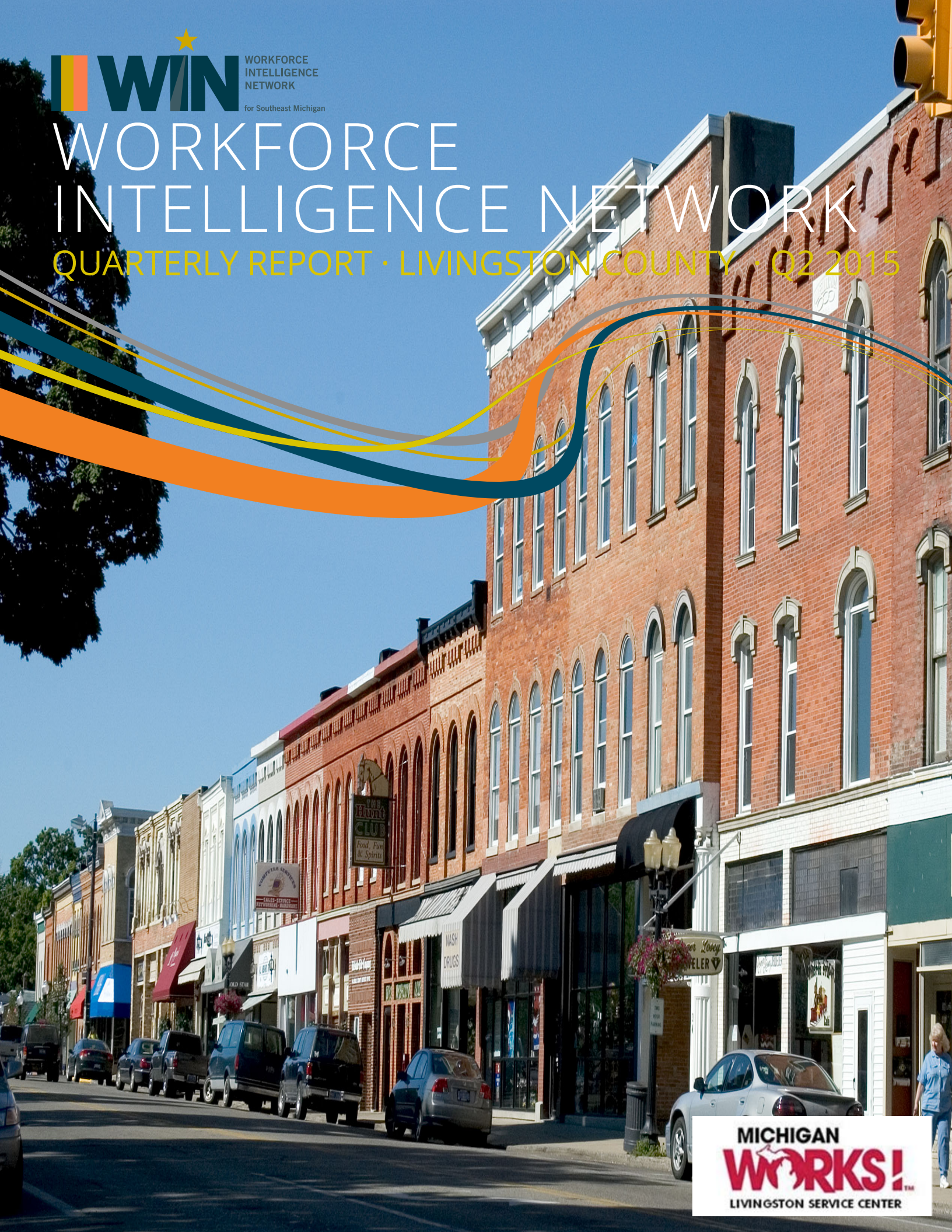


# WORKFORCE INTELLIGENCE NETWORK

QUARTERLY REPORT • LIVINGSTON COUNTY • Q2 2015





# CONTENTS

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## 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

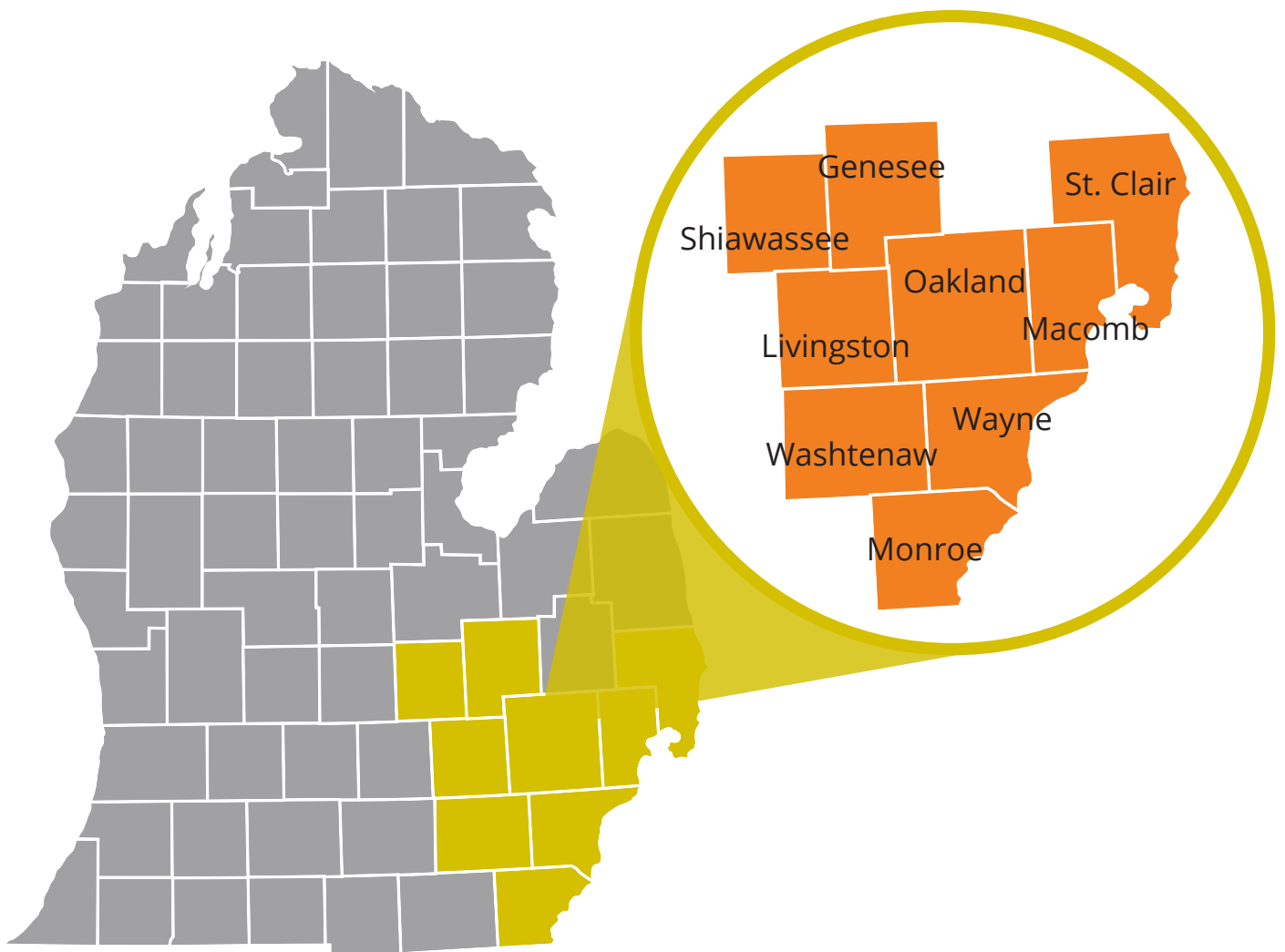
## Data Notes and Sources



WIN region includes 9 counties:

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

This report focuses on Livingston County.







# SECTION ONE

## LABOR MARKET AND DEMAND OVERVIEW





# TOP 20 JOBS IN DEMAND

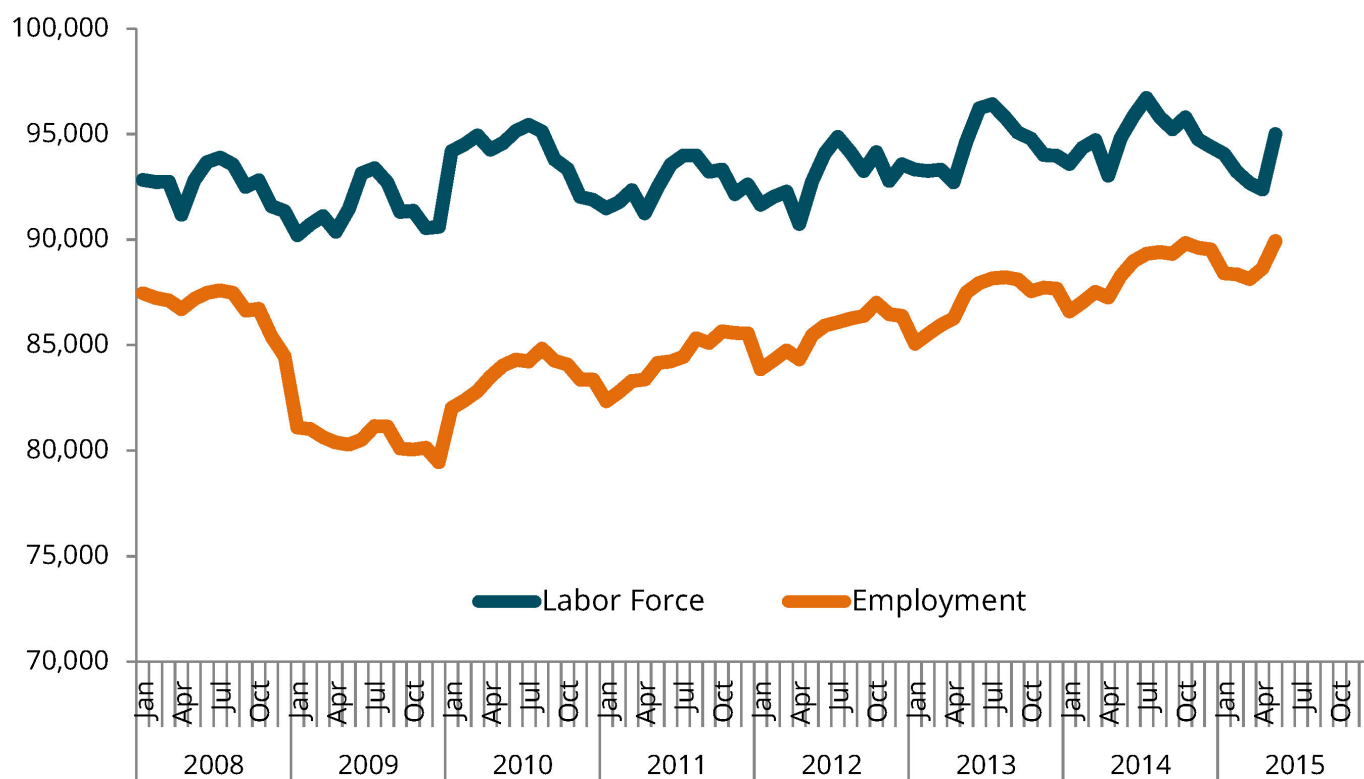
APRIL - JUNE 2015



Heavy and tractor-trailer truck drivers replaced retail salespersons as the most in-demand job in Livingston County according to online job postings for Q2 2015. Postings for truck drivers increased from 85 in Q1 to 104 this past quarter. Retail salespersons moved down to second with 92 online ads in Q2 2015. Not including truck drivers, half of the top jobs in Livingston County this quarter are in Retail & Hospitality or the Skilled Trades.



# EMPLOYMENT AND LABOR FORCE



Source: Bureau of Labor Statistics

Analysis: Workforce Intelligence Network

Both labor force participation and employment increased between Q1 and Q2 2015 with employment growing at close to the regional average and the labor force making modest gain. The labor force increased by 378 individuals to 93,700 (0.4%) while employment grew by 991 workers to 89,290 (1.1%). Since employment increased at a greater rate than the labor force, the 0.7 percentage point drop in unemployment (5.4% to 4.7%) between quarters can be entirely attributed to people gaining jobs. With that said, however, labor force participation is still under its recent peak of 95,921 individuals in Q3 2014.



# EMPLOYER DEMAND

APRIL - JUNE 2015

Livingston County Online Job Postings



Source: Burning Glass Technologies

Analysis: Workforce Intelligence Network

Total job postings in Livingston County reached new highs this quarter with 2,102 online ads posted by local employers. Q2 2015 marks a fifth consecutive quarter of posting growth in the county. While postings typically decreased by Q4 in previous years, 2014 bucked that trend. Online ads should remain high in the county as employers continue to increase employment levels.

Online job ads increased for all occupation clusters analyzed by WIN in Livingston County between Q1 and Q2 2015 with exception to IT, which remained stagnant. The most notable growth in postings was in Engineering and Health Care; both of these sectors have seen demand more than double since Q4 2014. At the end of 2014 the Engineer & Design cluster held just a 2.2% share of total postings in the county; it now holds a 4.1% share. This cluster is gaining in importance.

The clusters analyzed by WIN represent 56.3% of all online job postings in Livingston County.



# EMPLOYMENT AND LABOR FORCE OVERVIEW

	2010 Annual	2011 Annual	2012 Annual	2013 Annual	2014 Annual	2015 To-Date
Labor Force	94,112	92,687	93,029	94,466	94,929	<b>93,473</b>
Employment	83,600	84,318	85,599	87,144	88,565	<b>88,695</b>
Unemployment	10,512	8,369	7,429	7,322	6,364	<b>4,778</b>
Unemployment Rate	11.2%	9.0%	8.0%	7.8%	6.7%	<b>5.1%</b>

3rd Quarter 2014	4th Quarter 2014	1st Quarter 2015	2nd Quarter 2015	Change from 1st Quarter 2015	Percent Change from 1st Quarter 2015
95,921	94,986	93,322	<b>93,700</b>	378	0.4%
89,364	89,662	88,299	<b>89,290</b>	991	1.1%
6,557	5,324	5,023	<b>4,410</b>	-614	-12.2%
6.8%	5.6%	5.4%	<b>4.7%</b>	-0.7%	na










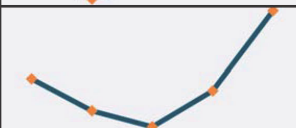



# SECTION TWO

## OCCUPATIONAL CLUSTERS



# LIVINGSTON COUNTY DEMAND OVERVIEW

	Q2 2014	Q3 2014	Q4 2014	Q1 2015	Q2 2015	Change over time	Share of Total Postings Q2 2015
Total	1,370	1,379	1,519	1,905	2,102		
Skilled Trades & Technicians	99	85	66	138	142		6.8%
Engineers & Designers	42	41	34	62	87		4.1%
IT	38	44	40	58	57		2.7%
Health Care	125	140	137	247	297		14.1%
Retail & Hospitality	464	409	437	541	547		26.0%
Agriculture	38	30	26	35	55		2.6%



# ADVANCED MANUFACTURING

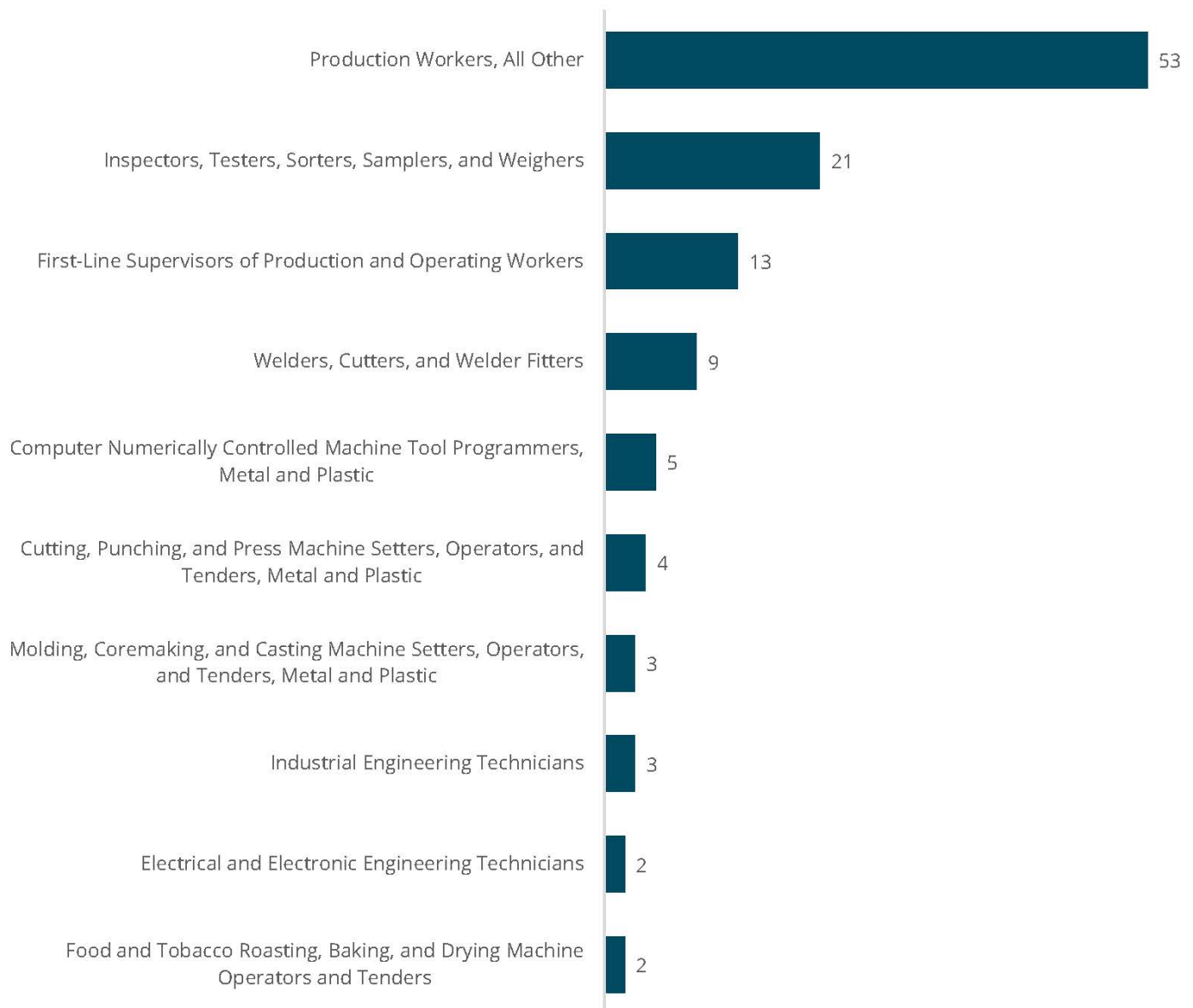
SKILLED TRADES AND TECHNICIANS *WIN's technicians/skilled trades category includes jobs related to advanced manufacturing. Southeast Michigan has more demand for skilled- trades labor, such as CNC machinists and welders, than almost anywhere else in the country. In 2014, skilled trades employment reached 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.*

Production workers are now the most in-demand Skilled Trade occupation in Livingston with online ads more than tripling from 12 in Q1 to 53 in Q2 2015 . CNC machinists was the top job in Q1 with 29 postings; postings dropped to just five this past quarter, possibly indicating that employers successfully found individuals for their openings. Other top jobs include inspectors, testers, sorters, samplers, and weighers (21 ads) and first-line supervisors of production and operating workers (13 ads).



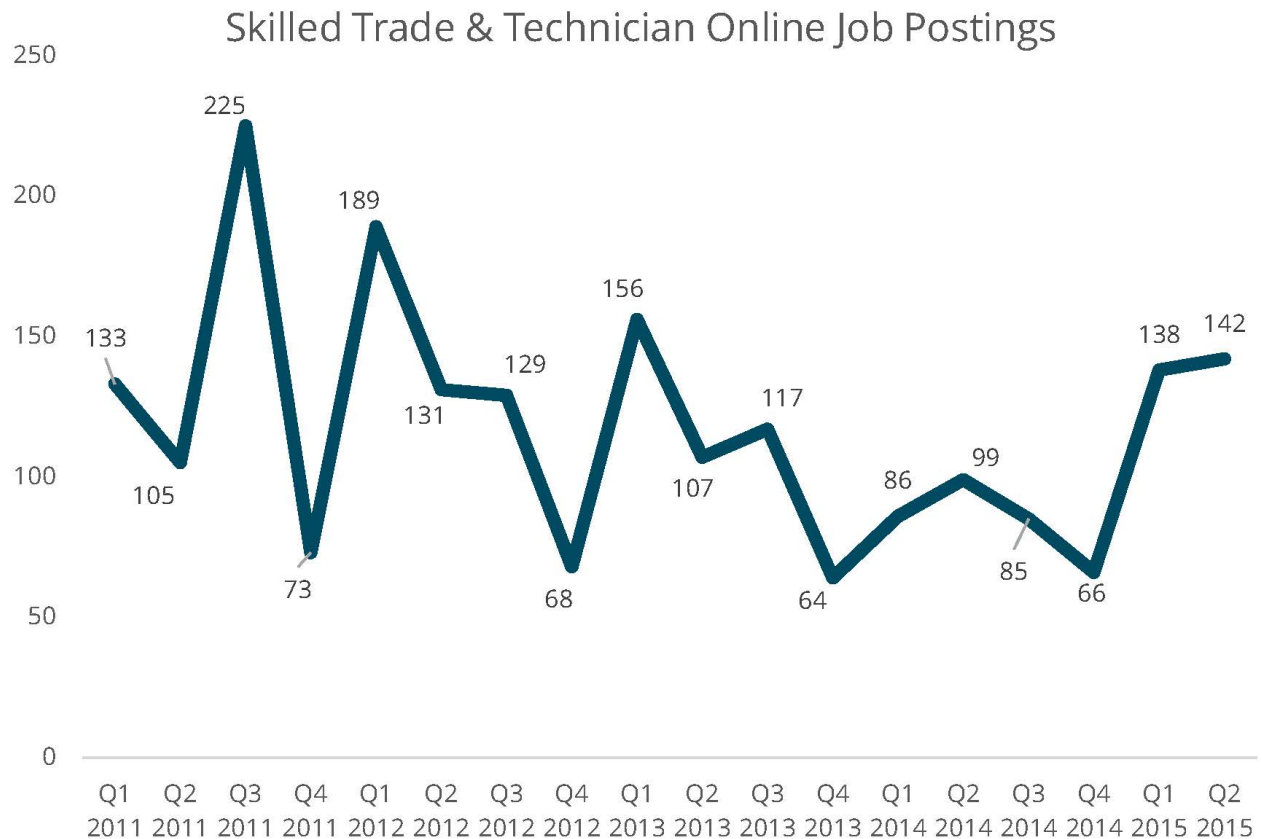
# ADVANCED MANUFACTURING

## 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

Postings for the Skilled Trades in Livingston increased from 138 in Q1 to 142 in Q2 2015, a rise of just 2.9%. While postings did not increase as substantially as last quarter, the continued high level of posting is a welcoming sign compared to the sub-100 postings per quarter in 2014. Online ads for this cluster typically reduce drastically in Q4 each year and could occur again if historical trends continue.



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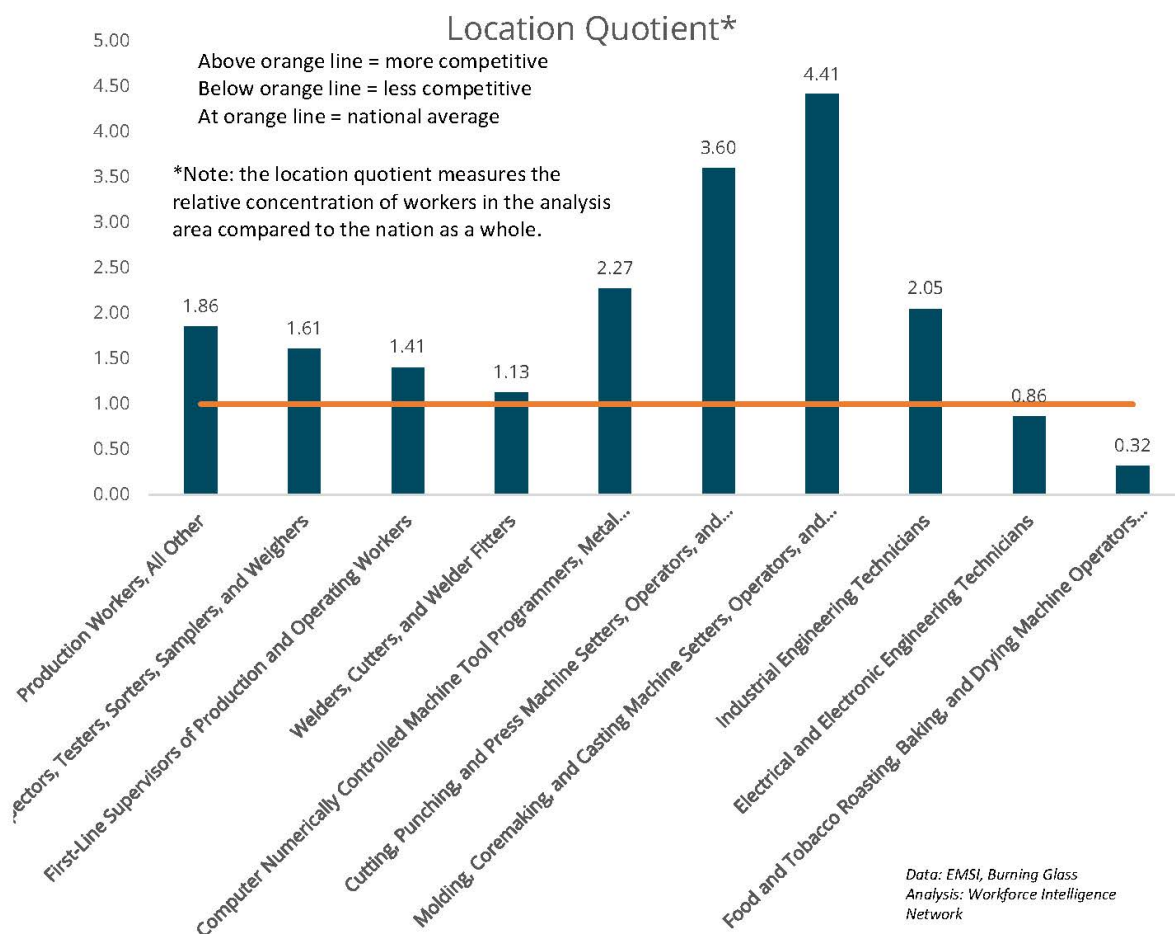
Livingston County has a competitive edge in the Skilled Trades with nearly every top in-demand job at a higher concentration of workers than the rest of the nation. CNC machinists have a location quotient (LQ) of 2.37, meaning that the concentration of these workers in the county is 137% higher than 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 most 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 \$26 per hour, or \$54,000 per year.

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
51-9199	Production Workers, All Other	\$9.67	\$12.82	\$15.00	\$16.65	\$19.54
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	\$9.02	\$10.53	\$14.06	\$20.55	\$25.48
51-1011	First-Line Supervisors of Production and Operating Workers	\$14.83	\$18.94	\$25.72	\$33.43	\$40.84
51-4121	Welders, Cutters, and Welder Fitters	\$10.79	\$13.05	\$15.29	\$18.64	\$23.41
51-4012	Computer Numerically Controlled Machine Tool Programmers, Metal and P	\$13.82	\$16.16	\$20.53	\$25.10	\$29.77
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Met	\$8.86	\$10.36	\$13.06	\$16.77	\$22.98
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders	\$8.15	\$9.63	\$12.21	\$15.03	\$16.93
17-3026	Industrial Engineering Technicians	\$14.24	\$18.18	\$22.84	\$27.44	\$31.97
17-3023	Electrical and Electronic Engineering Technicians	\$12.81	\$15.33	\$19.49	\$26.27	\$31.46
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Ter	Insf. Data	Insf. Data	Insf. Data	Insf. Data	Insf. Data

## SKILLED TRADES AND TECHNICIANS: TOP 10 JOBS EDUCATION AND TRAINING REQUIREMENTS

ONET Code	Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
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
51-1011	First-Line Supervisors of Production and Operating Workers	Postsecondary non-degree award	Less than 5 years	None
51-4121	Welders, Cutters, and Welder Fitters	High school diploma or equivalent	None	Moderate-term on-the-job training
51-4012	Computer Numerically Controlled Machine Tool Programmers, Metal and P	High school diploma or equivalent	None	Long-term on-the-job training
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Met	High school diploma or equivalent	None	Moderate-term on-the-job training
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tender	High school diploma or equivalent	None	Moderate-term on-the-job training
17-3026	Industrial Engineering Technicians	Associate's degree	None	None
17-3023	Electrical and Electronic Engineering Technicians	Associate's degree	None	None
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Te	Less than high school	None	Moderate-term on-the-job training



A photograph of four professionals, three men and one woman, wearing blue hard hats and business attire. They are looking at a document together, with one man pointing at it. The image is overlaid with a semi-transparent orange banner containing the text 'ADVANCED MANUFACTURING' in large, orange, sans-serif capital letters.

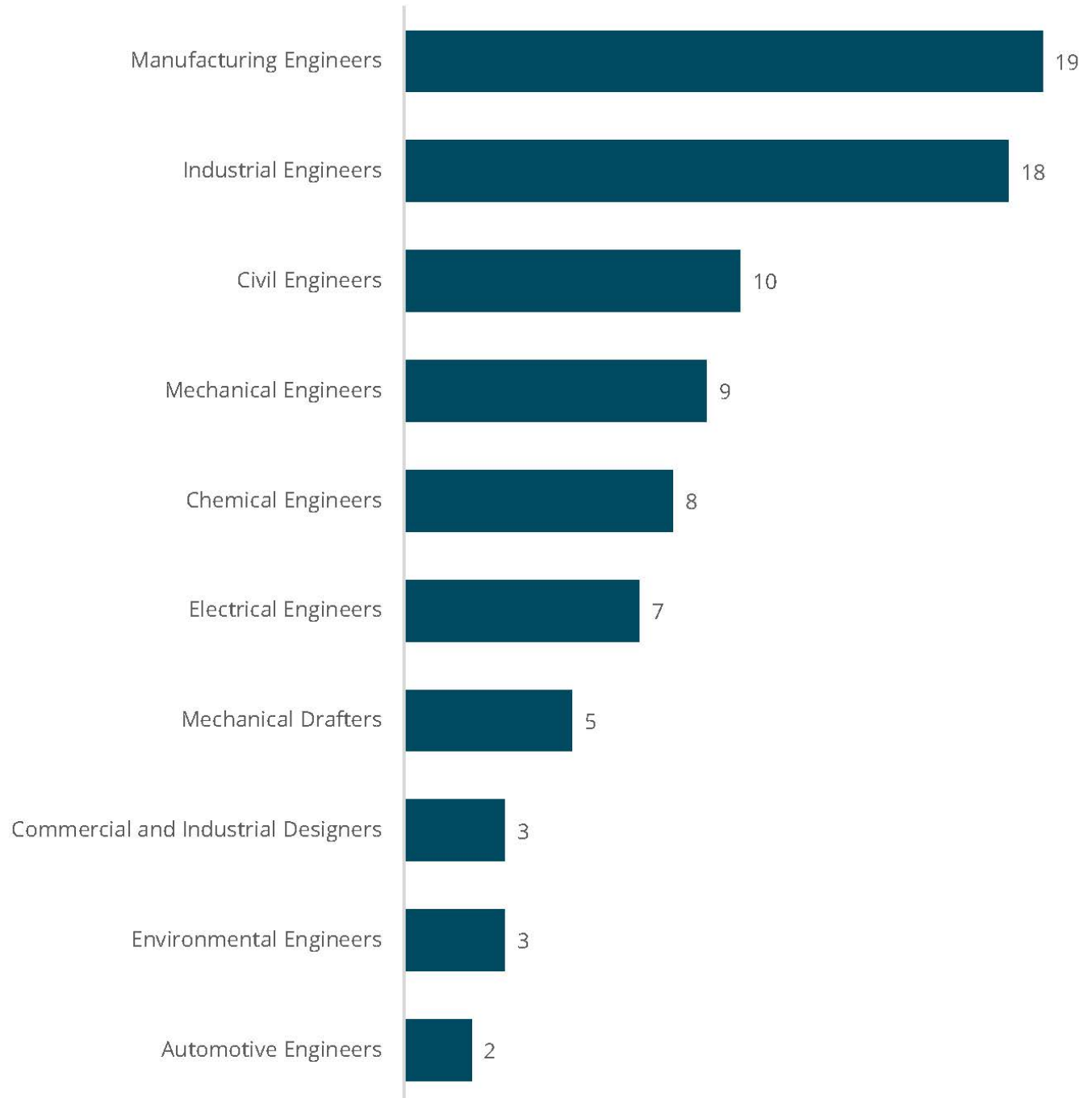
# ADVANCED MANUFACTURING

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.*

Manufacturing engineers was the most in-demand job during Q2 2015 for this cluster in Livingston with 19 online postings. Industrial engineers was the next most in-demand occupation with 18 ads. Many of the top jobs in Engineering and Design have experienced substantial demand growth over the past few quarters. For example, the top job in this cluster in Q4 2014 was mechanical engineers with seven online ads. Electrical engineers had seven online postings during Q2 2015 but is now just the sixth most in-demand occupation for this cluster.

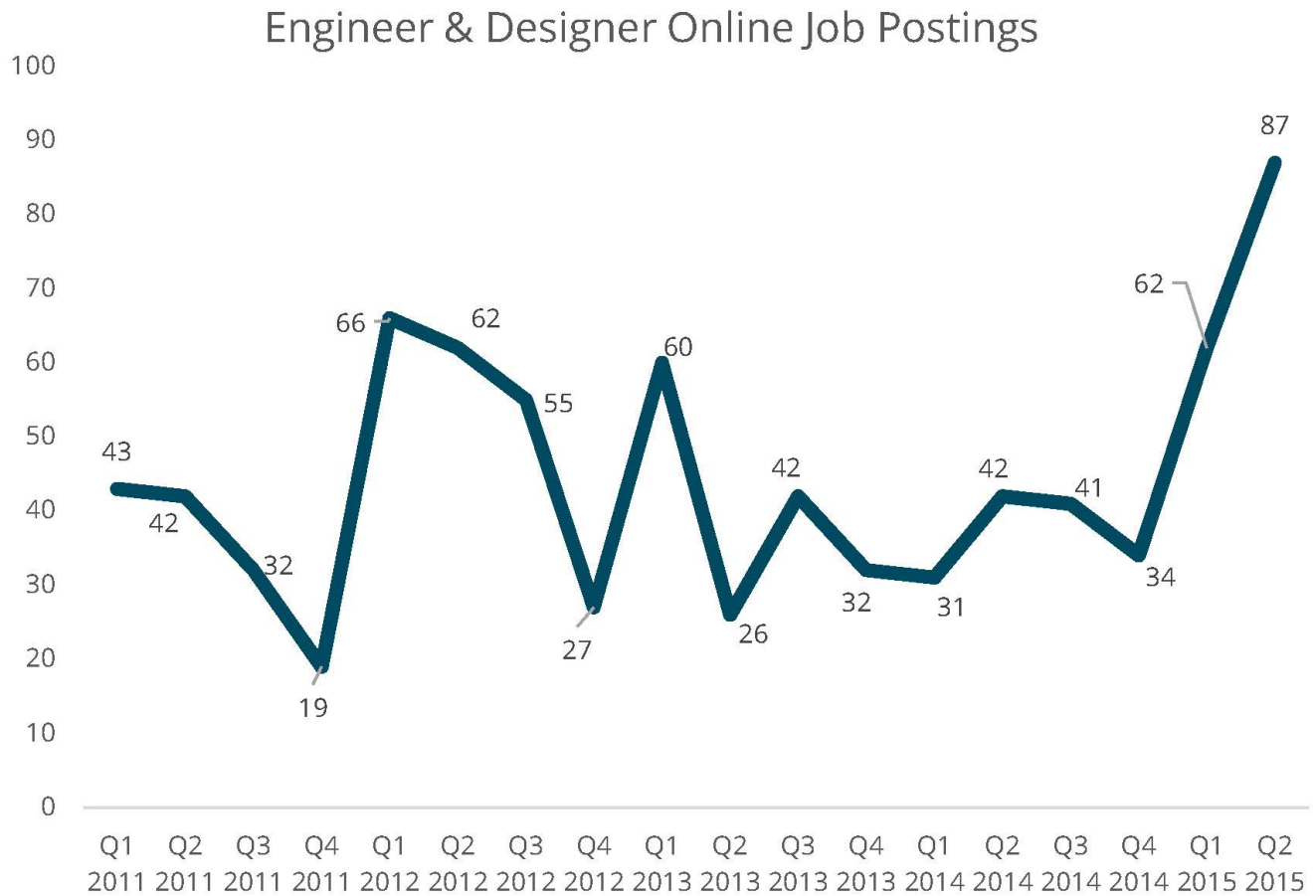
# ADVANCED MANUFACTURING

## ENGINEERS AND DESIGNERS: TOP JOBS



# ADVANCED MANUFACTURING

## ENGINEERS AND DESIGNERS: ONLINE JOB POSTINGS OVER TIME



Source: Burning Glass Technologies

Analysis: Workforce Intelligence Network

Postings for Engineers and Designers rose from 62 in Q1 to 87 in Q2 2015, a 37% increase. Online ads have increased by 159% since Q4 2014 and have surpassed Q1 2012's previous record high of 66. From Q2 2013 to Q4 2014 postings fluctuated between 26 and 42 ads per quarter. This level of high postings indicates that employer demand for this cluster in Livingston continues to increase in 2015.



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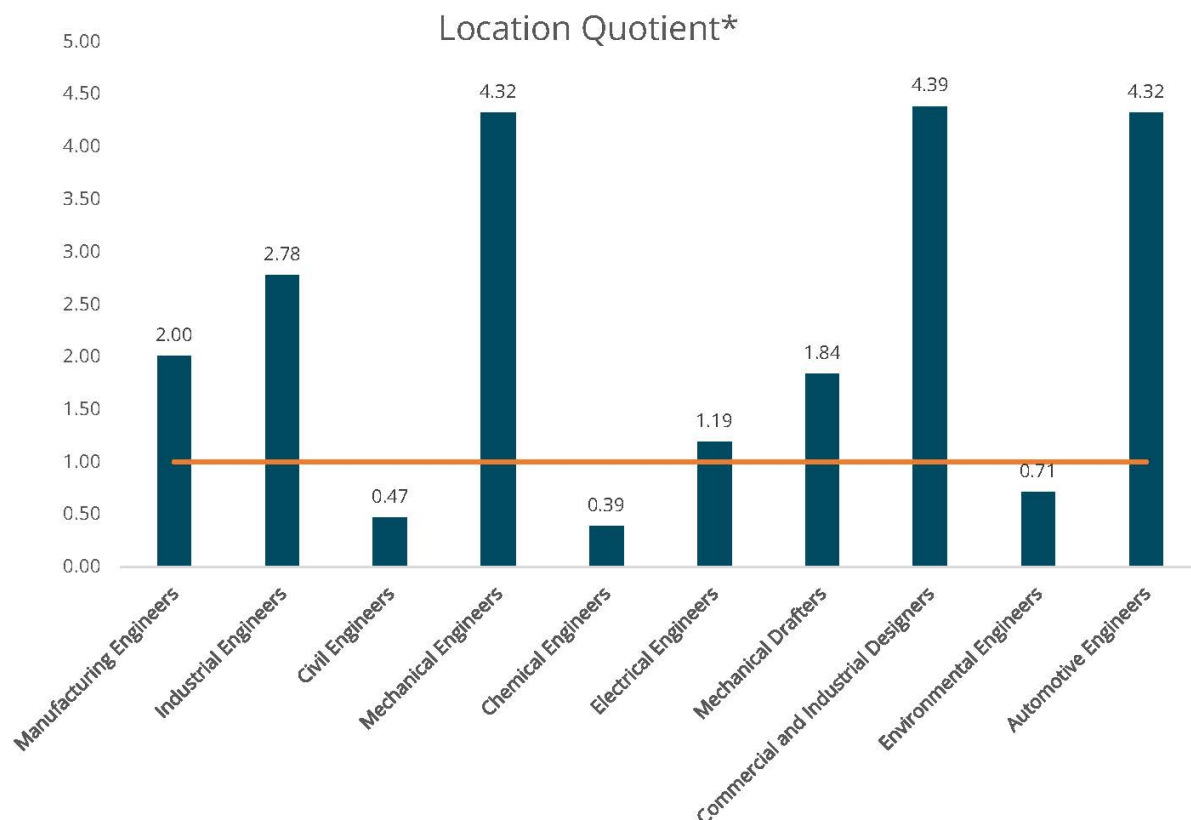
Livingston County has a strong presence for a majority of the most in-demand Engineer and Designer occupations. Mechanical engineers, commercial and industrial designers and automotive engineers boast location quotients (LQ) greater than four, indicating that these occupations have a concentration of workers 300% or higher than the rest of the nation on average in Livingston. On the other hand, civil engineers and chemical engineers have LQ's less than 0.5, meaning that the concentration of these workers is less than 50% of the national 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 mechanical drafters—the lowest paying occupation—require a Bachelor's degree for entry into the field.

While there are no graduates specifically in Livingston, 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.

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

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
17-2199	Manufacturing Engineers	\$18.59	\$31.61	\$40.32	\$49.61	\$60.54
17-2112	Industrial Engineers	\$24.02	\$29.82	\$36.52	\$42.65	\$50.42
17-2051	Civil Engineers	\$20.43	\$24.58	\$29.22	\$33.07	\$38.93
17-2141	Mechanical Engineers	\$26.58	\$32.79	\$39.57	\$47.65	\$53.29
17-2041	Chemical Engineers	Insf. Data	Insf. Data	Insf. Data	Insf. Data	Insf. Data
17-2071	Electrical Engineers	\$24.83	\$29.77	\$36.57	\$42.57	\$50.75
17-3013	Mechanical Drafters	\$14.68	\$18.70	\$23.63	\$29.12	\$33.95
27-1021	Commercial and Industrial Designers	\$22.77	\$27.85	\$33.25	\$37.41	\$40.35
17-2081	Environmental Engineers	\$18.88	\$27.70	\$35.06	\$41.90	\$50.93
17-2141	Automotive Engineers	\$26.58	\$32.79	\$39.57	\$47.65	\$53.29

## ENGINEERS AND DESIGNERS: TOP 10 JOBS EDUCATION AND TRAINING REQUIREMENTS

ONET Code	Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
17-2199	Manufacturing Engineers	Bachelor's degree	None	None
17-2112	Industrial Engineers	Bachelor's degree	None	None
17-2051	Civil Engineers	Bachelor's degree	None	None
17-2141	Mechanical Engineers	Bachelor's degree	None	None
17-2041	Chemical Engineers	Bachelor's degree	None	None
17-2071	Electrical Engineers	Bachelor's degree	None	None
17-3013	Mechanical Drafters	Associate's degree	None	None
27-1021	Commercial and Industrial Designers	Bachelor's degree	None	None
17-2081	Environmental Engineers	Bachelor's degree	None	None
17-2141	Automotive 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 rows of server racks with many green and white 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.

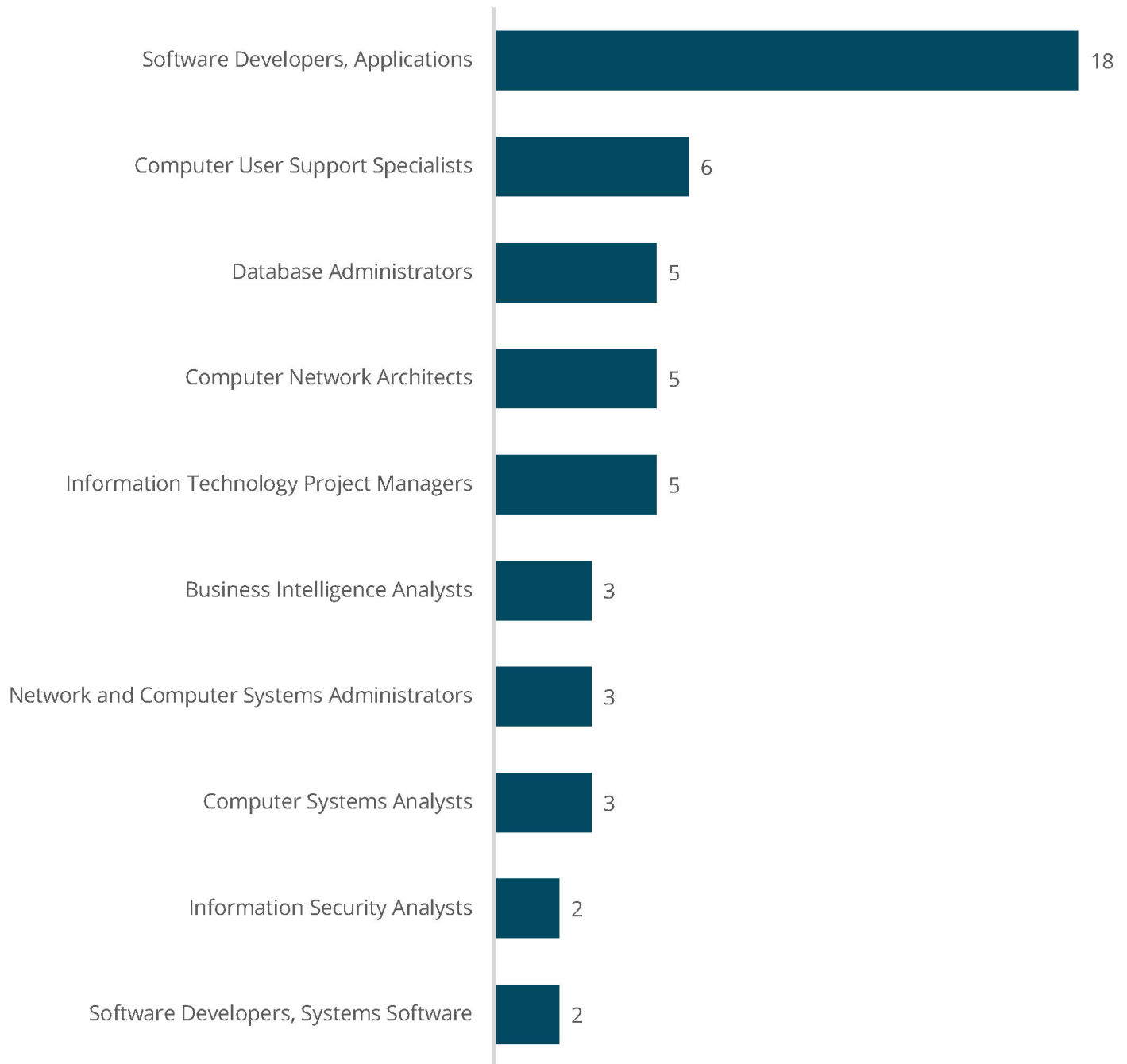
# INFORMATION TECHNOLOGY

*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.*

Software developers for applications was the most in-demand IT occupation in Livingston County for the second consecutive quarter. The 18 postings for this occupation tripled the number of ads for the next most in-demand IT job, computer user-support specialists (6 postings). Demand for IT occupations is not as high in Livingston compared to the WIN region as a whole.

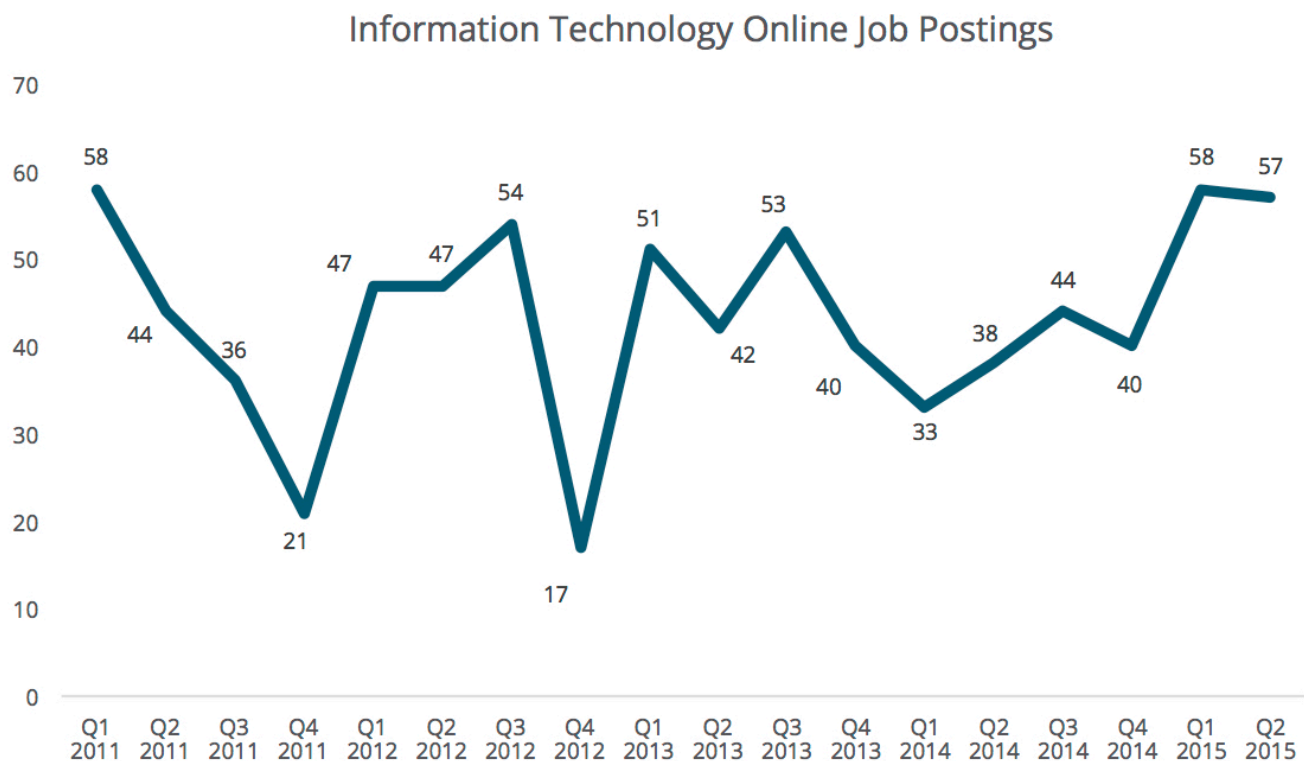
# INFORMATION TECHNOLOGY

## TOP JOBS



# INFORMATION TECHNOLOGY

## ONLINE JOB POSTINGS OVER TIME



Source: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

IT was the only cluster in Livingston that did not see posting growth between Q1 and Q2 2015. Yet, postings effectively remained stagnant, shifting down just one from 58 in Q1 to 57 in Q2. This level of postings remains high compared to the average of 39 ads per quarter between Q4 2013 and Q4 2014. At the same time, posting growth for this cluster in Livingston lags behind the growth seen throughout the region.



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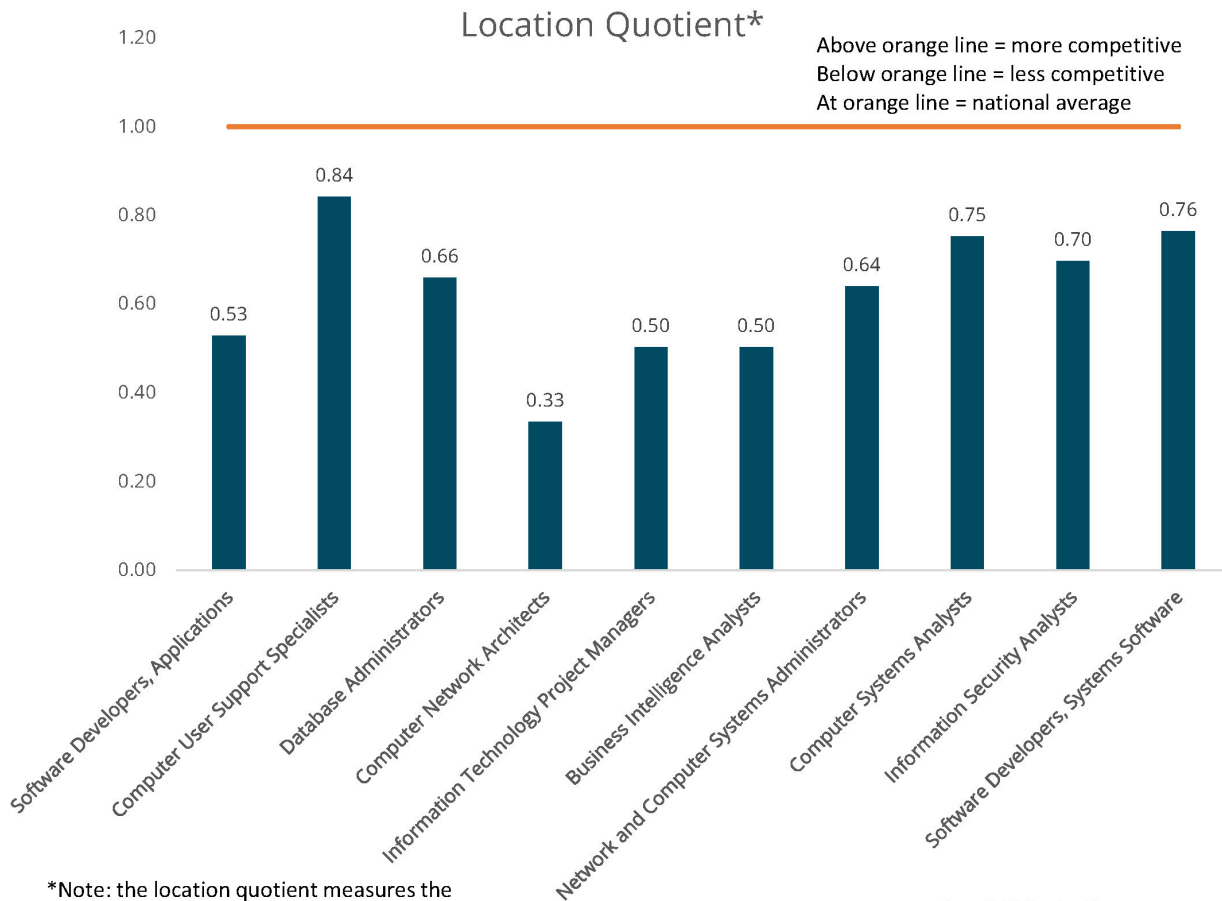
Whereas a majority of the most in-demand IT occupations in the region have a higher concentration of workers than the U.S. on average, all of the top IT jobs in Livingston have a lower concentration of workers than the national average. Software developers—the most in-demand IT occupation in the county—boasts a location quotient (LQ) of just 0.53, meaning that the concentration of these workers in the county is just 53% of the national average. Lower LQ's typically cause employers to have more difficulty filling open positions as there is a smaller talent pool to choose from.

Wages for IT occupations are generally very competitive with 10th percentile earnings (entry-level) near or above \$20 per hour for all but one of the top ten occupations in Livingston County. The high wages follow a need for higher education. The nine occupations with starting salaries above \$20 per hour require Bachelor's degrees 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 Livingston had no IT-related graduates in 2013, 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 Livingston'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	\$21.41	\$25.76	\$33.25	\$42.86	\$51.18
15-1151	Computer User Support Specialists	\$11.95	\$15.57	\$20.36	\$27.53	\$34.89
15-1141	Database Administrators	\$20.38	\$26.59	\$35.92	\$45.14	\$54.05
15-1143	Computer Network Architects	\$26.81	\$34.86	\$45.59	\$52.51	\$61.58
15-1199	Information Technology Project Managers	\$23.19	\$29.17	\$35.30	\$43.12	\$50.49
15-1199	Business Intelligence Analysts	\$23.19	\$29.17	\$35.30	\$43.12	\$50.49
15-1142	Network and Computer Systems Administrators	\$20.20	\$25.11	\$31.92	\$38.91	\$45.95
15-1121	Computer Systems Analysts	\$20.15	\$26.95	\$34.09	\$42.60	\$50.85
15-1122	Information Security Analysts	\$22.32	\$25.51	\$36.21	\$44.17	\$51.00
15-1133	Software Developers, Systems Software	\$25.77	\$31.55	\$38.82	\$47.27	\$54.27

## TOP 10 JOBS EDUCATION AND TRAINING REQUIREMENTS

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
15-1151	Computer User Support Specialists	Some college, no degree	None	Moderate-term on-the-job training
15-1141	Database Administrators	Bachelor's degree	Less than 5 years	None
15-1143	Computer Network Architects	Bachelor's degree	5 years or more	None
15-1199	Information Technology Project Managers	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
15-1122	Information Security Analysts	Bachelor's degree	Less than 5 years	None
15-1133	Software Developers, Systems Software	Bachelor's degree	None	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

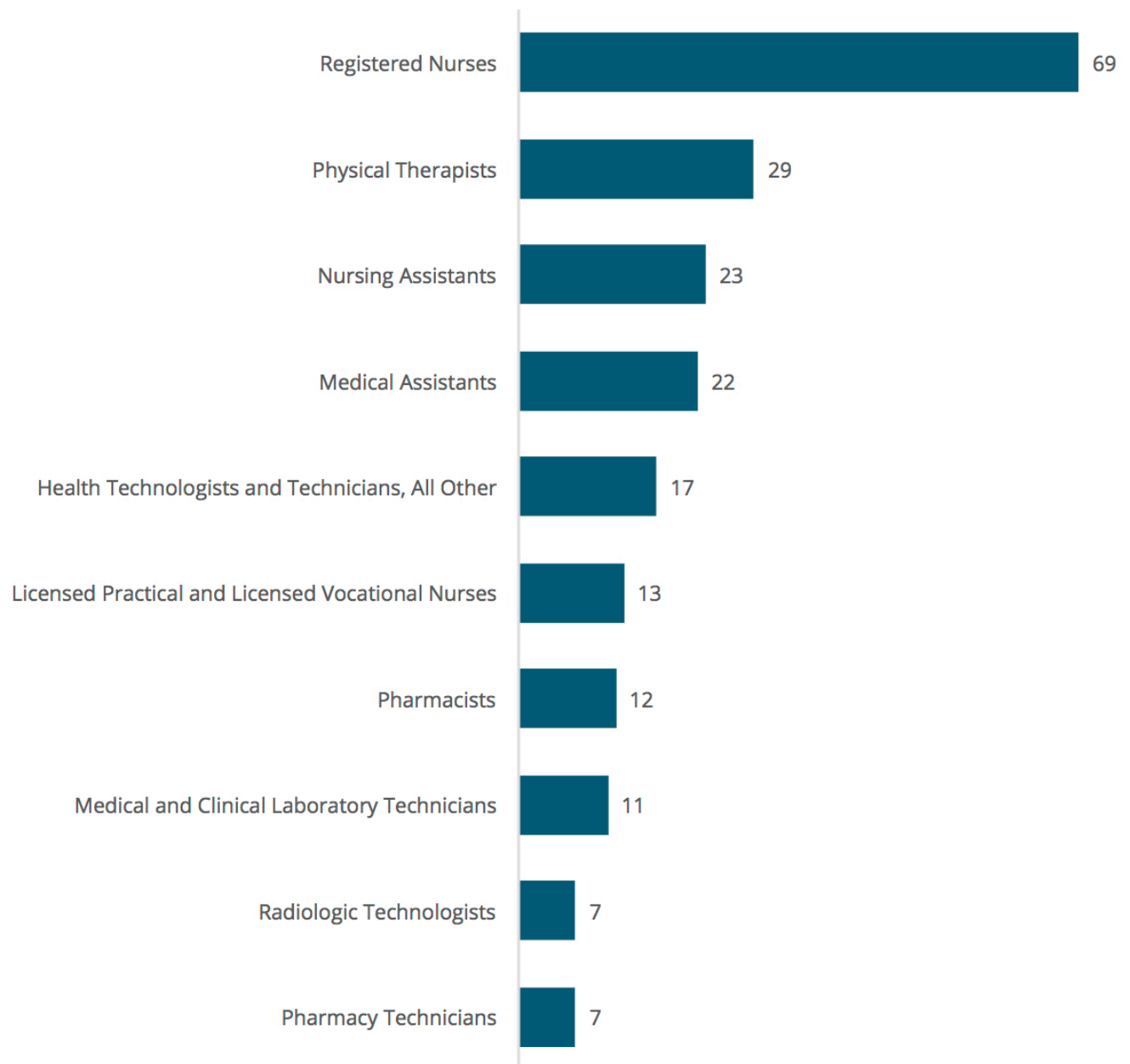
*WIN's health care occupation cluster includes jobs related to health care support and practitioners. This cluster is one of Southeast Michigan's largest with, 243,782 employees in 2014. Employment in this cluster has been consistently growing, more health care workers needed to care for Michigan's aging population and in response to regulatory and other changes. Registered nurses are routinely the most in-demand job in this cluster.*

The demand for registered nurses continues to rise in Livingston. There were 69 postings for nurses in Q2 2015, up from 43 in Q1 (a 60% increase). This occupation was also the most in-demand during Q4 2014 with 25 ads, and postings have now nearly tripled. 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. Other top posting Health Care occupations include physical therapists (29 ads), nursing assistants (23 ads) and medical assistants (22 ads).



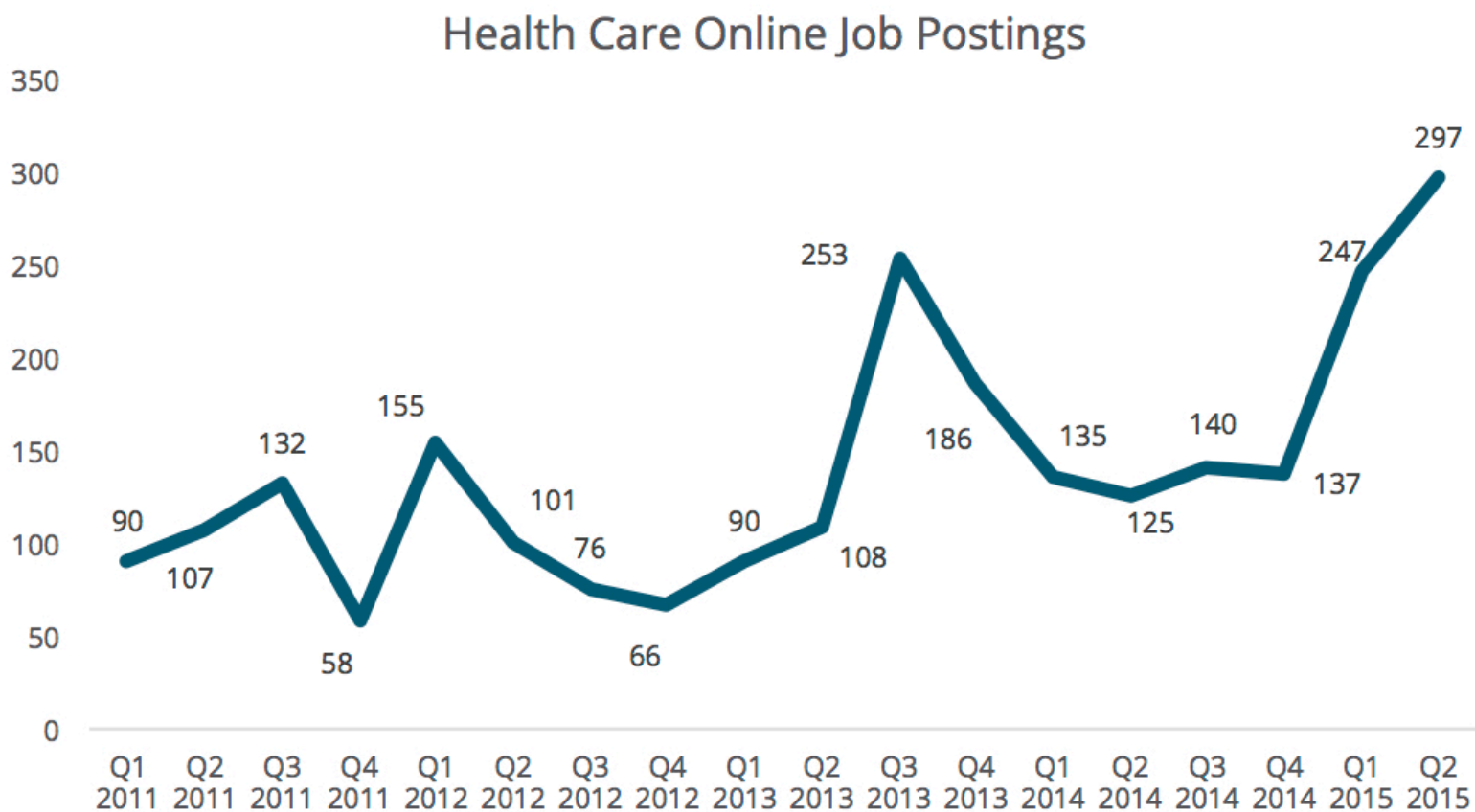
# HEALTH CARE

## TOP JOBS



# HEALTH CARE

## ONLINE JOB POSTINGS OVER TIME



Source: Burning Glass Technologies

Analysis: Workforce Intelligence Network

Postings for Health Care occupations reached a record high in Q2 2015 with 297 online ads. This is a 20% increase over the 247 postings during Q1 2015. After several quarters of decline and stagnation throughout 2014 postings have recovered and Health Care employers are hiring. The growth in postings for this cluster in Livingston matches the growth in the WIN region.

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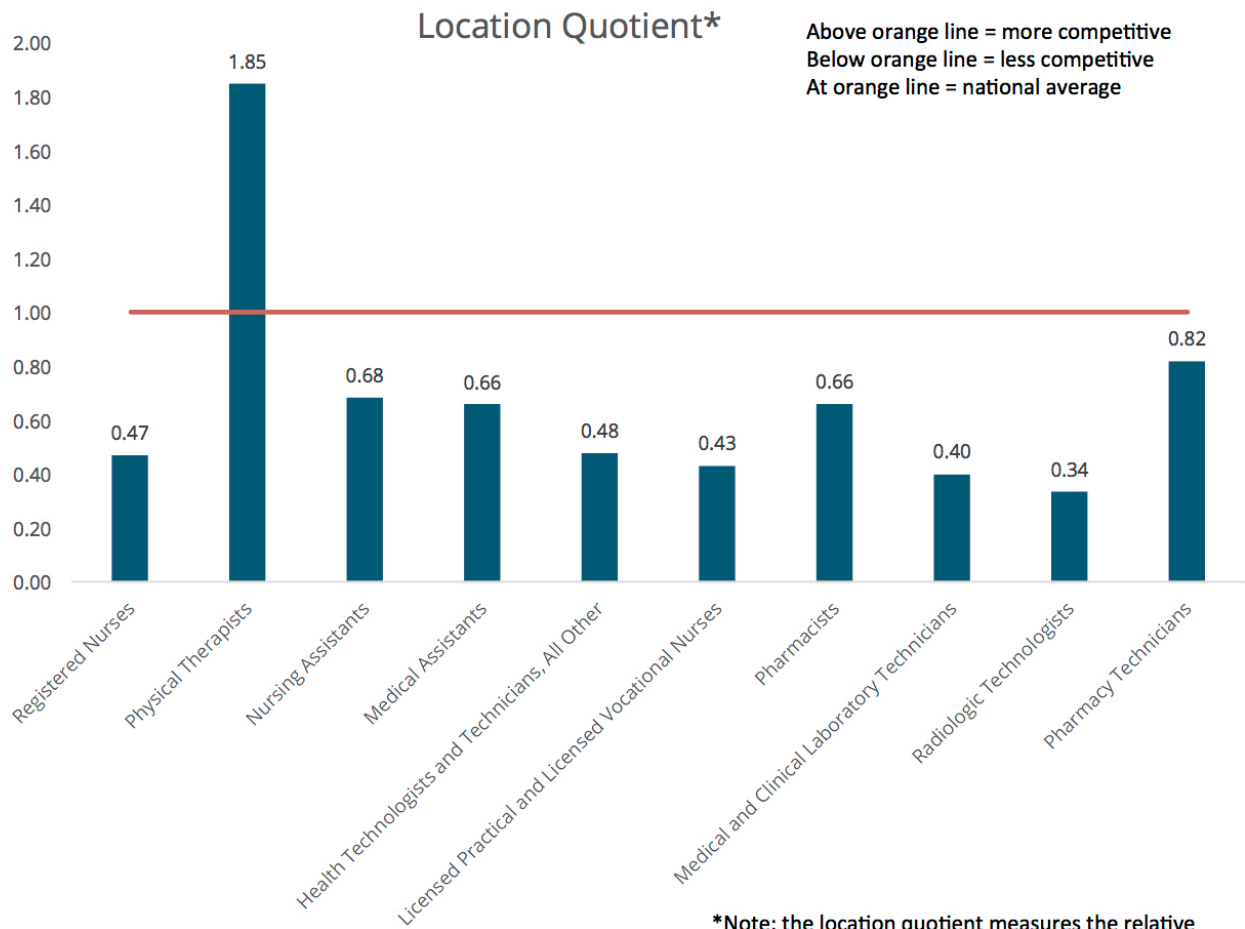
Health Care is a sector that grows in concentration and demand as the local population increases and ages (demanding more services) and as universities and hospitals diversify and increase their reputation for destination care. Both of these are occurring in Michigan with demand for health services increase (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 Livingston has not yet improved the supply of these workers. With exception to physical therapists, none of the most in-demand Health Care occupations in Livingston match national concentration of workers averages. For example, registered nurses have a location quotient (LQ) of 0.47, meaning that the concentration of these workers in Livingston is just 47% of the U.S. average. Lower LQ's typically indicate that employers will have more difficulty filling open positions as there is a smaller talent pool to choose from.

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



Data: EMSI, Burning Glass  
Analysis: Workforce Intelligence Network

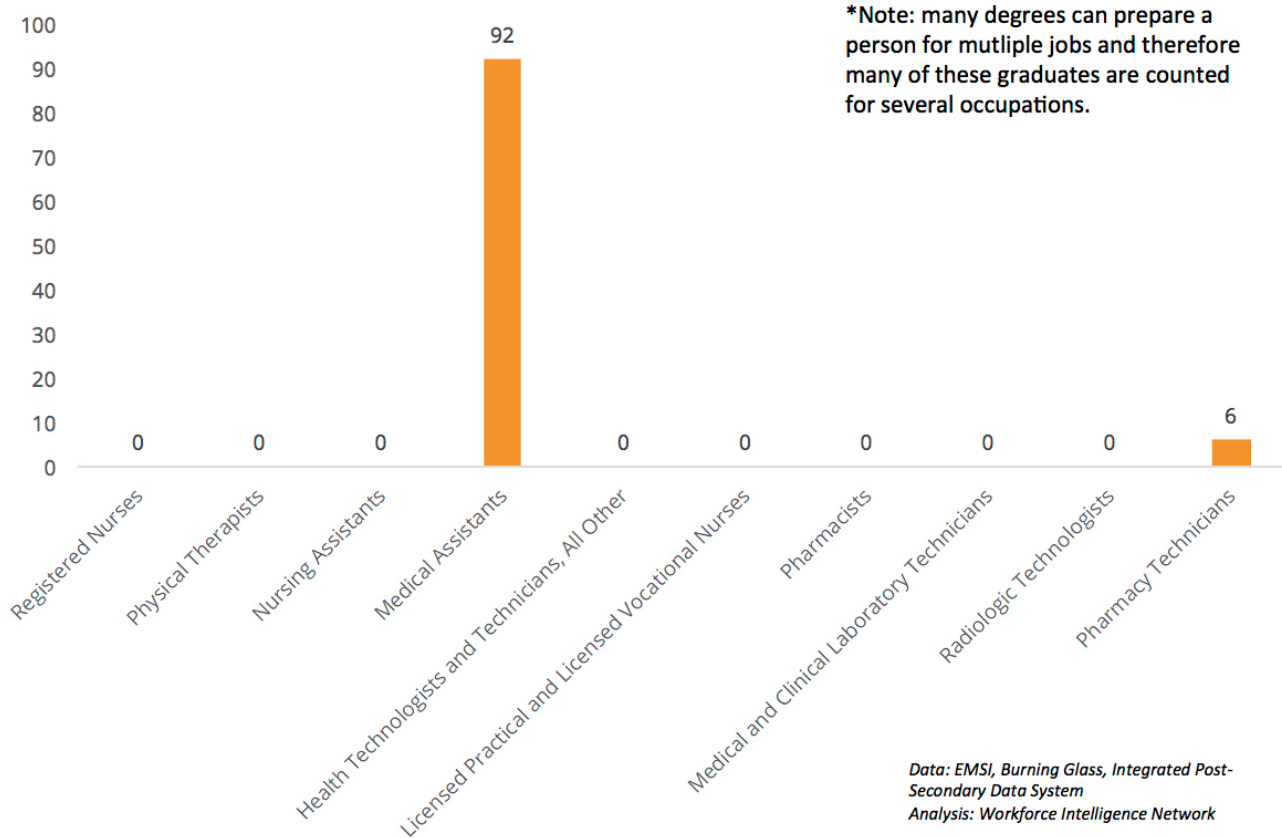
\*Note: the location quotient measures the relative concentration of workers in the analysis area compared to the nation as a whole.

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	\$22.60	\$26.45	\$30.17	\$34.51	\$49.15
29-1123	Physical Therapists	\$24.21	\$29.83	\$36.18	\$45.89	\$65.65
31-1014	Nursing Assistants	\$8.85	\$10.28	\$12.10	\$14.08	\$15.74
31-9092	Medical Assistants	\$9.80	\$11.24	\$12.72	\$14.81	\$16.49
29-2099	Health Technologists and Technicians, All Other	\$12.50	\$13.82	\$16.35	\$19.56	\$24.78
29-2061	Licensed Practical and Licensed Vocational Nurses	\$15.21	\$17.83	\$20.86	\$23.97	\$25.93
29-1051	Pharmacists	\$42.02	\$45.67	\$50.49	\$56.05	\$62.90
29-2012	Medical and Clinical Laboratory Technicians	\$10.62	\$12.14	\$14.65	\$18.87	\$24.61
29-2034	Radiologic Technologists	\$17.70	\$19.91	\$23.36	\$26.71	\$31.08
29-2052	Pharmacy Technicians	\$8.35	\$9.90	\$12.26	\$14.74	\$16.55



# TOP 10 JOBS RECENT GRADUATES AND EDUCATION AND TRAINING REQUIREMENTS

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



ONET Code	Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
29-1141	Registered Nurses	Associate's degree	None	None
29-1123	Physical Therapists	Doctoral or professional degree	None	None
31-1014	Nursing Assistants	Postsecondary non-degree award	None	None
31-9092	Medical Assistants	Postsecondary non-degree award	None	None
29-2099	Health Technologists and Technicians, All Other	High school diploma or equivalent	None	None
29-2061	Licensed Practical and Licensed Vocational Nurses	Postsecondary non-degree award	None	None
29-1051	Pharmacists	Doctoral or professional degree	None	None
29-2012	Medical and Clinical Laboratory Technicians	Associate's degree	None	None
29-2034	Radiologic Technologists	Associate's degree	None	None
29-2052	Pharmacy Technicians	High school diploma or equivalent	None	Moderate-term on-the-job training



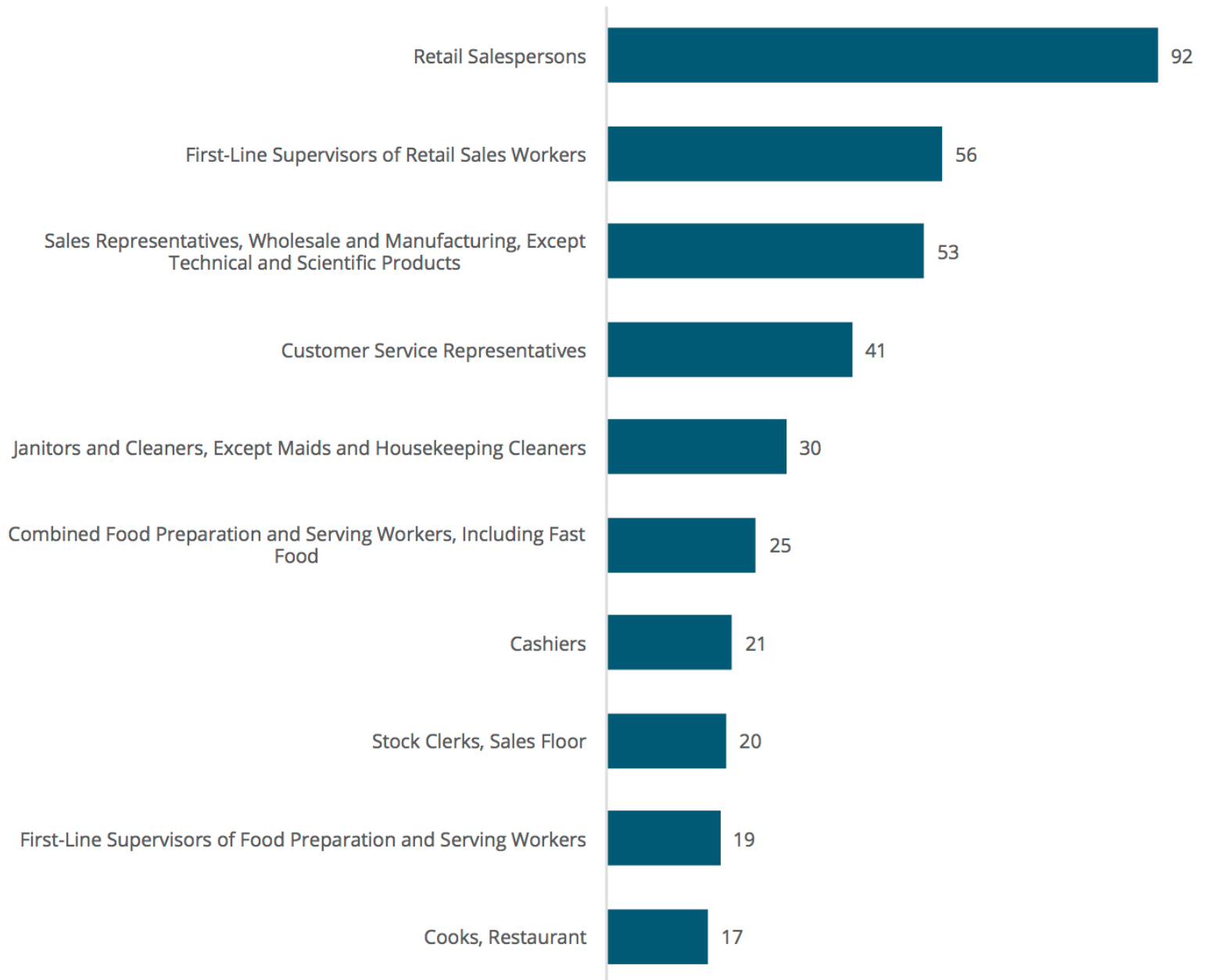
# RETAIL AND HOSPITALITY

*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 employed in retail and hospitality related occupations in the region.*

Retail salespersons once again topped the list as the most in-demand Retail & Hospitality occupation not only in Livingston but most of the WIN region as well. Postings remained high for this occupation despite dropping from 98 ads in Q1 to 92 this past quarter. Other top posting occupations included first-line supervisors of retail sales workers (56 ads), wholesale and manufacturing sales representatives—except technical and scientific products (53 ads), and customer service representatives (41 ads).

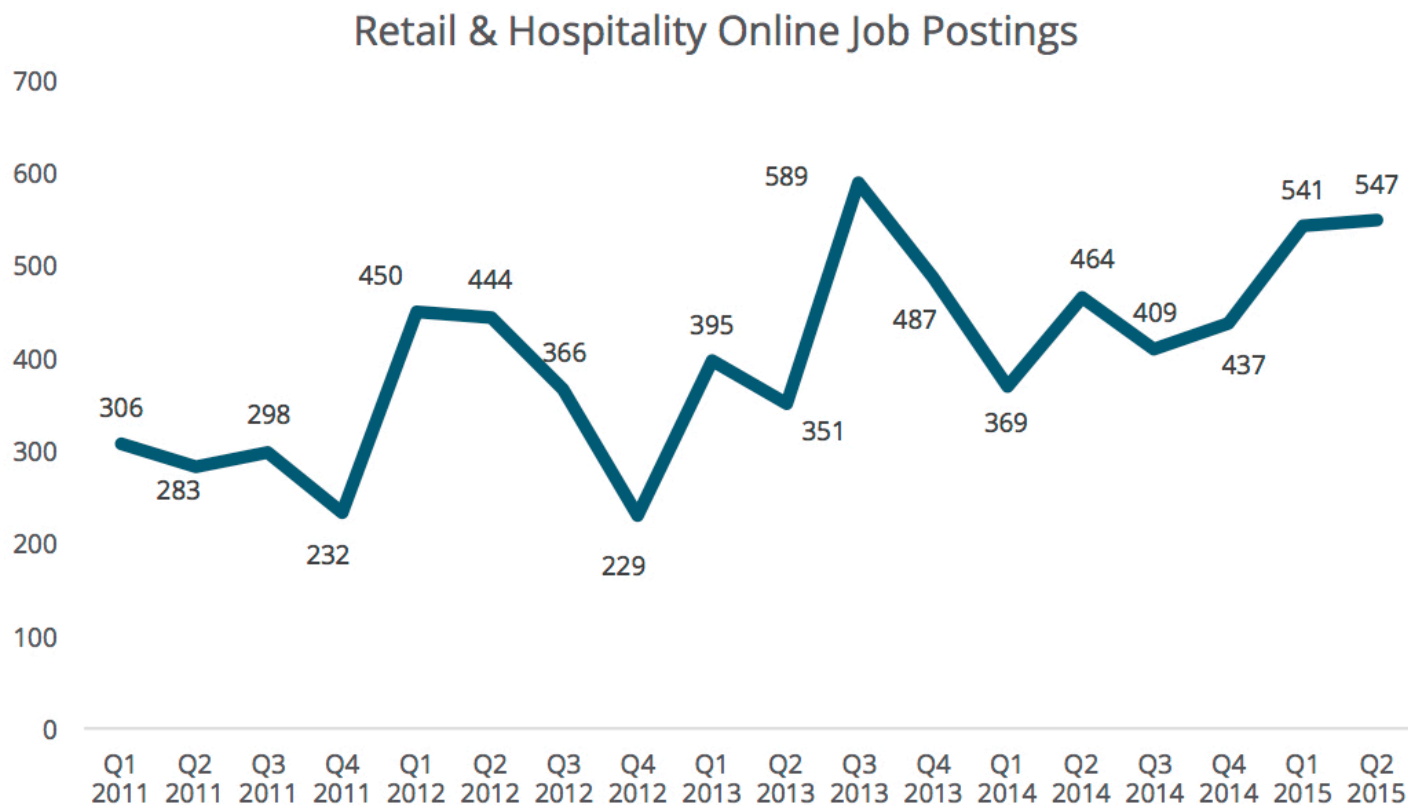
# RETAIL AND HOSPITALITY

## TOP JOBS



# RETAIL AND HOSPITALITY

## ONLINE JOB POSTINGS OVER TIME



Source: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

Postings for the Retail & Hospitality cluster rose to 547 during Q2 2015, just six above the 541 ads posted in Q1 2015. Online ads for this cluster have not yet surpassed the peak of 589 postings during Q3 2013. Nevertheless, this higher level of postings is an improvement over the 2014 average of 420 ads per quarter. If historical trends continue, postings will most likely decrease in Q4 after employers reduce seasonal staffing.



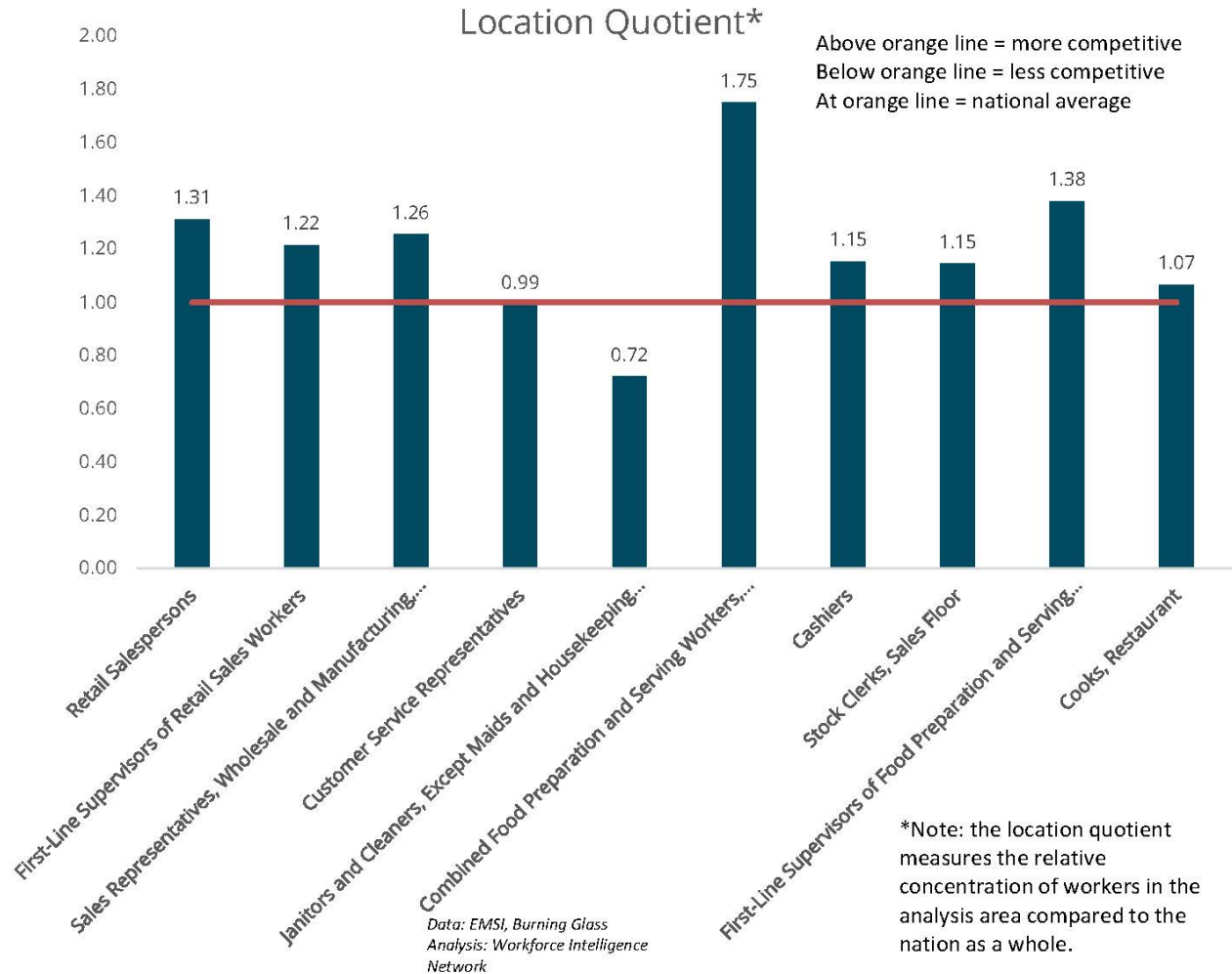
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Like other services, Health Care being one, demand for Retail & Hospitality occupations increase as the population grows and has more money to spend in the economy. Wages in the region have not been growing rapidly but compared to the recession low, wages are up. Most of the top Retail & Hospitality occupations in Livingston County are 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. Food preparation and serving workers have the highest location quotient in the region at 1.75, meaning that there is a 75% higher concentration of these workers in Washtenaw than the U.S. on average.

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.

# RETAIL AND HOSPITALITY

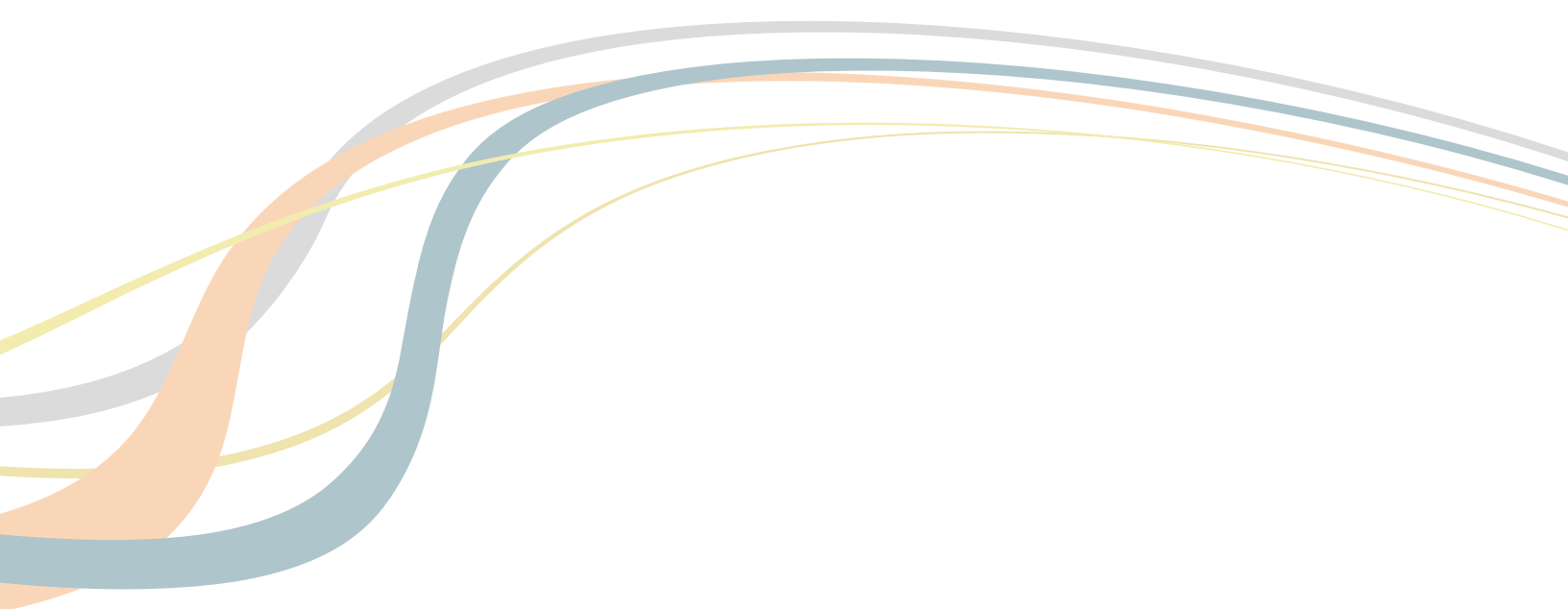
## TOP 10 JOBS LOCATION QUOTIENT AND WAGES



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	\$8.22	\$8.78	\$9.89	\$12.74	\$18.39
41-1011	First-Line Supervisors of Retail Sales Workers	\$10.65	\$12.91	\$16.14	\$20.46	\$25.17
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$11.28	\$16.33	\$23.89	\$35.59	\$49.97
43-4051	Customer Service Representatives	\$8.25	\$10.16	\$13.27	\$16.81	\$21.23
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$8.36	\$9.14	\$10.92	\$13.89	\$17.25
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	\$8.15	\$8.48	\$9.04	\$9.62	\$11.68
41-2011	Cashiers	\$8.15	\$8.65	\$9.52	\$11.43	\$14.95
43-5081	Stock Clerks, Sales Floor	\$8.17	\$8.99	\$10.85	\$13.87	\$17.64
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	\$8.16	\$9.59	\$12.72	\$17.40	\$21.80
35-2014	Cooks, Restaurant	\$8.13	\$8.99	\$10.53	\$12.46	\$13.87

## 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
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	High school diploma or equivalent	None	Moderate-term on-the-job training
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
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	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
43-5081	Stock Clerks, Sales Floor	Less than high school	None	Short-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
35-2014	Cooks, Restaurant	Less than high school	Less than 5 years	Moderate-term on-the-job training



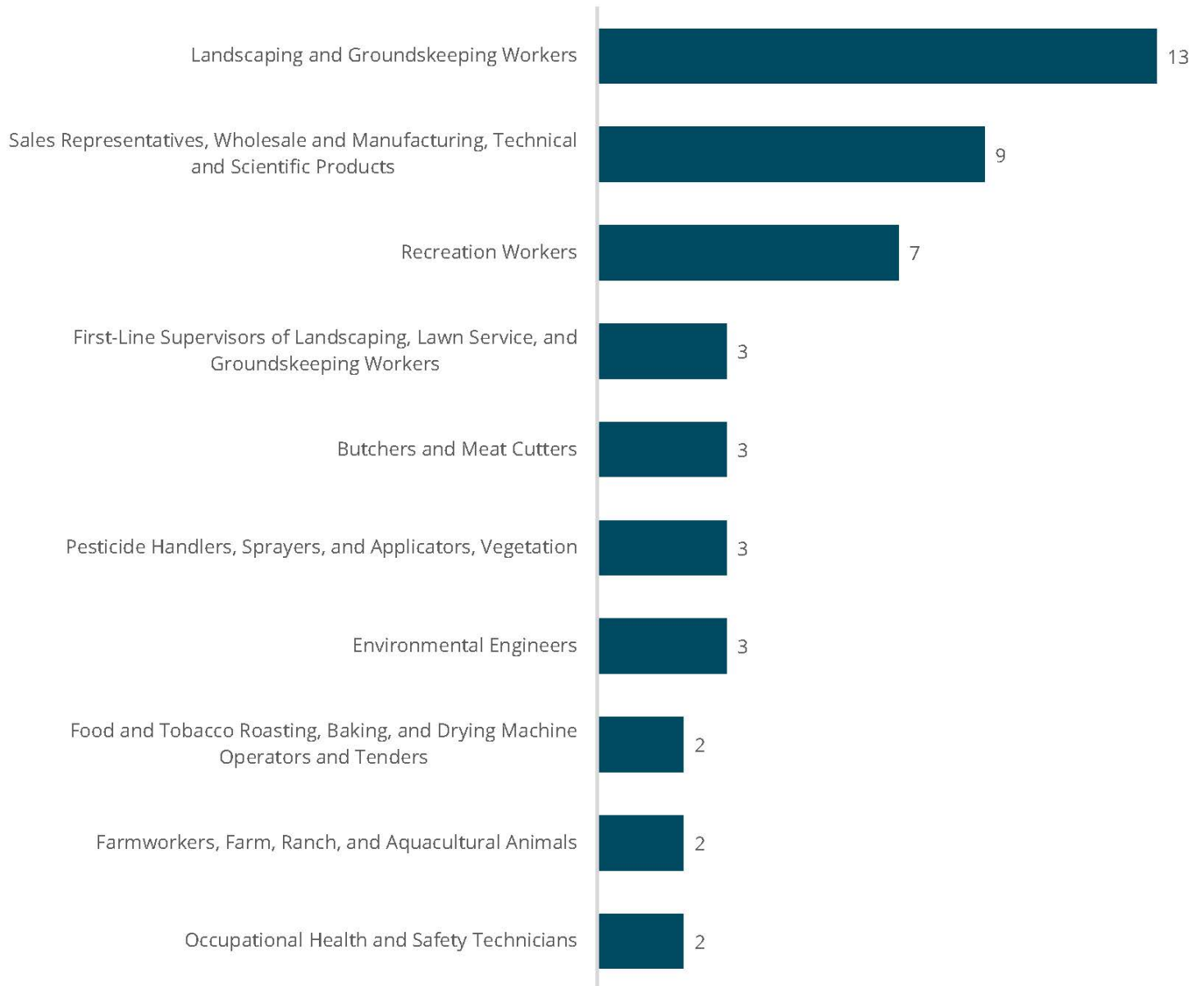


# AGRICULTURE

*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.*

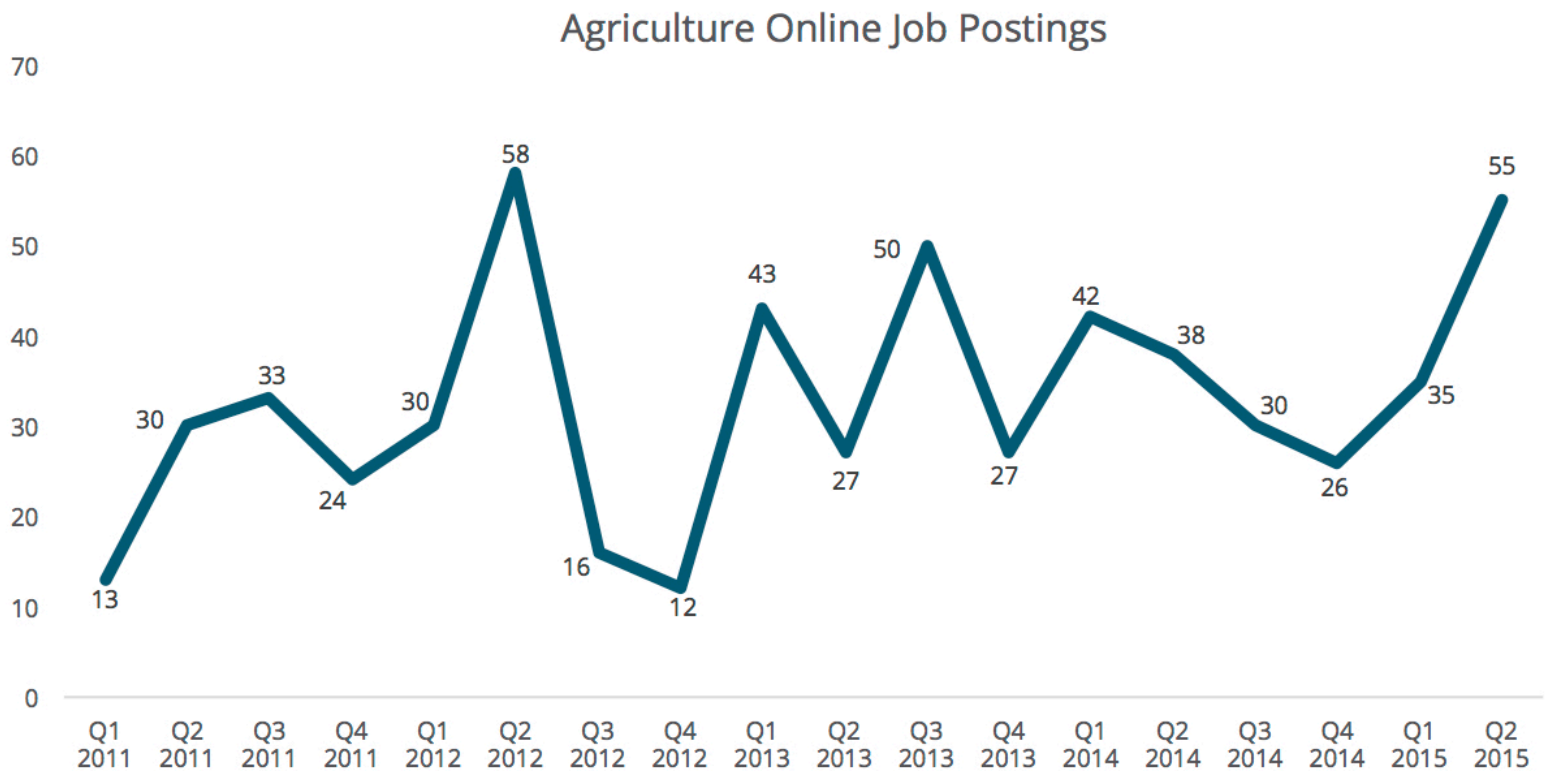
Landscaping and groundskeeping workers was the most in-demand Agriculture occupation with 13 online ads during Q2 2015. This occupation also topped the list during Q1 2015 when it had six postings. Online ads for this occupation most likely increased in Q2 2015 as employers prepared for the busy spring and summer months. Other top occupations include wholesale and manufacturing sales representatives for technical and scientific products (9 postings) and recreation workers (7 postings).





# AGRICULTURE

## ONLINE JOB POSTINGS OVER TIME



Source: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

The occupations in the Agriculture cluster garnered 55 online job ads during Q2 2015. This is an increase over Q1's 35 postings and consistent with the cycle of postings seen in the agriculture occupations; increase in demand over the first three quarters of the year followed by a drop-off in Q4.

Agriculture occupations are the smallest cluster in Livingston, accounting for just 2.6% of online job ads in the county.

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Livingston County's employment is similar to or above the national average for half of the most in-demand agriculture occupations. Supervisors of landscaping and lawn service workers has a location quotient (LQ) of 1.62, meaning that concentration for these workers is 62% higher than the U.S. average. Occupations like recreation workers (LQ = 1.27) are slightly more concentrated in the county 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 Livingston, however, this occupation has one of the lowest median wages for the agriculture sector.

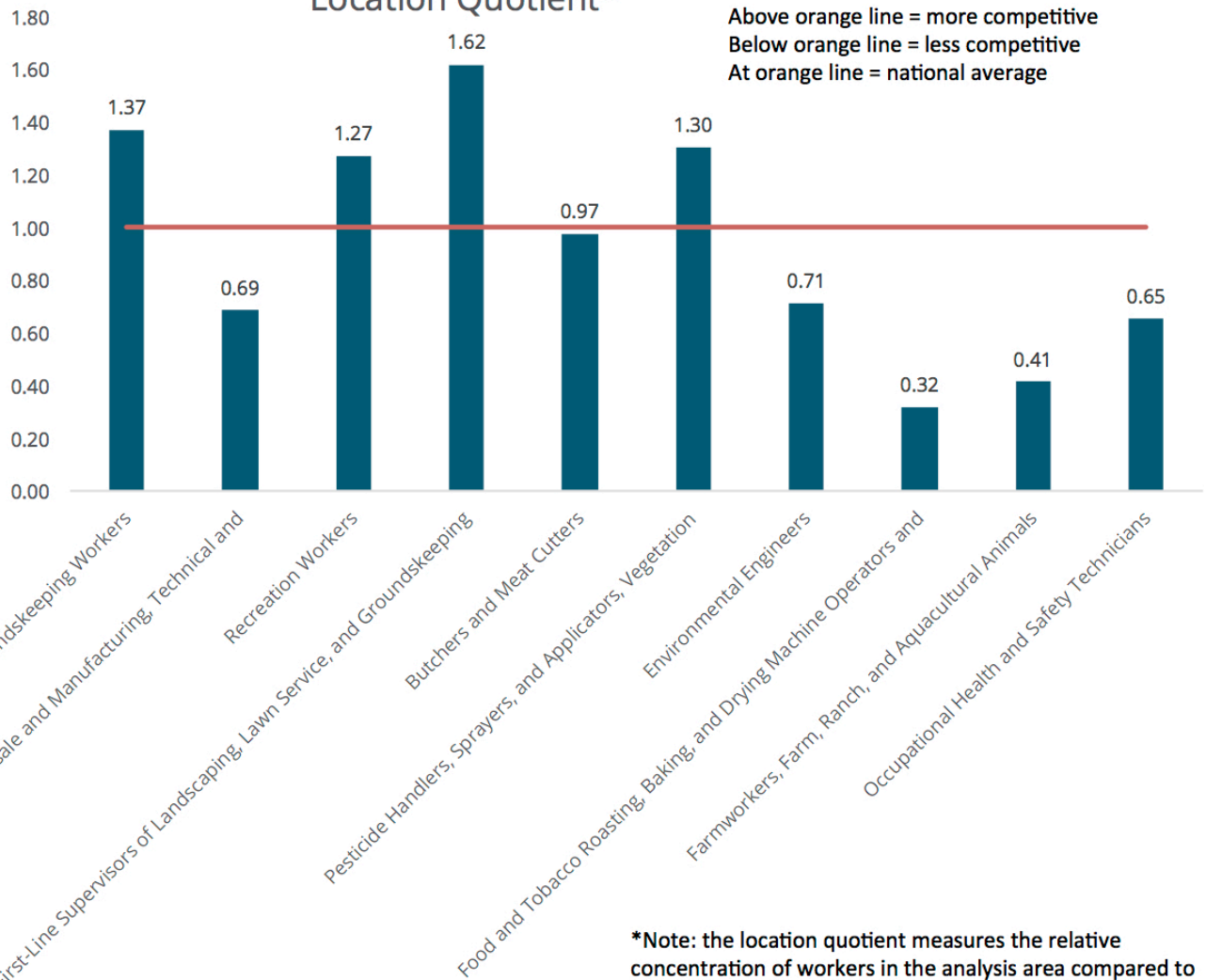
Many of the in-demand agriculture occupations do not require more than a high school diploma and are attainable with some on-the-job training. However, the high-paying jobs in sales or engineering require at least a bachelor's degree. Median entry-level recreation workers are required to have a bachelor's degree, but has the second lowest level of wages for in-demand agricultural occupations.

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\*



Data: EMSI, Burning Glass  
Analysis: Workforce Intelligence Network

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

ONET Code	Occupation	10th Percentile Hourly Earnings	25th Percentile Hourly Earnings	Median Hourly Earnings	75th Percentile Hourly Earnings	90th Percentile Hourly Earnings
37-3011	Landscaping and Groundskeeping Workers	\$8.52	\$9.64	\$10.70	\$13.44	\$16.73
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	\$16.40	\$23.25	\$33.09	\$46.95	\$67.13
39-9032	Recreation Workers	\$8.37	\$9.11	\$10.29	\$11.56	\$14.23
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	\$10.20	\$11.75	\$14.78	\$19.20	\$27.72
51-3021	Butchers and Meat Cutters	\$9.20	\$10.95	\$14.99	\$19.29	\$24.13
37-3012	Pesticide Handlers, Sprayers, and Applicators, Vegetation	\$11.43	\$12.72	\$14.14	\$15.79	\$20.16
17-2081	Environmental Engineers	\$18.88	\$27.70	\$35.06	\$41.90	\$50.93
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	Insf. Data	Insf. Data	Insf. Data	Insf. Data	Insf. Data
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	\$8.15	\$8.77	\$10.22	\$12.31	\$13.47
29-9012	Occupational Health and Safety Technicians	Insf. Data	Insf. Data	Insf. Data	Insf. Data	Insf. Data



## TOP 10 JOBS EDUCATION AND TRAINING REQUIREMENTS

ONET Code	Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
37-3011	Landscaping and Groundskeeping Workers	Less than high school	None	Short-term 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
39-9032	Recreation Workers	Bachelor's degree	None	None
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	High school diploma or equivalent	Less than 5 years	None
51-3021	Butchers and Meat Cutters	Less than high school	None	Long-term on-the-job training
37-3012	Pesticide Handlers, Sprayers, and Applicators, Vegetation	High school diploma or equivalent	None	Moderate-term on-the-job training
17-2081	Environmental Engineers	Bachelor's degree	None	None
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	Less than high school	None	Moderate-term on-the-job training
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	Less than high school	None	Short-term on-the-job training
29-9012	Occupational Health and Safety Technicians	High school diploma or equivalent	None	Moderate-term on-the-job training

# SECTION THREE

## LABOR MARKET AND DEMAND SUMMARY



The top in-demand occupations often remain unchanged from quarter to quarter but do shift in order depending on the point in the business cycle. Heavy and tractor-trailer truck drivers, registered nurses and retail salespersons are the top in-demand positions once again.

Demand for heavy and tractor-trailer truck drivers outpaces all other jobs with 103 online ads.

Q2 saw the labor force grow by 0.4% while employment grew by 1.1%. Labor force participation increased to 93,700 individuals while employment increased to 89,290 workers.

Unemployment dropped from 5.4% in Q1 to 4.7% in Q2 2015. Since employment increased at a greater rate than the labor force, the 0.7 percentage point drop in unemployment between quarters can be entirely attributed to people gaining jobs.

Total job postings in Livingston County reached new highs this quarter with 2,102 online ads posted by local employers. Q2 2015 marks a fifth consecutive quarter of posting growth in the county. While postings typically decreased by Q4 in previous years, 2014 bucked that trend. Online ads should remain high in the county as employers continue to increase employment levels.

Online job ads increased for all occupation clusters analyzed by WIN in Livingston County between Q1 and Q2 2015 with exception to IT, which remained stagnant. The most notable growth in postings was in Engineering and Health Care; both these sectors have seen demand more than double since Q4 2014.

The clusters analyzed by WIN in Livingston County represent 56.3% of all online job postings in the county.



# SECTION FOUR

## DATA NOTES AND SOURCES

# DATA NOTES AND SOURCES

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## 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](mailto: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

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## 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.

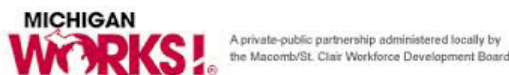
## DATA SOURCES

- 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





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[WWW.WIN-SEMICH.ORG/DATA-RESEARCH](http://WWW.WIN-SEMICH.ORG/DATA-RESEARCH)

