OAKLAND COUNTY

WIN Labor Market Report

INTRODUCTION
Oakland County | Q4 2018

Report Contents

Occupation Groups

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 Oakland county. 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 2018 in Oakland county and includes summative data for October, November, and December of 2018. The Oakland report focuses on analyzing the Business and Finance, Health Care, Information Technology, Skilled Trades, and TDL occupation groups.

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.

WIN WORKFORCE INTELLIGENCE NETWORK

ANNUAL STATE OF THE LABOR MARKET
Oakland County | Q4 2018

State of the Labor Market in Oakland County

Over the course of 2018, the labor force and employment figures both increased in Oakland county. With this simultaneous increase in both labor force and employment, the number of unemployed individuals decreased in the region. This caused the unemployment rate to drop from the 3.4 percent annual rate in 2017 to the annual rate of 3.3 percent in 2018. Employer demand for most occupation groups also increased during Q4 2018. The TDL occupation group reported the highest demand with over 13,000 job postings during the quarter. Other occupation groups also offer great job opportunities for active job seekers: health care postings grew by 18 percent from Q3 2018, and 39 percent of postings were open to entry-level applicants.

Annual Labor Market Information

Moving into a ten-year high, the labor force in the Oakland county increased by 888 individuals between 2017 and 2018. Employment increased by nearly double that number between 2017 and 2018, adding 1,691 workers. With employment increasing by a greater margin than the labor force, the unemployment rate fell by 0.1 percentage points from the already remarkably low annual figures in 2017 to an annual rate of 3.3 percent in 2018.

Annual Labor Force, Employment, Unemployment Rate 2010–2018

Data: BLS | Analysis: Workforce Intelligence Network
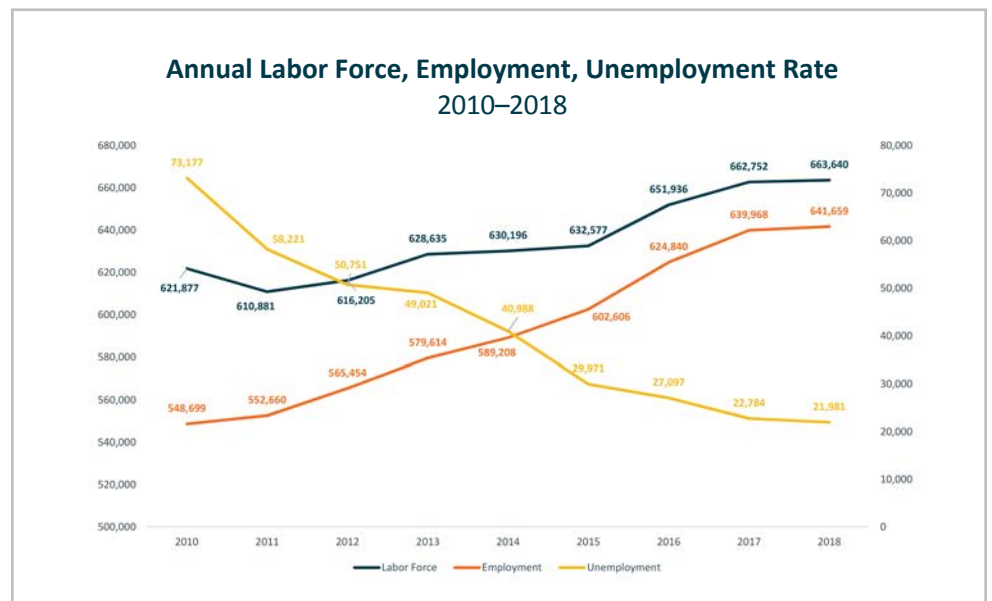
Quarterly Employer Demand Overview

Data from the fourth quarter of 2018, including posting information from October, November, and December, showed continued growth in employer demand in Oakland County. There were 13,483 more postings during Q4 2018 than the 88,258 postings made during Q4 2017 for a total of 101,741 postings. Typically, demand tends to grow through the end of the year, and Q4 2018 job postings are 15 percent higher than the level of demand at the end of 2017.

Quarterly Posting Analysis Oakland County

Data: Emsi | Analysis: Workforce Intelligence Network
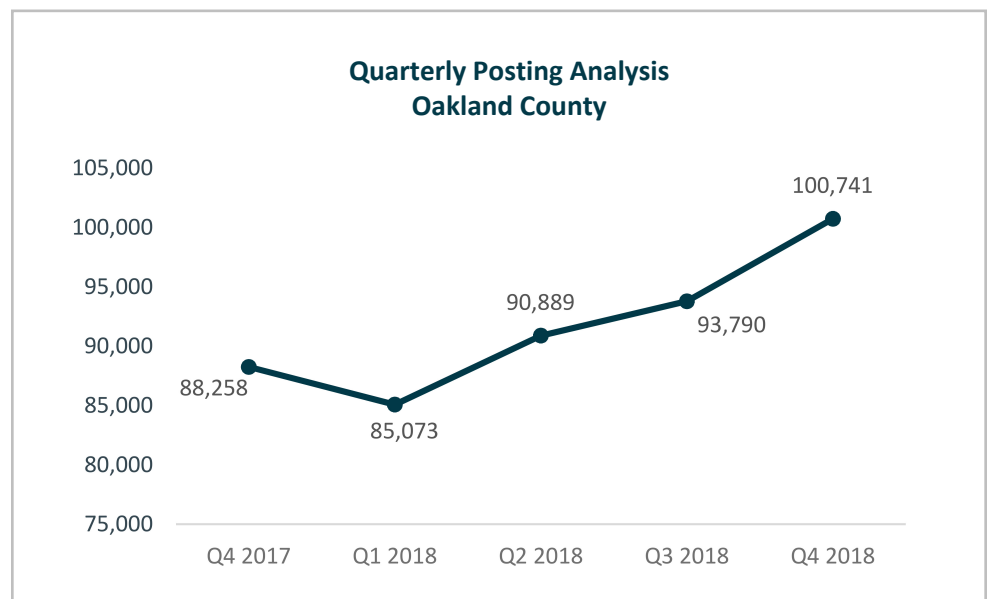
QUARTERLY WORKFORCE INDICATORS
Oakland County | Key Findings for Q4 2018

Employer demand surges to 101,400 postings during Q4 2018, with most occupation groups analyzed by WIN experiencing increases in online job postings between Q3 and Q4 2018.
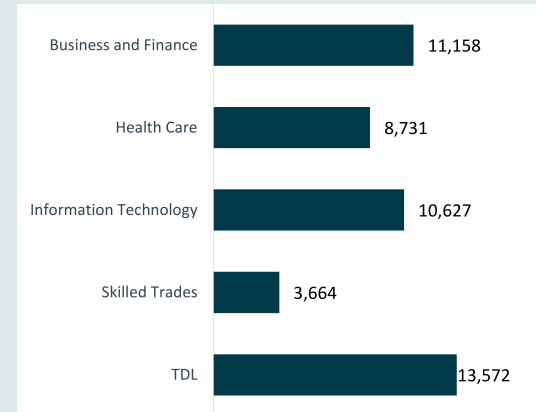
During Q4 2018, there were 101,437 jobs posted, 7,649 more than the 93,788 jobs posted during Q3 2018 in Oakland County. Most of the occupation groups analyzed by WIN experienced an increase during the fourth quarter of 2018. The IT and health care groups each increased by over 1,000 postings, while business and finance and TDL also grew by over 500 postings from Q3 2018. A bachelor's degree is required for many of the fastest-growing occupations. For more information about quarterly job postings, see page 2.
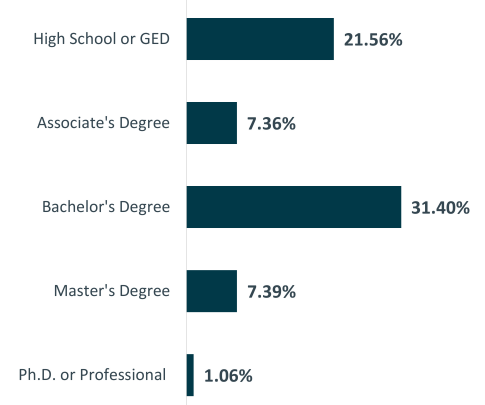
Postings by Occupation Group
Q4 2018

Occupation Group	Postings
Business and Finance	11,158
Health Care	8,731
Information Technology	10,627
Skilled Trades	3,664
TDL	13,572

Data: Emsi | Analysis: Workforce Intelligence Network

Job postings made by employers in Oakland County indicate a high school diploma or GED as the most in-demand minimum education level during Q4 2018.

Over a quarter (31.4 percent) of the 101,437 jobs posted in Oakland county indicated the need for candidates with a bachelor's degree. Another 21.5 percent of these postings were looking for applicants with a high school diploma or equivalent. Higher education attainment tends to lead to more lucrative opportunities, but many entry level opportunities exist in each occupation group. As only 68 percent of job postings identified a minimum education level, educational requirements may vary somewhat across all job openings in the county.

Education Levels In-Demand
Q4 2018

Education Level	Percent
High School or GED	21.56%
Associate's Degree	7.36%
Bachelor's Degree	31.40%
Master's Degree	7.39%
Ph.D. or Professional	1.06%

Data: Emsi | Analysis: Workforce Intelligence Network

The Q4 2018 unemployment rate of 3.2 percent in Oakland County was down 0.2 percentage points from Q3 2018.

Employment has grown somewhat since Q3 2018, while the labor force has fallen slightly. The growth in workers combined with the drop in labor force participants caused the quarterly unemployment rate to drop from 3.4 percent in Q3 2018 to 3.2 percent in Q4 2018 as fewer people looked for work. Unemployment was low in the county during 2018, even reaching an unemployment rate below 3.0 percent in April and May. For more information about this quarter's unemployment rate and other labor market indicators, see page 4.

Quarterly Labor Market Data

	3rd Quarter 2018	4th Quarter 2018	Change from 3rd Quarter 2018	Percent Change from 3rd Quarter 2018
Labor Force	667,438	667,204	-234	0.0%
Employment	644,886	645,666	780	0.1%
Unemployment	22,552	21,538	-1,014	-4.5%
Unemployment Rate	3.4%	3.2%	-0.2%	na

Note: Monthly data averaged by quarter | Data: BLS

WORKFORCE OVERVIEW
Oakland County | Labor Market Information Q4 2018

Labor Force, Employment, Unemployment Rate
1990-2018
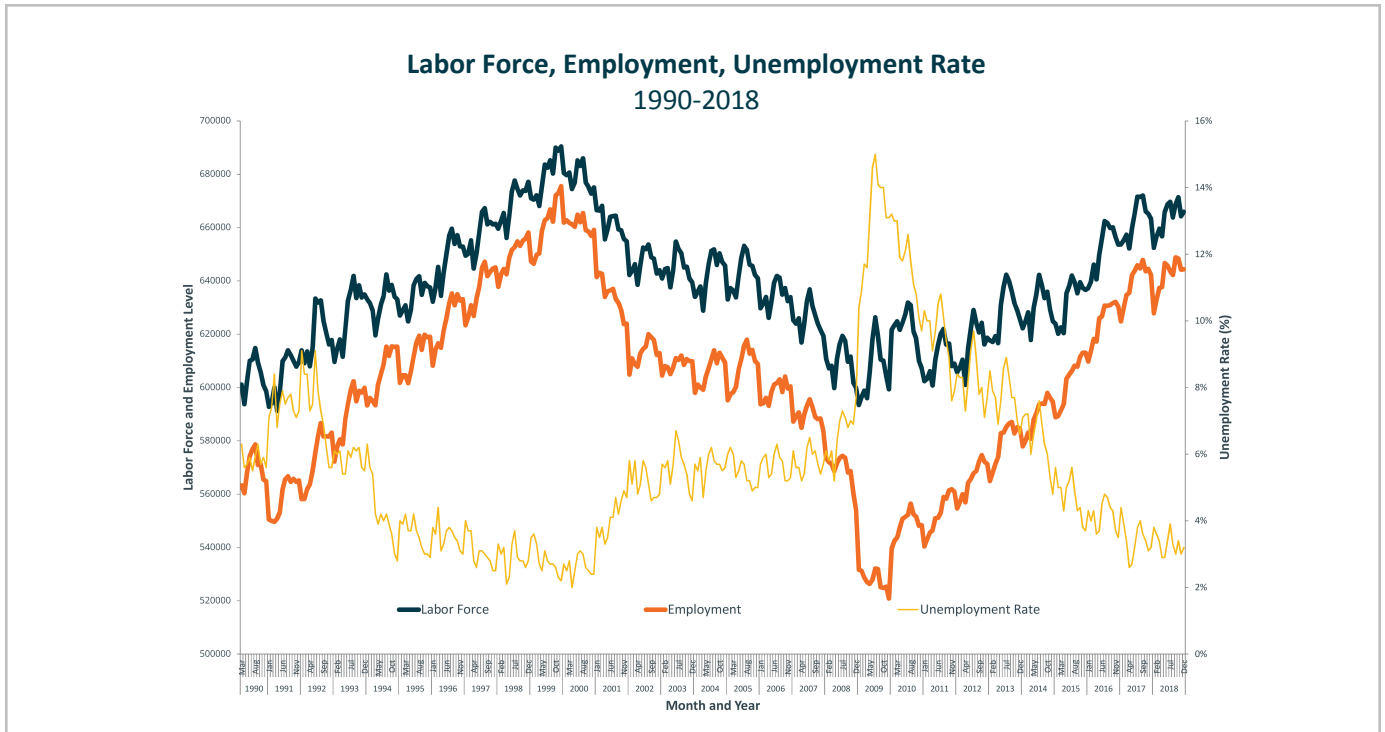
Data: BLS | Analysis: Workforce Intelligence Network

Quarterly Labor Market Data
Q4 2017 - Q4 2018

	4th Quarter 2017	1st Quarter 2018	2nd Quarter 2018	3rd Quarter 2018	4th Quarter 2018	Change from 3rd Quarter 2018	Percent Change from 3rd Quarter 2018	Change from 4th Quarter 2017	Percent Change from 4th Quarter 2017
Labor Force	664,853	654,518	663,724	667,438	667,204	-234	0.0%	2,351	0.4%
Employment	643,433	630,412	643,351	644,886	645,666	780	0.1%	2,233	0.3%
Unemployment	21,420	24,106	20,373	22,552	21,538	-1,014	-4.5%	118	0.6%
Unemployment Rate	3.2%	3.7%	3.1%	3.4%	3.2%	-0.2%	na	0.0%	na

Note: Monthly data averaged by quarter | Data: BLS

Labor Force, Employment, and Unemployment

The labor market in Oakland County has experienced relative stability since 2010. The labor force decreased by 234 workers (0.0 percent) between Q3 2018 and Q4 2018. Employment in the county increased from Q3 2018 values by 780 workers (0.1 percent). With employment increasing while the labor force decreased, the unemployment rate fell by 0.2 percentage points between Q3 2018 and Q4 2018 to 3.2 percent.

WORKFORCE OVERVIEW
Oakland County| 2017 Annual Population Demographics

Population Demographics

According to the data from the most recent Census Bureau 2017 ACS Five Year estimates, the population in Oakland increased by 0.5 percent between 2016 and 2017. During 2017, 1,241,860 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 (76 percent) with the second largest number of individuals identifying as black or African American (14 percent). The region as a whole is facing an aging population; 30 percent of population was over the age of 55, compared to 18 percent under the age of 14.

1,124,860
People in the Region
0.5% Increase
from 2016

Population Race Demographics

- White, 75.63%
- Black or African American, 13.72%
- Asian, 6.83%
- Two or More Races, 2.77%
- Other Race, 0.77%
- American Indian or Alaska Native, 0.26%
- Native Hawaiian or Other Pacific Islander, 0.02%
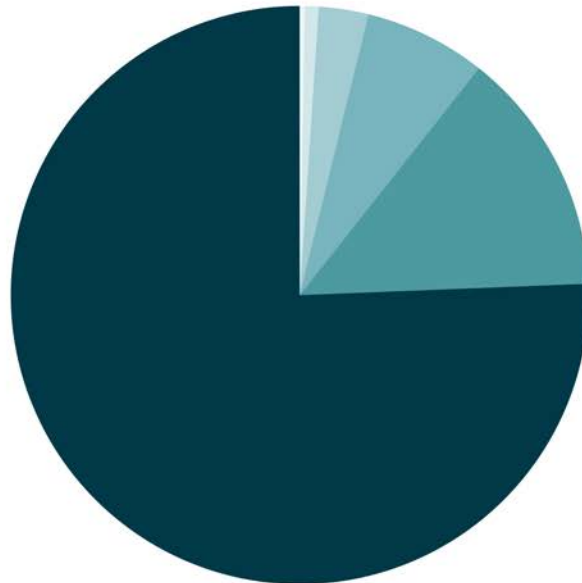
Population Gender Demographics

51% Females

49% Males

0 10 20 30 40 50 60 70 80 90 100

Population Age Demographics

| Age 14 and under 17.7% | Age 15-25 12.4% | Age 25-54 40.2% | Age 55+ 29.7% |

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

2017 Labor Force, Employment, and Unemployment Demographics

Civilian Labor Force by Demographic Group				
Demographic Group	**Civilian Labor Force**	**Total Employment**	**Total Unemployment**	**Unemployment Rate**
Total Population 16 +	665,386	629,202	35,265	5.3%
Sex				
Male 16+	351,580	332,807	18,773	5.3%
16-19	13,102	10,380	2,722	20.8%
20-24	30,652	27,268	3,384	11.0%
25-54	224,189	214,763	9,426	4.2%
55-64	63,063	60,628	2,435	3.9%
65 Plus	20,574	19,768	806	3.9%
Female 16+	313,542	296,744	16,798	5.4%
16-19	14,203	12,370	1,833	12.9%
20-24	28,626	25,496	3,130	10.9%
25-54	198,380	188,772	9,608	4.8%
55-64	56,317	54,508	1,809	3.2%
65 Plus	16,016	15,598	418	2.6%
Race				
White	509,146	485,231	23,930	4.7%
Black / African American	90,863	82,503	8,359	9.2%
Native American	1,800	1,699	103	5.7%
Asian	45,089	43,554	1,533	3.4%
Native Hawaiian / Pacific Islander	163	155	8	4.9%
Some Other Race	5,309	4,907	382	7.2%
Two or More Races	13,235	11,909	1,310	9.9%
Ethnicity				
Hispanic	23,303	21,420	1,794	7.7%

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

Labor Market Demographics

During 2017, the most recent census year, there were about 665,000 people in the labor force, meaning they were either working or looking for work, in Oakland County. Slightly more than half of the population of 1,241,860 individuals (54 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 20.8 percent. Black or African American job seekers also have a difficult time finding employment, facing an unemployment rate of 9.2 percent.

WORKFORCE OVERVIEW
Oakland County | 2018 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 2018, there were a total of 747,710 individuals working in Oakland County. A slight majority (51 percent or 378,017 workers) were male, while 49 percent (369,694 workers) of the workforce was female. Most of those working in the region were white, accounting for 73.8 percent of the workforce, while African American or black workers accounted for 15.8 percent of the workforce. Those identifying as having a Hispanic or Latino ethnicity accounted for 3.8 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 Oakland County.

Workforce Race and Ethnicity Demographics

- White, 73.82%
- Black or African American, 15.75%
- Asian, 4.92%
- Hispanic or Latino, 3.73%
- Two or More Races, 1.44%
- American Indian or Alaska Native, 0.29%
- Native Hawaiian or Other Pacific Islander, 0.04%
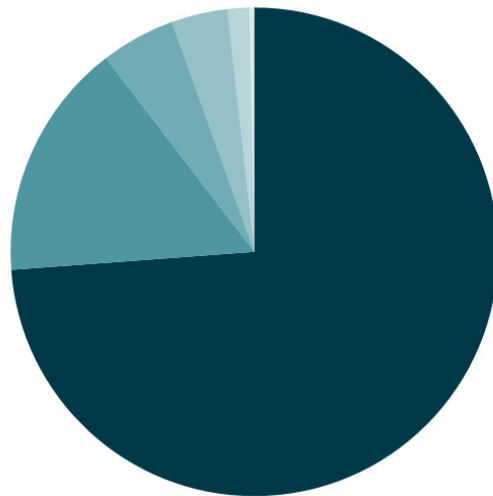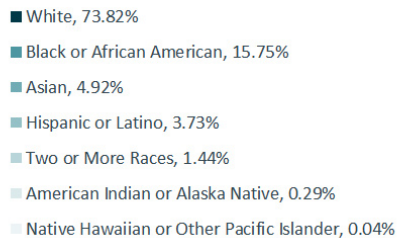
Workforce Gender Demographics

51% Males
49% Females

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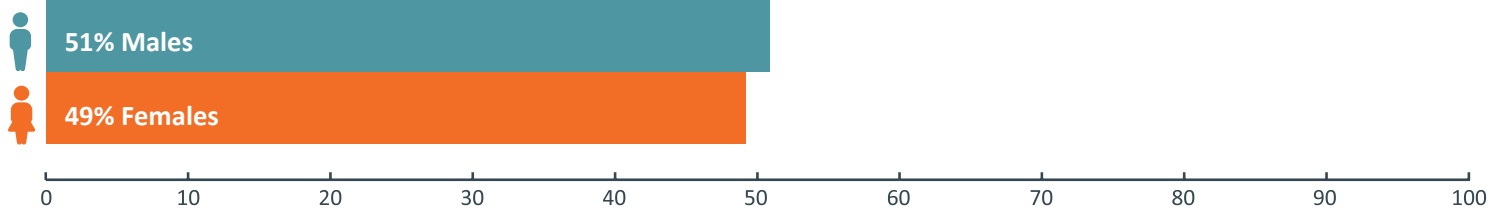
Workforce Age Demographics

Age 14-24 13.6% | Age 25-54 65.3% | Age 55+ 21.1%

Data: Emsi | Analysis: Workforce Intelligence Network

WORKFORCE OVERVIEW
Oakland County | 2015 Regional Commuting Patterns

Regional Commuting Patterns

According to the most recent OnTheMap data set available from the Census Bureau, during 2015, the county's workforce consisted of 547,430 residents. 312,652 (57.1 percent) of the residents lived and worked within the county, while the remaining 234,778 residents (42.9 percent) traveled outside of the region for work. There were 687,465 workers employed in the region during 2015. Of those, 374,816 workers (54.5 percent) lived outside of the region's borders and commuted in. From this information, we can see that the Oakland is a net importer of jobs, with more workers entering the area for employment than outwardly commuting.

Where Oakland County Residents Work

Location	Percent
Oakland	57.1%
Wayne	20.7%
Macomb	9.1%
Washtenaw	2.5%
Genesee	1.9%
Livingston	1.4%
Ingham	1.2%
Kent	1.0%
Saginaw	0.4%
Monroe	0.3%
All Other Locations	4.5%

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

Where Oakland County Workers Live

Location	Percent
Oakland	45.5%
Wayne	19.4%
Macomb	15.7%
Genesee	3.1%
Livingston	2.6%
Washtenaw	1.9%
St. Clair	1.5%
Lapeer	1.4%
Kent	1.0%
Ingham	0.9%
All Other Locations	7.0%

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

374,813 LIVE OUTSIDE OF OAKLAND COUNTY AND COMMUTE IN

312,652 LIVE AND WORK IN OAKLAND COUNTY

234,778 LIVE IN OAKLAND COUNTY AND COMMUTE OUT

REAL-TIME DEMAND OVERVIEW
Oakland County | Top Posted Jobs | Q4 2018

Top Posted Jobs
Q4 2018

Occupation	Postings
Heavy and Tractor-Trailer Truck Drivers	5,139
Retail Salespersons	3,531
Mechanical Engineers	3,021
First-Line Supervisors of Retail Sales Workers	2,987
Software Developers, Applications	2,871
Customer Service Representatives	2,668
Registered Nurses	2,601
Industrial Engineers	2,318
Computer Occupations, All Other	1,918
Light Truck or Delivery Services Drivers	1,569
First-Line Supervisors of Office and Administrative Support Workers	1,374
Accountants and Auditors	1,309
Sales Managers	1,262
Stock Clerks and Order Fillers	1,188
Combined Food Preparation and Serving Workers, Including Fast Food	1,178
First-Line Supervisors of Food Preparation and Serving Workers	1,108
Software Developers, Systems Software	1,106
Computer User Support Specialists	1,094
Maintenance and Repair Workers, General	1,083
Electrical Engineers	1,015

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

Top Posted Jobs: Q4 2018

Heavy and Tractor-Trailer Truck Drivers were the highest in-demand occupation for the fourth quarter of 2018, with 5,139 online job postings. Of the top five overall in-demand occupations, only Software Developers, Applications typically requires a bachelor's degree for entry. Median wages for Software Developers are nearly $25 more per hour than the other top jobs. Customer service occupations are also in high demand, with First-Line Supervisors of Retail Sales Workers (2,987 postings) and Retail Salespersons (3,531 postings) also featured in the top five. Several engineering roles are featured within the top 10 in Oakland county, and perennial top occupation Registered Nurses has fallen to the number 7 spot.

REAL-TIME DEMAND OVERVIEW
Oakland County | Top Posted Entry-Level Jobs | Q4 2018

Top Posted Entry-Level Jobs
Q4 2018

Occupation	Postings
Registered Nurses	1,295
First-Line Supervisors of Retail Sales Workers	1,107
Mechanical Engineers	882
Customer Service Representatives	767
Heavy and Tractor-Trailer Truck Drivers	732
Software Developers, Applications	731
Retail Salespersons	612
Industrial Engineers	551
Computer User Support Specialists	448
First-Line Supervisors of Office and Administrative Support Workers	439
Computer Occupations, All Other	396
Accountants and Auditors	387
Software Developers, Systems Software	371
Taxi Drivers and Chauffeurs	340
Business Operations Specialists, All Other	317
Bookkeeping, Accounting, and Auditing Clerks	314
Securities, Commodities, and Financial Services Sales Agents	300
Sales Representatives, Services, All Other	298
Maintenance and Repair Workers, General	286
Computer Systems Analysts	279

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

Top Posted Entry-Level Jobs: Q4 2018

These entry-level jobs represent the top posted occupations requiring zero to two years of previous work experience. Many of these occupations require training, some college, or an associate degree, with IT and business roles well-represented. Those who enter the workforce with a bachelor's degree can expect entry wages nearly double those with fewer years of education. Registered Nurses were the top posted entry-level job with about 1,300 postings in Q4 2018.

Data: Emsi
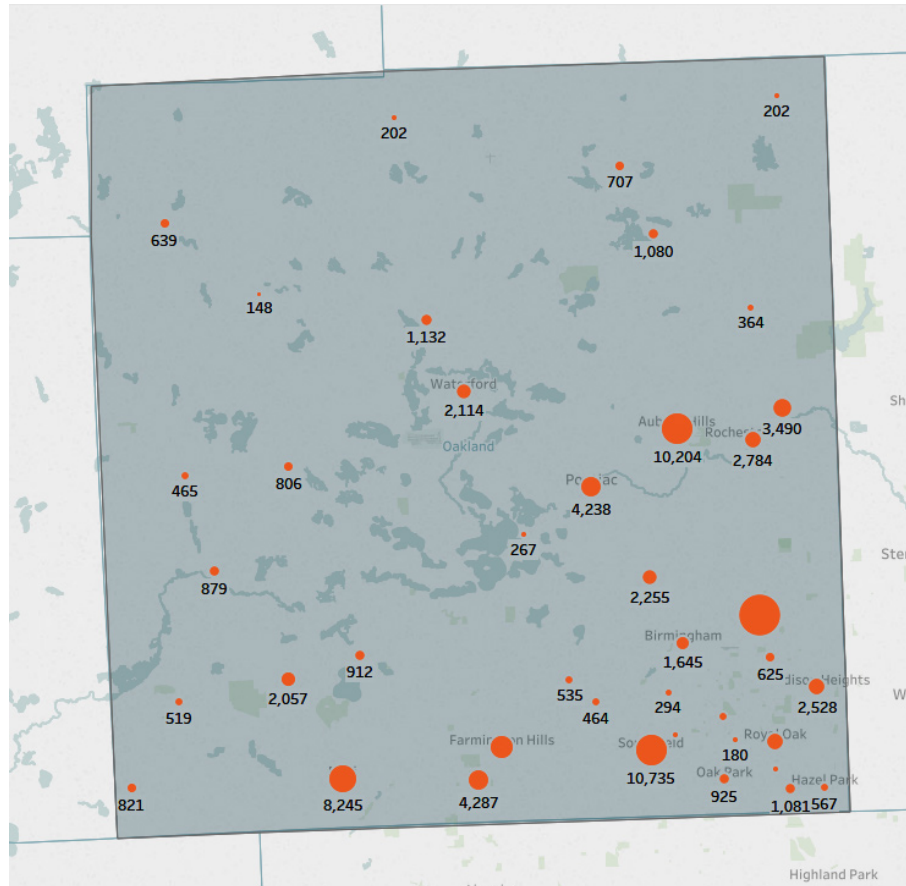*Analysis: Workforce Intelligence Network*

REAL-TIME DEMAND OVERVIEW
Oakland County | Job Postings by City | Q4 2018

Job Postings by City
Q4 2018

Map based on Longitude (generated) and Latitude (generated). Size shows sum of Unique Postings (Oct 2018–Dec 2018). Details are shown for City.

Top In-Demand Qualifications

- Commercial Driver's License (CDL)
- Certified Nursing Assistant
- Licensed Practical Nurse
- CompTIA Security+
- Certified Public Accountant
- Patient Care Technician
- Nurse Practitioner
- Radiologic Technologist
- American Registry of Radiologic Technologists (ARRT) Certified
- Certified Medical Assistant

Top In-Demand Skills

- Merchandising
- Selling Techniques
- Accounting
- Restaurant Operation
- Nursing
- Customer Satisfaction
- Customer Experience
- Purchasing
- Automotive Industry
- Electrical Engineering

Top Posting Employers*

- Oracle Corporation
- William Beaumont Hospital
- FCA US LLC
- Shipt LLC
- Robert Half International Inc.
- Kelly Services, Inc.
- Ascension Health
- Endevis, L.L.c
- The Home Depot Inc
- J.B. Hunt Transport Services, Inc.
- CVS Health Corporation

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

BUSINESS AND FINANCE OCCUPATION GROUP
## Oakland County| Q4 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.

69,411
Business Workers

0.8% Increase from 2017

Employment Over Time
2001–2018
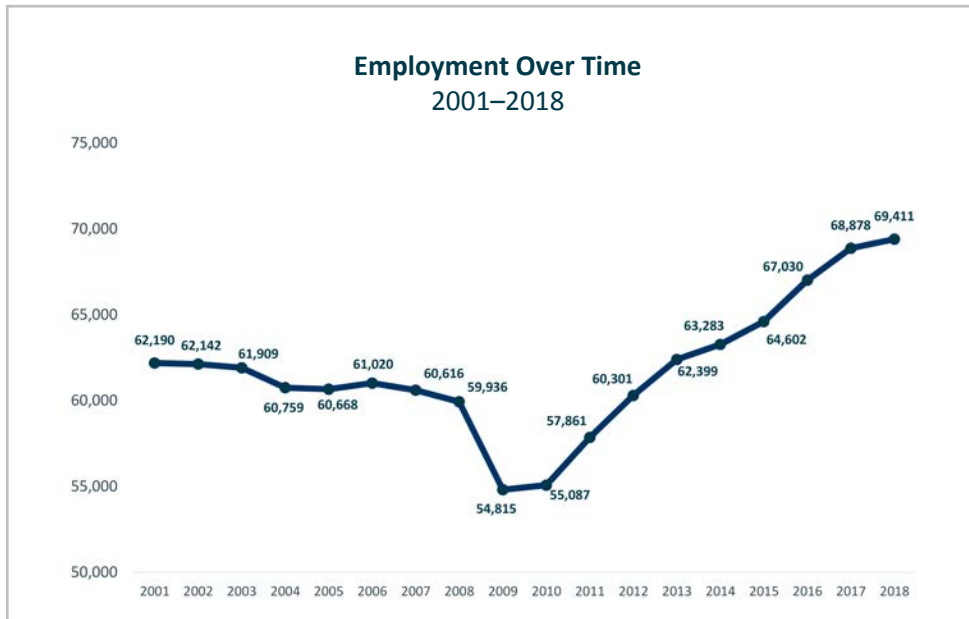
Worker Gender Demographics
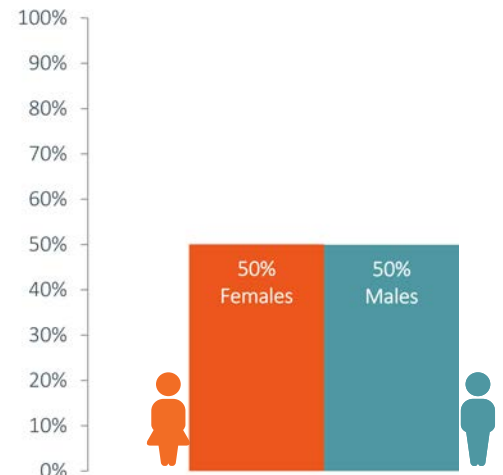
Business and Finance Worker Demographics

According to the most recent Emsi data set available (2018), the business and finance occupation group is a relatively diverse occupation group with respect to its nearly 70,000 workers. Half the working population identify as female (50 percent). In addition, 81 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

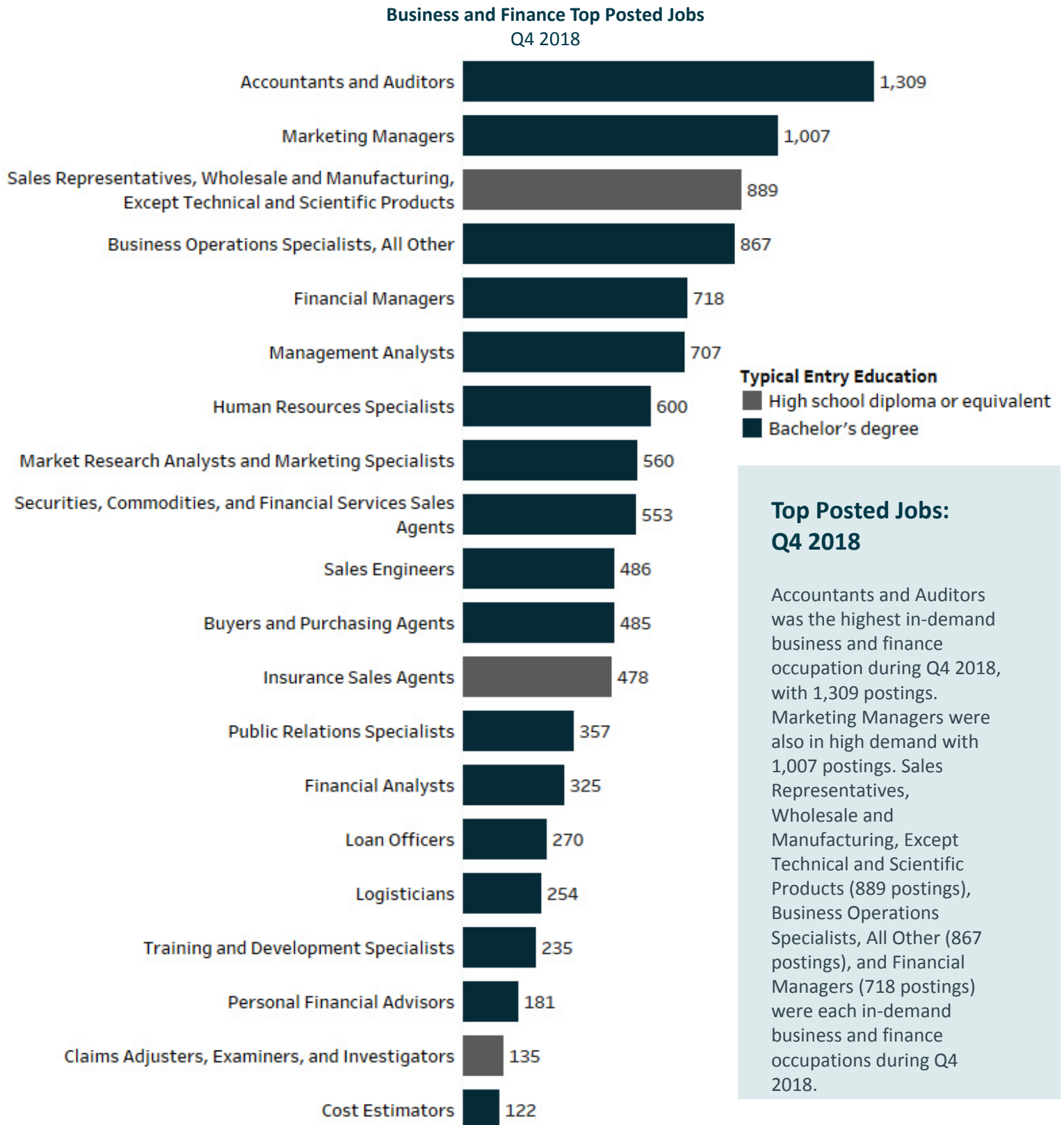**81.1% White | 10.2% Black or African American | 5.0% Asian**

Worker Age Demographics

Age 14-24 5.2%	Age 25-54 72.4%	Age 55+ 22.4%

Data: Emsi | Analysis: Workforce Intelligence Network

Bachelor's Degree Required for
Most Business and Finance Jobs

Business and Finance Top Posted Jobs
Q4 2018

Job	Postings
Accountants and Auditors	1,309
Marketing Managers	1,007
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	889
Business Operations Specialists, All Other	867
Financial Managers	718
Management Analysts	707
Human Resources Specialists	600
Market Research Analysts and Marketing Specialists	560
Securities, Commodities, and Financial Services Sales Agents	553
Sales Engineers	486
Buyers and Purchasing Agents	485
Insurance Sales Agents	478
Public Relations Specialists	357
Financial Analysts	325
Loan Officers	270
Logisticians	254
Training and Development Specialists	235
Personal Financial Advisors	181
Claims Adjusters, Examiners, and Investigators	135
Cost Estimators	122

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

Top Posted Jobs:
Q4 2018

Accountants and Auditors was the highest in-demand business and finance occupation during Q4 2018, with 1,309 postings. Marketing Managers were also in high demand with 1,007 postings. Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products (889 postings), Business Operations Specialists, All Other (867 postings), and Financial Managers (718 postings) were each in-demand business and finance occupations during Q4 2018.

High Earning Potential for Marketing Managers

CPA: In-Demand Business and Finance Certification

Business and Finance Wage Overview

Most business and finance related jobs offer high wages, providing 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 $35.76, translating to annual earnings of approximately $74,000.

Wage Overview for Top Posted Business and Finance Jobs in Q4 2018

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
13-2011	Accountants and Auditors	$22.07	$27.02	$35.76	$49.77	$67.28
11-2021	Marketing Managers	$35.83	$45.39	$61.16	$79.71	$124.43
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	$14.43	$22.14	$32.61	$48.72	$66.70
13-1199	Business Operations Specialists, All Other	$18.30	$25.29	$35.65	$48.21	$60.37
11-3031	Financial Managers	$37.65	$47.63	$61.37	$80.83	$130.64
13-1111	Management Analysts	$25.43	$32.17	$44.45	$60.56	$93.24
13-1071	Human Resources Specialists	$17.96	$22.78	$29.81	$38.96	$50.25
13-1161	Market Research Analysts and Marketing Specialists	$14.29	$21.14	$30.73	$42.69	$58.17
41-3031	Securities, Commodities, and Financial Services Sales Agents	$16.56	$19.12	$25.50	$42.67	$107.23
41-9031	Sales Engineers	$32.24	$40.61	$50.74	$61.63	$75.00

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills
- Accounting
- Auditing
- Business Development
- Financial Statements
- Selling Techniques

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

In-Demand Education Level*
- High School Diploma: 12.3%
- Associate Degree: 4.9%
- Bachelor's Degree: 56.8%
- Master's Degree: 12.9%

*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
- Certified Public Accountant
- Series 7 General Securities Representative License
- Series 6 Investment Company and Variable Contracts License (Mutual Funds/Variable Annuities)
- Certified Financial Planner
- Series 66 Uniform Investment Adviser: Combined State Laws License (Combined 63 And 65)

Banks and Financial Corporations Seeking Business and Finance Workers

Accounting and Auditing Skills are in High Demand
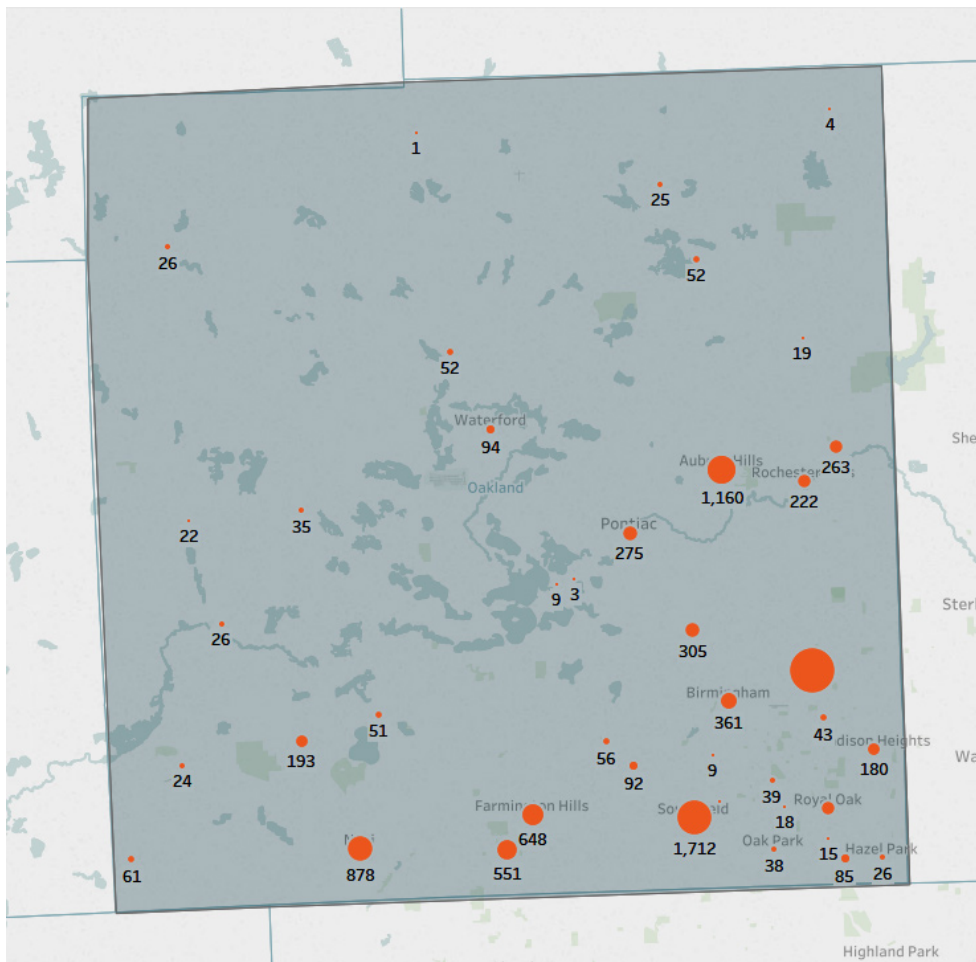
Map based on Longitude (generated) and Latitude (generated).
Size shows sum of Unique Postings (Oct 2018–Dec 2018). Details are shown for City.

Top Job Posting Employers*

- Oracle Corporation
- Robert Half International Inc.
- FCA US LLC
- State Farm Insurance
- JPMorgan Chase & Co.
- Bank of America Corporation
- Kelly Services, Inc.
- Huntington Bancshares Incorporated
- Flagstar Bancorp, Inc.
- Comerica Incorporated

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

Job Postings by City

1. Troy, MI: 2,930 Postings
2. Southfield, MI: 1,712 Postings
3. Auburn Hills, MI: 1,160 Postings
4. Novi, MI: 878 Postings
5. Farmington Hills, MI: 648 Postings

HEALTH CARE OCCUPATION GROUP
## Oakland County | Q4 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.

69,478
Health Care Workers
0.7% Increase from 2017

Employment Over Time
2001–2018

Worker Gender Demographics

80% Females
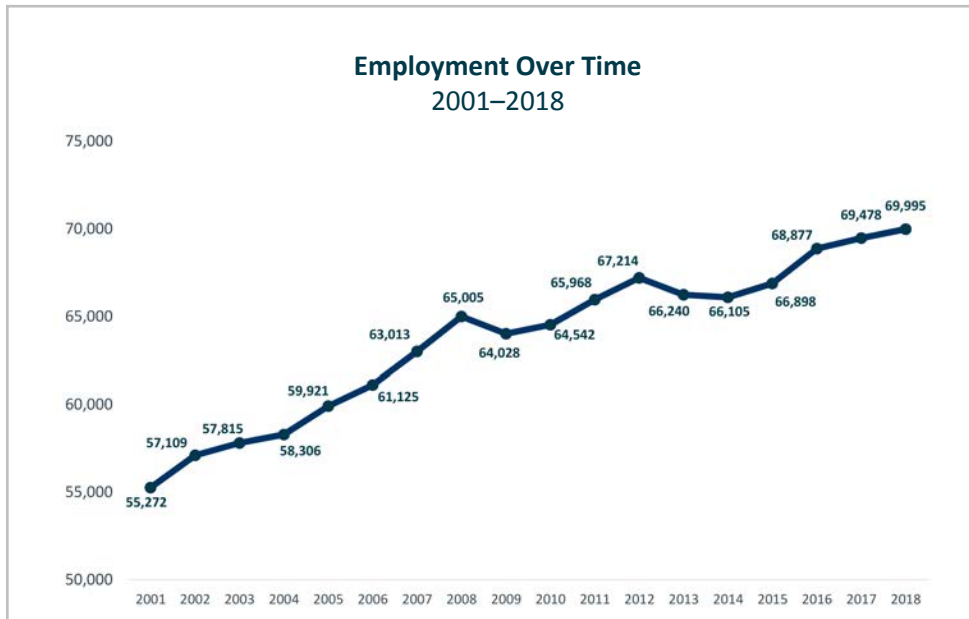
20% Males
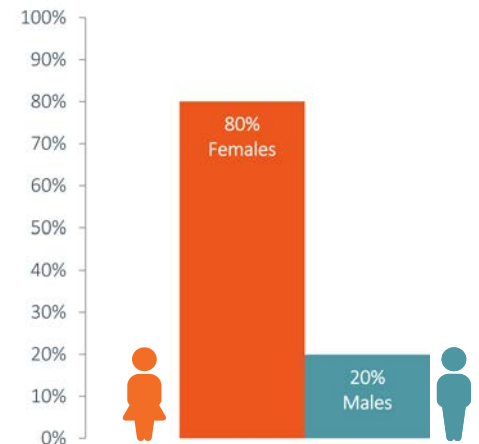
Health Care Worker Demographics

According to the most recent Emsi data set available (2018), the Health Care occupation group employs around 70,000 workers, who are primarily female (80 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 | 19.7% Black or African American | 6.5% Asian
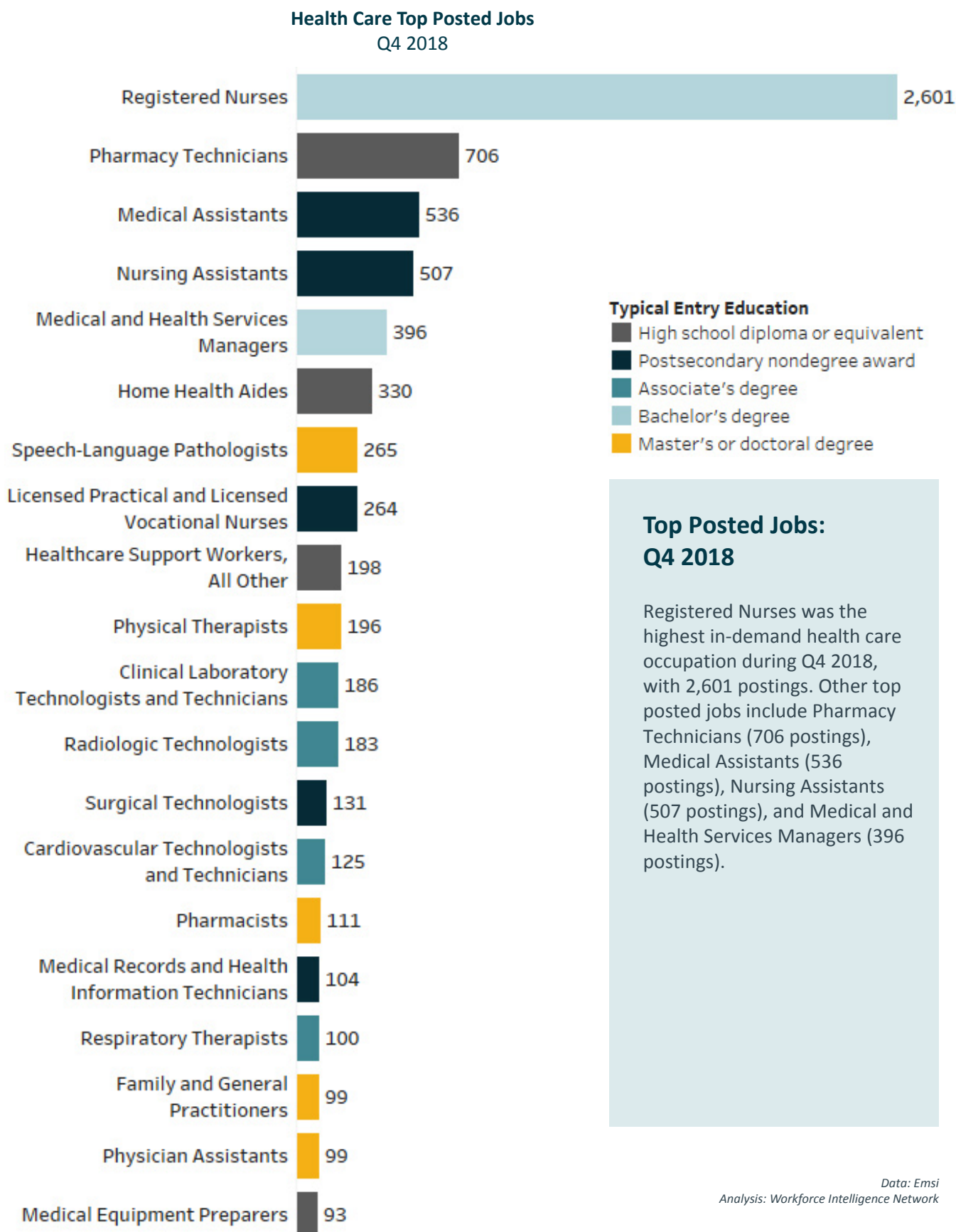
Worker Age Demographics

Age 14-24 8.6%	Age 25-54 70.1%	Age 55+ 21.3%

Data: Emsi | Analysis: Workforce Intelligence Network

**8,731 Health Care Postings:
1,340 More than Q3 2018**

**Bachelor's Degree Required for
High Paying Health Care Jobs**

Health Care Top Posted Jobs
Q4 2018

Job	Postings
Registered Nurses	2,601
Pharmacy Technicians	706
Medical Assistants	536
Nursing Assistants	507
Medical and Health Services Managers	396
Home Health Aides	330
Speech-Language Pathologists	265
Licensed Practical and Licensed Vocational Nurses	264
Healthcare Support Workers, All Other	198
Physical Therapists	196
Clinical Laboratory Technologists and Technicians	186
Radiologic Technologists	183
Surgical Technologists	131
Cardiovascular Technologists and Technicians	125
Pharmacists	111
Medical Records and Health Information Technicians	104
Respiratory Therapists	100
Family and General Practitioners	99
Physician Assistants	99
Medical Equipment Preparers	93

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 2018**

Registered Nurses was the highest in-demand health care occupation during Q4 2018, with 2,601 postings. Other top posted jobs include Pharmacy Technicians (706 postings), Medical Assistants (536 postings), Nursing Assistants (507 postings), and Medical and Health Services Managers (396 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 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. These jobs that require less than a bachelor's degree pay more than the region's median wage of $17.81 per hour. Registered Nurses, the top posted health care job in Q4 2018, offers a median hourly wage of $35.22 per hour or annual salary of about $73,000 according to the Bureau of Labor Statistics (BLS).

Wage Overview for Top Posted Health Care Jobs in Q4 2018

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
29-1141	Registered Nurses	$26.57	$30.46	$35.22	$39.58	$47.00
29-2052	Pharmacy Technicians	$10.84	$13.10	$16.23	$19.43	$27.67
31-9092	Medical Assistants	$12.40	$13.59	$15.23	$17.88	$19.93
31-1014	Nursing Assistants	$11.03	$12.79	$14.33	$16.16	$18.47
11-9111	Medical and Health Services Managers	$26.96	$34.48	$45.39	$59.15	$88.11
31-1011	Home Health Aides	$9.41	$9.92	$11.17	$12.50	$14.65
29-1127	Speech-Language Pathologists	$26.54	$30.91	$40.49	$48.49	$67.88
29-2061	Licensed Practical and Licensed Vocational Nurses	$20.70	$22.75	$26.07	$29.32	$31.28
31-9099	Healthcare Support Workers, All Other	$11.25	$13.10	$15.84	$19.18	$21.98
29-1123	Physical Therapists	$30.02	$36.06	$43.70	$50.56	$68.89

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills
- Nursing
- Health Sciences
- Basic Life Support
- Nursing Care
- Clinical Works

In-Demand Foundational Skills
- Management
- Leadership
- Communications
- Cardiopulmonary Resuscitation
- Operation

In-Demand Education Level*
- High School Diploma: 27.9%
- Associate Degree: 22.8%
- Bachelor's Degree: 24.4%
- Master's Degree: 7.8%

Not all job postings indicate the required educational attainment level, therefore the percentages found here may not add up to 100 percent
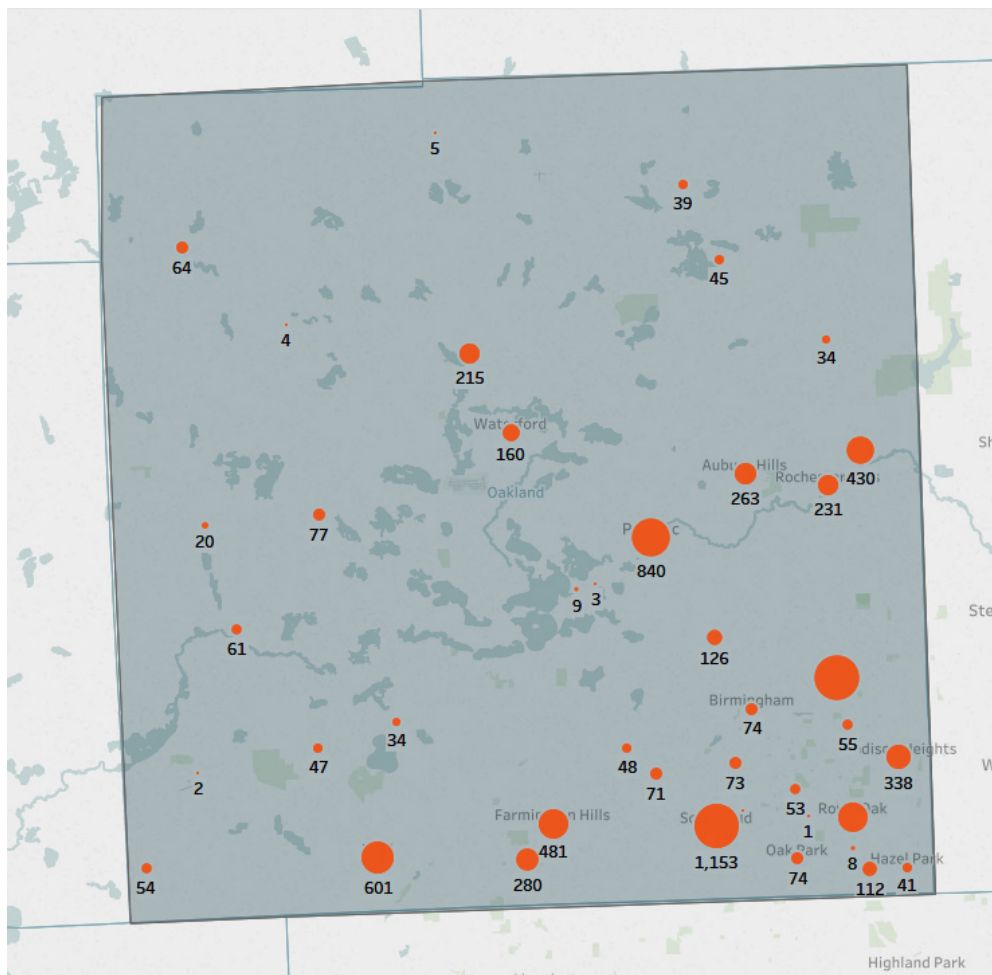
In-Demand Certifications
- Certified Nursing Assistant
- Licensed Practical Nurse
- CompTIA Security+
- Patient Care Technician
- Nurse Practitioner

Hospitals and Pharmacies were Top Employers of Health Care Workers

Nursing and Management Skills are in High Demand

Map based on Longitude (generated) and Latitude (generated).
Size shows sum of Unique Postings (Oct 2018–Dec 2018). Details are shown for City.

Top Posting Employers*

- William Beaumont Hospital
- Ascension Health
- Henry Ford Health System
- CVS Health Corporation
- Manor Care, Inc.
- Trinity Health Corporation
- Walgreens Boots Alliance, Inc.
- Tenet Healthcare Corporation
- Soliant Health, Inc
- Sunbelt Staffing, LLC

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

Job Postings by City

1. Troy, MI: 1,171 Postings
2. Southfield, MI: 1,153 Postings
3. Pontiac, MI: 840 Postings
4. Novi, MI: 601 Postings
5. Royal Oak, MI: 503 Postings

# INFORMATION TECHNOLOGY (IT) OCCUPATION GROUP
Oakland County | Q4 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.

35,343
IT Workers

0.3% Increase from 2017

Employment Over Time
2001–2018

Worker Gender Demographics

74% Males
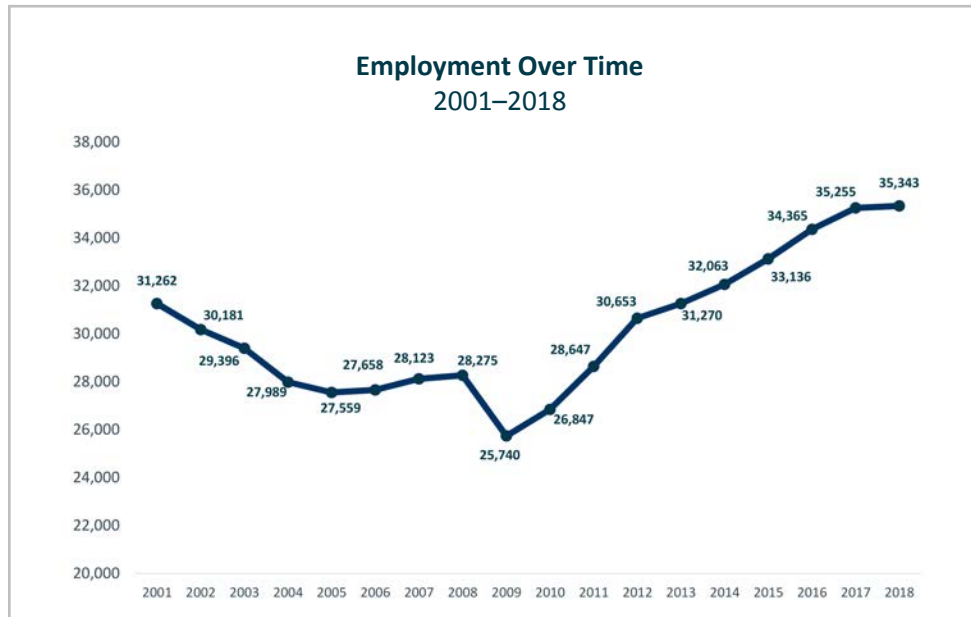
26% Females
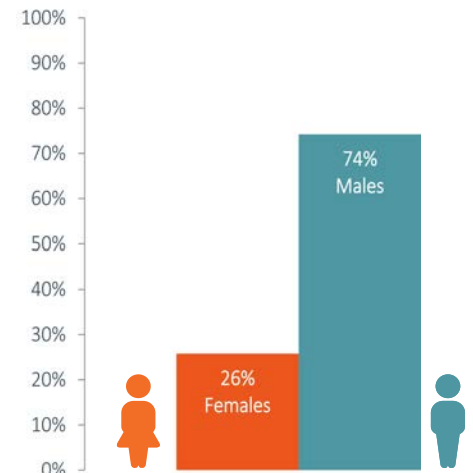
IT Worker Demographics

According to the most recent Emsi data set available (2018), the over 35,000 workers in the IT occupation group are primarily white males between the ages of twenty-five and fifty-four. Currently, 74 percent of workers identify as male, and 64 percent identify as white. 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

64.4% White | 9.2% Black or African American | 22.8% Asian

Population Age Demographics

Age 14-24
5.0%

Age 25-54
80.5%

Age 55+
14.5%

Data: Emsi | Analysis: Workforce Intelligence Network
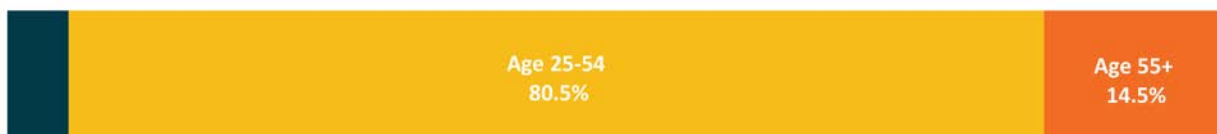
10,627 IT Postings:
1,318 More than in Q3 2018

Bachelors Degree
Required for Most IT Jobs

Information Technology Top Posted Jobs
Q4 2018

Job Title	Postings
Software Developers, Applications	2,871
Computer Occupations, All Other	1,918
Software Developers, Systems Software	1,106
Computer User Support Specialists	1,094
Computer Systems Analysts	885
Network and Computer Systems Administrators	802
Web Developers	690
Computer and Information Systems Managers	347
Information Security Analysts	321
Computer Programmers	300
Database Administrators	180
Computer and Information Research Scientists	57
Computer Network Architects	49
Computer Network Support Specialists	7

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

Top Posted Jobs: Q4 2018

Software Developers, Applications were the highest in-demand IT occupation during Q4 2018, with 2,871 postings. While most of the top jobs typically posted requirements for a bachelor's degree, one of the top five, Computer User Support Specialists, typically requires only some college coursework.

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 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 2018, offers a median hourly wage of $43.86 per hour or about $91,000 per year according to the Bureau of Labor Statistics (BLS).

Wage Overview for Top Posted IT Jobs in Q4 2018

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
15-1132	Software Developers, Applications	$27.04	$34.75	$43.86	$54.01	$62.18
15-1199	Computer Occupations, All Other	$19.61	$25.42	$36.65	$49.07	$60.01
15-1133	Software Developers, Systems Software	$22.88	$32.14	$42.31	$52.54	$62.86
15-1151	Computer User Support Specialists	$15.01	$18.41	$24.29	$30.89	$40.66
15-1121	Computer Systems Analysts	$24.99	$32.49	$42.15	$50.85	$61.33
15-1142	Network and Computer Systems Administrators	$25.98	$32.57	$41.07	$50.41	$60.03
15-1134	Web Developers	$19.02	$26.47	$34.01	$43.23	$49.38
11-3021	Computer and Information Systems Managers	$41.36	$52.42	$64.00	$78.06	$97.44
15-1122	Information Security Analysts	$27.61	$32.60	$43.85	$55.88	$65.61
15-1131	Computer Programmers	$22.13	$28.16	$34.53	$41.54	$48.00

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills
- Software Engineering
- SQL (Programming Language)
- Software Development
- Java (Programming Language)
- Agile Software Development

In-Demand Foundational Skills
- Management
- Communications
- Integration
- Information Technology
- Infrastructure

In-Demand Education Level*
- High School Diploma: 4.7%
- Associate Degree: 3.6%
- Bachelor's Degree: 61.3%
- Master's Degree: 16.4%

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
- Certified Information Systems Security Professional (CISSP)
- Microsoft Certified Professional
- Cisco Certified Network Associate
- CompTIA Security+
- 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 Oct 2018–Dec 2018). Details are shown for City.

Top Posting Employers*

- Oracle Corporation
- Endevis, L.L.c
- FCA US LLC
- Comerica Incorporated
- Cybercoders, Inc.
- V2soft Inc.
- ALTAIR ENGINEERING, INC.
- Aptiv Corporation
- Flagstar Bancorp, Inc.
- Systems Technology Group, Inc

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

Job Postings by City

1. Troy, MI: 3,112 Postings
2. Auburn Hills, MI: 1,871 Postings
3. Southfield, MI: 1,670 Postings
4. Farmington Hills, MI: 932 Postings
5. Farmington, MI: 747 Postings

SKILLED TRADES AND TECHNICIANS (MANUFACTURING) OCCUPATION GROUP
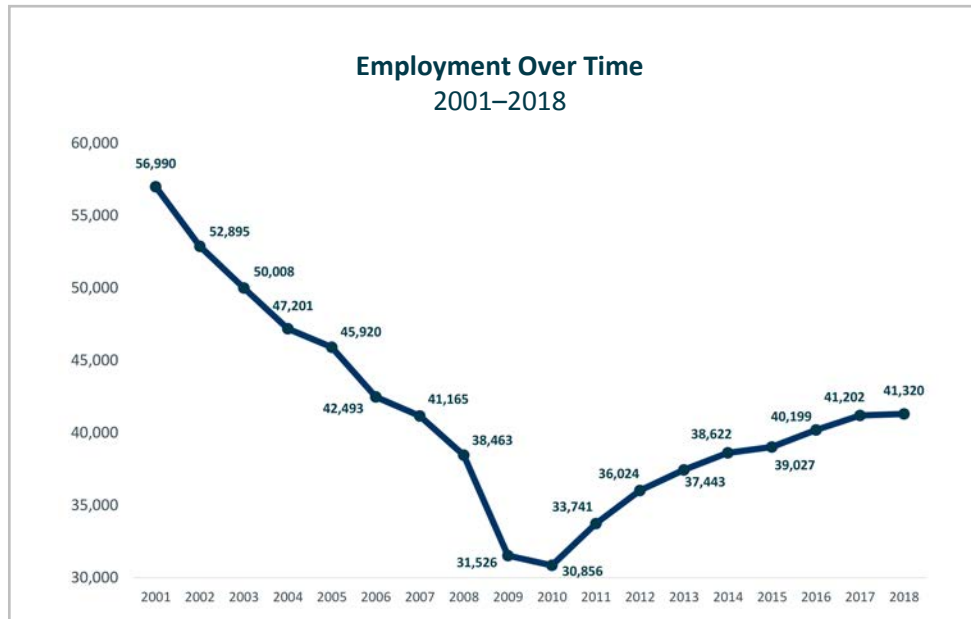## Oakland County | Q4 2018

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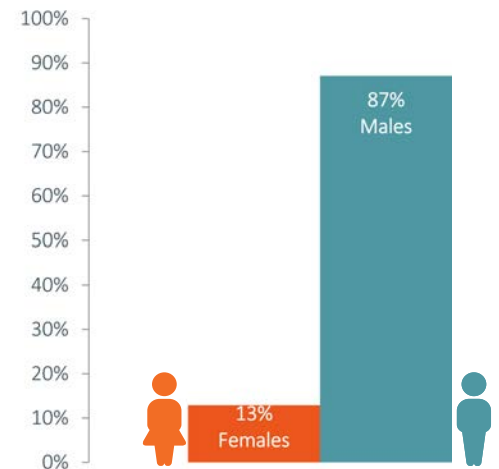
NOTE: Skilled trades related to construction and assembly are not included in this cluster, as the focus is on advanced manufacturing only.

41,320
Trade Workers

0.3% Increase from 2017

Employment Over Time
2001–2018

Worker Gender Demographics

87% Males

13% Females

Skilled Trades and Technicians Worker Demographics

According to the most recent Emsi data set available (2018), the Skilled Trades occupation group employs about 41,000 workers in Oakland County. 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 25.3 percent, the group has a somewhat higher proportion than average of workers over age 55.

Race and Ethnicity Demographics
79.2% White | 12.1% Black or African American | 3.3% Asian

Worker Age Demographics

Age 14-24 6.9%	Age 25-54 67.8%	Age 55+ 25.3%

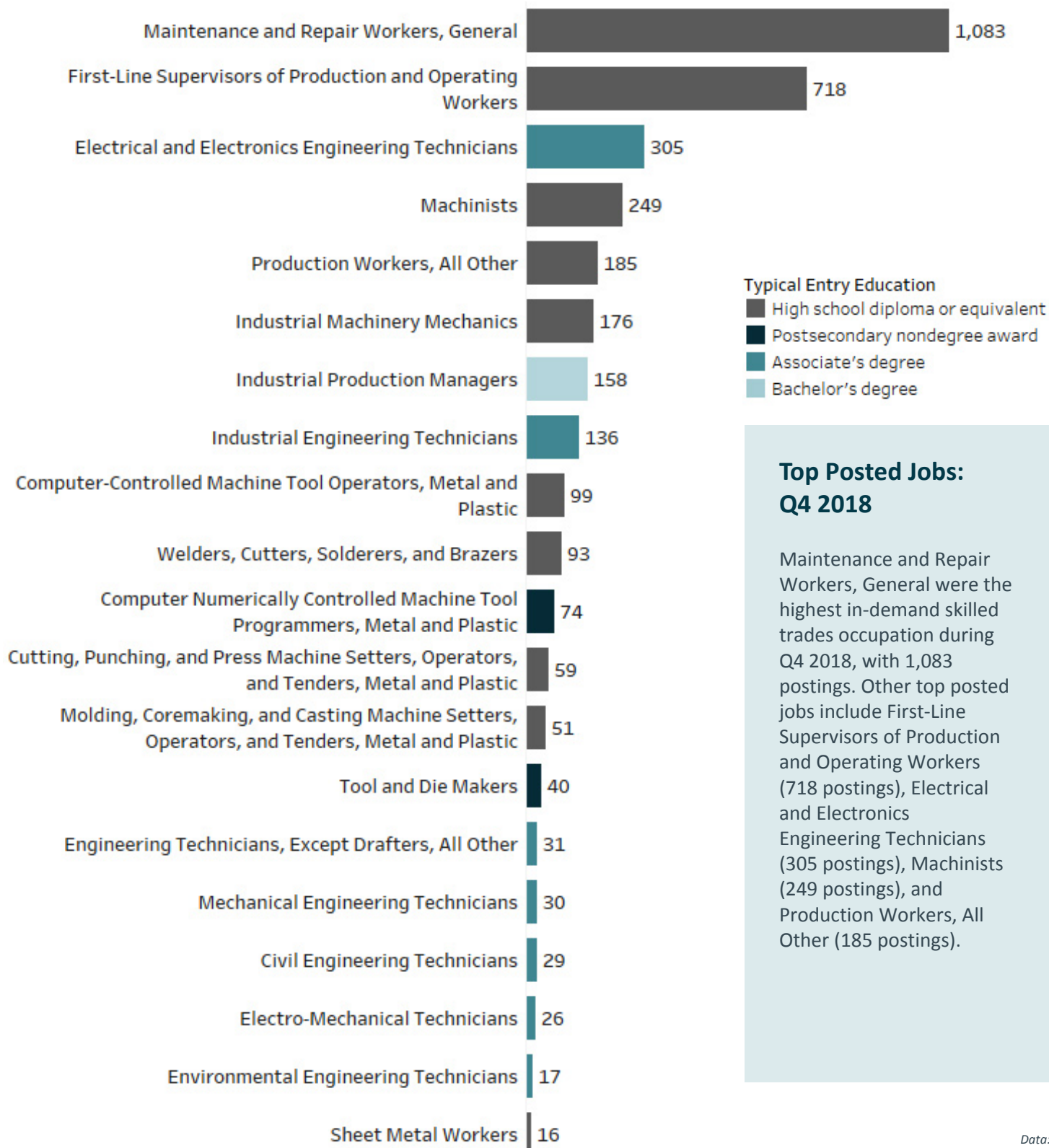*Data: Emsi | Analysis: Workforce Intelligence Network*

**3,664 Skilled Trades Postings:
108 Fewer than in Q3 2018**

**Vocational Training Required
for Most Skilled Trades Jobs**

Skilled Trades and Technicians Top Posted Jobs
Q4 2018

Job	Postings
Maintenance and Repair Workers, General	1,083
First-Line Supervisors of Production and Operating Workers	718
Electrical and Electronics Engineering Technicians	305
Machinists	249
Production Workers, All Other	185
Industrial Machinery Mechanics	176
Industrial Production Managers	158
Industrial Engineering Technicians	136
Computer-Controlled Machine Tool Operators, Metal and Plastic	99
Welders, Cutters, Solderers, and Brazers	93
Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	74
Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	59
Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	51
Tool and Die Makers	40
Engineering Technicians, Except Drafters, All Other	31
Mechanical Engineering Technicians	30
Civil Engineering Technicians	29
Electro-Mechanical Technicians	26
Environmental Engineering Technicians	17
Sheet Metal Workers	16

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

Top Posted Jobs: Q4 2018

Maintenance and Repair Workers, General were the highest in-demand skilled trades occupation during Q4 2018, with 1,083 postings. Other top posted jobs include First-Line Supervisors of Production and Operating Workers (718 postings), Electrical and Electronics Engineering Technicians (305 postings), Machinists (249 postings), and Production Workers, All Other (185 postings).

*Data: Emsi
Analysis: Workforce Intelligence Network*

Skilled Trades and Technicians Wage Overview

Eight of the top ten in-demand skilled trades occupations 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 Q4 2018, offers a median hourly wage of $17.52, which translates to an annual salary of about $36,000.

Wage Overview for Top Posted Skilled Trades and Technicians Jobs in Q4 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	$11.53	$14.02	$17.52	$23.25	$29.81
51-1011	First-Line Supervisors of Production and Operating Workers	$19.89	$25.39	$33.57	$43.51	$54.42
17-3023	Electrical and Electronics Engineering Technicians	$17.36	$21.72	$28.90	$34.72	$41.29
51-4041	Machinists	$14.08	$18.07	$23.21	$28.72	$32.96
51-9199	Production Workers, All Other	$10.98	$16.16	$19.76	$24.21	$35.71
49-9041	Industrial Machinery Mechanics	$16.88	$21.71	$27.44	$33.99	$41.76
11-3051	Industrial Production Managers	$37.90	$47.40	$59.37	$73.91	$94.02
17-3026	Industrial Engineering Technicians	$19.32	$23.13	$27.71	$34.44	$40.73
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	$14.47	$17.58	$22.86	$26.90	$32.27
51-4121	Welders, Cutters, Solderers, and Brazers	$14.75	$17.78	$20.92	$25.54	$30.72

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills
- Continuous Improvement Process
- Machining
- HVAC
- Plumbing
- Lathes

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

In-Demand Education Level*
- High School Diploma: 37.7%
- Associate Degree: 11.4%
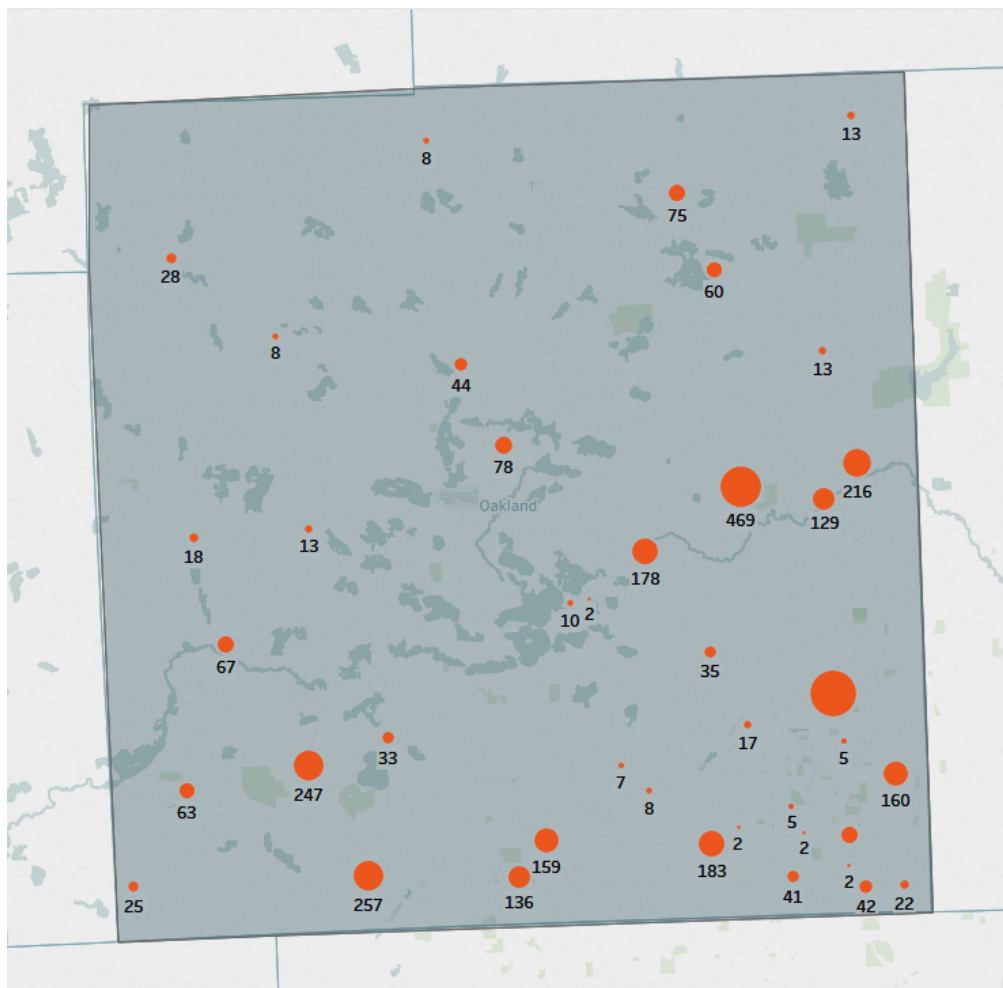- Bachelor's Degree: 14.7%
- Master's Degree: 2.0%

*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 Residential Specialist
- Operator Certification
- Certified Quality Engineer
- CompTIA Security+

Staffing Agencies and Manufacturers: Top Employers of Skilled Trades Workers

Continuous Improvement Process and Management Skills are in High Demand

Map based on Longitude (generated) and Latitude (generated).
Size shows sum of Unique Postings (Oct 2018–Dec 2018). Details are shown for City.

Top Posting Employers*

- McDonald's Corporation
- Express Services Inc
- Kelly Services, Inc.
- Shipt LLC
- American Axle & Manufacturing, Inc.
- Aerotek, Inc.
- Job Juncture, Inc
- Sentech Services
- The Home Depot Inc
- Start

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

Job Postings by City

1. Troy, MI: 600 Postings
2. Auburn Hills, MI: 469 Postings
3. Novi, MI: 257 Postings
4. Wixom, MI: 247 Postings
5. Rochester, MI: 216 Postings

# TRANSPORTATION, DISTRIBUTION, AND LOGISTICS (TDL) OCCUPATION GROUP
## Oakland County | Q4 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.

74,356
TDL Workers

0.5% Increase from 2017

Employment Over Time
2001–2018

Worker Gender Demographics

29% Females
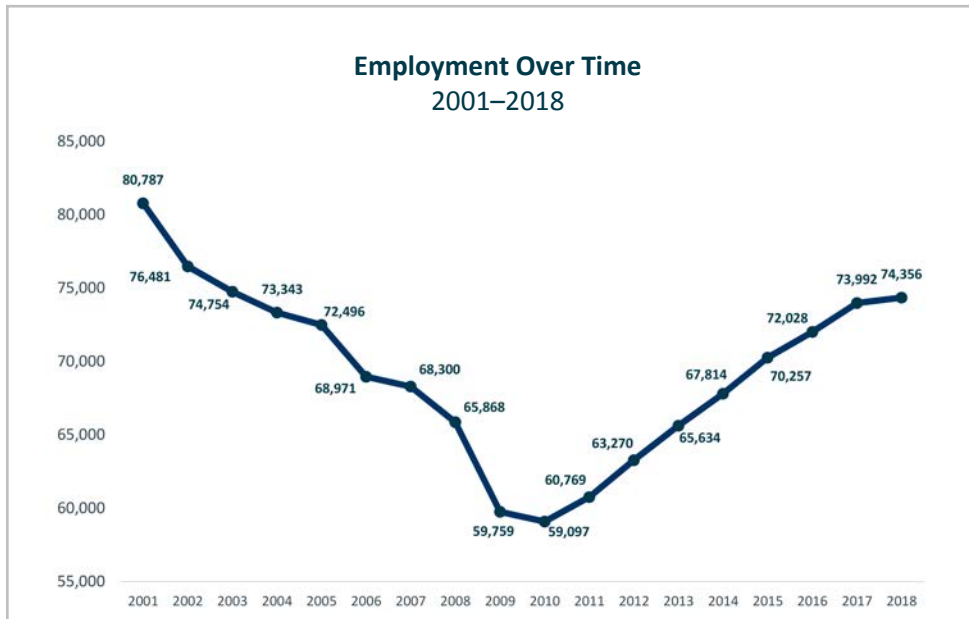
71% Males
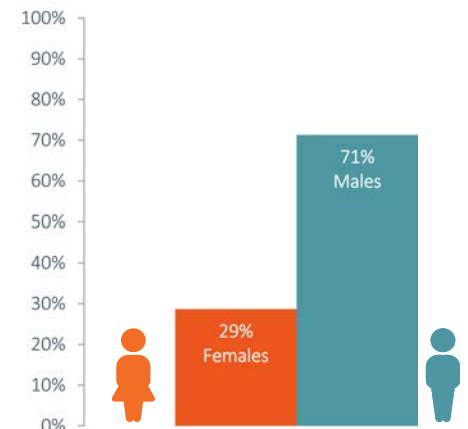
TDL Worker Demographics

According to the most recent Emsi data set available (2018), the TDL occupation group has a large workforce, employing nearly 75,000 individuals. These workers are 71 percent male and 71 percent white. Only thirteen percent of the workers in this occupation group are under the age of 24 compared to 22 percent that are 55 and older, indicating an aging TDL workforce.

Race and Ethnicity Demographics
70.7% White | 20.3% Black or African American | 2.9% Asian

Worker Age Demographics

Age 14-24
13.3%

Age 25-54
64.7%

Age 55+
22.0%

Data: Emsi | Analysis: Workforce Intelligence Network
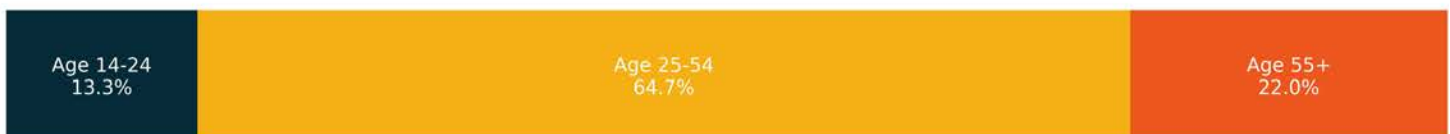
13,572 TDL Postings:
606 More than in Q3 2018

High School Diploma
Required for Most TDL Jobs

TDL Top Posted Jobs
Q4 2018

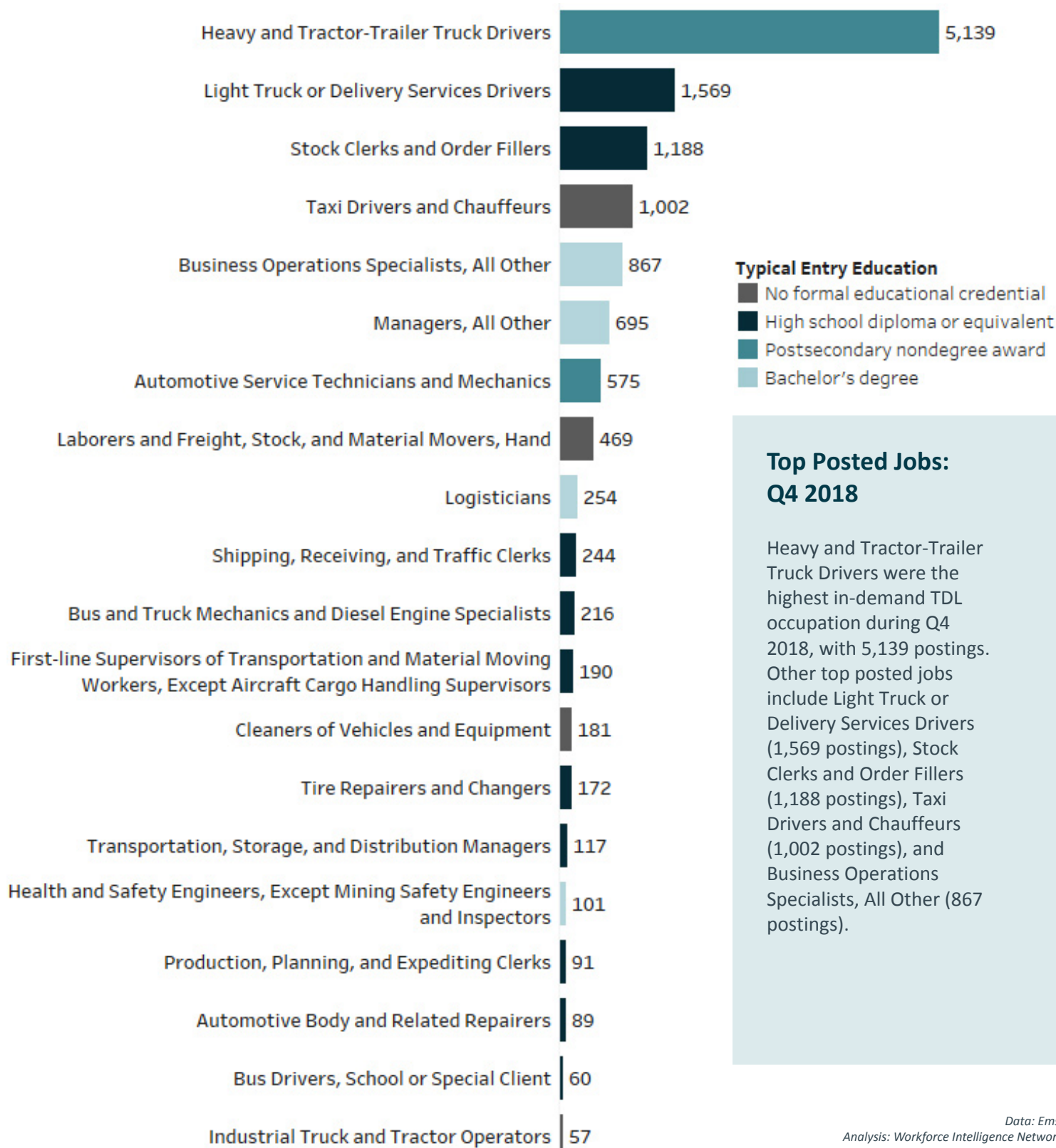| Job	Postings
Heavy and Tractor-Trailer Truck Drivers	5,139
Light Truck or Delivery Services Drivers	1,569
Stock Clerks and Order Fillers	1,188
Taxi Drivers and Chauffeurs	1,002
Business Operations Specialists, All Other	867
Managers, All Other	695
Automotive Service Technicians and Mechanics	575
Laborers and Freight, Stock, and Material Movers, Hand	469
Logisticians	254
Shipping, Receiving, and Traffic Clerks	244
Bus and Truck Mechanics and Diesel Engine Specialists	216
First-line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	190
Cleaners of Vehicles and Equipment	181
Tire Repairers and Changers	172
Transportation, Storage, and Distribution Managers	117
Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	101
Production, Planning, and Expediting Clerks	91
Automotive Body and Related Repairers	89
Bus Drivers, School or Special Client	60
Industrial Truck and Tractor Operators	57

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

Top Posted Jobs:
Q4 2018

Heavy and Tractor-Trailer Truck Drivers were the highest in-demand TDL occupation during Q4 2018, with 5,139 postings. Other top posted jobs include Light Truck or Delivery Services Drivers (1,569 postings), Stock Clerks and Order Fillers (1,188 postings), Taxi Drivers and Chauffeurs (1,002 postings), and Business Operations Specialists, All Other (867 postings).

Data: Emsi
Analysis: Workforce Intelligence Network

High Earning Potential for
Managers, All Other

CDL: Most In-Demand
TDL Certification

TDL Wage Overview

According to the Bureau of Labor Statistics (BLS), half of the top ten in-demand TDL occupations offer median wages of over the region's median of $17.61 per hour. Heavy and Tractor-Trailer Truck Drivers, the top posted TDL job in Q4 2018, offers a median hourly wage of $19.81, or an annual salary of about $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 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	$13.33	$16.55	$19.81	$24.89	$30.34
53-3033	Light Truck or Delivery Services Drivers	$9.65	$11.33	$15.57	$21.28	$27.42
43-5081	Stock Clerks and Order Fillers	$9.47	$9.93	$11.64	$15.15	$19.17
53-3041	Taxi Drivers and Chauffeurs	$9.37	$9.75	$10.91	$12.72	$16.05
13-1199	Business Operations Specialists, All Other	$18.30	$25.29	$35.65	$48.21	$60.37
11-9199	Managers, All Other	$30.68	$39.32	$50.26	$62.61	$79.26
49-3023	Automotive Service Technicians and Mechanics	$10.12	$13.57	$23.49	$30.00	$36.46
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	$10.29	$11.82	$14.42	$17.94	$21.74
13-1081	Logisticians	$25.22	$33.20	$44.56	$53.43	$61.55
43-5071	Shipping, Receiving, and Traffic Clerks	$11.47	$13.75	$16.55	$20.27	$25.76

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills
- Warehousing
- Merchandising
- Capital Markets
- Truckload Shipping
- Customer Satisfaction

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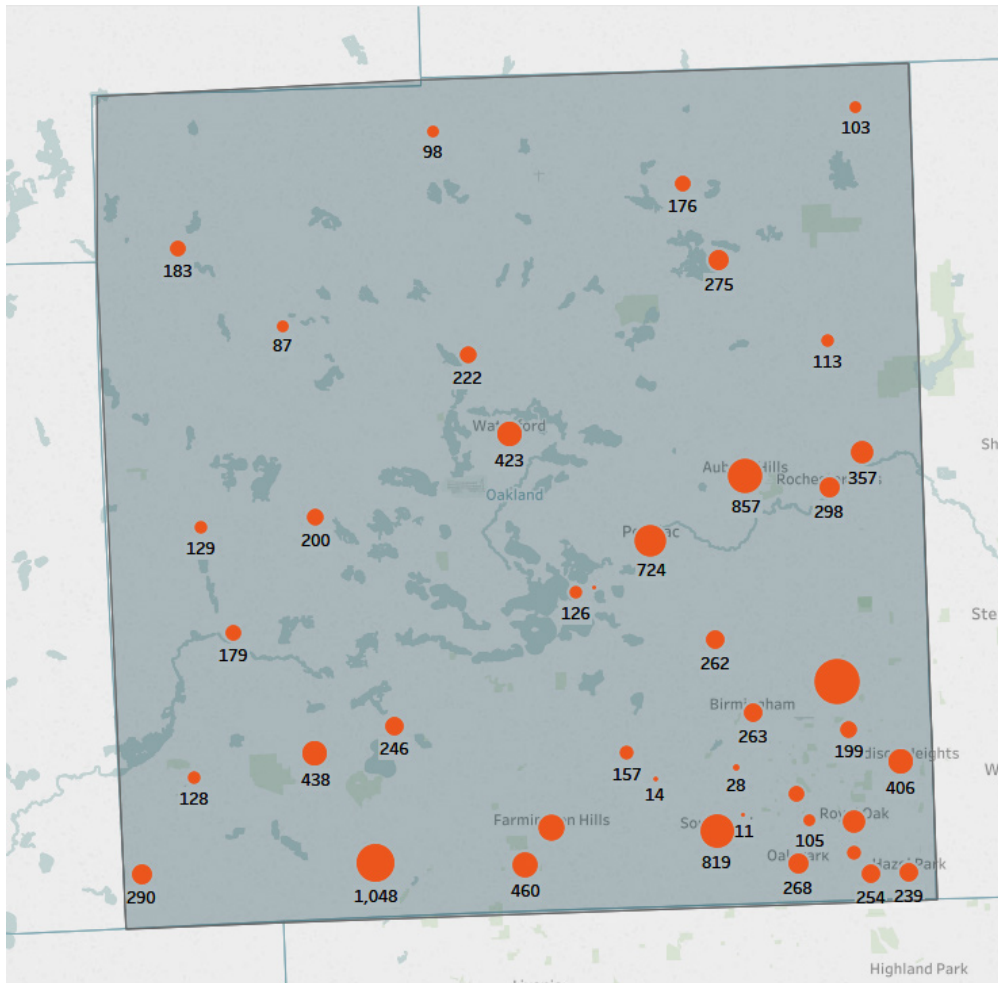- Communications
- Operations
- Customer Service
- Sales

In-Demand Education Level*
- High School Diploma: 15.9%
- Associate Degree: 1.6%
- Bachelor's Degree: 9.3%
- Master's Degree: 2.6%

*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
- Commercial Driver's License (CDL)
- Transportation Worker Identification Credential (TWIC) Card
- Project Management Professional Certification
- Certified Benefits Professional
- CompTIA Security+

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).
Size shows sum of Unique Postings (Oct 2018–Dec 2018). Details are shown for City.

Top Posting Employers*

- J.B. Hunt Transport Services, Inc.
- Lyft, Inc.
- CRST International, Inc.
- Shipt LLC
- Uber Technologies, Inc.
- USA Truck, Inc.
- U. S. Xpress, Inc.
- United Parcel Service, Inc.
- Roehl Transport, Inc.
- Schneider National, Inc.

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

Job Postings by City

1. Troy, MI: 1,490 Postings
2. Novi, MI: 1,048 Postings
3. Auburn Hills, MI: 857 Postings
4. Southfield, MI: 819 Postings
5. Pontiac, MI: 724 Postings

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