



WIN PARTNERSHIP

WIN Quarterly Report



Introduction: WIN 16 County Partnership Region

About This Report

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

WIN's analysis of online job postings, a proxy for employer demand, is a pioneering method for tracking the health of the labor market. This report highlights labor market information and real-time job posting data for the full 16-county region with specialized analysis devoted to 11 occupational groups.

Occupational groups include:

- Agriculture (page 7)
- Business & Finance (page 12)
- Construction (page 17)
- Customer service (formerly retail & hospitality) (page 22)
- Education (page 27)
- Energy (page 32)
- Engineers & designers (manufacturing focused) (page 37)
- Health care (page 42)
- Information technology (page 47)
- Skilled trades & technicians (manufacturing focused) (page 52)
- Transportation, distribution, and logistics (TDL) (page 57)

Data analyzed includes:

- Employer demand
- Top posting jobs
- In-demand credentials, degrees, and skills
- Educational attainment required
- Wages offered in job postings
- Employment
- Unemployment
- Labor force

State of the Labor Market in Q2 2016

Quarter two 2016 (Q2 2016) represented a series of milestone highs as the economy continued to emerge from the recent great recession. Since January 2010, when the recession was at its deepest (the trough), the region recovered 279,866 jobs. In Q2 2016, the total number of jobs held reached 2.62 million, a number not seen since 2007.

Between Q1 2016 and Q2 2016, employment in the region expanded 1.4%, with 35,439 additional individuals employed. The labor force expanded by 15,640 individuals (0.6%) during this timeframe. Because employment grew more quickly than the labor force, many of the jobs added in Q2 2016 went to workers who were unemployed in the previous quarter, Q1 2016: Nearly 20,000 previously unemployed individuals gained employment in the region along with more than 15,000 new workers, bringing the unemployment rate to 4.5% for Q2, a low not experienced in southeast Michigan since 2001.

Q1 2016 experienced unusually high job posting rates, resulting in substantial employment growth in Q2 2016. However, job postings in Q2 2016 were 2% lower than in Q1, declining by 3,434. While several occupation groupings experienced lower job demand in Q2 compared to Q1 2016, some experienced growth, including Construction, IT, and TDL. The total decline was modest across the region, and overall posting levels remained high. In Q2 2016, postings were 8% higher (9,971 total) than a year ago in Q2 2015.



Introduction: WIN 16 County Partnership Region

Q2 is typically a time when employment begins an annual surge that continues through Q4. With substantial job gains seen between Q1 and Q2, 2016 likely will be no different and is expected to follow the historic cyclical trend. While employer demand and job growth are following expected patterns, signals are mixed for what the future holds. Consumer sentiment, a measure of how the public perceives the health of the economy, as measured by the University of Michigan's Institute for Social Research, increased during Q2 2016 compared to the previous four quarters but is lower than Q2 last year. The purchasing managers' index (PMI), as measured by the Institute for Supply Chain Management, indicates that manufacturing is continuing to expand and grow, but growth has started to slow moving into Q3. (The manufacturing economy is often used as an indicator of how well business is doing overall.) Together, these factors make it difficult to estimate whether the economy is going to continue its slow and stable growth or begin to plateau.

Key Findings

1. Employment reached a new high, expanding 1.4% and adding over 35,000 jobs between Q1 and Q2 2016.

With the addition of 35,000 jobs in Q2 2016, the total number of jobs held in the region increased to over 2.62 million. This milestone employment number was last experienced in late 2007, before the recession. Because of slow labor force growth, 20,000 of those new jobs likely went to individuals unemployed during Q1 this year. (See page 4 and Appendix 1).

2. Unemployment is at a historic low, 4.5%, due to increasing job levels and slow labor force growth.

The labor force expanded less rapidly than employment during Q2 2016, just 0.6% with 15,640 joining the ranks of job seekers. On one hand, this is positive for the workforce, since employment growth was strong and many unemployed workers found positions. However, this marks yet another quarter of plateauing labor force growth, which makes it difficult for employers to find workers. (See page 4 and Appendix 1).

3. Online job ads declined modestly, dropping 2%:

Posting declines were largest in Oakland and Wayne counties, which accounted for nearly 100% of the decline. While these counties experienced the largest drops in magnitude, the values are a small share of their total postings. (See page 4 and Appendix 3).

4. Postings expanded in several occupation groups despite a region-wide drop in employer demand.

Construction demand increased 3.5%, likely due to seasonal hiring for the summer construction season. IT demand increased 3.8%, a consistently in-demand field of occupations. TDL demand increased 16.0%, a third straight quarter of demand growth. (See pages 17, 47, and 57, for more detail on Construction, IT, and TDL demand, respectively and Appendix 2 for posting change comparison tables).

5. Heavy and tractor-trailer truck drivers once again top the demand lists with historic posting levels in TDL occupations.

The Q2 2016 top job, heavy and tractor-trailer truck drivers, reached a historic high in demand, bringing total TDL demand along with it. Postings in this occupation group increased to 11,380 during Q2 2016, a near six-fold increase since Q1 2011 when posting-data collection began. (See page 57 and 58).



Executive Summary

Postings Over Time

Between Q1 2016 and Q2 2016, online job postings declined modestly falling from 143,199 in Q1 to 139,765 in Q2. This is a 2% drop with the region losing 3,434 job ads between the two quarters. Compared to one year prior, Q2 2015, postings were 8% higher (9,971 additional postings in Q2 2016 compared to Q2 2015). While postings dropped in the recent quarter, the general trend is positive and posting levels remain high.

Total Online Job Postings

2008 - June 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Labor Force, Employment, & Unemployment

Between Q1 2016 and Q2 2016, employment in the region expanded 1.4%, with 35,439 additional individuals employed. The labor force expanded by 15,640 individuals (0.6%) during this timeframe. Because employment grew more quickly than the labor force, many of the jobs added in Q2 2016 went to workers who were unemployed in the previous quarter, Q1 2016: Nearly 20,000 previously unemployed individuals gained employment in the region along with more than 15,000 new workers, bringing the unemployment rate to 4.5% for Q2, a low not experienced in southeast Michigan since 2001.

Labor Force, Employment, Unemployment Rate

2008 - May 2016



Data: BLS
Analysis: Workforce Intelligence Network

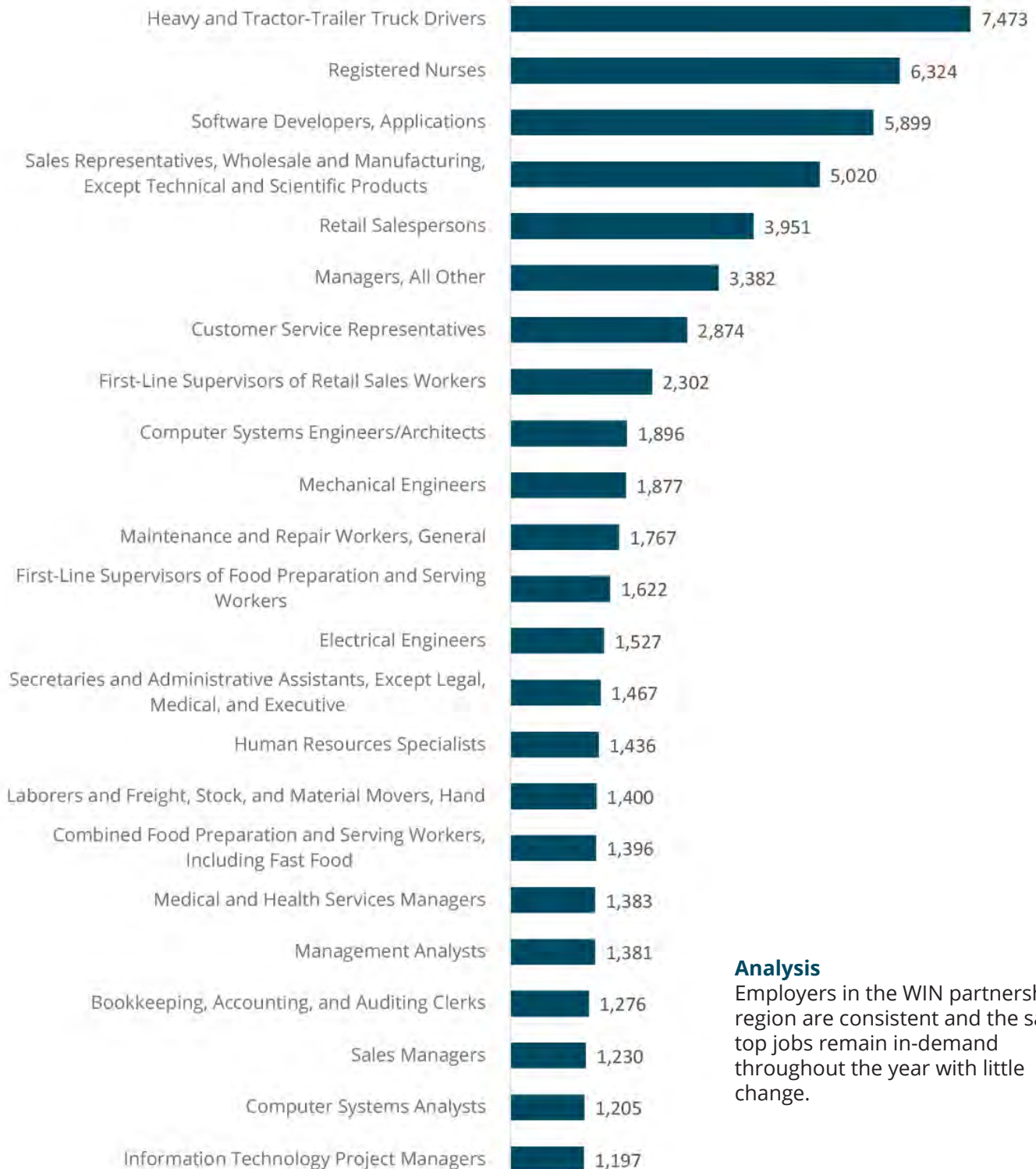


Top Job In-Demand: Truck Drivers

4.5%
Unemployment rate in
Q2 2016

Top Jobs In Demand

Quarter 2 2016



Analysis

Employers in the WIN partnership region are consistent and the same top jobs remain in-demand throughout the year with little change.



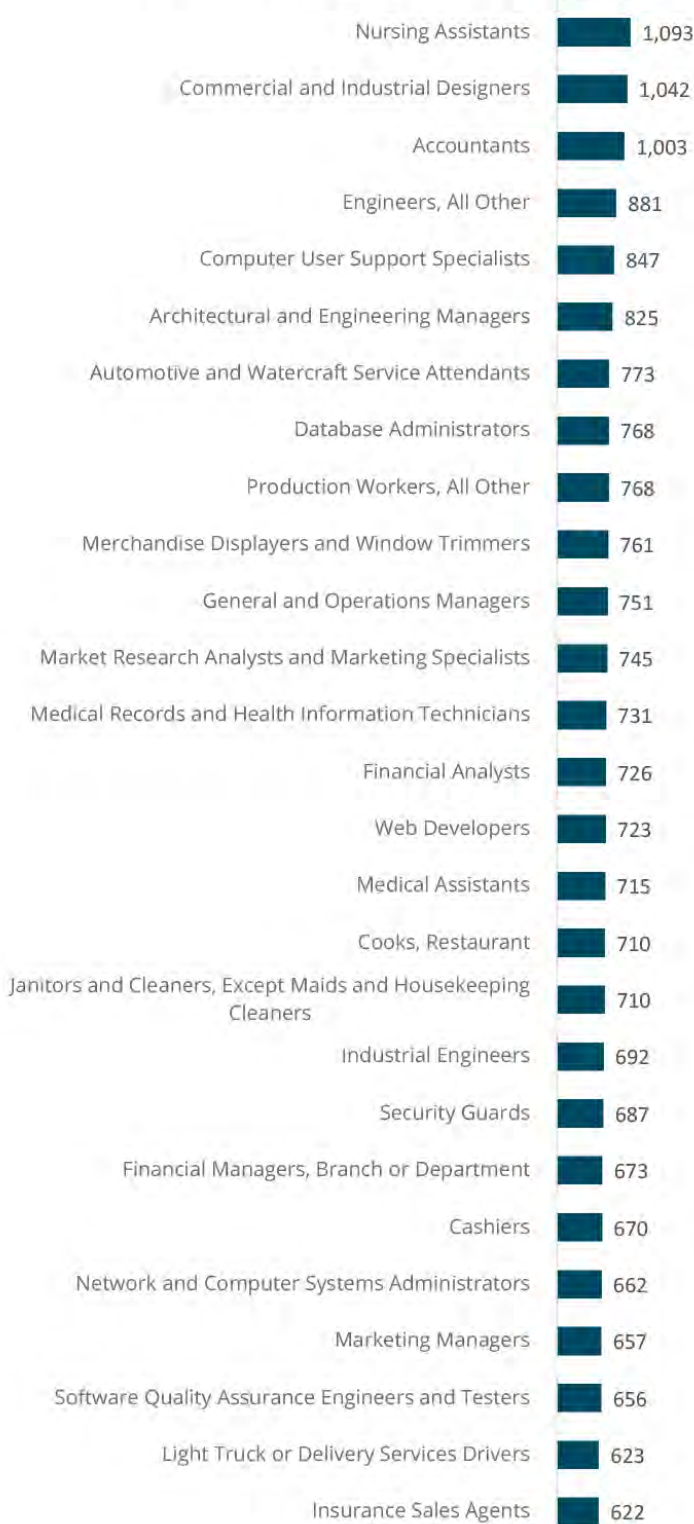
Four out of the top ten jobs
are in Customer Service



35,439 newly employed
workers in Q2 2016

Top Jobs In Demand

Quarter 2 2016



Introduction

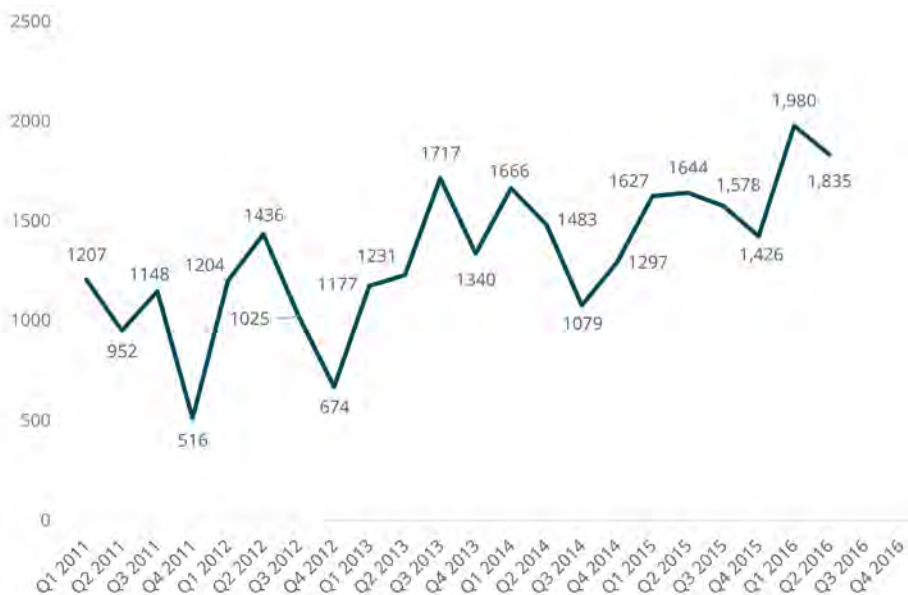
Agriculture

WIN's Agriculture group brings together occupations that require knowledge of the farming, livestock, the environment, and natural sciences. Occupations range from farm workers, to environmental engineers, to meat butchers, and recreation workers.

Postings Over Time

Job postings for Agriculture-related occupations dropped 7%, falling by 145 from 1,980 in Q1 2016 to 1,835 in Q2 2016. Postings remain high and are 12% above levels from Q2 2015, one year prior to this report's analysis.

Online Job Postings

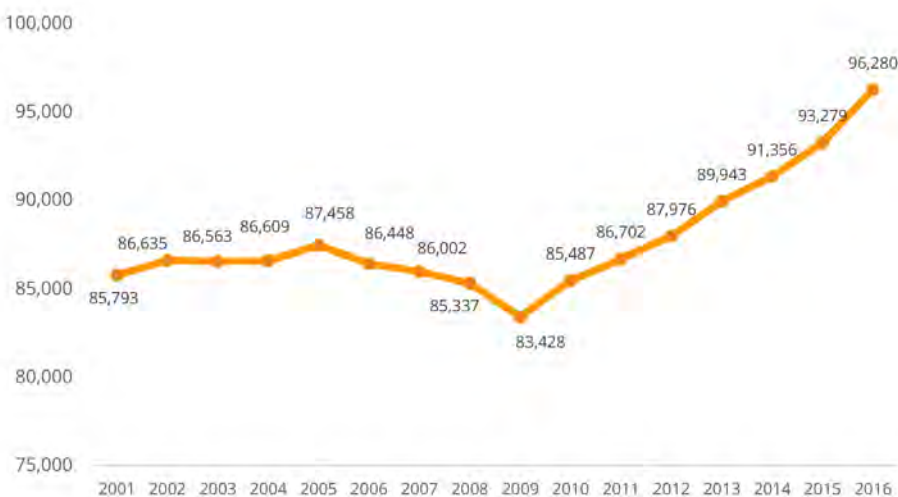


Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time

Agriculture employment is growing rapidly and has surpassed pre-recession job level peaks by nearly 10,000 workers. While the Great Recession hit many industries, Agriculture was able to maintain its employment well and regain jobs to pre-recession employment by 2012.

Employment Over Time



Data: EMSI, BLS
Analysis: Workforce Intelligence Network

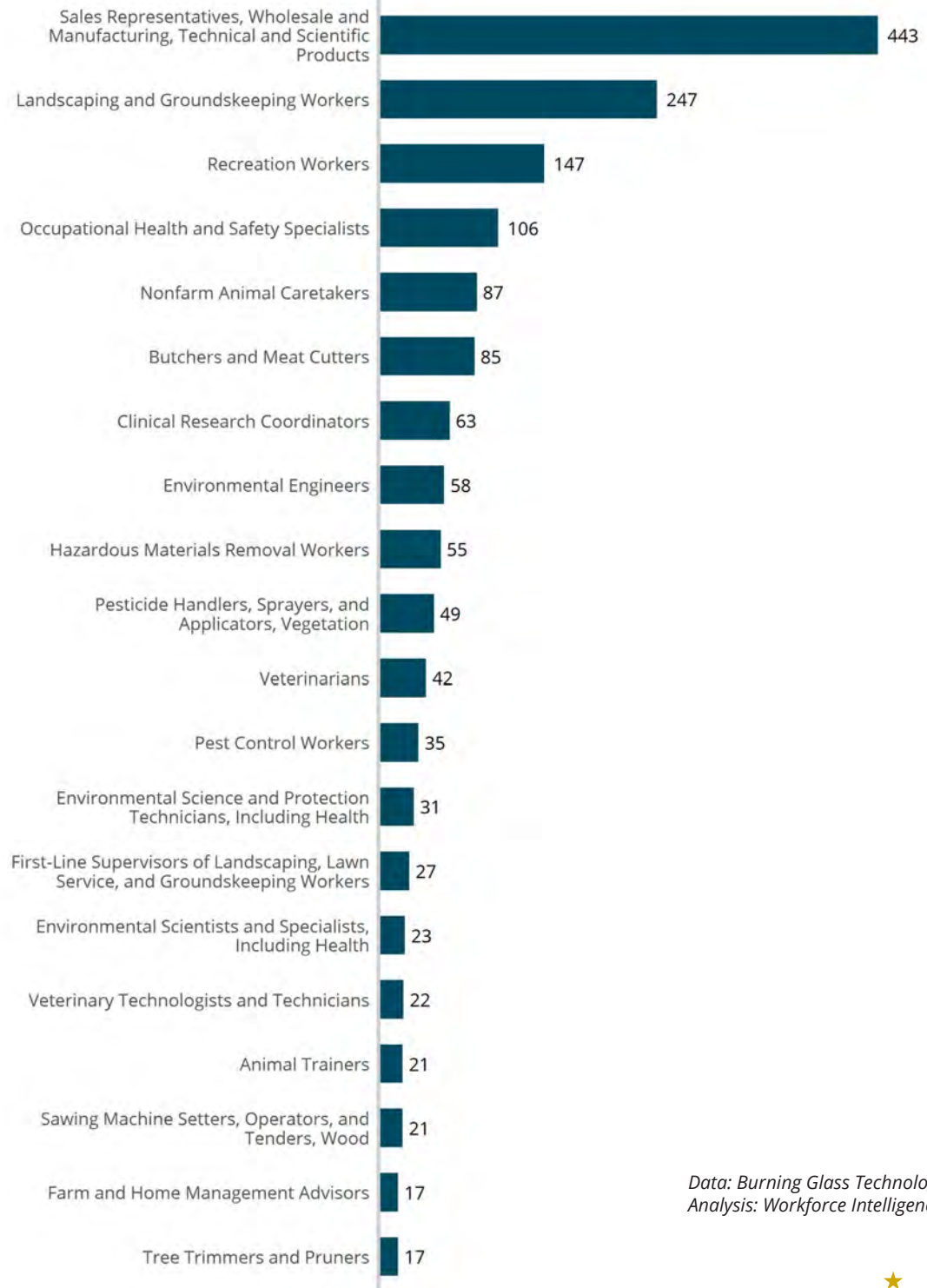


Technical sales: top in-demand
job



Surpassed pre-recession
employment by 10,000 workers

**Agriculture
Top Jobs**
Quarter 2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Most jobs require training or a Bachelor's degree



Most jobs require five years or less experience

Agriculture Educational Attainment & Experience Required

Most Agriculture jobs require vocational training or a Bachelor's degree with little in between. This is because most jobs are focused on skilled labor (vocational training) or technical sales and management (Bachelor's degree).

Of the postings that listed required experience, most require five years or less making these great jobs for workers just getting started in the labor market.

Minimum Educational Attainment Required Q2 2016



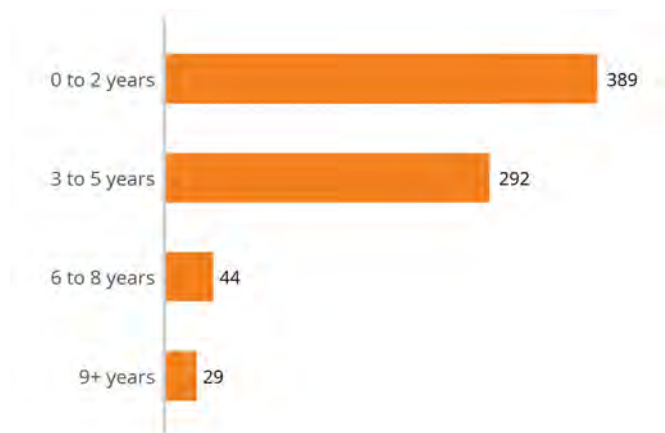
Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Areas of Study in-Demand Q2 2016

- Engineering, general
- Business administration and management, general
- Chemistry
- Occupational health and industrial hygiene
- Environmental engineering

In-demand degrees for workers interested in Agriculture range from engineering to business to chemistry. A wide variety of areas of study prepare a person for these careers.

Experience Required Q2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Communications and customer service: essential skills

48%+

At least half of available jobs are full-time

Agriculture in-Demand Skills Q2 2016

Q2 2016 postings require a wide variety of skills ranging from more technical (repair, use of fertilizers, occupational health and safety) to foundational skills that every workers needs such as communications, problem solving, and customer service. Many Agriculture jobs also include an element of physical demand.

Technical in-Demand Skills

- Inspection, repair
- Fertilizer use, application
- Occupational health and safety
- Supervisory skills, management
- Business development, sales

Foundational In-Demand Skills

- Communications skills: writing, building relationships
- Customer Service
- Organization, detail-oriented, planning
- Problem solving
- Physical demand

Job Type

- Temporary: 9.8%
- Full-time: 46.4%
- Part-time: 4.6%

Certifications In-Demand

- Commercial driver's license
- First aid CPR AED
- Certified safety professional
- Veterinary technician
- Certified pest control



\$46,622: Average wage
advertised in postings



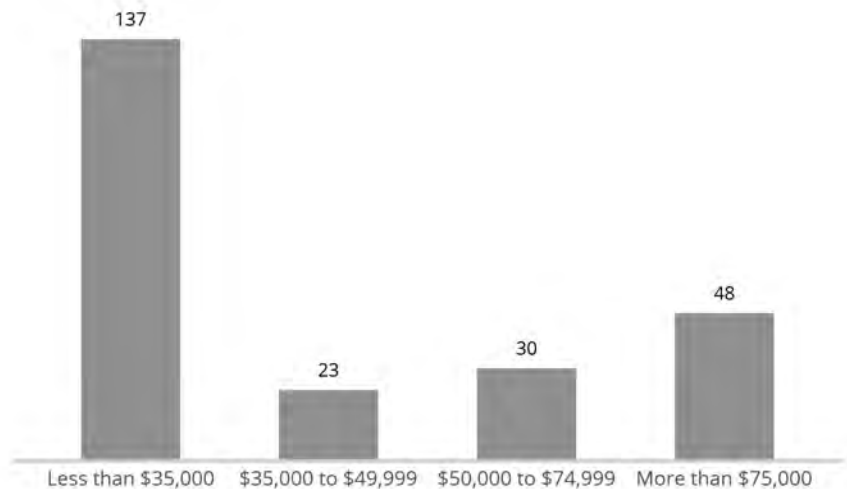
Wage growth potential for
technical sales jobs

Agriculture Wages

Many Agriculture jobs start with wages below \$35,000, especially those that do not require experience or a degree. However, many jobs offer wages much higher. The average wage advertised in postings during Q1 2016 was \$ 46,622 a fall from \$51,227 during Q1. This is likely due to a shift in more postings for workers during the summer that do not require a degree.

Advertised Salaries

Quarter 2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2015

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	\$18.78	\$26.09	\$36.74	\$51.21	\$69.44
37-3011	Landscaping and	\$8.53	\$9.71	\$11.34	\$14.84	\$19.69
39-9032	Recreation Workers	\$8.22	\$8.89	\$10.16	\$12.51	\$15.67
29-9011	Occupational Health and	\$20.67	\$24.18	\$32.08	\$37.88	\$45.15
39-2021	Nonfarm Animal Caretakers	\$8.16	\$8.70	\$9.77	\$12.15	\$15.48
51-3021	Butchers and Meat Cutters	\$9.30	\$11.39	\$14.58	\$18.23	\$22.05
11-9121	Clinical Research Coordinators	\$31.69	\$38.00	\$47.70	\$60.12	\$83.53
17-2081	Environmental Engineers	\$25.89	\$35.00	\$42.62	\$50.78	\$58.39
47-4041	Hazardous Materials Removal	\$11.70	\$16.09	\$20.98	\$25.07	\$27.53
37-3012	Pesticide Handlers, Sprayers,	\$11.17	\$12.91	\$15.00	\$17.55	\$21.39

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Business & Finance

Introduction

Business & Finance

Jobs in the Business and Finance occupation group can be found in nearly every type of business and industry. These workers need strong mathematical and accounting abilities along with project management and planning skills. Workers in this occupation group are in high demand in southeast Michigan.

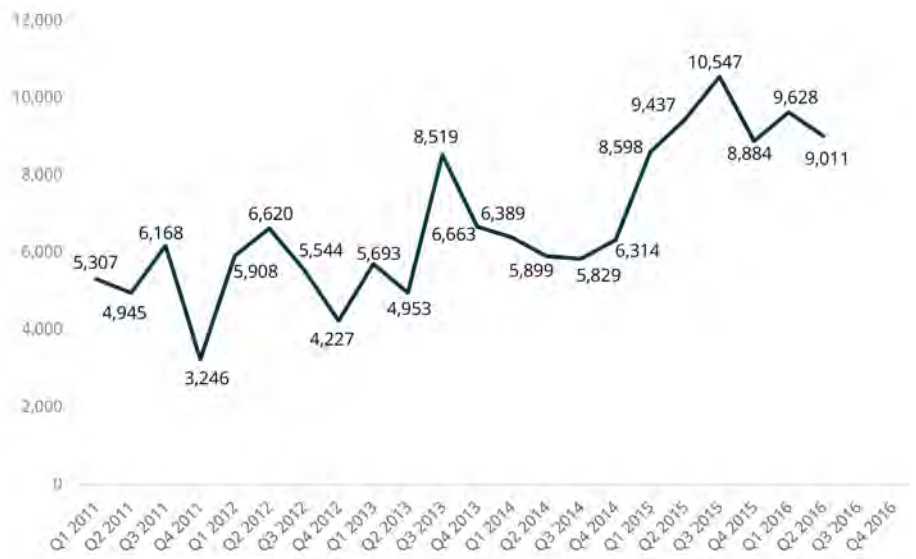
Postings Over Time

Online job ads for Business and Finance positions dropped a modest 6% between Q1 and Q2 2016, declining by 617 postings from 9,628 in Q1 to 9,011 in Q2. Postings have been lower than the Q3 2015 all-time high for the past three quarters nearing levels seen in early 2015. While postings dropped they are near the average seen in early 2015 which is substantially higher than levels from 2011-2014.

Employment Over Time

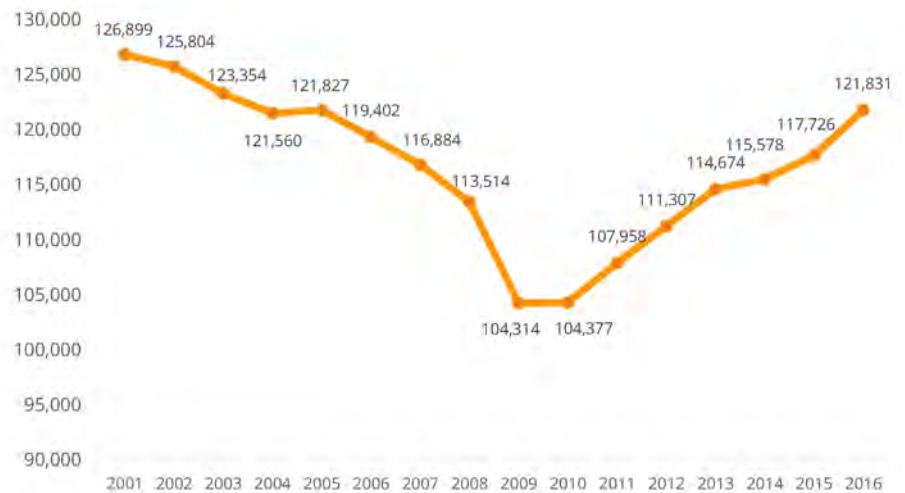
Employment in Business and Finance positions in the region increased over 120,000 between 2015 and 2016 marking nearly 17% growth since the recession low of 104,314 workers employed in 2009. The region must gain another 5,000 jobs before moving back to the pre-recession high employment level of 126,899 from 2001.

Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time



Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Human Resources: most in-demand occupation

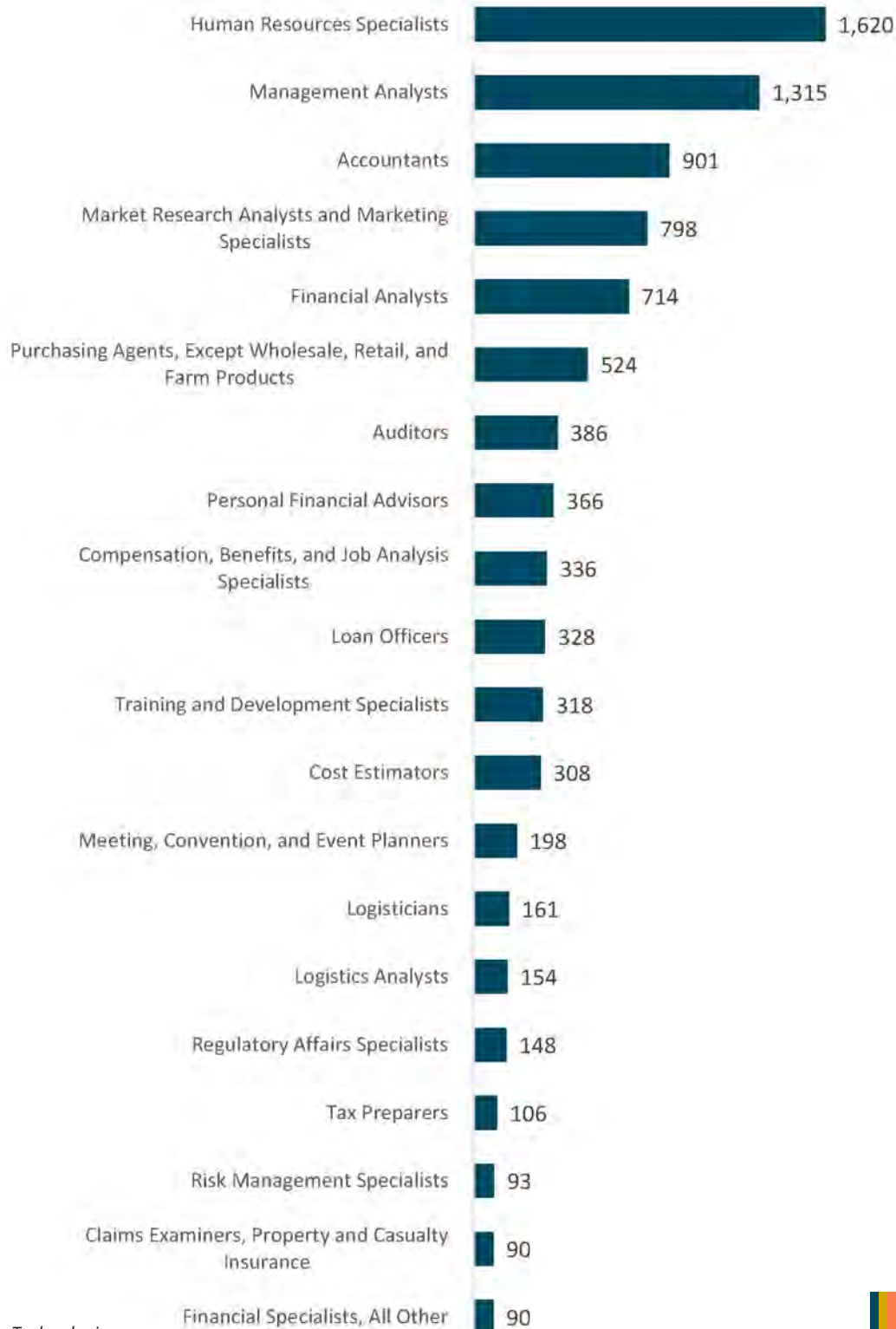


17% employment growth since recession

Business & Finance

Top Jobs

Quarter 2 2016





Bachelor's degree required for most jobs

%

Business and finance degrees in-demand

Business & Finance Educational Attainment & Experience Required

The vast majority of Business and Finance jobs posted require a Bachelor's degree. Due to most jobs requiring high-level mathematics skills and management abilities, a Bachelor's degree is the most common in-demand credential. Because of this, higher wages follow.

Most available jobs are five or fewer years of experience. Most employers want to see three to five years of experience, stressing the importance of internships and other on-the-job work-and-learn experiences. A large proportion of jobs are available to those at the entry-level as well.

Minimum Educational Attainment Required Q2 2016

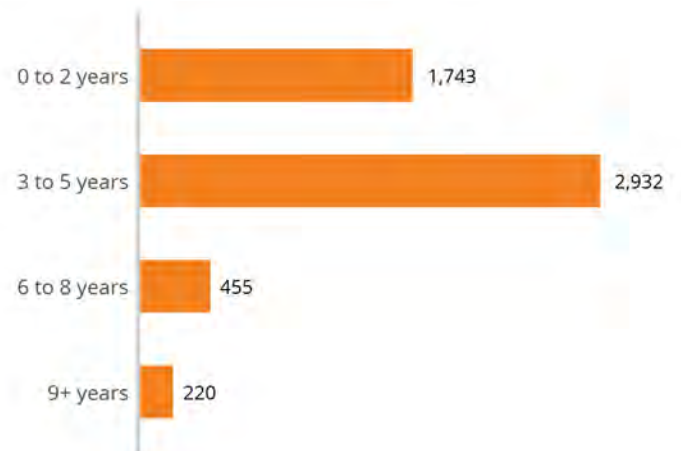


Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Areas of Study in-Demand Q2 2016

- Business administration and management, general
- Accounting
- Finance, general
- Engineering, general
- Human resources development

Experience Required Q2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Employers in need of workers
with finance skills

50%+

Most positions are full-time

Business & Finance in-Demand Skills Q2 2016

The occupations in the Business and Finance group require a variety of skills. Communication skills tend to represent the highest in-demand skills consisting of customer service, relationship building, and teamwork. Management skills are also highly sought out over a broad area of business disciplines. Advanced technical skills also show up on this list with a focus in data. Data entry, business analysis, and research skill show a spring of demand for analytics in the business environment. Traditional business skills appear as well with emphasis on leadership, self-management, and motivational skills for individuals. These skills reflect a desired business environment with an ample amount of managerial skills, with individuals who are strong in communication, analytical thinking, and self-motivated.

Technical in-Demand Skills

- Financial analysis, reporting
- Project management
- SAP
- Accounting, budgeting
- Business administration

Foundational In-Demand Skills

- Communications skills: writing, collaboration, presentation skills
- Microsoft Excel, Office, PowerPoint
- Problem solving
- Organization, planning, detail-oriented
- Customer service

Job Type

- Temporary: 3.7%
- Full-time: 52.6%
- Part-time: 1.8%

Certifications In-Demand

- Certified public accountant (CPA)
- Series 7
- Certified information systems auditor (CISA)
- Project management certification (e.g. PMP)
- Professional in human resources (PHR)



\$62,970: average advertised salary during Q2 2016



Most available jobs pay \$50,000+

Business & Finance

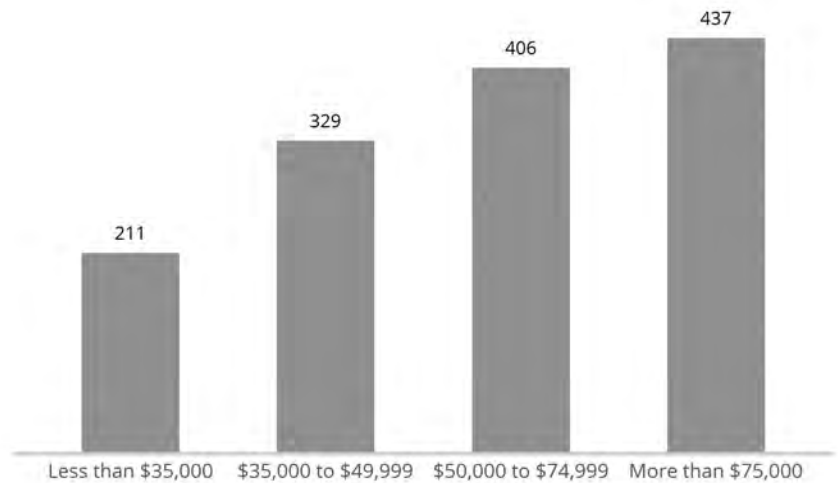
Advertised Salaries

Quarter 2 2016

Wages

Most jobs postings that listed a wage highlighted salaries between \$50,000 to \$75,000 a year. Many open positions also offer wages over \$75,00, likely for jobs requiring more experience.

The mean salary for these Business and Finance postings during Q2 2016 was \$62,970 up from \$60,116 in Q1 2016.



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2015

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
13-1071	Human Resources Specialists	\$16.76	\$21.08	\$27.22	\$34.67	\$43.98
13-1111	Management Analysts	\$21.00	\$29.35	\$39.86	\$51.57	\$66.61
13-2011	Accountants	\$19.28	\$23.73	\$31.10	\$40.29	\$52.77
13-1161	Market Research Analysts and Marketing Specialists	\$17.48	\$22.55	\$29.96	\$41.41	\$51.89
13-2051	Financial Analysts	\$23.39	\$28.10	\$35.93	\$45.34	\$54.76
13-1023	Purchasing Agents, Except	\$19.41	\$24.16	\$31.79	\$41.78	\$50.98
13-2011	Auditors	\$19.28	\$23.73	\$31.10	\$40.29	\$52.77
13-1141	Compensation, Benefits, and	\$20.13	\$24.14	\$29.36	\$37.41	\$45.90
13-2052	Personal Financial Advisors	\$18.56	\$23.69	\$31.85	\$53.69	\$87.06
13-1151	Training and Development Specialists	\$14.89	\$19.00	\$25.61	\$34.88	\$44.24

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Introduction

Construction

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

Postings Over Time

While postings fell for many occupation groups in the WIN region during Q2 2016, postings for Construction workers increased. Postings grew a modest 3%, 43 additional postings, between Q1 and Q2 2016. With 1,281 postings have reached a historic high. This high is not dramatically different than previous highs that have reached in the 1,200 range. However, Q2 2016 represents the highest number of postings to-date for Construction workers in the region.

Construction employers are beginning to post more online but the trend for most construction hiring is more traditional through word-of-mouth, hiring halls, and unions.

Employment Over Time

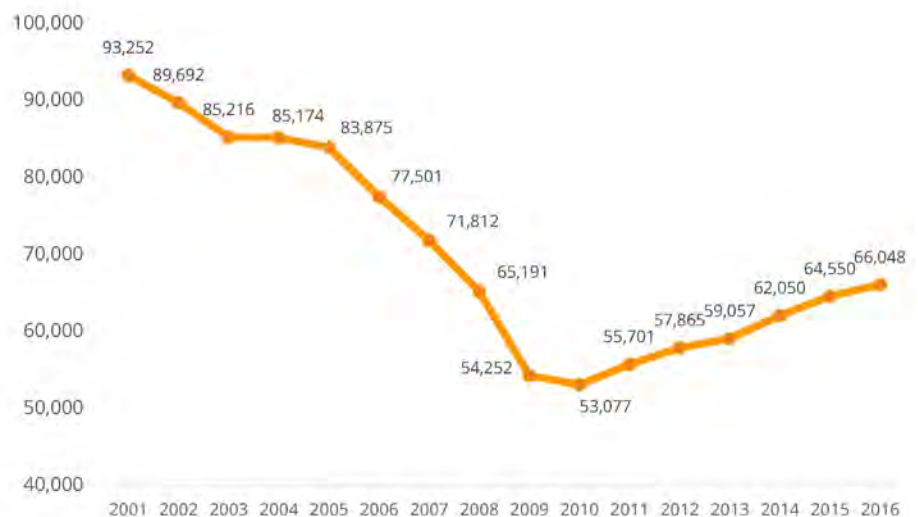
Construction employment has grown nearly 25% since 2010, recovering 13,000 jobs from the depths of the recession in 2010. While employment is steadily growing, employment is still 27,204 individuals below the 2001 pre-recession peak.

Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time



Data: EMSI, BLS
Analysis: Workforce Intelligence Network

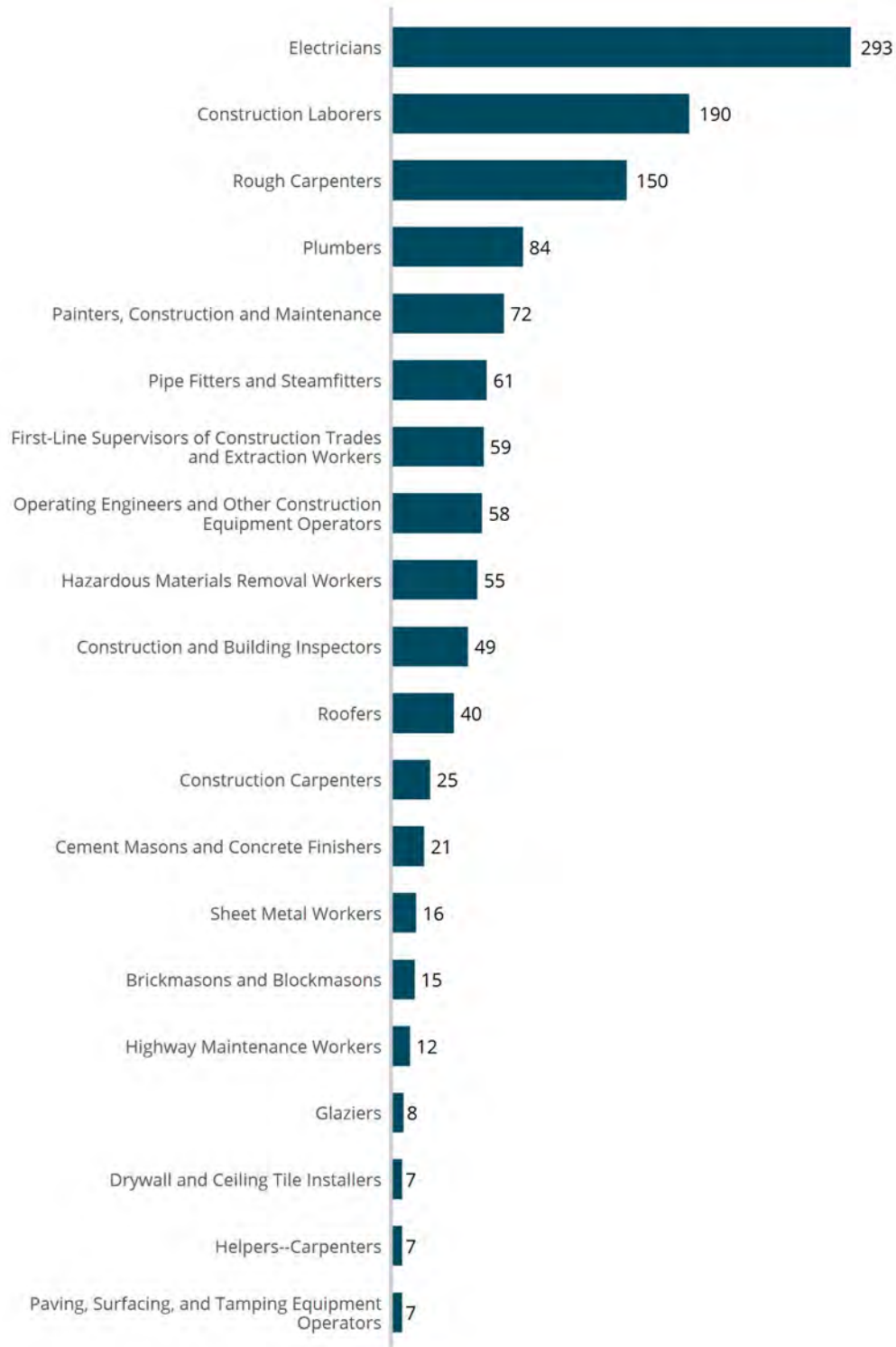


Electricians most in-demand



13,000 jobs replaced since recession

**Construction
Top Jobs**
Quarter 2 2016





Specialized vocational training
is required for most jobs

%

Entry-level opportunities
available

Construction Educational Attainment & Experience Required

Most Construction jobs require a registered apprenticeship or other skilled training. While some postings list high school as the only required credential it is clear from the skills listed in postings that vocational training is a must for Construction jobs.

Many construction jobs require three to five years of experience. Entry-level jobs are available to those who have the requisite skills for employment.

Minimum Educational Attainment Required Q2 2016

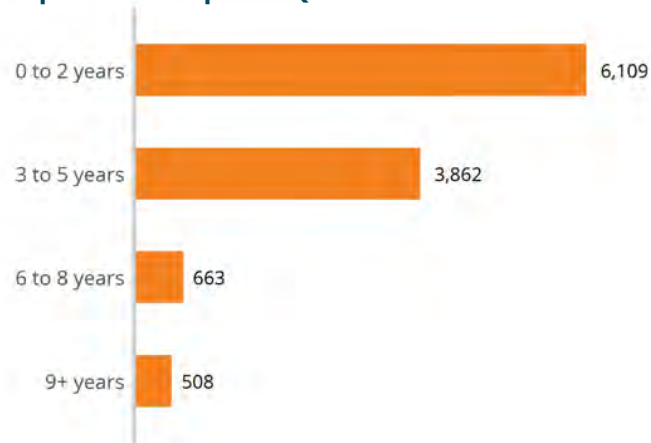


Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Areas of Study in-Demand Q2 2016

- Engineering, general
- Construction management
- Mechanical engineering
- Business administration and management, general
- Computer science

Experience Required Q2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Technical skills: electrical systems, carpentry, plumbing

44.4%+

Most jobs available are full-time

Construction in-Demand Skills Q2 2016

In-demand skills for Construction workers range from the highly technical to overarching foundational skills necessary for many jobs in the 21st century. Technical skills in-demand include carpentry, plumbing, electrical systems, repair, and diagram reading. All of these require specialized training outside of high school or an apprenticeship program included as part of a high school curriculum.

Foundational skills are also high-level. Construction employers want workers to be able to problem solve, manage projects, have strong collaboration skills, and work well with clients. Construction occupations also require physical demand.

Technical in-Demand Skills

- Repair, inspection
- Electrical systems, writing
- Schematic diagram reading, creation
- Carpentry, hand-tools
- Plumbing, pipefitting

Foundational In-Demand Skills

- Troubleshooting, problem solving
- Physical demand
- Communications skills: writing, collaboration
- Customer service
- Project management, organizational skills

Job Type

- Temporary: 6.1%
- Full-time: 44.4%
- Part-time: 1.5%

Certifications In-Demand

- Electrician certification, Master electrician
- Commercial driver's license, CDL class A
- First aid cpr aed
- Occupational safety and health administration certification
- Plumbing certification



\$48,552: average advertized wage during Q2 2016



Electricians, plumbers, pipefitters: most wage growth potential outside of mangaeement

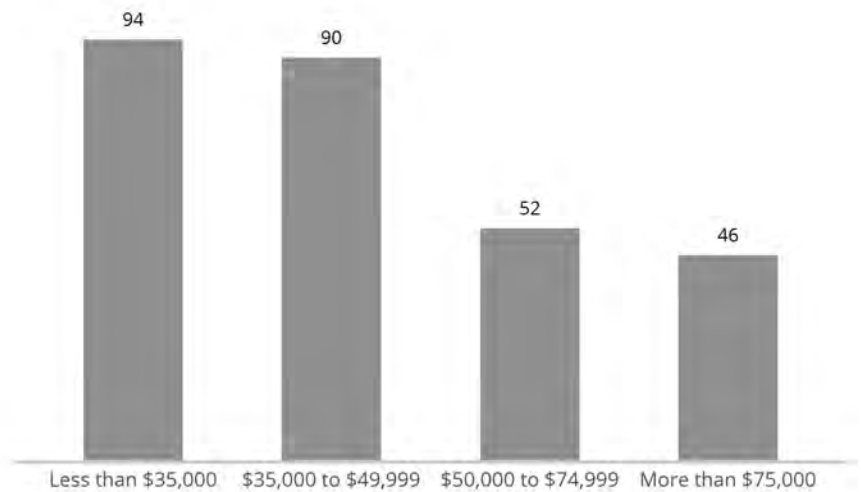
Construction

Wages

Wages for Construction workers have a broad range and grow with experience. Employers advertising wages in postings have equivalent numbers of jobs available for workers at all levels of wages below \$75,000. The average advertised wage in Q2 was \$48,552, down slightly from the Q1 2016 average of \$50,000. Still a competitive level.

Advertised Salaries

Quarter 2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2015

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
47-2111	Electricians	\$18.06	\$23.94	\$31.09	\$35.32	\$41.37
47-2061	Construction Laborers	\$11.35	\$13.99	\$18.56	\$22.59	\$26.66
47-2031	Rough Carpenters	\$13.97	\$18.22	\$23.85	\$29.03	\$33.29
47-2152	Plumbers	\$15.69	\$22.35	\$31.21	\$35.49	\$40.14
47-2141	Painters, Construction and	\$12.00	\$13.92	\$20.07	\$26.03	\$30.71
47-2152	Pipe Fitters and Steamfitters	\$15.69	\$22.35	\$31.21	\$35.49	\$40.14
47-1011	First-Line Supervisors of Construction Trades and	\$20.30	\$24.06	\$29.07	\$37.38	\$45.30
47-2073	Operating Engineers and	\$18.32	\$20.28	\$23.46	\$27.64	\$31.06
47-4041	Hazardous Materials Removal Workers	\$11.70	\$16.09	\$20.98	\$25.07	\$27.53
47-4011	Construction and Building Inspectors	\$15.23	\$20.59	\$26.40	\$30.96	\$35.92

Data: EMSI, BLS
Analysis: Workforce Intelligence Network

Introduction

Customer Service

The customer service group is the largest occupational group that WIN analyzes, both in terms of employment and online job postings. This group is of very high importance to the region because it is the first to grow when the economy expands and the first to contract in a downturn: it is often a leading indicator. As defined by WIN, this group encompasses all customer service occupations, with skills transferrable across the retail sector, the hotel industry, food and beverage service industry, call centers, and other areas.

Postings Over Time

Online job ads for Customer Service workers dropped 20% between Q1 and Q2 2016 falling by 7,485 postings. This drop is nearly equivalent to the increase experienced between Q4 2015 and Q1 2016 as Q1 2016 was a historical high for postings in this group. Postings remain high but the trend moving into the second half of 2016 is unclear.

Employment Over Time

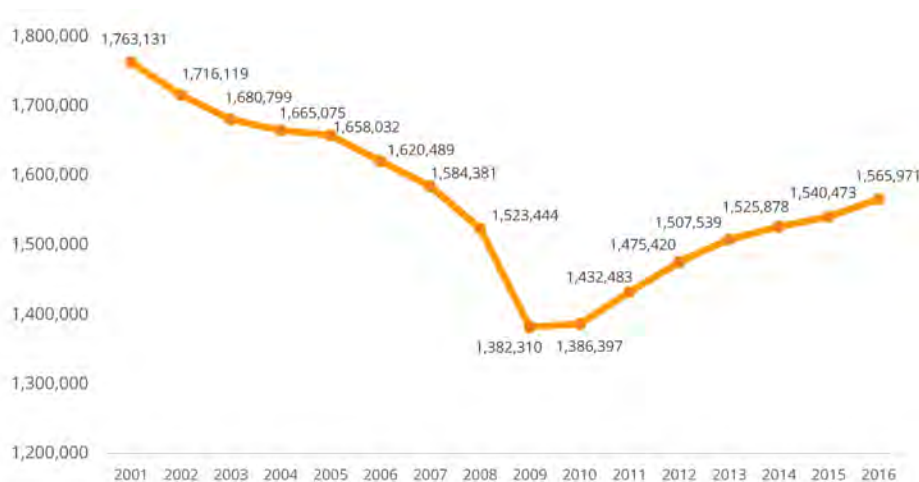
Employment in Customer Service occupations has increased 13% since the 2009 recession low, adding nearly 200,000 jobs. 2016 estimates show that nearly 1.6 million individuals are employed in Customer Service-related jobs making it the largest occupation group in the region. Jobs are growing slowly and employers must add another 200,000 jobs to reach 2001 pre-recession highs.

Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time



Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Wholesale and manufacturing
sales: most in-demand



1.56 million workers
employed

Customer Service

Top Jobs

Quarter 2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Entry-level opportunities
available



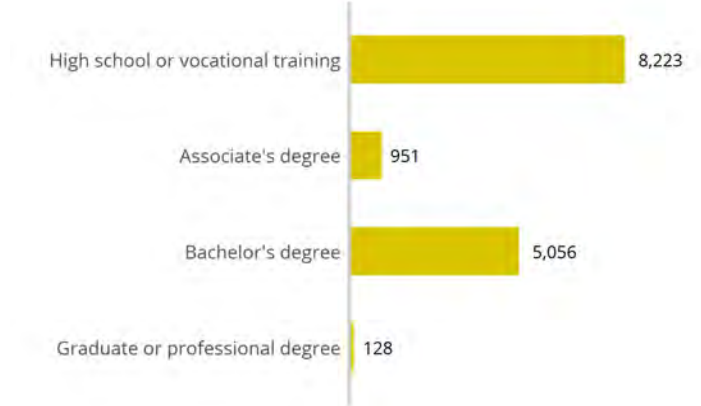
High school diploma required

Customer Service Educational Attainment & Experience Required

Customer Service jobs either require little to no training past a high school education or require a Bachelor's degree. This is because occupations in the group range from retail sales and other lower technical skill jobs to those in technical sales and management.

Because many Customer Service jobs do not require higher levels of education many are open to entry-level workers allowing individuals to gain experience and basic skills before transitioning to another career path.

Minimum Educational Attainment Required Q2 2016

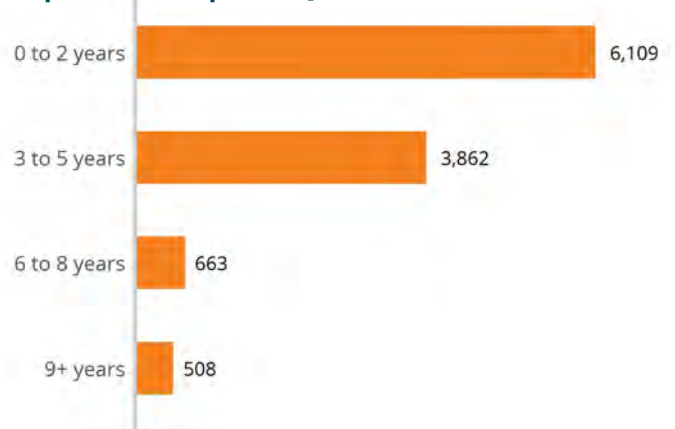


Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Areas of Study in-Demand Q2 2016

- Business administration and management, general
- Marketing/marketing management, general
- Engineering, general
- Finance, general
- Computer science

Experience Required Q2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Essential skill: customer service



More than 1/3 of positions are full-time

Customer Service in-Demand Skills Q2 2016

The postings in the Customer Service group required a wide array of high-level communication skills. The most demanding skill in this occupation group was sales and customer service, the skill that links all of the jobs in this occupation group. Management skills, such as scheduling and budgeting, were also present in many of the postings for Customer Service related jobs. The skills listed below are vital for Customer Service to build a relationship with customers and provide them with particular product to meet their needs.

Technical in-Demand Skills

- Sales
- Merchandising
- Cleaning
- Store Management
- Supervisory skills

Foundational In-Demand Skills

- Communications skills: writing, building relationships, listening
- Customer service
- Organization
- Physical demand
- Problem solving

Job Type

- Temporary: 4.2%
- Full-time: 35.3%
- Part-time 11.2%:

Certifications In-Demand

- Servsafe
- Automotive service excellence (ASE) certification
- Commercial driver's license
- Alcohol server certification
- Mortgage license



\$56,641 average advertized wage

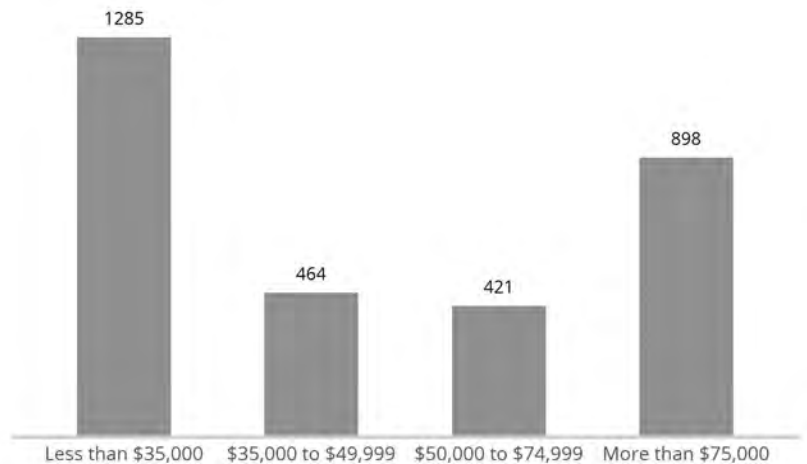


Wholesale and manufacturing sales = most wage potential

Customer Service Wages

Many Customer Service jobs pay lower wages because they require fewer technical skills, less training, and are open to workers with little to no experience. Some occupations offer a great deal of wage potential but also require more education and training. While most postings listed wage below \$35,000 the average advertised wage in Q2 2016 was \$56,641 up from \$52,224 during Q1. Higher wages for workers with certain credentials and experiences highlight the opportunity in this career area.

Advertised Salaries Quarter 2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2015

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$12.68	\$18.66	\$27.10	\$39.62	\$55.93
41-2031	Retail Salespersons	\$8.27	\$8.90	\$10.16	\$13.10	\$19.10
43-4051	Customer Service	\$9.22	\$11.38	\$14.86	\$18.90	\$24.29
41-1011	First-Line Supervisors of Retail Sales Workers	\$11.52	\$14.25	\$18.39	\$23.70	\$30.16
35-1012	First-Line Supervisors of Food	\$8.89	\$10.52	\$14.25	\$19.31	\$24.15
35-3021	Combined Food Preparation	\$8.15	\$8.52	\$9.14	\$9.92	\$12.12
11-2022	Sales Managers	\$29.05	\$39.39	\$53.42	\$71.56	\$108.82
53-6031	Automotive and Watercraft	\$8.19	\$8.80	\$9.84	\$11.68	\$13.74
35-2014	Cooks, Restaurant	\$8.31	\$9.14	\$10.68	\$12.74	\$14.33
37-2011	Janitors and Cleaners, Except Maids and Housekeeping	\$8.30	\$9.38	\$11.71	\$15.15	\$18.64

Data: EMSI, BLS
Analysis: Workforce Intelligence Network

Introduction

Education

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

Postings Over Time

Job postings for jobs in Education do not follow a traditional business cycle like many other occupation groups. Instead, postings for Education positions peak during quarter three, particularly in July and August when schools ramp up hiring for the school year. Q2 2016 postings did not shift in a meaningful way compared to Q1. Postings increased by 4 with the level remaining nearly unchanged since Q4 2015. Postings will likely increase and peak during Q3 as they have in previous years.

Employment Over Time

Unlike many other occupation groups that have experienced employment gains since the recession, Education employment has declined. Also, unlike others, there was no precipitous drop in employment during 2009 and 2010 as the economy collapsed. Education positions, many of which are publicly funded, have fallen more in line with government spending on educator positions and universities changing from tenured faculty to adjust and part-time staff that are not counted in full-time employment numbers. Compared to a pre-recession high employment level of 144,216 in 2004, employment has dropped 18.6% with 26,828 fewer individuals employed in Education occupations.

Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time



Data: EMSI, BLS
Analysis: Workforce Intelligence Network



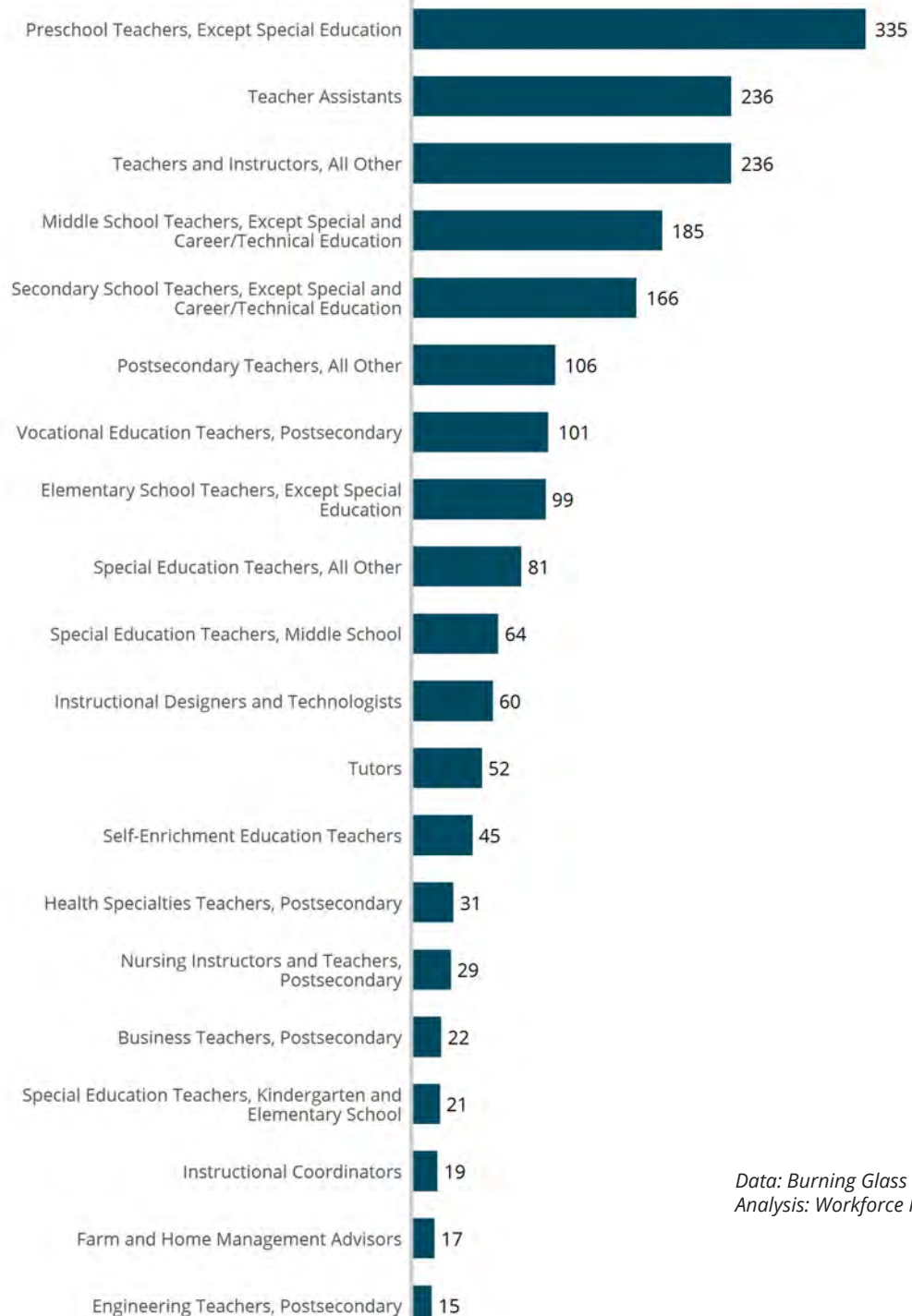
Preschool teachers and teaching assistants: most in-demand



Declining employment: most available jobs are replacement positions

Education Top Jobs

Quarter 2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Bachelor's degree required to teach

%

Entry-level opportunities available

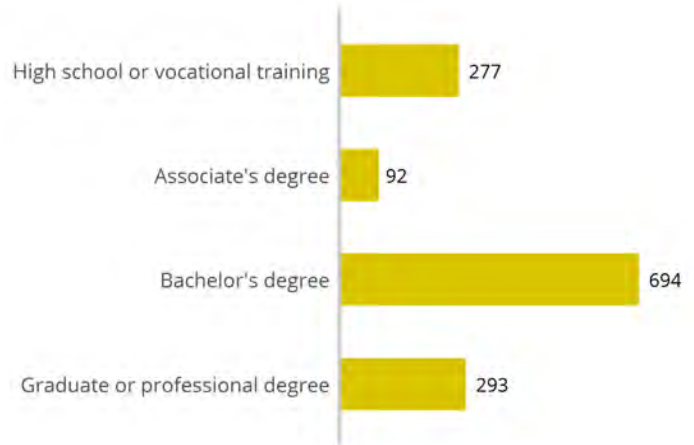
Education

Educational Attainment & Experience Required

Most positions in Education require a Bachelor's or Master's degree as teacher training requirements have increased. Some positions, like those for teacher aids, require vocational training instead of a degree.

Many positions are open to less experienced workers with more than half of postings listing entry-level positions. The next most requested experience is three to five years. Few postings require more than five years of experience.

Minimum Educational Attainment Required Q2 2016

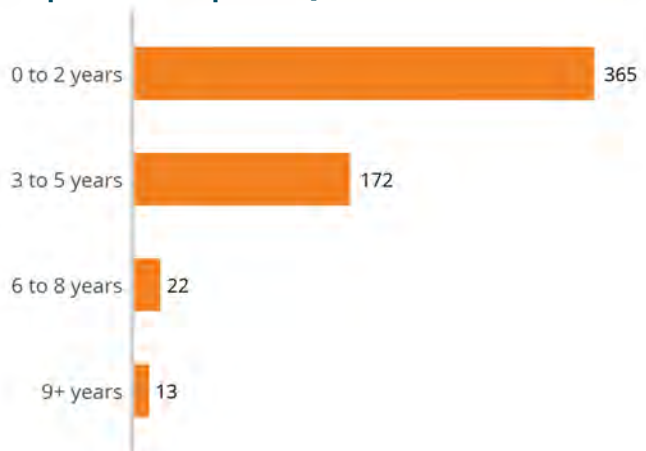


Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Areas of Study in-Demand Q2 2016

- Early childhood education and teaching
- Child development
- Business administration and management, general
- Educational/instructional technology
- Nursing science

Experience Required Q2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Special education and early childhood education: in-demand skills

Teacher certification required

Education in-Demand Skills Q2 2016

The foundational skills required for Education jobs are similar to those required for many other jobs. Communications, organization, problem solving, and others are all required of most jobs in the 21st century. Technical skills for teachers and other occupations in Education include lesson planning, knowledge of child development, mathematics, special education, and other teaching-specific skills.

Technical in-Demand Skills

- Teaching, lesson planning
- Child development
- Early childhood education
- Mathematics
- Special education

Foundational In-Demand Skills

- Communications skills: writing, building relationships, presentation skills
- Planning, organization
- Research, problem solving
- Physical demand
- Creativity

Job Type

- Temporary: 4.2%
- Full-time: 42.8%
- Part-time: 11.8%

Certifications In-Demand

- Certified teacher
- First aid CPR AED
- Registered nurse
- Special education certification
- Emergency medical technician (EMT)



\$31,660: average advertised wage in Q2 2016



Wage potential increases with age of students taught

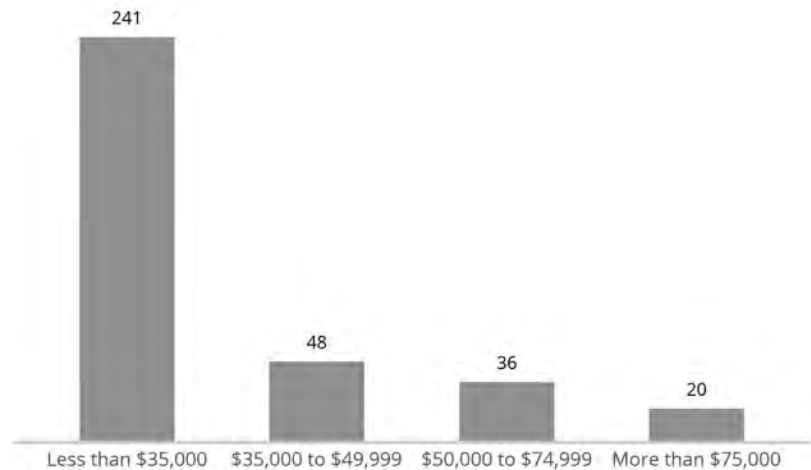
Education

Wages

Starting wages for many teaching positions are not competitive but have the opportunity to grow. For many positions, wages are negotiated by a union and increase over time. The average wage for a teacher, as advertised in postings during Q2 2016, was \$31,660 down from \$40,183. This is likely due to a shift in demand toward more teaching assistant positions. While half of postings list wages below \$35,000, most open positions require little to no experience so it stands to reason that this is why wages in postings are so low even though most jobs require at least a Bachelor's degree.

Advertised Salaries

Quarter 2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2015

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
25-2011	Preschool Teachers, Except Special Education	\$9.29	\$10.77	\$13.47	\$16.51	\$22.18
25-9041	Teacher Assistants	\$8.67	\$10.04	\$11.95	\$14.88	\$18.42
25-3099	Teachers and Instructors, All	\$10.11	\$15.70	\$26.12	\$33.71	\$40.66
25-2022	Middle School Teachers, Except Special and	\$18.38	\$23.85	\$31.86	\$38.46	\$44.02
25-2031	Secondary School Teachers,	\$18.43	\$23.15	\$30.87	\$38.63	\$44.48
25-1099	Postsecondary Teachers, All	\$20.52	\$27.32	\$37.84	\$51.09	\$73.72
25-1099	Vocational Education Teachers, Postsecondary	\$20.52	\$27.32	\$37.84	\$51.09	\$73.72
25-2021	Elementary School Teachers,	\$17.66	\$22.87	\$32.12	\$38.30	\$43.69
25-2059	Special Education Teachers, All Other	\$16.01	\$20.46	\$25.64	\$35.20	\$44.48
25-2053	Special Education Teachers, Middle School	\$19.57	\$24.21	\$30.71	\$38.56	\$45.12

Data: EMSI, BLS
Analysis: Workforce Intelligence Network

Introduction

Energy

Energy-related occupations encompass jobs in engineering, science, mining, and extraction. Workers in this field have a range of skills all related to keeping businesses and homes powered. Energy companies employ workers in a variety of occupations, many of which are also included in other WIN occupation groups. Data referenced in this section pertain only to job postings from energy-related businesses.

Postings Over Time

Online job ads for workers in Energy shifted little between Q1 and Q2 2016 with postings increasing by 4. Postings have remained relatively stagnant for the past six quarters hovering around an average of 250 job ads per quarter. Postings are 21% higher during this Q2 compared to Q2 of 2015 with 48 additional postings.

Employment Over Time

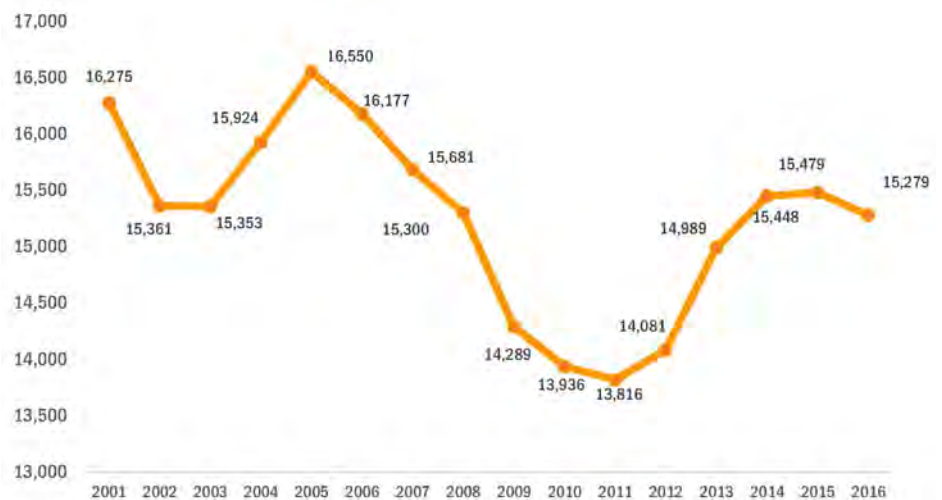
The data presented in the graph to the right represents total employment in the Energy industries (NAICS 2111, 2131, 2211, 2212, 2371), not just WIN-designated Energy occupations. In 2016, 15,448 workers are employed in these Energy industries in southeast Michigan. Employment in these industries dipped in 2011, losing 2,734 jobs. Employment has since recovered to just over 15,000 workers, a 1,663 job gain between 2011 and 2015, but employment looks to be dropping again.

Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time



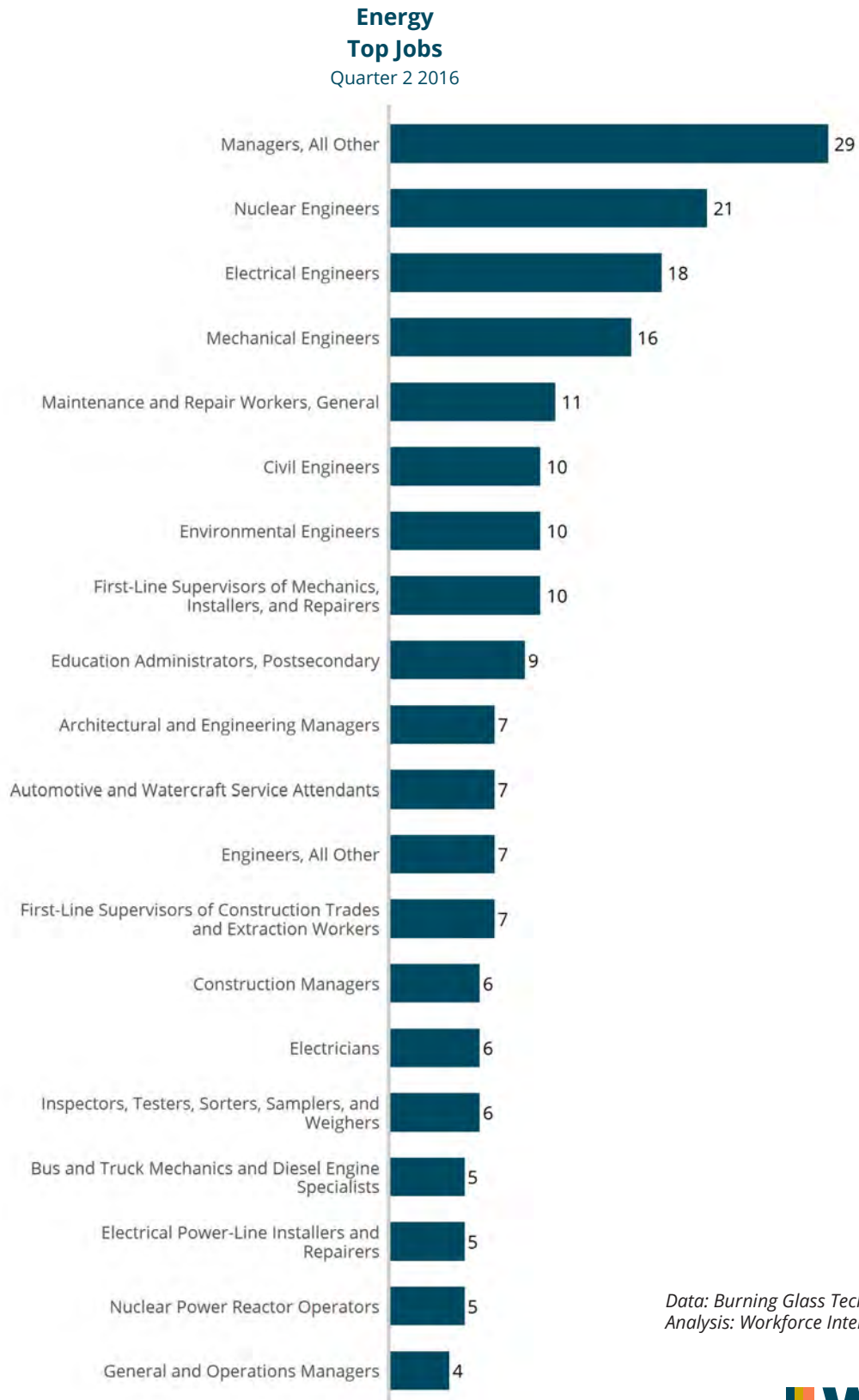
Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Managers and engineers: most
in-demand jobs



Postings holding steady around
250, demand not increasing



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Technical training require for technician positions

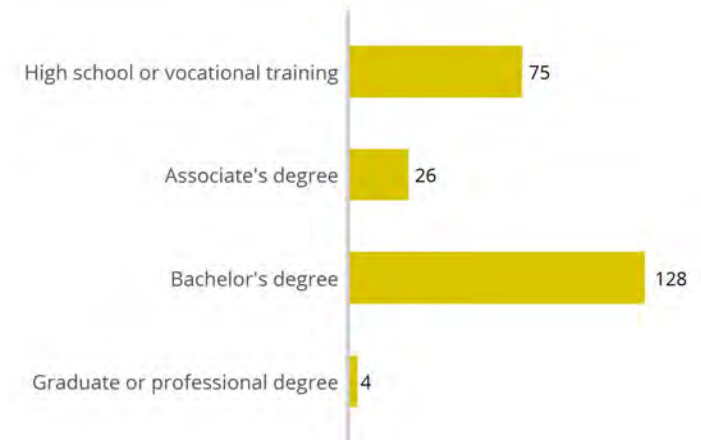
%

3 to 5 years of experience required

Energy Educational Attainment & Experience Required

Jobs in Energy tend to have an engineering focus and thus require at least a Bachelor's degree for employment. Select available jobs at the technician level require vocational training such as an apprenticeship. Energy companies posting in Q1 2016 required three to five years of experience leaving little room for entry-level talent.

Minimum Educational Attainment Required Q2 2016

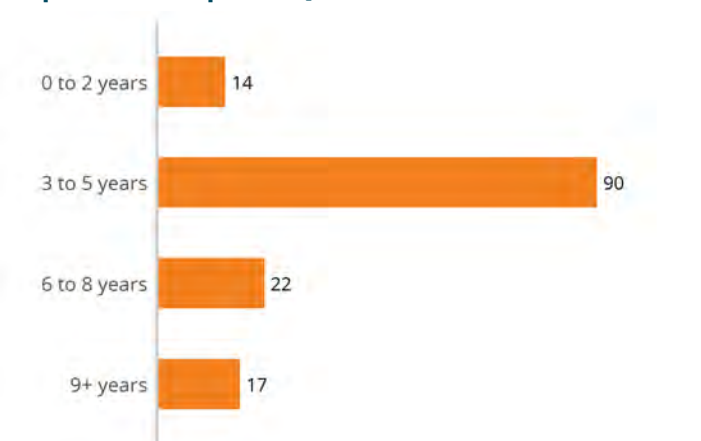


Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Areas of Study in-Demand Q2 2016

- Engineering, general
- Engineering technology, general
- Mechanical engineering
- Electrical and electronic engineering technologies/technicians, other
- Business administration and management, general

Experience Required Q2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Nuclear energy: essential skill/
knowledge

ABET and ASME certifications
in-demand

Energy in-Demand Skills Q2 2016

Foundational skills for jobs in Energy fields are similar to those across the WIN-analyzed occupation groups. Planning, customer service, problem solving, and communications skills are necessary for workers. Technical skills in Energy jobs range from budgeting to nuclear energy and repair. A wide variety in these highly skilled jobs.

Technical in-Demand Skills

- Budgeting
- Supervisory skills
- Project Management
- Nuclear energy
- Repair, inspection

Foundational In-Demand Skills

- Planning, project management
- Problem solving
- Communication skills: writing, building relationships
- Supervisory skills, mentoring
- Computer skills: Microsoft Excel, Office

Job Type

- Temporary: 3.0%
- Full-time: 36.2%
- Part-time: data unavailable

Certifications In-Demand

- Commercial driver's license (CDL)
- American board for engineering and technology (ABET) accredited
- Auditor certification
- Air brake certified
- American society of mechanical engineers (ASME) certified



\$65,873: Average wage
advertised during Q2 2016



Engineering positions provide
most wage growth

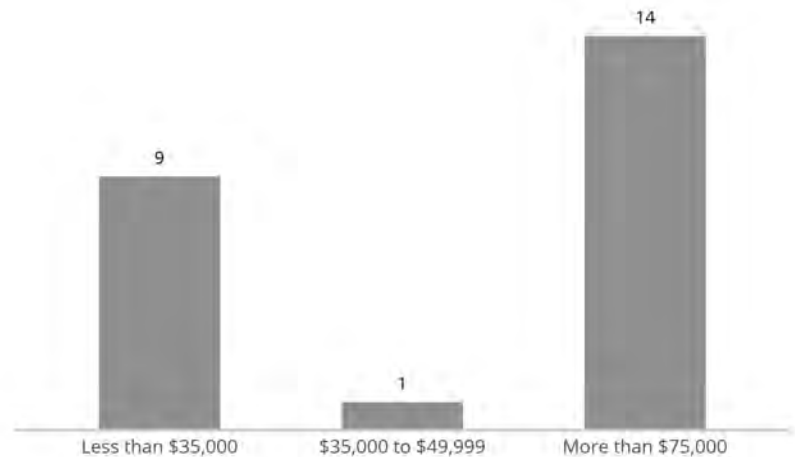
Energy

Wages

Few postings in Energy advertise a salary. Of those that did list a wage, most were above \$75,000 annually. The average advertised wage in a posting during Q2 2016 was \$65,873 slightly lower than Q1's average of \$66,054. According to BLS data, wages for energy workers are high and offer upward growth. With greater education requirements comes higher pay and Energy jobs are a great example of this.

Advertised Salaries

Quarter 2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2015

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
11-9199	Managers, All Other	\$27.60	\$34.55	\$45.50	\$56.62	\$69.64
17-2161	Nuclear Engineers	\$35.80	\$43.46	\$50.81	\$56.88	\$64.21
17-2071	Electrical Engineers	\$28.62	\$34.37	\$41.93	\$49.17	\$57.20
17-2141	Mechanical Engineers	\$29.71	\$36.70	\$44.39	\$53.14	\$59.51
49-9071	Maintenance and Repair	\$10.08	\$12.52	\$16.67	\$21.78	\$27.39
17-2051	Civil Engineers	\$23.15	\$27.80	\$33.73	\$39.42	\$46.77
17-2081	Environmental Engineers	\$25.89	\$35.00	\$42.62	\$50.78	\$58.39
49-1011	First-Line Supervisors of	\$16.48	\$22.09	\$29.56	\$38.49	\$46.06
11-9033	Education Administrators, Postsecondary	\$26.36	\$35.36	\$49.35	\$68.26	\$91.15
11-9041	Architectural and Engineering Managers	\$41.29	\$49.77	\$59.23	\$71.28	\$82.47

Data: EMSI, BLS
Analysis: Workforce Intelligence Network

Engineers & Designers (Manufacturing Focused)

Introduction

Engineers & 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. Demand for engineers in the region has been consistent, and employment has been growing quickly.

Postings Over Time

Job postings for occupations in the Engineering and Design group dropped marginally between Q1 and Q2 2016 falling by 80 postings (1%). Postings for this occupation group have remained relatively stagnant for three quarters running. Postings are on a general decline since the Q3 2015 all-time high of 10,433 postings. However, the drop is slow and relatively small.

Employment Over Time

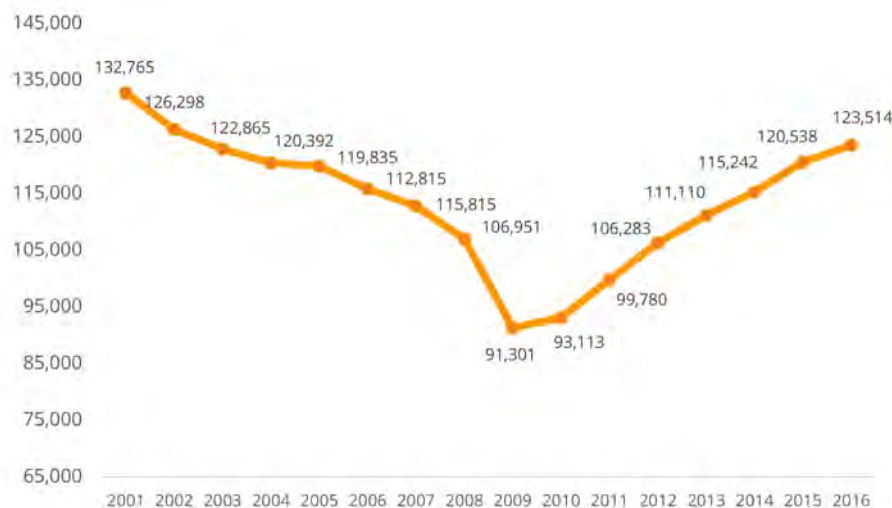
Employment in Engineering and Design occupations has increased 35.3% since the lowest point in the recession during 2009 recovering 32,213 jobs over a seven-year period. Postings for these workers are continuously high and hiring has been steady. While growth has been strong, another 9,251 workers need to be employed for job levels to reach 2001 peak pre-recession numbers.

Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time



Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Most in-demand: mechanical
and electrical engineers

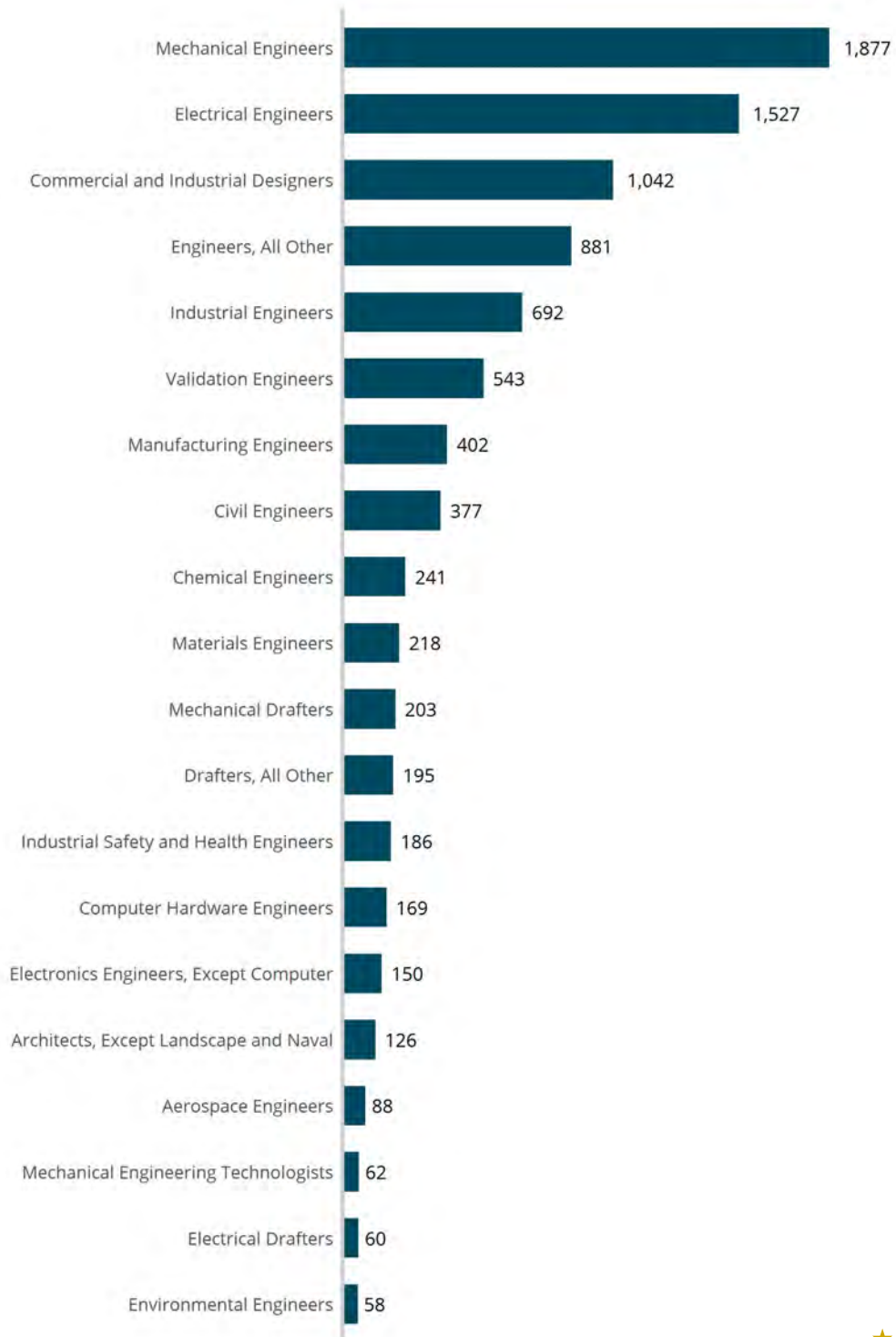


32,213 jobs recovered since
the recession

Engineers & Designers

Top Jobs

Quarter 2 2016





Bachelor's degree required

%

Most opportunity for those with 3 to 5 years of experience

Engineers & Designers Educational Attainment & Experience Required

Engineering and Design jobs require a Bachelor's degree or higher for employment. Experience however, is a range. Most available jobs require three to five years of experience. But, there are also many jobs available at the entry-level.

Minimum Educational Attainment Required Q2 2016

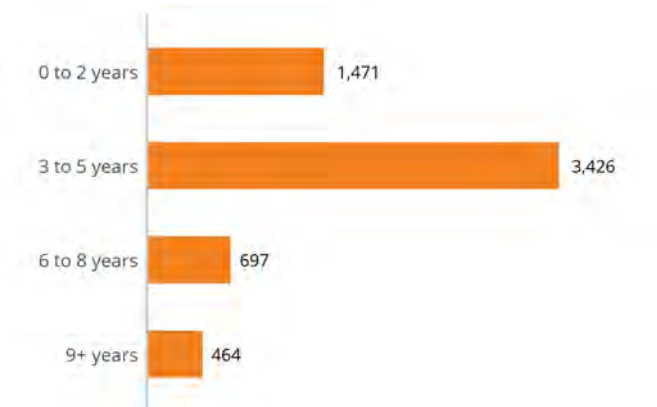


Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Areas of Study in-Demand Q2 2016

- Engineering, general
- Mechanical engineering
- Electrical and electronic engineering technologies/technicians, other
- Computer science
- Aerospace, aeronautical and astronautical engineering

Experience Required Q2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Product development: in-demand skill



Engineering certification from ABET required

Engineers & Designers in-Demand Skills Q2 2016

The foundational skills required to be an engineer or designer are similar to those for other occupational groups. Communications, management, problem solving, and computer skills are all important for workers in the current economy. Technical skills for engineers are more specific. Mechanical engineering, the top skill is also the top in-demand job. Many employers also want engineers to be part of the product development and project management processes.

Technical in-Demand Skills

- Mechanical engineering
- Electrical engineering
- Validation
- Product development
- Project management

Foundational In-Demand Skills

- Communication skills: writing, collaboration
- Problem solving, troubleshooting
- Computer skills: Microsoft Office, Excel, Powerpoint
- Planning, project management, organizational skills
- Research

Job Type

- Temporary: 5.6%
- Full-time: 50.6%
- Part-time: 0.6%

Certifications In-Demand

- American board for engineering and technology (ABET) accredited
- Six sigma certification
- Certified quality engineer
- Security clearance
- Project management certification (e.g. PMP)



Average advertized wage in Q2
2016: \$79,443

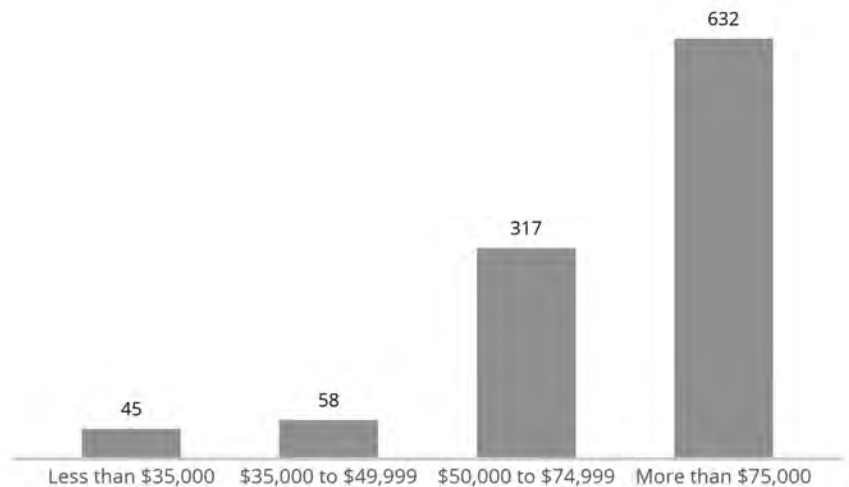


\$50,000+: average starting salary
for engineers and designers

Engineers & Designers Wages

With such high educational attainment requirements, it follows that most jobs posted for engineers pay more than \$75,000 annually. These are great jobs but require many years of training and a lot of skill. The average posted wage in Q2 2016 was \$79,433 down slightly from \$80,620, the average in Q1 2016.

Advertised Salaries Quarter 2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2015

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
17-2141	Mechanical Engineers	\$29.71	\$36.70	\$44.39	\$53.14	\$59.51
17-2071	Electrical Engineers	\$28.62	\$34.37	\$41.93	\$49.17	\$57.20
27-1021	Commercial and Industrial Designers	\$25.92	\$32.08	\$38.07	\$44.01	\$49.28
17-2199	Engineers, All Other	\$24.12	\$35.91	\$45.03	\$55.10	\$66.56
17-2112	Industrial Engineers	\$27.77	\$33.54	\$40.47	\$47.49	\$55.75
17-2199	Validation Engineers	\$24.12	\$35.91	\$45.03	\$55.10	\$66.56
17-2199	Manufacturing Engineers	\$24.12	\$35.91	\$45.03	\$55.10	\$66.56
17-2051	Civil Engineers	\$23.15	\$27.80	\$33.73	\$39.42	\$46.77
17-2041	Chemical Engineers	\$27.64	\$31.64	\$37.98	\$45.50	\$54.33
17-2131	Materials Engineers	\$25.52	\$30.93	\$38.31	\$47.85	\$58.35

Data: EMSI, BLS
Analysis: Workforce Intelligence Network

Introduction

Health Care

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

Postings Over Time

Health Care job ads dropped 8%, losing 1,569 postings between Q1 and Q2 2016. This drop comes after three consecutive quarters of growth and job ads increasing to 19,449, a historical high during Q1 2016. Posting trends remain positive with growth and general high levels remaining since late 2014.

Employment Over Time

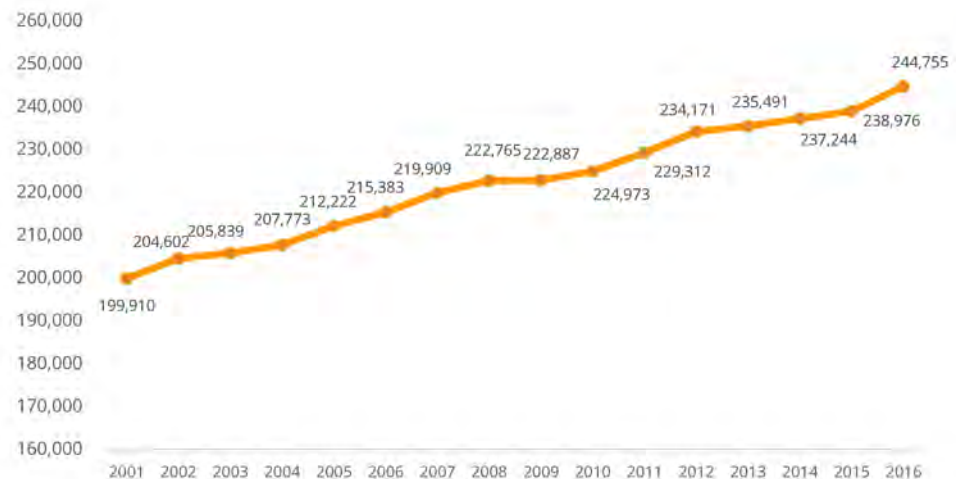
Health Care employment had proven to be one of few "recession-proof" occupation groups. Employment growth slowed modestly during the recession but no jobs were lost. Employment in Health Care jobs grew 2.42% adding 5,779 workers between 2015 and 2016. Growth is likely to continue as demand for services rises.

Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time



Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Registered nurses: most in-demand

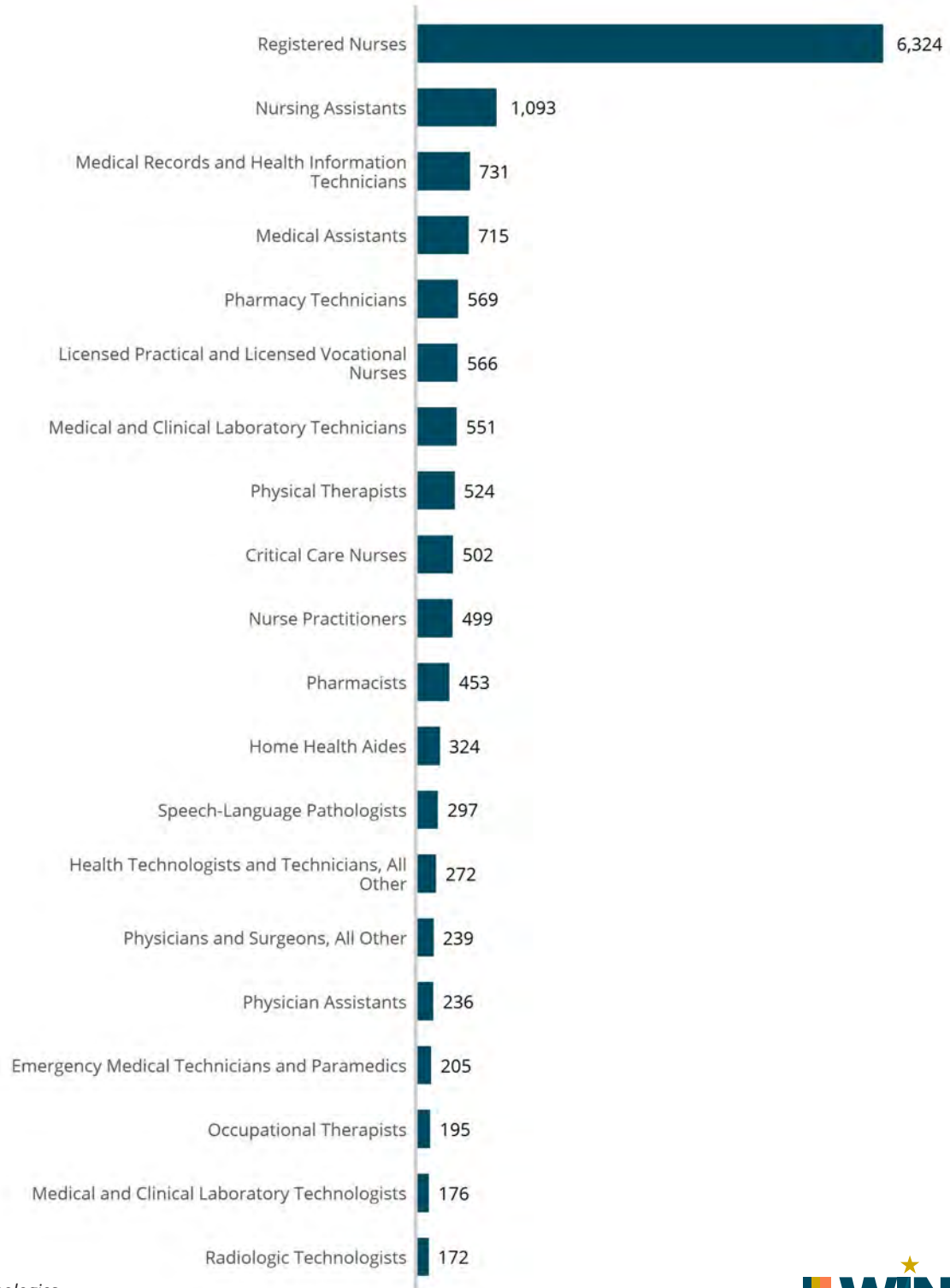


Recession-proof jobs: continuous employment growth

Health Care

Top Jobs

Quarter 2 2016





Opportunities available to all educational attainment levels

%

Many entry-level open jobs

Health Care Educational Attainment & Experience Required

Educational attainment for the Health Care group is not uniform across occupations. Health Care careers are open to individuals across the educational attainment spectrum. Of course, higher paying positions such as registered nurses, physicians, and physical therapists require more education.

Many Health Care jobs are open to those at the entry-level. The vast majority of employers that list a desired level of experience are open to hiring workers with two years or fewer years of experience.

Minimum Educational Attainment Required Q2 2016

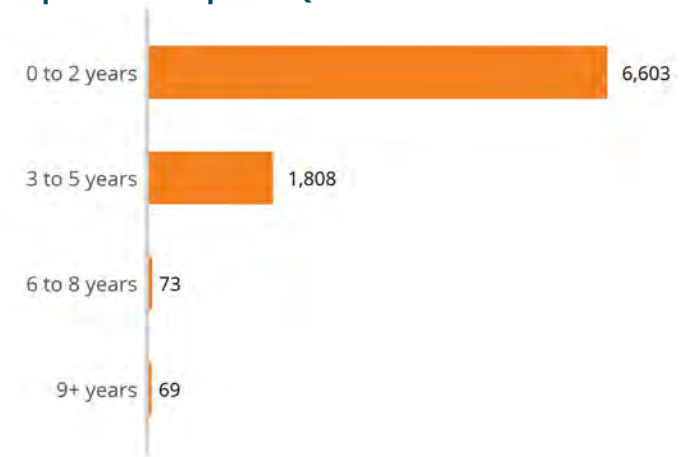


Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Areas of Study in-Demand Q2 2016

- Nursing science
- Physical therapy/therapist
- Business administration and management, general
- Occupational therapy/therapist
- Biology/biological sciences

Experience Required Q2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Patient care &
communications: most in-
demand skills

RN certification: most in-
demand

Health Care in-Demand Skills Q2 2016

The skills required of Health Care workers are focused on patient care and communication. The most in-demand technical skills outside of patient care include the ability to train patients and families about treatment. Basic skills in planning, computers, and organization are necessary.

Technical in-Demand Skills

- Patient care
- Treatment planning
- Supervisory skills, teaching
- Cardiopulmonary Resuscitation (CPR)
- Patient/Family education and instruction

Foundational In-Demand Skills

- Communications: collaboration, writing, building relationships
- Planning
- Computer skills
- Quality assurance
- Organization

Job Type

- Temporary: 7.3%
- Full-time: 48.2%
- Part-time: 6.8%

Certifications In-Demand

- Registered nurse
- First aid CPR AED
- Basic cardiac life support certification
- American heart association certificate
- Certified nursing assistant



\$60,094: average advertised wage in Q1 2016 postings

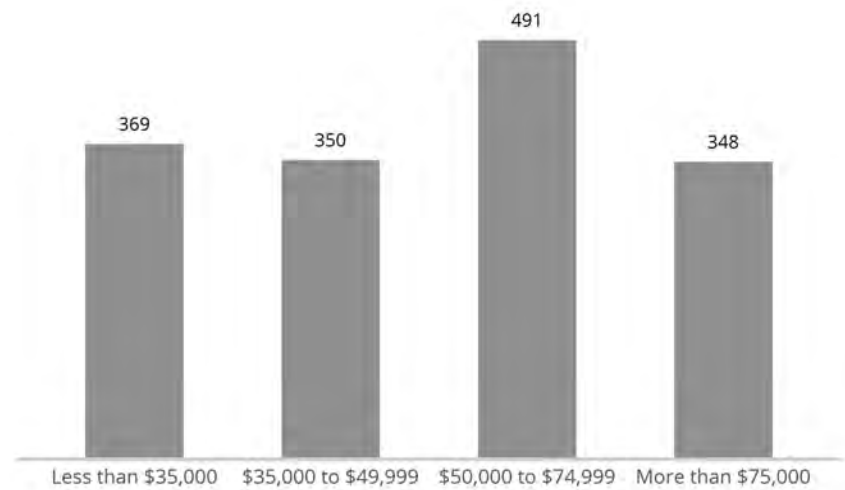


Wages and education follow an increasing trend

Health Care Wages

Like educational attainment, salaries offered to Health Care workers vary. Higher wages are often available to worker with more education. Demand is fairly equivalent across the spectrum as are wages. The average salary advertised in Health Care postings during Q2 2016 was \$60,094, down slightly from \$61,612 during Q1 2016.

Advertised Salaries Quarter 2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2015

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
29-1141	Registered Nurses	\$25.01	\$28.52	\$32.88	\$37.34	\$46.95
31-1014	Nursing Assistants	\$10.16	\$11.73	\$13.47	\$15.35	\$17.39
29-2071	Medical Records and Health Information Technicians	\$11.70	\$14.01	\$17.78	\$21.89	\$25.65
31-9092	Medical Assistants	\$10.53	\$12.07	\$13.83	\$16.16	\$18.59
29-2052	Pharmacy Technicians	\$9.26	\$11.38	\$14.08	\$16.71	\$19.00
29-2061	Licensed Practical and Licensed Vocational Nurses	\$17.66	\$19.98	\$22.80	\$25.84	\$28.22
29-2012	Medical and Clinical Laboratory Technicians	\$11.23	\$12.89	\$15.75	\$20.28	\$27.61
29-1123	Physical Therapists	\$27.22	\$33.08	\$39.56	\$47.90	\$63.98
29-1141	Critical Care Nurses	\$25.01	\$28.52	\$32.88	\$37.34	\$46.95
29-1171	Nurse Practitioners	\$33.37	\$39.27	\$44.58	\$51.92	\$58.85

Data: EMSI, BLS
Analysis: Workforce Intelligence Network

Information Technology (IT)

Introduction

Information Technology (IT)

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 group does not currently meet the employment levels of the others, it is quickly growing.

Postings Over Time

Unlike overall job ads in the region during Q2 2016 postings for IT workers increased between Q1 and Q2 2016. Postings for IT workers grew 4% increasing by 640 to 17,335, the second highest level in posting recording history. IT demand remains strong in the region.

Employment Over Time

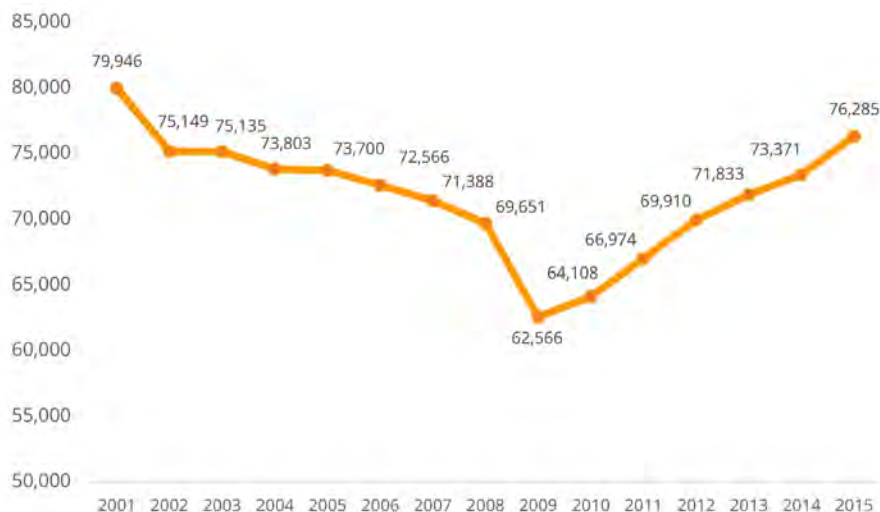
IT employment has increased nearly 26% with 16,231 jobs recovered between 2009 and 2016. Employment is growing rapidly and nearing the 2001 pre-recession high. An additional 1,150 workers in IT jobs in the region will push employment above pre-recession peak levels.

Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time



Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Software development: most
in-demand

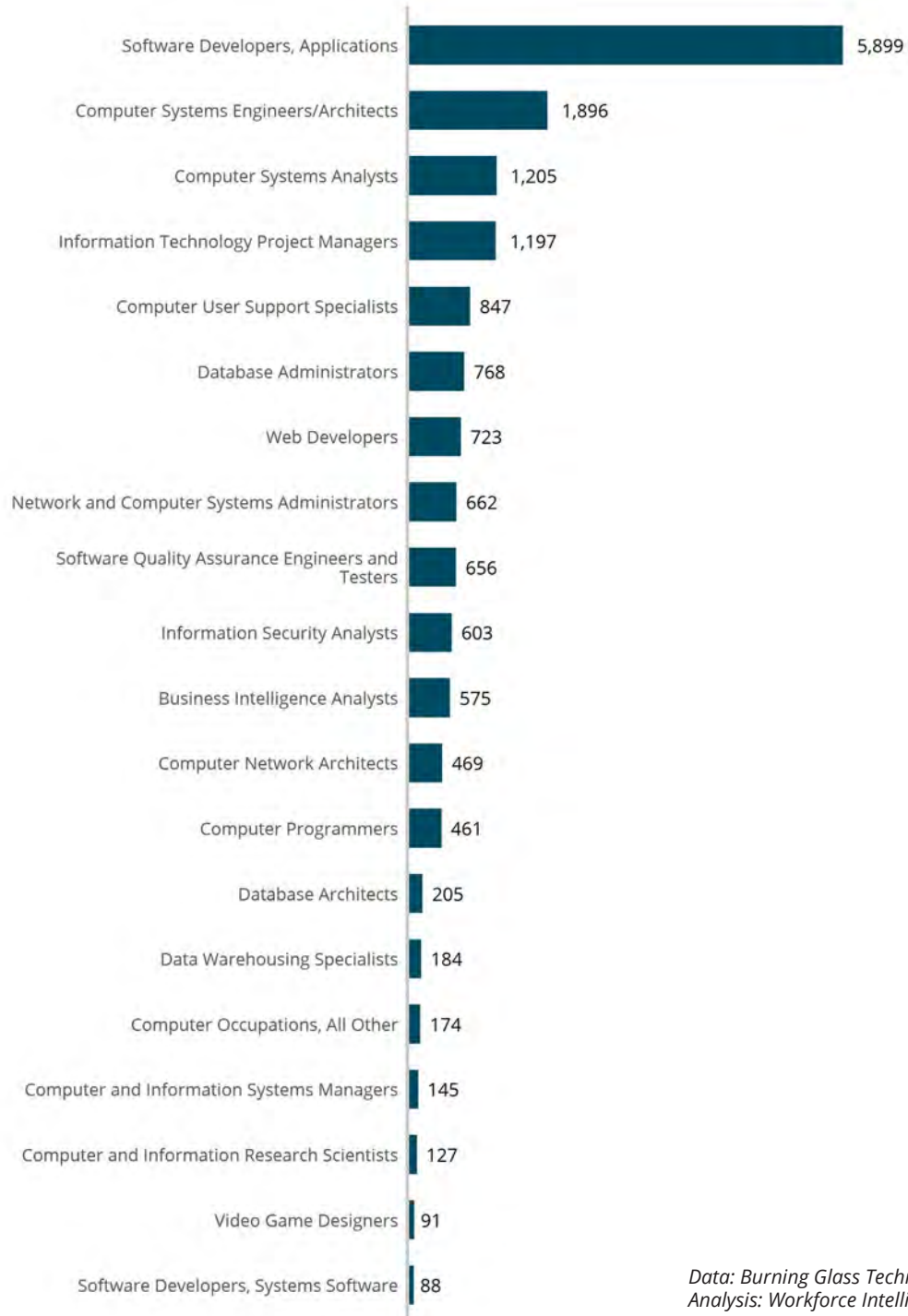


Consistent employment
growth: jobs to soon reach
pre-recession levels

Information Technology (IT)

Top Jobs

Quarter 2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Bachelor's degree required



3 to 5 years of experience:
most in-demand

Information Technology (IT) Educational Attainment & Experience Required

Of the employers that posted required educational attainment for IT jobs, a strong majority require workers to have a Bachelor's degree. Some IT positions can be obtained with shorter term training.

Many employers want IT workers with three to five years of experience. Jobs are available at the entry-level but with the rapid pace of technology change and adaption employers are seeking experienced talent.

Minimum Educational Attainment Required Q2 2016

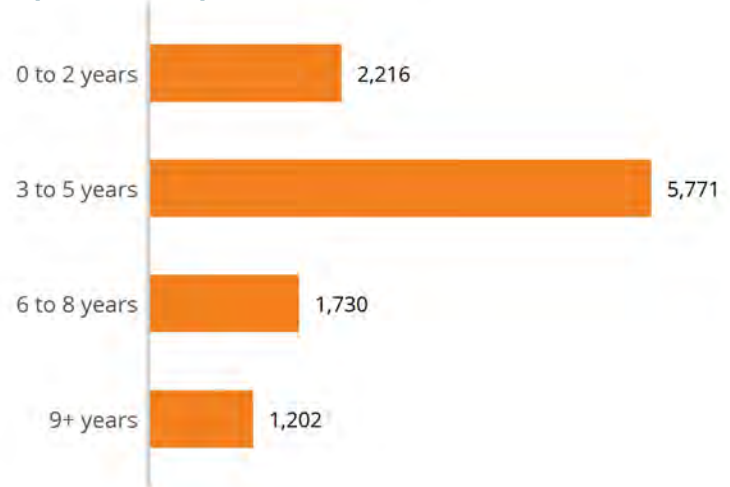


Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Areas of Study in-Demand Q2 2016

- Computer science
- Engineering, general
- Electrical and electronic engineering technologies/technicians, other
- Mechanical engineering
- Business administration and management, general

Experience Required Q2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



In-demand coding languages:
SQL, LINUX, JAVA

Project management: in-
demand certification

Information Technology (IT) in-Demand Skills Q2 2016

IT employers are seeking candidates who have a combination of highly technical skills and coding language fluency as well as foundational skills important for any job in the 21st century. Several coding languages are often listed in postings. In-demand foundational skills include communications, project management, and customer service.

Technical in-Demand Skills

- SQL
- Software development
- LINUX
- JAVA
- Oracle

Foundational In-Demand Skills

- Communications skills: writing, collaboration
- Problem solving, troubleshooting
- Project management, planning
- Microsoft Excel, Office
- Customer service

Job Type

- Temporary: 43.6
- Full-time: 33.7%
- Part-time: 0.9%

Certifications In-Demand

- Project management certification (e.g. PMP)
- Certified information systems security professional (CISSP)
- American board for engineering and technology (ABET) accredited
- Security clearance
- Cisco certified network professional (CCNP)



\$86,462: average advertised salary during Q1 2016

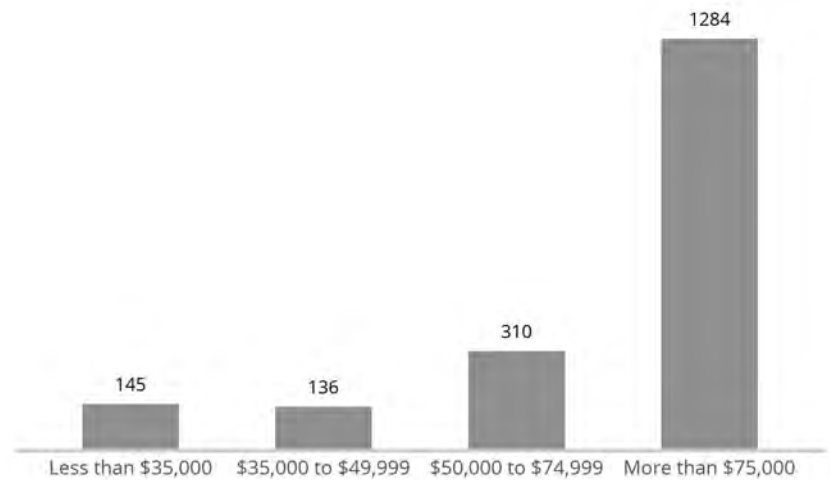


Software development jobs have the strongest wage growth

Information Technology (IT) Wages

Wages for IT workers are high and growing. With such high demand, employers are increasing wages to attract workers to the field. Of the postings that list wages, most offer workers over \$75,000 per year. The average salary offered in job postings during Q2 2016 was \$86,462 slightly higher than the average in Q1 2016, \$85,457.

Advertised Salaries Quarter 2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2015

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
15-1132	Software Developers, Applications	\$25.13	\$31.37	\$39.46	\$49.62	\$59.11
15-1199	Computer Systems Engineers/Architects	\$23.30	\$30.60	\$38.96	\$49.35	\$57.64
15-1121	Computer Systems Analysts	\$25.15	\$32.13	\$40.07	\$49.50	\$58.95
15-1199	Information Technology Project Managers	\$23.30	\$30.60	\$38.96	\$49.35	\$57.64
15-1151	Computer User Support Specialists	\$12.23	\$15.79	\$21.41	\$28.91	\$36.83
15-1141	Database Administrators	\$23.68	\$31.25	\$40.92	\$49.92	\$58.00
15-1134	Web Developers	\$18.26	\$22.41	\$29.30	\$37.46	\$45.63
15-1142	Network and Computer Systems Administrators	\$21.49	\$27.15	\$35.54	\$43.29	\$51.36
15-1199	Software Quality Assurance Engineers and Testers	\$23.30	\$30.60	\$38.96	\$49.35	\$57.64
15-1122	Information Security Analysts	\$23.99	\$28.40	\$39.21	\$48.71	\$57.13

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Skilled Trades & Technicians (Manufacturing Focused)

Introduction

Skilled Trades & 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.

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

Postings Over Time

Skilled Trade job ads dropped 12% between Q1 and Q2 2016 falling by 587 postings. This drop is approximately half of the increase experienced between Q4 2015 and Q1 2016. While postings have fallen, the general trend in demand for Skilled Trade workers is stable and strong.

Employment Over Time

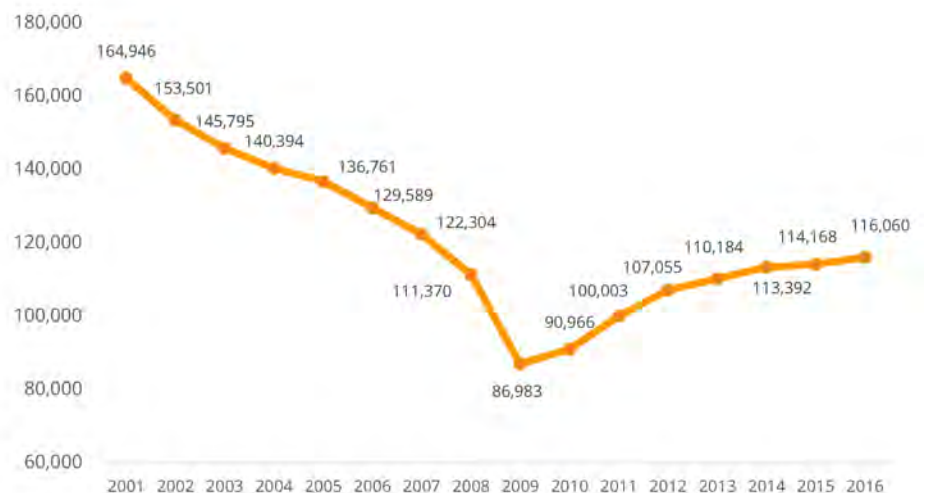
Employment in Skilled Trades and Technician occupations has increased 33.4% since 2009, the lowest employment point during the recession. Since 2009, 29,077 jobs have been recovered. Employment growth has been consistent but not rapid. Another 49,000 workers must be hired for employment to reach pre-recession peaks.

Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time



Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Production workers in-
demand

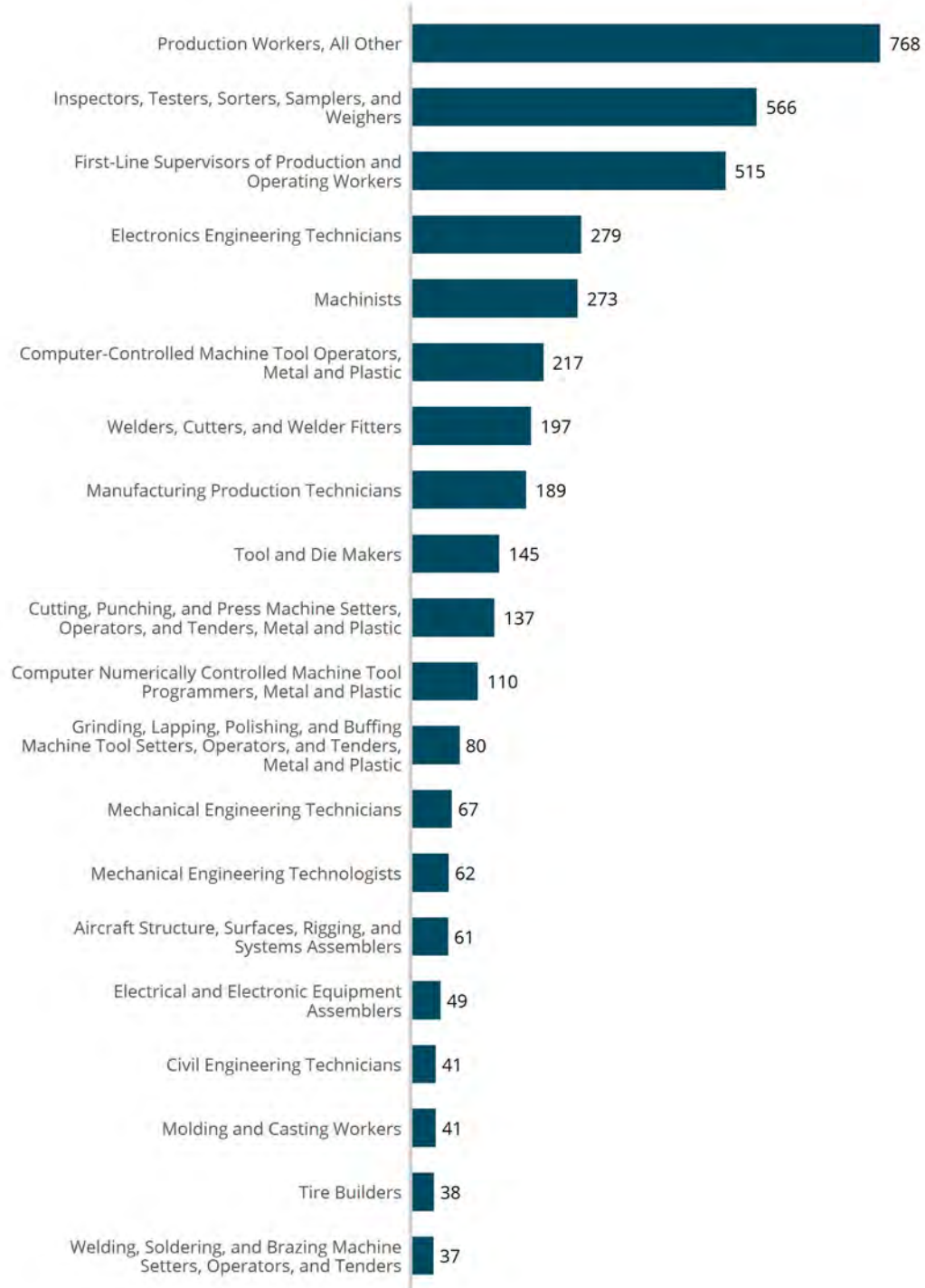


4,500+ job postings

Skilled Trades & Technicians

Top Jobs

Quarter 2 2016





Technical training required

Skilled Trades & Technicians Educational Attainment & Experience Required

Most positions in the Skilled Trades and Technicians occupation group require specialized training. While employers do not always require a degree, a certificate, registered apprenticeship, or other specialized training is required for employment.

Jobs are open to those with little experience. Employers are interested in hiring entry-level workers and experienced workers with three to five years of experience.

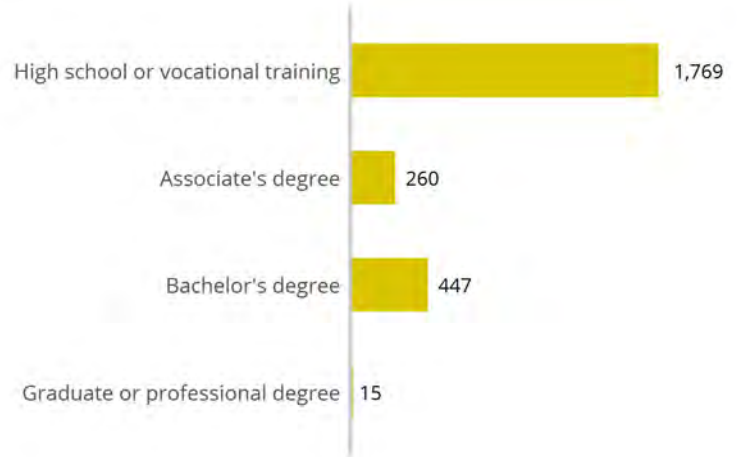
Areas of Study in-Demand Q2 2016

- Engineering, general
- Mechanical engineering
- Business administration and management, general
- Electrical and electronic engineering technologies/technicians, other
- Automotive engineering technology/technician

%

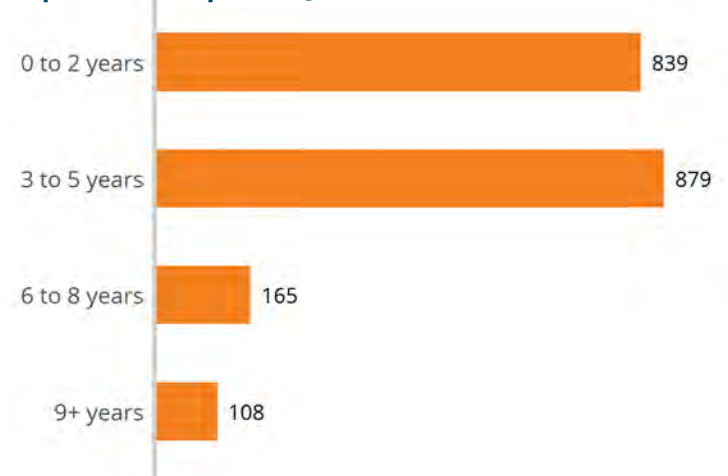
Entry-level opportunities available

Minimum Educational Attainment Required Q2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required Q2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



In-demand technical skill: CNC machining

56.1%+

More than half of jobs are full-time

Skilled Trades & Technicians in-Demand Skills Q2 2016

Workers in Skilled Trade and Technician positions must have a combination of technical and foundational skills. Employers during Q2 2016 were most in-demand of CNC machining, repair, and welding skills along with inspection. Mathematics skills are also sought after. Foundational skills that are important to employers include communication, organizations, attention to detail, and problem solving. These jobs also have a degree of physical demand.

Technical in-Demand Skills

- Inspection
- Computer Numerical Control (CNC)
- Repair
- Mathematics
- Welding

Foundational In-Demand Skills

- Communications skills
- Problem solving, troubleshooting
- Physical demand
- Organizational skills
- Detail-oriented

Job Type

- Temporary: 8.5%
- Full-time: 56.1%
- Part-time: 1.9%

Certifications In-Demand

- Commercial driver's license (CDL)
- Forklift operator certification
- American society for quality (ASQ) certification
- Security clearance
- Boiler operator license



\$36,593: average advertized wage

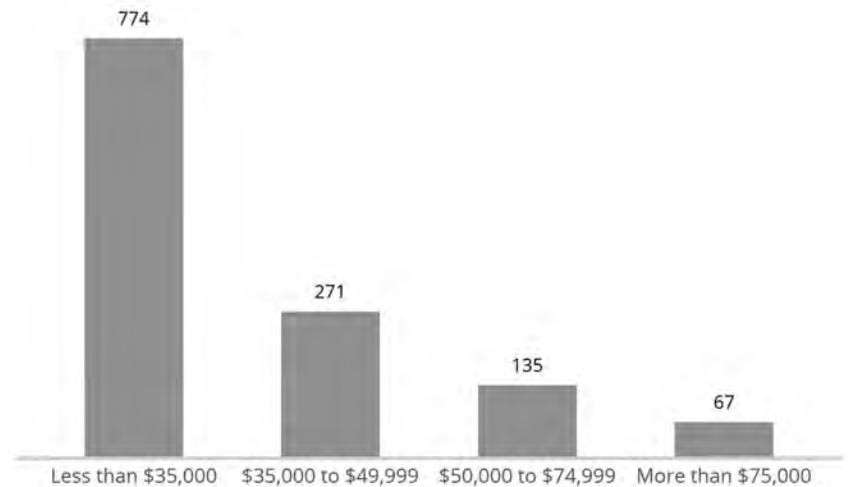


Most wage growth potential in management positions

Skilled Trades & Technicians Wages

Most employers do not post wages or salaries in job postings for Skilled Trade and Technician workers. Of those that do, many are below \$35,000. There is wage growth opportunity in many occupations in this group, especially for those working as production technicians and supervisors. The average wage posted during Q2 2016 was \$36,593.

Advertised Salaries Quarter 2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2015

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
51-9199	Production Workers, All Other	\$10.21	\$13.16	\$16.12	\$19.27	\$24.02
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	\$9.57	\$11.60	\$15.66	\$22.71	\$28.52
51-1011	First-Line Supervisors of Production and Operating Workers	\$17.30	\$22.00	\$29.37	\$38.40	\$46.29
17-3023	Electronics Engineering Technicians	\$15.36	\$19.52	\$24.83	\$31.34	\$36.25
51-4041	Machinists	\$12.08	\$15.37	\$19.57	\$25.29	\$30.40
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	\$10.62	\$12.77	\$17.85	\$21.97	\$27.34
51-4121	Welders, Cutters, and Welder Fitters	\$12.30	\$14.76	\$17.69	\$22.44	\$28.18
17-3029	Manufacturing Production Technicians	\$16.09	\$21.56	\$29.59	\$36.19	\$45.70
51-4111	Tool and Die Makers	\$16.67	\$20.89	\$26.80	\$32.55	\$35.51
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	\$10.16	\$12.14	\$15.99	\$22.44	\$27.92

Data: EMSI, BLS
Analysis: Workforce Intelligence Network

Transportation, Distribution, and Logistics (TDL)

Introduction

Transportation, Distribution, and Logistics (TDL)

Transportation, distribution, and logistics (TDL) workers help move materials in an efficient manner whether it is from one company to another or directly to a consumer. Logistics workers range from materials movers to logistics analysts, coordinating and analyzing material and goods movement.

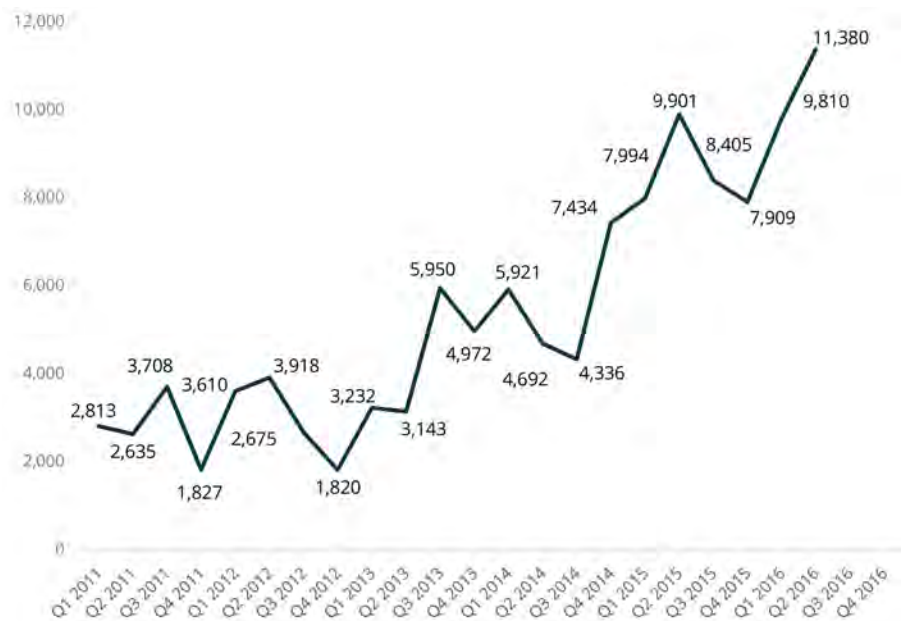
Postings Over Time

Demand for TDL workers, specifically truck drivers, has made TDL the fastest growing occupation group in terms of employer demand, in the region. Between Q1 and Q2 2016 postings for TDL workers increased 16% adding 1,570 postings. Job ads have reached yet another record high with 11,380 job ads in the region during Q2 2016. This recent growth is part of a long running trend of increasing demand for TDL workers, primarily truck drivers.

Employment Over Time

Employment in TDL jobs has grown 15% since 2009 with 33,846 jobs recovered from the recession drop. While growth is positive, it is not swift and jobs have been added rapidly enough to fill employer needs. An additional 37,865 workers need to be hired for job levels to reach pre-recession peak levels.

Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time



Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Most in-demand job: heavy
and tractor trailer truck drivers

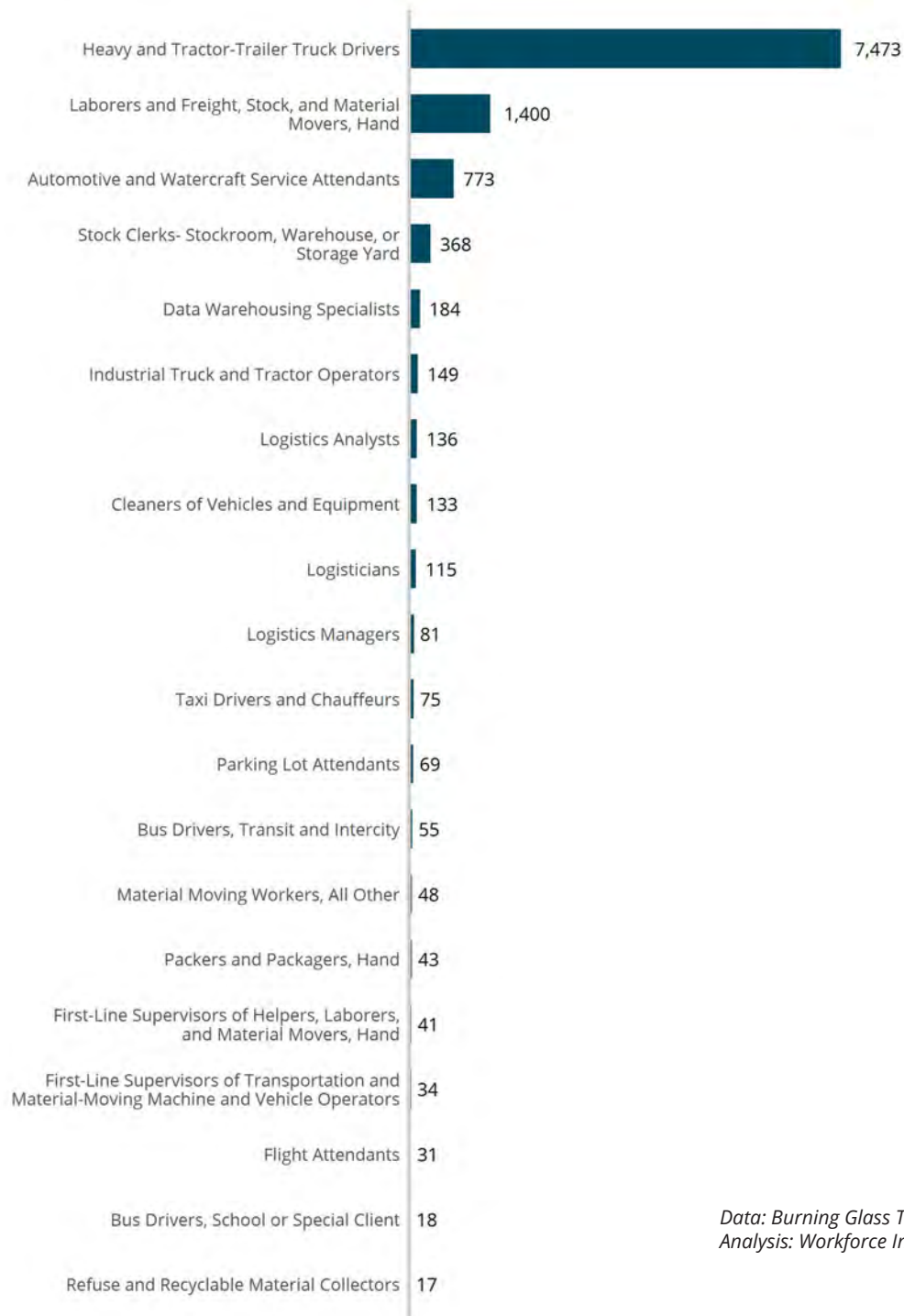


Continuous strong posting
growth

Transportation, Distribution, and Logistics (TDL)

Top Jobs

Quarter 2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Specialized training for drivers required

%

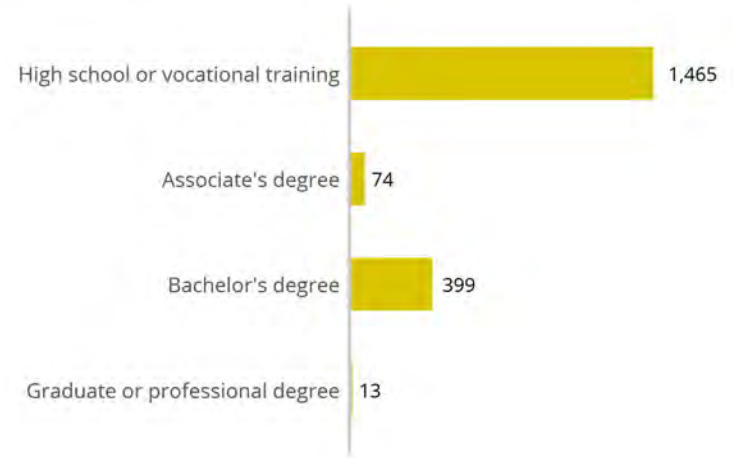
Bachelor's degree necessary for logistics jobs

Transportation, Distribution, and Logistics (TDL) Educational Attainment & Experience Required

Many TDL jobs require specialized training and certifications for employment. Jobs in management and logistics analytics often require a Bachelor's degree.

TDL employers have many open positions at the entry-level.

Minimum Educational Attainment Required Q2 2016

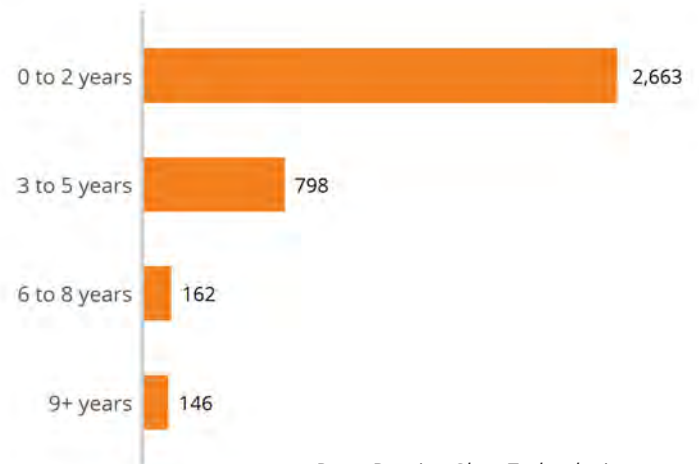


Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Areas of Study in-Demand Q2 2016

- Business administration and management, general
- Computer science
- Engineering, general
- Logistics, materials, and supply chain management
- Mechanical engineering

Experience Required Q2 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



CDL required for drivers

%

Logistics jobs require mathematics and computer skills

Transportation, Distribution, and Logistics (TDL) in-Demand Skills Q2 2016

TDL workers require a range of skills for employment. Truck drivers must be able to perform repair and maintenance of their vehicles. Driving also requires a degree of physical demand. Jobs in logistics require strong mathematics and computer skills.

Technical in-Demand Skills

- Repair, inspection
- Forklift Operation
- Auto Repair
- Logistics
- Inventory Control

Foundational In-Demand Skills

- Physical demand
- Communications skills: writing
- Detail-oriented, organization
- Computer skills: Microsoft Excel, Office
- Mathematics

Job Type

- Temporary: 6.3%
- Full-time: 24.3%
- Part-time: 2.8%

Certifications In-Demand

- Commercial driver's license (CDL)
- Automotive service excellence (ASE) certification
- Forklift operator certification
- Security clearance
- Road test



\$65,239; average advertised wage during Q2 2016



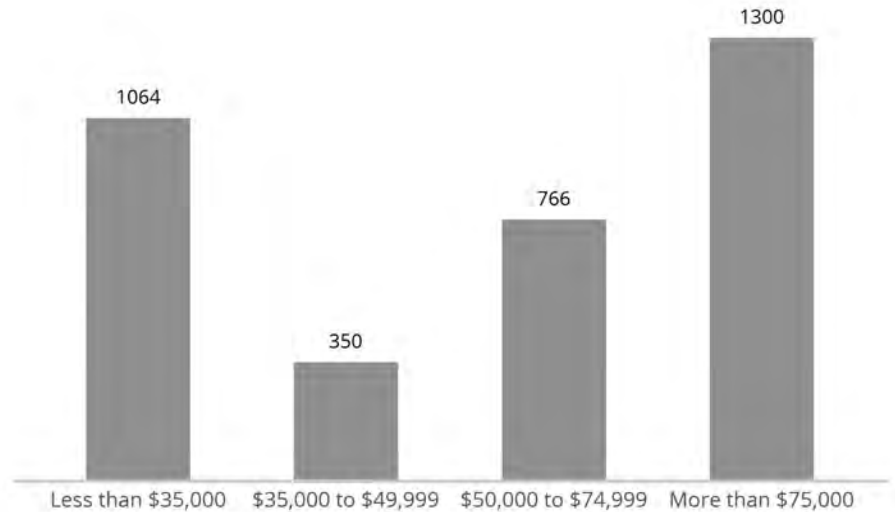
Strong wage growth for truck drivers

Transportation, Distribution, and Logistics (TDL)

Advertised Salaries Quarter 2 2016

Wages

Wages for TDL workers vary depending on the jobs. Most jobs offer wages above \$75,000 or below \$35,000 with little in between. Higher paying positions are often those in logistics or truck driving which are in high demand and require training and/or higher education. Lower wage jobs include those in materials movement. The average wage in postings during Q2 2016 was \$65,239, down from the Q1 2016 average of \$71,685. The drop is likely due to more postings for lower wage jobs including a wage in the job ad. Over 1,000 positions posted offer wages over \$75,000.



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2015

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
53-3032	Heavy and Tractor-Trailer Truck Drivers	\$12.53	\$15.59	\$19.06	\$23.92	\$29.23
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	\$8.94	\$10.39	\$12.90	\$16.29	\$20.39
53-6031	Automotive and Watercraft Service Attendants	\$8.19	\$8.80	\$9.84	\$11.68	\$13.74
43-5081	Stock Clerks- Stockroom, Warehouse, or Storage Yard	\$8.29	\$9.11	\$11.00	\$14.40	\$18.58
15-1199	Data Warehousing Specialists	\$23.30	\$30.60	\$38.96	\$49.35	\$57.64
53-7051	Industrial Truck and Tractor Operators	\$9.94	\$12.22	\$15.80	\$21.01	\$24.94
13-1081	Logistics Analysts	\$24.70	\$31.09	\$39.75	\$47.19	\$54.63
53-7061	Cleaners of Vehicles and Equipment	\$8.17	\$8.69	\$9.58	\$11.55	\$15.25
13-1081	Logisticians	\$24.70	\$31.09	\$39.75	\$47.19	\$54.63
11-3071	Logistics Managers	\$28.19	\$35.42	\$46.16	\$58.87	\$72.37

Data: EMSI, BLS
Analysis: Workforce Intelligence Network

Annual Labor Market Data

	2010 Annual	2011 Annual	2012 Annual	2013 Annual	2014 Annual	2015 Annual	2016 to- date (through May 2016)	Change from 2015	Percent Change from 2015
Labor Force	2,748,569	2,674,603	2,670,319	2,699,858	2,698,088	2,684,188	2,730,740	46,552	1.7%
Employment	2,380,682	2,382,010	2,413,125	2,446,491	2,486,445	2,526,698	2,594,542	67,844	2.7%
Unemployment	367,888	292,593	257,194	253,368	211,643	157,490	136,198	-21,292	-13.5%
Unemployment Rate	13.4%	10.9%	9.6%	9.4%	7.8%	5.9%	5.0%	-0.9%	na

**Note: Monthly data averaged by year*

Data: Bureau of Labor Statistics

Quarterly Labor Market Data

	2nd Quarter 2015	3rd Quarter 2015	4th Quarter 2015	1st Quarter 2016	2nd Quarter 2016 (through May 2016)	Change from 1st Quarter 2016	Percent Change from 1st Quarter 2016
Labor Force	2,688,149	2,695,813	2,688,123	2,724,484	2,740,124	15,640	0.6%
Employment	2,527,654	2,532,827	2,552,065	2,580,366	2,615,805	35,439	1.4%
Unemployment	160,495	162,986	136,058	144,118	124,319	-19,799	-13.7%
Unemployment Rate	6.0%	6.0%	5.1%	5.3%	4.5%	-0.8%	na

**Note: Monthly data averaged by quarter*

Data: Bureau of Labor Statistics











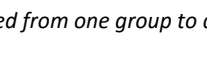

Monthly Labor Market Data

	March 2015	April 2015	May 2015	June 2015	July 2015	August 2015	Septembe r 2015	October 2015	November 2015	December 2015	January 2016	February 2016	March 2016	April 2016	May 2016
Labor Force	2,662,607	2,648,996	2,707,271	2,708,180	2,717,572	2,698,715	2,671,153	2,694,917	2,680,443	2,689,010	2,700,085	2,724,556	2,748,811	2,748,811	2,748,811
Employment	2,501,267	2,509,465	2,535,554	2,537,942	2,526,875	2,539,514	2,532,093	2,546,077	2,554,340	2,555,778	2,554,618	2,583,676	2,602,804	2,602,804	2,602,804
Unemployment	161,340	139,531	171,717	170,238	190,697	159,201	139,060	148,840	126,103	133,232	145,467	140,880	146,007	146,007	146,007
Unemployment Rate	6.1%	5.3%	6.3%	6.3%	7.0%	5.9%	5.2%	5.5%	4.7%	5.0%	5.4%	5.2%	5.3%	5.3%	5.3%

** Note: Data shown for 15 most recently available months*


















Data: Bureau of Labor Statistics

Job Posting Data by Occupation Group* Over Time


















	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Change Over Time	Annual Change Q2 2015-Q2 2016	Quarter Growth Q2 2016-Q2 2015
Total Postings	129,794	140,225	126,959	143,199	139,765		7.7%	-2.4%
Agriculture	1,644	1,578	1,426	1,980	1,835		11.6%	-7.3%
Business & finance	9,437	10,547	8,884	9,628	9,011		-4.5%	-6.4%
Construction	1,096	1,183	917	1,238	1,281		16.9%	3.5%
Customer service	25,802	30,285	27,235	37,788	30,303		17.4%	-19.8%
Education	2,227	2,584	2,219	2,110	2,114		-5.1%	0.2%
Energy	224	264	211	268	272		21.4%	1.5%
Engineers & designers	9,753	10,433	9,675	9,534	9,454		-3.1%	-0.8%
Health care	17,394	17,110	17,666	19,449	17,880		2.8%	-8.1%
Information technology	16,922	19,360	16,403	16,695	17,335		2.4%	3.8%
Skilled trades & technicians	3,961	4,409	3,675	5,090	4,503		13.7%	-11.5%
Transportation, distribution, and logistics	9,901	8,405	7,909	9,810	11,380		14.9%	16.0%

**Note: Some overlap exists between groups, the occupational groups are not mutually exclusive. Thus, postings should not be added from one group to another but instead should be analyzed on their own.*













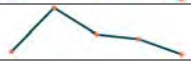




Total Job Postings: WIN Partnership

	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Share of Q2 2016 Total	Change Over Time	Annual Change Q2 2015-Q2 2016	Quarter Growth Q1 2016-Q2 2016
WIN-Region Total	129,794	140,225	126,959	143,199	139,765	100.0%		7.7%	-2.4%
Detroit	27,742	30,426	27,966	29,296	28,456	20.5%		2.6%	-2.9%
Genesee & Shiawassee	5,071	5,465	4,721	5,711	5,631	4.0%		11.0%	-1.4%
Hillsdale & Lenawee	1,495	1,467	1,580	1,678	1,606	1.2%		7.4%	-4.3%
Jackson	2,415	2,373	2,099	2,557	2,181	1.8%		-9.7%	-14.7%
Livingston	2,151	2,274	2,048	2,472	2,162	1.7%		0.5%	-12.5%
Macomb	13,586	14,136	12,658	14,754	14,257	10.3%		4.9%	-3.4%
Monroe	1,871	1,778	1,662	1,841	1,694	1.3%		-9.5%	-8.0%
Oakland	40,219	44,474	39,030	45,418	43,058	31.7%		7.1%	-5.2%
St. Clair	1,807	1,697	1,461	1,730	1,788	1.2%		-1.1%	3.4%
Thumb Area	1,208	1,199	1,561	1,673	1,598	1.2%		32.3%	-4.5%
Washtenaw	11,192	11,812	10,540	11,951	11,020	8.3%		-1.5%	-7.8%
Wayne	50,930	55,824	51,993	55,886	54,770	39.0%		7.5%	-2.0%
Outer Wayne	23,188	25,398	24,027	26,590	26,314	18.6%		13.5%	-1.0%
Prosperity Region 6	8,086	8,361	7,743	9,114	9,017	6.4%		11.5%	-1.1%
Prosperity Region 9	19,124	19,704	17,929	20,499	18,663	14.3%		-2.4%	-9.0%
Prosperity Region 10	104,735	114,434	103,681	116,058	112,085	81.0%		7.0%	-3.4%


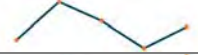















Agriculture Job Postings: WIN Partnership

	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Share of Q2 2016 Total	Change Over Time	Annual Change Q2 2015-Q2 2016	Quarter Growth Q1 2016-Q2 2016
WIN-Region Total	1,644	1,578	1,426	1,980	1,835	100.0%		11.6%	-7.3%
Detroit	353	375	316	353	384	17.8%		8.8%	8.8%
Genesee & Shiawassee	90	73	50	75	94	3.8%		4.4%	25.3%
Hillsdale & Lenawee	22	15	7	28	18	1.4%		-18.2%	-35.7%
Jackson	19	21	35	47	33	2.4%		73.7%	-29.8%
Livingston	45	34	32	28	61	1.4%		35.6%	117.9%
Macomb	148	134	119	188	187	9.5%		26.4%	-0.5%
Monroe	26	23	20	25	24	1.3%		-7.7%	-4.0%
Oakland	438	438	415	622	520	31.4%		18.7%	-16.4%
St. Clair	27	23	14	40	33	2.0%		22.2%	-17.5%
Thumb Area	24	23	15	40	28	2.0%		16.7%	-30.0%
Washtenaw	183	186	163	223	197	11.3%		7.7%	-11.7%
Wayne	622	608	556	664	640	33.5%		2.9%	-3.6%
Outer Wayne	269	233	240	311	256	15.7%		-4.8%	-17.7%
Prosperity Region 6	141	119	79	155	155	7.8%		9.9%	0.0%
Prosperity Region 9	295	279	257	351	333	17.7%		12.9%	-5.1%
Prosperity Region 10	1,208	1,180	1,090	1,474	1,347	74.4%		11.5%	-8.6%


















Business and Finance Job Postings: WIN Partnership

	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Share of Q2 2016 Total	Change Over Time	Annual Change Q2 2015-Q2 2016	Quarter Growth Q1 2016-Q2 2016
WIN-Region Total	9,437	10,547	8,884	9,628	9,011	100.0%		-4.5%	-6.4%
Detroit	2,449	2,843	2,271	2,393	2,300	24.9%		-6.1%	-3.9%
Genesee & Shiawassee	193	228	217	242	185	2.5%		-4.1%	-23.6%
Hillsdale & Lenawee	34	50	42	51	55	0.5%		61.8%	7.8%
Jackson	146	157	123	139	133	1.4%		-8.9%	-4.3%
Livingston	65	104	87	111	95	1.2%		46.2%	-14.4%
Macomb	664	737	616	734	587	7.6%		-11.6%	-20.0%
Monroe	119	108	133	141	112	1.5%		-5.9%	-20.6%
Oakland	3,432	3,730	3,165	3,379	3,273	35.1%		-4.6%	-3.1%
St. Clair	43	79	45	68	72	0.7%		67.4%	5.9%
Thumb Area	24	22	36	57	39	0.6%		62.5%	-31.6%
Washtenaw	781	824	592	775	684	8.0%		-12.4%	-11.7%
Wayne	3,936	4,508	3,828	3,931	3,776	40.8%		-4.1%	-3.9%
Outer Wayne	1,487	1,665	1,557	1,538	1,476	16.0%		-0.7%	-4.0%
Prosperity Region 6	260	329	298	367	296	3.8%		13.8%	-19.3%
Prosperity Region 9	1,145	1,243	977	1,217	1,079	12.6%		-5.8%	-11.3%
Prosperity Region 10	8,032	8,975	7,609	8,044	7,636	83.5%		-4.9%	-5.1%


















Construction Job Postings: WIN Partnership

	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Share of Q2 2016 Total	Change Over Time	Annual Change Q2 2015-Q2 2016	Quarter Growth Q1 2016-Q2 2016
WIN-Region Total	1,096	1,183	917	1,238	1,281	100.0%		16.9%	3.5%
Detroit	204	236	220	197	215	15.9%		5.4%	9.1%
Genesee & Shiawassee	37	81	46	64	87	5.2%		135.1%	35.9%
Hillsdale & Lenawee	21	17	20	26	13	2.1%		-38.1%	-50.0%
Jackson	29	34	23	50	29	4.0%		0.0%	-42.0%
Livingston	44	40	36	62	48	5.0%		9.1%	-22.6%
Macomb	147	162	102	151	176	12.2%		19.7%	16.6%
Monroe	14	19	14	30	31	2.4%		121.4%	3.3%
Oakland	331	310	228	298	329	24.1%		-0.6%	10.4%
St. Clair	22	12	4	8	16	0.6%		-27.3%	100.0%
Thumb Area	78	109	72	104	33	8.4%		-57.7%	-68.3%
Washtenaw	80	111	80	146	132	11.8%		65.0%	-9.6%
Wayne	352	381	342	371	387	30.0%		9.9%	4.3%
Outer Wayne	148	145	122	174	172	14.1%		16.2%	-1.1%
Prosperity Region 6	137	202	122	176	136	14.2%		-0.7%	-22.7%
Prosperity Region 9	188	221	173	314	253	25.4%		34.6%	-19.4%
Prosperity Region 10	830	853	672	820	892	66.2%		7.5%	8.8%














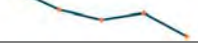



Customer Service Job Postings: WIN Partnership

	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Share of Q2 2016 Total	Change Over Time	Annual Change Q2 2015-Q2 2016	Quarter Growth Q1 2016-Q2 2016
WIN-Region Total	25,802	30,285	27,235	37,788	30,303	100.0%		17.4%	-19.8%
Detroit	4,485	4,919	4,857	5,283	5,240	14.0%		16.8%	-0.8%
Genesee & Shiawassee	1,206	1,570	1,170	1,458	1,417	3.9%		17.5%	-2.8%
Hillsdale & Lenawee	288	372	332	363	339	1.0%		17.7%	-6.6%
Jackson	470	534	451	492	465	1.3%		-1.1%	-5.5%
Livingston	591	699	660	669	665	1.8%		12.5%	-0.6%
Macomb	2,609	3,171	2,826	3,406	3,260	9.0%		25.0%	-4.3%
Monroe	407	425	355	403	414	1.1%		1.7%	2.7%
Oakland	8,277	9,717	8,642	10,030	9,403	26.5%		13.6%	-6.3%
St. Clair	474	543	386	429	405	1.1%		-14.6%	-5.6%
Thumb Area	239	339	239	278	323	0.7%		35.1%	16.2%
Washtenaw	2,101	2,361	2,057	2,577	2,255	6.8%		7.3%	-12.5%
Wayne	9,140	10,554	10,117	11,648	11,357	30.8%		24.3%	-2.5%
Outer Wayne	4,655	5,635	5,260	6,365	6,117	16.8%		31.4%	-3.9%
Prosperity Region 6	1,919	2,452	1,795	2,165	2,145	5.7%		11.8%	-0.9%
Prosperity Region 9	3,857	4,391	3,855	4,504	4,138	11.9%		7.3%	-8.1%
Prosperity Region 10	20,026	23,442	21,585	25,084	24,020	66.4%		19.9%	-4.2%



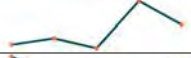







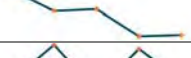






Education Job Postings: WIN Partnership

	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Share of Q2 2016 Total	Change Over Time	Annual Change Q2 2015-Q2 2016	Quarter Growth Q1 2016-Q2 2016
WIN-Region Total	2,227	2,584	2,219	2,110	2,114	100.0%		-5.1%	0.2%
Detroit	698	482	404	389	413	18.4%		-40.8%	6.2%
Genesee & Shiawassee	122	231	201	205	207	9.7%		69.7%	1.0%
Hillsdale & Lenawee	19	30	14	27	29	1.3%		52.6%	7.4%
Jackson	42	45	36	40	45	1.9%		7.1%	12.5%
Livingston	12	15	12	17	16	0.8%		33.3%	-5.9%
Macomb	1,875	196	217	182	161	8.6%		-91.4%	-11.5%
Monroe	28	53	24	16	48	0.8%		71.4%	200.0%
Oakland	528	728	566	601	543	28.5%		2.8%	-9.7%
St. Clair	22	24	15	22	13	1.0%		-40.9%	-40.9%
Thumb Area	18	36	15	41	13	1.9%		-27.8%	-68.3%
Washtenaw	327	255	259	194	259	9.2%		-20.8%	33.5%
Wayne	1,060	971	860	765	780	36.3%		-26.4%	2.0%
Outer Wayne	362	489	456	376	367	17.8%		1.4%	-2.4%
Prosperity Region 6	162	291	231	268	233	12.7%		43.8%	-13.1%
Prosperity Region 9	428	398	345	294	397	13.9%		-7.2%	35.0%
Prosperity Region 10	3,463	1,895	1,643	1,548	1,484	73.4%		-57.1%	-4.1%

Energy Job Postings: WIN Partnership

	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Share of Q2 2016 Total	Change Over Time	Annual Change Q2 2015-Q2 2016	Quarter Growth Q1 2016-Q2 2016
WIN-Region Total	224	264	211	268	272	100.0%		21.4%	1.5%
Detroit	71	157	118	108	129	40.3%		81.7%	19.4%
Genesee & Shiawassee	7	3	0	44	49	16.4%		600.0%	11.4%
Hillsdale & Lenawee	1	2	0	1	1	0.4%		0.0%	0.0%
Jackson	11	20	8	11	12	4.1%		9.1%	9.1%
Livingston	2	1	2	5	4	1.9%		100.0%	-20.0%
Macomb	12	6	10	5	17	1.9%		41.7%	240.0%
Monroe	47	19	25	45	26	16.8%		-44.7%	-42.2%
Oakland	19	5	7	8	7	3.0%		-63.2%	-12.5%
St. Clair	8	7	8	12	5	4.5%		-37.5%	-58.3%
Thumb Area	9	5	7	2	2	0.7%		-77.8%	0.0%
Washtenaw	3	5	5	4	4	1.5%		33.3%	0.0%
Wayne	101	181	139	131	145	48.9%		43.6%	10.7%
Outer Wayne	30	24	21	23	16	8.6%		-46.7%	-30.4%
Prosperity Region 6	24	15	15	58	56	21.6%		133.3%	-3.4%
Prosperity Region 9	64	47	40	66	47	24.6%		-26.6%	-28.8%
Prosperity Region 10	132	192	156	144	169	53.7%		28.0%	17.4%


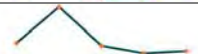





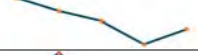









Engineers & Designers Job Postings: WIN Partnership

	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Share of Q2 2016 Total	Change Over Time	Annual Change Q2 2015-Q2 2016	Quarter Growth Q1 2016-Q2 2016
WIN-Region Total	9,753	10,433	9,675	9,534	9,454	100.0%		-3.1%	-0.8%
Detroit	1,214	1,378	1,298	1,130	1,057	11.9%		-12.9%	-6.5%
Genesee & Shiawassee	101	108	97	149	123	1.6%		21.8%	-17.4%
Hillsdale & Lenawee	51	43	30	43	49	0.5%		-3.9%	14.0%
Jackson	85	109	92	130	135	1.4%		58.8%	3.8%
Livingston	86	84	76	90	44	0.9%		-48.8%	-51.1%
Macomb	1,584	1,266	1,294	1,311	1,181	13.8%		-25.4%	-9.9%
Monroe	107	91	75	107	76	1.1%		-29.0%	-29.0%
Oakland	3,822	4,324	3,941	3,973	4,039	41.7%		5.7%	1.7%
St. Clair	63	41	50	56	59	0.6%		-6.3%	5.4%
Thumb Area	104	72	75	34	36	0.4%		-65.4%	5.9%
Washtenaw	480	516	469	512	480	5.4%		0.0%	-6.3%
Wayne	3,333	3,820	3,526	3,129	3,232	32.8%		-3.0%	3.3%
Outer Wayne	2,119	2,442	2,228	1,999	2,175	21.0%		2.6%	8.8%
Prosperity Region 6	268	221	222	239	218	2.5%		-18.7%	-8.8%
Prosperity Region 9	809	843	742	882	784	9.3%		-3.1%	-11.1%
Prosperity Region 10	8,739	9,410	8,761	8,413	8,452	88.2%		-3.3%	0.5%


















Health Care Job Postings: WIN Partnership

	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Share of Q2 2016 Total	Change Over Time	Annual Change Q2 2015-Q2 2016	Quarter Growth Q1 2016-Q2 2016
WIN-Region Total	17,394	17,110	17,666	19,449	17,880	100.0%		2.8%	-8.1%
Detroit	4,467	4,531	4,908	5,228	5,123	26.9%		14.7%	-2.0%
Genesee & Shiawassee	889	865	868	925	976	4.8%		9.8%	5.5%
Hillsdale & Lenawee	308	251	351	279	199	1.4%		-35.4%	-28.7%
Jackson	336	293	328	405	242	2.1%		-28.0%	-40.2%
Livingston	336	296	246	238	210	1.2%		-37.5%	-11.8%
Macomb	1,875	1,933	1,936	1,996	1,839	10.3%		-1.9%	-7.9%
Monroe	277	200	178	176	110	0.9%		-60.3%	-37.5%
Oakland	4,146	4,183	3,937	4,777	4,205	24.6%		1.4%	-12.0%
St. Clair	285	299	312	387	365	2.0%		28.1%	-5.7%
Thumb Area	266	198	332	413	271	2.1%		1.9%	-34.4%
Washtenaw	1,692	1,737	1,692	1,696	1,614	8.7%		-4.6%	-4.8%
Wayne	6,984	6,855	7,486	8,272	7,849	42.5%		12.4%	-5.1%
Outer Wayne	2,517	2,324	2,578	3,044	2,726	15.7%		8.3%	-10.4%
Prosperity Region 6	1,440	1,362	1,512	1,725	1,612	8.9%		11.9%	-6.6%
Prosperity Region 9	2,949	2,777	2,795	2,794	2,375	14.4%		-19.5%	-15.0%
Prosperity Region 10	13,005	12,971	13,359	15,045	13,893	77.4%		6.8%	-7.7%


















Information Technology Job Postings: WIN Partnership

	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Share of Q2 2016 Total	Change Over Time	Annual Change Q2 2015-Q2 2016	Quarter Growth Q1 2016-Q2 2016
WIN-Region Total	16,922	19,360	16,403	16,695	17,335	100.0%		2.4%	3.8%
Detroit	4,554	5,770	4,459	4,207	4,285	25.2%		-5.9%	1.9%
Genesee & Shiawassee	209	168	130	168	208	1.0%		-0.5%	23.8%
Hillsdale & Lenawee	31	43	52	40	32	0.2%		3.2%	-20.0%
Jackson	193	147	143	145	124	0.9%		-35.8%	-14.5%
Livingston	46	58	72	84	70	0.5%		52.2%	-16.7%
Macomb	1,337	1,169	1,039	1,160	1,336	6.9%		-0.1%	15.2%
Monroe	117	97	82	47	70	0.3%		-40.2%	48.9%
Oakland	6,190	6,998	5,824	6,471	6,100	38.8%		-1.5%	-5.7%
St. Clair	30	28	21	29	41	0.2%		36.7%	41.4%
Thumb Area	16	14	20	14	20	0.1%		25.0%	42.9%
Washtenaw	1,554	1,749	1,446	1,606	1,499	9.6%		-3.5%	-6.7%
Wayne	7,199	8,871	7,588	6,931	7,835	41.5%		8.8%	13.0%
Outer Wayne	2,645	3,101	3,129	2,724	3,550	16.3%		34.2%	30.3%
Prosperity Region 6	255	210	171	211	269	1.3%		5.5%	27.5%
Prosperity Region 9	1,941	2,094	1,795	1,922	1,795	11.5%		-7.5%	-6.6%
Prosperity Region 10	14,726	17,038	14,451	14,562	15,271	87.2%		3.7%	4.9%

Skilled Trade & Technician Job Postings: WIN Partnership

	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Share of Q2 2016 Total	Change Over Time	Annual Change Q2 2015-Q2 2016	Quarter Growth Q1 2016-Q2 2016
WIN-Region Total	3,961	4,409	3,675	5,090	4,503	100.0%		13.7%	-11.5%
Detroit	419	503	443	439	446	8.6%		6.4%	1.6%
Genesee & Shiawassee	118	138	155	247	167	4.9%		41.5%	-32.4%
Hillsdale & Lenawee	60	92	75	114	174	2.2%		190.0%	52.6%
Jackson	60	92	75	114	112	2.2%		86.7%	-1.8%
Livingston	137	177	137	224	143	4.4%		4.4%	-36.2%
Macomb	769	767	615	869	820	17.1%		6.6%	-5.6%
Monroe	82	91	85	101	95	2.0%		15.9%	-5.9%
Oakland	978	1,269	1,006	1,429	1,354	28.1%		38.4%	-5.2%
St. Clair	96	75	50	66	85	1.3%		-11.5%	28.8%
Thumb Area	64	82	66	129	92	2.5%		43.8%	-28.7%
Washtenaw	309	198	298	387	286	7.6%		-7.4%	-26.1%
Wayne	1,238	1,312	1,132	1,415	1,295	27.8%		4.6%	-8.5%
Outer Wayne	819	809	689	976	849	19.2%		3.7%	-13.0%
Prosperity Region 6	278	295	271	442	344	8.7%		23.7%	-22.2%
Prosperity Region 9	648	650	670	940	810	18.5%		25.0%	-13.8%
Prosperity Region 10	2,985	3,348	2,753	3,713	3,469	72.9%		16.2%	-6.6%

Transportation, Distribution, and Logistics Job Postings: WIN Partnership

	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Share of Q2 2016 Total	Change Over Time	Annual Change Q2 2015-Q2 2016	Quarter Growth Q1 2016-Q2 2016
WIN-Region Total	9,901	8,405	7,909	9,810	11,380	100.0%		14.9%	16.0%
Detroit	1,571	1,622	1,492	1,780	1,652	18.1%		5.2%	-7.2%
Genesee & Shiawassee	791	595	537	607	732	6.2%		-7.5%	20.6%
Hillsdale & Lenawee	345	234	270	290	418	3.0%		21.2%	44.1%
Jackson	432	309	275	325	340	3.3%		-21.3%	4.6%
Livingston	210	179	161	210	307	2.1%		46.2%	46.2%
Macomb	1,008	976	811	1,195	1,365	12.2%		35.4%	14.2%
Monroe	276	201	251	249	353	2.5%		27.9%	41.8%
Oakland	1,747	1,573	1,487	1,856	2,269	18.9%		29.9%	22.3%
St. Clair	238	167	158	212	305	2.2%		28.2%	43.9%
Thumb Area	181	144	199	273	385	2.8%		112.7%	41.0%
Washtenaw	691	515	477	491	646	5.0%		-6.5%	31.6%
Wayne	3,982	3,512	4,315	4,102	4,260	41.8%		7.0%	3.9%
Outer Wayne	2,411	1,890	2,823	2,322	2,608	23.7%		8.2%	12.3%
Prosperity Region 6	1,210	906	894	1,092	1,422	11.1%		17.5%	30.2%
Prosperity Region 9	1,954	1,438	1,434	1,565	2,064	16.0%		5.6%	31.9%
Prosperity Region 10	6,737	6,061	6,613	7,153	7,894	72.9%		17.2%	10.4%

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