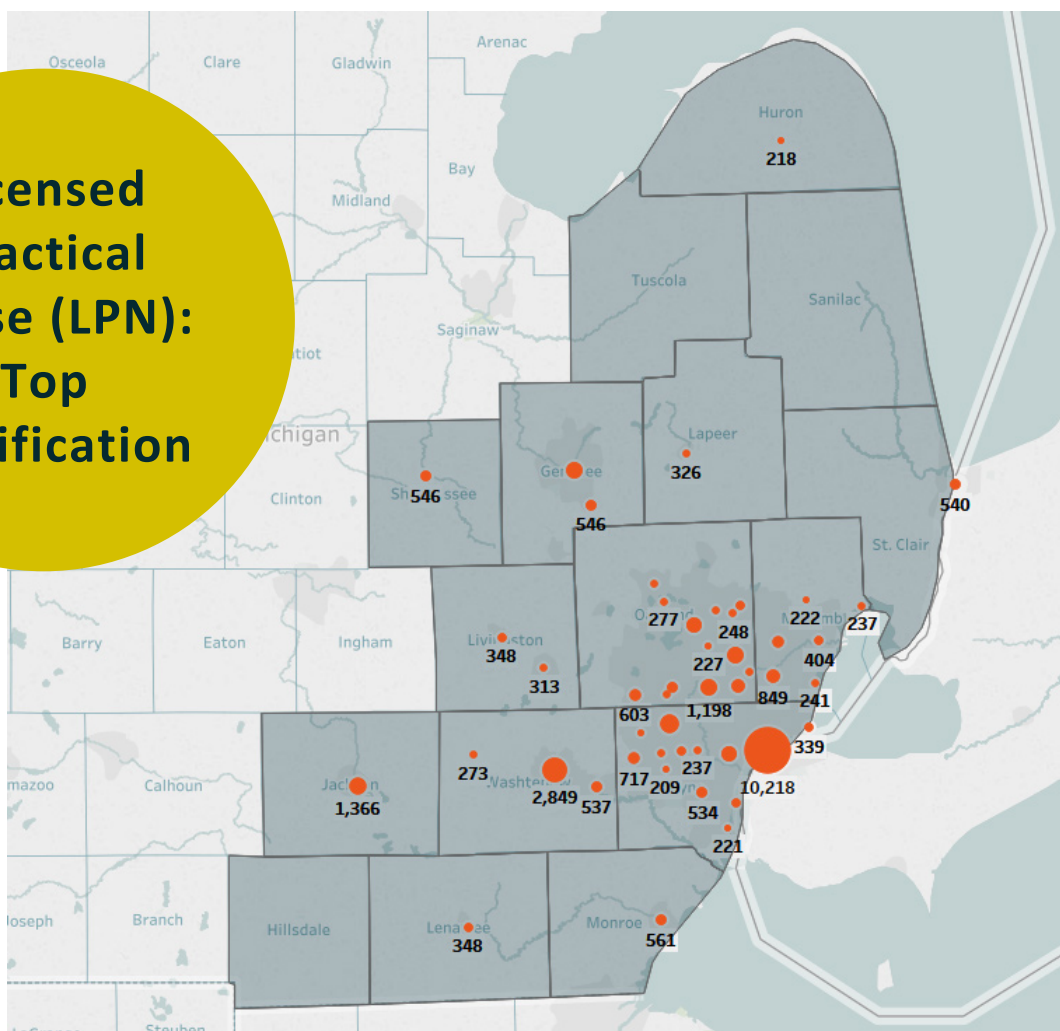
In-Demand Certifications

- Licensed Practical Nurse
- Certified Nursing Assistant
- Critical Care Registered Nurse (CCRN)
- Nurse Practitioner
- Certificate of Clinical Competence in Speech-Language Pathology (CCC-SLP)

Employer Demand by City

Licensed Practical Nurse (LPN): Top Certification

Top Posting Employers*

- General Healthcare Resources, Inc.
- Henry Ford Health System
- HealthCare Employment Network
- Trinity Health Corporation
- Ascension Health
- Beaumont Health System
- Soliant Health, Inc
- Mercy Medical Center, Inc.
- William Beaumont Hospital
- NurseFly

*Employer names are listed as they appear in online job postings.
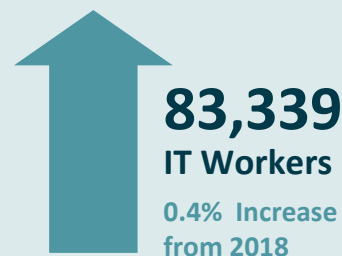
Job Postings by City

1. Detroit: 10,218 Postings
2. Ann Arbor: 2,849 Postings
3. Livonia: 1,635 Postings
4. Jackson: 1,366 Postings
5. Troy: 1,268 Postings
6. Flint: 1,224 Postings
7. Southfield: 1,198 Postings
8. Pontiac: 1,102 Postings
9. Dearborn: 1,004 Postings
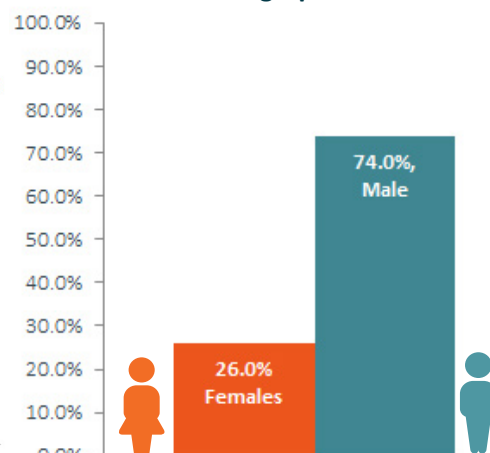10. Warren: 849 Postings

Introduction

Information technology (IT) jobs include occupations that are associated with entry-level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia, and systems integration services. While the information technology group does not currently employ as many individuals as the other groups here, it is quickly growing, and about 7,000 job openings are reported in the region annually.

83,339
IT Workers
0.4% Increase
from 2018

Employment Over Time
2001–2019

Year	Value
2001	66,911
2002	64,055
2003	65,170
2004	64,496
2005	65,219
2006	64,125
2007	63,712
2008	63,226
2009	57,677
2010	59,621
2011	63,098
2012	66,736
2013	69,101
2014	71,451
2015	76,371
2016	79,444
2017	81,789
2018	83,057
2019	83,399

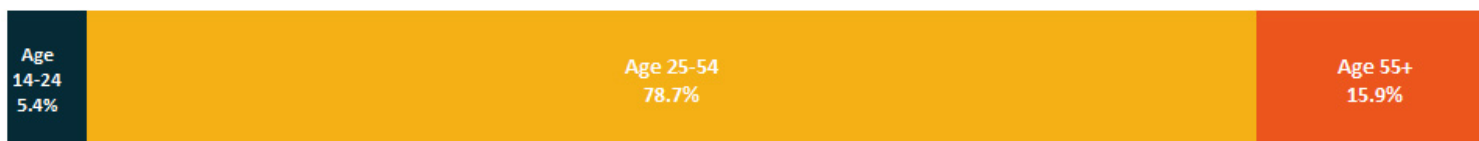### Worker Gender Demographics

74.0%, Male

26.0% Females

IT Worker Demographics

The IT occupation group remains demographically skewed despite having more than 83,339 IT workers in the region. Most workers are white males between the ages of 25 and 54. Currently, 74 percent of the workers in IT in southeast Michigan identify as male, and 68 percent identify as white. More than 18 percent are Asian, and less than 10 percent are black or African American. Overall, 78 percent are between the ages of 25 and 54. There are a broad range of organizations providing specialized training resources for female and minority IT workers throughout southeast Michigan. With the push to diversify the IT field, more opportunities are opening for women and minorities.
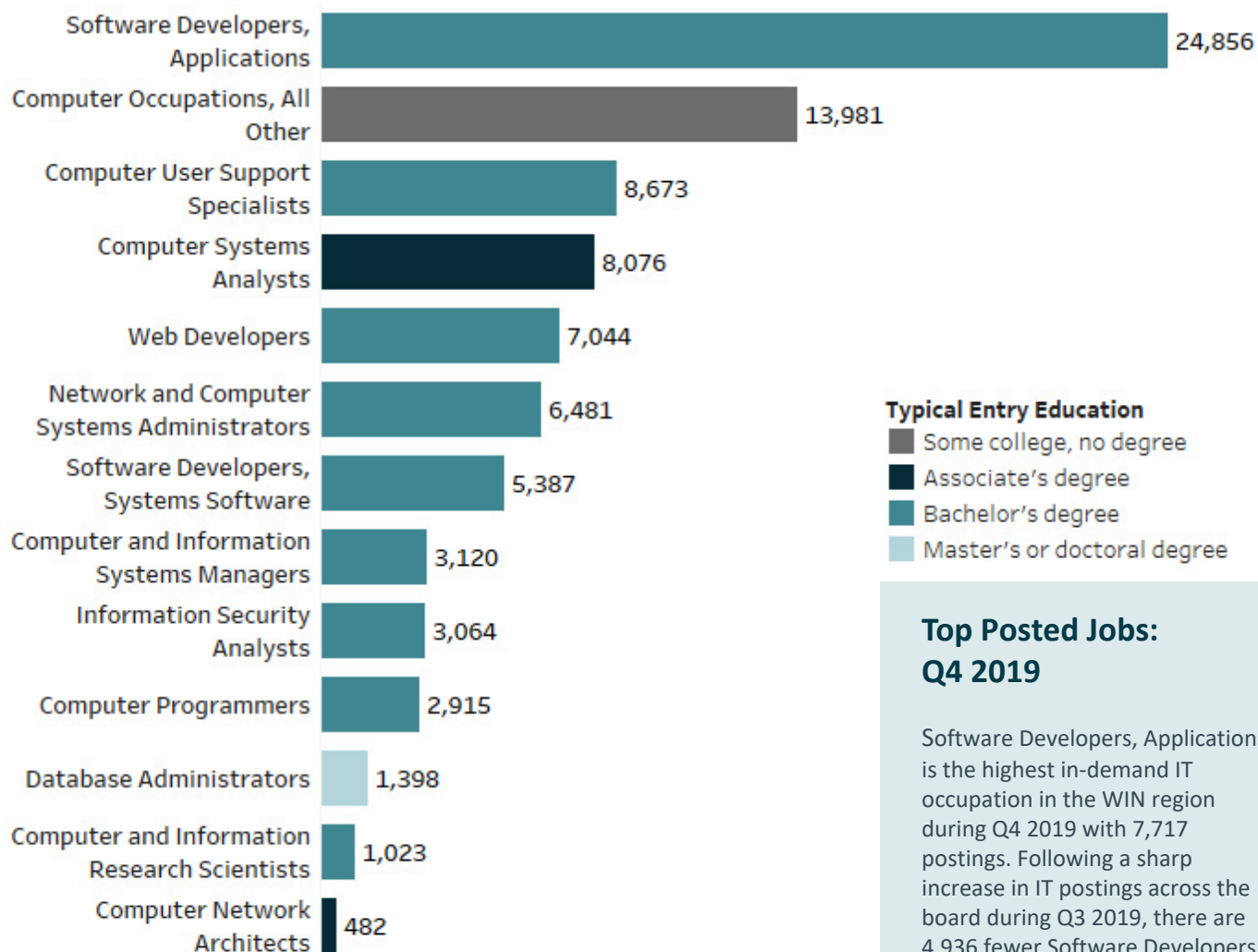
Race and Ethnicity Demographics

67.5% White | 9.9% Black or African American | 18.4% Asian

Worker Age Demographics

Age 14-24 5.4%	Age 25-54 78.7%	Age 55+ 15.9%

Data: Emsi | Analysis: Workforce Intelligence Network

IT Top Posted Jobs
Q4 2019

Occupation	Postings
Software Developers, Applications	24,856
Computer Occupations, All Other	13,981
Computer User Support Specialists	8,673
Computer Systems Analysts	8,076
Web Developers	7,044
Network and Computer Systems Administrators	6,481
Software Developers, Systems Software	5,387
Computer and Information Systems Managers	3,120
Information Security Analysts	3,064
Computer Programmers	2,915
Database Administrators	1,398
Computer and Information Research Scientists	1,023
Computer Network Architects	482

Typical Entry Education
- Some college, no degree
- Associate's degree
- Bachelor's degree
- Master's or doctoral degree

Top Posted Jobs: Q4 2019

Software Developers, Applications is the highest in-demand IT occupation in the WIN region during Q4 2019 with 7,717 postings. Following a sharp increase in IT postings across the board during Q3 2019, there are 4,936 fewer Software Developers, Applications postings during Q4. Overall, there were 15,408 fewer IT job postings from 42,523 postings in Q3 to 27,115 postings in Q4 2019 which is more consistent previous with demand levels during Q1 2019.

Computer User Support Specialists and Computer Systems Analysts continue to be in the top five in-demand occupations with 2,814 and 2,521 job postings, respectively.

Data: Emsi | Analysis: Workforce Intelligence Network

IT Wage Overview

Most IT-related jobs offer high wages providing a lucrative opportunity to job seekers willing to meet the minimum education requirements related to these jobs. Software Developers, Applications, the top posted IT job in Q4 2019, offers a median hourly wage of $43.73 per hour or nearly $91,000 per year according to the Bureau of Labor Statistics (BLS). Even occupations requiring shorter-term training, such as Computer User Support Specialists and Web Developers, make over $21 per hour.

Wage Overview for Top Posted IT Jobs in 2019

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
15-1132	Software Developers, Applications	$28.28	$34.67	$43.73	$54.53	$63.13
15-1199	Computer Occupations, All Other	$20.13	$26.62	$36.88	$48.57	$59.91
15-1151	Computer User Support Specialists	$13.25	$16.84	$22.67	$29.47	$37.43
15-1121	Computer Systems Analysts	$25.78	$31.96	$39.62	$49.18	$59.81
15-1134	Web Developers	$18.05	$24.17	$32.32	$42.01	$49.34
15-1142	Network and Computer Systems Administrators	$24.99	$30.74	$37.96	$47.50	$57.23
15-1133	Software Developers, Systems Software	$23.74	$33.81	$43.34	$52.88	$62.70
11-3021	Computer and Information Systems Managers	$39.56	$49.81	$62.55	$77.23	$96.94
15-1122	Information Security Analysts	$28.94	$34.30	$44.02	$56.47	$65.60
15-1131	Computer Programmers	$22.24	$29.79	$37.23	$45.21	$52.29

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills

- Agile Software Development
- Java
- SQL
- Software Engineering
- Software Development

In-Demand Foundational Skills

- Management
- Communications
- Problem Solving
- Leadership
- Integration

In-Demand Education Level*

- High School Diploma: 4.4%
- Associate Degree: 4.5%
- Bachelor's Degree: 56.9%
- Master's Degree: 13.3%

Not all job postings indicate the required educational attainment level, therefore the percentages found here may not add up to 100 percent
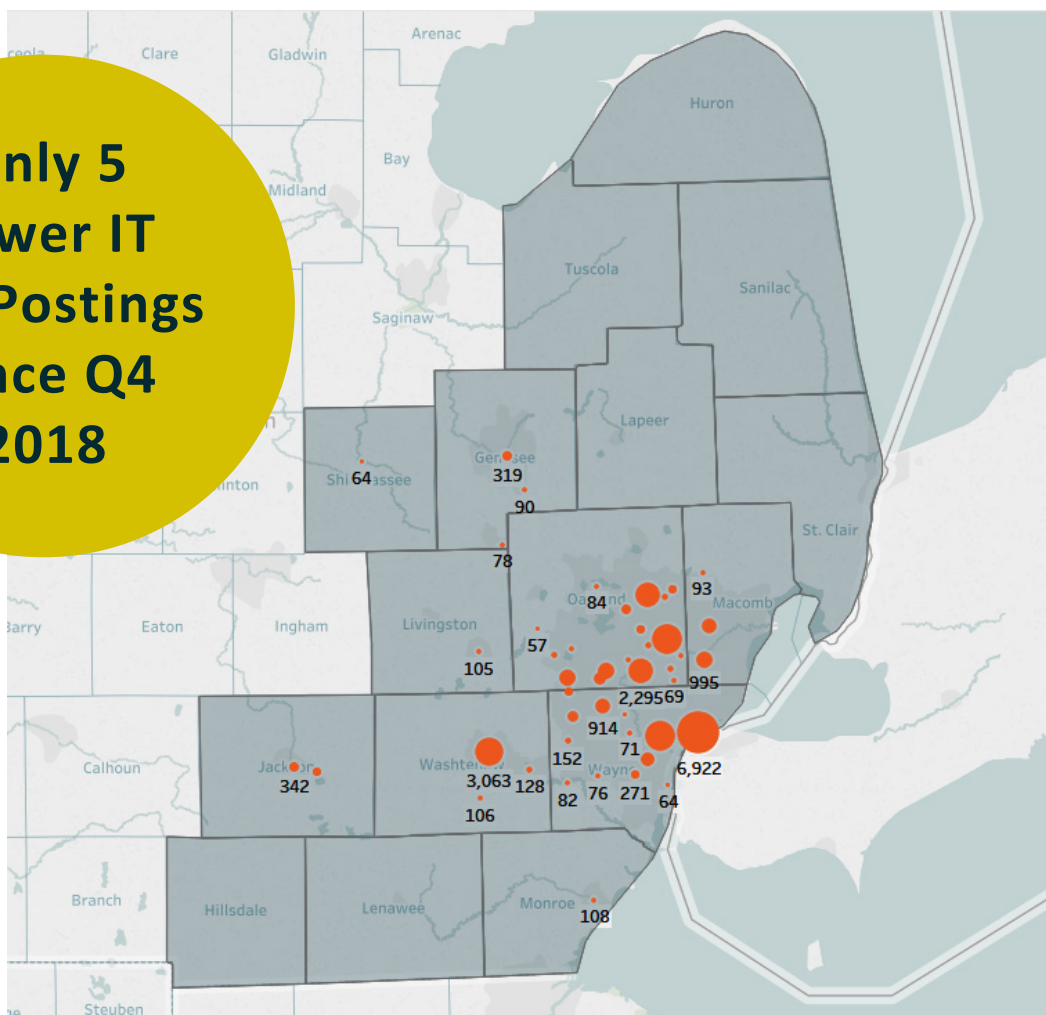
In-Demand Certifications

- Project Management Professional Certification (PMP)
- Certified Information Systems Security Professional (CISSP)
- Cisco Certified Network Associate (CCNA)
- Certified Microsoft Professional
- Certified Information System Auditor (CISA)

Employer Demand by City

Only 5 Fewer IT Job Postings Since Q4 2018

Top Posting Employers*

- Ford Motor Company
- Teksystems, Inc.
- Oracle Corporation
- Deloitte LLP
- Revature
- Fast Switch, Ltd.
- Accenture PLC
- V2soft Inc.
- Advantage Resourcing
- General Motors Company

Employer names are listed as they appear in online job postings.

Job Postings by City

1. Detroit: 6,922 Postings
2. Troy: 2,788 Postings
3. Dearborn: 2,707 Postings
4. Ann Arbor: 2,369 Postings
5. Auburn Hills: 1,809 Postings
6. Southfield: 1,673 Postings
7. Farmington Hills: 843 Postings
8. Warren: 740 Postings
9. Novi: 664 Postings
10. Livonia: 642 Postings

Introduction

WIN's technicians/skilled trades category includes jobs related to advanced manufacturing. Southeast Michigan has more demand for skilled- trades labor, such as CNC machinists and welders, than almost anywhere else in the country. There are about 21,000 openings for these workers annually.

NOTE: Skilled trades related to construction and assembly are not included in this cluster, as the focus is on advanced manufacturing only.
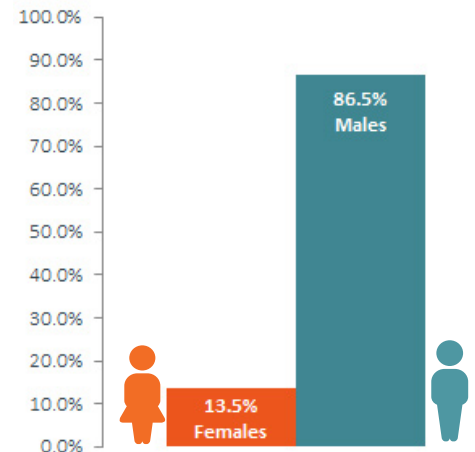
163,319
Skilled Trades Workers

0.2% Increase from 2018

Employment Over Time
2001–2019

Worker Gender Demographics

86.5% Males
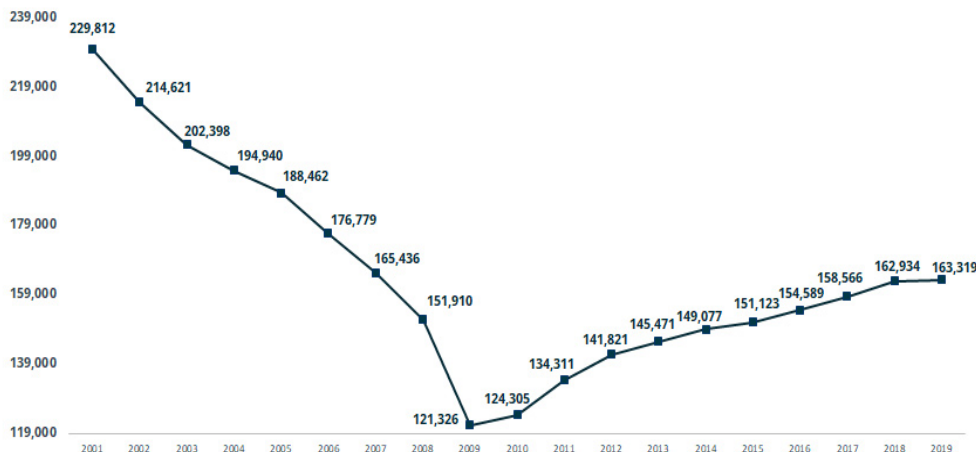
13.5% Females

Skilled Trades Worker Demographics

According to the most recent Emsi data set available (Q4 2019), the skilled trades occupation group employs about 163,000 workers in southeast Michigan. A majority of skilled trades workers are white males between the ages of 25 and 54. Additional outreach may be necessary in the near future, as at 26.5 percent, the group has a somewhat higher proportion than average of workers over age 55, but this proportion has reduced just over two percent since 2018.

Race and Ethnicity Demographics
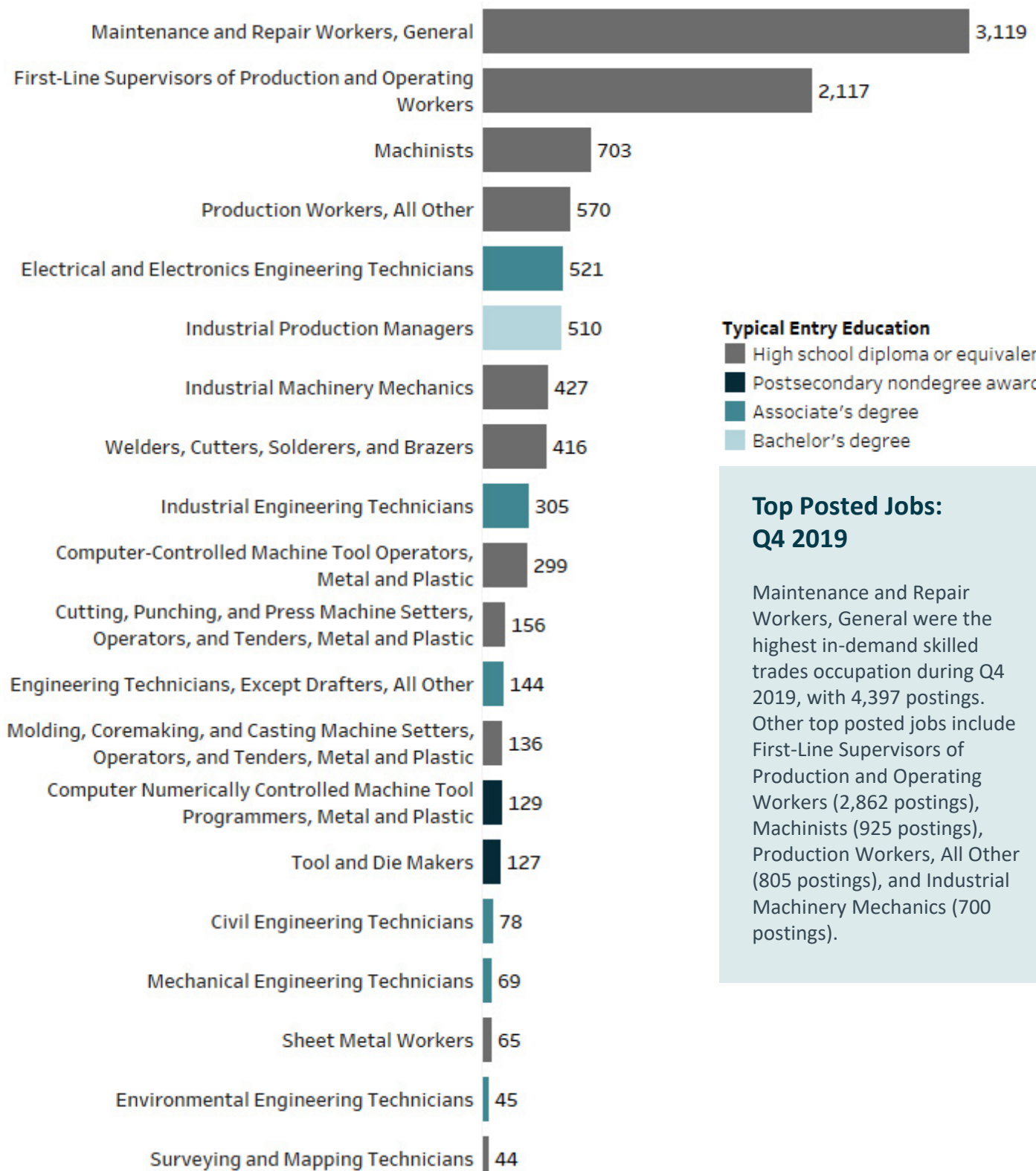
78.0% White | 13.4% Black or African American | 4.2% Hispanic or Latino

Worker Age Demographics

Age 14-24 6.7%	Age 25-54 66.9%	Age 55+ 26.5%

Data: Emsi | Analysis: Workforce Intelligence Network

**Skilled Trades
Top Posted Jobs**
Q4 2019

Occupation	Postings
Maintenance and Repair Workers, General	3,119
First-Line Supervisors of Production and Operating Workers	2,117
Machinists	703
Production Workers, All Other	570
Electrical and Electronics Engineering Technicians	521
Industrial Production Managers	510
Industrial Machinery Mechanics	427
Welders, Cutters, Solderers, and Brazers	416
Industrial Engineering Technicians	305
Computer-Controlled Machine Tool Operators, Metal and Plastic	299
Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	156
Engineering Technicians, Except Drafters, All Other	144
Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	136
Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	129
Tool and Die Makers	127
Civil Engineering Technicians	78
Mechanical Engineering Technicians	69
Sheet Metal Workers	65
Environmental Engineering Technicians	45
Surveying and Mapping Technicians	44

Typical Entry Education
- High school diploma or equivalent
- Postsecondary nondegree award
- Associate's degree
- Bachelor's degree

Top Posted Jobs: Q4 2019

Maintenance and Repair Workers, General were the highest in-demand skilled trades occupation during Q4 2019, with 4,397 postings. Other top posted jobs include First-Line Supervisors of Production and Operating Workers (2,862 postings), Machinists (925 postings), Production Workers, All Other (805 postings), and Industrial Machinery Mechanics (700 postings).

Data: Emsi | Analysis: Workforce Intelligence Network

Skilled Trades Wage Overview

Half of the top ten in-demand skilled trades occupations have median wages above $20 per hour according to the Bureau of Labor Statistics (BLS), and three more above the state's median wage of $18.08. Maintenance and Repair Workers, General, the top posted skilled trades job in 2019, offers a median hourly wage of $17.09. This translates to an annual salary of about $35,500.

Wage Overview for Top Posted Skilled Trades Jobs in Q4 2019

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
49-9071	Maintenance and Repair Workers, General	$10.52	$13.06	$17.09	$22.83	$28.70
51-1011	First-Line Supervisors of Production and Operating Workers	$18.89	$24.14	$31.82	$41.01	$50.68
51-4041	Machinists	$11.87	$15.51	$19.95	$25.81	$30.42
51-9199	Production Workers, All Other	$9.54	$11.29	$15.76	$23.42	$36.37
17-3023	Electrical and Electronics Engineering Technicians	$17.10	$22.53	$30.39	$35.65	$40.06
11-3051	Industrial Production Managers	$35.47	$44.49	$56.39	$71.01	$87.38
49-9041	Industrial Machinery Mechanics	$15.77	$19.82	$25.34	$31.04	$36.75
51-4121	Welders, Cutters, Solderers, and Brazers	$13.49	$15.84	$18.88	$23.29	$28.76
17-3026	Industrial Engineering Technicians	$16.96	$20.96	$26.68	$33.82	$39.89
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	$12.36	$14.70	$19.16	$23.81	$29.21

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills
- Plumbing
- Machining
- Tooling
- HVAC
- Preventive Maintenance

In-Demand Foundational Skills
- Operations
- Troubleshooting (Problem Solving)
- Management
- Communications
- Problem Solving

In-Demand Education Level*
- High School Diploma: 38.6%
- Associate Degree: 9.2%
- Bachelor's Degree: 14.2%
- Master's Degree: 1.5%

Not all job postings indicate the required educational attainment level, therefore the percentages found here may not add up to 100 percent
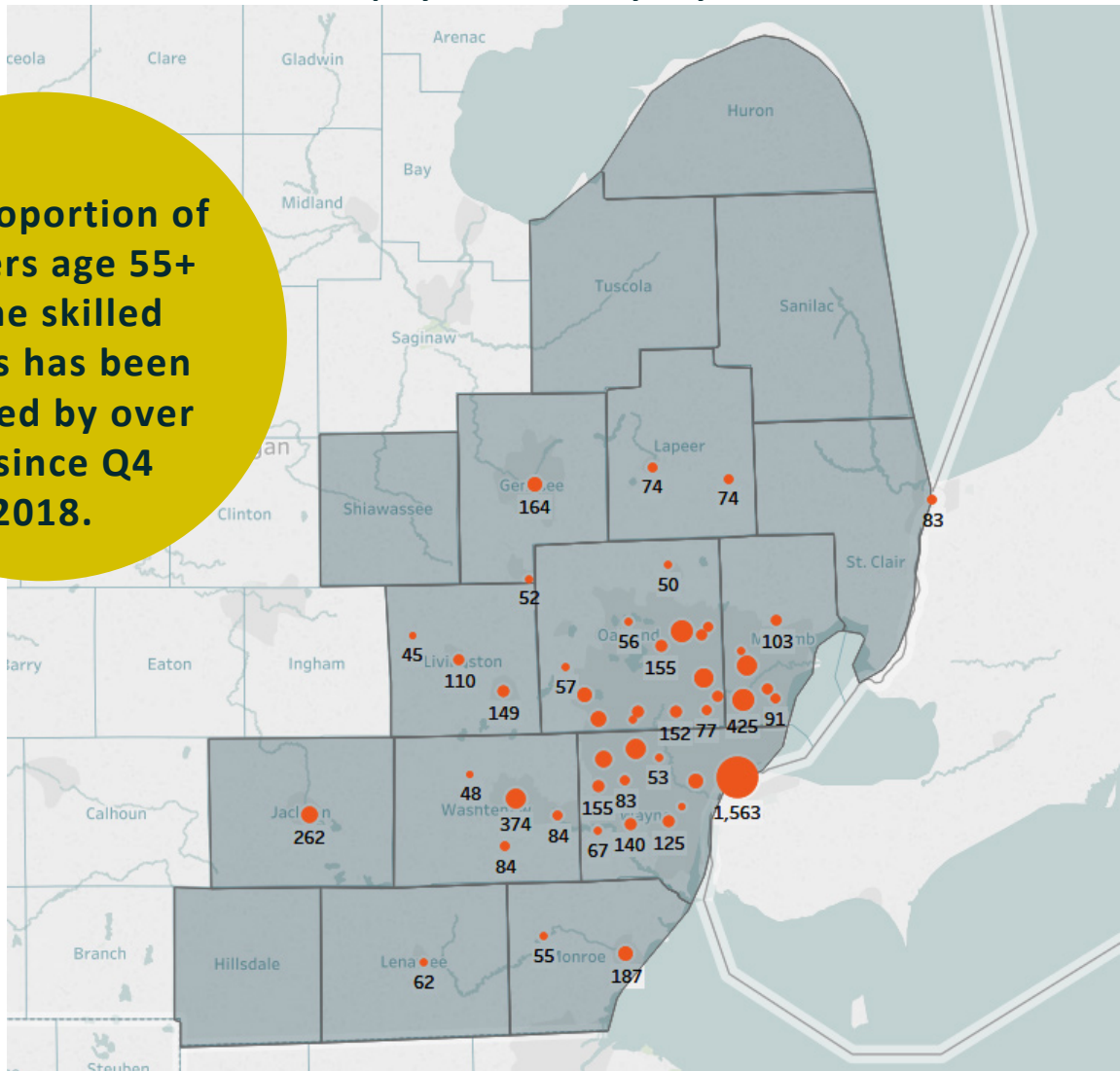
In-Demand Certifications
- Commercial Driver's License (CDL)
- HVAC Certification
- EPA 608 Technician Certification
- Automotive Service Excellence (ASE) Certification
- CFC Refrigeration Certification

Employer Demand by City

The proportion of workers age 55+ in the skilled trades has been reduced by over 2% since Q4 2018.

Top Posting Employers*

- Kelly Services, Inc.
- Express Employment Professionals
- The Home Depot
- ManpowerGroup Global
- Aerotek, Inc.
- FCA US LLC
- Sentech Services
- Nesco Resource
- Trillium Staffing
- Flex-N-Gate Corporation

Employer names are listed as they appear in online job postings.

Job Postings by City

1. Detroit: 1,563 Postings
2. Auburn Hills: 433 Postings
3. Warren: 425 Postings
4. Ann Arbor: 374 Postings
5. Sterling Heights: 352 Postings
6. Livonia: 331 Postings
7. Troy: 328 Postings
8. Jackson: 262 Postings
9. Plymouth: 245 Postings
10. Novi: 217 Postings

Introduction

Transportation, distribution, and logistics (TDL) workers help move materials in an efficient manner, whether it is from one company to another or directly to consumers. Logistics workers range from materials movers to logistics analysts, coordinating and analyzing material and goods movement. For all TDL workers, there are over 37,000 job openings annually in Southeast Michigan.

282,163
TDL Workers

0.8% Increase
from 2018

Employment Over Time
2001–2019

Worker Gender Demographics
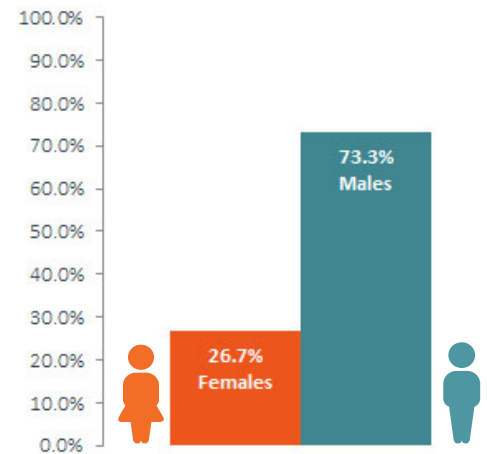
TDL Worker Demographics

According to the most recent Emsi data set available (2019), the TDL occupation group has a large workforce, employing nearly 300,000 individuals. These workers are 73.3 percent male and 70.3 percent white. Only 12.5 percent of the workers in this occupation group are under the age of 25, indicating an aging TDL workforce.

Race and Ethnicity Demographics

70.3% White | 20.7% Black or African American | 4.6% Hispanic or Latino

Worker Age Demographics

Age 14-24 12.5%	Age 25-54 63.8%	Age 55+ 23.7%

Data: Emsi | Analysis: Workforce Intelligence Network

TDL Top Posted Jobs
Q4 2019

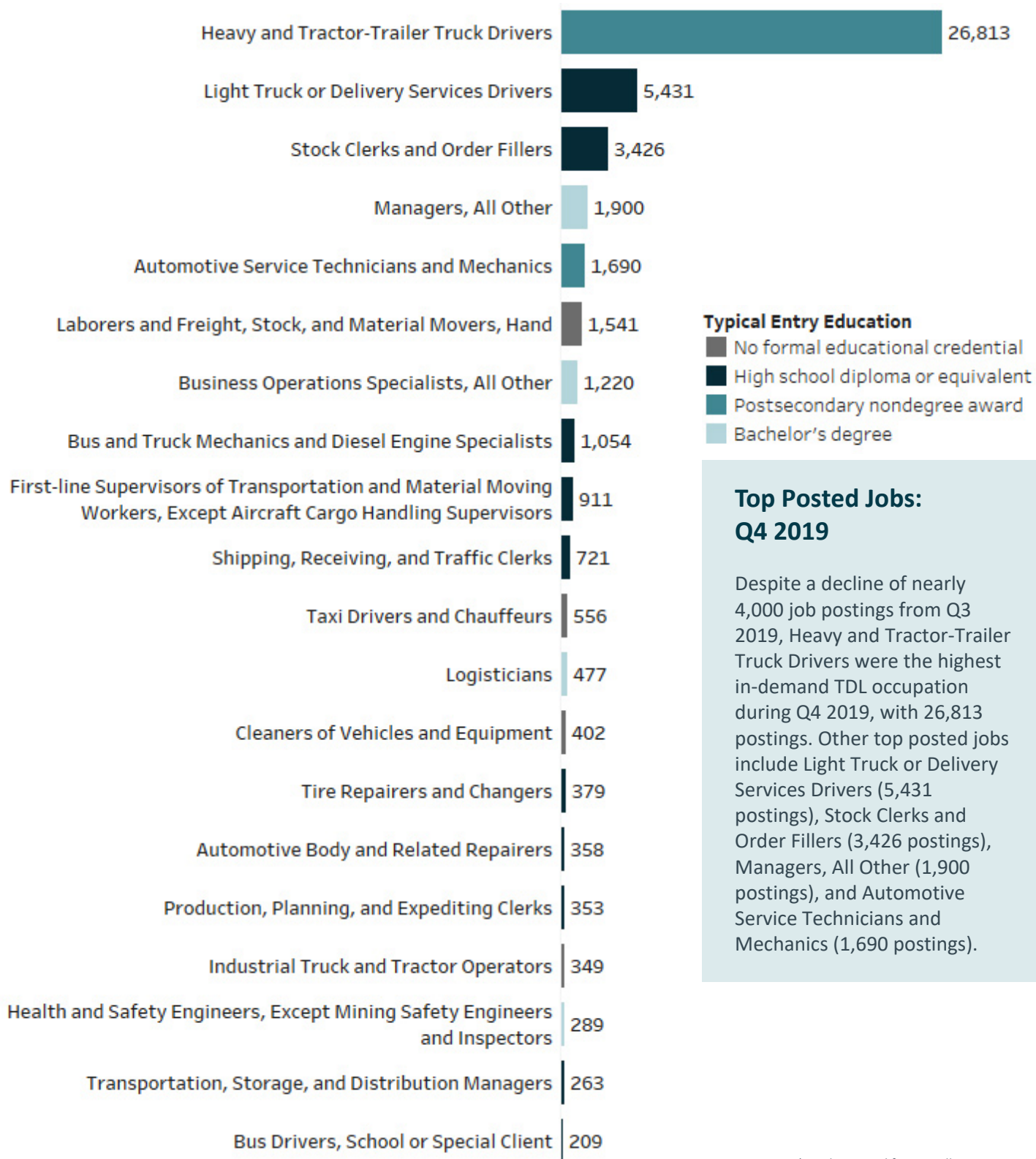| Occupation	Postings
Heavy and Tractor-Trailer Truck Drivers	26,813
Light Truck or Delivery Services Drivers	5,431
Stock Clerks and Order Fillers	3,426
Managers, All Other	1,900
Automotive Service Technicians and Mechanics	1,690
Laborers and Freight, Stock, and Material Movers, Hand	1,541
Business Operations Specialists, All Other	1,220
Bus and Truck Mechanics and Diesel Engine Specialists	1,054
First-line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	911
Shipping, Receiving, and Traffic Clerks	721
Taxi Drivers and Chauffeurs	556
Logisticians	477
Cleaners of Vehicles and Equipment	402
Tire Repairers and Changers	379
Automotive Body and Related Repairers	358
Production, Planning, and Expediting Clerks	353
Industrial Truck and Tractor Operators	349
Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	289
Transportation, Storage, and Distribution Managers	263
Bus Drivers, School or Special Client	209

Typical Entry Education

- No formal educational credential
- High school diploma or equivalent
- Postsecondary nondegree award
- Bachelor's degree

Top Posted Jobs: Q4 2019

Despite a decline of nearly 4,000 job postings from Q3 2019, Heavy and Tractor-Trailer Truck Drivers were the highest in-demand TDL occupation during Q4 2019, with 26,813 postings. Other top posted jobs include Light Truck or Delivery Services Drivers (5,431 postings), Stock Clerks and Order Fillers (3,426 postings), Managers, All Other (1,900 postings), and Automotive Service Technicians and Mechanics (1,690 postings).

Data: Emsi | Analysis: Workforce Intelligence Network

TDL Wage Overview

According to the Bureau of Labor Statistics (BLS), five of the top ten in-demand TDL occupations offer median wages of more than $20 per hour. Heavy and Tractor-Trailer Truck Drivers, the top posted TDL job in Q4 2019, offers a median hourly wage of $19.71, or an annual salary of nearly $41,000. Logistics roles that require additional education, such as Business Operations Specialists, typically offer even higher wages.

Wage Overview for Top Posted TDL Jobs in Q4 2019

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
53-3032	Heavy and Tractor-Trailer Truck Drivers	$13.17	$15.96	$19.71	$23.96	$28.87
53-3033	Light Truck or Delivery Services Drivers	$9.72	$11.19	$15.70	$22.69	$30.05
43-5081	Stock Clerks and Order Fillers	$9.55	$10.44	$12.12	$15.62	$19.54
11-9199	Managers, All Other	$29.63	$37.06	$48.55	$59.80	$73.97
49-3023	Automotive Service Technicians and Mechanics	$10.17	$12.78	$20.19	$27.98	$33.81
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	$9.87	$11.59	$14.28	$17.85	$21.51
13-1199	Business Operations Specialists, All Other	$18.06	$24.04	$32.71	$45.36	$57.91
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	$14.93	$18.38	$22.31	$27.04	$31.46
53-1048	First-line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	$14.40	$19.62	$25.55	$34.05	$41.39
43-5071	Shipping, Receiving, and Traffic Clerks	$10.95	$13.06	$16.07	$20.41	$26.90

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills
- Warehousing
- Merchandising
- Mechanics
- Forklift Truck
- Palletizing

In-Demand Foundational Skills
- Valid Driver's License
- Customer Service
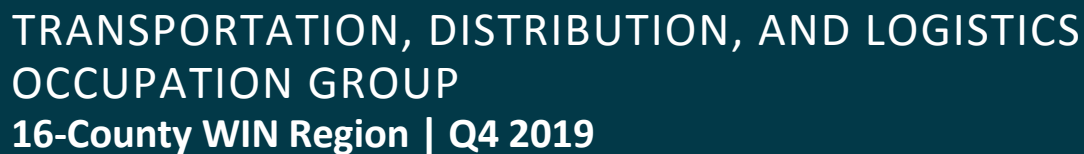- Management
- Operations
- Communications

In-Demand Education Level*
- High School Diploma: 15.6%
- Associate Degree: 1.5%
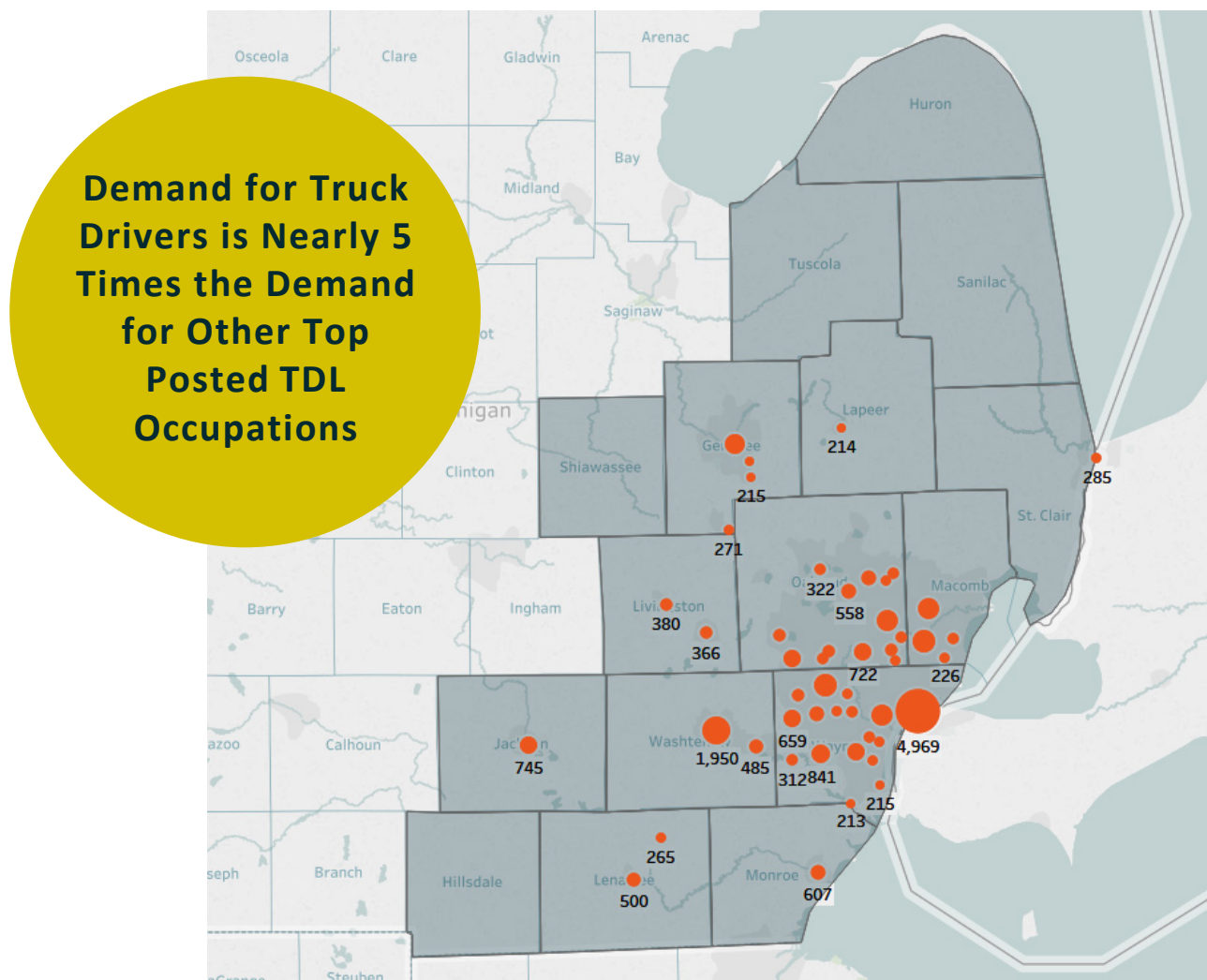- Bachelor's Degree: 7.3%
- Master's Degree: 1.4%

*Not all job postings indicate the required educational attainment level, therefore the percentages found here may not add up to 100 percent

In-Demand Certifications
- Commercial Driver's License (CDL)
- Automotive Service Excellence (ASE) Certification
- Transportation Worker Identification Credential (TWIC) Card
- Certified Forklift Operator
- Project Management Professional Certification

Employer Demand by City

Demand for Truck Drivers is Nearly 5 Times the Demand for Other Top Posted TDL Occupations

(map showing Employer Demand by City with data points)

214
285
215
271
322
558
380
366
722
226
745
1,950
485
659
312 841
4,969
215
213
265
500
607

Top Posting Employers*

- CRST International, Inc.
- U.S. Xpress, Inc.
- C.R. England, Inc.
- Roehl Transport, Inc.
- Doordash
- Hogan Transports Inc
- Celadon Group, Inc.
- United Parcel Service, Inc.
- Blair Logistics, LLC
- E. W. Wylie Corporation

Job Postings by City

1. Detroit: 4,969 Postings
2. Ann Arbor: 1,950 Postings
3. Warren: 1,278 Postings
4. Livonia: 1,191 Postings
5. Troy: 1,103 Postings
6. Dearborn: 1,100 Postings
7. Sterling Heights: 1,091 Postings
8. Flint: 989 Postings
9. Romulus: 841 Postings
10. Novi: 747 Postings

Employer names are listed as they appear in online job postings.

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WIN WORKFORCE
INTELLIGENCE
NETWORK