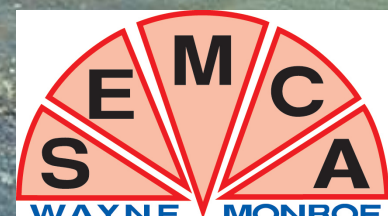




WORKFORCE INTELLIGENCE NETWORK

QUARTERLY REPORT • MONROE COUNTY • Q2 2015



CONTENTS

Labor Market and Demand Overview

Occupational Clusters

Advanced Manufacturing: Skilled Trades & Technicians
Advanced Manufacturing: Engineers & Designers
Information Technology
Health Care
Retail & Hospitality
Agriculture

Labor Market and Demand Summary

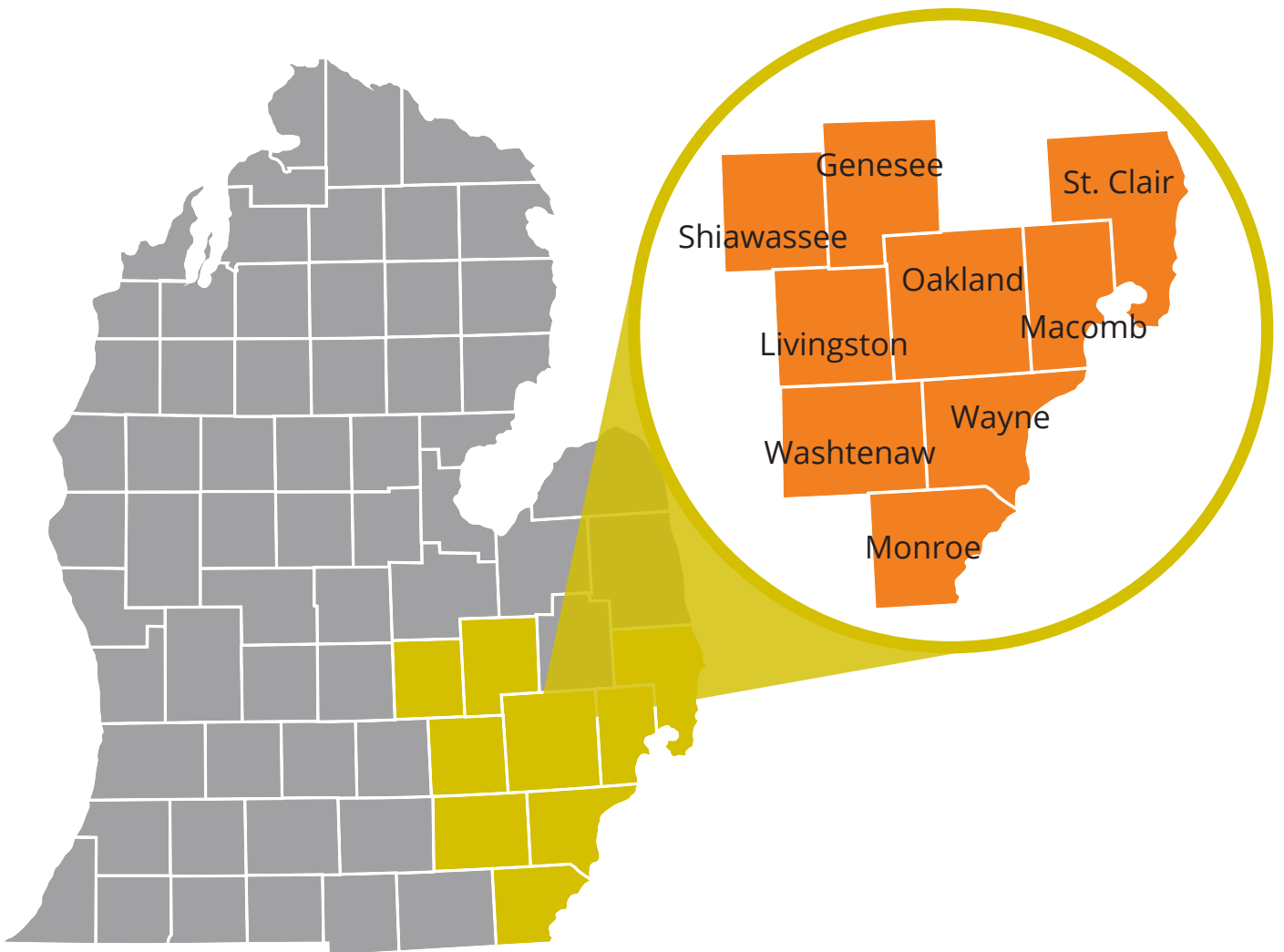
Data Notes and Sources



WIN region includes 9 counties:

**Genesee, Livingston, Monroe, Macomb, Oakland,
Shiawassee, St. Clair, Washtenaw, and Wayne.**

This report focuses on Monroe County.





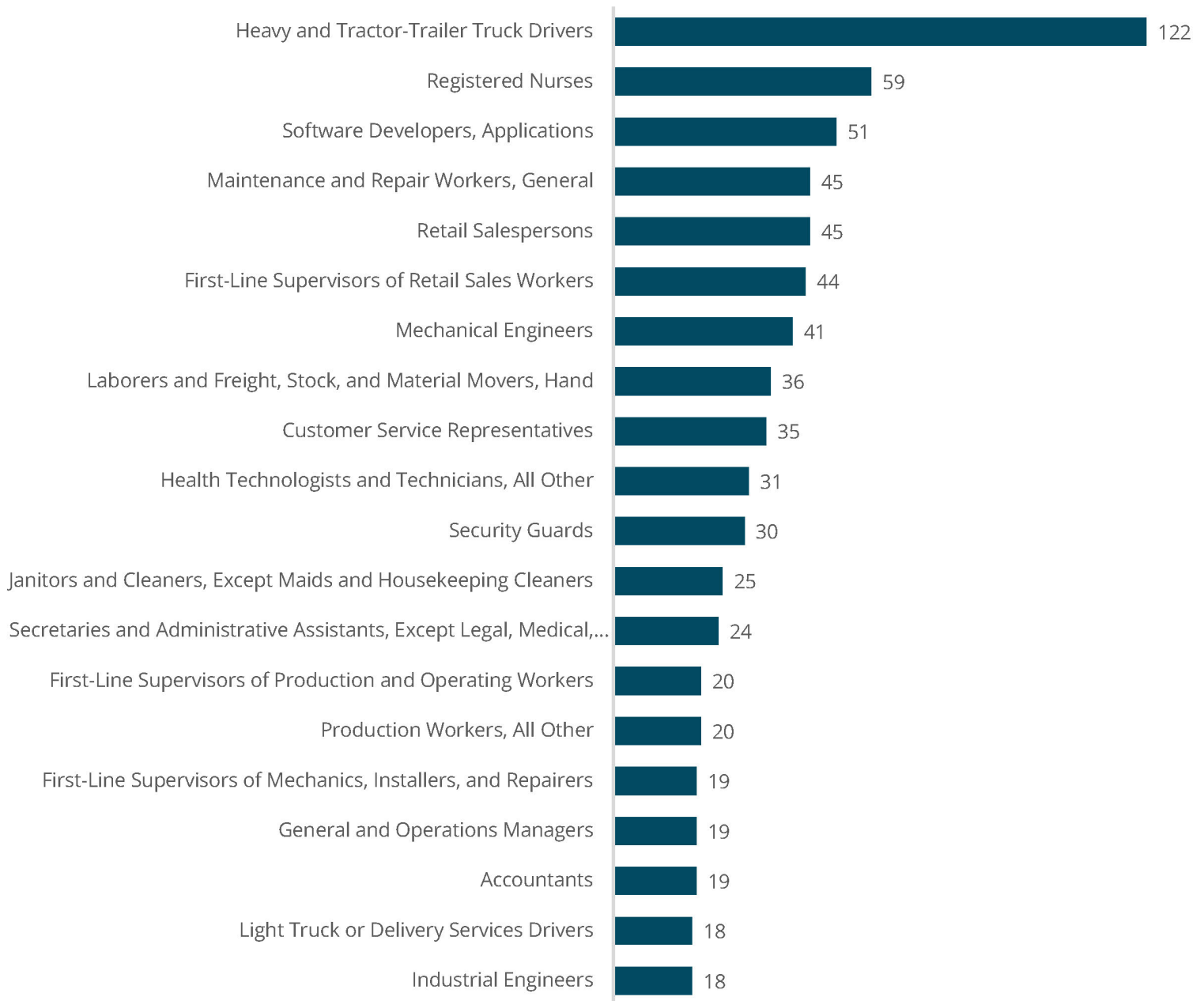
SECTION ONE

LABOR MARKET AND DEMAND OVERVIEW



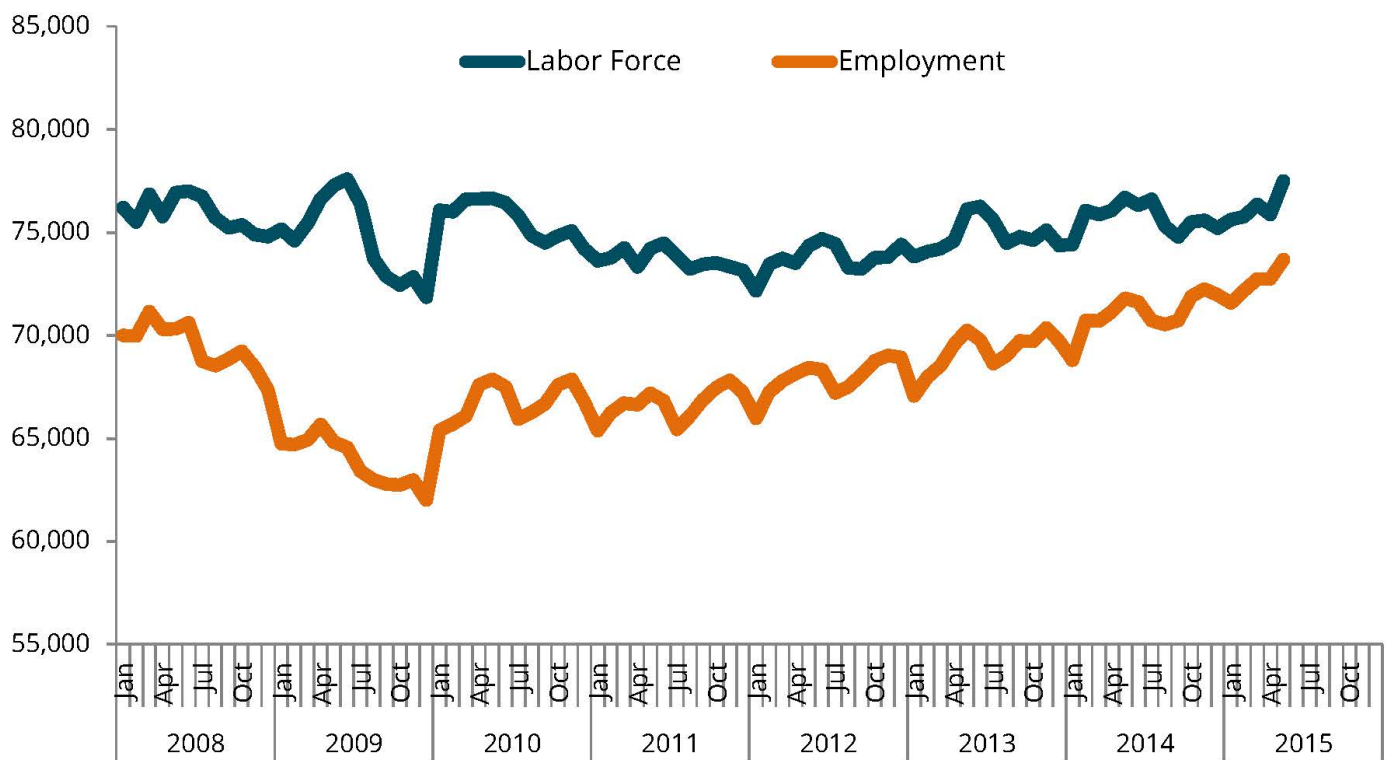
TOP 20 JOBS IN DEMAND

APRIL - JUNE 2015



Heavy and tractor-trailer truck drivers was once again the most in-demand occupation in Monroe County for Q2 2015. Postings for this occupation reached an all-time high in Q4 2014 with 148 online ads and then decreased to 83 in Q1 2015. In Q2 2015 ads for truck drivers increased by 39% over Q1 2015 numbers to 122. Other top jobs in the county include registered nurses (59 ads), software developers for applications (51 ads), maintenance and repair workers (45 ads) and retail salespersons (45 ads).

EMPLOYMENT AND LABOR FORCE



Source: Bureau of Labor Statistics

Analysis: Workforce Intelligence Network

The labor force in Monroe County increased by 1% between Q1 and Q2 2015 while employment grew by 1.5%. Both increased at a greater rate than the region as a whole. Labor force participation increased by 774 to 76,689 individuals while employment grew by 1,052 to 73,215 individuals. Typically the labor force and employment levels in Monroe County will peak during the summer months due to seasonal employment. There will most likely be a slight decrease next quarter if historic trends continue. With that said, however, labor force numbers in the county continue to grow.

Unemployment in the county decreased by 0.4 percentage points to 4.5% between Q1 and Q2 2015. Since employment increased at a greater rate than the labor force, this drop in unemployment is entirely due to people gaining jobs. As employment levels continue to approach labor force numbers, employers will have an increasingly difficult time finding talent they need for open positions. Hopefully, growing employment will encourage more individuals to enter the labor market.

EMPLOYER DEMAND

APRIL - JUNE 2015

Monroe County Online Job Postings



Source: Burning Glass Technologies

Analysis: Workforce Intelligence Network

Total job postings in Monroe County increased to 1,688 online ads in Q2 2015, an 8.4% increase over the 1,557 postings from Q1 2015. Online ads in the county have slowly been increasing since Q4 2013 but have not surpassed the peak of 2,069 postings during Q3 2013. While the rate of growth for postings in Monroe County has been positive since Q4 2013, it is slower than the regional average. Nonetheless, Q2 2015 postings doubled the 2011 through 2012 average of 834 ads per quarter.

While overall postings increased for Monroe County between Q1 and Q2 2015, there was a mixture of increase, stagnation, and decrease in ads for different occupational clusters. Postings increased for the IT, Health Care, and Agriculture clusters while postings decreased in Retail & Hospitality. The remaining two occupation clusters, Skilled Trades & Technicians and Engineers & Designers had the same number of ads in Q2 as they did in Q1 2015. The IT cluster has doubled its share of total postings from 3.5% in Q4 2014 to 7% in Q2 2015. This cluster is gaining in importance.

The clusters analyzed by WIN in Monroe County represent 51.8% of all online job postings in the county.

EMPLOYMENT AND LABOR FORCE OVERVIEW

	2010 Annual	2011 Annual	2012 Annual	2013 Annual	2014 Annual	2015 To-Date
Labor Force	75,641	73,683	73,739	74,837	75,701	76,224
Employment	66,771	66,661	67,954	69,194	71,071	72,584
Unemployment	8,869	7,022	5,786	5,642	4,630	3,640
Unemployment Rate	11.7%	9.5%	7.8%	7.5%	6.1%	4.8%

3rd Quarter 2014	4th Quarter 2014	1st Quarter 2015	2nd Quarter 2015	Change from 1st Quarter 2015	Percent Change from 1st Quarter 2015
75,562	75,433	75,914	76,689	774	1.0%
70,657	72,034	72,163	73,215	1,052	1.5%
4,905	3,399	3,751	3,474	-277	-7.4%
6.5%	4.5%	4.9%	4.5%	-0.4%	na

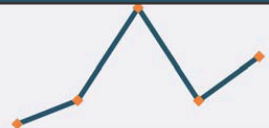











SECTION TWO

OCCUPATIONAL CLUSTERS

MONROE COUNTY DEMAND OVERVIEW

	Q2 2014	Q3 2014	Q4 2014	Q1 2015	Q2 2015	Change over time	Share of Total Postings Q2 2015
Total	1,487	1,558	1,834	1,557	1,688		
Skilled Trades & Technicians	88	92	90	94	94		5.6%
Engineers & Designers	81	64	49	106	106		6.3%
IT	66	55	64	90	119		7.0%
Health Care	111	120	127	105	176		10.4%
Retail & Hospitality	469	437	504	352	344		20.4%
Agriculture	24	26	22	24	36		2.1%



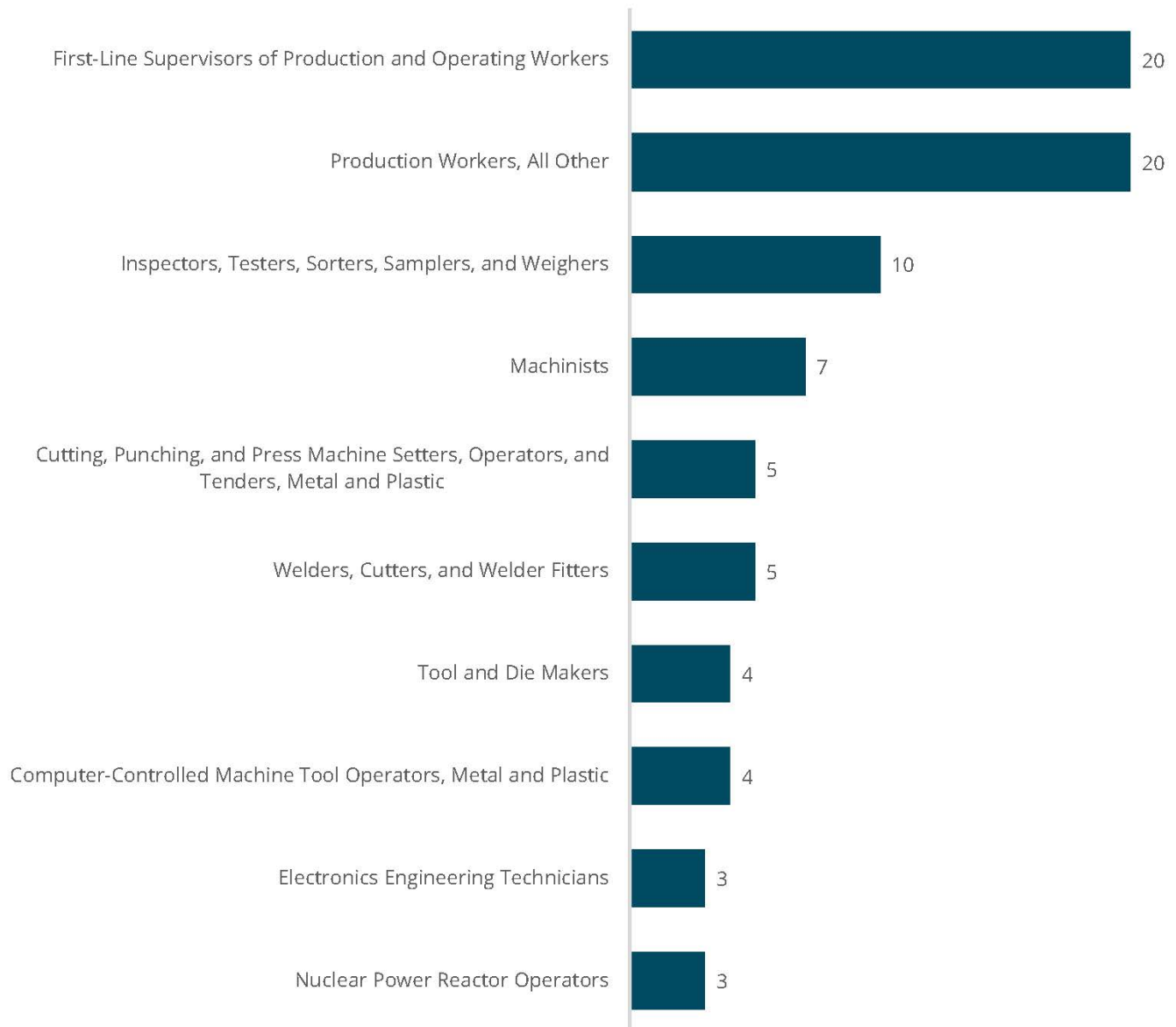
ADVANCED MANUFACTURING

SKILLED TRADES AND TECHNICIANS *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. In 2014, skilled trades employment reached 104,229 individuals in the WIN region. NOTE: Skilled trades related to construction and repair are not included in this cluster, as the focus is on advanced manufacturing.*

First-line supervisors of production and operating workers was the most in-demand Skilled Trades occupation in Monroe County during Q2 2015. Postings for supervisors nearly doubled from 11 in Q1 to 20 in Q2. CNC machinists was the most in-demand Skilled Trades job during Q1 2015 with 16 postings. Online ads for this occupation dropped to just four last quarter, possibly indicating that employers successfully found talent for the openings during Q1. Other top jobs during Q2 included production workers (20 ads) and inspectors, testers, sorters, samplers, and weighers (10 ads).

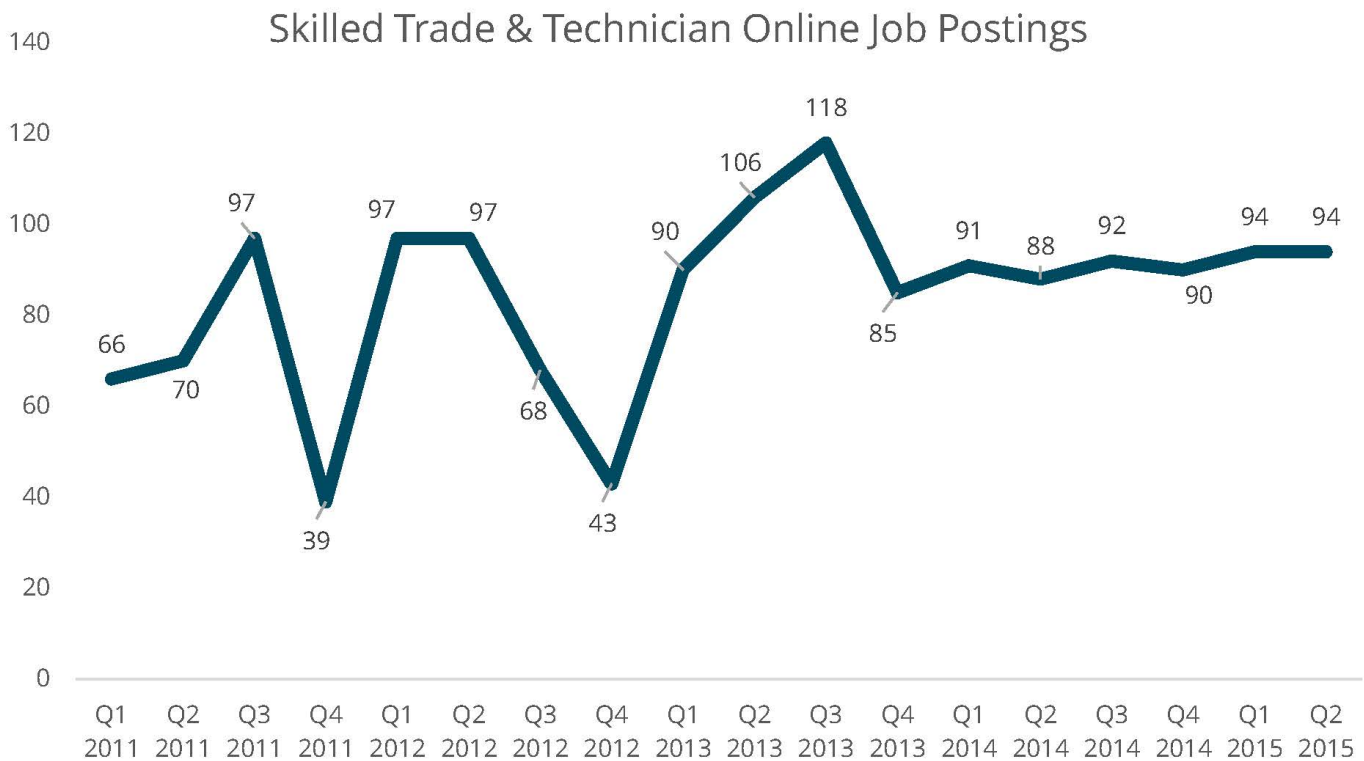
ADVANCED MANUFACTURING

SKILLED TRADES AND TECHNICIANS: TOP JOBS



ADVANCED MANUFACTURING

SKILLED TRADES AND TECHNICIANS: ONLINE JOB POSTINGS OVER TIME



Source: Burning Glass Technologies

Analysis: Workforce Intelligence Network

Posting growth for Skilled Trades and Technicians has been relatively flat since Q4 2013. Online ads for this cluster have fluctuated between 85 and 94 per quarter over the last 7 quarters. While postings may not be growing, the stabilization is a welcomed sign compared to the erratic peak and troughs in postings seen during 2011 and 2012.

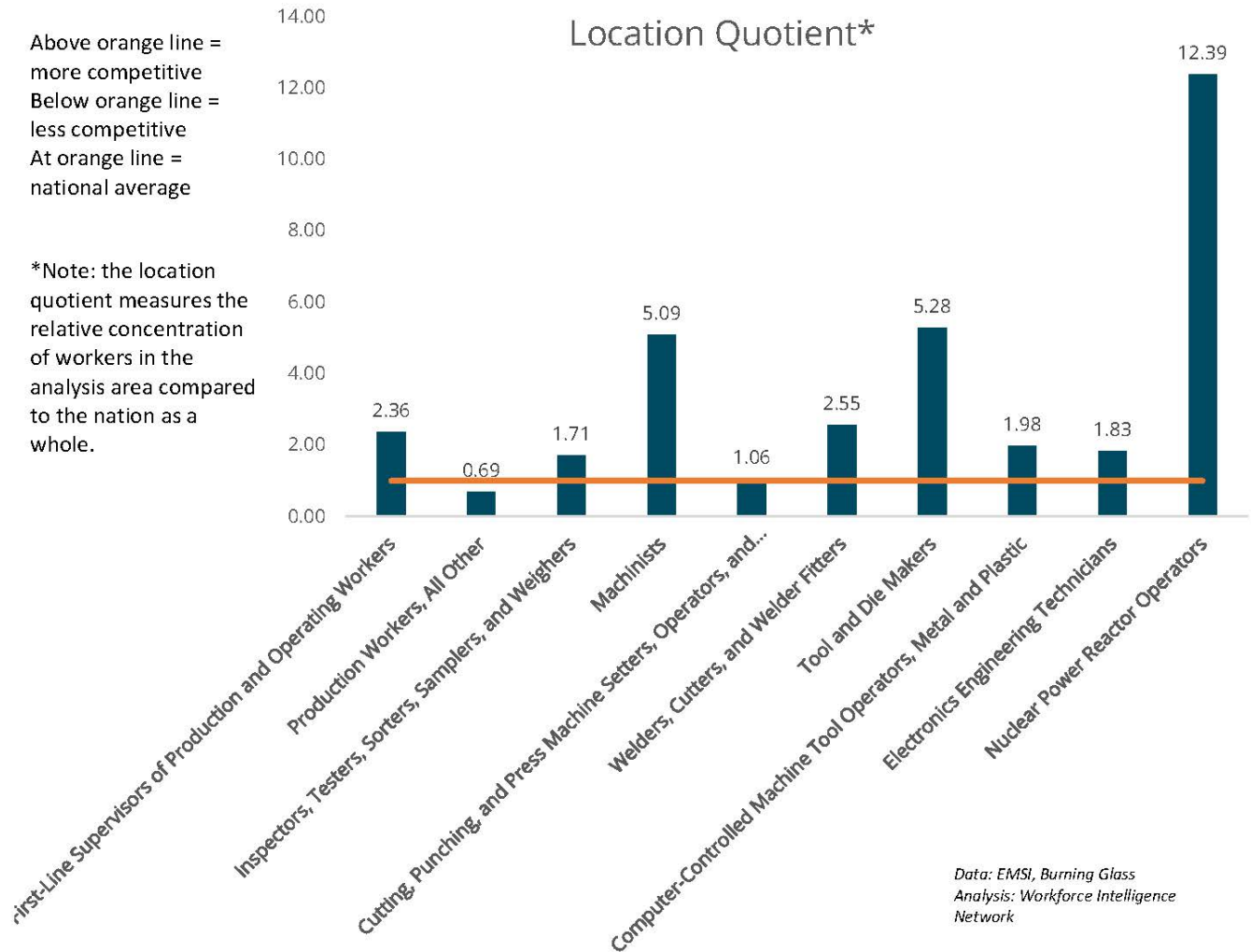
Monroe County has a competitive edge in the Skilled Trades with nearly every top in-demand job at a higher concentration of workers than the rest of the nation. Machinists and tool and die makers both boast a location quotient (LQ) greater than five, meaning that the concentration of these workers is more than 400% greater in the county than the rest of the U.S. on average. Having high LQ's is a good sign for employers as they will generally have an easier time finding talent to fill open positions.

Skilled Trade jobs also allow workers to earn a living wage with the median hourly rate above \$15 for nearly all in-demand jobs. Starting wages (10th percentile) are not as competitive for every job, but all positions offer upward wage growth. Occupations that offer lower wages do provide experience necessary for in-demand supervisory rolls. Combining a post-secondary award with this experience would allow these workers to become first-line supervisors who can make a median hourly wage just under \$38 per hour, or \$78,000 per year. First-line supervisors in Monroe County are some of the highest paid in the nation; the U.S. median hourly average is \$26.69 per hour.

Many skilled trade jobs do not require a degree but instead a special certification and on-the-job training. Technician positions require an associate's degree in engineering while supervisory roles often require a post-secondary award that takes less than two years. CNC machinists, one of the highest paying skilled trades jobs requires long-term-on the job training.

ADVANCED MANUFACTURING

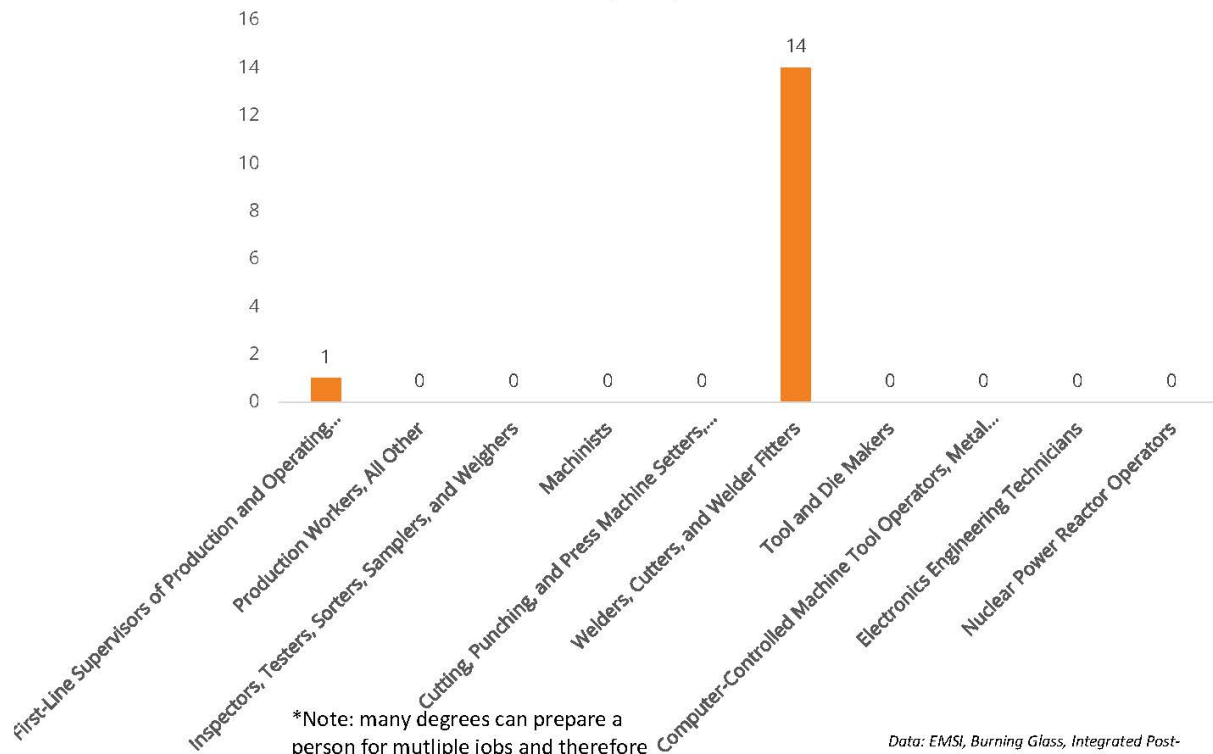
SKILLED TRADES AND TECHNICIANS: TOP 10 JOBS LOCATION QUOTIENT AND WAGES



ONET Code	Occupation	10th Percentile Hourly Earnings	25th Percentile Hourly Earnings	Median Hourly Earnings	75th Percentile Hourly Earnings	90th Percentile Hourly Earnings
51-1011	First-Line Supervisors of Production and Operating Workers	\$20.56	\$28.00	\$37.48	\$45.08	\$53.25
51-9199	Production Workers, All Other	\$11.05	\$13.61	\$18.15	\$25.40	\$28.84
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	\$9.89	\$11.18	\$15.64	\$21.48	\$26.79
51-4041	Machinists	\$16.52	\$23.37	\$27.82	\$32.21	\$34.89
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	\$10.04	\$10.50	\$11.27	\$12.04	\$21.62
51-4121	Welders, Cutters, and Welder Fitters	\$12.75	\$14.70	\$17.02	\$20.39	\$24.83
51-4111	Tool and Die Makers	\$15.23	\$19.05	\$21.86	\$25.12	\$28.18
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	\$11.08	\$14.43	\$18.66	\$28.00	\$30.15
17-3023	Electronics Engineering Technicians	\$24.32	\$28.50	\$34.48	\$40.91	\$44.69
51-8011	Nuclear Power Reactor Operators	\$30.09	\$38.48	\$45.96	\$59.15	\$60.55

SKILLED TRADES AND TECHNICIANS: TOP 10 JOBS RECENT GRADUATES AND EDUCATION AND TRAINING REQUIREMENTS


Recent Area Graduates with Degrees Related to Top Jobs*
(2013)



*Note: many degrees can prepare a person for multiple jobs and therefore many of these graduates are counted for several occupations.

Data: EMSI, Burning Glass, Integrated Post-Secondary Data System
Analysis: Workforce Intelligence Network

ONET Code	Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
51-1011	First-Line Supervisors of Production and Operating Workers	Postsecondary non-degree award	Less than 5 years	None
51-9199	Production Workers, All Other	High school diploma or equivalent	None	Moderate-term on-the-job training
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	High school diploma or equivalent	None	Moderate-term on-the-job training
51-4041	Machinists	High school diploma or equivalent	None	Long-term on-the-job training
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	High school diploma or equivalent	None	Moderate-term on-the-job training
51-4121	Welders, Cutters, and Welder Fitters	High school diploma or equivalent	None	Moderate-term on-the-job training
51-4111	Tool and Die Makers	High school diploma or equivalent	None	Long-term on-the-job training
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	High school diploma or equivalent	None	Moderate-term on-the-job training
17-3023	Electronics Engineering Technicians	Associate's degree	None	None
51-8011	Nuclear Power Reactor Operators	High school diploma or equivalent	None	Long-term on-the-job training

A photograph of four professionals, three men and one woman, wearing blue hard hats and business attire. They are gathered around a table, looking at and pointing to documents. The image is overlaid with a semi-transparent blue filter. The title 'ADVANCED MANUFACTURING' is written in large, orange, sans-serif capital letters across the middle of the image.

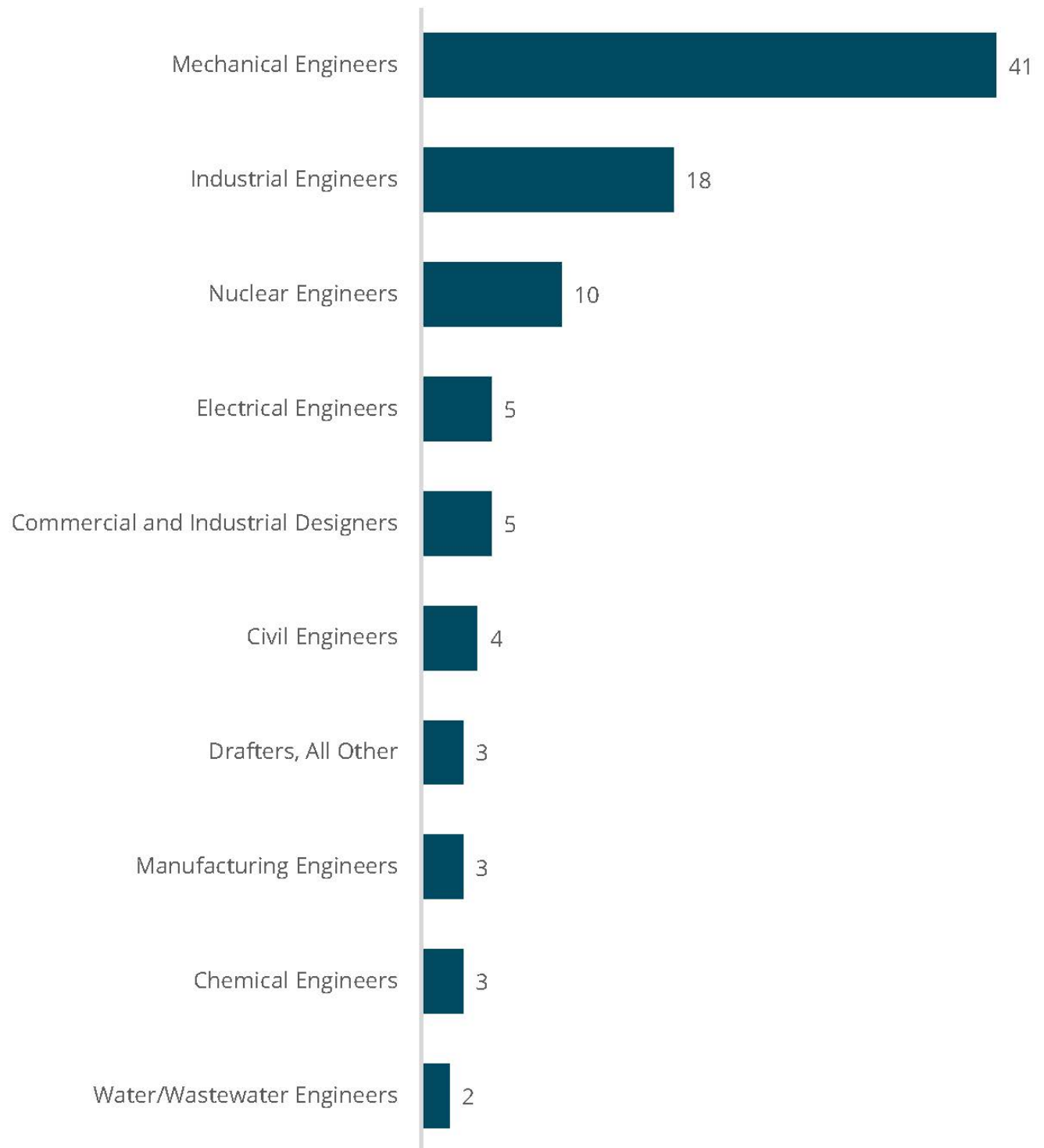
ADVANCED MANUFACTURING

ENGINEERS AND DESIGNERS *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. This section focuses on engineers & designers, which represent 74,198 employed individuals in Southeast Michigan. Demand for engineers in the region has been consistent, and employment has been growing quickly.*

Mechanical engineers were again the most in-demand Engineer and Designer occupation in Monroe during Q2 2015. Postings increased from 25 in Q1 to 41 in Q2, and are up over 150% since Q4 2014. The continued increase in postings for this occupation indicates that employers are having a difficult time finding talent for openings. Other top occupations in this cluster include industrial engineers (18 ads) and nuclear engineers (10 ads).

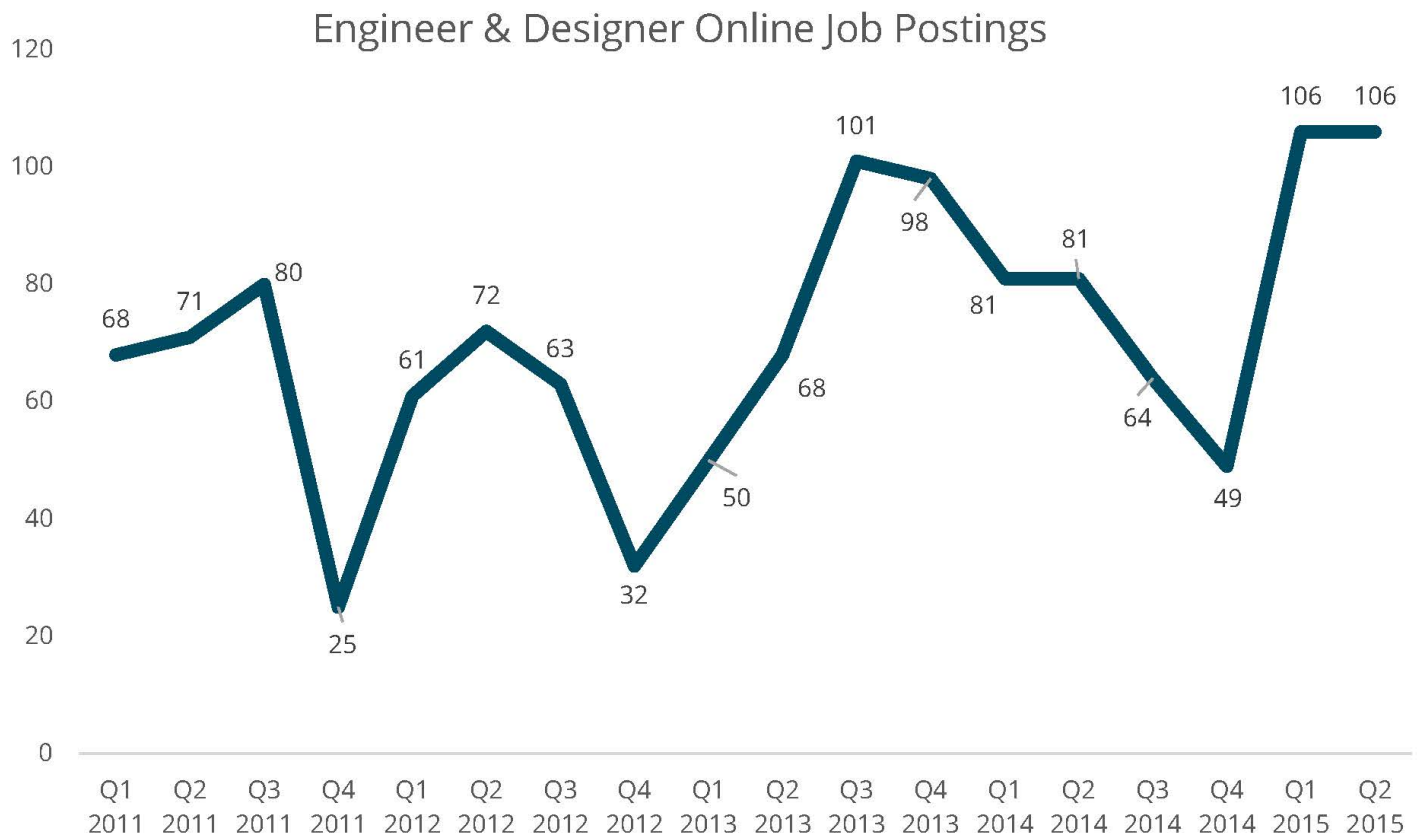
ADVANCED MANUFACTURING

ENGINEERS AND DESIGNERS: TOP JOBS



ADVANCED MANUFACTURING

ENGINEERS AND DESIGNERS: ONLINE JOB POSTINGS OVER TIME



Source: Burning Glass Technologies

Analysis: Workforce Intelligence Network

Online ads for Engineers and Designers during Q2 2015 remained at 106 postings, with no change from Q1. This level of online postings remains a record for the county and is a welcomed sign after five consecutive quarters of drops in postings from Q4 2013 to Q4 2014. Historical trends show that online ads for this cluster typically reach their lowest point for the year during Q4.

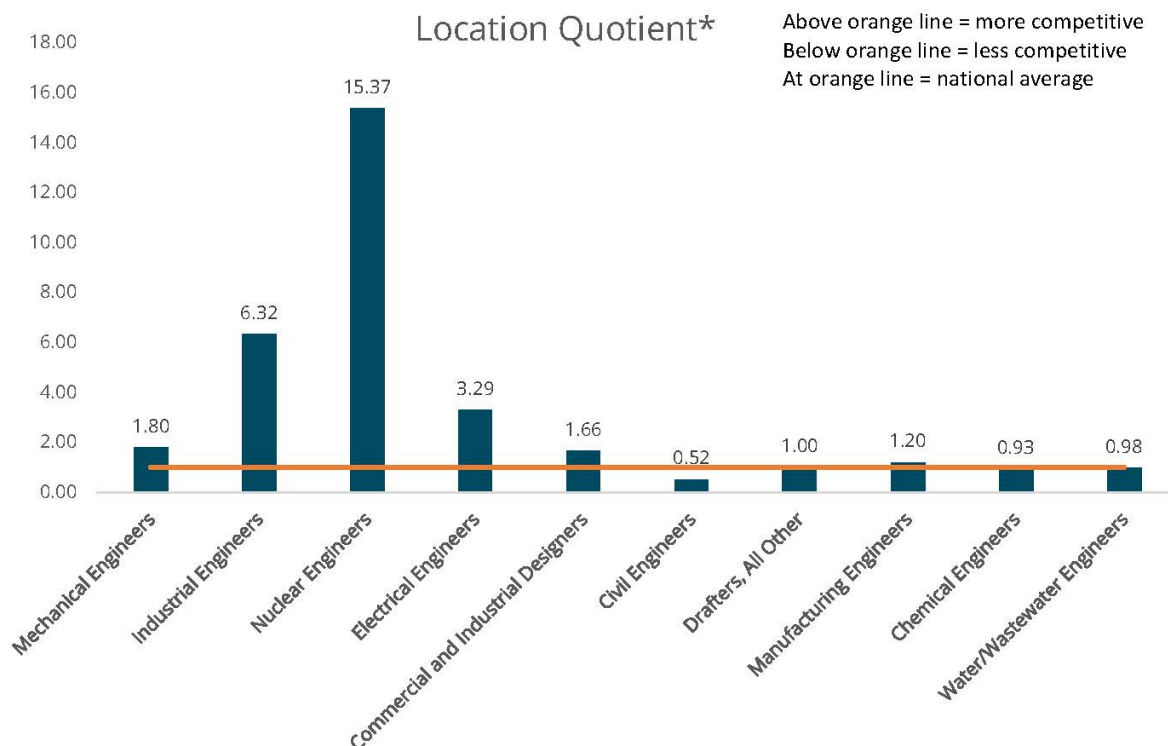
Monroe County has a strong presence of workers for some Engineer and Designer occupations and is about on par with the rest of the nation for other in-demand jobs in this cluster. Industrial engineers have a location quotient (LQ) of 6.32 in Monroe, indicating that the concentration of these workers is 532% higher than the U.S. average. Higher LQ's typically indicate that employers will have an easier time finding talent; lower LQ's will make filling open positions more difficult.

Wages for engineers and designers are extremely competitive with nearly all 10th percentile earnings (entry-level) near or above \$20. The high wages follow a need for higher education. All of the top jobs in this cluster, with exception to drafters, all other, require a Bachelor's degree for entry into the field.

While there are not enough graduates to meet demand in Monroe, southeast Michigan boasts a number of schools with Engineer and Designer graduates to fill open positions in the county.

ADVANCED MANUFACTURING

ENGINEERS AND DESIGNERS: TOP 10 JOBS LOCATION QUOTIENT AND WAGES

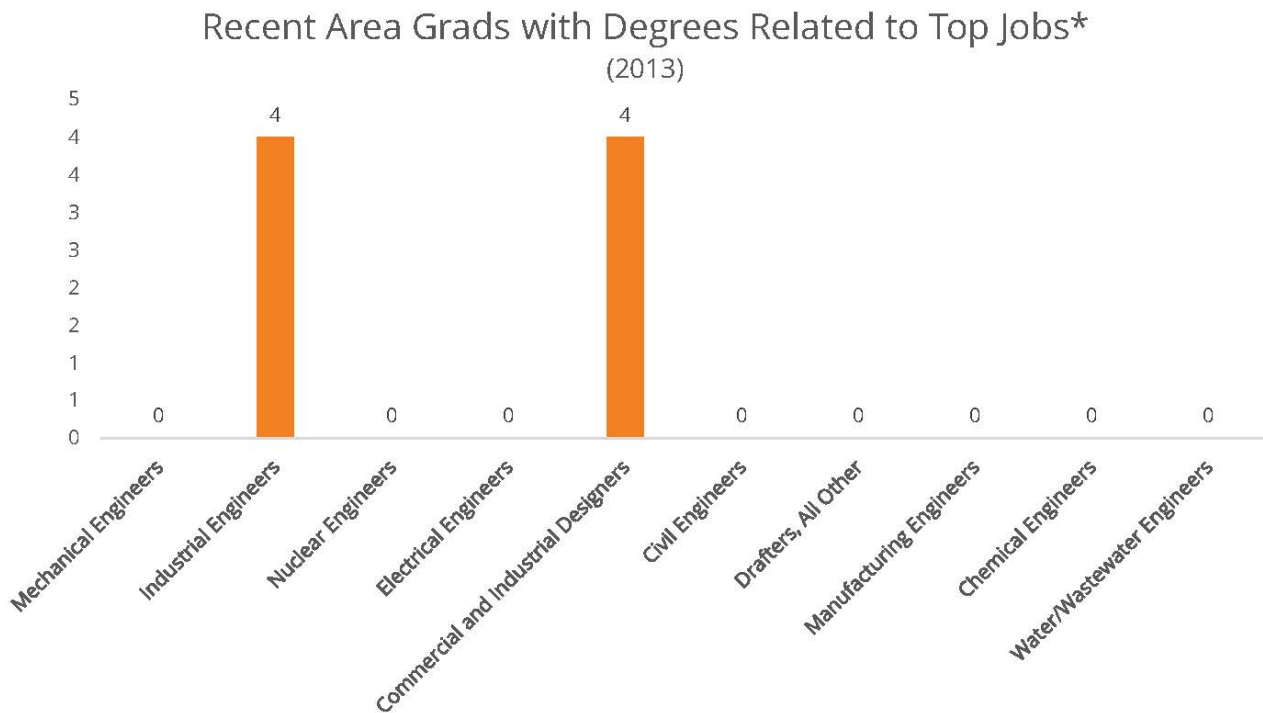


*Note: the location quotient measures the relative concentration of workers in the analysis area compared to the nation as a whole.

Data: EMSI, Burning Glass
Analysis: Workforce Intelligence
Network

ONET Code	Occupation	10th Percentile Hourly Earnings	25th Percentile Hourly Earnings	Median Hourly Earnings	75th Percentile Hourly Earnings	90th Percentile Hourly Earnings
17-2141	Mechanical Engineers	\$26.22	\$29.86	\$34.83	\$42.71	\$50.04
17-2112	Industrial Engineers	\$30.43	\$34.23	\$40.24	\$45.70	\$52.95
17-2161	Nuclear Engineers	\$38.27	\$48.05	\$54.68	\$59.47	\$66.23
17-2071	Electrical Engineers	\$29.83	\$38.49	\$45.00	\$50.82	\$58.35
27-1021	Commercial and Industrial Designers	\$19.50	\$20.23	\$23.49	\$29.64	\$40.29
17-2051	Civil Engineers	\$26.08	\$31.01	\$36.71	\$43.17	\$50.09
17-3019	Drafters, All Other	Insf. Data	Insf. Data	Insf. Data	Insf. Data	Insf. Data
17-2199	Manufacturing Engineers	\$24.68	\$36.21	\$44.61	\$51.73	\$59.46
17-2041	Chemical Engineers	Insf. Data	Insf. Data	Insf. Data	Insf. Data	Insf. Data
17-2081	Water/Wastewater Engineers	\$28.66	\$38.66	\$45.86	\$52.05	\$58.72

ENGINEERS AND DESIGNERS: TOP 10 JOBS RECENT GRADUATES AND EDUCATION AND TRAINING REQUIREMENTS



*Note: many degrees can prepare a person for multiple jobs and therefore many of these graduates are counted for several occupations.

Data: EMSI, Burning Glass, Integrated Post-Secondary Data System
Analysis: Workforce Intelligence Network

ONET Code	Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
17-2141	Mechanical Engineers	Bachelor's degree	None	None
17-2112	Industrial Engineers	Bachelor's degree	None	None
17-2161	Nuclear Engineers	Bachelor's degree	None	None
17-2071	Electrical Engineers	Bachelor's degree	None	None
27-1021	Commercial and Industrial Designers	Bachelor's degree	None	None
17-2051	Civil Engineers	Bachelor's degree	None	None
17-3019	Drafters, All Other	Associate's degree	None	None
17-2199	Manufacturing Engineers	Bachelor's degree	None	None
17-2041	Chemical Engineers	Bachelor's degree	None	None
17-2081	Water/Wastewater Engineers	Bachelor's degree	None	None

A woman with brown hair, wearing a light blue sweater, is sitting at a desk in a server room. She is looking at a computer monitor and has her hands on a keyboard and mouse. In the background, there are server racks with many green and blue cables. Another person is standing in the background, looking at a clipboard. The text "INFORMATION TECHNOLOGY" is overlaid in large, orange, sans-serif capital letters across the middle of the image.

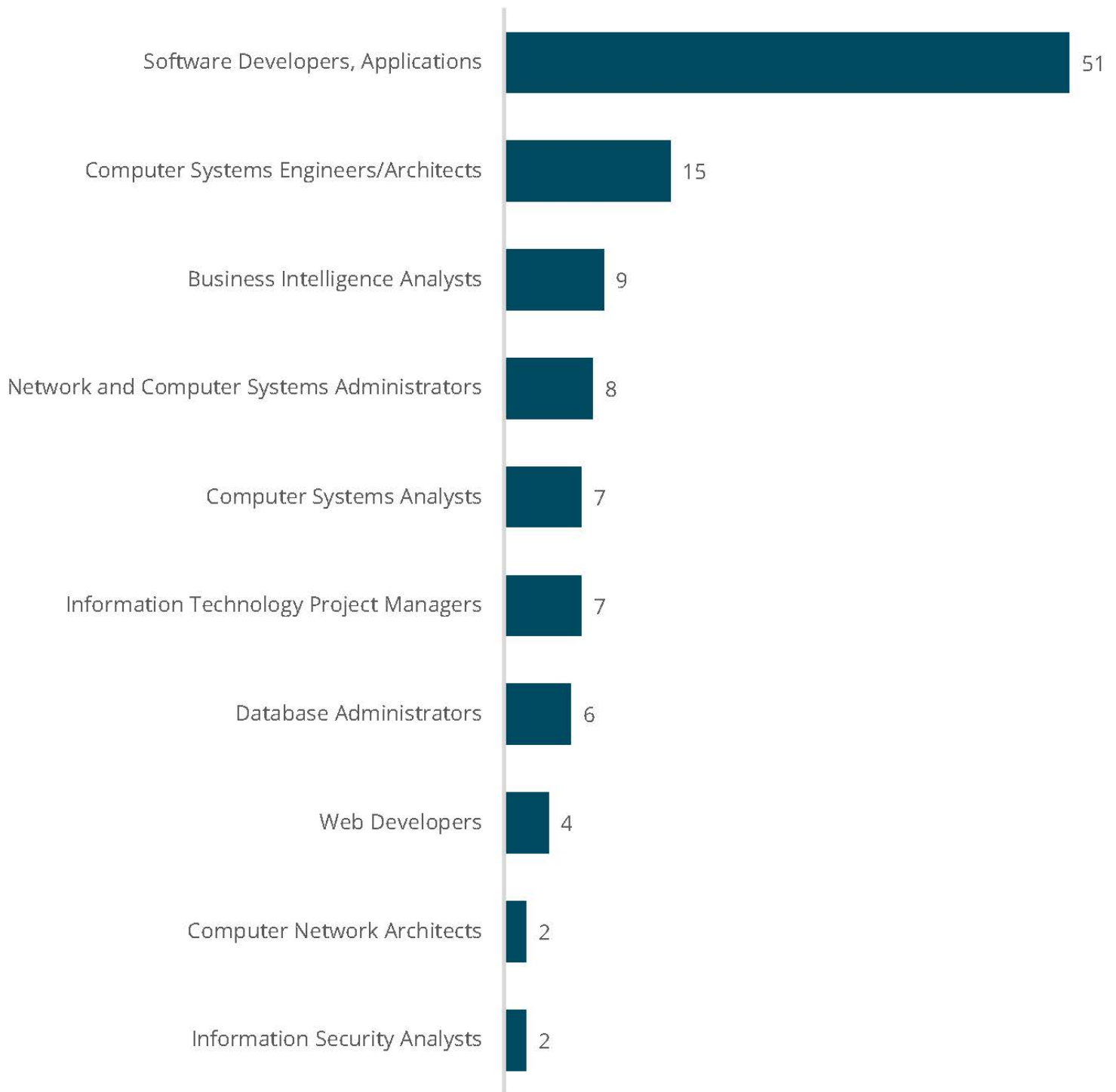
INFORMATION TECHNOLOGY

Information technology 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 cluster does not currently meet the employment levels of the other clusters, it is quickly growing. In 2014, IT occupational employment was 74,309 in the WIN region. Top jobs in this cluster include computer support specialists, computer systems analysts, and software developers for applications.

Similar to the rest of the WIN region, the most in-demand IT occupation in Monroe County during Q2 2015 was software developers for applications. Unlike the WIN region as a whole, the demand for software developers in Monroe only formed in the past few quarters. Postings first doubled from 9 in Q4 2014 to 18 in Q1 2015 and then nearly tripled to 51 in Q2. The surge in postings over the past few quarters indicates that software developers are quickly growing in importance in Monroe County.

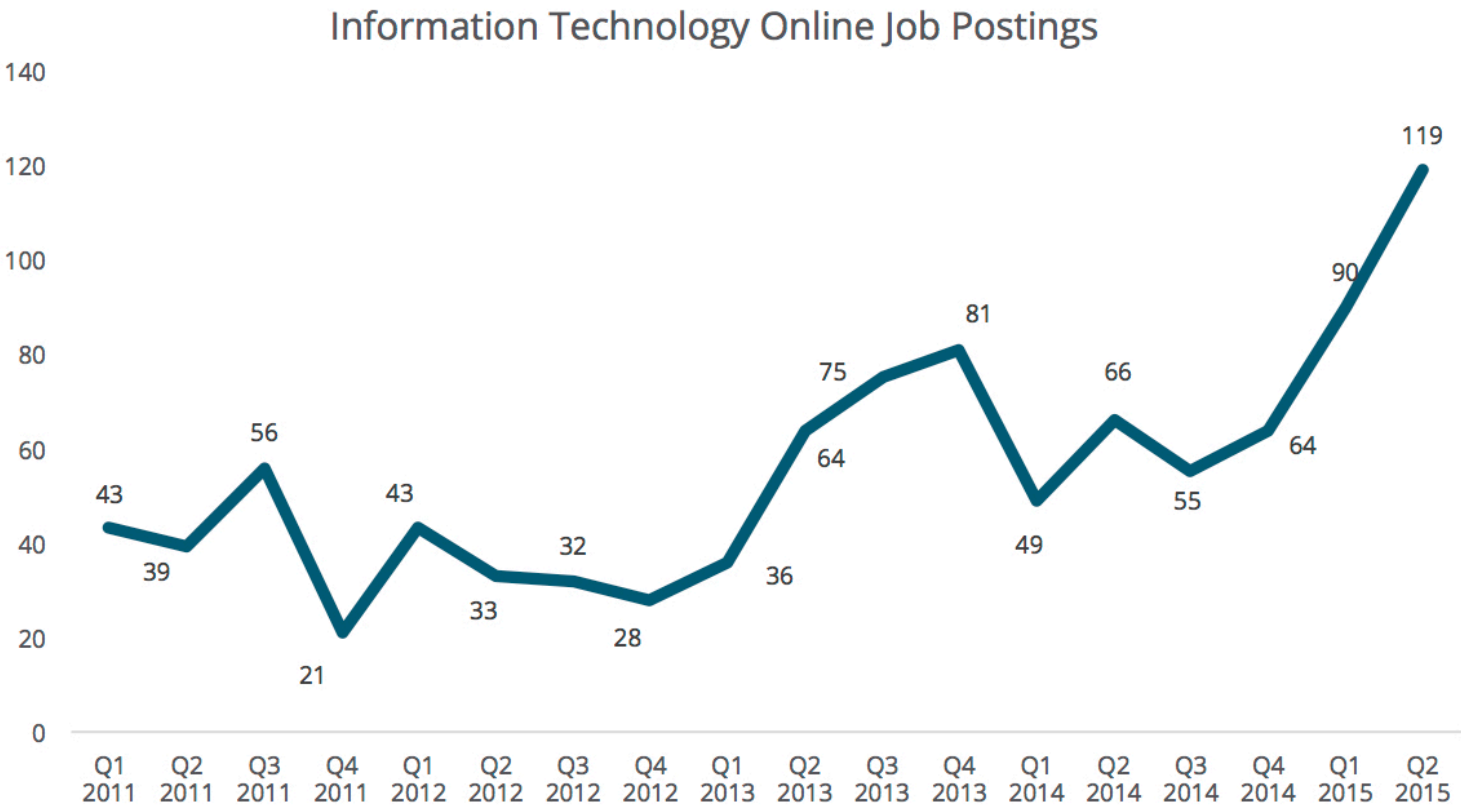
INFORMATION TECHNOLOGY

TOP JOBS



INFORMATION TECHNOLOGY

ONLINE JOB POSTINGS OVER TIME



Source: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Just as online ads for software developers have been increasing, so have the postings for IT occupations in Monroe County. Postings increased by 33% from 90 in Q1 2015 to 119 in Q2. Online ads for this cluster have more than doubled since Q3 2014 and have again reached a record level. As companies and industries begin to rely on new, technological advancements demand in the IT sector will continue to grow.

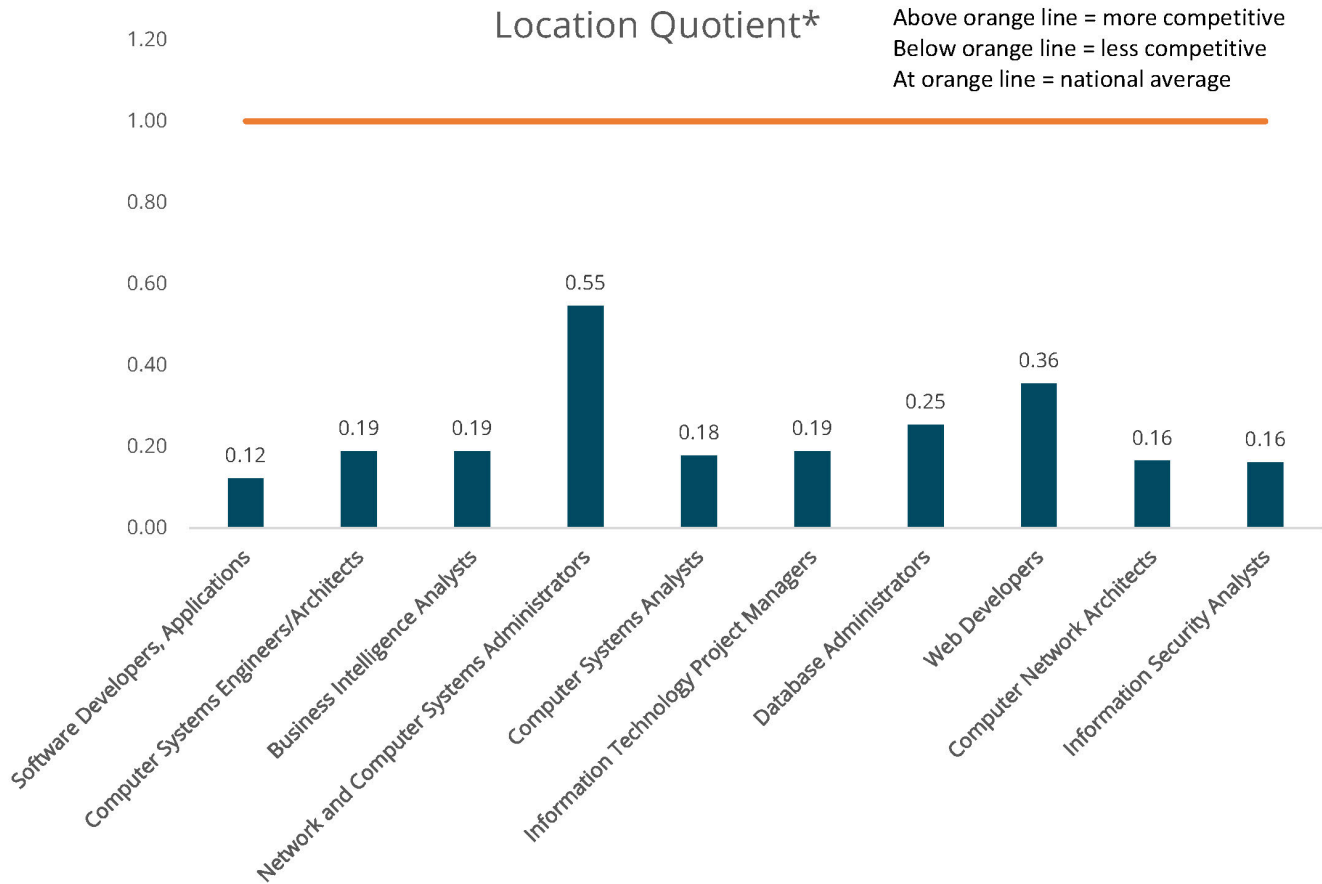
While postings for the IT cluster have increased over the past several quarters, the supply of IT workers in the county has not yet met demand. All of the most in-demand IT occupations have a location quotient (LQ) less than 1.0, meaning that the concentration of those workers in Monroe is less than the national average. For example, software developers—the most in-demand IT occupation not only in Monroe but southeast Michigan as a whole—has an LQ of just 0.12, indicating that the concentration of these workers is just 12% of other areas in the U.S. on average. Higher LQ's typically indicate that employers will have an easier time finding talent; lower LQ's will make filling open positions more difficult.

Wages for IT occupations are generally very competitive with 10th percentile earnings (entry-level) near or above \$20 for most of the top ten occupations in Monroe County. The high wages follow a need for higher education. All but just one of the most in-demand IT occupations require a Bachelor's degree for entry into the field. Wages have followed demand and high pay will likely drive more workers into this field in the coming years.

While Monroe had few graduates in 2013 for IT occupations, particularly those most in-demand, the number of individuals receiving degrees in IT-related fields in surrounding communities is on the rise. Computer engineering, software development, and other fields that often require a Bachelor's degree are attracting more students each year that will help add to Monroe's IT employer needs.

INFORMATION TECHNOLOGY

TOP 10 JOBS LOCATION QUOTIENT AND WAGES



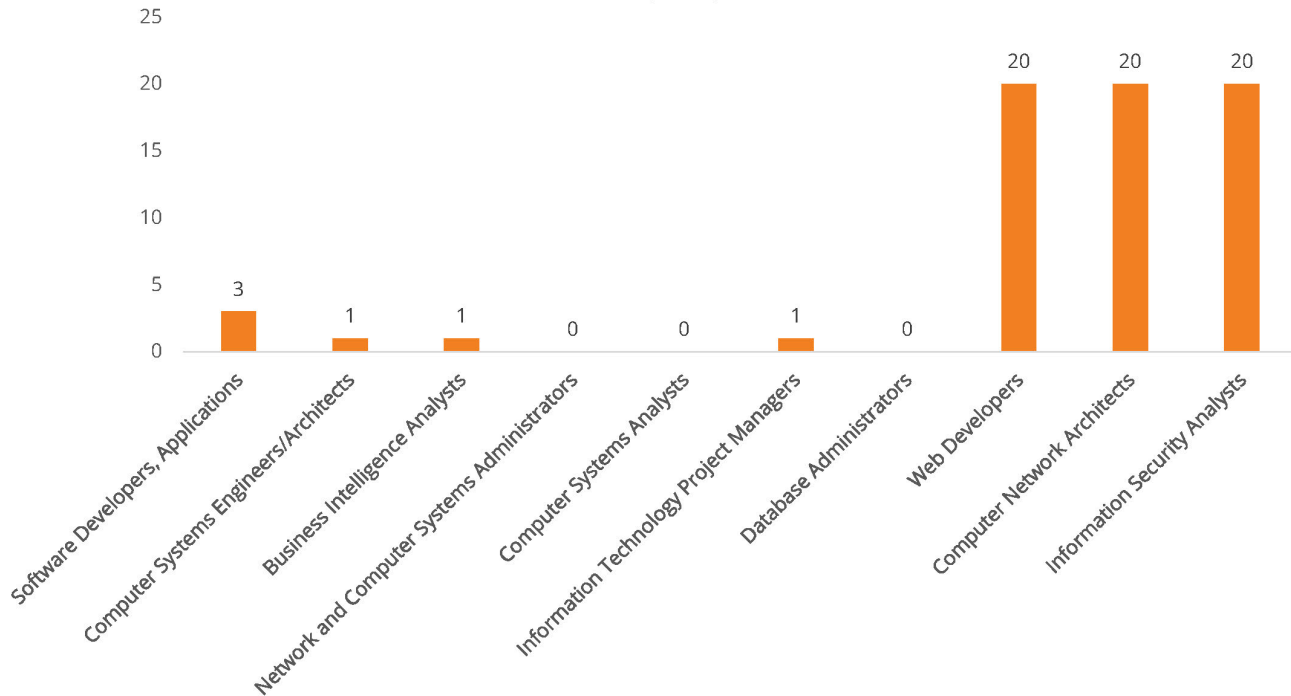
*Note: the location quotient measures the relative concentration of workers in the analysis area compared to the nation as a whole.

Data: EMSI, Burning Glass
Analysis: Workforce Intelligence Network

ONET Code	Occupation	10th Percentile Hourly Earnings	25th Percentile Hourly Earnings	Median Hourly Earnings	75th Percentile Hourly Earnings	90th Percentile Hourly Earnings
15-1132	Software Developers, Applications	\$23.57	\$27.35	\$31.68	\$41.29	\$51.70
15-1199	Computer Systems Engineers/Architects	\$19.24	\$23.20	\$26.83	\$35.25	\$43.87
15-1199	Business Intelligence Analysts	\$19.24	\$23.20	\$26.83	\$35.25	\$43.87
15-1142	Network and Computer Systems Administrators	\$22.32	\$25.63	\$29.83	\$39.52	\$50.37
15-1121	Computer Systems Analysts	\$21.91	\$25.35	\$28.72	\$36.36	\$45.32
15-1199	Information Technology Project Managers	\$19.24	\$23.20	\$26.83	\$35.25	\$43.87
15-1141	Database Administrators	Insf. Data	Insf. Data	Insf. Data	Insf. Data	Insf. Data
15-1134	Web Developers	\$14.98	\$17.67	\$20.56	\$25.64	\$30.96
15-1143	Computer Network Architects	Insf. Data	Insf. Data	Insf. Data	Insf. Data	Insf. Data
15-1122	Information Security Analysts	Insf. Data	Insf. Data	Insf. Data	Insf. Data	Insf. Data

TOP 10 JOBS RECENT GRADUATES AND EDUCATION AND TRAINING REQUIREMENTS

Recent Area Grads with Degrees Related to Top Jobs*
(2013)



*Note: many degrees can prepare a person for multiple jobs and therefore many of these graduates are counted for several occupations.

Data: EMSI, Burning Glass, Integrated Post-Secondary Data System
Analysis: Workforce Intelligence Network

ONET Code	Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
15-1132	Software Developers, Applications	Bachelor's degree	None	None
15-1199	Computer Systems Engineers/Architects	Bachelor's degree	None	None
15-1199	Business Intelligence Analysts	Bachelor's degree	None	None
15-1142	Network and Computer Systems Administrators	Bachelor's degree	None	None
15-1121	Computer Systems Analysts	Bachelor's degree	None	None
15-1199	Information Technology Project Managers	Bachelor's degree	None	None
15-1141	Database Administrators	Bachelor's degree	Less than 5 years	None
15-1134	Web Developers	Associate's degree	None	None
15-1143	Computer Network Architects	Bachelor's degree	5 years or more	None
15-1122	Information Security Analysts	Bachelor's degree	Less than 5 years	None

A photograph of two healthcare workers, a woman and a man, sitting at a desk in a clinical setting. The woman is on the left, wearing red scrubs, and the man is on the right, wearing blue scrubs. Both are smiling at the camera. The background is slightly blurred, showing office equipment and papers.

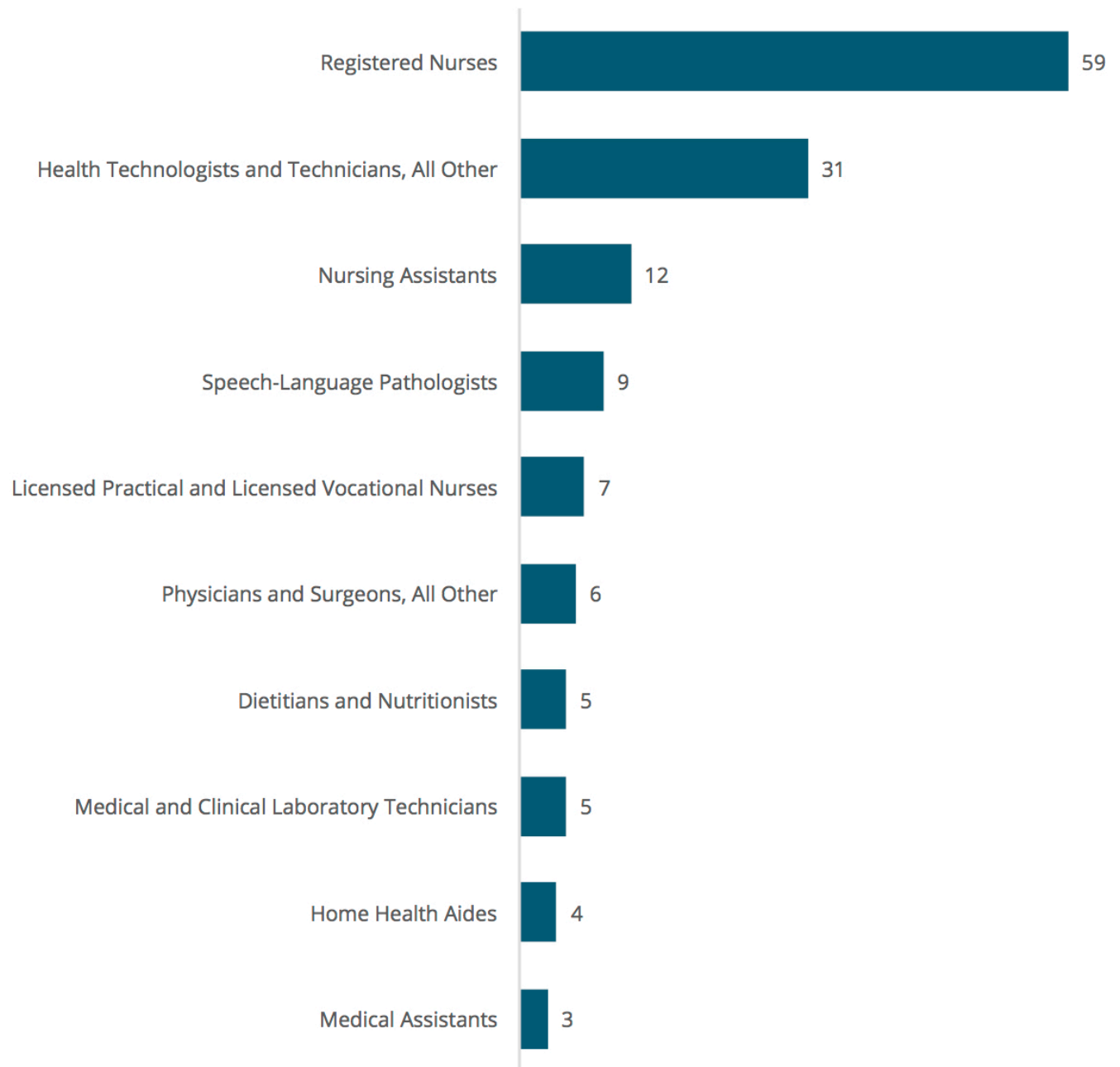
HEALTH CARE

WIN's health care occupation cluster includes jobs related to health care support and practitioners. This cluster is one of Southeast Michigan's largest with, 243,782 employees in 2014. Employment in this cluster 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 cluster.

Like the rest of the region, the top Health Care job in Monroe was registered nurses during Q2 2015. Online ads for nurses more than doubled from 27 during Q1 to 59 in Q2. There is currently a bill on the state Senate floor that would allow nurses to complete a Bachelor's degree at their local community college, alleviating the monetary and distance issues with attending a four-year university for many. The second most in-demand Health Care occupation was health technologists and technicians with 31 online ads. Combined, the top two occupations accounted for one out of every two postings for the Health Care cluster in Q2 2015.

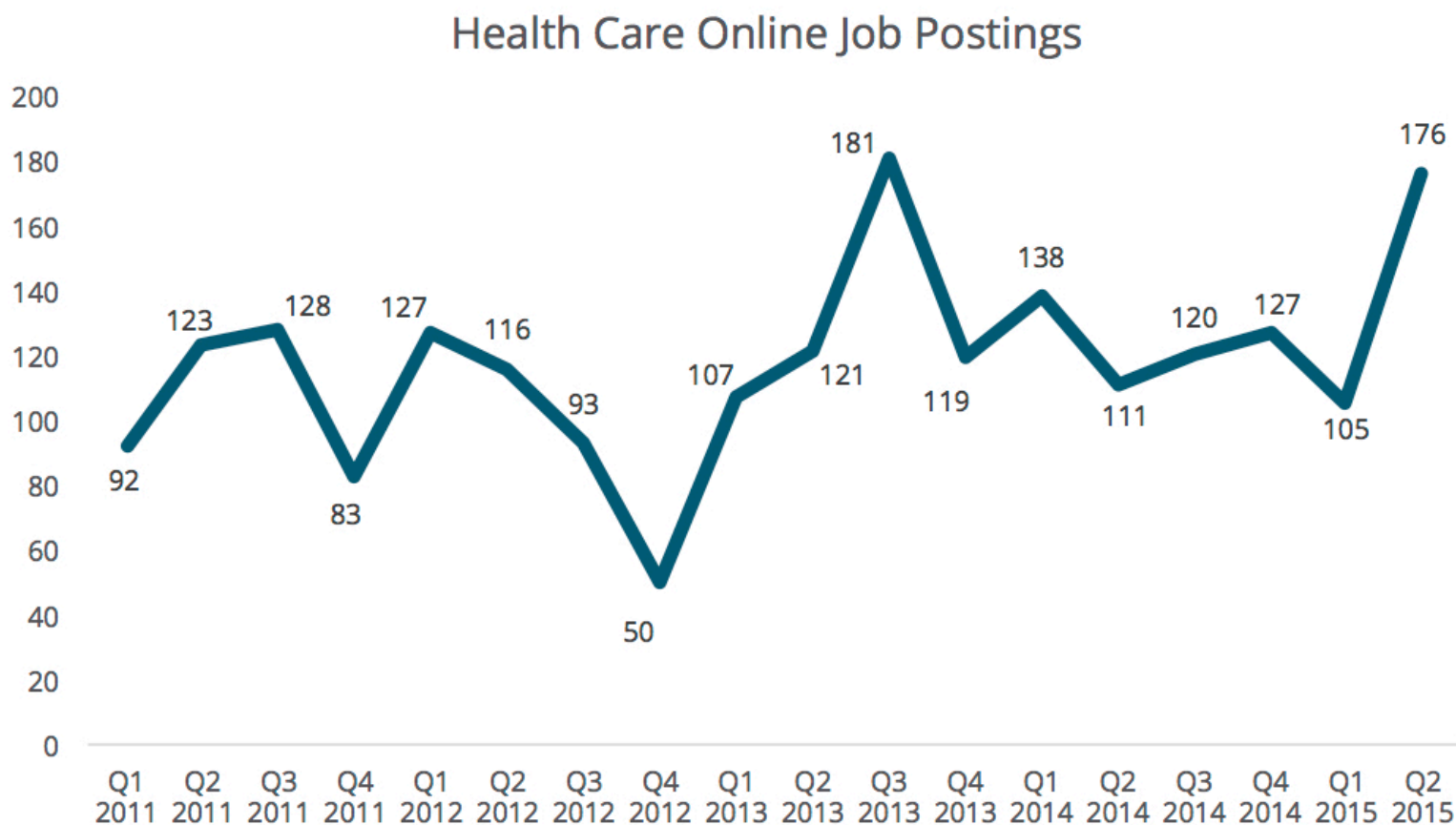
HEALTH CARE

TOP JOBS



HEALTH CARE

ONLINE JOB POSTINGS OVER TIME



Source: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Online ads for Health Care occupations rose from 105 in Q1 to 176 in Q2 2015, a 67.6% increase. Prior to Q2, online ads averaged 120 per quarter between Q4 2013 and Q1 2015. Despite the increase, postings have not yet surpassed the record of 181 online ads in Q3 2013. Historically, postings typically dropped during Q4 each year but 2014 bucked that trend.

Health Care is a sector that grows in concentration and demand as the local population increases and ages (demanding more services) and as universities and hospitals diversify and increase their reputation for destination care. Both of these are occurring in Michigan with demand for health services increase (as the population ages) and as universities and other hospitals become places of choice for others seeking care from outside the region.

The recent increase in demand for Health Care occupations in Monroe has not yet improved the supply of these workers. Only half of the most in-demand jobs in this cluster have concentrations of workers in Monroe near or above national averages. For example, registered nurses have a location quotient (LQ) of 0.75, meaning that the concentration of these workers in Monroe is just 75% of the U.S. on average. Meanwhile, medical assistants have an LQ of 1.88, indicating that the concentration of these workers is 88% higher than national averages. Higher LQ's typically indicate that employers will have an easier time finding talent; lower LQ's will make filling open positions more difficult.

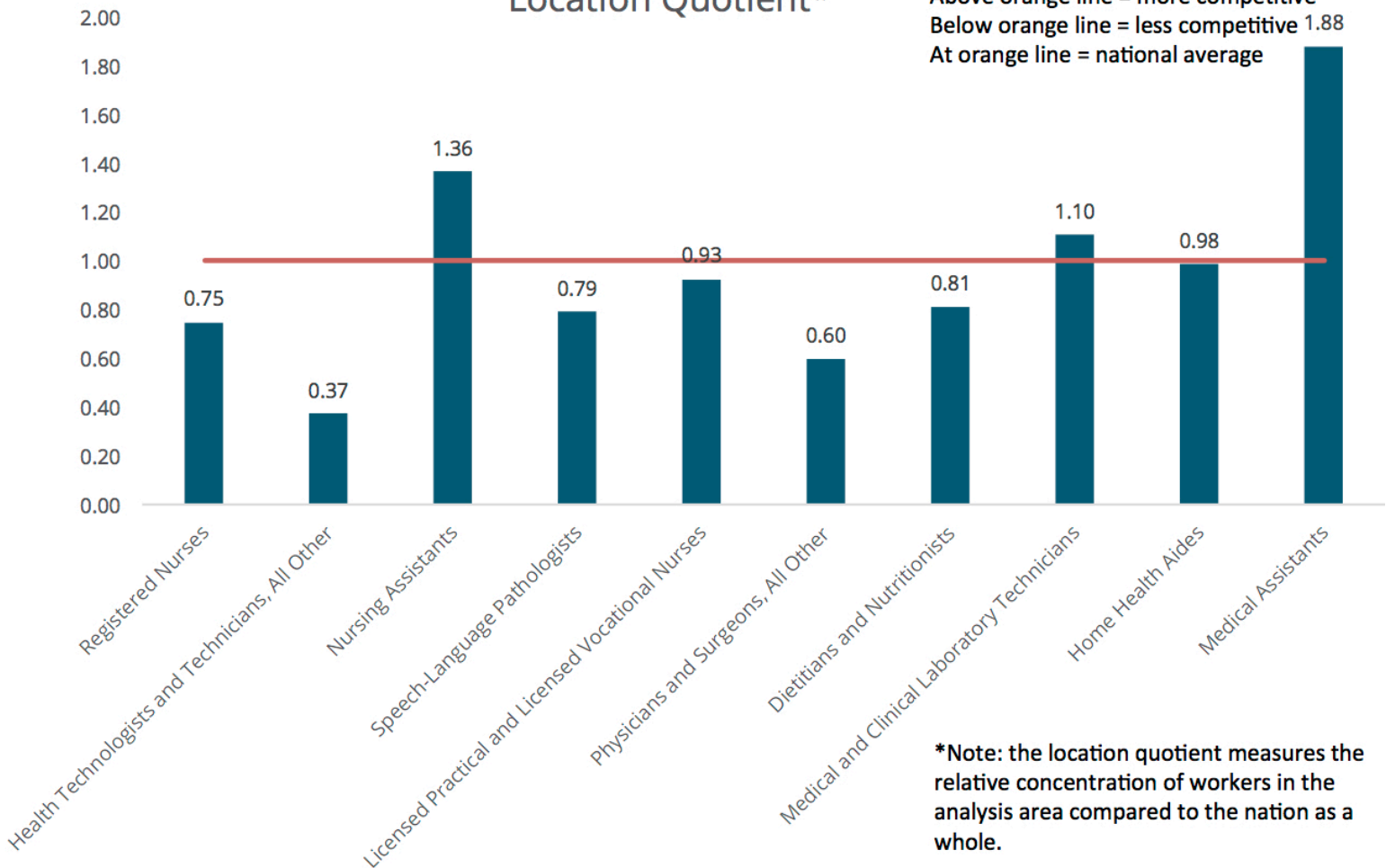
Many health care jobs are a pathway into the middle-class and others, those that require graduate-level training, boast very high salaries. Many workers see the high wage potential are enrolling in health programs, however, there is still a shortage of many health care workers as evidenced by high posting levels and employment growth.

HEALTH CARE

TOP 10 JOBS LOCATION QUOTIENT AND WAGES

Location Quotient*

Above orange line = more competitive
Below orange line = less competitive
At orange line = national average



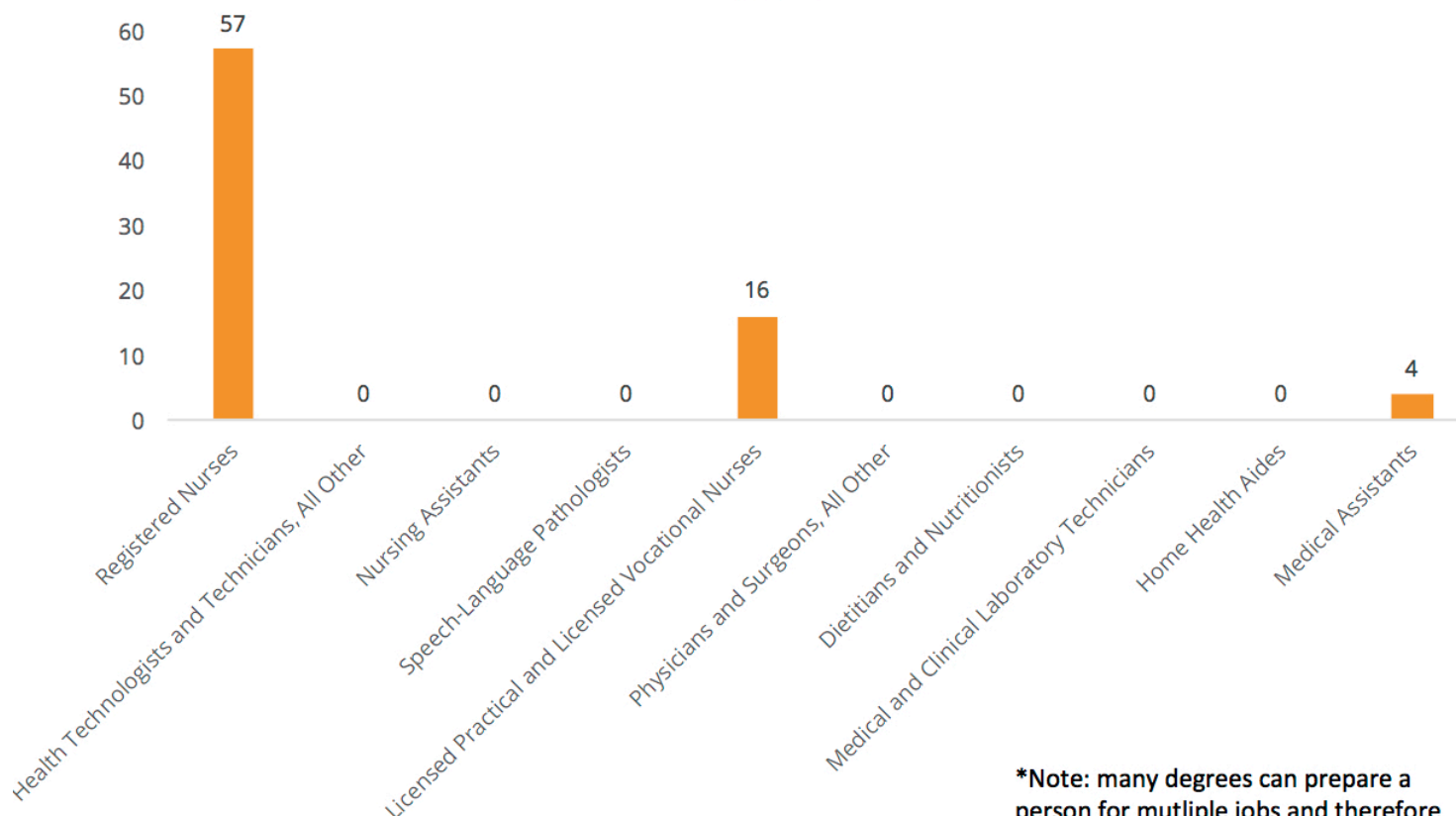
*Note: the location quotient measures the relative concentration of workers in the analysis area compared to the nation as a whole.

Data: EMSI, Burning Glass
Analysis: Workforce Intelligence Network

ONET Code	Occupation	10th Percentile Hourly Earnings	25th Percentile Hourly Earnings	Median Hourly Earnings	75th Percentile Hourly Earnings	90th Percentile Hourly Earnings
29-1141	Registered Nurses	\$20.74	\$23.62	\$28.21	\$31.43	\$43.12
29-2099	Health Technologists and Technicians, All Other	\$11.81	\$13.51	\$16.83	\$21.01	\$29.36
31-1014	Nursing Assistants	\$9.93	\$11.33	\$12.77	\$13.96	\$14.68
29-1127	Speech-Language Pathologists	\$18.89	\$23.00	\$28.21	\$32.59	\$44.62
29-2061	Licensed Practical and Licensed Vocational Nurses	\$17.68	\$19.80	\$21.51	\$23.21	\$26.44
29-1069	Physicians and Surgeons, All Other	\$27.63	\$30.62	\$71.07	\$85.54	\$140.22
29-1031	Dietitians and Nutritionists	\$15.96	\$18.79	\$22.39	\$24.71	\$32.11
29-2012	Medical and Clinical Laboratory Technicians	\$9.61	\$11.35	\$13.90	\$16.44	\$24.20
31-1011	Home Health Aides	\$8.16	\$8.68	\$9.53	\$11.04	\$12.59
31-9092	Medical Assistants	\$10.30	\$11.49	\$12.96	\$14.42	\$16.91

TOP 10 JOBS RECENT GRADUATES AND EDUCATION AND TRAINING REQUIREMENTS

Recent Area Grads with Degrees Related to Top Jobs* (2013)



Data: EMSI, Burning Glass, Integrated Post-Secondary Data System
Analysis: Workforce Intelligence Network

*Note: many degrees can prepare a person for multiple jobs and therefore many of these graduates are counted for several occupations.

ONET Code	Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
29-1141	Registered Nurses	Associate's degree	None	None
29-2099	Health Technologists and Technicians, All Other	High school diploma or equivalent	None	None
31-1014	Nursing Assistants	Postsecondary non-degree award	None	None
29-1127	Speech-Language Pathologists	Master's degree	None	None
29-2061	Licensed Practical and Licensed Vocational Nurses	Postsecondary non-degree award	None	None
29-1069	Physicians and Surgeons, All Other	Doctoral or professional degree	None	Internship/residency
29-1031	Dietitians and Nutritionists	Bachelor's degree	None	Internship/residency
29-2012	Medical and Clinical Laboratory Technicians	Associate's degree	None	None
31-1011	Home Health Aides	Less than high school	None	Short-term on-the-job training
31-9092	Medical Assistants	Postsecondary non-degree award	None	None



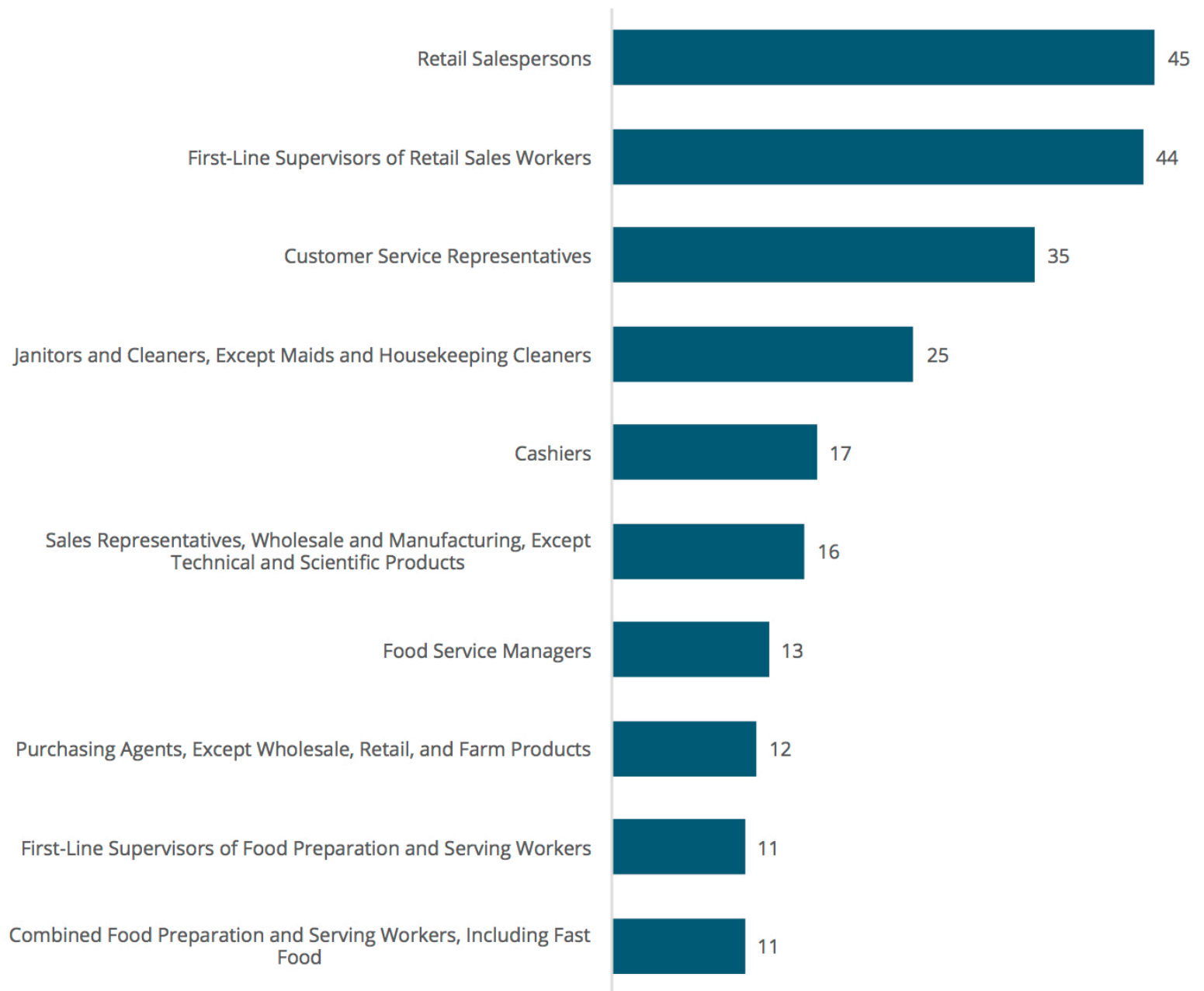
RETAIL AND HOSPITALITY

The retail and hospitality cluster is the largest occupational cluster that WIN analyzes, both in terms of employment and online job postings. This cluster 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. As defined by WIN, the retail and hospitality cluster 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. In 2014, 632,825 individuals were employment in retail and hospitality related occupations in the region.

Retail salespersons was the most in-demand Retail & Hospitality occupation for a second consecutive quarter with 45 online ads during Q2 2015. While demand decreased from the 61 postings in Q1, it remained higher than the second most in-demand occupation, first-line supervisors of retail workers (44 online ads). Together, these two occupations account for one out of every four Retail & Hospitality job postings in Monroe County. Other top occupations included customer service representatives (35 online ads) and janitors (25 online ads).

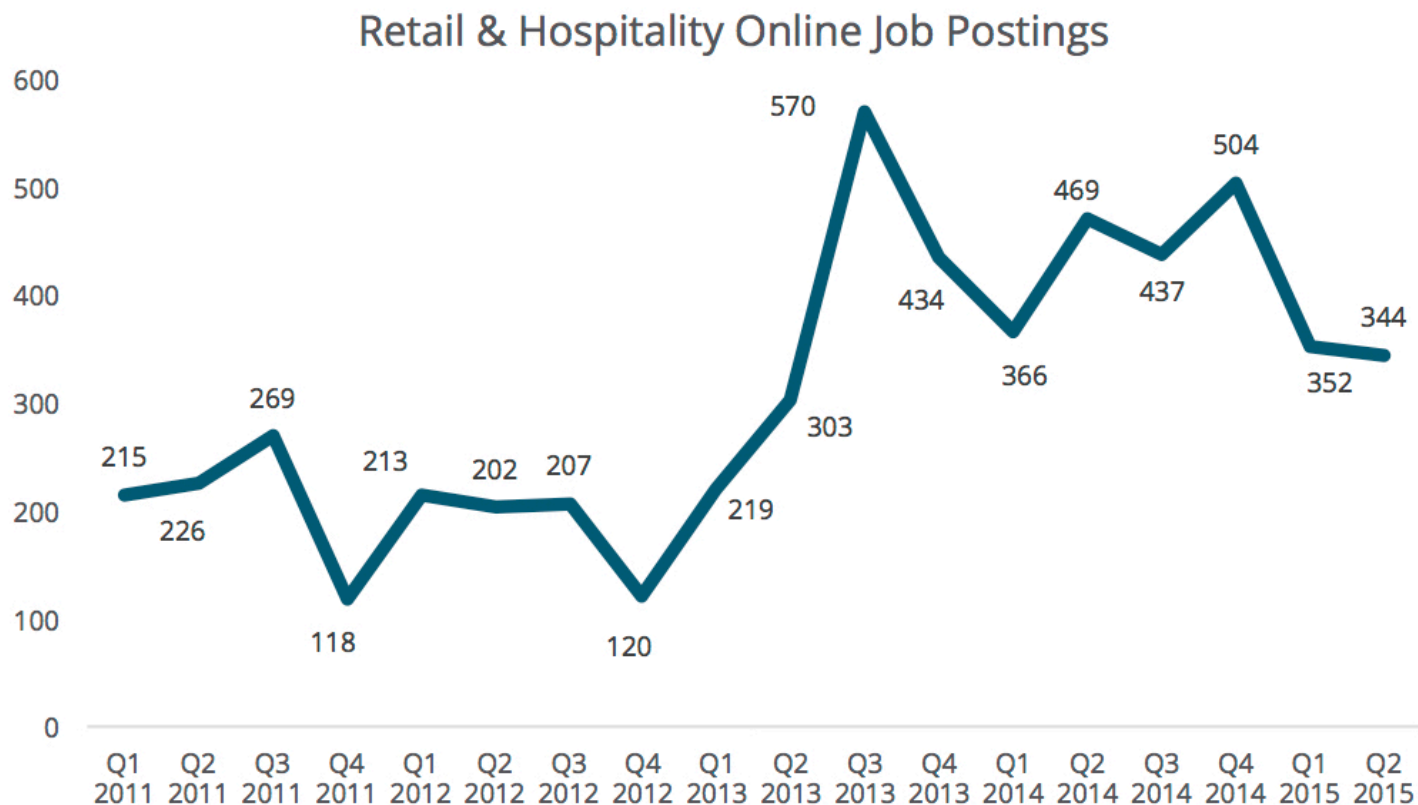
RETAIL AND HOSPITALITY

TOP JOBS



RETAIL AND HOSPITALITY

ONLINE JOB POSTINGS OVER TIME



Source: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Postings have decreased for the Retail & Hospitality cluster in Monroe County for the second consecutive quarter. Online ads dropped from 352 in Q1 2015 to 344 in Q2. In comparison, postings for this cluster increased by 2,000 (11% growth) between Q1 and Q2 in the nine-county WIN Region. While postings remain well above the low levels seen in 2011-2012, they do fall short of 2014's average of 444 online ads per quarter.

Like other services, Health Care being one, demand for Retail & Hospitality occupations increase as the population grows and has more money to spend in the economy. Wages in the region have not been growing rapidly but compared to the recession low, wages are up. Most of the top Retail & Hospitality occupations in Monroe County are as or more concentrated than the national average (location quotient greater than one), but none are anywhere near the high concentration of other occupations in other clusters. Cashiers have the highest location quotient (LQ), 1.62, meaning that there is a 62% higher concentration of these workers in Monroe than in the U.S. on average. Higher LQ's typically indicate that employers will have an easier time finding experienced talent; lower LQ's will make filling open positions more difficult.

Retail & hospitality jobs are not often sought after due to high wages. But these jobs are often the first step for workers into the labor force where they can learn valuable skills that translate to other occupations that earn a higher wage. Management and supervisory positions tend to have high wages but also require more education.

Most retail & hospitality jobs do not require higher education but many require specialized on-the-job training.

RETAIL AND HOSPITALITY

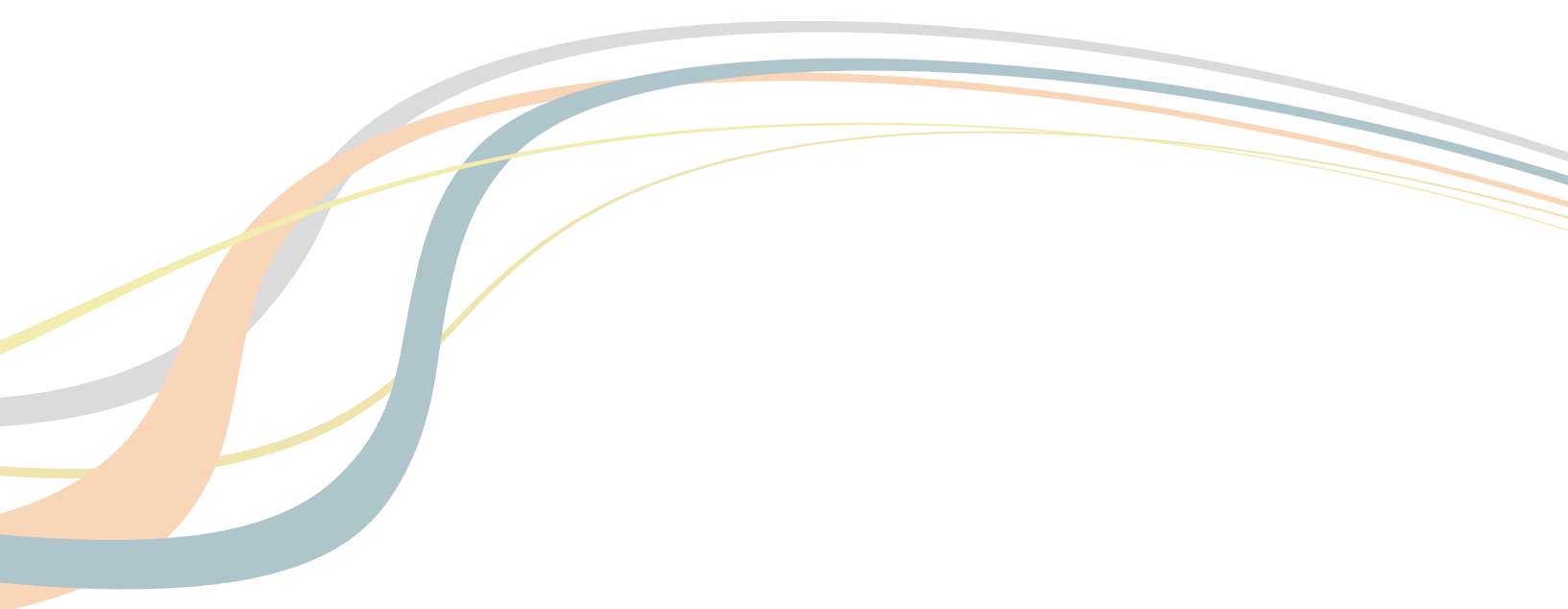
TOP 10 JOBS LOCATION QUOTIENT AND WAGES



ONET Code	Occupation	10th Percentile Hourly Earnings	25th Percentile Hourly Earnings	Median Hourly Earnings	75th Percentile Hourly Earnings	90th Percentile Hourly Earnings
41-2031	Retail Salespersons	\$8.18	\$8.77	\$9.84	\$13.17	\$17.88
41-1011	First-Line Supervisors of Retail Sales Workers	\$11.71	\$13.29	\$16.14	\$19.86	\$23.95
43-4051	Customer Service Representatives	\$8.23	\$8.94	\$11.07	\$15.64	\$19.12
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$8.13	\$8.89	\$10.92	\$13.70	\$16.46
41-2011	Cashiers	\$8.15	\$8.55	\$9.22	\$10.34	\$13.25
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$12.18	\$16.11	\$21.41	\$27.86	\$35.89
11-9051	Food Service Managers	\$13.25	\$14.63	\$17.03	\$22.10	\$24.62
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	\$17.91	\$21.76	\$28.37	\$39.36	\$46.99
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	\$9.52	\$10.80	\$13.51	\$18.21	\$23.37
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	\$8.15	\$8.47	\$9.00	\$9.53	\$10.38

TOP 10 JOBS EDUCATION AND TRAINING REQUIREMENTS

ONET Code	Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
41-2031	Retail Salespersons	Less than high school	None	Short-term on-the-job training
41-1011	First-Line Supervisors of Retail Sales Workers	High school diploma or equivalent	Less than 5 years	None
43-4051	Customer Service Representatives	High school diploma or equivalent	None	Short-term on-the-job training
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	Less than high school	None	Short-term on-the-job training
41-2011	Cashiers	Less than high school	None	Short-term on-the-job training
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	High school diploma or equivalent	None	Moderate-term on-the-job training
11-9051	Food Service Managers	High school diploma or equivalent	Less than 5 years	None
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	High school diploma or equivalent	None	Long-term on-the-job training
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	High school diploma or equivalent	Less than 5 years	None
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	Less than high school	None	Short-term on-the-job training





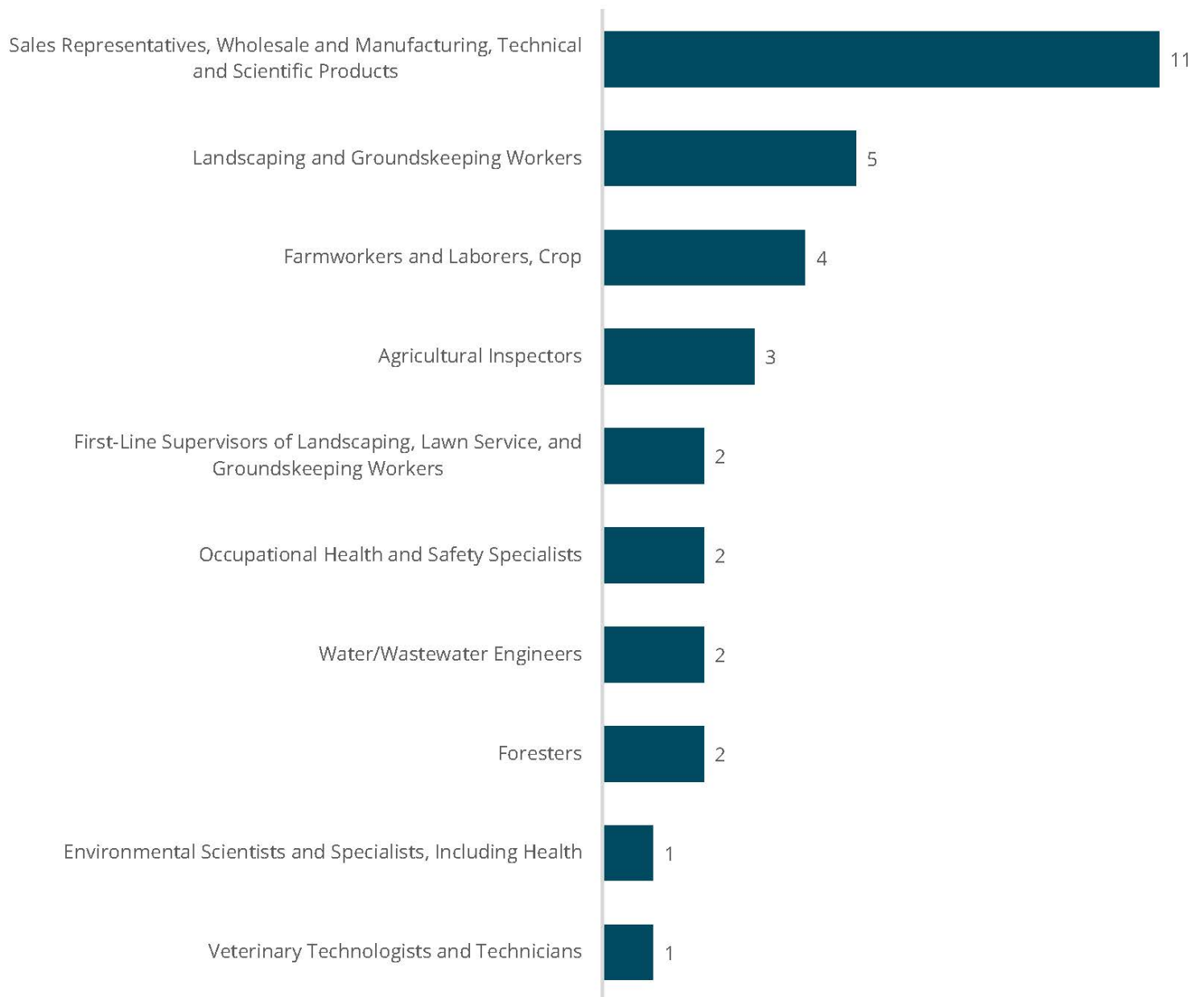
AGRICULTURE

WIN's agriculture cluster 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, and recreation workers. In 2014, 30,424 individuals were employed in the agriculture cluster in Region 9.

Wholesale and manufacturing sales representatives for technical and scientific products was the most in-demand Agriculture occupation in Monroe County with 11 postings during Q2 2015. This occupation accounted for nearly one out of every three Agricultural-related posting. Other top jobs included landscaping and groundskeeping workers (5 online ads) and crop farmworkers (4 online ads).

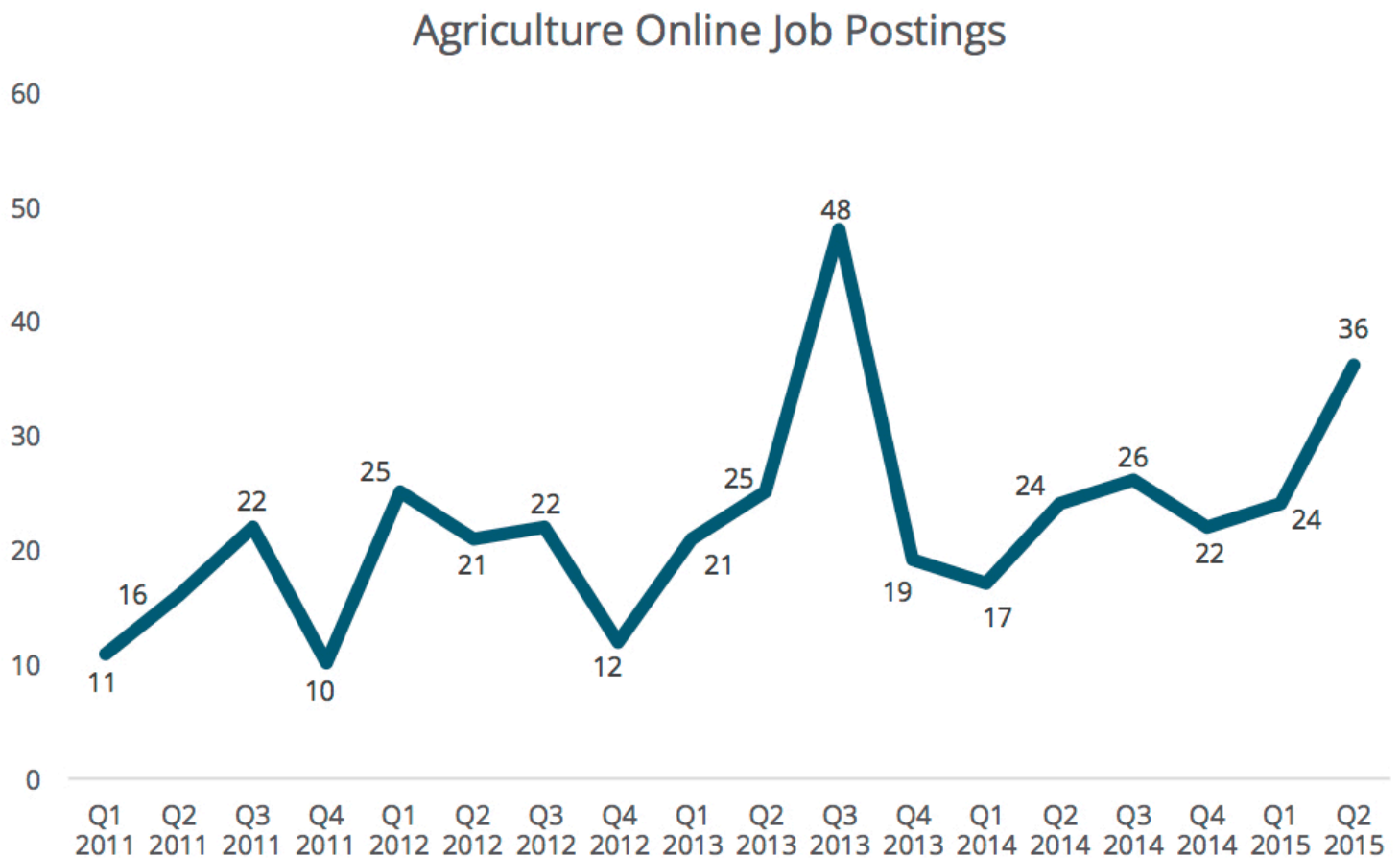
AGRICULTURE

TOP JOBS



AGRICULTURE

ONLINE JOB POSTINGS OVER TIME



Source: Burning Glass Technologies

Analysis: Workforce Intelligence Network

Postings rose from 24 in Q1 2015 to 36 in Q2, a 50% increase. This jump is consistent with the cycle of postings seen in the agriculture occupations; increase in demand during Q2 and Q3 following a drop-off in Q4. Based on this cyclical model and the nature of the occupations in this cluster, postings can be expected to remain stagnant or slightly increase in Q3.

Agriculture occupations are the smallest cluster in Region 9, accounting for just 2.1% of all online jobs ads in the county.

The concentration of workers is near or above the national average for half of the most in-demand Agricultural occupations in Monroe. Veterinary technologists and technicians have a location quotient (LQ) of 2.2 in the county, meaning that the concentration of these workers is 120% higher in Monroe than the rest of the U.S. on average. . Higher LQ's typically indicate that employers will have an easier time finding experienced talent; lower LQ's will make filling open positions more difficult. Occupations like landscaping and groundskeeping workers (LQ = 1.27) are slightly more concentrated in the country compared to the rest of the U.S., but many of these agricultural occupations have room to make gains in employment.

Median wages for agricultural occupations, like retail and hospitality, represent a large range. Most high-paying jobs in this cluster are in engineering, research, or generally STEM professions. Positions in sales are also higher-paying options in this cluster. There is great demand for landscaping workers in Monroe, however, this occupation has one of the lowest median wages for the agriculture sector.

Many of the in-demand agriculture occupations do not require more than a high school diploma and are attainable with some on-the-job training. However, the high-paying jobs in sales or engineering require at least a bachelor's degree.

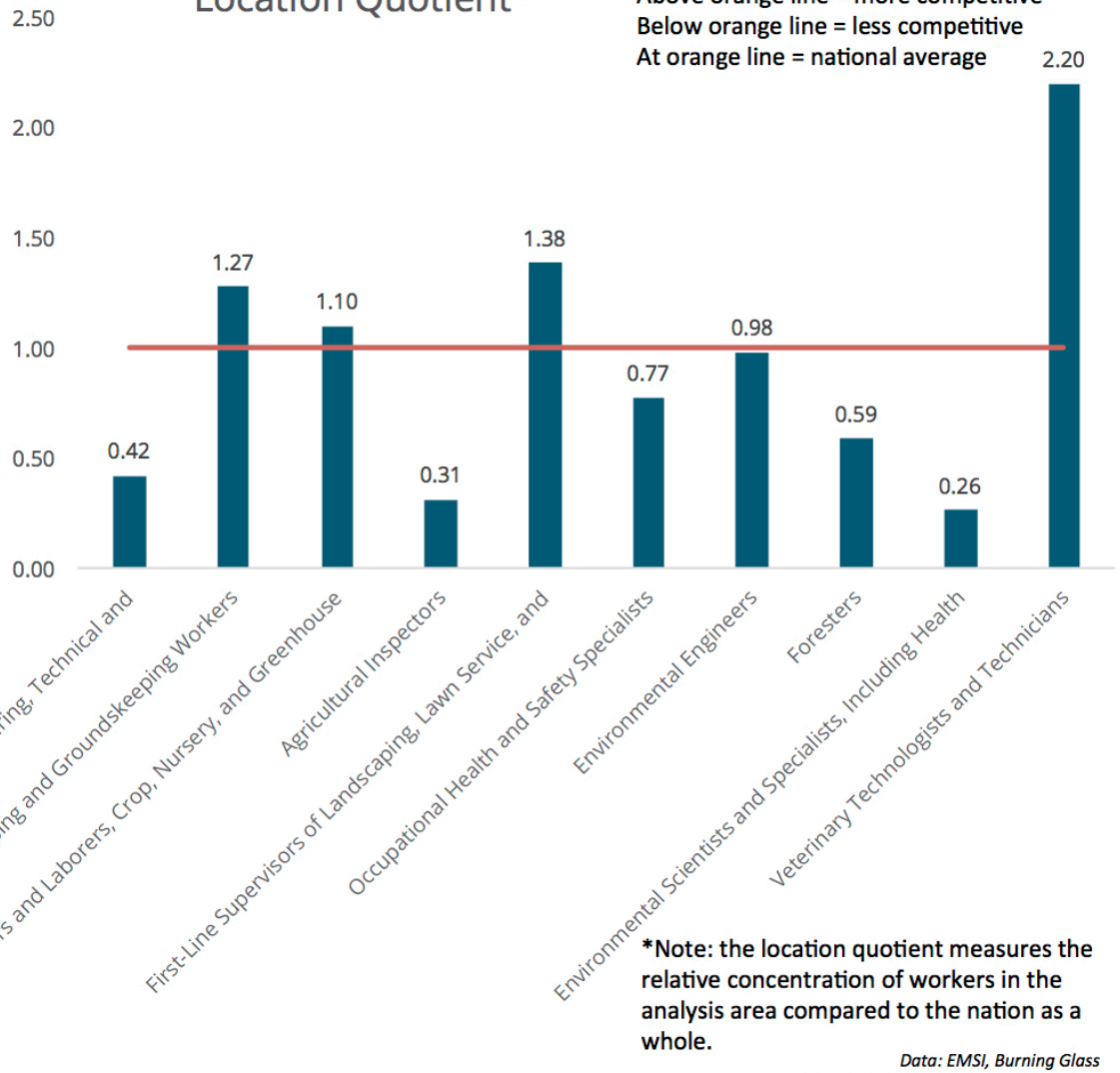
Many degrees can prepare completers for multiple jobs, therefore it is not advantageous to compare completions to demand in a cluster like agriculture where programs do not map perfectly onto occupations and many occupations may not even require a degree.

AGRICULTURE

TOP 10 JOBS LOCATION QUOTIENT AND WAGES

Location Quotient*

Above orange line = more competitive
Below orange line = less competitive
At orange line = national average



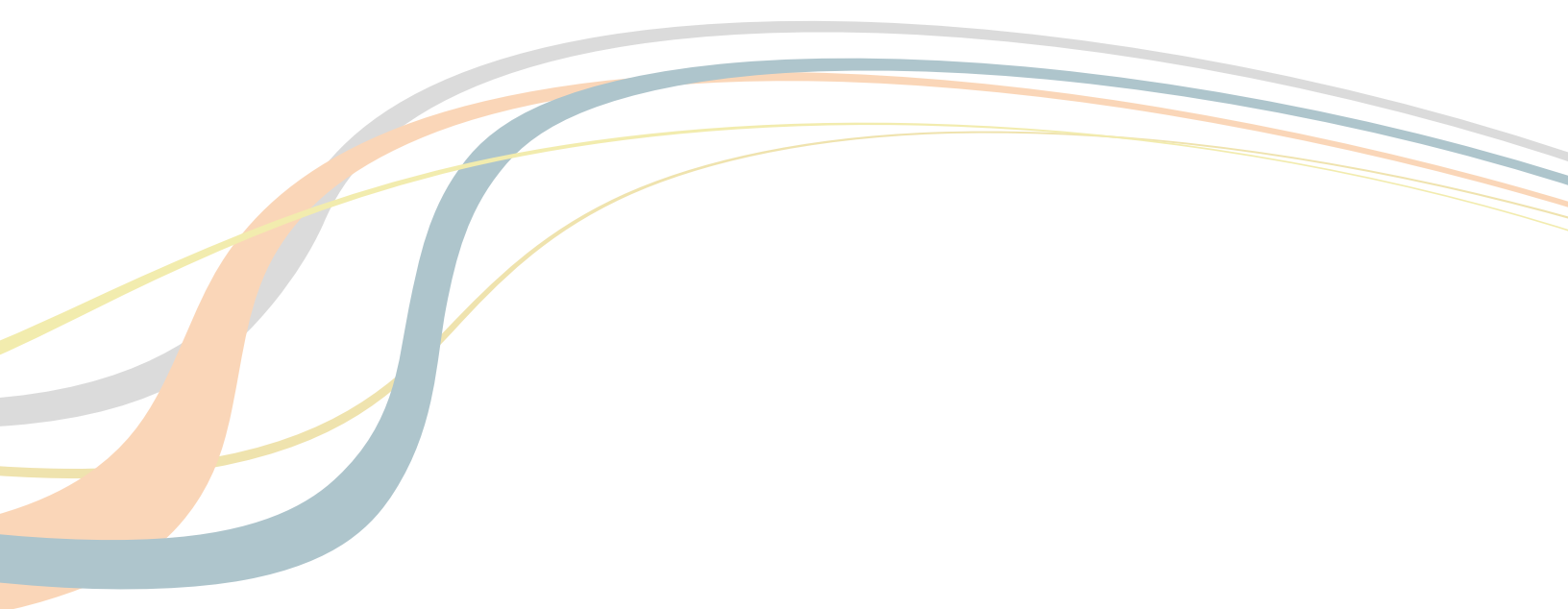
*Note: the location quotient measures the relative concentration of workers in the analysis area compared to the nation as a whole.

Data: EMSI, Burning Glass
Analysis: Workforce Intelligence Network

ONET Code	Occupation	10th Percentile Hourly Earnings	25th Percentile Hourly Earnings	Median Hourly Earnings	75th Percentile Hourly Earnings	90th Percentile Hourly Earnings
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	\$20.96	\$31.75	\$39.92	\$46.49	\$58.24
37-3011	Landscaping and Groundskeeping Workers	\$8.87	\$9.92	\$12.17	\$13.35	\$14.23
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	\$8.36	\$8.61	\$8.85	\$9.61	\$12.01
45-2011	Agricultural Inspectors	Insf. Data	Insf. Data	Insf. Data	Insf. Data	Insf. Data
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	\$11.88	\$12.92	\$14.39	\$20.76	\$25.72
29-9011	Occupational Health and Safety Specialists	\$16.99	\$21.40	\$27.22	\$30.76	\$41.42
17-2081	Environmental Engineers	\$28.66	\$38.66	\$45.86	\$52.05	\$58.72
19-1032	Foresters	Insf. Data	Insf. Data	Insf. Data	Insf. Data	Insf. Data
19-2041	Environmental Scientists and Specialists, Including Health	Insf. Data	Insf. Data	Insf. Data	Insf. Data	Insf. Data
29-2056	Veterinary Technologists and Technicians	\$9.71	\$10.74	\$12.92	\$16.04	\$17.93

TOP 10 JOBS EDUCATION AND TRAINING REQUIREMENTS

ONET Code	Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-job Training
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	Bachelor's degree	None	Moderate-term on-the-job training
37-3011	Landscaping and Groundskeeping Workers	Less than high school	None	Short-term on-the-job training
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	Less than high school	None	Short-term on-the-job training
45-2011	Agricultural Inspectors	Bachelor's degree	None	Moderate-term on-the-job training
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	High school diploma or equivalent	Less than 5 years	None
29-9011	Occupational Health and Safety Specialists	Bachelor's degree	None	Short-term on-the-job training
17-2081	Environmental Engineers	Bachelor's degree	None	None
19-1032	Foresters	Bachelor's degree	None	None
19-2041	Environmental Scientists and Specialists, Including Health	Bachelor's degree	None	None
29-2056	Veterinary Technologists and Technicians	Associate's degree	None	None



SECTION THREE

LABOR MARKET AND DEMAND SUMMARY



The top in-demand jobs in Monroe County during Q2 2015 were heavy and tractor-trailer truck drivers, registered nurses, software developers for applications, maintenance and repair workers, and retail salespersons. Demand for truck drivers dominated postings; the 122 online ads for this occupation in Q2 more than double the postings for the next most in-demand job—registered nurses.

Demand for software developers (applications), according to online postings, has increased by more than 500% since Q3 2014. This occupation is growing in importance across the region and in Monroe County.

Q2 saw the labor force grow by 1% while employment grew by 1.5%. Labor force participations increased to 76,689 individuals while employment increased to 73,215 workers.

Unemployment dropped from 4.9% in Q1 to 4.5% in Q2 2015. Since employment increased at a greater rate than the labor force, the 0.4 percentage point drop in unemployment can be entirely attributed to people gaining jobs.

Total job postings in Monroe County increased to 1,688 online ads in Q2 2015, an 8.4% increase over the 1,557 postings from Q1 2015. Online ads in the county have slowly been increasing since Q4 2013 but have not surpassed the peak of 2,069 postings during Q3 2013. While the rate of growth for postings in Monroe County has been positive since Q4 2013, it is slower than the regional average. Nonetheless, Q2 2015 postings doubled the 2011 through 2012 average of 834 ads per quarter.

Postings increased for the IT, Health Care and Agriculture clusters while postings decreased in Retail & Hospitality. The remaining two occupation clusters, Skilled Trades & Technicians and Engineers & Designers, remained consistent with the same number of ads in Q2 as in Q1 2015. The IT cluster has doubled its share of total postings from 3.5% in Q4 2014 to 7% in Q2 2015.

The clusters analyzed by WIN in Monroe County represent 51.8% of all online job postings in the county.



SECTION FOUR

DATA NOTES AND SOURCES

DATA NOTES AND SOURCES

SPECIAL DATA NOTE

- Due to changes in Burning Glass's aggregation, parsing, and deduplication methods implemented in December 2014, data from previously released reports should not be compared to data in reports starting in Q4 2014 and moving forward. For the Q4 2014 report, the WIN team re-gathered and analyzed all of the data (postings from 2011 through 2014) to ensure that all numbers are up-to-date. If you would like information on the differences between the updated data and data from previous reports, please contact WIN's Research Director Colby Spencer Cesaro at colby.cesaro@win-semich.org.
- Wage data that is not labeled as a national average is specific to each report's geography. For example, wage data reported in the WIN Region report is averaged across the 9-county WIN Region. Data in the Wayne County report is wage data solely for Wayne County.
- All numbers included in this report are the correct and updated data.
- Wage and educational attainment data available varies depending on the occupation. All wage and educational attainment data provided is for the 6-digit SOC code. Some 6-digit codes do not have education or wage data available, in this case we leave the information blank.
- Educational attainment data available refers to the share of the current workforce in each bracket, not what is shown in postings. Employers may require different educational attainment than what is in this report.
- Quarterly reports: Due to a data update in Burning Glass Technologies' Labor Insight tool, comparisons should not be made between data from each quarterly report and the annual review data should not be compared to data from previous quarterly reports.
- Adjustments to the labor force information were also made to reflect and incorporate updated inputs, re-estimation, and controlling to new statewide totals. Much of the information related to monthly and quarterly employment is updated several months after the initial release. More information can be found here: <http://www.bls.gov/lau/launews1.htm>

DATA NOTES AND SOURCES

UNDERSTANDING DEMAND VS EMPLOYMENT

- Employment refers to actual employment numbers—the number of people in jobs—in targeted industries or occupations.
- Demand refers to statistics derived from employer job postings, which indicate the potential for employment but may or may not materialize into actual jobs.
- Job posting-related demand, as presented in this report, is measured by online job postings. Employer demand may be larger than what is highlighted in this report if employers find talent by other means.

DATA SOURCES

- Labor market demand data for this report was compiled using Burning Glass Technologies' Labor Insight Tool, and analyzed by the Workforce Intelligence Network. Other data sources include, the Bureau of Labor Statistics, and Economic Modeling Specialists Inc. (EMSI). Check out our website <http://www.win-semich.org> for more data and detailed information about our sources.

UNDERSTANDING CLUSTERS

- Rather than focusing on talent demand within industries (types of firms), WIN generally emphasizes exploring talent demand based on occupations, including the skills, educational credentials, and experience needed to work in them.
- WIN research examines industry data, as the health of companies can be useful for economic development purposes. However, shifting focus from industry to occupation is important as different types of occupations with extremely different skillsets may work within and across industries. For example, accountants, computer specialists, and engineers all may work in the manufacturing industry.
- By clustering occupations, the talent system can identify employer demand for particular skillsets across multiple industry types and develop a response through training and pipeline development to meet that demand.

BOARD ORGANIZATIONS



FOR MORE INFORMATION ABOUT RESEARCH AND DATA,
VISIT OUR WEBSITE:
WWW.WIN-SEMICH.ORG/DATA-RESEARCH

