

**Q1 2018**  
**January - March**

# SOUTHEAST MICHIGAN

16-COUNTY WIN REGION

**WIN Labor Market Report**



# INTRODUCTION

## 16-County WIN Region | Q1 2018

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### About This Report

The Workforce Intelligence Network for Southeast Michigan (WIN) partnership is a collaboration of six Michigan Works! Agencies (MWAs) and ten 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.

This report analyzes data from the first quarter of 2018 in the 16-county WIN region and includes summative data for January, February, and March of 2018.

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](http://www.WINintelligence.org) or contact the data and research team directly at [research@WINintelligence.org](mailto:research@WINintelligence.org).



# ANNUAL STATE OF THE LABOR MARKET

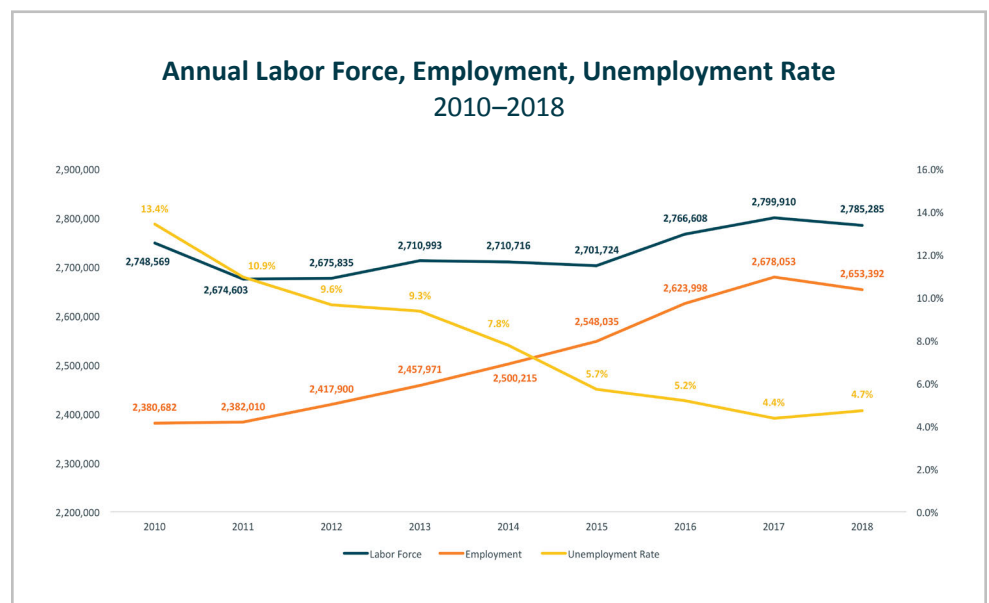
## 16-County WIN Region | Q1 2018

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

Thus far in 2018, the labor force and employment figures in southeast Michigan have fallen after two years of annual growth. Employment has fallen at a greater rate than the labor force, meaning a greater proportion of the labor force is looking for work. This has caused the annual unemployment rate to rise to 4.7 percent from the annual rate of 4.4 percent during 2017. Despite this, employer demand remains high for customer service related workers. The customer service occupation group reported the highest demand with 1,000,000 job postings during Q1 2018. Other occupation groups also offer great job opportunities for active job seekers: transportation, distribution, and logistics (TDL) postings grew by 16 percent since Q1 2017, and 25 percent of education postings were open to entry-level applicants.

### Annual Labor Market Information

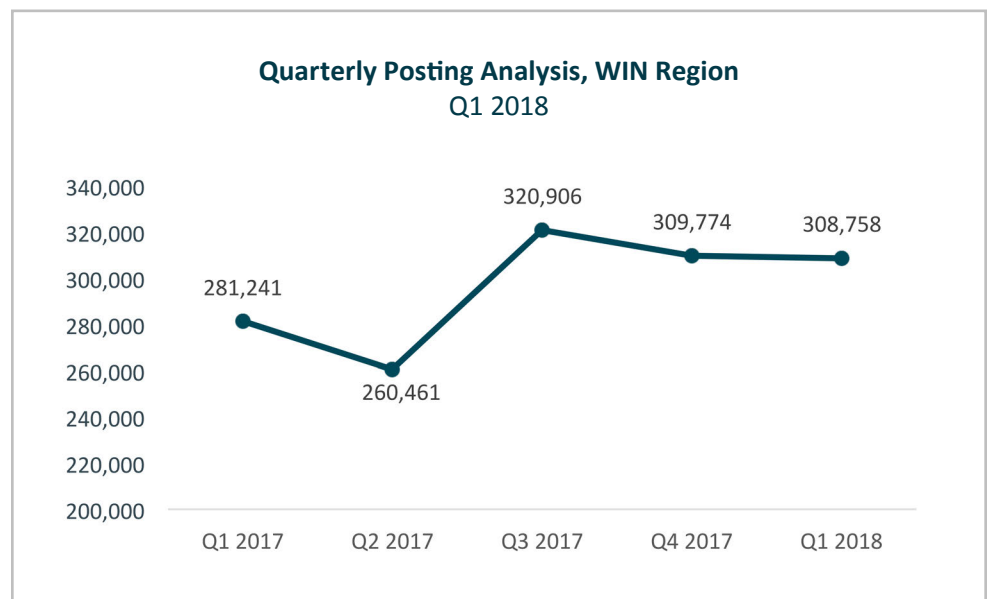
Moving away from a ten-year high, the labor force in the southeast Michigan dropped by 14,610 individuals between 2017 and 2018. Employment also fell by 24,690 workers between recent years. With employment decreasing at a greater rate, the unemployment rate rose by 0.3 percentage points to a current annual rate of 4.7 percent in the 16-county WIN partnership region.



Data: BLS | Analysis: Workforce Intelligence Network

### Quarterly Employer Demand Overview

Data from the first quarter of 2018, including posting information from January, February, and March, indicated strong employer demand throughout southeast Michigan. There were 27,517 more postings during Q1 2018 compared to the 281,241 postings made during Q1 2017 for a total of 308,758 postings. Typically, the first half of the year tends to report lower postings than the second half



Data: Emsi | Analysis: Workforce Intelligence Network



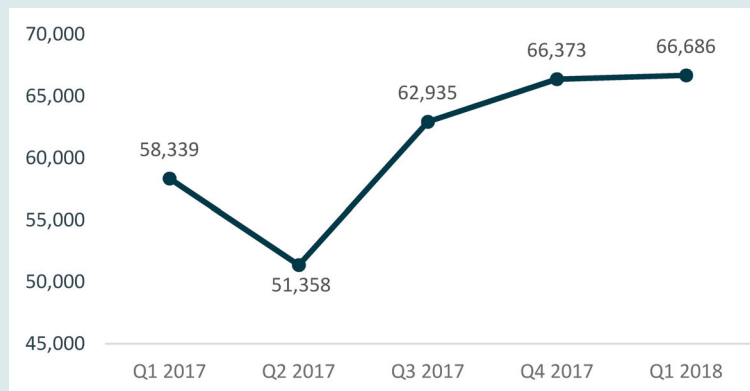
## QUARTERLY WORKFORCE INDICATORS

### 16-County WIN Region | Key Findings for Q1 2018

#### The customer service occupation group reports the highest number of postings during Q1 2018.

Employers seeking customer service workers posted more jobs (66,686 online job postings) than those in any other occupation groups during Q1 2018. Most of the occupation groups analyzed by WIN experienced a decline in online job postings moving into 2018, excluding customer service. Demand in the customer service group increased by about 300 postings between Q4 2017 and Q1 2018, totaling over 66,000 postings during Q1 2018. Meanwhile, the TDL occupation group saw an increase in demand, with over 6,000 more postings during Q1 2018, compared to Q4 2017. Both occupation groups present job seekers with numerous entry-level opportunities. For more information about the customer service occupation group, see page 24.

#### Quarterly Posting Analysis Customer Service Q1 2018

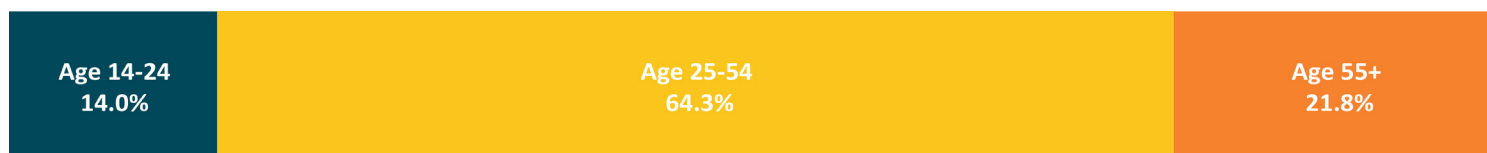


Data: Emsi | Analysis: Workforce Intelligence Network

#### The age gap between older and younger workers in southeast Michigan continues to widen in several custom occupation groups analyzed by WIN.

Of the 2.5 million workers in southeast Michigan, only 14 percent identified as under the age of 24. Some occupation groups reported smaller percentages of workers under 24, including skilled trades (six percent), TDL (12 percent), and engineers and designers (six percent). As the workforce continues to age, employers may need to focus on training younger workers to reduce the labor lost when older workers retire. For more information about worker demographics, see page 7.

#### Workforce Age Demographics



Data: Emsi | Analysis: Workforce Intelligence Network

#### Southeast Michigan's unemployment rate is currently at 4.7 percent, down 0.5 percentage points from Q1 2017.

While the unemployment rate increased between Q4 2017 and Q1 2018, the labor market may be starting 2018 stronger than it did in 2017. During the first quarter of a year, unemployment tends to surge due to many seasonal positions closing, but there were 11,502 fewer people unemployed in Q1 2018 than in Q1 2017. For more information about this quarter's unemployment rate and other labor market indicators, see page 4.

#### Quarterly Labor Market Data

	1st Quarter 2017	1st Quarter 2018	One-Year Change from 1st Quarter 2017	One-Year Percent Change from 1st Quarter 2017
Labor Force	2,782,362	2,785,285	2,923	0.1%
Employment	2,638,922	2,653,392	14,470	0.5%
Unemployment	143,440	131,893	-11,547	-8.1%
Unemployment Rate	5.2%	4.7%	-0.4%	na

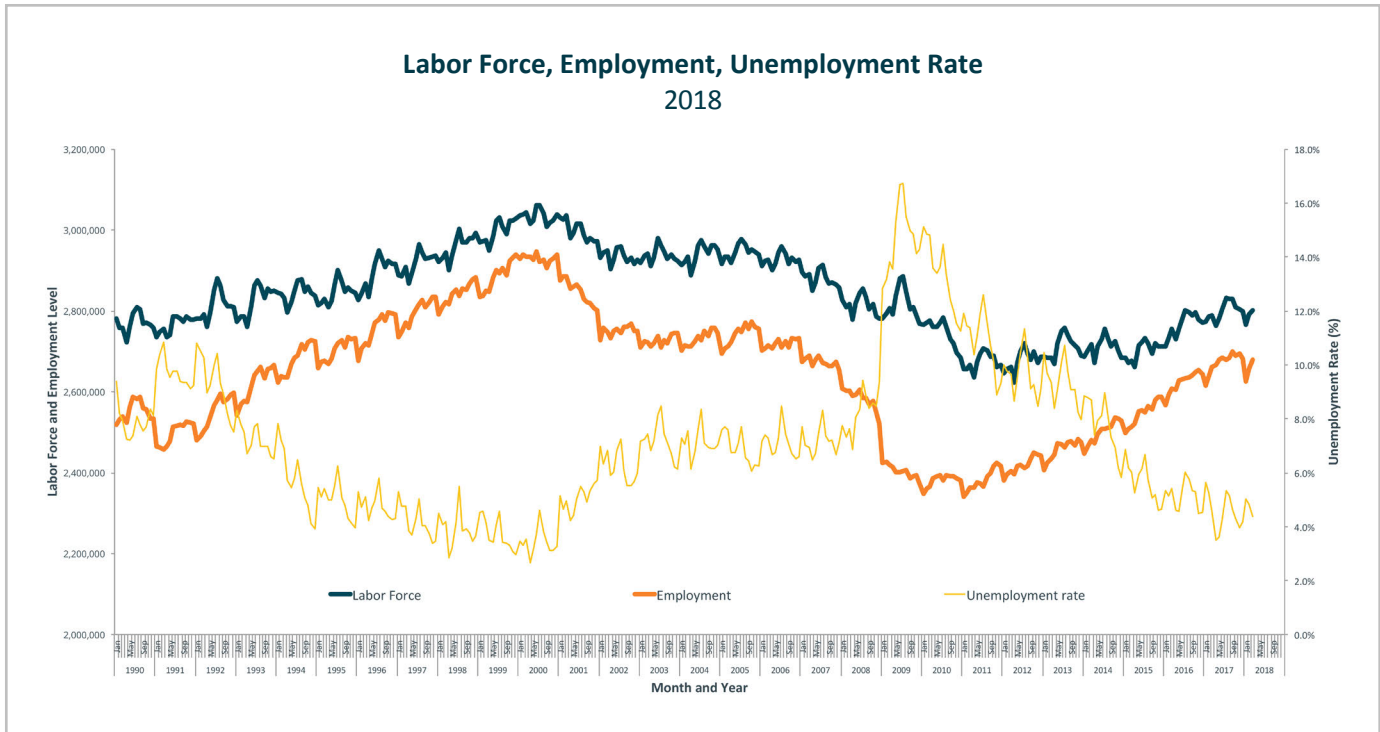
Note: Monthly data average by quarter | Data: BLS





# WORKFORCE OVERVIEW

## 16-County WIN Region | Labor Market Information Q1 2018



Data: BLS | Analysis: Workforce Intelligence Network

### Quarterly Labor Market Data

	1st Quarter 2017	2nd Quarter 2017	3rd Quarter 2017	4th Quarter 2017	1st Quarter 2018	Change from 4th Quarter 2017	Percent Change from 4th Quarter 2017	One-Year Change from 1st Quarter 2017	One-Year Percent Change from 1st Quarter 2017
<b>Labor Force</b>	2,782,362	2,782,418	2,830,051	2,804,807	2,785,285	-19,522	-0.7%	2,923	0.1%
<b>Employment</b>	2,638,922	2,676,711	2,687,586	2,688,208	2,653,392	-34,816	-1.3%	14,470	0.5%
<b>Unemployment</b>	143,440	105,708	142,465	116,598	131,893	15,295	13.1%	-11,547	-8.1%
<b>Unemployment Rate</b>	5.2%	3.8%	5.0%	4.2%	4.7%	0.6%	na	-0.4%	na

Note: Monthly data averaged by quarter | Data: BLS

### Labor Force, Employment, and Unemployment

The labor market in the southeast Michigan area has experienced relative stability since 2010. The labor force decreased by 19,506 workers (-0.7 percent) between Q4 2017 and Q1 2018. Employment in the 16-county area has also decreased from Q4 2017, by 34,846 workers (- 1.3 percent). With employment falling more than the labor force, the unemployment rate rose this quarter: the quarterly unemployment rate increased by 0.6 percentage points between Q4 2017 and Q1 2018 to 4.7 percent.



# WORKFORCE OVERVIEW

## 16-County WIN Region | 2016 Annual Population Demographics

### Population Demographics

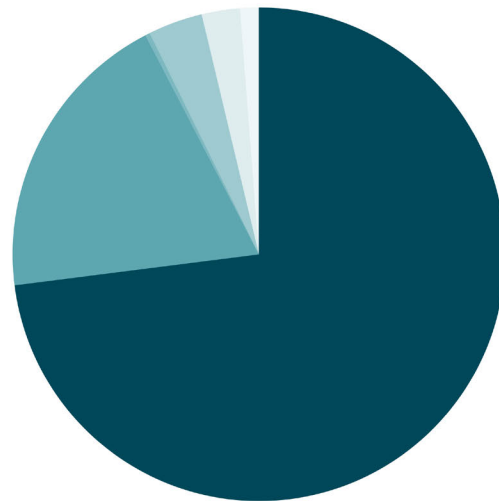
According to the data from the most recent Census Bureau 2016 ACS Five Year estimates, the population in southeast Michigan increased by nearly eight percent between 2015 and 2016. During 2016, 5,718,624 people were living in the region. The sex of the populace was split almost evenly, with about 51 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; 28.5 percent of population was over the age of 55, compared to 19.6 percent under the age of 24.



**5,718,624**  
People in the Region  
7.8% Increase  
from 2015

### Population Race and Ethnicity Demographics

- White, 73.17%
- Black or African American, 19.43%
- American Indian and Alaska Native, 0.31%
- Asian, 3.58%
- Native Hawaiian and Other Pacific Islander, 0.02%
- Two or More Races, 2.50%
- Other Race, 1.23%



### Population Gender Demographics



51% Females



49% Males



### Population Age Demographics

Age 14 and under  
18.5%

Age 15-24  
13.7%

Age 25-54, 39.3%

Age 55+  
28.5%



# WORKFORCE OVERVIEW

## 16-County WIN Region | 2016 Annual Labor Force Demographics

### 2016 Labor Force, Employment, and Unemployment Demographics

Civilian Labor Force by Demographic Group				
Demographic Group	Civilian Labor Force	Total Employment	Total Unemployment	Unemployment Rate
<b>Total Population 16 +</b>	2,822,432	2,564,812	256,226	9.1%
<b>Sex</b>				
<b>Male 16+</b>	1,466,095	1,328,701	137,394	9.4%
16-19	62,698	45,222	17,476	27.9%
20-24	152,202	126,579	25,623	16.8%
25-54	948,482	872,646	75,836	8.0%
55-64	239,002	223,928	15,074	6.3%
65 Plus	63,711	60,326	3,385	5.3%
<b>Female 16+</b>	1,355,127	1,236,663	118,464	8.7%
16-19	64,404	49,213	15,191	23.6%
20-24	146,785	125,503	21,282	14.5%
25-54	864,129	796,223	67,906	7.9%
55-64	224,912	213,334	11,578	5.1%
65 Plus	54,897	52,390	2,507	4.6%
<b>Race</b>				
<b>White</b>	2,134,972	1,987,586	146,411	6.9%
<b>Black / African American</b>	500,327	407,215	93,156	18.6%
<b>Native American</b>	8,322	7,304	1,017	12.2%
<b>Asian</b>	102,813	97,439	5,413	5.3%
<b>Native Hawaiian / Pacific Islander</b>	762	676	060	7.9%
<b>Some Other Race</b>	25,794	23,080	2,690	10.4%
<b>Two or More Races</b>	49,861	43,027	6,739	13.5%
<b>Ethnicity</b>				
<b>Hispanic</b>	104,921	93,396	11,421	10.9%

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

### Labor Market Demographics

During 2016, the most recent census year, there were about 2.82 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 of 2,071,285 individuals (49.4 percent) living in the region were participating in the labor force. 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 27.9 percent. Black or African American job seekers also have a difficult time finding employment, facing an unemployment rate of 18.4 percent.

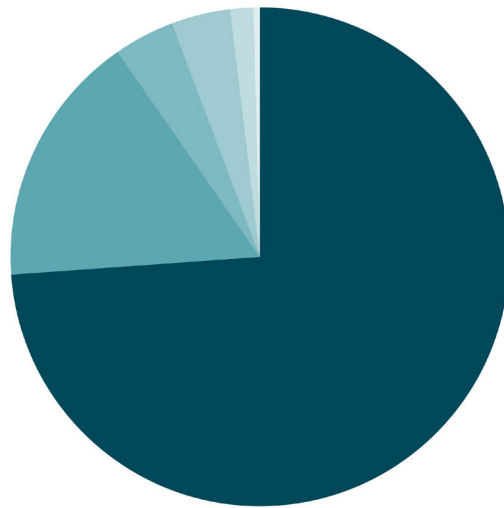
# WORKFORCE OVERVIEW

## 16-County WIN Region | 2017 Annual Working Population Demographics

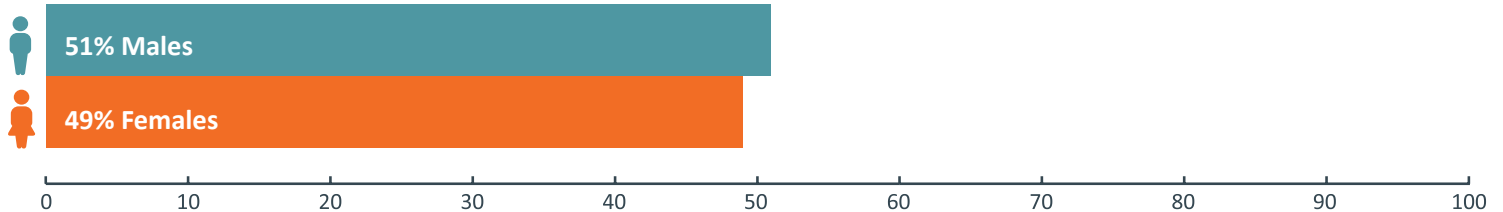
### Current Workforce Demographics

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. During 2017, there were a total of 2,497,500 individuals working in southeast Michigan. A slight majority (51 percent or 1,277,391 workers) were male, while 49 percent (1,220,110 workers) of the workforce was female. Most of those working in the region were white, accounting for 73.95 percent of the workforce, while African American or black workers accounted for 16.5 percent of the workforce. Those identifying as having a Hispanic or Latino ethnicity accounted for 3.9 percent. Eighty-six percent of the workforce was 25 years or older. Only fourteen percent of those under the age of 25 were working, indicating an aging workforce in southeast Michigan.

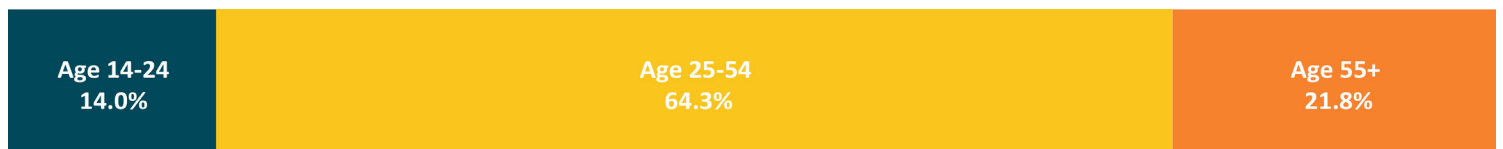
#### Workforce Race and Ethnicity Demographics



#### Workforce Gender Demographics



#### Workforce Age Demographics





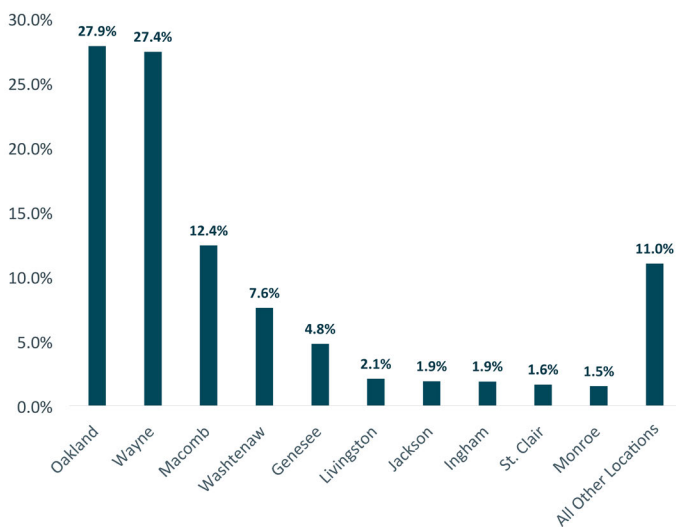
## WORKFORCE OVERVIEW

### 16-County WIN Region | 2015 Regional Commuting Patterns

#### Regional Commuting Patterns

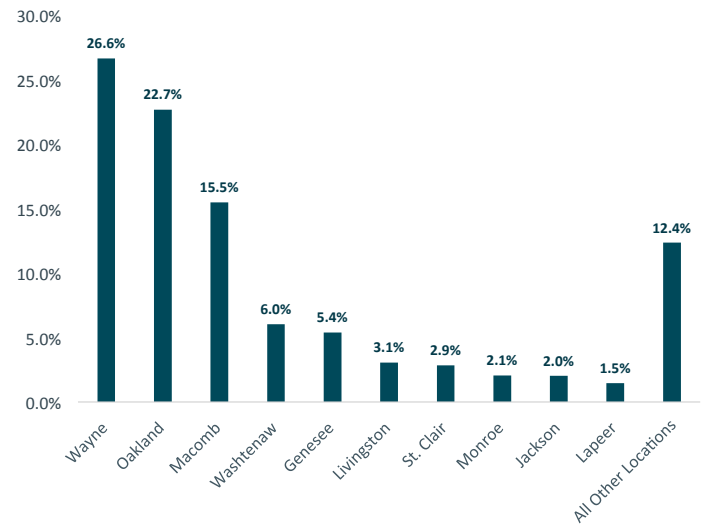
According to the most recent OnTheMap data set available from the Census Bureau, during 2015, the region's workforce consisted of 2,295,900 residents. 2,088,193 (91.0 percent) of the residents lived and worked within the 16-county region, while the remaining 207,707 residents (9.0 percent) traveled outside 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**



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

**Where 16-County WIN Region Workers Live**



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

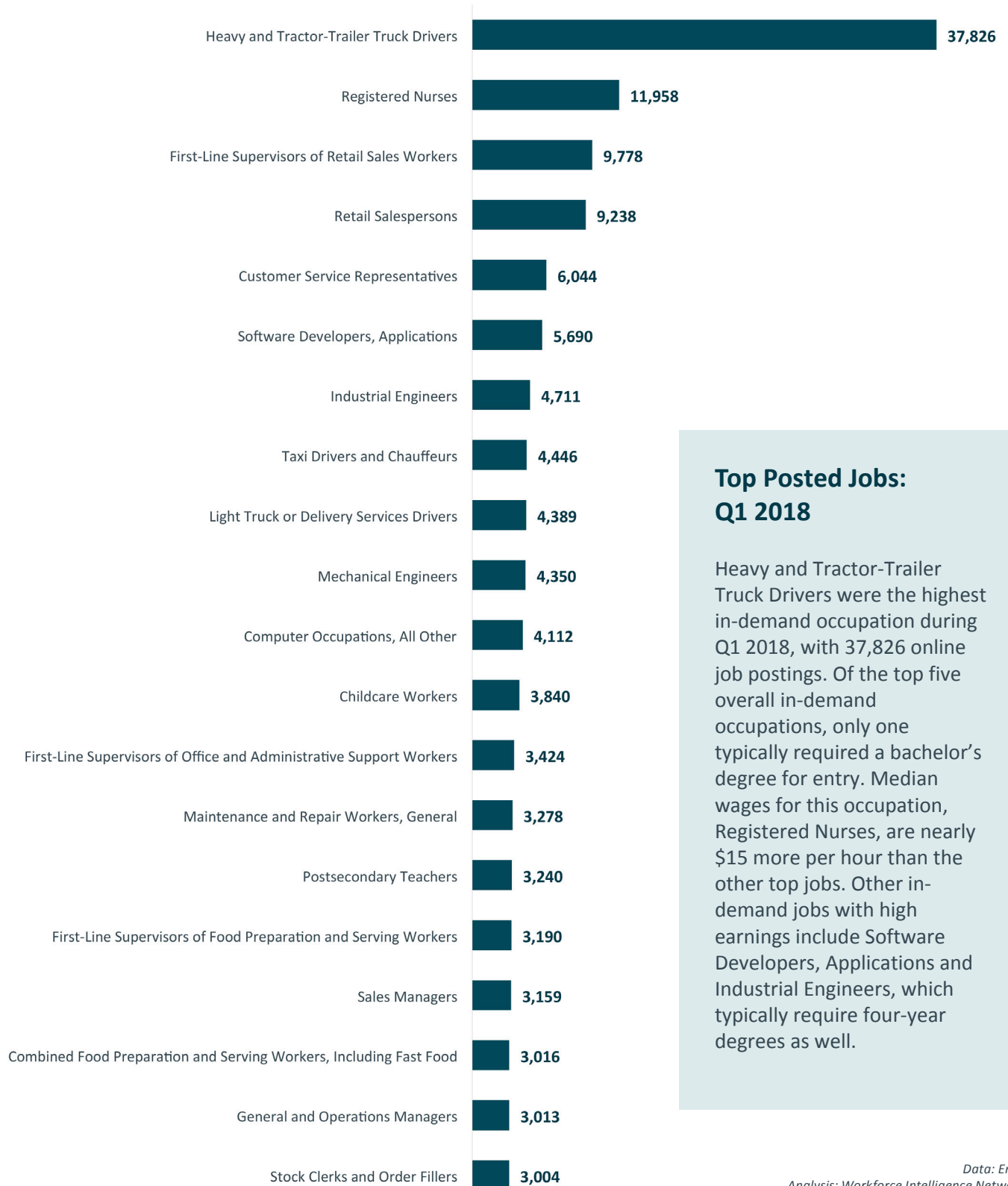




# REAL-TIME DEMAND OVERVIEW

## 16-County WIN Region | Top Posted Jobs | Q1 2018

### Top Posted Jobs Q1 2018



### Top Posted Jobs: Q1 2018

Heavy and Tractor-Trailer Truck Drivers were the highest in-demand occupation during Q1 2018, with 37,826 online job postings. Of the top five overall in-demand occupations, only one typically required a bachelor's degree for entry. Median wages for this occupation, Registered Nurses, are nearly \$15 more per hour than the other top jobs. Other in-demand jobs with high earnings include Software Developers, Applications and Industrial Engineers, which typically require four-year degrees as well.

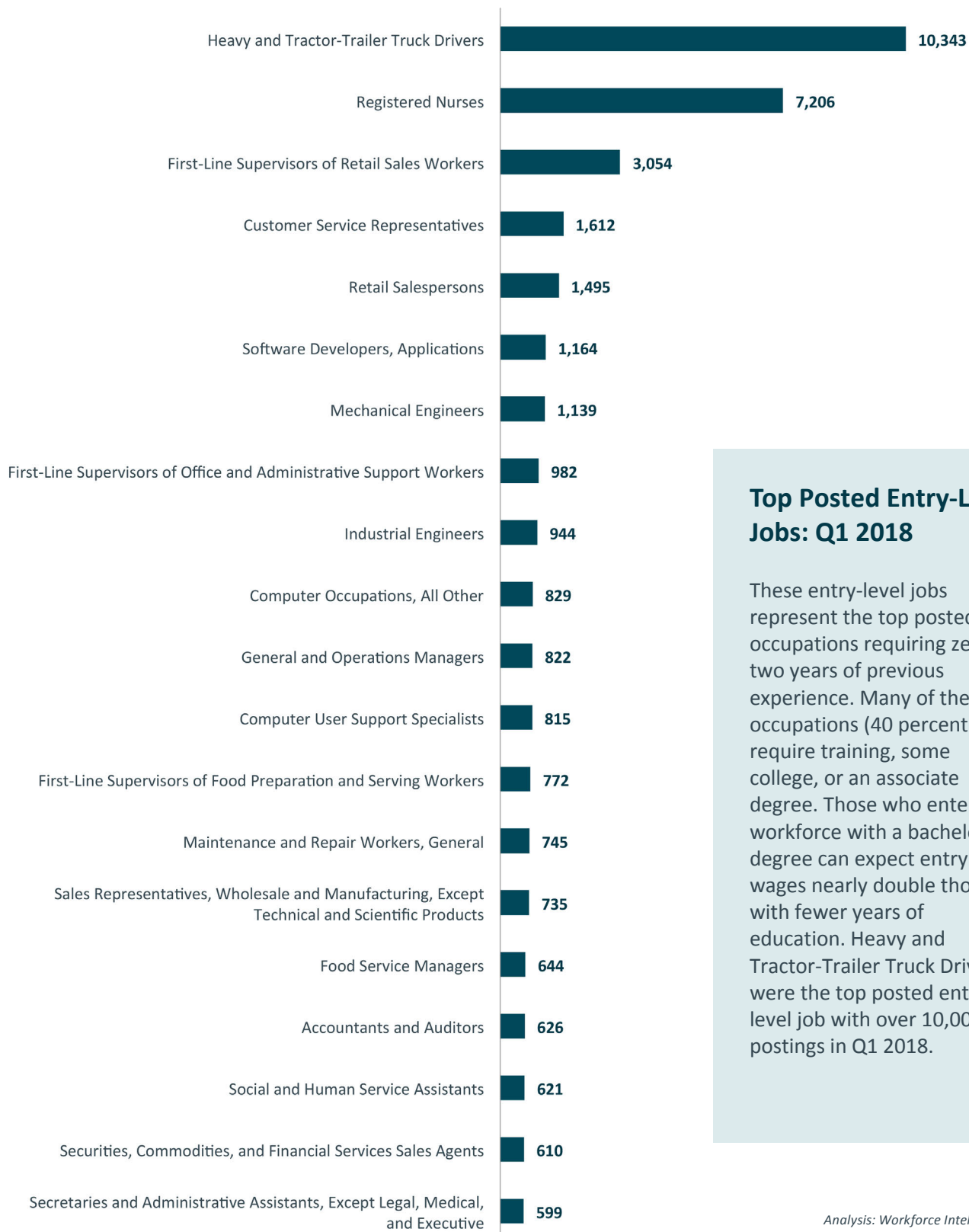


## REAL-TIME DEMAND OVERVIEW

### 16-County WIN Region | Top Posted Entry-Level Jobs | Q1 2018

#### Top Posted Entry-Level Jobs

Q1 2018



#### Top Posted Entry-Level Jobs: Q1 2018

These entry-level jobs represent the top posted occupations requiring zero to two years of previous experience. Many of these occupations (40 percent) require training, some college, or an associate degree. Those who enter the workforce with a bachelor's degree can expect entry wages nearly double those with fewer years of education. Heavy and Tractor-Trailer Truck Drivers were the top posted entry-level job with over 10,000 postings in Q1 2018.

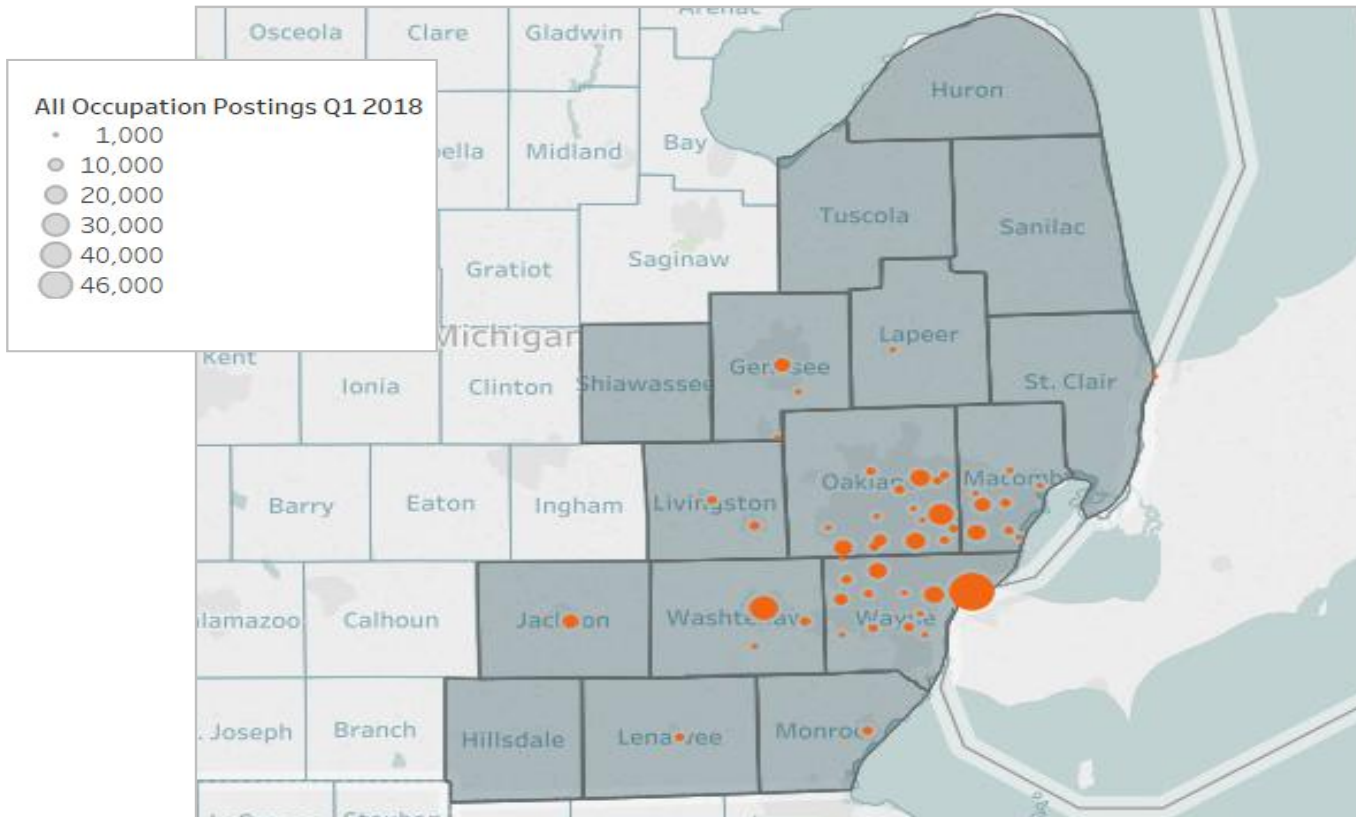




## REAL-TIME DEMAND OVERVIEW

### 16-County WIN Region | Job Postings by City | Q1 2018

**Job Postings by City**  
Q1 2018



Map based on Longitude (generated) and Latitude (generated). Color shows sum of Postings/hiring intensity. Size shows sum of Unique Postings (Jan 2017–Dec 2017). Details are shown for City.

#### Top In-Demand Qualifications

- Commercial Driver's License (CDL)
- Licensed Practical Nurse
- Critical Care Registered Nurse (CCRN)
- CNOR Certification
- Certified Nursing Assistant (CNA)
- Transportation Worker Identification Credential (TWIC) Card
- Nurse Practitioner
- Certified Public Accountant
- Licensed Vocational Nurses
- Patient Care Technician

#### Top In-Demand Skills

- Merchandising
- Selling Techniques
- Restaurant Operation
- Nursing
- Accounting
- Purchasing
- Customer Experience/ Customer Satisfaction
- Food Services
- Warehousing
- Home Care

#### Top Posting Employers

- CRST International, Inc.
- Lyft, Inc.
- University of Michigan
- Henry Ford Health System
- The Home Depot Inc
- Uber Technologies, Inc.
- William Beaumont Hospital
- CVS Health Corporation
- Michigan Works Service Center, Alpena C
- McDonald's Corporation
- Tutree, Inc.
- Dollar General Corporation
- Kelly Services, Inc.



## AGRICULTURE OCCUPATION GROUP 16-County WIN Region | Q1 2018

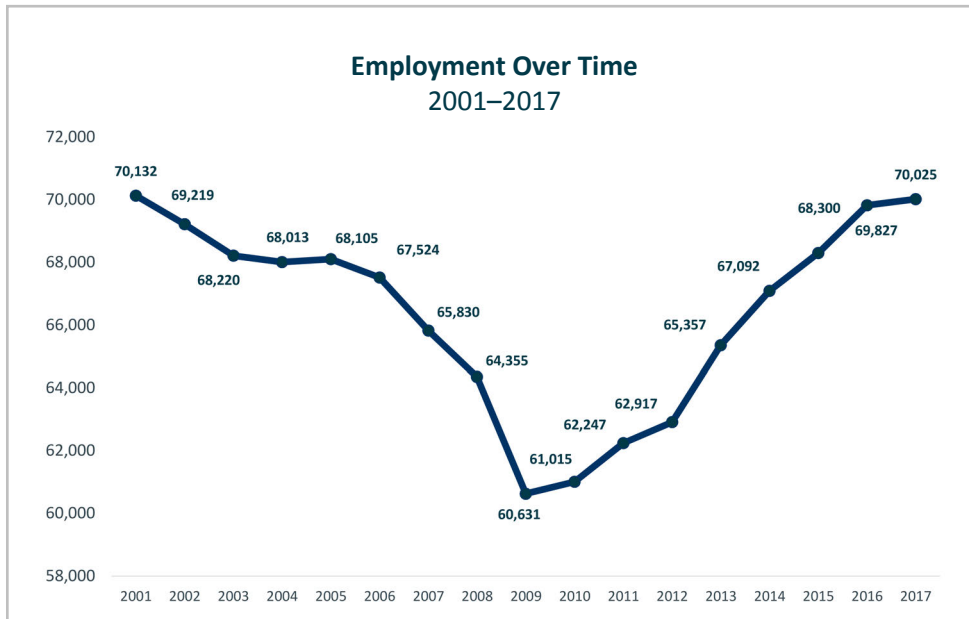
### Introduction

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.

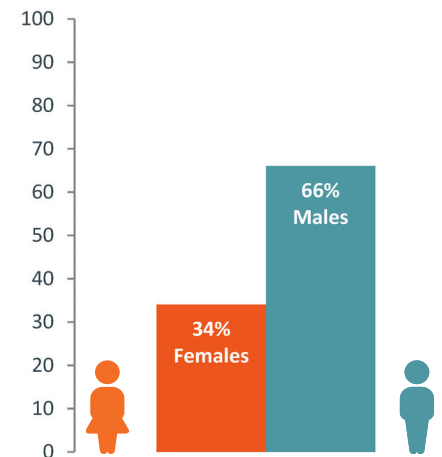


**70,379**  
**Agriculture Workers**

0.5% Increase  
from 2017



### Population Gender Demographics



### Agriculture Worker Demographics

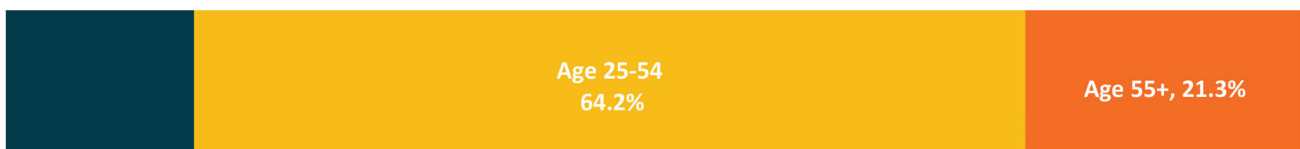
According to the most recent Emsi data set available (2017), the 70,050 workers in the agriculture occupation group is not very diverse. A large majority of workers are white males between the ages of 25 and 54. Only 33 percent of agriculture workers identify as women, and only 15 percent of workers were under the age of 24.

#### Race and Ethnicity Demographics

**77.0% White** | **11.8% Black or African American** | **3.5% Asian**

#### Population Age Demographic

Age 14-24, 14.5%



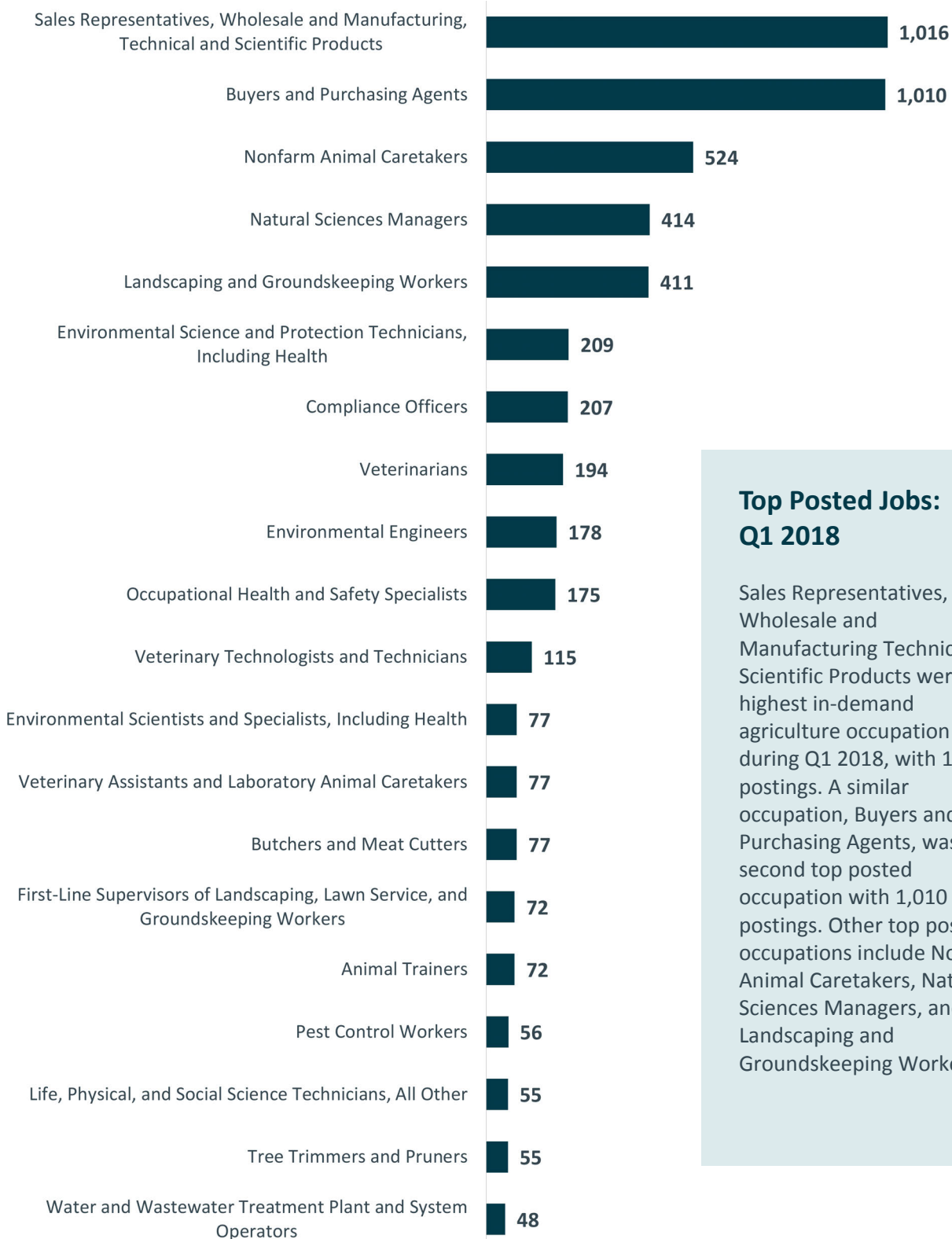


5,347 Agriculture Postings  
305 more than Q4 2017



Bachelors Degree Required  
for Most Agriculture Jobs

### Agriculture Top Posted Jobs Q1 2018



### Top Posted Jobs: Q1 2018

Sales Representatives, Wholesale and Manufacturing Technical and Scientific Products were the highest in-demand agriculture occupation during Q1 2018, with 1,016 postings. A similar occupation, Buyers and Purchasing Agents, was the second top posted occupation with 1,010 postings. Other top posted occupations include Nonfarm Animal Caretakers, Natural Sciences Managers, and Landscaping and Groundskeeping Workers.



## High Earning Potential for Natural Science Managers



## CDL: Most In-Demand Agriculture Certification

### Agriculture Wage Overview

Of the top posted agriculture related jobs, eight of the ten offer median wages of over \$20 per hour according to the Bureau of Labor Statistics (BLS). The top posted job, Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products offer median hourly earnings of \$39.25, which translates to annual earnings of approximately \$68,536.

**Wage Overview for Top Posted Agriculture Jobs in Q1 2018**

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	\$23.29	\$28.37	\$39.25	\$54.90	\$72.02
13-1028	Buyers and Purchasing Agents	\$17.98	\$23.85	\$32.23	\$43.82	\$56.95
39-2021	Nonfarm Animal Caretakers	\$9.10	\$9.48	\$10.45	\$11.75	\$14.65
11-9121	Natural Sciences Managers	\$33.28	\$39.28	\$48.53	\$66.50	\$85.48
37-3011	Landscaping and Groundskeeping Workers	\$9.56	\$10.70	\$12.87	\$15.46	\$18.97
19-4091	Environmental Science and Protection Technicians, Including Health	\$14.15	\$16.50	\$21.55	\$27.90	\$32.74
13-1041	Compliance Officers	\$21.46	\$27.49	\$37.52	\$42.72	\$48.79
29-1131	Veterinarians	\$28.64	\$33.12	\$39.16	\$50.40	\$67.32
17-2081	Environmental Engineers	\$28.95	\$35.11	\$44.64	\$55.77	\$65.12
29-9011	Occupational Health and Safety Specialists	\$24.84	\$29.89	\$37.23	\$46.02	\$54.58

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

#### In-Demand Technical Skills

- Purchasing
- Selling Techniques
- Procurement
- Landscaping
- Supply Chain Management

#### In-Demand Foundational Skills

- Management
- Communications
- Sales
- Operations
- Leadership

#### In-Demand Education Level\*

- High School Diploma: 17.8%
- Associate Degree: 4.3%
- Bachelor's Degree: 36.8%
- Master's Degree: 8.9%

\*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

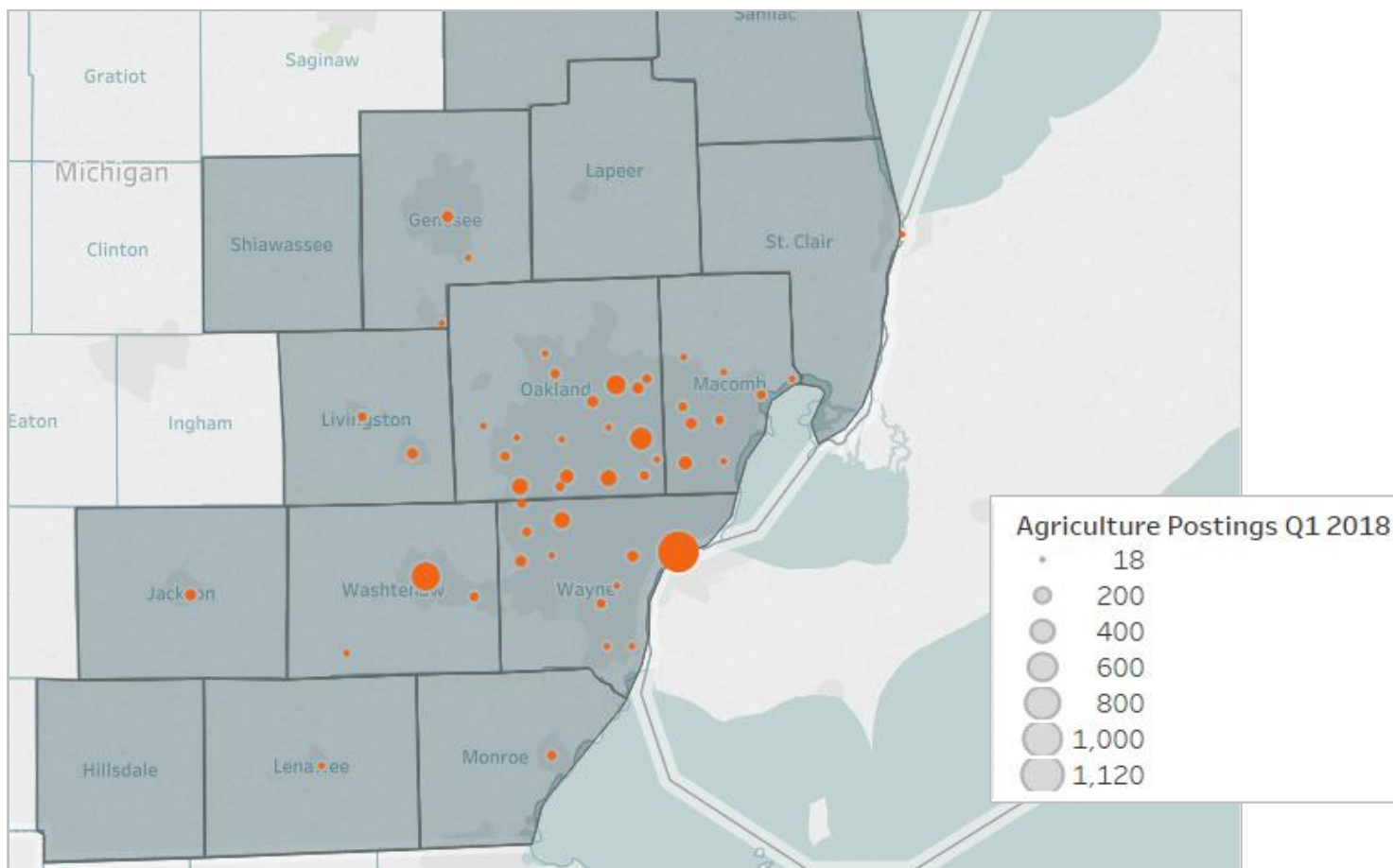
- Commercial Driver's License (CDL)
- Certified Veterinary Technician
- Professional Engineer
- Certified Hazardous Materials Manager
- Certified Safety Professional



## Buyers and Purchasing Agents: In-Demand Entry-Level Occupation



## Purchasing and Management Skills are in High Demand



Map based on Longitude (generated) and Latitude (generated).  
Size shows sum of Unique Postings (Jan 2017–Dec 2017). Details are shown for City.

### Top Posting Employers\*

- Petsmart, Inc.
- Banfield Pet Hospital
- University of Michigan
- Medrep Inc
- PRA Health Sciences, Inc.
- Oracle Corporation
- Petco Inc
- Care.com, Inc.
- Henry Ford Health System
- The Davey Tree Expert Company

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

### Job Postings by City

1. Detroit, MI: 1,120 Postings
2. Ann Arbor, MI: 514 Postings
3. Troy, MI: 304 Postings
4. Auburn Heights, MI: 234 Postings
5. Novi, MI: 192 Postings



## BUSINESS AND FINANCE OCCUPATION GROUP

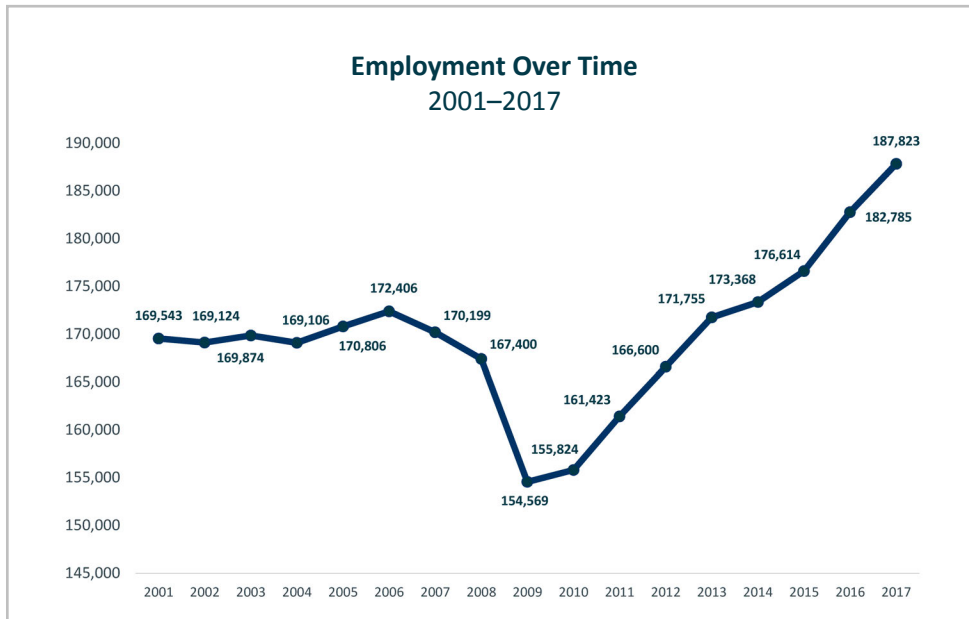
### 16-County WIN Region | Q1 2018

#### Introduction

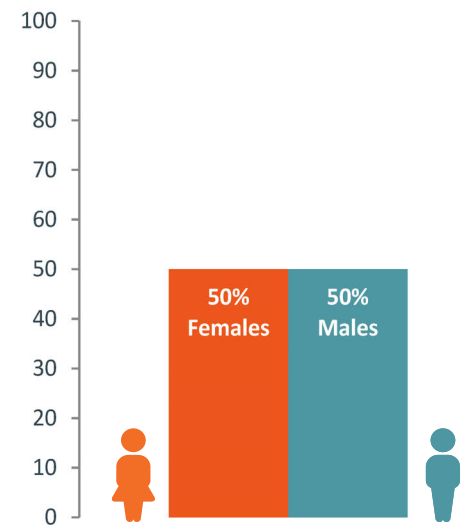
Jobs in the business and finance occupation group can be found in nearly every type of establishment/firm throughout the region. These workers need strong mathematical and accounting abilities along with project management and planning skills. Workers in this occupation group are in high demand in southeast Michigan.



**188,664**  
**Business Workers**  
0.4% Increase  
from 2017



#### Population Gender Demographics



#### Business and Finance Worker Demographics

According to the most recent Emsi data set available (2017), the business and finance occupation group is a relatively diverse occupation group with respect to its over 180,000 workers. Half the working population identify as female (50 percent). In addition, only, 80 percent of workers are white, so the field may offer opportunity for minority workers. Only five percent of the working population is under the age of 25, indicating a large aging population of business and finance workers.

#### Race and Ethnicity Demographics

**80.6% White** | **11.2% Black or African American** | **4.2% Asian**

#### Population Age Demographics

Age 14-24, 5.2%







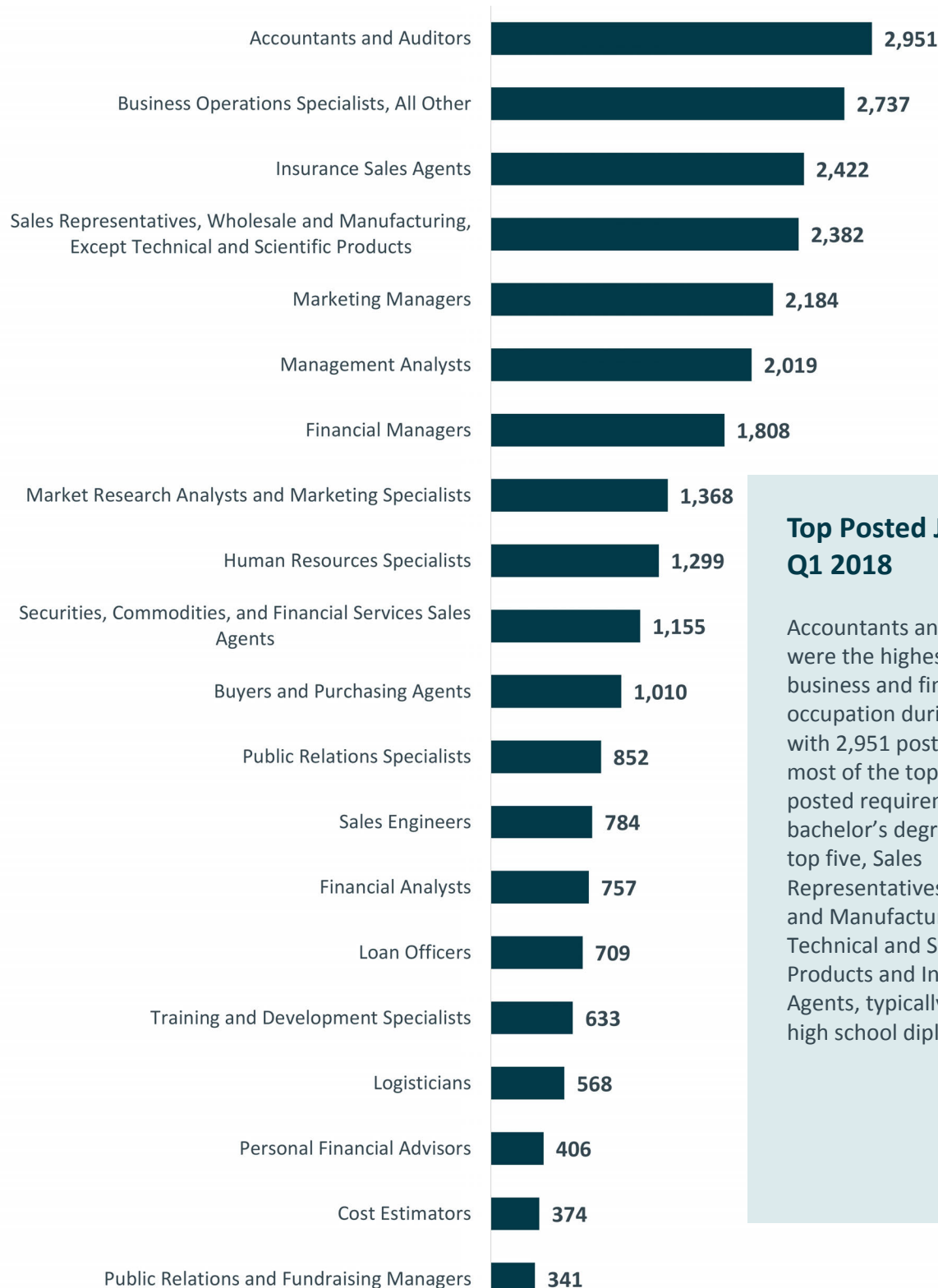
28,483 Business and Finance Postings  
719 less than Q4 2017



Bachelor's Degree Required for  
Most Business and Finance Jobs

### Business and Finance Top Posted Jobs

Q1 2018



### Top Posted Jobs: Q1 2018

Accountants and Auditors were the highest in-demand business and finance occupation during Q1 2018, with 2,951 postings. While most of the top jobs typically posted requirements for a bachelor's degree, two of the top five, Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products and Insurance Sales Agents, typically require a high school diploma.





## High Earning Potential for Financial Managers



## Certified Public Accountant: Most In-Demand Business and Finance Certification

### 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. According to the Bureau of Labor Statistics (BLS), the top posted business and finance job, Accountants and Auditors, offers median hourly wages of \$33.62, translating to annual earnings of approximately \$70,000.

**Wage Overview for Top Posted Business and Finance Jobs in Q1 2018**

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
13-2011	Accountants and Auditors	\$20.85	\$25.73	\$33.62	\$44.98	\$58.85
13-1199	Business Operations Specialists, All Other	\$18.15	\$23.65	\$32.82	\$44.80	\$56.35
41-3021	Insurance Sales Agents	\$14.37	\$18.86	\$26.97	\$44.03	\$68.10
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$14.19	\$20.63	\$30.26	\$45.55	\$61.33
11-2021	Marketing Managers	\$34.50	\$45.09	\$61.75	\$79.72	\$111.97
13-1111	Management Analysts	\$24.93	\$30.81	\$40.48	\$55.71	\$78.72
11-3031	Financial Managers	\$34.04	\$43.17	\$57.57	\$76.57	\$106.27
13-1161	Market Research Analysts and Marketing Specialists	\$16.53	\$22.79	\$31.49	\$43.45	\$57.66
13-1071	Human Resources Specialists	\$17.82	\$22.43	\$29.30	\$38.11	\$49.11
41-3031	Securities, Commodities, and Financial Services Sales Agents	\$15.69	\$18.29	\$25.20	\$40.99	\$73.26

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

#### In-Demand Technical Skills

- Accounting
- Selling Techniques
- Mortgage Loans
- Auditing
- Business Development

#### In-Demand Foundational Skills

- Management
- Sales
- Communications
- Operations
- Customer Service

#### In-Demand Education Level\*

- High School Diploma: 13.0%
- Associate Degree: 4.1%
- Bachelor's Degree: 48.8%
- Master's Degree: 1.3%

\*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

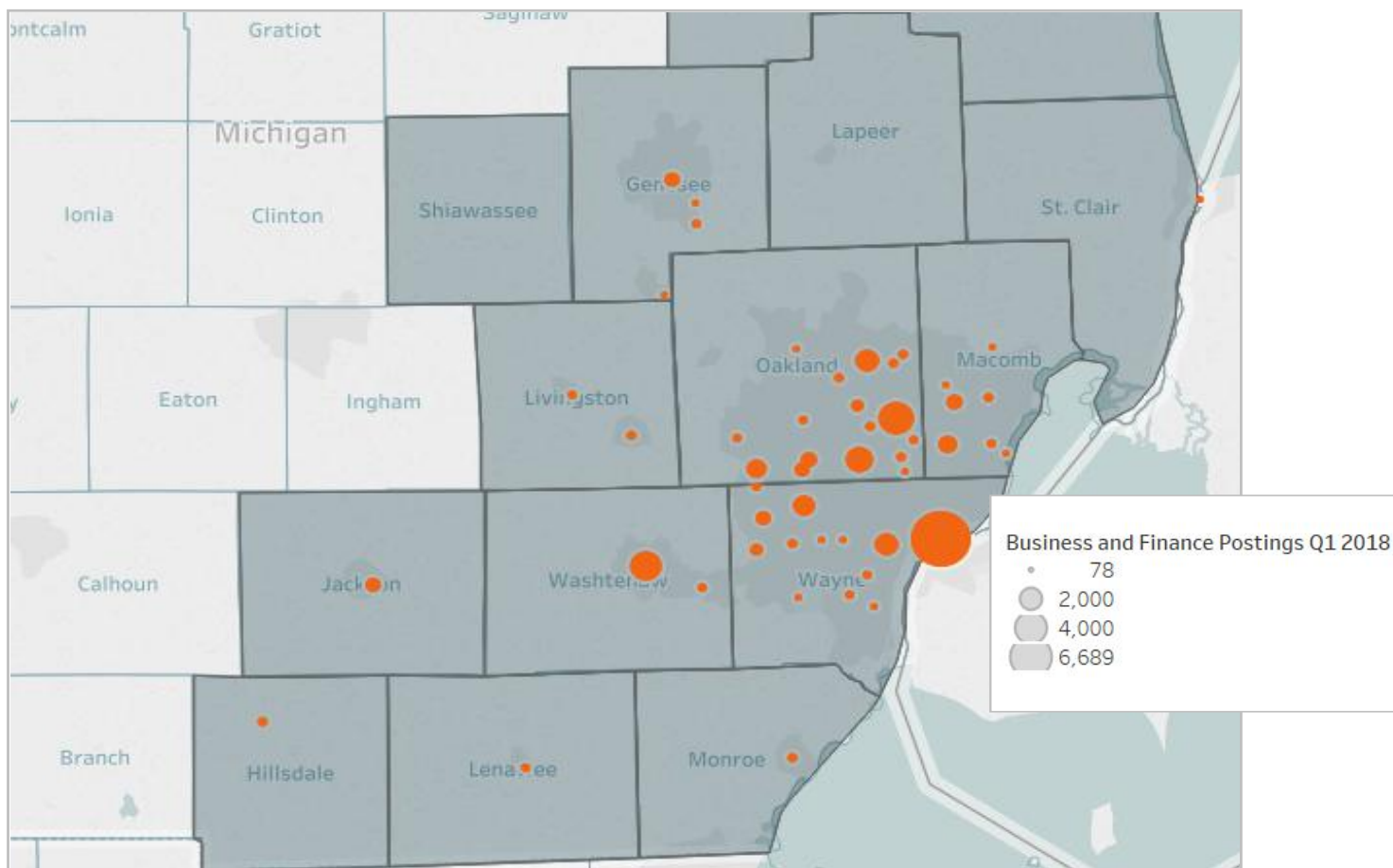
- Certified Public Accountant
- Series 7 General Securities Representative License (Stockbroker)
- Certified Financial Planner
- Series 6 Investment Company and Variable Contracts License (Mutual Funds/Variable Annuities)
- Certified Internal Auditor



## Banks and Major Corporations Seeking Business and Finance Workers



## Accounting and Management Skills are in High Demand



Map based on Longitude (generated) and Latitude (generated).  
Size shows sum of Unique Postings (Jan 2017–Dec 2017). Details are shown for City.

### Top Job Posting Employers\*

- Co-Alliance, LLP
- H&R Block, Inc.
- Robert Half International Inc.
- Anthem, Inc.
- Bank of America Corporation
- Deloitte LLP
- Huntington Bancshares Incorporated
- Oracle Corporation
- University of Michigan
- JPMorgan Chase & Co.

### Job Postings by City

1. Detroit, MI: 6,689 Postings
2. Troy, MI: 2,309 Postings
3. Ann Arbor, MI: 1,845 Postings
4. Southfield, MI: 1,396 Postings
5. Auburn Heights, MI: 1,162 Postings

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



# CONSTRUCTION OCCUPATION GROUP

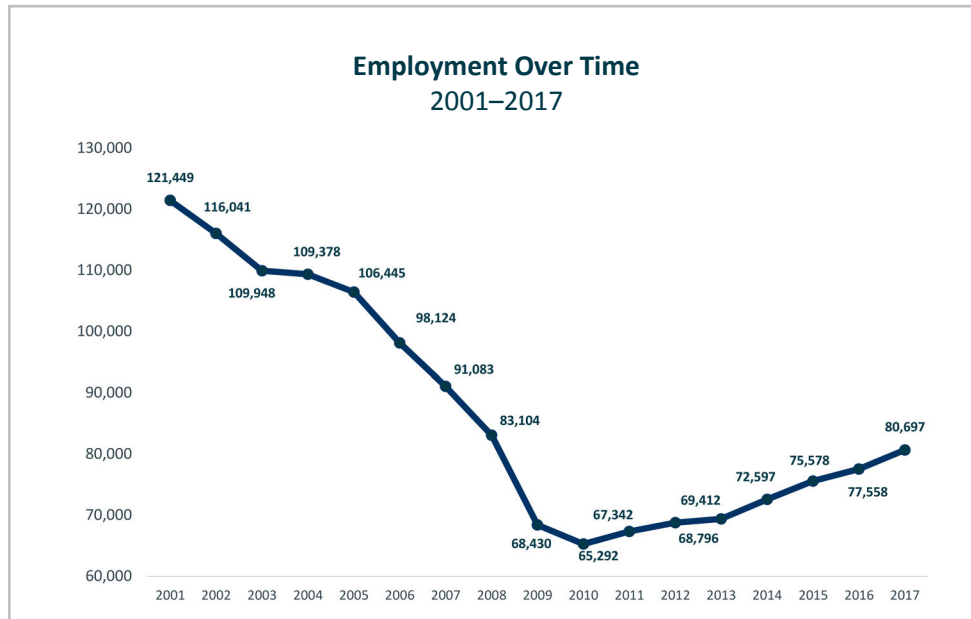
## 16-County WIN Region | Q1 2018

### Introduction

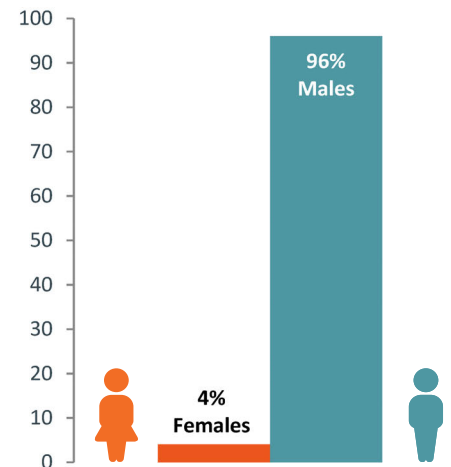
Jobs in the WIN construction occupation group are associated with the skilled trades, engineering, management, and planning. Many construction employers are slowly adopting online job search methods, so online job ads may not provide a complete picture of demand for these workers. Even so, it is an important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



**81,473**  
Construction Workers  
1.0% Increase  
from 2017



### Population Gender Demographics



### Construction Worker Demographics

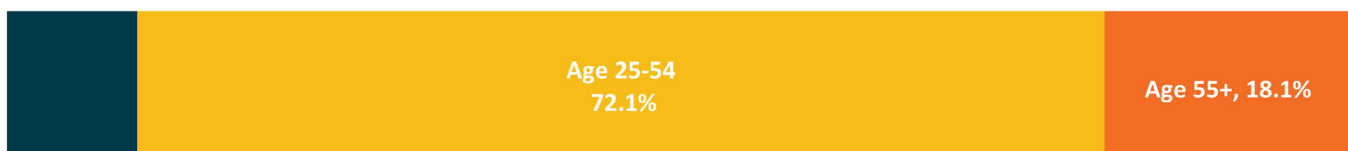
According to the most recent Emsi worker demographic data set available (2017), despite having over 80,000 workers, the construction occupation group is not very diverse. A large majority of workers are white males between the ages of twenty-five and fifty-four. Only four percent of workers identified as female, and only 16 percent identified as a racial minority.

#### Race and Ethnicity Demographics

**84.3% White | 7.1% Black or African American | 0.6% Asian**

#### Population Age Demographics

Age 14-24, 9.7%



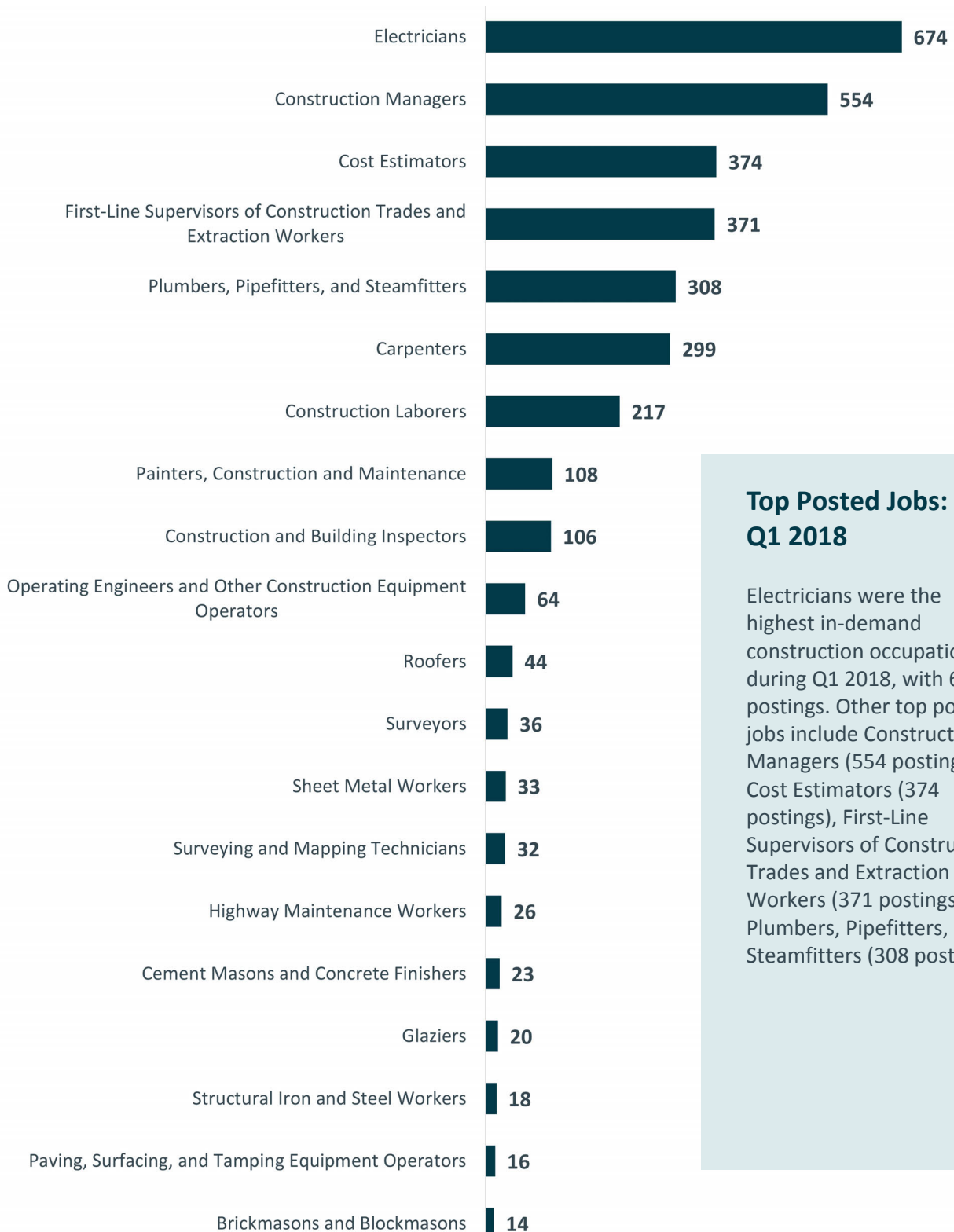


3,513 Construction Postings  
62 less than Q4 2017



Vocational Training Required  
for Most Construction Jobs

### Construction Top Posted Jobs Q1 2018



#### Top Posted Jobs: Q1 2018

Electricians were the highest in-demand construction occupation during Q1 2018, with 674 postings. Other top posted jobs include Construction Managers (554 postings), Cost Estimators (374 postings), First-Line Supervisors of Construction Trades and Extraction Workers (371 postings), and Plumbers, Pipefitters, and Steamfitters (308 postings).



## High Earning Potential for Computer and Information System Managers



## CISSP: Most In-Demand IT Certification

### Construction Wage Overview

The top posted construction job, Electricians, offers median annual salary of about \$63,000 per year. According to the Bureau of Labor Statistics (BLS), those working in management positions or working in apprentice-able occupations can expect higher wage potential, such as Construction Managers reporting a median wage of \$44.79 per hour or \$93,000 annually.

#### Wage Overview for Top Posted Construction Jobs in Q1 2018

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
47-2111	Electricians	\$14.31	\$19.65	\$30.51	\$37.18	\$42.16
11-9021	Construction Managers	\$26.52	\$34.45	\$44.79	\$58.02	\$75.83
13-1051	Cost Estimators	\$16.66	\$23.00	\$31.63	\$41.39	\$49.96
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	\$20.92	\$25.72	\$31.87	\$41.41	\$50.48
47-2152	Plumbers, Pipefitters, and Steamfitters	\$18.58	\$26.53	\$33.42	\$37.62	\$41.14
47-2031	Carpenters	\$14.26	\$18.14	\$25.03	\$32.27	\$37.55
47-2061	Construction Laborers	\$11.79	\$14.42	\$18.80	\$24.46	\$29.26
47-2141	Painters, Construction and Maintenance	\$10.50	\$15.65	\$18.93	\$25.08	\$29.63
47-4011	Construction and Building Inspectors	\$15.97	\$21.01	\$27.78	\$33.25	\$38.06
47-2073	Operating Engineers and Other Construction Equipment Operators	\$17.42	\$20.58	\$25.72	\$29.97	\$34.13

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

#### In-Demand Technical Skills

- Construction Management
- Subcontracting
- Blueprinting
- Carpentry
- Estimation

#### In-Demand Foundational Skills

- Construction
- Management
- Operations
- Communications
- Leadership

#### In-Demand Education Level\*

- High School Diploma: 25.5%
- Associate Degree: 6.0%
- Bachelor's Degree: 19.8%
- Master's Degree: 1.8%

\*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

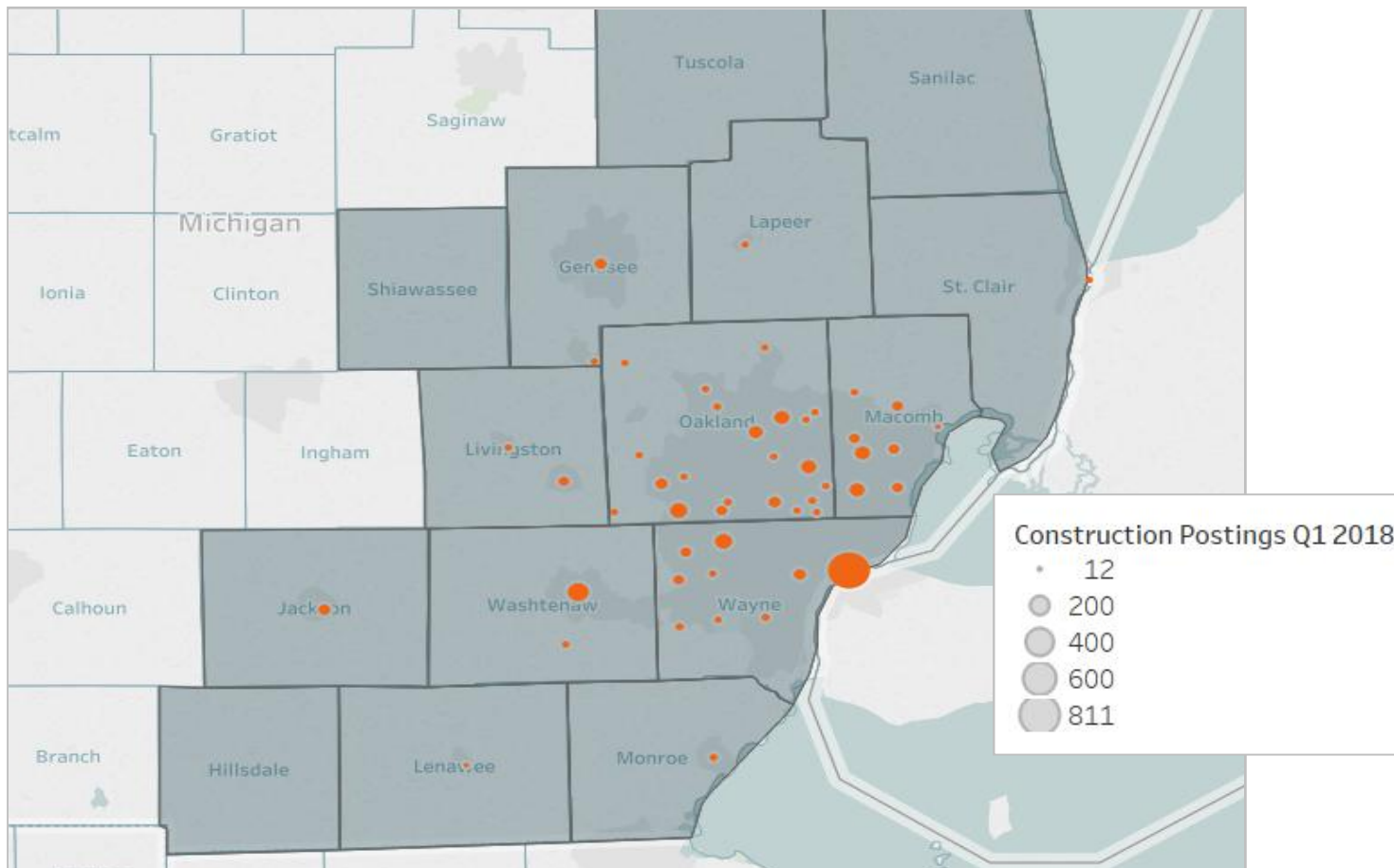
- Commercial Driver's License (CDL)
- Operator Certification
- Project Management Professional (PMP) Certification
- Certified Safety Professional
- Construction Health and Safety Technician



## Detroit Employers Posted the Largest Share of IT Jobs



## Programming Language Skills are in High Demand



Map based on Longitude (generated) and Latitude (generated).  
Size shows sum of Unique Postings (Jan 2017–Dec 2017). Details are shown for City.

### Top Posting Employers\*

- Homeadvisor, Inc.
- Tradesmen International, Inc
- TEC Group Inc
- Trueblue, Inc.
- Cybercoders, Inc.
- MICHAEL PAGE INTERNATIONAL PLC
- Trillium Staffing
- Aerotek, Inc.
- Career Opportunities Inc
- MICHAEL PAGE UK LTD

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

### Job Postings by City

1. Detroit, MI: 811 Postings
2. Ann Arbor, MI: 195 Postings
3. Livonia, MI: 136 Postings
4. Novi, MI: 130 Postings
5. Troy, MI: 119 Postings



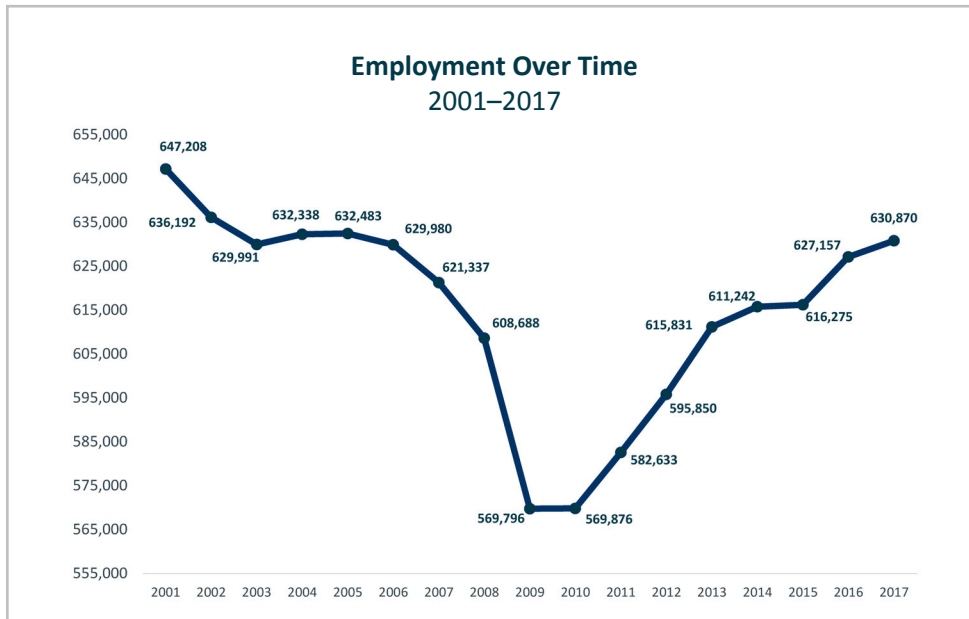


## CUSTOMER SERVICE OCCUPATION GROUP 16-County WIN Region | Q1 2018

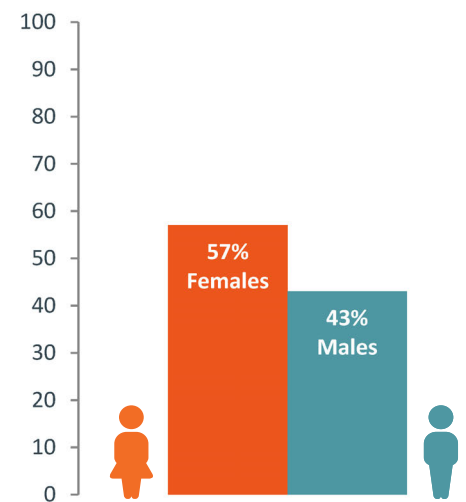
### Introduction

The customer service group is the largest occupation group that WIN analyzes, both in terms of employment and online job postings. This group is of very high importance to the region because it is the first to grow when the economy expands and the first to contract in a downturn: it is often a leading indicator. The large number of postings for this occupation group are due in part to the relatively high worker turnover. 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. These skills are also transferrable to public-facing positions in many other occupation groups.

**630,629**  
**Service Workers**  
>0.1% Increase  
from 2017



### Population Gender Demographics



### Customer Service Worker Demographics

According to the most recent Emsi data set available (2017), having over 630,000 workers, the customer service occupation group is more diverse than other occupation groups. During 2017, 57 percent of workers identified as female. Twenty-seven percent of workers in customer service were identified as a racial minority. A quarter of the workforce (25 percent) was under the age of 24, a much higher percentage than in other occupation groups.

#### Race and Ethnicity Demographics

**72.9% White** | **17.6% Black or African American** | **2.9% Asian**

#### Population Age Demographics

**Age 14-24, 25.9%**

**Age 25-54**  
**55.4%**

**Age 55+, 18.7%**





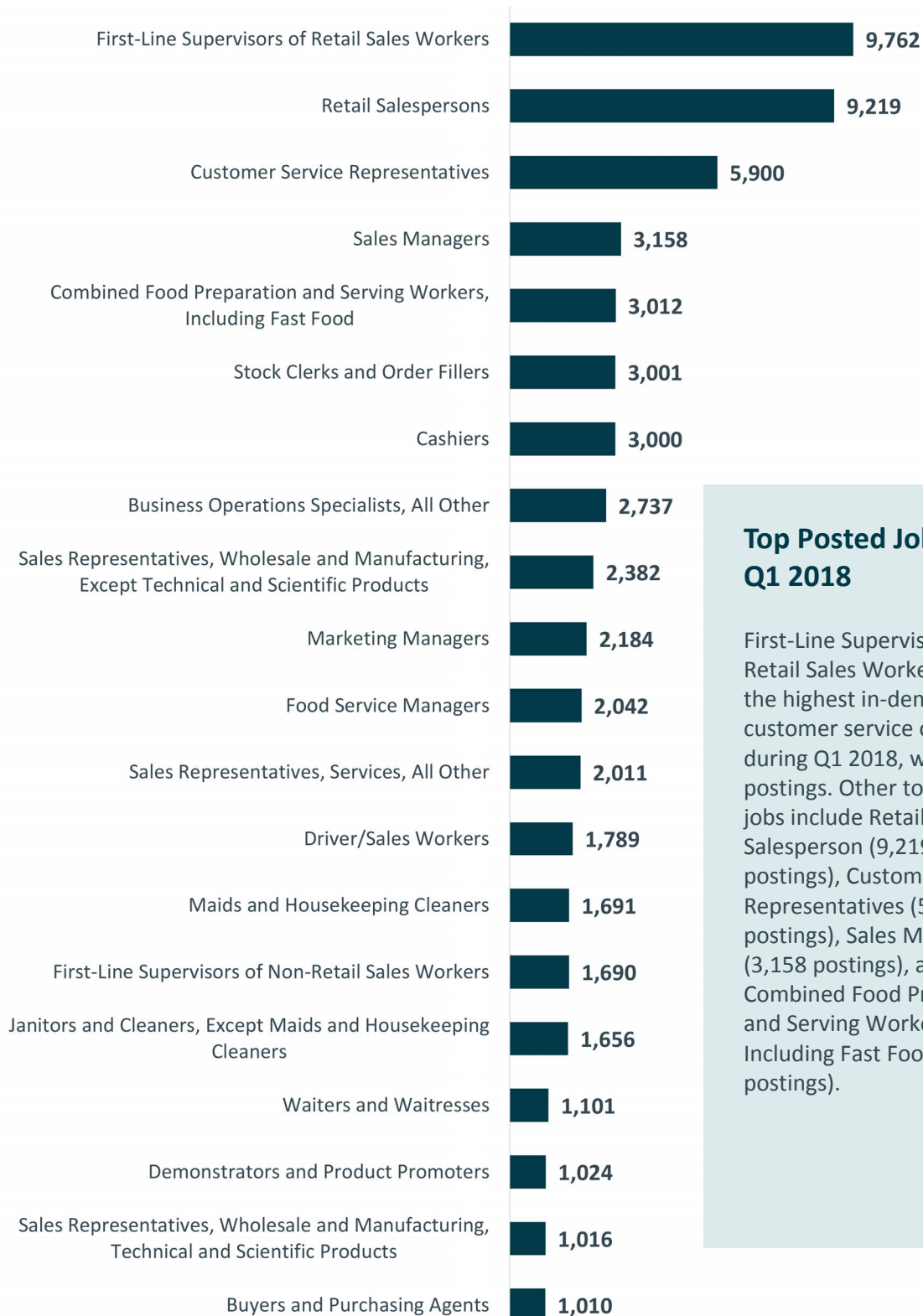
66,686 Customer Service Postings  
313 more than Q4 2017



High School Diploma Required  
for Most Customer Service Jobs

### Customer Service Top Posted Jobs

Q1 2018



### Top Posted Jobs: Q1 2018

First-Line Supervisors of Retail Sales Workers were the highest in-demand customer service occupation during Q1 2018, with 9,762 postings. Other top posted jobs include Retail Salesperson (9,219 postings), Customer Service Representatives (5,900 postings), Sales Managers (3,158 postings), and Combined Food Preparation and Serving Workers, Including Fast Food (3,012 postings).



## High Earning Potential for Sales Managers



## TWIC Card: In-Demand Customer Service Certification

### Customer Service Wage Overview

Despite having 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. The top posted job, First-Line Supervisors of Retail Sales Workers, offer median annual earnings of nearly \$39,500.

**Wage Overview for Top Posted Customer Service Jobs in Q1 2018**

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
41-1011	First-Line Supervisors of Retail Sales Workers	\$11.99	\$14.63	\$18.97	\$25.41	\$33.81
41-2031	Retail Salespersons	\$9.05	\$9.45	\$10.55	\$13.64	\$18.83
43-4051	Customer Service Representatives	\$9.89	\$12.03	\$15.57	\$20.37	\$26.87
11-2022	Sales Managers	\$35.00	\$47.22	\$62.67	\$79.08	\$116.94
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	\$9.00	\$9.21	\$9.52	\$10.23	\$12.19
43-5081	Stock Clerks and Order Fillers	\$9.16	\$9.66	\$11.24	\$14.97	\$18.84
41-2011	Cashiers	\$9.03	\$9.23	\$9.82	\$11.59	\$14.47
13-1199	Business Operations Specialists, All Other	\$18.15	\$23.65	\$32.82	\$44.80	\$56.35
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$14.19	\$20.63	\$30.26	\$45.55	\$61.33
11-2021	Marketing Managers	\$34.50	\$45.09	\$61.75	\$79.72	\$111.97

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

#### In-Demand Technical Skills

- Merchandising
- Selling Techniques
- Restaurant Operation
- Customer Experience/ Customer Satisfaction
- Sales Management

#### In-Demand Foundational Skills

- Sales
- Customer Service
- Management
- Communications
- Operations

#### In-Demand Education Level\*

- High School Diploma: 33.2%
- Associate Degree: 3.5%
- Bachelor's Degree: 16.0%
- Master's Degree: 2.2%

\*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

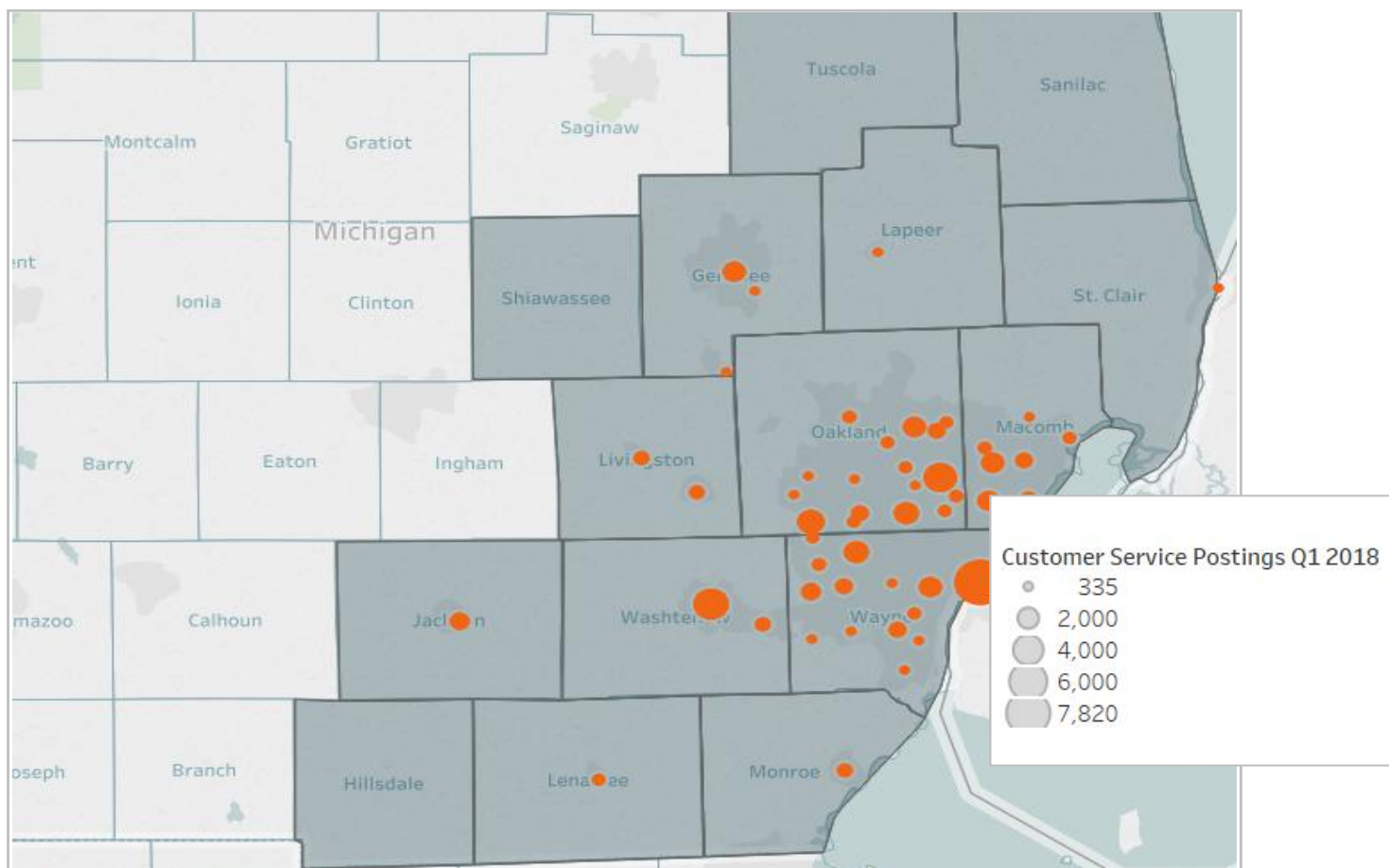
- Commercial Driver's License (CDL)
- Transportation Worker Identification Credential (TWIC) Card
- Series 7 General Securities Representative License (Stockbroker)
- Licensed Practical Nurse (LPN)
- Certified Public Accountant (CPA)



Brick and Mortar stores looking to  
fill Customer Service positions



Merchandising Skills  
are in High Demand



Map based on Longitude (generated) and Latitude (generated).  
Size shows sum of Unique Postings (Jan 2017–Dec 2017). Details are shown for City.

### Top Posting Employers\*

- Dollar General Corporation
- The Home Depot Inc
- CVS Health Corporation
- McDonald's Corporation
- Autozone, Inc.
- H&R Block, Inc.
- The Kroger Co
- Speedway LLC
- Meijer, Inc.
- Sears Holdings Corporation

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

### Job Postings by City

1. Detroit, MI: 7,820 Postings
2. Ann Arbor, MI: 3,621 Postings
3. Troy, MI: 3,186 Postings
4. Novi, MI: 2,172 Postings
5. Livonia, MI: 1,906 Postings



## EDUCATION OCCUPATION GROUP 16-County WIN Region | Q1 2018

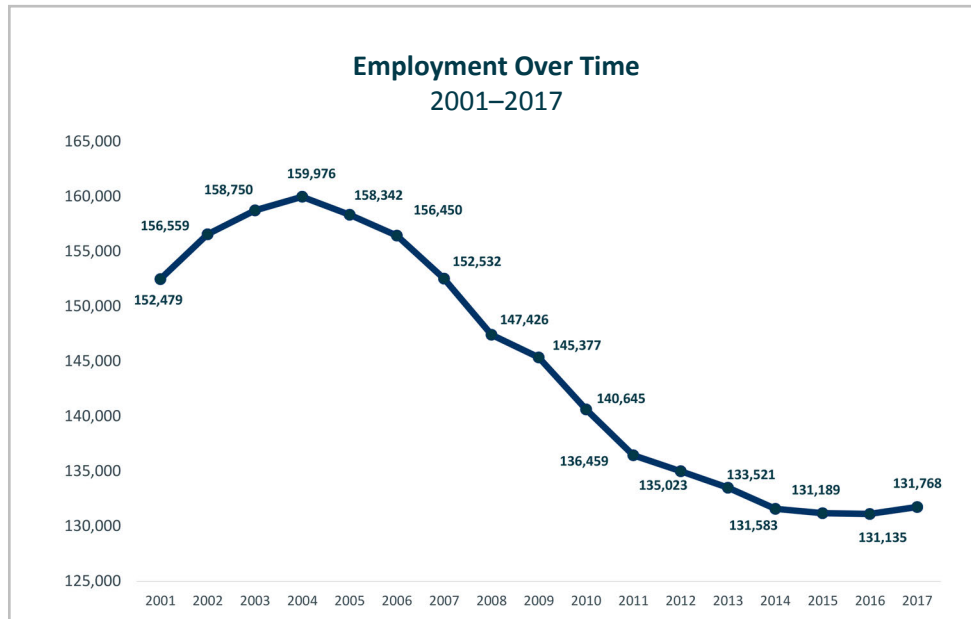
### Introduction

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. 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.

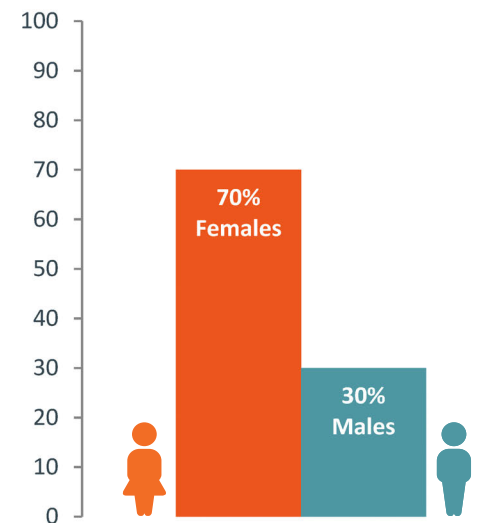


**132,036**  
Education Workers

0.3% Increase  
from 2017



### Population Gender Demographics



### Education Worker Demographics

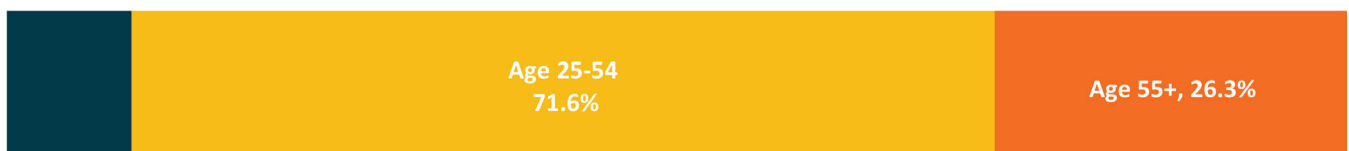
According to the most recent Emsi data set available (2017), among its 130,000 workers, the education occupation group is composed primarily of white females between the ages of twenty-five and fifty-four. Only 30 percent of workers are males, and only 20 percent of workers are of a minority race.

#### Race and Ethnicity Demographics

**79.6% White** | **12.2% Black or African American** | **3.6% Asian**

#### Population Age Demographics

Age 14-24, 9.3%





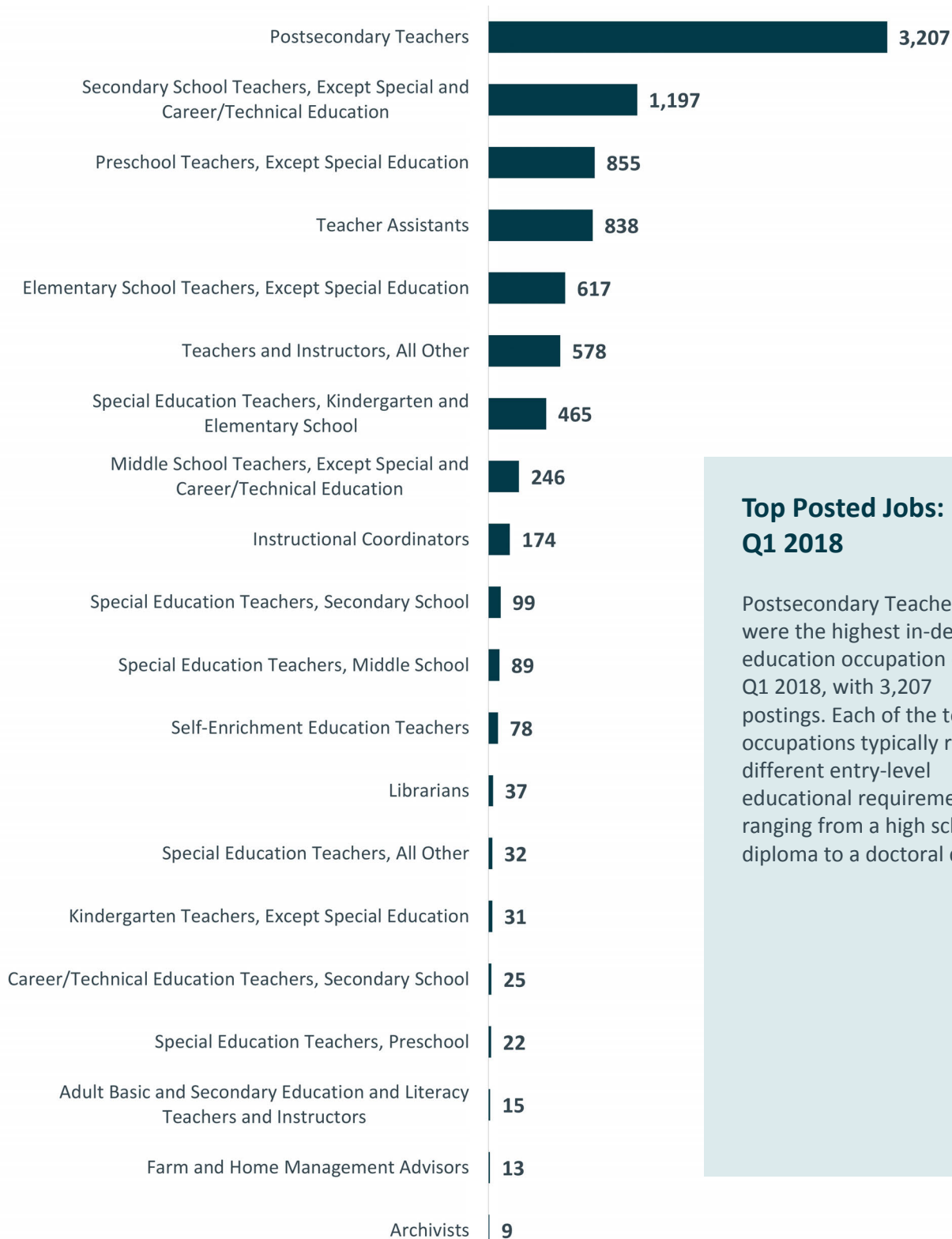
8,633 Education Postings  
1,172 more than Q4 2017



Bachelor's Degree Required  
for Most Education Jobs

### Education Top Posted Jobs

Q1 2018



### Top Posted Jobs: Q1 2018

Postsecondary Teachers were the highest in-demand education occupation during Q1 2018, with 3,207 postings. Each of the top five occupations typically require different entry-level educational requirements, ranging from a high school diploma to a doctoral degree.



## High Earning Potential for Postsecondary Teachers



## Certified Medical Administrative Assistant: In-Demand Education Certification

### Education Wage Overview

Many education related jobs, particularly permanent positions teaching older students, offer competitive median wages with growth potential. This can provide an excellent opportunity for job seekers willing to overcome the educational barriers and attain the necessary credentials and experience. According to the Bureau of Labor Statistics (BLS), six of the ten top posted education jobs offer median wages of over \$30 per hour. The top posted job, Postsecondary Teachers, offers a median wage of \$33.12 hourly, translating to annual earnings of nearly \$69,000.

**Wage Overview for Top Posted Education Jobs in Q1 2018**

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
25-1099	Postsecondary Teachers	\$14.22	\$21.44	\$33.12	\$48.76	\$63.12
25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$17.94	\$23.22	\$31.77	\$39.33	\$46.42
25-2011	Preschool Teachers, Except Special Education	\$9.71	\$10.89	\$13.61	\$19.02	\$24.91
25-9041	Teacher Assistants	\$9.29	\$10.19	\$12.15	\$14.82	\$17.90
25-2021	Elementary School Teachers, Except Special Education	\$17.42	\$21.93	\$30.92	\$39.20	\$46.72
25-3097	Teachers and Instructors, All Other	\$9.83	\$11.86	\$18.98	\$28.76	\$37.99
25-2052	Special Education Teachers, Kindergarten and Elementary School	\$18.34	\$24.51	\$31.74	\$38.46	\$45.29
25-2022	Middle School Teachers, Except Special and Career/Technical Education	\$18.12	\$23.07	\$31.37	\$38.93	\$45.50
25-9031	Instructional Coordinators	\$16.04	\$20.40	\$28.66	\$37.18	\$44.63
25-2054	Special Education Teachers, Secondary School	\$20.12	\$24.29	\$32.95	\$41.78	\$48.61

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

#### In-Demand Technical Skills

- Lesson Planning
- Curriculum Development
- Child Development
- Google Drive
- Experience with Individuals with Disabilities

#### In-Demand Foundational Skills

- Teaching
- Chinese Language
- Innovation
- Research
- Management

#### In-Demand Education Level\*

- High School Diploma: 16.7%
- Associate Degree: 14.7%
- Bachelor's Degree: 35.7%
- Master's Degree: 9.3%

\*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

- Certified Medical Administrative Assistant
- National Council Licensure Examination
- Nurse Practitioner
- Family Nursing Practitioner
- Certificate in English Language Teaching to Adults (CELTA)

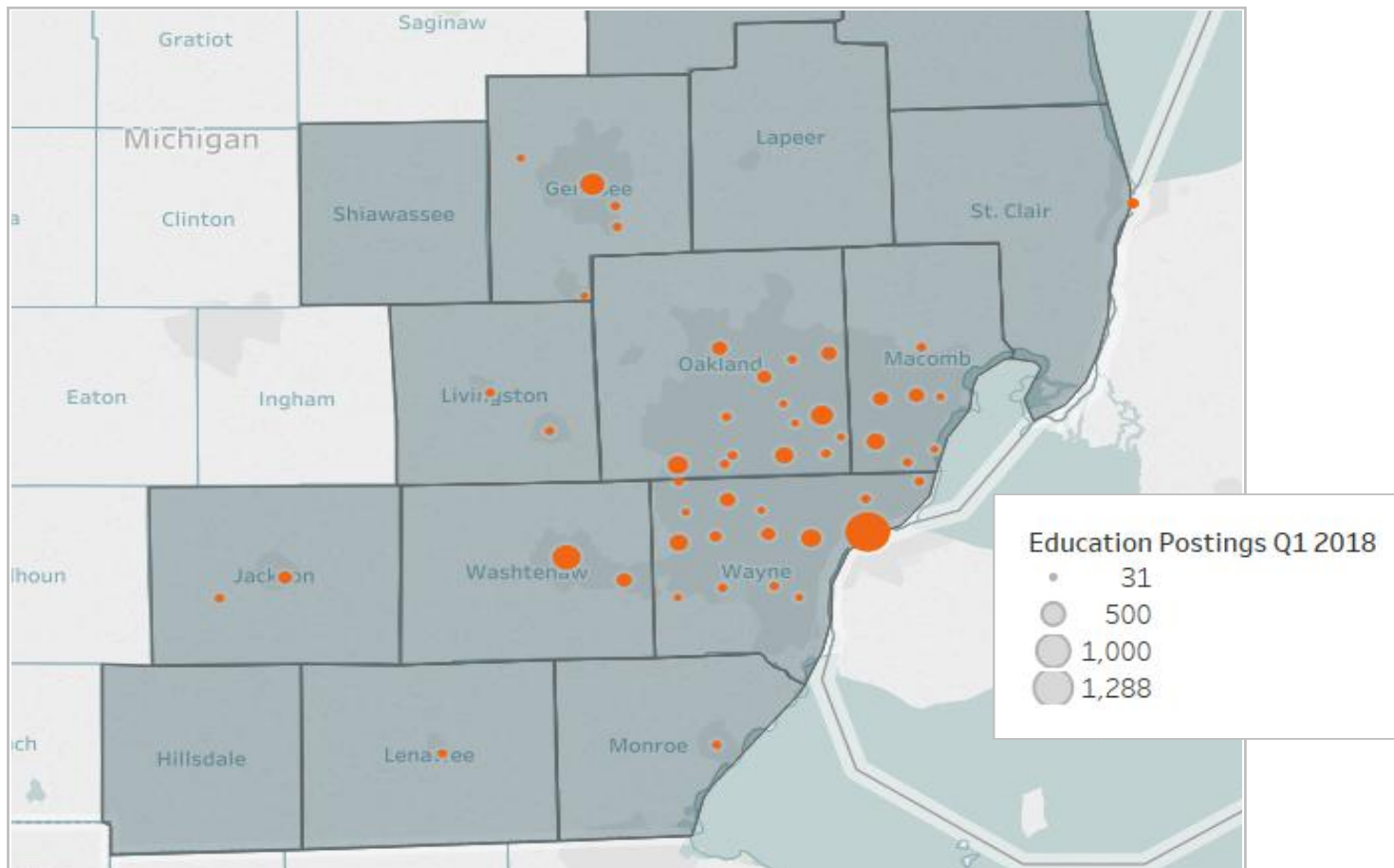




## Secondary School Teachers: In-Demand Entry-Level Occupation



## Teaching and Language Skills are in High Demand



Map based on Longitude (generated) and Latitude (generated).  
Size shows sum of Unique Postings (Jan 2017–Dec 2017). Details are shown for City.

### Top Posting Employers

- Tutree, Inc.
- Qt Kids Inc
- VIP Kidz LLC
- Learning Care Group, Inc.
- Soliant Health, Inc
- Sunbelt Staffing, LLC
- University of Michigan
- V I P Kids
- Procare Therapy, Inc.
- English First Inc

### Job Postings by City

1. Detroit, MI: 6,852 Postings
2. Troy, MI: 2,168 Postings
3. Ann Arbor, MI: 2,026 Postings
4. Dearborn, MI: 1,790 Postings
5. Southfield, MI: 1,270 Postings

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



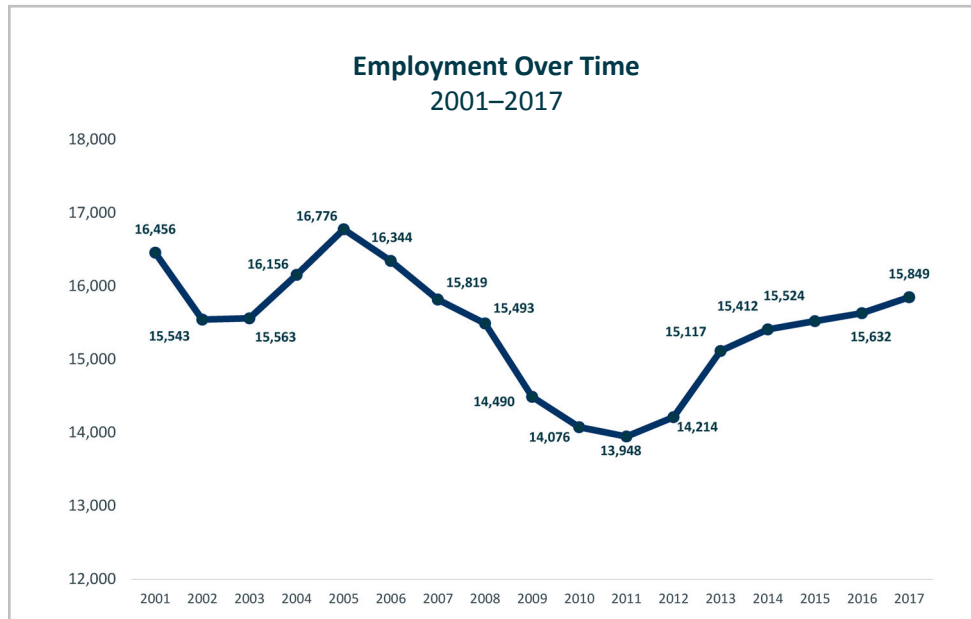


## ENERGY OCCUPATION GROUP 16-County WIN Region | Q1 2018

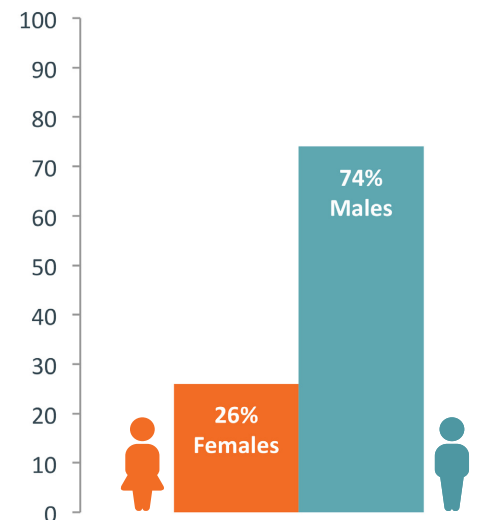
### Introduction

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. Data referenced in this section pertain only to job postings from energy-related businesses.

**15,898**  
**Energy Workers**  
0.3% Increase  
from 2017



### Population Gender Demographics



### Energy Worker Demographics

According to the most recent Emsi data set available (2017), The over 15,000 workers in the energy occupation group are primarily white males between the ages of twenty-five and fifty-four, with 26 percent of workers identifying as female and just 17 percent identifying as a racial minority. Only five percent of the workers in the occupation group are under the age of 24, indicating that the energy field faces a particular threat from the region's aging workforce.

#### Race and Ethnicity Demographics

**82.6% White** | **11.0% Black or African American** | **2.1% Asian**

#### Population Age Demographics

Age 14-24, 5.3%



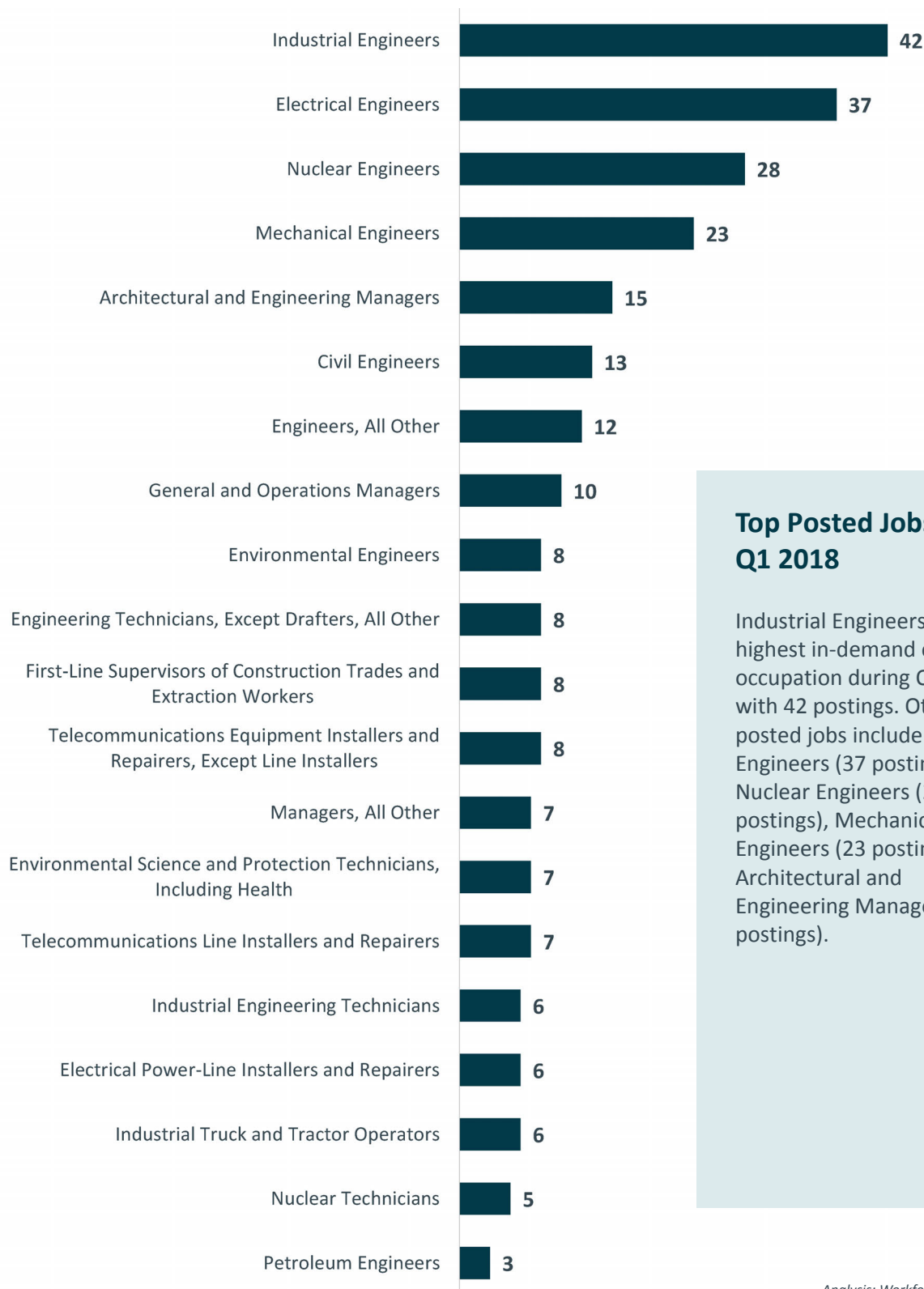


292 Energy Postings  
only 2 less than Q4 2017



Bachelors Degree Required  
for Most Energy Jobs

### Energy Top Posted Jobs Q1 2018



### Top Posted Jobs: Q1 2018

Industrial Engineers were the highest in-demand energy occupation during Q1 2018, with 42 postings. Other top posted jobs include Electrical Engineers (37 postings), Nuclear Engineers (28 postings), Mechanical Engineers (23 postings), and Architectural and Engineering Managers (15 postings).



## High Earning Potential for General and Operations Managers



## CDL: Most In-Demand Energy Certification

### Energy Wage Overview

The high demand for engineers in the energy field creates lucrative opportunities for job seekers willing to overcome the educational barriers related to these jobs. According to the Bureau of Labor Statistics (BLS), the top posted energy job, Electrical Engineers, offers a median hourly wage of \$34.50, or annual earnings of approximately \$72,000. Technician and construction-focused positions generally have shorter educational requirements than engineers and pay somewhat higher than similar occupations in other industries.

**Wage Overview for Top Posted Energy Jobs in Q1 2018**

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
17-2112	Industrial Engineers	\$30.26	\$35.69	\$44.19	\$53.66	\$61.99
17-2071	Electrical Engineers	\$28.54	\$34.50	\$42.69	\$51.70	\$62.00
17-2161	Nuclear Engineers	\$34.12	\$40.97	\$48.32	\$56.16	\$63.51
17-2141	Mechanical Engineers	\$29.26	\$35.40	\$44.22	\$54.56	\$63.26
11-9041	Architectural and Engineering Managers	\$43.56	\$52.48	\$63.21	\$75.85	\$89.61
17-2051	Civil Engineers	\$25.61	\$29.92	\$36.68	\$45.85	\$55.99
17-2199	Engineers, All Other	\$23.88	\$35.23	\$45.46	\$56.66	\$67.10
11-1021	General and Operations Managers	\$24.24	\$34.98	\$52.38	\$80.19	\$112.07
17-2081	Environmental Engineers	\$28.95	\$35.11	\$44.64	\$55.77	\$65.12
17-3029	Engineering Technicians, Except Drafters, All Other	\$17.53	\$21.92	\$29.99	\$37.85	\$45.10

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

#### In-Demand Technical Skills

- Electrical Engineering
- Oil and Gas
- Control Systems
- Engineering Design Process
- Microsoft Access

#### In-Demand Foundational Skills

- Operations
- Management
- Communications
- Leadership
- Research

#### In-Demand Education Level\*

- High School Diploma: 23.7%
- Associate Degree: 9.9%
- Bachelor's Degree: 46.8%
- Master's Degree: 9.1%

\*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

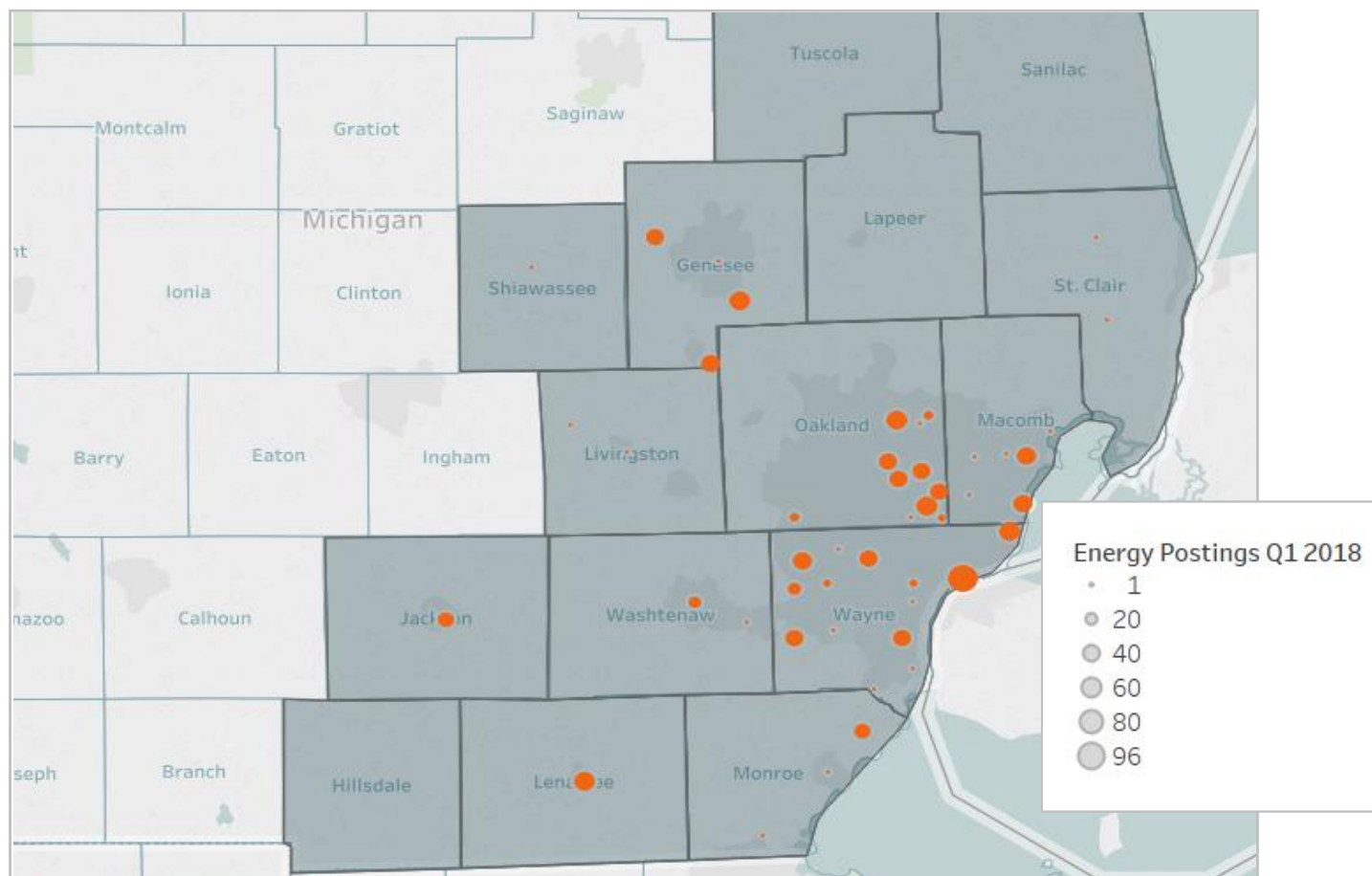
- Commercial Driver's License (CDL)
- Professional Engineer
- PMI Certified
- Project Management Professional (PMP) Certification



## Electrical Engineers: In-Demand Entry-Level Job



## Electrical Engineering Skills are in High Demand



Map based on Longitude (generated) and Latitude (generated).  
Size shows sum of Unique Postings (Jan 2017–Dec 2017). Details are shown for City.

### Top Posting Employers\*

- DTE Energy Company
- Lg Electronics
- CMS Energy Corporation
- Aero Communications, Inc.
- Itc Holdings Corp.
- Henkels & McCoy, Inc.
- Acuren Inspection, Inc.
- Communications Construction Group, LLC
- Schlumberger Limited
- Cavo Broadband Communications, LLC

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

### Job Postings by City

1. Detroit, MI: 96 Postings
2. Troy, MI: 31 Postings
3. Newport, MI: 28 Postings
4. Jackson, MI: 25 Postings
5. Canton, MI: 18 Postings



## ENGINEERING AND DESIGN OCCUPATION GROUP 16-County WIN Region | Q1 2018

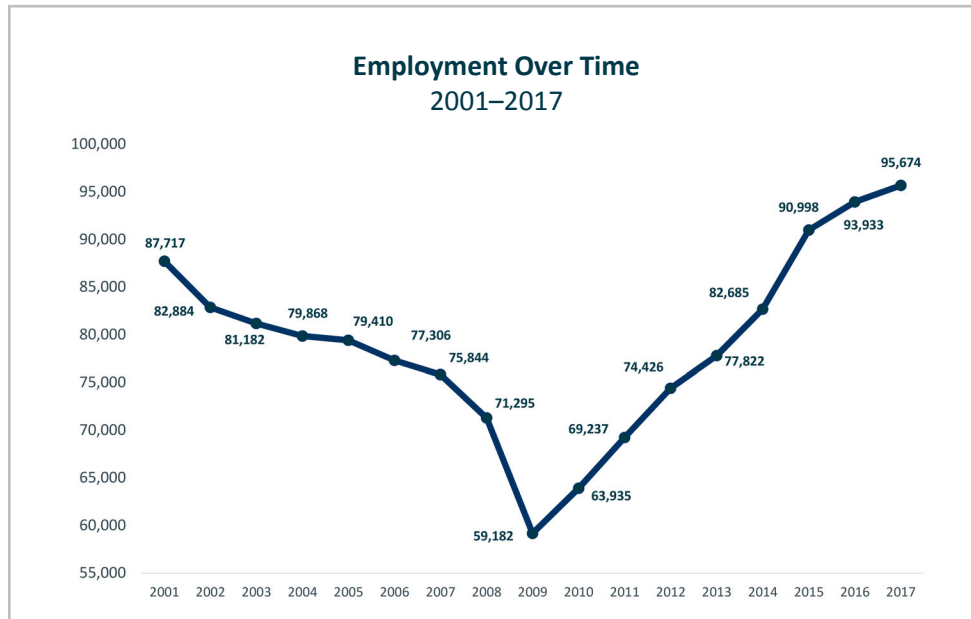
### Introduction

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.

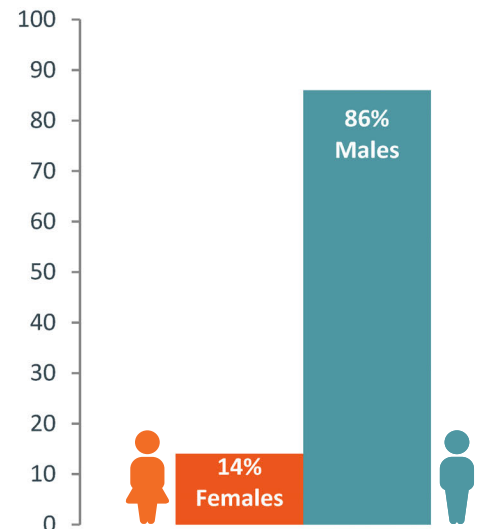


**96,749**  
**Engineering Workers**

1.1% Increase  
from 2017



### Population Gender Demographics



### Engineering and Design Worker Demographics

According to the most recent Emsi data set available (2017), the nearly 92,602 workers in the Engineers and Designers group are not particularly diverse. Under six percent of the workforce is under 25, likely due to the consistently high educational requirements. Fourteen percent of current workers are female, and only 11 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

**79.4% White** | **7.7% Black or African American** | **9.1% Asian**

#### Population Age Demographics

Age 14-24, 5.5%



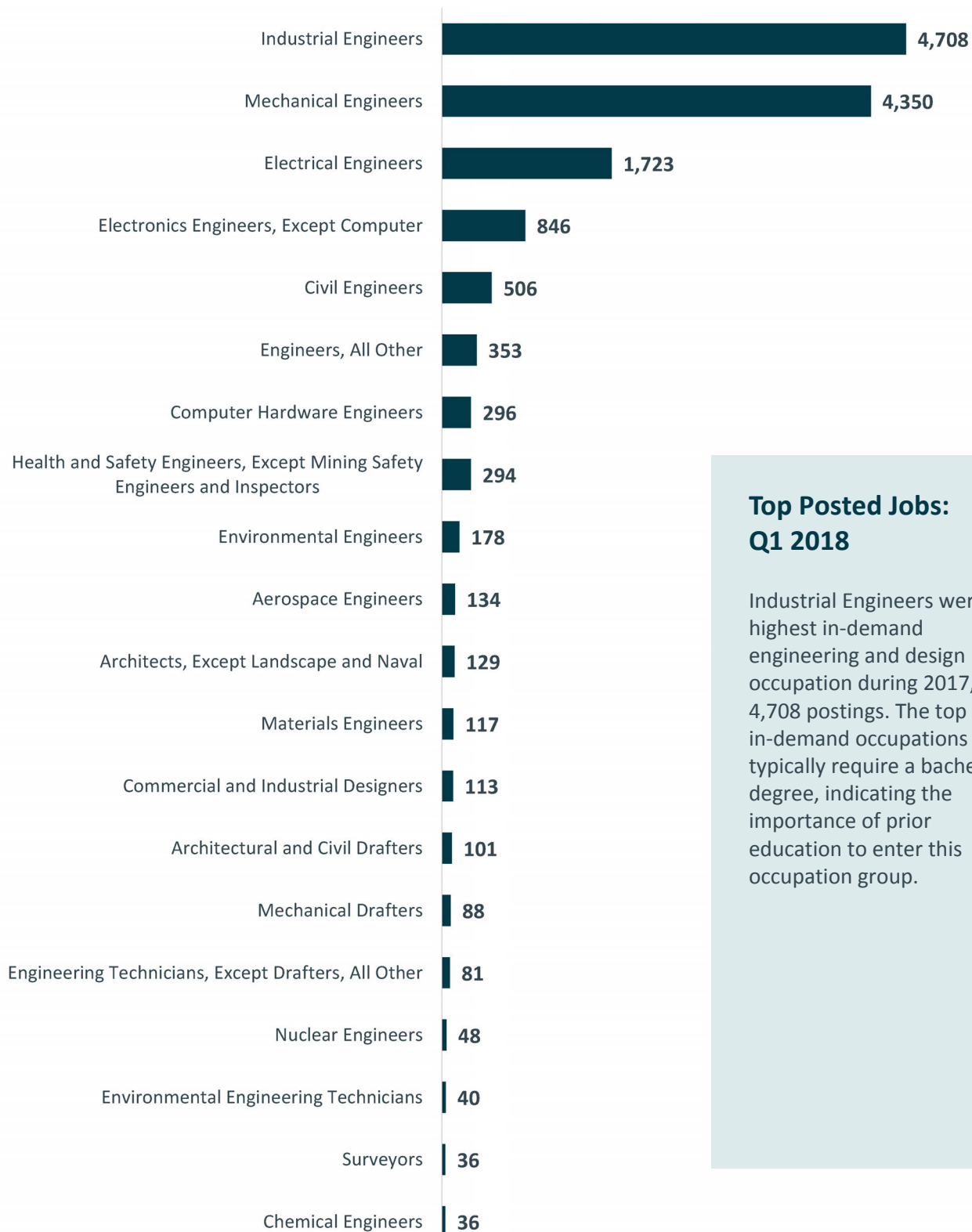


23,236 Engineering and Design Postings  
570 less than Q4 2017



Bachelor's Degree Required for Most  
Engineers and Designers Jobs

### Engineering and Design Top Posted Jobs Q1 2018



### Top Posted Jobs: Q1 2018

Industrial Engineers were the highest in-demand engineering and design occupation during 2017, with 4,708 postings. The top ten in-demand occupations all typically require a bachelor's degree, indicating the importance of prior education to enter this occupation group.



## High Earning Potential for Engineers, All Other



## Professional Engineer: Most In-Demand Engineering and Design Certification

### Engineering and Design Wage Overview

Most Engineering and Design related jobs offer high wages, making for a lucrative opportunity for job seekers willing to overcome the educational barriers related to these jobs. The top posted engineering and design job, Industrial Engineers, offers a median hourly wage of \$43.06, or an annual salary of approximately \$90,000 according to the Bureau of Labor Statistics (BLS).

**Wage Overview for Top Posted Engineering and Design Jobs in Q1 2018**

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
17-2112	Industrial Engineers	\$30.26	\$35.69	\$44.19	\$53.66	\$61.99
17-2141	Mechanical Engineers	\$29.26	\$35.40	\$44.22	\$54.56	\$63.26
17-2071	Electrical Engineers	\$28.54	\$34.50	\$42.69	\$51.70	\$62.00
17-2072	Electronics Engineers, Except Computer	\$27.98	\$33.64	\$41.02	\$48.55	\$57.77
17-2051	Civil Engineers	\$25.61	\$29.92	\$36.68	\$45.85	\$55.99
17-2199	Engineers, All Other	\$23.88	\$35.23	\$45.46	\$56.66	\$67.10
17-2061	Computer Hardware Engineers	\$19.58	\$28.52	\$43.54	\$56.20	\$64.59
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	\$26.35	\$28.74	\$34.18	\$50.34	\$60.87
17-2081	Environmental Engineers	\$28.95	\$35.11	\$44.64	\$55.77	\$65.12
17-2011	Aerospace Engineers	\$22.48	\$31.44	\$37.69	\$49.70	\$60.29

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

#### In-Demand Technical Skills

- Mechanical Engineering
- Electrical Engineering
- Computer-Aided Design (CAD)
- Prototype (Manufacturing)
- Automation

#### In-Demand Foundational Skills

- Management
- Communications
- Operations
- Problem Solving
- Innovation

#### In-Demand Education Level\*

- High School Diploma: 5.0%
- Associate Degree: 5.9%
- Bachelor's Degree: 67.7%
- Master's Degree: 15.6%

\*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
- Certified Quality Engineer
- American Society for Quality (ASQ) Certified
- Licensed Professional Engineer
- Certified Quality Auditor

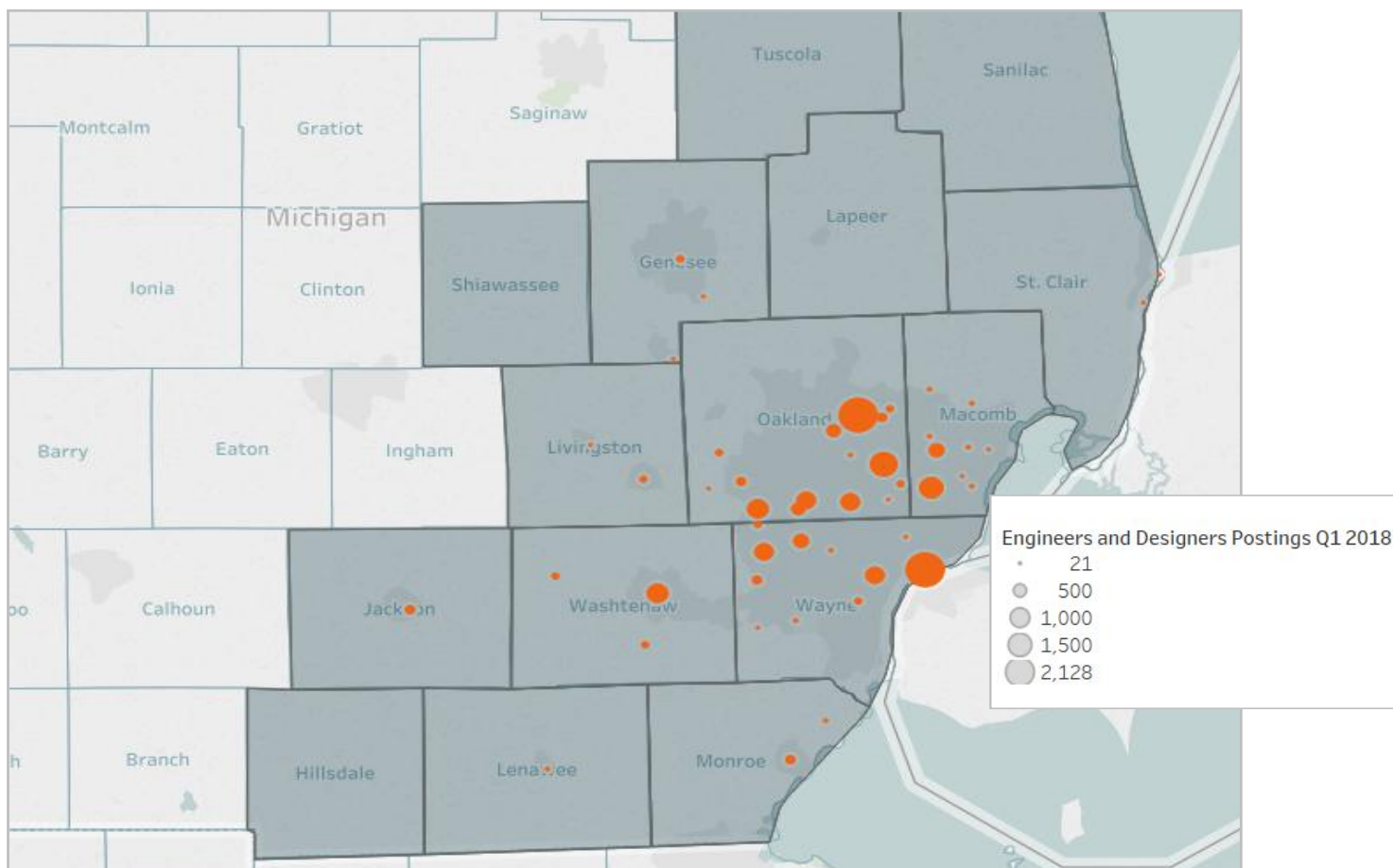




## Automakers and Suppliers are Top Engineering Employers



## Mechanical Engineering Skills are in High Demand



Map based on Longitude (generated) and Latitude (generated).  
Size shows sum of Unique Postings (Jan 2017–Dec 2017). Details are shown for City.

### Top Posting Employers\*

- General Motors Company
- Michigan Works Service Center, Alpena C
- Chrysler Realty Company LLC
- ALTAIR ENGINEERING, INC.
- FCA US LLC
- Ford Motor Company
- Cybercoders, Inc.
- Aerotek, Inc.
- Movement Search LLC
- Gtech Services, Inc
- Trillium Staffing

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

### Job Postings by City

1. Detroit, MI: 2,128 Postings
2. Auburn Heights, MI: 2,123 Postings
3. Troy, MI: 1,063 Postings
4. Warren, MI: 826 Postings
5. Ann Arbor, MI: 714 Postings



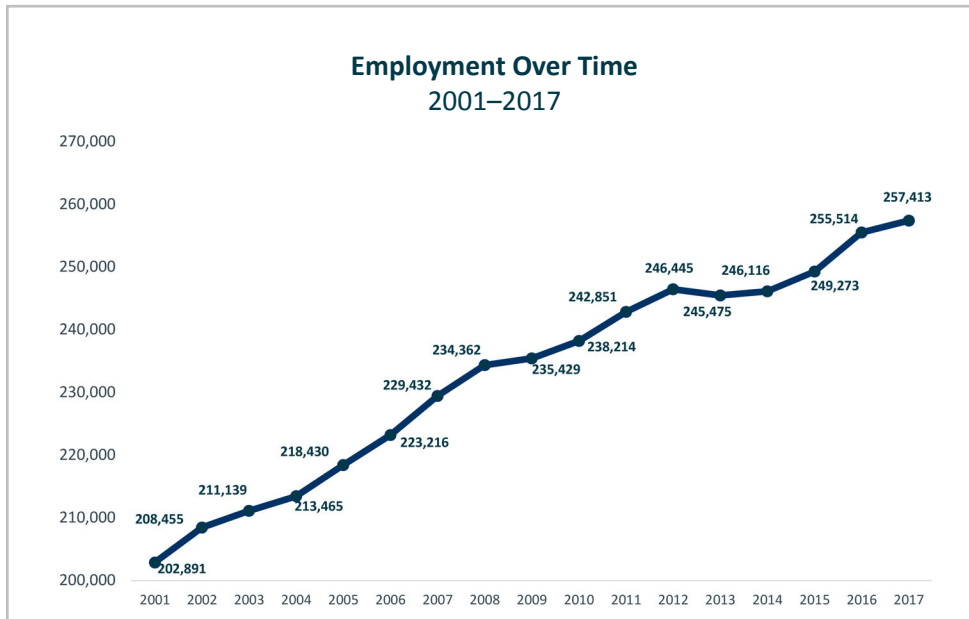
## HEALTH CARE OCCUPATION GROUP 16-County WIN Region | Q1 2018

### Introduction

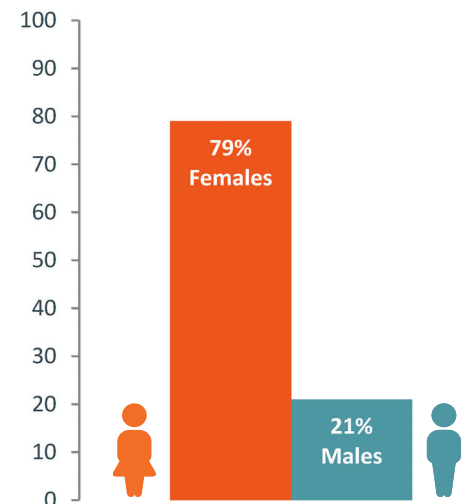
WIN's health care occupation group includes jobs related to health care support and practitioners. Employment in this group has been consistently growing, more health care workers needed to care for Michigan's aging population and in response to regulatory and other changes. Registered nurses are routinely the most in-demand job in this group.



**258,550**  
**Health Care Workers**  
0.4% Increase  
from 2017



### Population Gender Demographics



### Health Care Worker Demographics

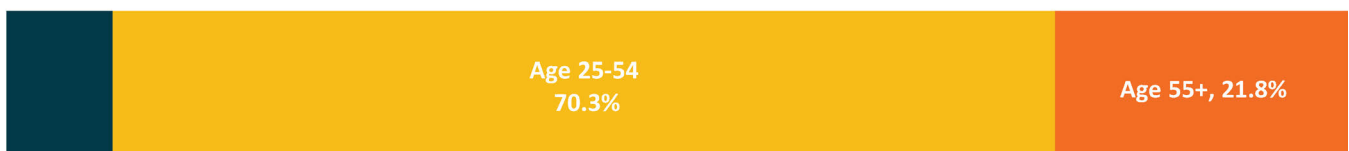
According to the most recent Emsi data set available (2017), the Health Care occupation group employs around 244,937 workers, who are primarily female (79 percent) and between the ages of 25 and 54 (70 percent), although 21 percent of workers are over 55. The group has a similar proportion of racial minorities as the workforce as a whole, with 70 percent of workers identifying as white, 20 percent identifying as black or African American, and ten percent identifying otherwise.

#### Race and Ethnicity Demographics

**70.1% White** | **20.0% Black or African American** | **5.4% Asian**

#### Population Age Demographics

Age 14-24, 7.9%



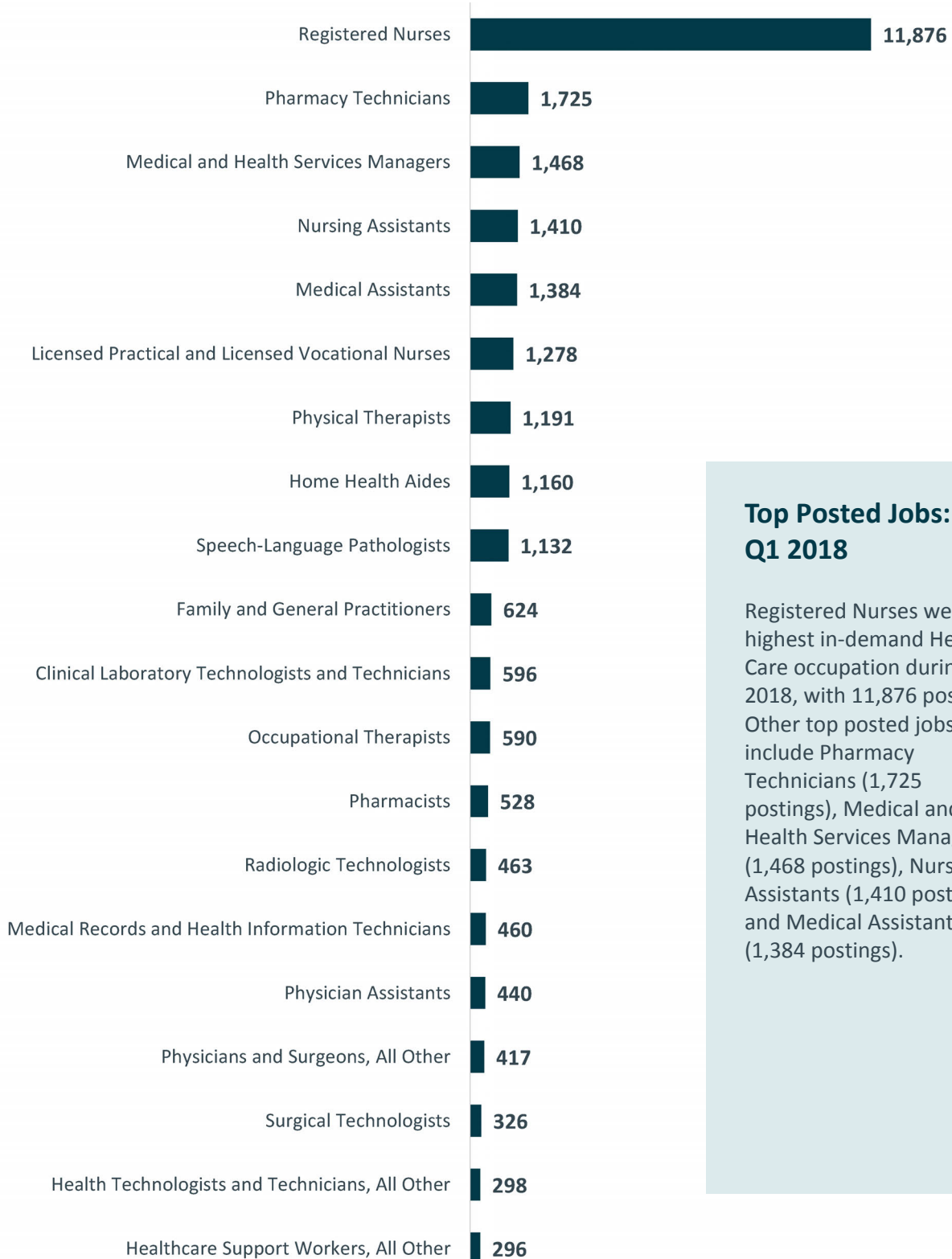


32,653 Health Care Postings:  
2,676 less than Q4 2017



Bachelor's Degree Required for  
High Earning Health Care Jobs

### Health Care Top Posted Jobs Q1 2018



### Top Posted Jobs: Q1 2018

Registered Nurses were the highest in-demand Health Care occupation during Q1 2018, with 11,876 postings. Other top posted jobs include Pharmacy Technicians (1,725 postings), Medical and Health Services Managers (1,468 postings), Nursing Assistants (1,410 postings), and Medical Assistants (1,384 postings).



## High Earning Potential for Medical and Health Services Managers



## Licensed Practical Nurse: Most In-Demand Health Care Certification

### Health Care Wage Overview

Wages in the high-demand health care field scale with education and experience, though the group does boast a relatively broad array of entry requirements and high volume of jobs open to those with less than a bachelor's that pay more than the region's median wage of \$17.81 per hour. Registered Nurses, the top posted health care job in Q1 2018, offers a median annual salary of nearly \$70,000 according to the Bureau of Labor Statistics (BLS).

**Wage Overview for Top Posted Health Care Jobs in Q1 2018**

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
29-1141	Registered Nurses	\$25.71	\$29.35	\$34.08	\$38.66	\$45.10
29-2052	Pharmacy Technicians	\$10.02	\$11.79	\$14.90	\$18.05	\$21.21
11-9111	Medical and Health Services Managers	\$27.71	\$35.10	\$46.91	\$62.71	\$90.58
31-1014	Nursing Assistants	\$10.66	\$12.32	\$14.03	\$16.01	\$18.26
31-9092	Medical Assistants	\$11.66	\$12.94	\$14.75	\$17.13	\$19.22
29-2061	Licensed Practical and Licensed Vocational Nurses	\$19.86	\$21.89	\$24.94	\$28.11	\$30.23
29-1123	Physical Therapists	\$29.60	\$35.50	\$42.51	\$48.77	\$60.28
31-1011	Home Health Aides	\$9.11	\$9.52	\$10.61	\$12.22	\$14.30
29-1127	Speech-Language Pathologists	\$26.08	\$30.97	\$37.75	\$45.43	\$53.57
29-1062	Family and General Practitioners	\$36.11	\$54.01	\$83.01	\$103.18	\$154.84

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

#### In-Demand Technical Skills

- Nursing
- Basic Life Support
- Intensive Care Unit
- Advanced Cardiovascular Life Support (ACLS)
- Acute Care

#### In-Demand Foundational Skills

- Management
- Communications
- Leadership
- Operations
- Research

#### In-Demand Education Level\*

- High School Diploma: 18.3%
- Associate Degree: 9.1%
- Bachelor's Degree: 19.7%
- Master's Degree: 7.3%

\*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

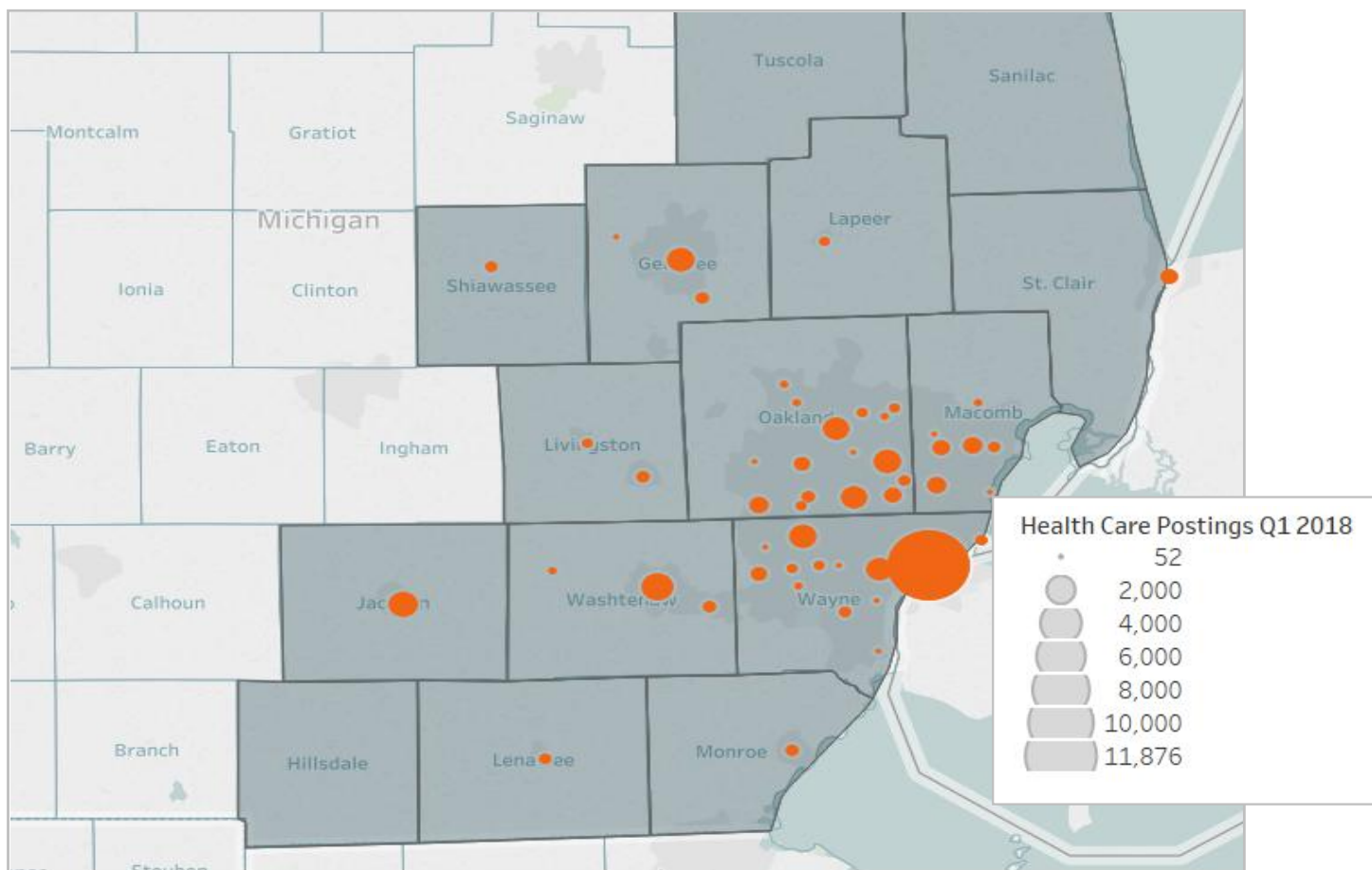
- Licensed Practical Nurse (LPN)
- Critical Care Registered Nurse (CCRN)
- CNOR Certification
- Certified Nursing Assistant (CNA)
- Nurse Practitioner



## Registered Nurses: In-Demand Entry Level Occupation



## Nursing and Management Skills are in High Demand



Map based on Longitude (generated) and Latitude (generated).  
Size shows sum of Unique Postings (Jan 2017–Dec 2017). Details are shown for City.

### Top Posting Employers\*

- Henry Ford Health System
- William Beaumont Hospital
- Travel Nurse Inc
- HealthCare Employment Network
- University of Michigan
- CVS Health Corporation
- Trinity Health Corporation
- Sunbelt Staffing, LLC
- Mercy Medical Center, Inc.
- Manor Care, Inc.

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

### Job Postings by City

1. Detroit, MI: 5,248 Postings
2. Ann Arbor, MI: 2,793 Postings
3. Jackson, MI: 1,281 Postings
4. Livonia, MI: 1,070 Postings
5. Flint, MI: 1,046 Postings



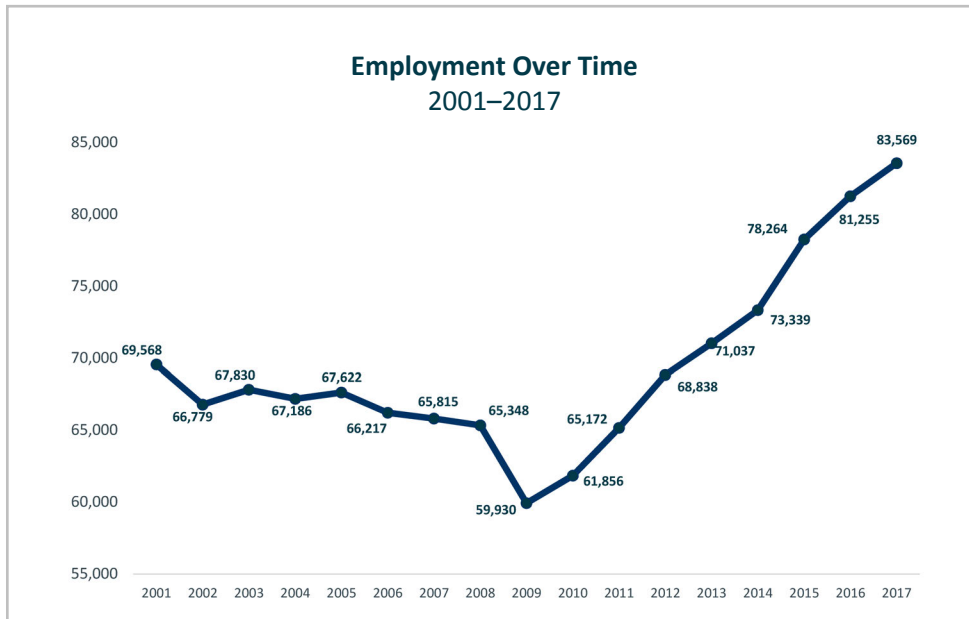
# INFORMATION TECHNOLOGY (IT) OCCUPATION GROUP

## 16-County WIN Region | Q1 2018

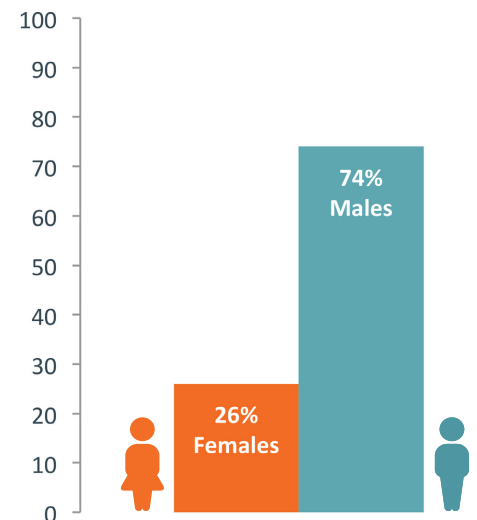
### Introduction

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.

**83,756**  
IT Workers  
0.2% Increase  
from 2017



### Population Gender Demographics



### IT Worker Demographics

According to the most recent Emsi data set available (2017), despite having over 80,000 workers, the IT occupation group is not very diverse. A large majority of workers are white males between the ages of twenty-five and fifty-four. Currently, 74 percent of workers identify as male, and 69 percent identify as white. There are a broad range of organizations providing specialized training resources for female and minority IT workers in the City of Detroit as well as throughout southeast Michigan. With the push to diversify the IT field, more opportunities are opening for women and minorities.

### Race and Ethnicity Demographics

**68.6% White | 10.5% Black or African American | 17.1% Asian**

Age 14-24  
5.7%

### Population Age Demographics

Age 25-54  
79.0%

Age 55+  
15.4%

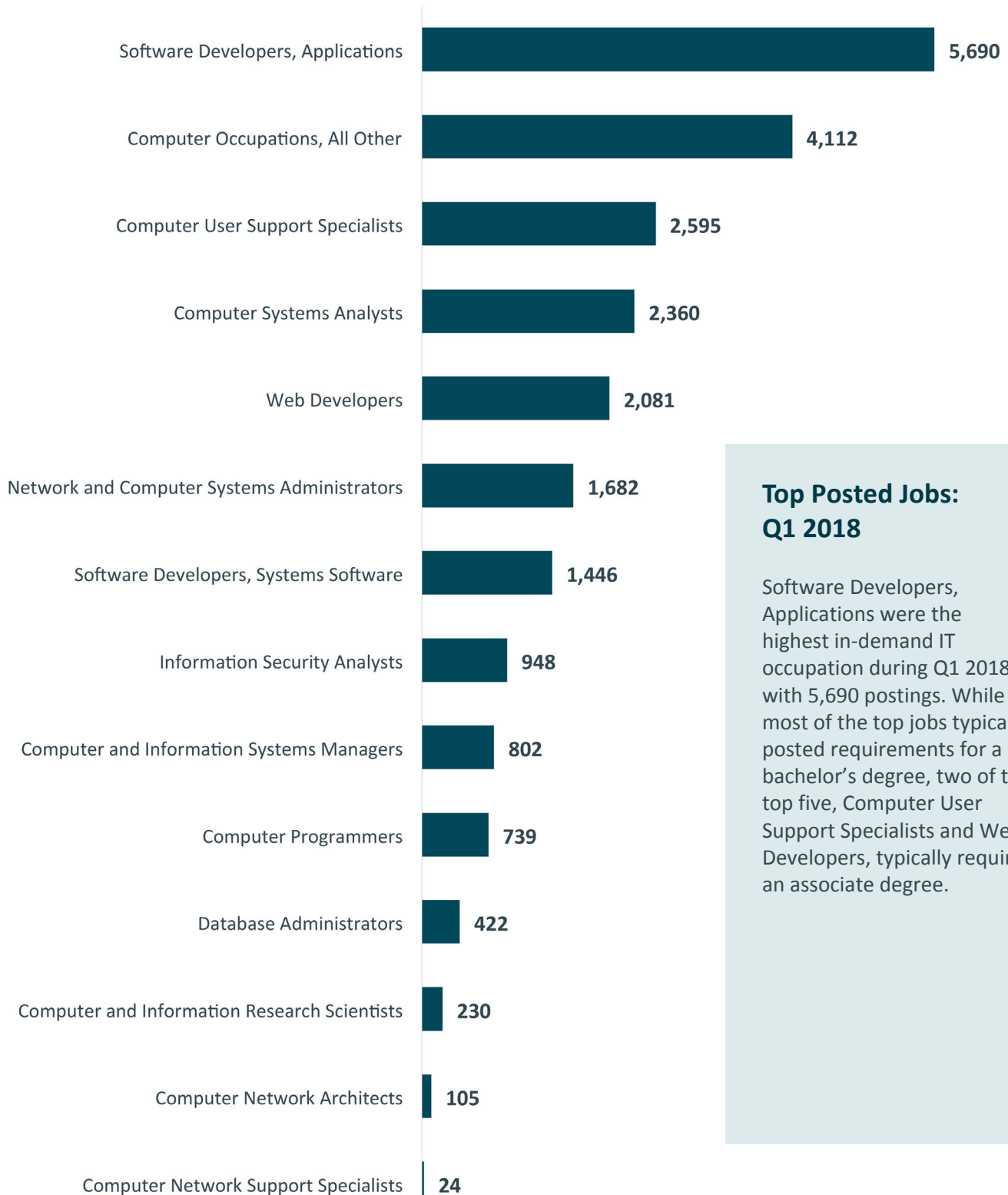


23,236 IT Openings  
112 More than Q4 2017



Bachelors Degree  
Required for Most IT Jobs

### Information Technology Top Posted Jobs Q1 2018



#### Top Posted Jobs: Q1 2018

Software Developers, Applications were the highest in-demand IT occupation during Q1 2018, with 5,690 postings. While most of the top jobs typically posted requirements for a bachelor's degree, two of the top five, Computer User Support Specialists and Web Developers, typically require an associate degree.





## High Earning Potential for Computer and Information System Managers



## CISSP: Most In-Demand IT Certification

### IT Wage Overview

Most IT related jobs offer high wages, making for a lucrative opportunity for job seekers willing to overcome the educational barriers related to these jobs. Software Developers, Applications, the top posted IT job in Q1 2018, offers a median annual salary of nearly \$88,000 according to the Bureau of Labor Statistics (BLS).

#### Wage Overview for Top Posted IT Jobs in Q1 2018

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
15-1132	Software Developers, Applications	\$27.76	\$34.79	\$44.12	\$54.83	\$64.22
15-1199	Computer Occupations, All Other	\$20.42	\$26.19	\$37.17	\$49.25	\$59.86
15-1151	Computer User Support Specialists	\$13.66	\$17.20	\$23.20	\$29.92	\$38.36
15-1121	Computer Systems Analysts	\$25.08	\$31.51	\$40.83	\$49.89	\$60.33
15-1134	Web Developers	\$18.48	\$24.09	\$30.98	\$40.53	\$48.09
15-1142	Network and Computer Systems Administrators	\$24.97	\$30.58	\$38.30	\$47.36	\$56.17
15-1133	Software Developers, Systems Software	\$24.74	\$32.96	\$42.69	\$52.62	\$62.72
15-1122	Information Security Analysts	\$28.47	\$34.30	\$45.39	\$57.07	\$67.00
11-3021	Computer and Information Systems Managers	\$40.08	\$50.17	\$62.17	\$76.51	\$95.29
15-1131	Computer Programmers	\$21.30	\$27.52	\$34.77	\$42.51	\$49.80

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

#### In-Demand Technical Skills

- SQL
- Java
- Software Development
- Agile Software Development
- Information Systems

#### In-Demand Foundational Skills

- Management
- Communications
- Operations
- Integration
- Information Technology

#### In-Demand Education Level\*

- High School Diploma: 3.9%
- Associate's Degree: 3.5%
- Bachelor's Degree: 52.2%
- Master's Degree: 12.1%

\*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

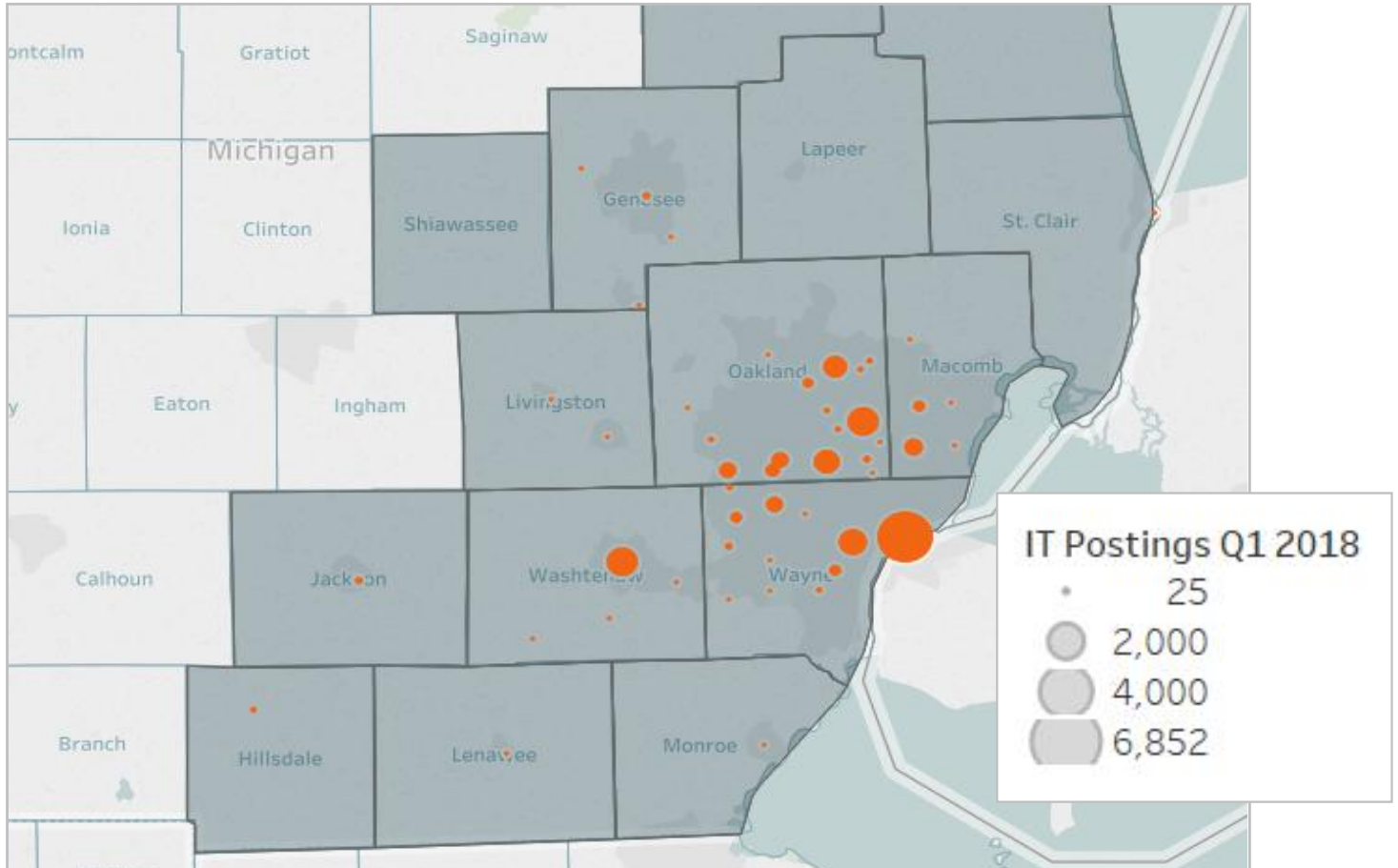
- Certified Information Systems Security Professional (CISSP)
- Certified Information Security Manager
- Cisco Certified Network Associate
- Certified Ethical Hacker
- Microsoft Certified Systems Engineer



## Automotive and Tech Companies are Top Employers of IT Workers



## Programming Language Skills are in High Demand



Map based on Longitude (generated) and Latitude (generated).  
Size shows sum of Unique Postings (Jan 2017–Dec 2017). Details are shown for City.

### Top Posting Employers\*

- Accenture, Inc.
- Teksystems, Inc.
- Oracle Corporation
- Deloitte LLP
- General Motors Company
- Ford Motor Company
- Anthem, Inc.
- Cybercoders, Inc.
- Ciber, Inc.
- University of Michigan

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

### Job Postings by City

1. Detroit, MI: 6,852 Postings
2. Troy, MI: 2,168 Postings
3. Ann Arbor, MI: 2,026 Postings
4. Dearborn, MI: 1,790 Postings
5. Southfield, MI: 1,270 Postings



# SKILLED TRADES AND TECHNICIANS (MANUFACTURING) OCCUPATION GROUP

## 16-County WIN Region | Q1 2018

### Introduction

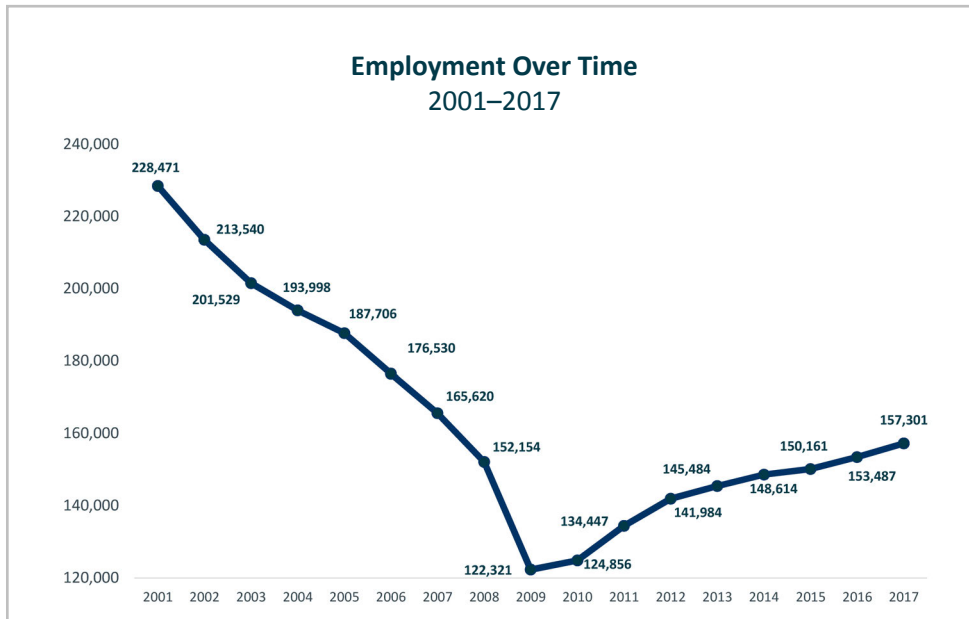
WIN's technicians/skilled trades category includes jobs related to advanced manufacturing. Southeast Michigan has more demand for skilled-trades labor, such as CNC machinists and welders, than almost anywhere else in the country.

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

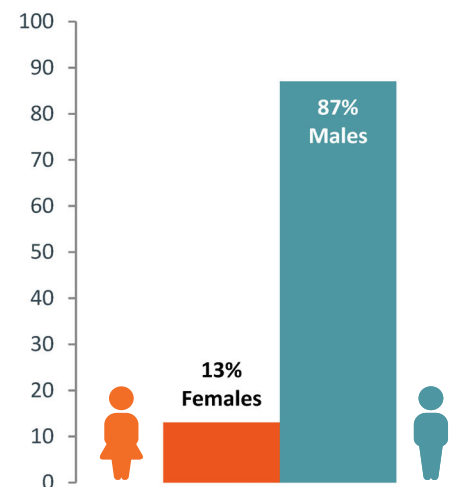


**158,144**  
Trade Workers

0.5% Increase  
from 2017



### Population Gender Demographics



### Skilled Trades and Technicians Worker Demographics

According to the most recent Emsi data set available (2017), the Skilled Trades occupation group employs about 158,000 workers in southeast Michigan. A majority of workers are white males between the ages of twenty-five and fifty-four. Additional outreach may be necessary in the near future, as at 25.6 percent, the group has a somewhat higher proportion than average of workers over age 55.

#### Race and Ethnicity Demographics

**79.0% White | 12.9% Black or African American | 2.7% Asian**

#### Population Age Demographics

Age 14-24, 6.8%





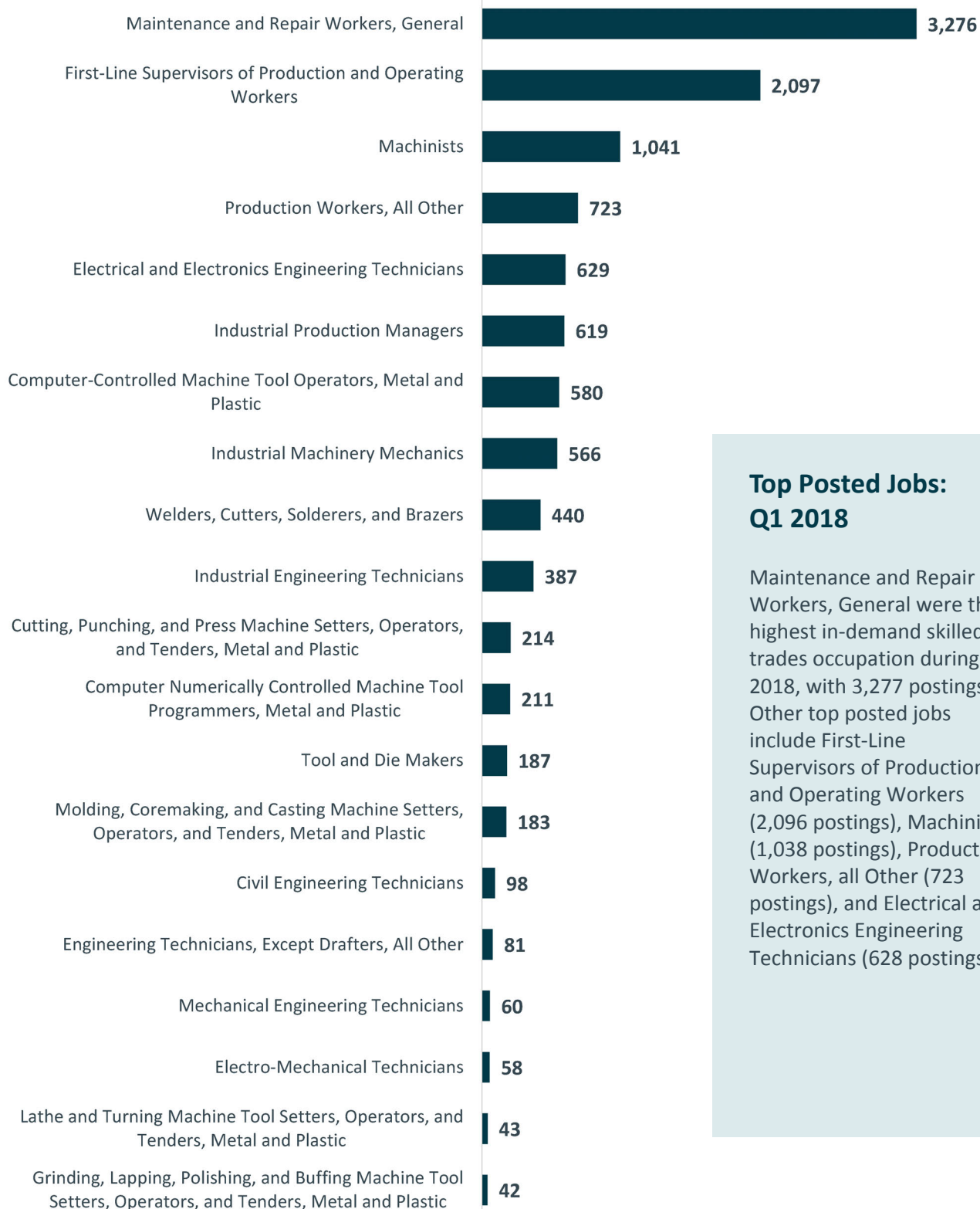
11,942 Skilled Trades Postings:  
669 less than Q4 2017



Vocational Training Required  
for Most Skilled Trades Jobs

### Skilled Trades and Technicians Top Posted Jobs

Q1 2018



### Top Posted Jobs: Q1 2018

Maintenance and Repair Workers, General were the highest in-demand skilled trades occupation during Q1 2018, with 3,277 postings. Other top posted jobs include First-Line Supervisors of Production and Operating Workers (2,096 postings), Machinist (1,038 postings), Production Workers, all Other (723 postings), and Electrical and Electronics Engineering Technicians (628 postings).



## High Earning Potential for Industrial Production Manager



## CDL: Most In-Demand Skilled Trades Certification

### Skilled Trades and Technicians Wage Overview

Half of the top ten in-demand skilled trades occupation have median wages above \$20 per hour according to the Bureau of Labor Statistics (BLS). Maintenance and Repair Workers, General, the top posted skilled trades job in Q1 2018, offers a median hourly wage of \$17.05, which translates to an annual salary of nearly \$35,000.

**Wage Overview for Top Posted Skilled Trades and Technicians Jobs in Q1 2018**

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	\$10.33	\$12.86	\$17.05	\$22.86	\$28.70
51-1011	First-Line Supervisors of Production and Operating Workers	\$18.53	\$23.71	\$31.58	\$41.27	\$51.13
51-4041	Machinists	\$12.22	\$15.26	\$19.88	\$25.17	\$29.74
51-9199	Production Workers, All Other	\$10.31	\$14.39	\$17.81	\$21.60	\$26.84
17-3023	Electrical and Electronics Engineering Technicians	\$16.83	\$21.70	\$29.01	\$34.76	\$40.42
11-3051	Industrial Production Managers	\$34.75	\$43.95	\$56.34	\$71.30	\$87.32
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	\$12.31	\$14.48	\$19.12	\$23.87	\$28.45
49-9041	Industrial Machinery Mechanics	\$16.30	\$20.57	\$26.22	\$32.12	\$37.55
51-4121	Welders, Cutters, Solderers, and Brazers	\$13.08	\$15.44	\$18.52	\$22.74	\$27.84
17-3026	Industrial Engineering Technicians	\$16.73	\$20.01	\$25.35	\$32.29	\$38.93

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

#### In-Demand Technical Skills

- Machining
- Lathe Experience
- HVAC
- Tooling
- Mill Experience

#### In-Demand Foundational Skills

- Management
- Operations
- Communications
- Troubleshooting (Problem Solving)
- Leadership

#### In-Demand Education Level\*

- High School Diploma: 39.9%
- Associate Degree: 9.1%
- Bachelor's Degree: 12.0%
- 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

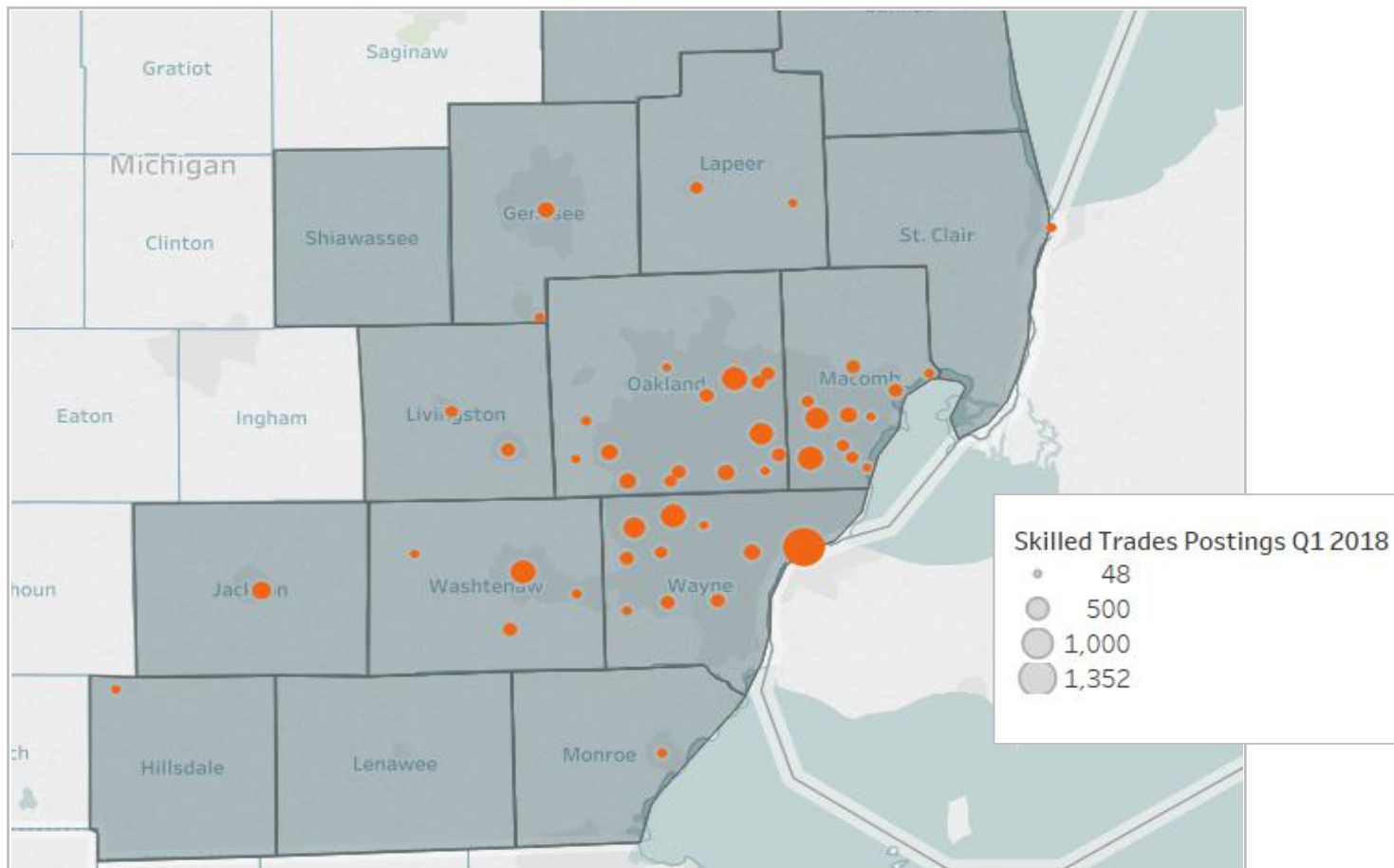
- Commercial Driver's License (CDL)
- Certified Quality Engineer
- American Society for Quality (ASQ) Certified
- Certified Broadcast Radio Engineer
- Certified Welder



## Maintenance and Repair Workers: In-Demand Entry-Level Occupation



## Machining Skills are in High Demand



Map based on Longitude (generated) and Latitude (generated).  
Size shows sum of Unique Postings (Jan 2017–Dec 2017). Details are shown for City.

### Top Posting Employers\*

- McDonald's Corporation
- Aerotek, Inc.
- Kelly Services, Inc.
- Michigan Works Service Center, Alpena C
- Express Services Inc
- Trillium Staffing
- Sentech Services
- Nesco Resource
- The Home Depot Inc
- Diversified Staffing Services Ltd

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

### Job Postings by City

1. Detroit, MI: 6,852 Postings
2. Troy, MI: 2,168 Postings
3. Ann Arbor, MI: 2,026 Postings
4. Dearborn, MI: 1,790 Postings
5. Southfield, MI: 1,270 Postings





# TRANSPORTATION, DISTRIBUTION, AND LOGISTICS (TDL) OCCUPATION GROUP

## 16-County WIN Region | Q1 2018

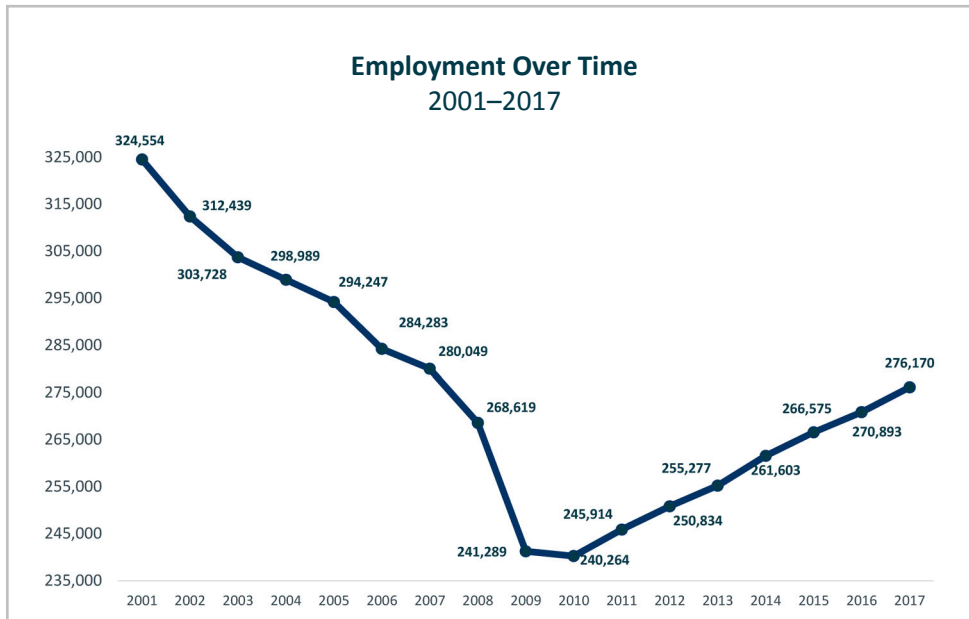
### Introduction

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.

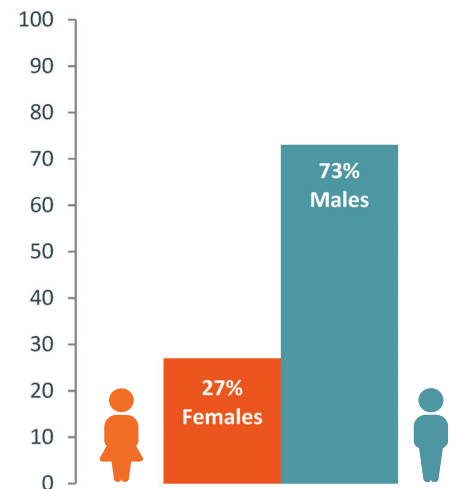


**277,591**  
TDL Workers

0.5% Increase  
from 2017



### Population Gender Demographics



### TDL Worker Demographics

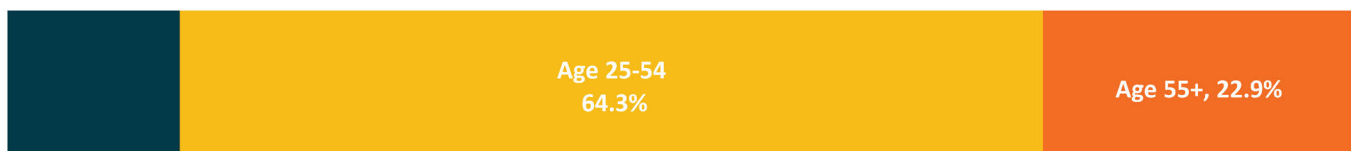
According to the most recent Emsi data set available (2017), the TDL occupation group has a large workforce, employing 275,000 individuals. These workers are 73 percent male and 71 percent white. Only twelve percent of the workers in this occupation group are under the age of 24, indicating an aging TDL workforce.

#### Race and Ethnicity Demographics

**71.3% White** | **20.2% Black or African American** | **2.2% Asian**

#### Population Age Demographics

Age 14-24, 12.8%





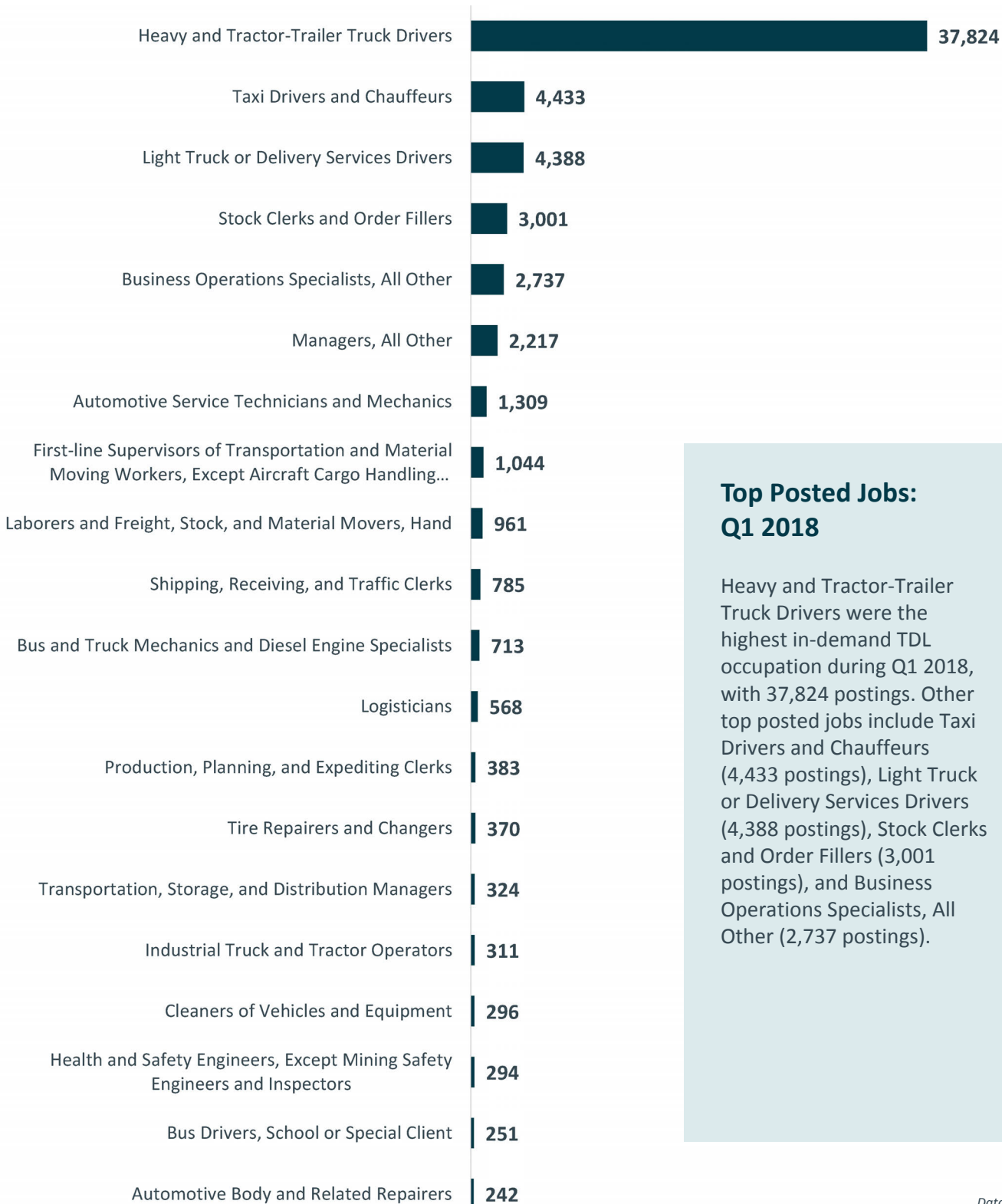


63,742 TDL Postings  
6,839 more than Q4 2017



High School Diploma  
Required for Most TDL Jobs

### TDL Top Posted Jobs Q1 2018



### Top Posted Jobs: Q1 2018

Heavy and Tractor-Trailer Truck Drivers were the highest in-demand TDL occupation during Q1 2018, with 37,824 postings. Other top posted jobs include Taxi Drivers and Chauffeurs (4,433 postings), Light Truck or Delivery Services Drivers (4,388 postings), Stock Clerks and Order Fillers (3,001 postings), and Business Operations Specialists, All Other (2,737 postings).



## High Earning Potential for Managers, All Other



## CDL: Most In-Demand TDL Certification

### TDL Wage Overview

According to the Bureau of Labor Statistics (BLS), four 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 Q1 2018, offers a median hourly wage of \$19.11, or an annual salary of nearly \$40,000. Logistics roles that require additional education, such as Business Operations Specialists, typically offer even higher wages.

**Wage Overview for Top Posted TDL Jobs in Q1 2018**

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	\$12.72	\$15.41	\$19.11	\$23.55	\$28.47
53-3041	Taxi Drivers and Chauffeurs	\$9.11	\$9.51	\$10.80	\$13.15	\$16.74
53-3033	Light Truck or Delivery Services Drivers	\$9.54	\$11.34	\$15.76	\$21.70	\$28.35
43-5081	Stock Clerks and Order Fillers	\$9.16	\$9.66	\$11.24	\$14.97	\$18.84
13-1199	Business Operations Specialists, All Other	\$18.15	\$23.65	\$32.82	\$44.80	\$56.35
11-9199	Managers, All Other	\$30.24	\$38.26	\$48.94	\$61.60	\$76.43
49-3023	Automotive Service Technicians and Mechanics	\$9.76	\$12.64	\$20.16	\$27.77	\$33.10
53-1048	First-line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	\$14.95	\$19.41	\$25.72	\$34.01	\$40.95
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	\$9.58	\$10.97	\$13.52	\$17.11	\$20.72
43-5071	Shipping, Receiving, and Traffic Clerks	\$10.85	\$12.95	\$16.07	\$20.79	\$27.01

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

#### In-Demand Technical Skills

- Warehousing
- Merchandising
- Purchasing
- Forklift Truck
- Mechanics

#### In-Demand Foundational Skills

- Management
- Operations
- Customer Service
- Communications
- Sales

#### In-Demand Education Level\*

- High School Diploma: 12.9%
- Associate Degree: 0.9%
- Bachelor's Degree: 5.0%
- Master's Degree: 1.1%

\*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

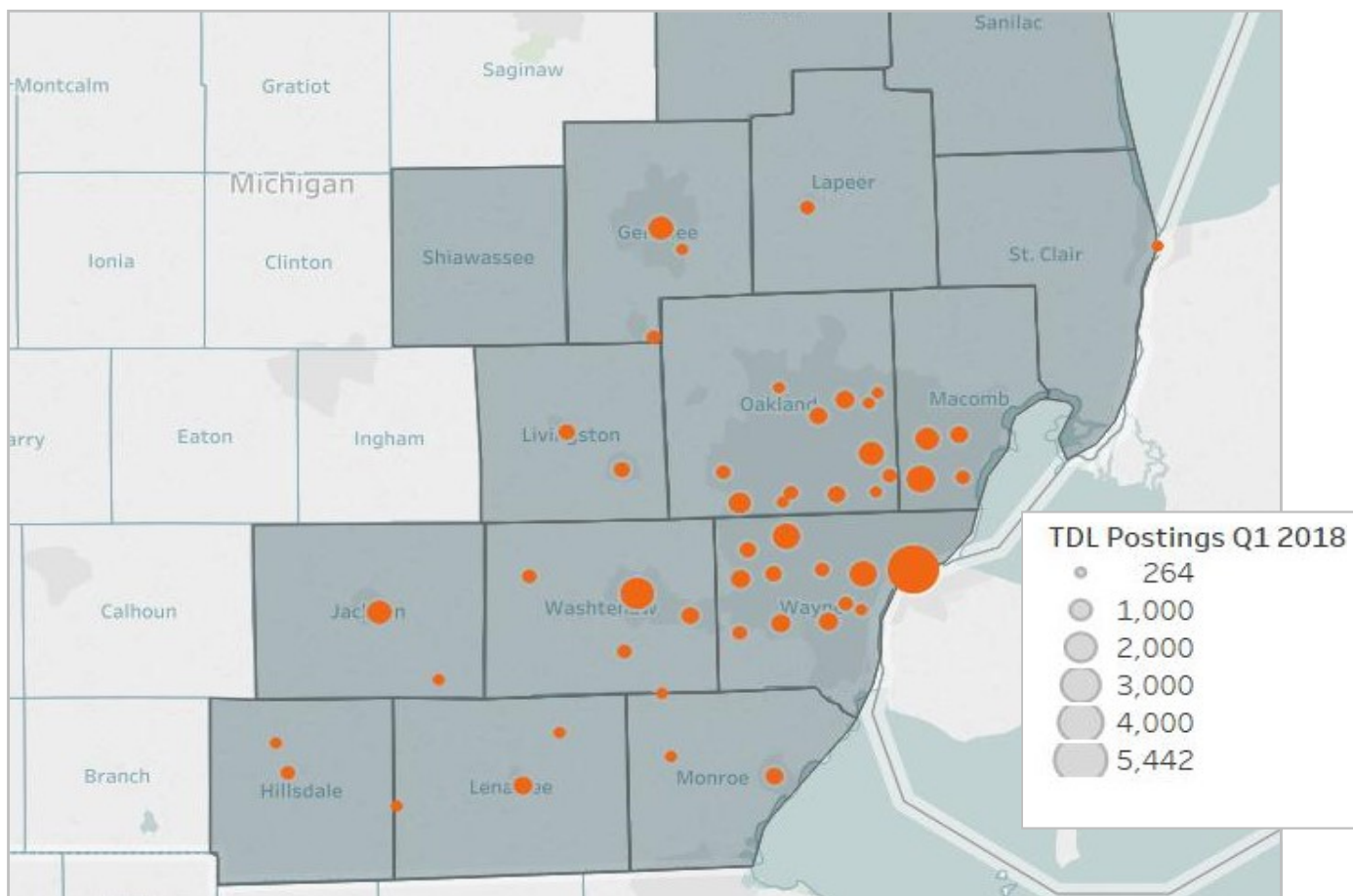
- Commercial Driver's License (CDL)
- Transportation Worker Identification Credential (TWIC) Card
- PMI Certified
- Certified Safety Professional
- Certified Hazardous Materials Manager



## Rideshare Companies and Trucking Fleets are the Top Employers of TDL Workers



## Warehousing Skills are in High Demand



Map based on Longitude (generated) and Latitude (generated). C  
Size shows sum of Unique Postings (Jan 2017–Dec 2017). Details are shown for City.

### Top Posting Employers\*

- CRST International, Inc.
- Lyft, Inc.
- Uber Technologies, Inc.
- C.R. England, Inc.
- USA Truck, Inc.
- Swift Transportation Company
- Schneider National, Inc.
- Roehl Transport, Inc.
- Super Service Holdings, LLC
- Hogan Transports Inc

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

### Job Postings by City

- Detroit, MI: 5,442 Postings
- Ann Arbor, MI: 2,240 Postings
- Warren, MI: 1,587 Postings
- Livonia, MI: 1,448 Postings
- Dearborn, MI: 1,376 Postings

Website

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