

WIN PARTNERSHIP

WIN Quarterly Report





Introduction: County/Group Name Here

About This Report

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

This report highlights labor market information and real-time job posting data for Region # as a whole with special sections devoted to 8 occupational groups. WIN's analysis of online job postings, a proxy for employer demand, is a pioneering method for tracking the health of the labor market.

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 WIN Partnership Region

Quarter three 2016 (Q3 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 over 280,000 jobs. In Q3 2016, the total number of jobs held reached 2.62 million, a number not seen since 2007.

Between Q2 2016 and Q3 2016, employment in the region expanded 0.4%, with 9,659 additional individuals employed. The labor force expanded by 29,196 individuals (1.1%) during this timeframe. Because the labor force grew more quickly than employment, many of those who joined the labor force in Q3 2016 were unemployed.

Q3 2016 experienced a new high point for job posting rates. Job postings in Q3 2016 increased by 7% after Q2, with almost 10,000 more postings. Many occupation groups witnessed increases in job postings, Customer Service and TDL both witnessed large increases in demand.

Q3 is typically a time when employment continues an annual surge experienced between Q2 and Q4. With substantial job gains seen between Q2 and Q3, 2016 likely will be no different and is expected to follow the historic cyclical trend.



Introduction: WIN Partnership Region

Key Findings for Q3 2016

Employment reached a new high, expanding 0.4% and adding over 9,000 jobs between Q2 and Q3 2016.

With the addition of 9,000 jobs in Q3 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. (See page 4).

Unemployment increased back to 2015 numbers between Q2 and Q3 2016.

The labor force expanded more rapidly than employment during Q3 2016, 1.1% with 29,196 joining the ranks of job seekers. On one hand, this is positive for the workforce, since employment grew, but due to the small increase unemployment increased by nearly 20,000 people. (See page 4).

Online job ads increased by 7% through Q3 2016.

A majority of 16 counties witnessed increases in online job postings. The cumulative increase lead to the 7% increase in employer demand seen this quarter. (See page 4).

Postings expanded in several occupation groups along with the region wide increase in online postings.

Customer Service demand increased 12.9%, another occupation group with large increase. IT demand fell 2.1%, but remains a consistently in-demand field of occupations despite the drop. TDL demand increased 16.0%, a fourth straight quarter of demand growth. (See pages 22, 47, and 57 for more detail on customer service, IT, and TDL respectively).

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

The Q3 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 13,548 during Q3 2016, a six-fold increase since Q1 2011 when posting-data collection began. (See page 57).

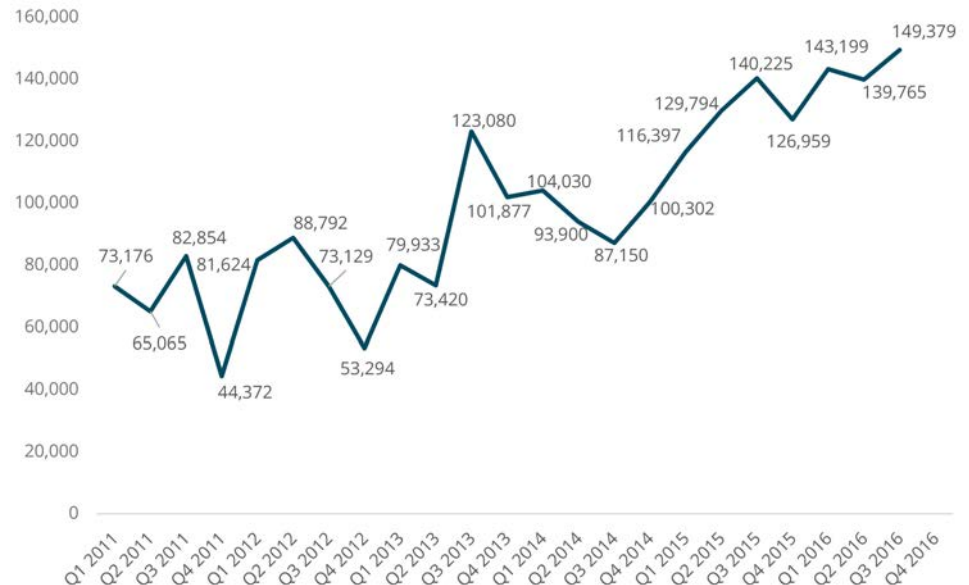


Executive Summary

Postings over time

Q3 2016 experienced a new high point for job posting rates. Job postings in Q3 2016 increased by 7% after Q2, with almost 10,000 more postings. Many occupation groups witnessed increases in job postings, Customer Service and TDL both witnessed large increases in demand.

WIN Region Online Job Postings



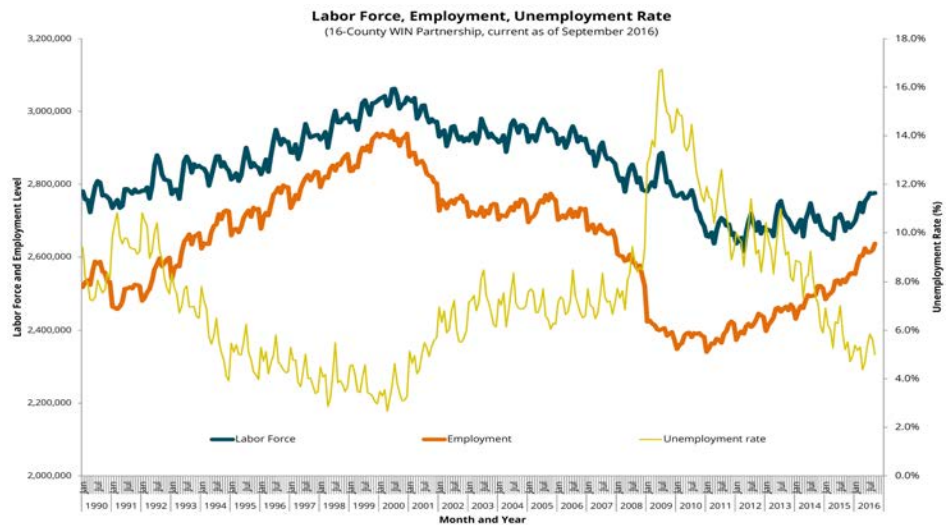
Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Labor Force, Employment, Unemployment Rate

Quarter 3 2016

Labor force/employment/unemployment

Between Q2 2016 and Q3 2016, employment in the region expanded 0.4%, with 9,659 additional individuals employed. The labor force expanded by 29,196 individuals (1.1%) during this timeframe. Because the labor force grew more quickly than employment, many of those who joined the labor force in Q3 2016 were unemployed.



Data: BLS
Analysis: Workforce Intelligence Network

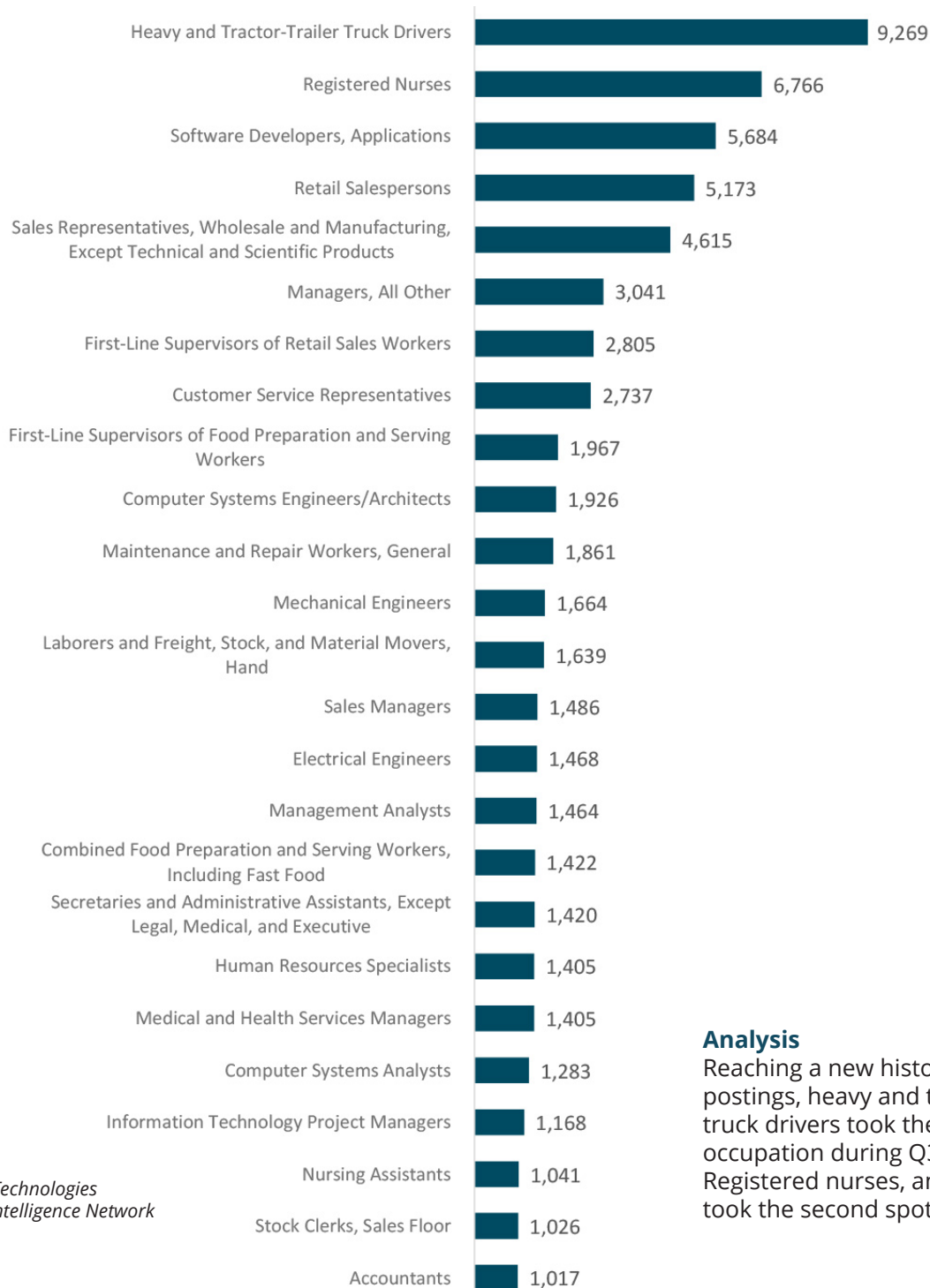


Heavy and Tractor-Trailer Truck Drivers in-demand

7%

Increase in online job postings
moving into Q3 2016

Top Jobs Quarter 3 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Analysis

Reaching a new historic high in postings, heavy and tractor-trailer truck drivers took the top in-demand occupation during Q3 2016. Registered nurses, another top job took the second spot.



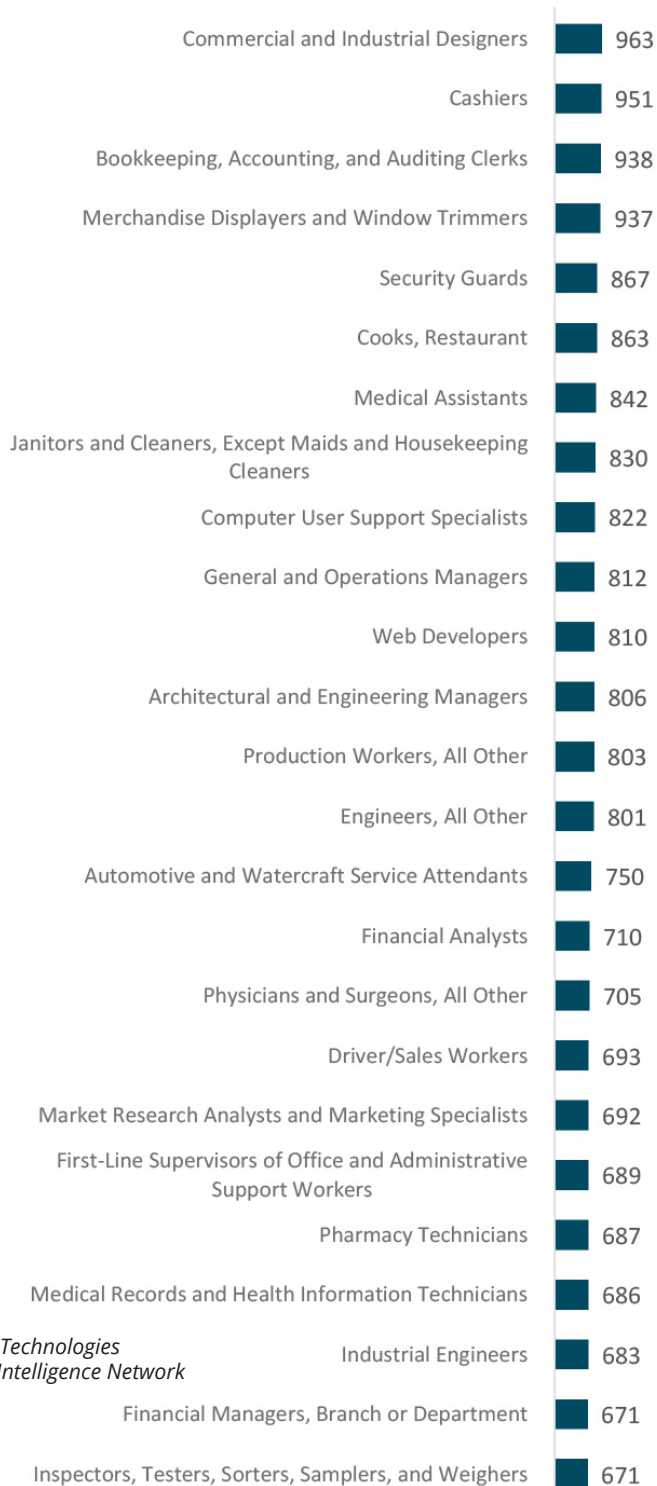
Employment increased by
9,659 workers



Unemployment at 5.5%

Top Jobs

Quarter 3 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Introduction

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.

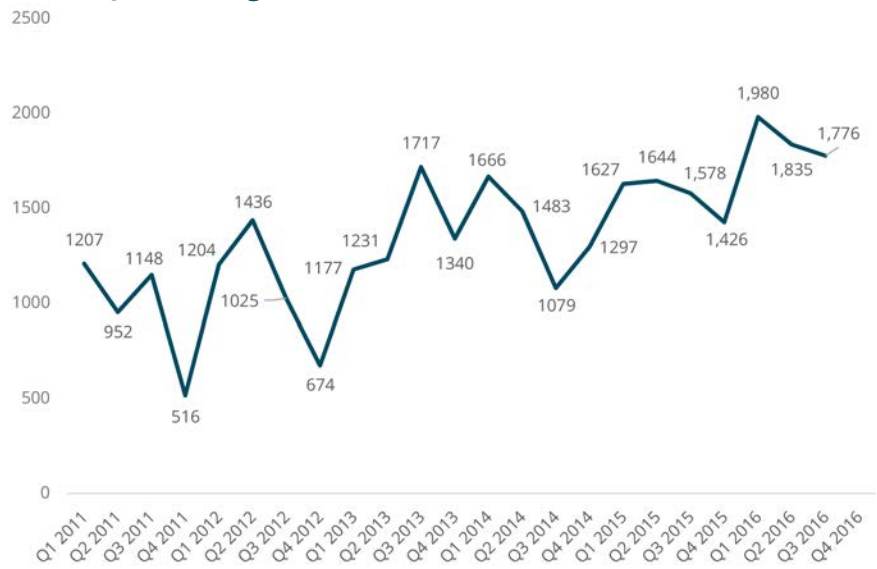
Job Posting Analysis

Job postings for Agriculture-related occupations decreased 3.5%, falling by 59 from 1,835 in Q2 2016 to 1,776 in Q3 2016. Postings remain high and are 20% above levels from Q3 2015, one year prior to this report's analysis.

Employment Analysis

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.

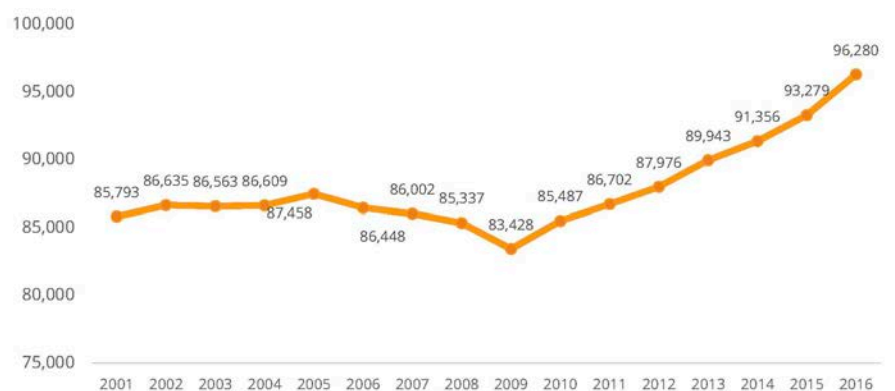
Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time

Quarter 3 2016



Data: EMSI, BLS
Analysis: Workforce Intelligence Network

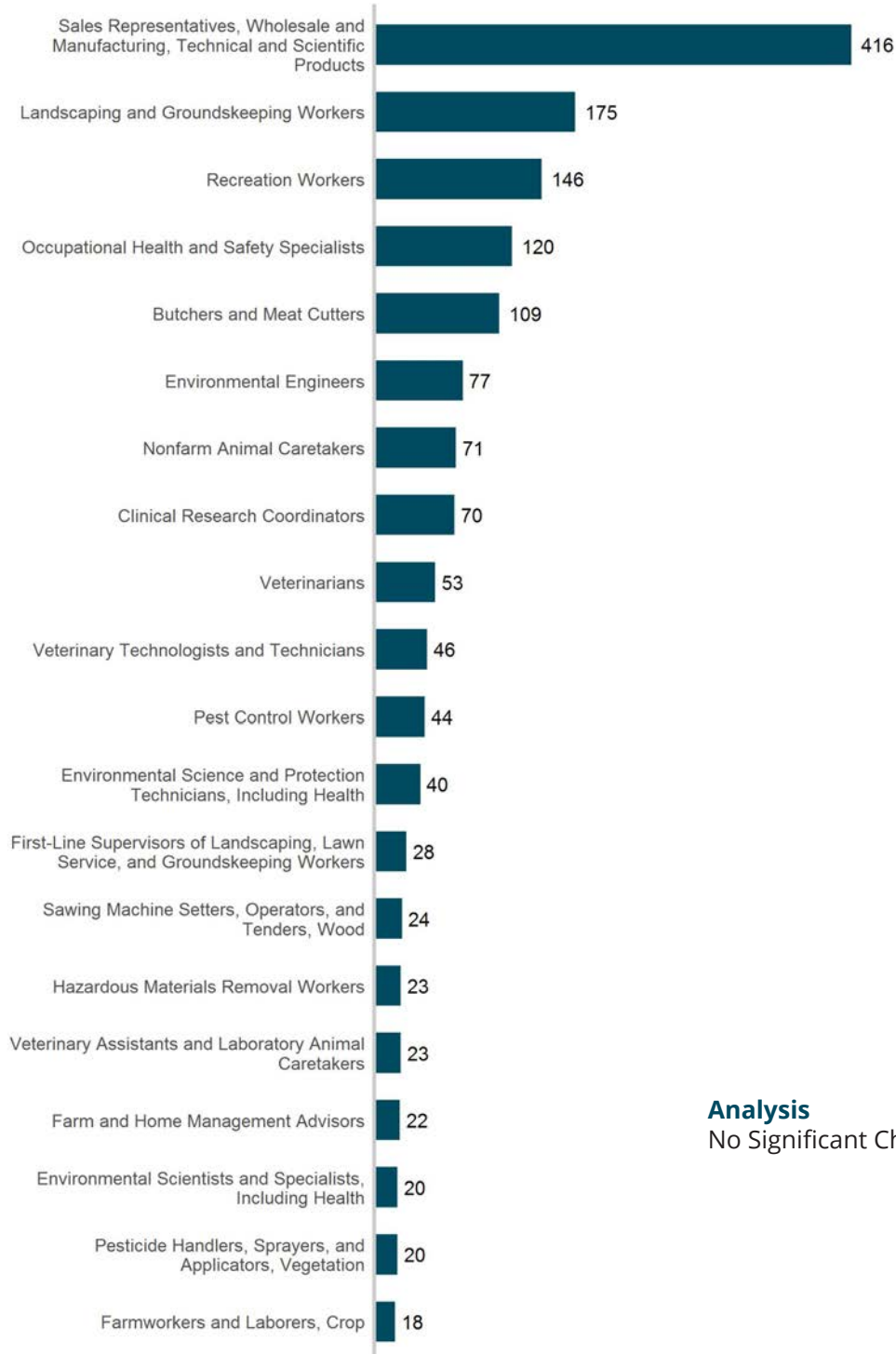


Now hiring: 1776 job postings



Most in-demand job: Landscaping and Grounds keeping Workers

**Agriculture
Top Jobs**
Quarter 3 2016



Analysis
No Significant Change



Experience required: less than 5 years

%

Education required: Bachelor's degree or Vocational training

Agriculture Educational Attainment Required

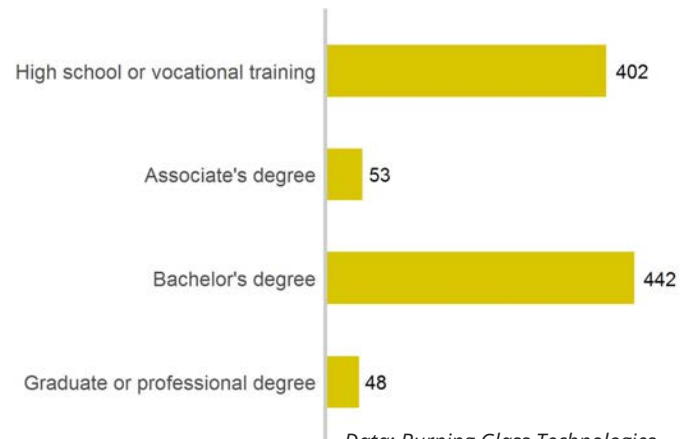
Most Agriculture jobs require vocational training or a Bachelor's degree with little in between. This is because most jobs are focused on skilled labor (vocational training) or technical sales and management (Bachelor's degree).

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

Areas of Study in-Demand Q3 2016

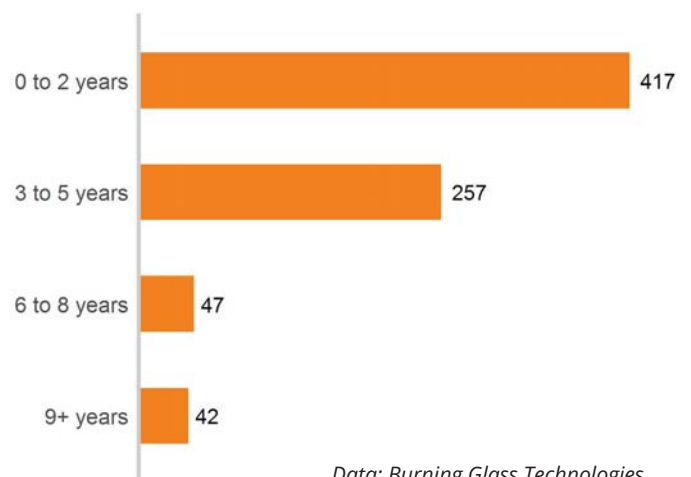
- Engineering
- Business Administration and Management
- Occupational Health and Industrial Hygiene
- Chemistry
- Marketing/Marketing Management

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Knowledge areas: Biology,
Environment Science

50%

of advertised salaries greater
than \$35,000

Agriculture in-Demand Skills

Q3 2016 postings require a wide variety of skills ranging from more technical (re, 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

- Sales
- Customer service
- Microsoft excel
- Scheduling
- Inspection

Foundational In-Demand Skills

- Communication skills
- Writing
- Organizational skills
- Problem solving
- Physical demand

Job Type

- Full Time - 50.3%
- Part Time - 7.0%
- Temp - 6.9%

Certifications In-Demand

- Commercial driver's license
- Veterinary technician
- First aid CPR AED
- Pest control applicator
- Certified Veterinary Technician



\$ 52,235 average advertised salary



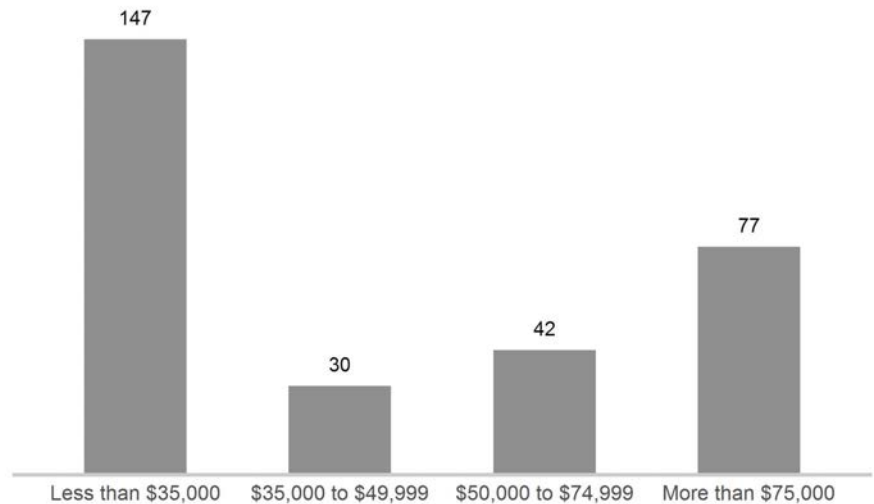
In-demand certification: Pest Control Applicator

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 Q3 2016 was \$ 52,235 an increase from \$ 46,622 during Q2. This is likely due to a shift in more postings for workers during the fall that do require a degree.

Advertised Wages in Job Postings

Quarter 3 2016



Wage Data from Bureau of Labor Statistics 2015

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

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	\$18.78	\$51.21	\$69.44
37-3011	Landscaping and Groundskeeping Workers	\$8.53	\$9.71	\$8.53	\$14.84	\$19.69
39-9032	Recreation Workers	\$8.22	\$8.89	\$8.22	\$12.51	\$15.67
29-9011	Occupational Health and Safety Specialists	\$20.67	\$24.18	\$20.67	\$37.88	\$45.15
51-3021	Butchers and Meat Cutters	\$9.30	\$11.39	\$9.30	\$18.23	\$22.05
17-2081	Environmental Engineers	\$25.89	\$35.00	\$25.89	\$50.78	\$58.39
39-2021	Nonfarm Animal Caretakers	\$8.16	\$8.70	\$8.16	\$12.15	\$15.48
11-9121	Clinical Research Coordinators	\$31.69	\$38.00	\$31.69	\$60.12	\$83.53
29-1131	Veterinarians	\$32.76	\$38.53	\$32.76	\$61.44	\$69.68
29-2056	Veterinary Technologists and Technicians	\$9.81	\$12.31	\$9.81	\$17.92	\$20.85

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Introduction

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.

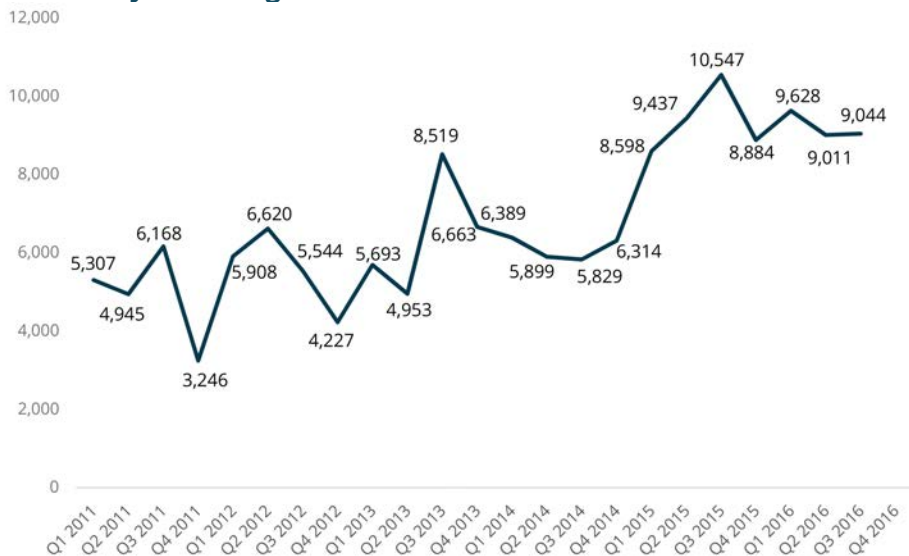
Job Posting Analysis

Online job ads for Business and Finance positions increased a modest 1% between Q2 and Q3 2016, increased by 33 postings from 9,011 in Q2 to 9,044 in Q3. 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 Analysis

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.

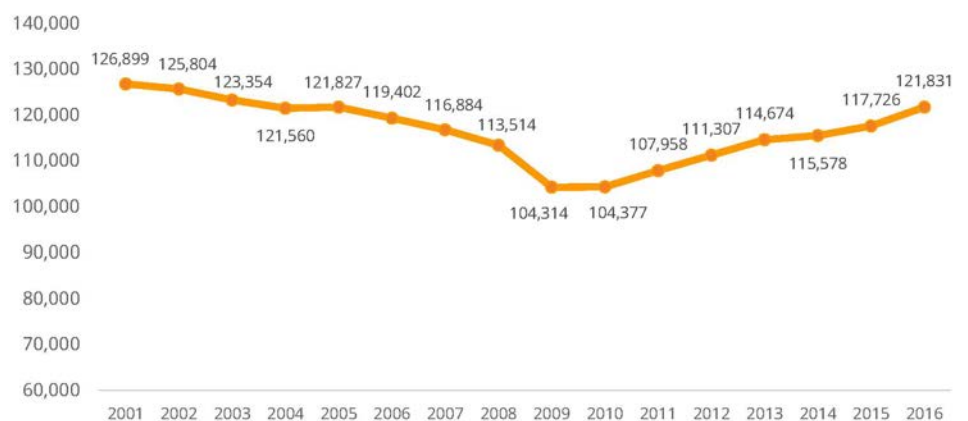
Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time

Quarter 3 2016



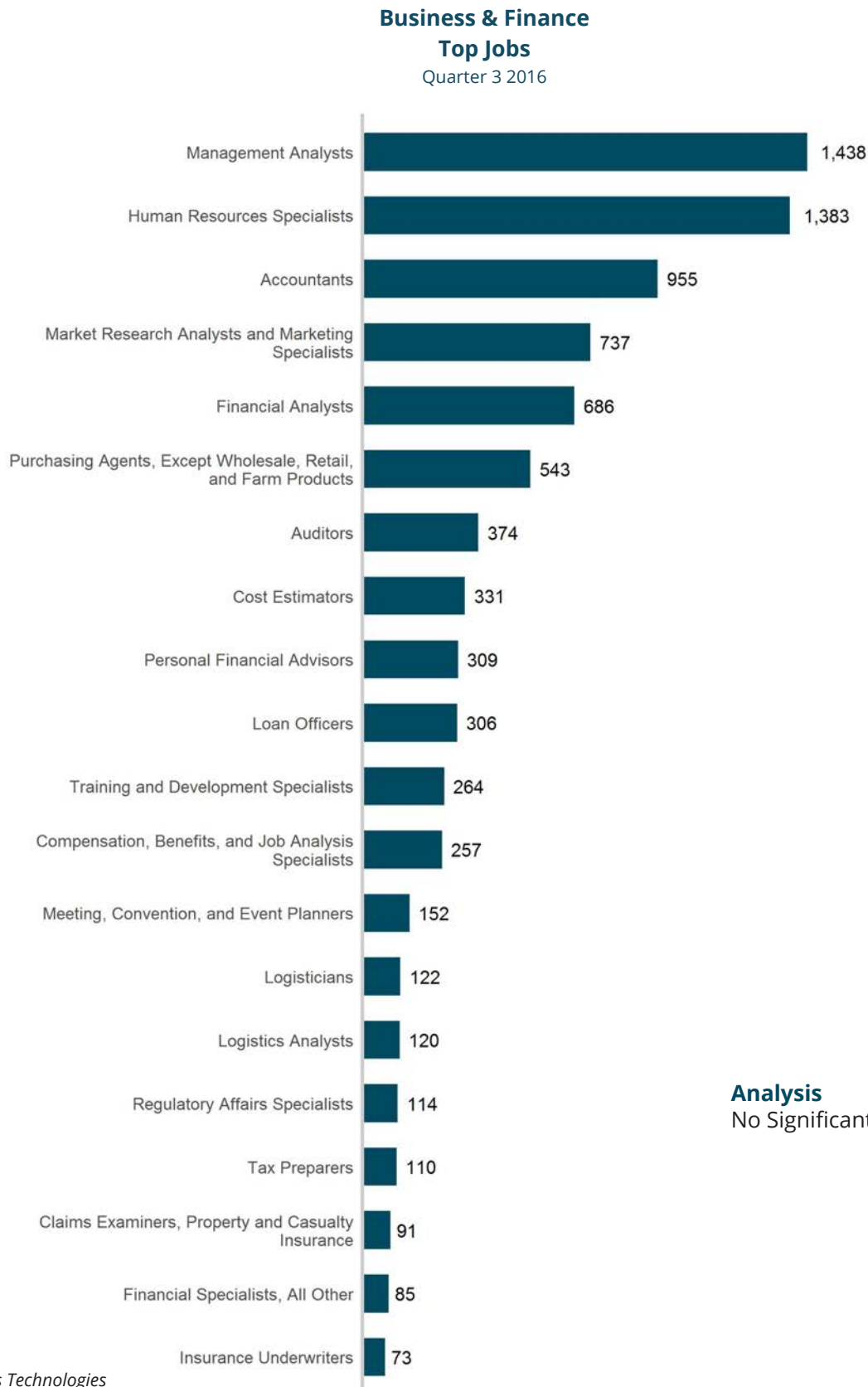
Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Now hiring: 9044 job postings



Most in-demand job: Human Resources Specialist



Analysis
No Significant Change



Experience required: less than 5 years

%

Education required: Bachelor's degree

Business & Finance Educational Attainment Required

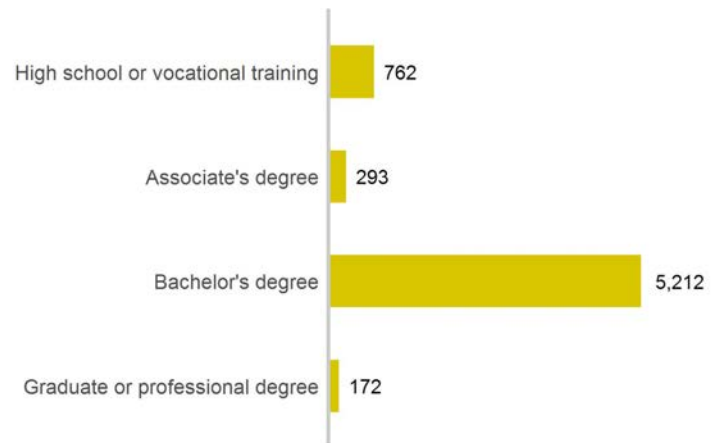
The vast majority of Business and Finance jobs posted require a Bachelor's degree. Due to most jobs requiring high-level mathematics skills and management abilities, a Bachelor's degree is the most common in-demand credential. Because of this, higher wages follow.

Most available jobs require 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.

Areas of Study in-Demand Q3 2016

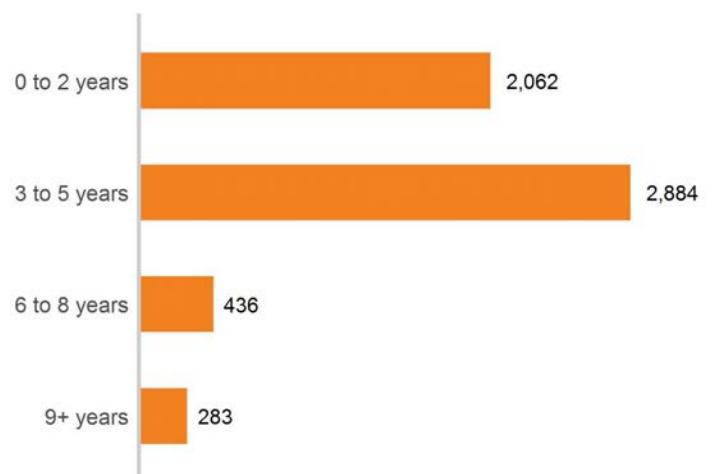
- Business Administration and Management,
- Accounting
- Finance
- Engineering
- Computer Science

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Knowledge areas: Business,
Accounting

85%

of advertised salaries greater
than \$35,000

Business & Finance in-Demand Skills

Occupations in Business and Finance require a host of skills necessary for business management. These skills included accounting, budgeting, customer service, scheduling, and project management in Q3 2016. Employers hiring Business and Finance workers also posted employability skills like communication skills, writing, , planning ability, and organizational skills

Technical in-Demand Skills

- Microsoft office
- Accounting
- Budgeting
- Customer Service
- Financial Analysis

Foundational In-Demand Skills

- Communication Skills
- Writing
- Problem Solving
- Organizational Skills
- Planning

Job Type

- Full Time- 56.1%
- Part Time- 1.6%
- Temp- 4.7%

Certifications In-Demand

- Certified Public Accountant (CPA)
- Series 7
- Project Management Certification
- Insurance License
- Certified Information Systems



\$ 62,671 average advertised salary



In-demand certification: CPA, series 7

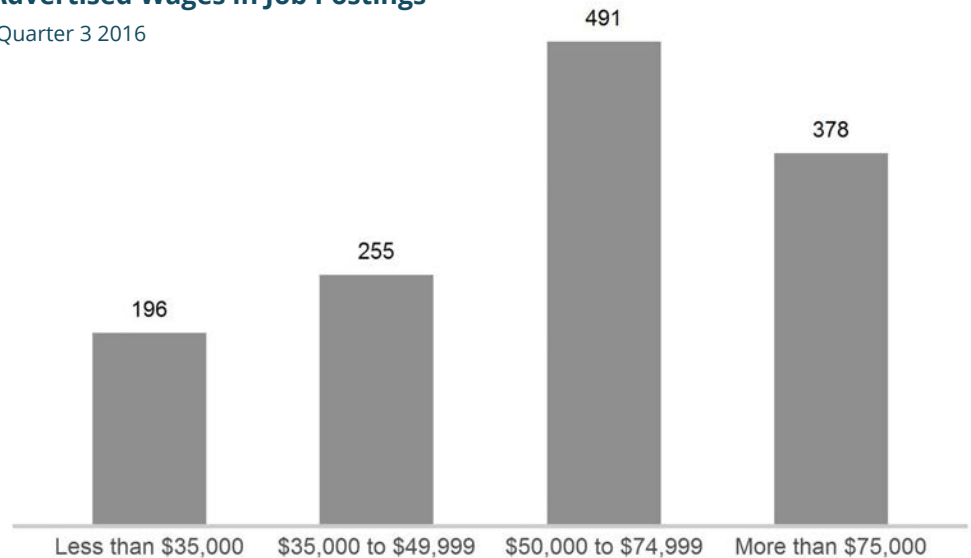
Business & Finance Wages

Few postings in Business advertise a salary. Of the jobs postings that listed a salary, 37% highlighted salaries between \$50,000 to \$75,000 a year. Many open positions also offer wages over \$75,000 likely for jobs requiring more experience.

The mean salary for these Business and Finance postings during Q3 2016 was \$62,671 down from \$62,970 in Q2 2016.

Advertised Wages in Job Postings

Quarter 3 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
13-1111	Management Analysts	\$21.00	\$29.35	\$39.86	\$51.57	\$66.61
13-1071	Human Resources Specialists	\$16.76	\$21.08	\$27.22	\$34.67	\$43.98
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 Wholesale, Retail, and Farm Products	\$19.41	\$24.16	\$31.79	\$41.78	\$50.98
13-2011	Auditors	\$19.28	\$23.73	\$31.10	\$40.29	\$52.77
13-1051	Cost Estimators	\$18.00	\$22.10	\$28.62	\$38.55	\$45.73
13-2052	Personal Financial Advisors	\$18.56	\$23.69	\$31.85	\$53.69	\$87.06
13-2072	Loan Officers	\$13.69	\$18.64	\$25.14	\$34.19	\$47.69

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Construction

Introduction

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.

Job Posting Analysis

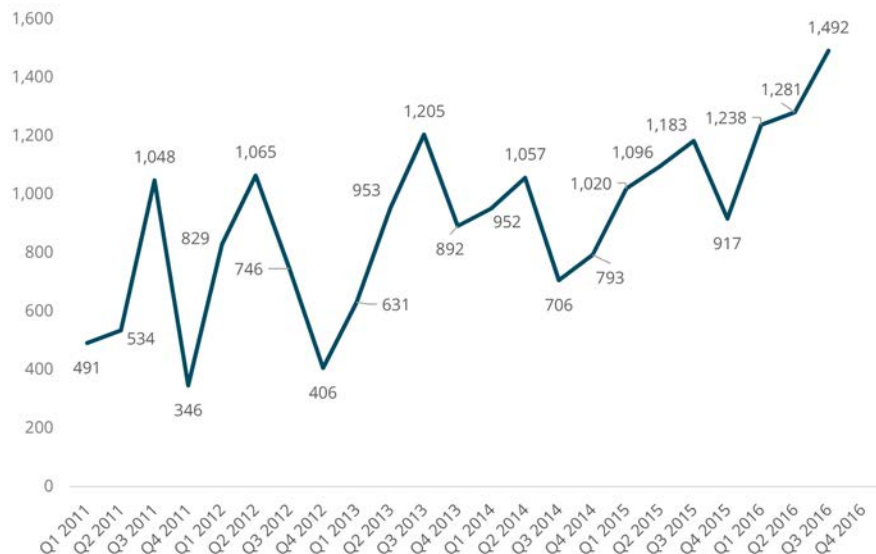
Postings grew 15%, 211 additional postings, between Q2 and Q3 2016. With 1,492 postings have reached a historic high. This high is dramatically different than previous highs that have reached in the 1,200 range. Q3 2016 represents the highest number of postings to-date for Construction workers in the 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 Analysis

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.

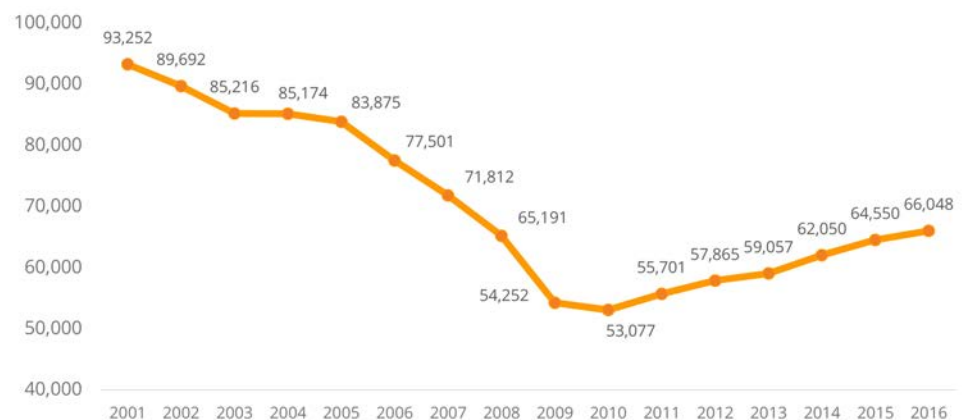
Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time

Quarter 3 2016



Data: EMSI, BLS
Analysis: Workforce Intelligence Network

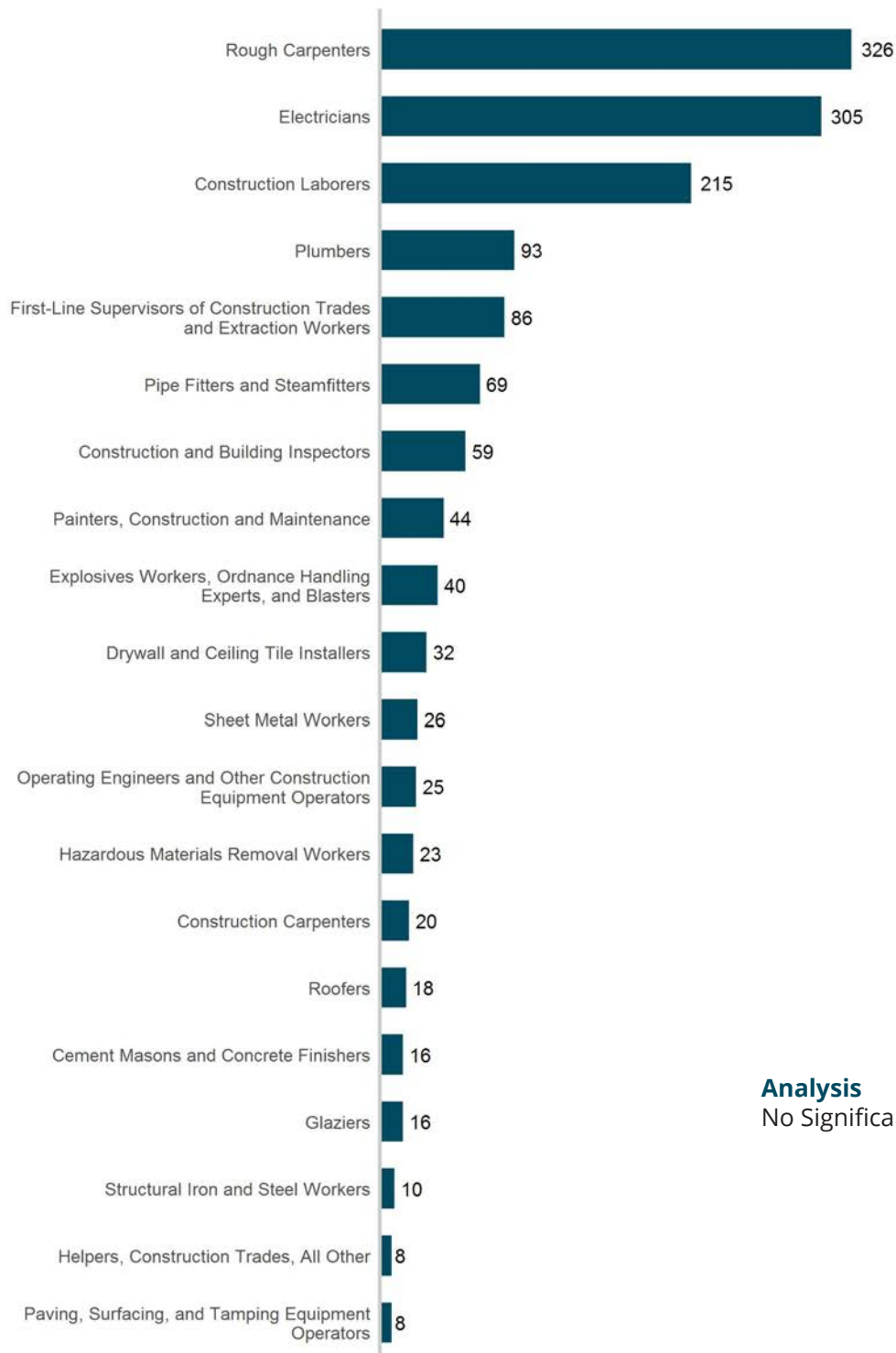


Now hiring: 1492 job postings



Most in-demand job:
Electricians

Construction Top Jobs Quarter 3 2016



Analysis
No Significant Changes



Experience required: less than 5 years

%

Education required: Bachelor's degree or Vocational training

Construction Educational Attainment 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.

Areas of Study in-Demand Q3 2016

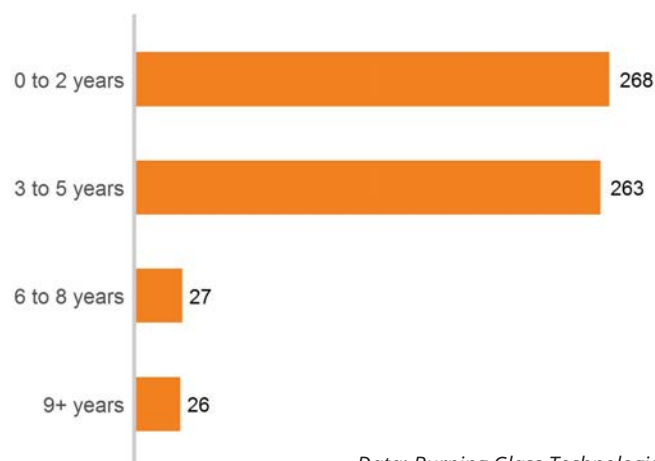
- Engineering
- Mechanical Engineering
- Business Administration and Management
- Construction Management
- Ecology

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Knowledge areas: Engineering,
Construction Management

67%

of advertised salaries greater
than \$35,000

Construction in-Demand Skills

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. This technical prowess take precedence in the occupation group due to the nature of construction related jobs.

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
- Electrical Work
- Hand Tools
- Inspection
- Machinery

Foundational In-Demand Skills

- Troubleshooting
- Communication Skills
- Physical Demand
- Writing
- Preventive Maintenance

Job Type

- Full Time- 54.4%
- Part Time- 0.9%
- Temp- 4.7%

Certifications In-Demand

- Electrician Certification
- Commercial Driver's License (CDL)
- Forklift Operator Certification
- HVAC Technician Certification
- Plumbing License or Certification



\$ 43,059 average advertised salary



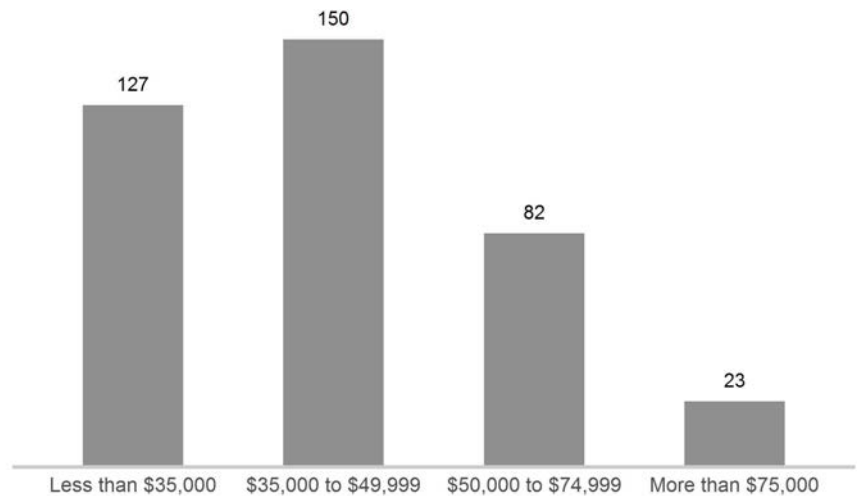
In-demand certification:
Electrician Certification, Forklift

Construction Wages

Few postings in Construction advertise a salary. 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 \$ 50,000. The average advertised wage in Q3 was \$43,059 down slightly from the Q2 2016 average of \$48,552.

Advertised Wages in Job Postings

Quarter 3 2016



Wage Data from Bureau of Labor Statistics 2015

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
47-2031	Rough Carpenters	\$13.97	\$18.22	\$23.85	\$29.03	\$33.29
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
47-2152	Plumbers	\$15.69	\$22.35	\$31.21	\$35.49	\$40.14
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	\$20.30	\$24.06	\$29.07	\$37.38	\$45.30
47-2152	Pipe Fitters and Steamfitters	\$15.69	\$22.35	\$31.21	\$35.49	\$40.14
47-4011	Construction and Building Inspectors	\$15.23	\$20.59	\$26.40	\$30.96	\$35.92
47-2141	Painters, Construction and Maintenance	\$12.00	\$13.92	\$20.07	\$26.03	\$30.71
47-5031	Explosives Workers, Ordnance Handling Experts, and Blasters	\$19.99	\$24.90	\$30.93	\$34.26	\$35.10
47-2081	Drywall and Ceiling Tile Installers	\$15.19	\$17.60	\$20.97	\$24.55	\$28.90

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Customer Service

Introduction

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.

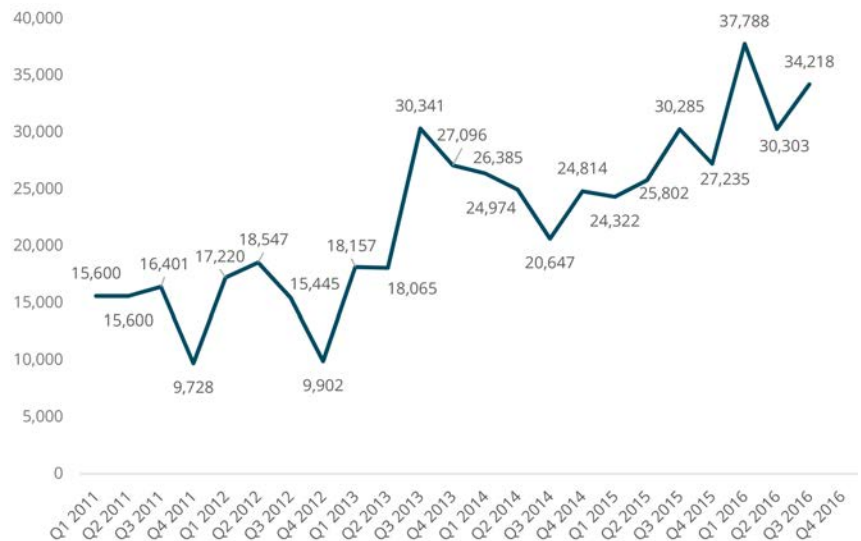
Job Posting Analysis

Online job ads for Customer Service workers rose 13 percent between Q2 and Q3 2016, gaining 3,915 postings. This increase follows uncertainty in 2016, but is in line with the long-term growth trend for Customer Service positions.

Employment Analysis

Employment in Customer Service occupations has increased 9 percent since the 2010 recession low, adding nearly 60,000 jobs. 2016 estimates show that over 680,000 individuals are employed in Customer Service-related jobs making it one of the largest occupation groups in the region. Jobs are growing slowly and employers must add another 40,000 jobs to surpass the 2001 pre-recession high.

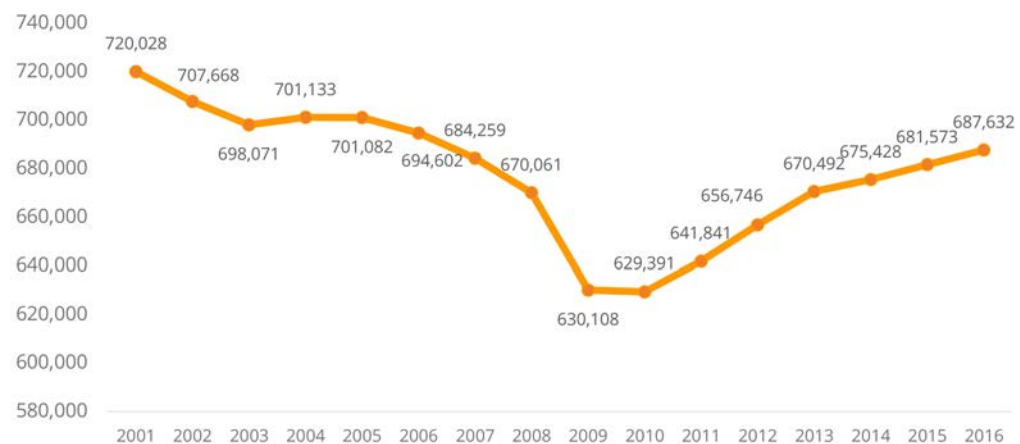
Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time

Quarter 3 2016



Data: EMSI, BLS
Analysis: Workforce Intelligence Network

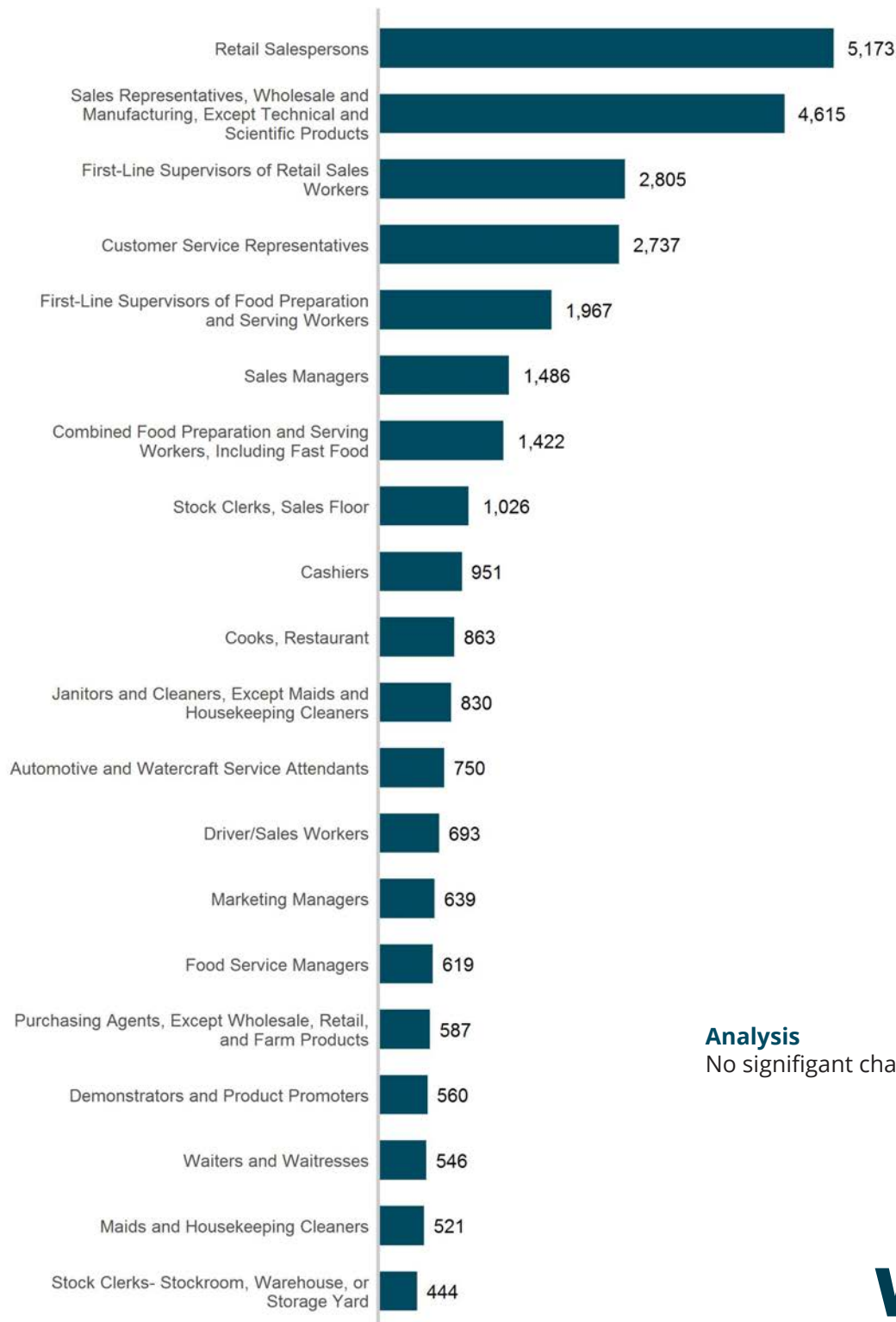


34,218 postings this quarter



Retail Salesperson: top in-demand job

**Customer Service
Top Jobs**
Quarter 3 2016



Analysis
No significant change



13% growth in postings

%

Sales skills a must for most jobs

Customer Service Educational Attainment Required

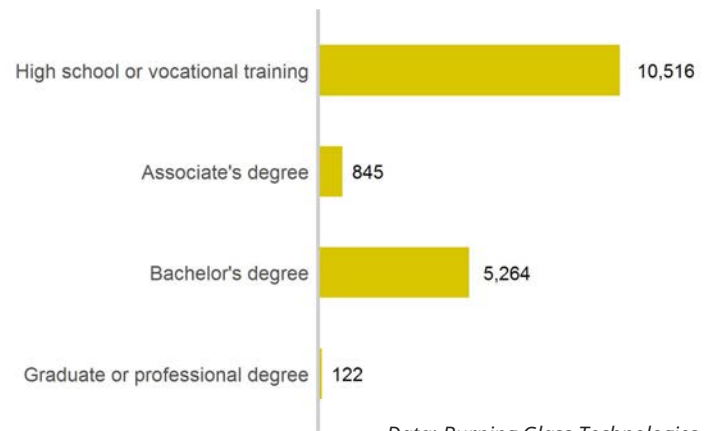
Customer Service jobs either require little to no training past a high school education (about 10,500 postings fall in this category) or require a Bachelor's degree (5,300). This is because occupations in the group range from retail sales and other lower technical skill jobs to those in technical sales 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. However, there are also many management and other more technical positions requiring three to five years of experience.

Areas of Study in-Demand Q3 2016

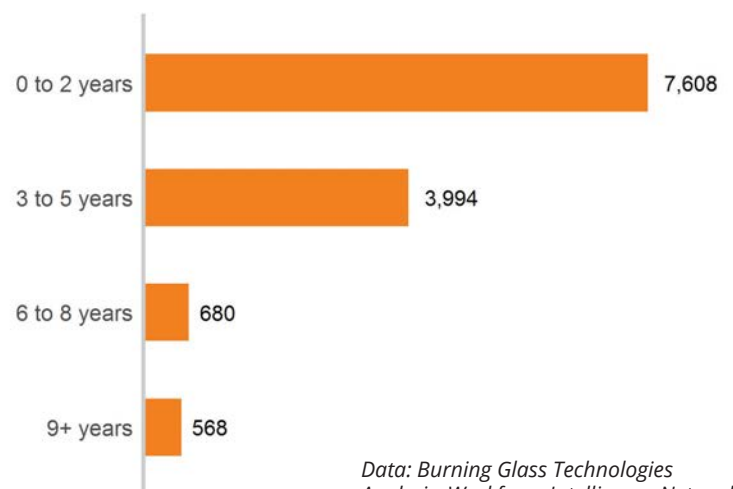
- Business Administration and Management,
- Engineering
- Marketing/Marketing Management
- Finance
- Logistics, Materials, and Supply Chain Management

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Many entry level positions
available

%

Technical positions open to
those with bachelor's degrees

Customer Service in-Demand Skills

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 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 products to meet their needs.

Technical in-Demand Skills

- Sales
- Customer Service, Customer Contact
- Experience in a Retail Setting
- Store Management, Supervisory Skills
- Merchandising

Foundational In-Demand Skills

- Communication Skills, Building Effective Relationships
- Writing
- Ability to perform physical labor
- Organizational Skills
- Problem Solving

Job Type

- Full Time- 37.1%
- Part Time- 13.3%
- Temp- 5.6%

Certifications In-Demand

- ServSafe
- Automotive Service Excellence (ASE) Certification
- Commercial Driver's License, CDL Class A
- Alcohol Server Certification
- Food Service Sanitation Certification



Average advertised Salary:
\$52,882



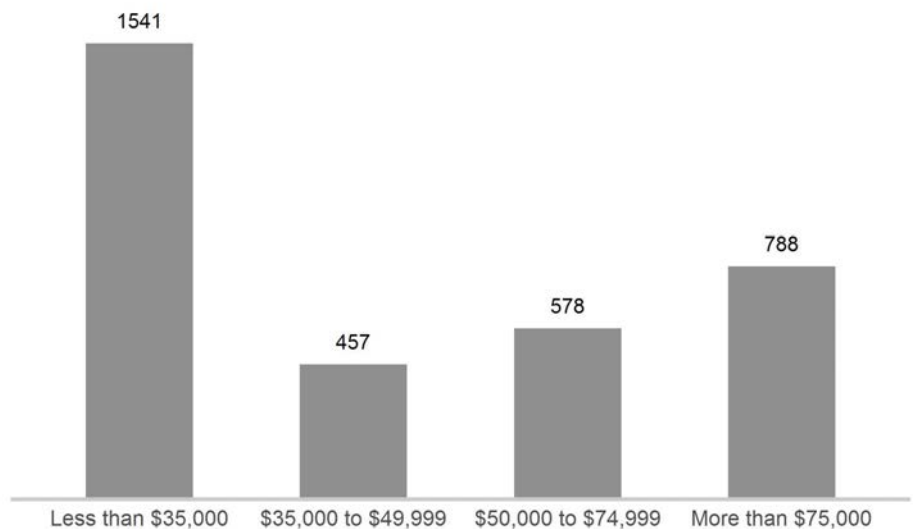
Sales Managers offer highest
wage potential

Customer Service Wages

Likely due to a high number of hourly positions, very few Customer Service job ads include annual salary data. It is possible that salary data is not representative of the entire occupation group. Many jobs in this group pay lower wages because they require fewer technical skills, training, and experience. However, there are occupations offering great wage potential if additional education and training are acquired. While most postings with salary information listed wages below \$35,000, the average advertised wage in Q3 2016 was \$52,882.

Advertised Wages in Job Postings

Quarter 3 2016



Wage Data from Bureau of Labor Statistics 2015

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
41-2031	Retail Salespersons	\$8.27	\$8.90	\$10.16	\$13.10	\$19.10
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$12.68	\$18.66	\$27.10	\$39.62	\$55.93
41-1011	First-Line Supervisors of Retail Sales Workers	\$11.52	\$14.25	\$18.39	\$23.70	\$30.16
43-4051	Customer Service Representatives	\$9.22	\$11.38	\$14.86	\$18.90	\$24.29
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	\$8.89	\$10.52	\$14.25	\$19.31	\$24.15
11-2022	Sales Managers	\$29.05	\$39.39	\$53.42	\$71.56	\$108.82
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	\$8.15	\$8.52	\$9.14	\$9.92	\$12.12
43-5081	Stock Clerks, Sales Floor	\$8.29	\$9.11	\$11.00	\$14.40	\$18.58
41-2011	Cashiers	\$8.17	\$8.68	\$9.57	\$11.62	\$15.08
35-2014	Cooks, Restaurant	\$8.31	\$9.14	\$10.68	\$12.74	\$14.33

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Education

Introduction

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.

Job Posting Analysis

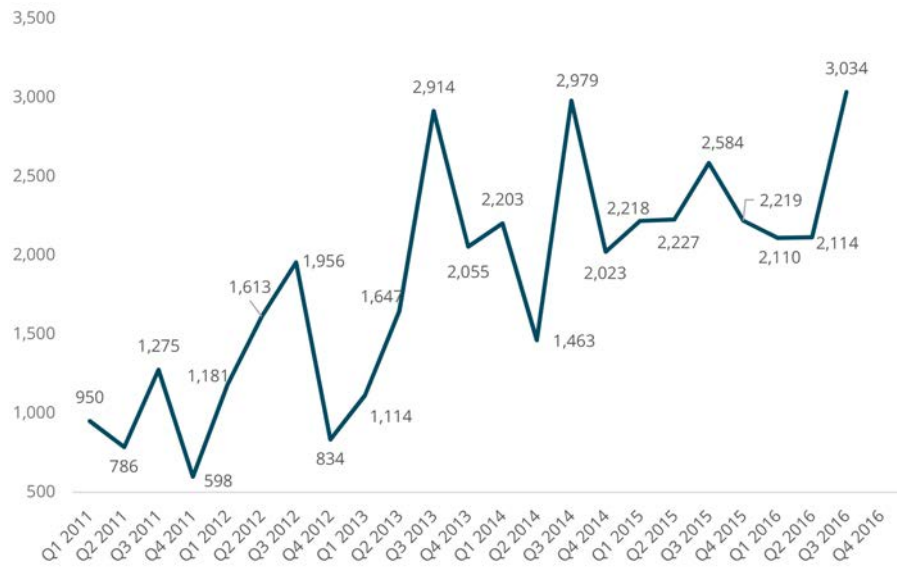
Job postings for jobs in Education do not follow a traditional business cycle like many other occupation groups. Instead, postings for Education positions peak during quarter three, particularly in July and August when schools ramp up hiring for the school year. Q3 reached a historic high with 3,034 job postings. This is not dramatically different than previous highs that have reached in the 2,900 range. However, Q3 2016 represents the highest number of postings to-date for Education workers in the region.

Employment Analysis

Unlike many other occupation groups that have experienced employment gains since the recession, Education employment has declined.

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.

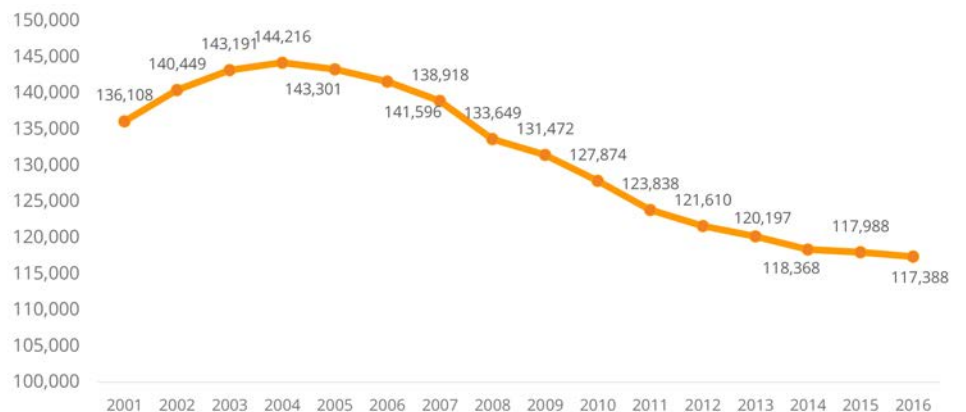
Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time

Quarter 3 2016



Data: EMSI, BLS
Analysis: Workforce Intelligence Network

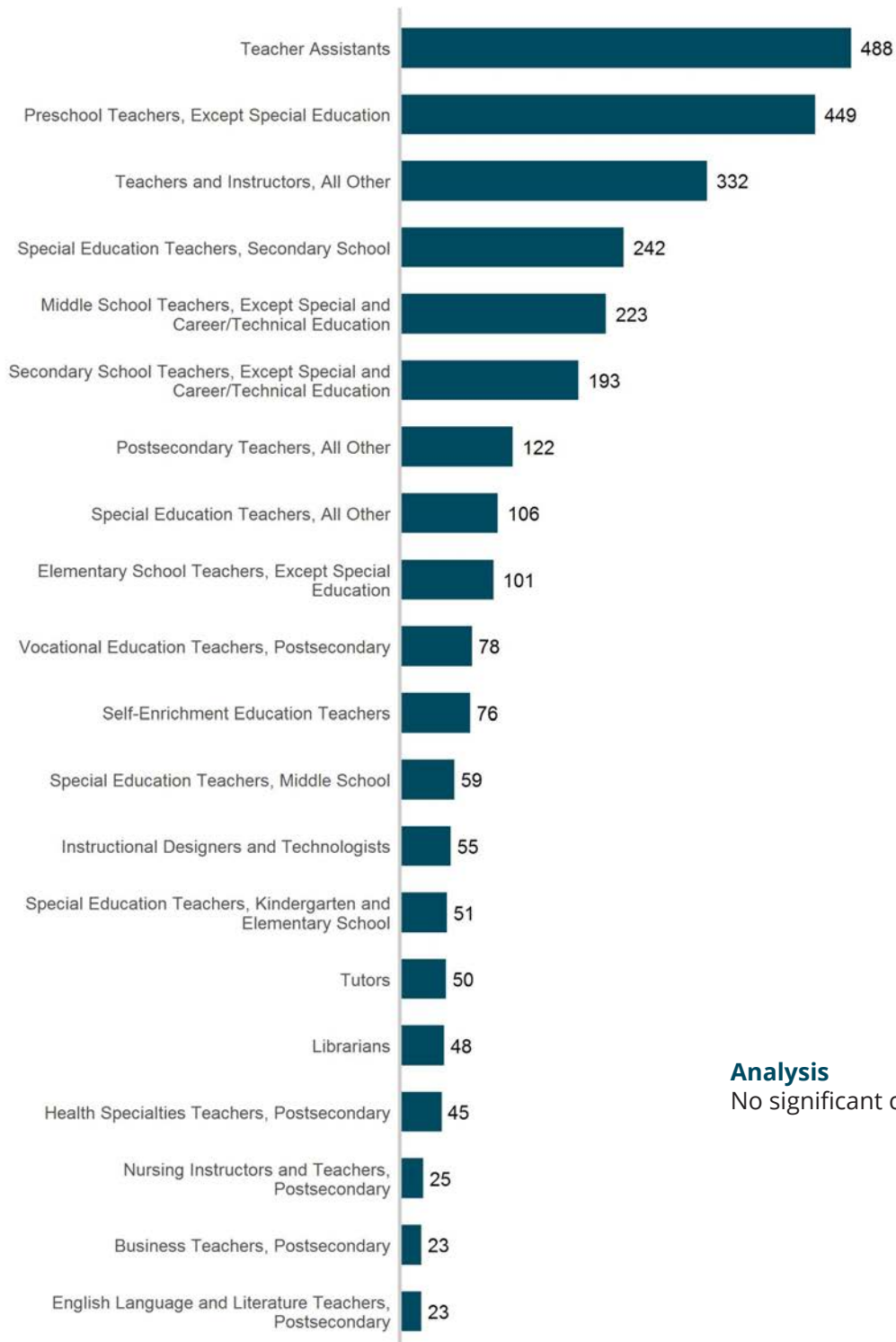


Now hiring: 3,034 job postings



Most in-demand job:
Preschool teacher

**Education
Top Jobs**
Quarter 3 2016



Analysis
No significant changes.



Experience required: Less than 5 years

%

Education required: Bachelor's degree

Education Educational Attainment Required

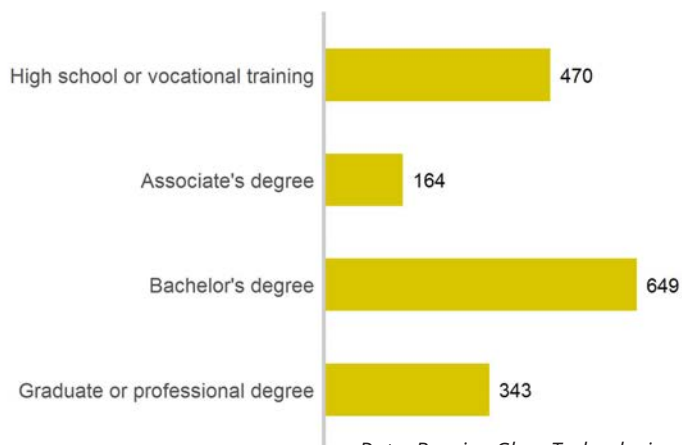
Most positions in Education require a Bachelor's; as teacher training requirements have increased. Some positions, like those for teacher aids, require vocational training instead of a degree.

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.

Areas of Study in-Demand Q3 2016

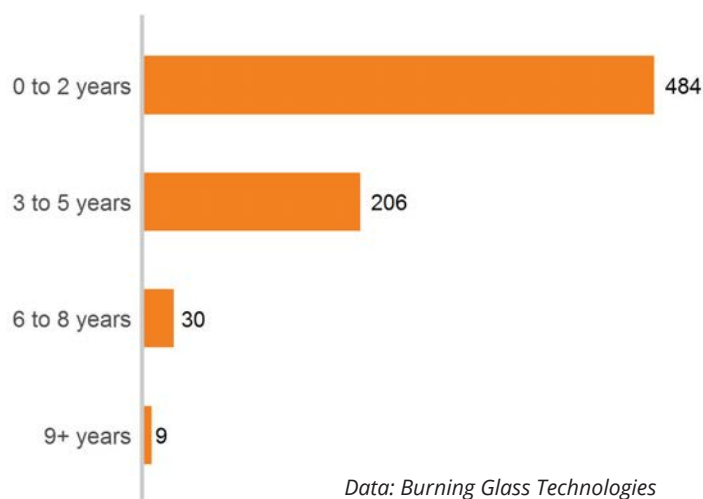
- Early Childhood Education and Teaching
- Child Development
- Nursing Science
- Computer Science
- Business Administration And Management

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Knowledge areas: Early Childhood Education and Child Development

46%

of advertised salaries greater than \$35,000

Education in-Demand Skills

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, special education, and other teaching-specific skills.

Technical in-Demand Skills

- Teaching
- Early Childhood Education
- Child Development
- Child Care
- Lesson Planning

Foundational In-Demand Skills

- Communication Skills
- Writing
- Planning
- Research
- Organization Skills

Job Type

- Full Time- 42.9%
- Part Time- 11.0%
- Temp- 4.3%

Certifications In-Demand

- Commercial Driver's License (CDL) and CDL Class A
- Teaching certificate or Certified teacher
- First aid CPR
- Special Education Certificate
- Child Development Associate



\$ 41,175 average advertised salary



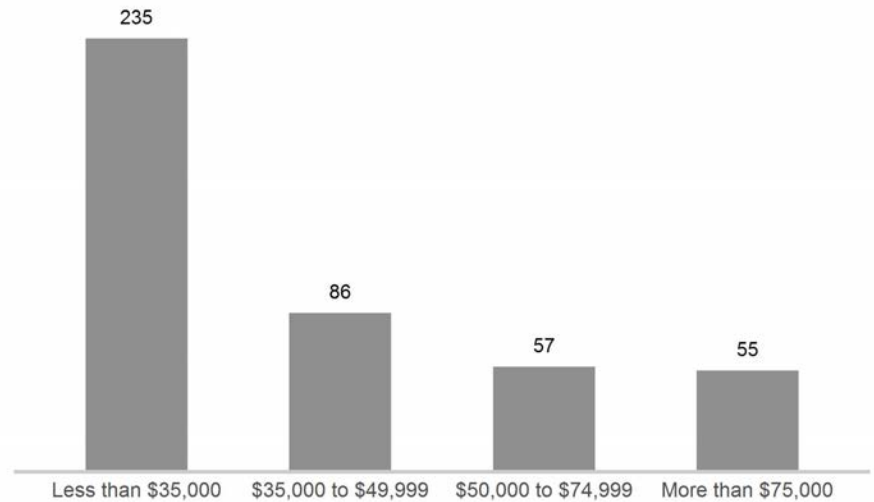
In-demand certification:
Teaching Certificate

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 Q3 2016, was \$41,165 up from \$31,660 in Q2. 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 Wages in Job Postings

Quarter 3 2016



Wage Data from Bureau of Labor Statistics 2015

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
25-9041	Teacher Assistants	\$8.67	\$10.04	\$11.95	\$14.88	\$18.42
25-2011	Preschool Teachers, Except Special Education	\$9.29	\$10.77	\$13.47	\$16.51	\$22.18
25-3099	Teachers and Instructors, All Other	\$10.11	\$15.70	\$26.12	\$33.71	\$40.66
25-2054	Special Education Teachers, Secondary School	\$20.66	\$26.34	\$33.45	\$40.41	\$47.13
25-2022	Middle School Teachers, Except Special and Career/Technical Education	\$18.38	\$23.85	\$31.86	\$38.46	\$44.02
25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$18.43	\$23.15	\$30.87	\$38.63	\$44.48
25-1199	Postsecondary Teachers, All Other	N/A	N/A	N/A	N/A	N/A
25-2059	Special Education Teachers, All Other	\$16.01	\$20.46	\$25.64	\$35.20	\$44.48
25-2021	Elementary School Teachers, Except Special Education	\$17.66	\$22.87	\$32.12	\$38.30	\$43.69
25-1194	Vocational Education Teachers, Postsecondary	N/A	N/A	N/A	N/A	N/A

Data: EMSI, BLS
Analysis: Workforce Intelligence Network

Introduction

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

Job Posting Analysis

Online job ads for workers in Energy fell between Q2 and Q3 2016 with postings decreasing by 13. Postings have fluctuated for the past seven quarters hovering around an average of 250 job ads per quarter despite the decline over the past two quarters. Postings are 2 percent lower during Q3 2016 compared to Q3 of 2015 with 5 less postings.

Employment Analysis

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, 15,279 workers are employed in these Energy industries in southeast Michigan. Employment in these industries dipped in 2011, to 13,816 jobs. Employment has since recovered to just over 15,000 workers, a 1,663 job gain between 2011 and 2015, but employment dropped in the most recent quarter.

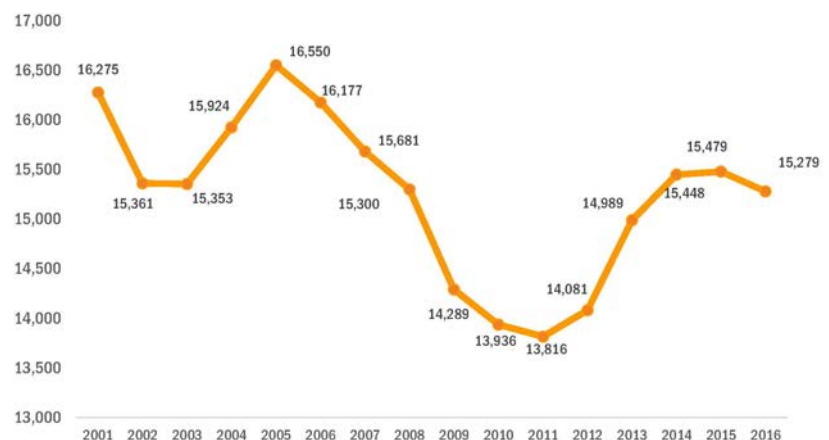
Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time

Quarter 3 2016



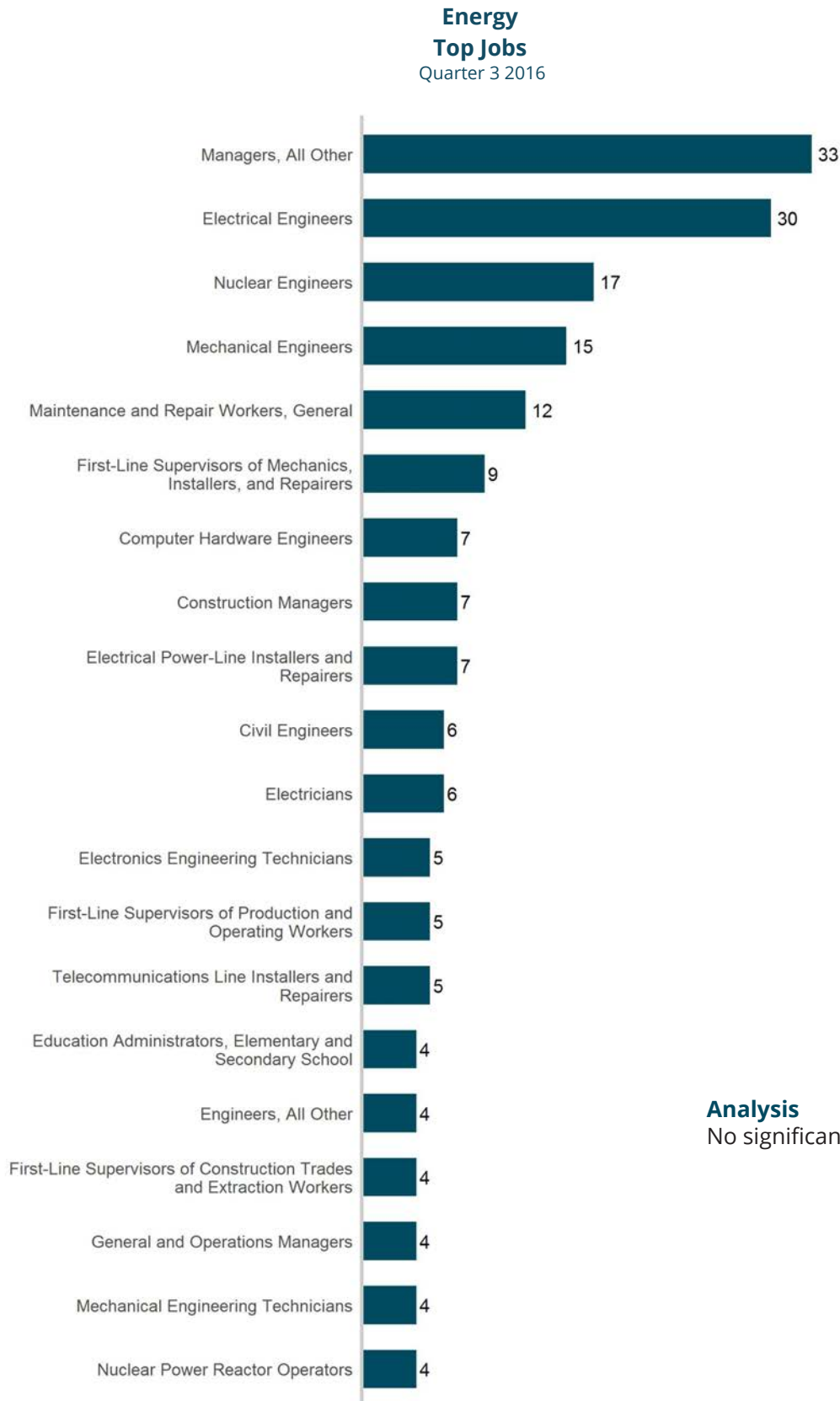
Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Now hiring: 259 job postings



Most in-demand job: Electrical Engineer



Analysis
No significant change



Experience required: Less than 5 years

%

Education required: Bachelor's degree or Technical Training

Energy Educational Attainment Required

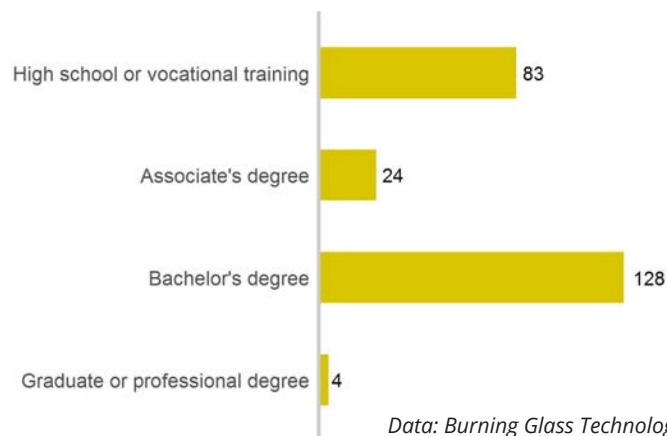
Jobs in Energy tend to have an engineering focus and thus require at least a Bachelor's degree for employment. Select available jobs at the technician level require vocational training such as an apprenticeships.

A majority of Energy related posting in Q3 2016 required three to five years of experience. The remaining postings searching for particular experiences levels were split relatively equally between the other experience levels.

Areas of Study in-Demand Q3 2016

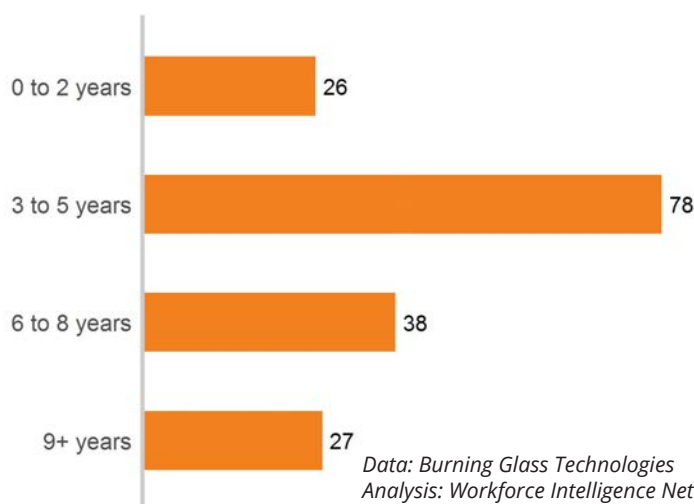
- Engineering
- Engineering Technology
- Electrical and Electronic Engineering Technologies/Technicians, Other
- Mechanical Engineering
- Business Administration and Management

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Knowledge areas: Engineering

%

In-demand certification: PMP and Engineering Certifications

Energy in-Demand Skills

Foundational skills for jobs in Energy fields are similar to those across the WIN-analyzed occupation groups. Planning, problem solving, and communications skills are necessary for workers. Technical skills in Energy jobs include such skills as nuclear energy and repair. Supervisory skills like budgeting and project management are also highly sought after in the energy occupation group. A wide variety of skills are demanded in these highly skilled jobs, especially for those looking to lead and design.

Technical in-Demand Skills

- Budgeting/ Scheduling
- Project Management
- Microsoft Office
- Supervisory Skills
- Benchmarking/ Performance Management

Foundational In-Demand Skills

- Planning/ Writing/ Research
- Problem Solving
- Communication Skills
- Mathematics
- Ability to perform physical labor

Job Type

- Full Time- 36.2%
- Part Time- N/A
- Temp- less than 0.1%

Certifications In-Demand

- Project Management Certification (PMP)
- Engineer in Training Certification (EIT)
- Professional Engineer
- Certified Construction Manager
- Six Sigma Yellow Belt



Factoid can go here but should only be two lines



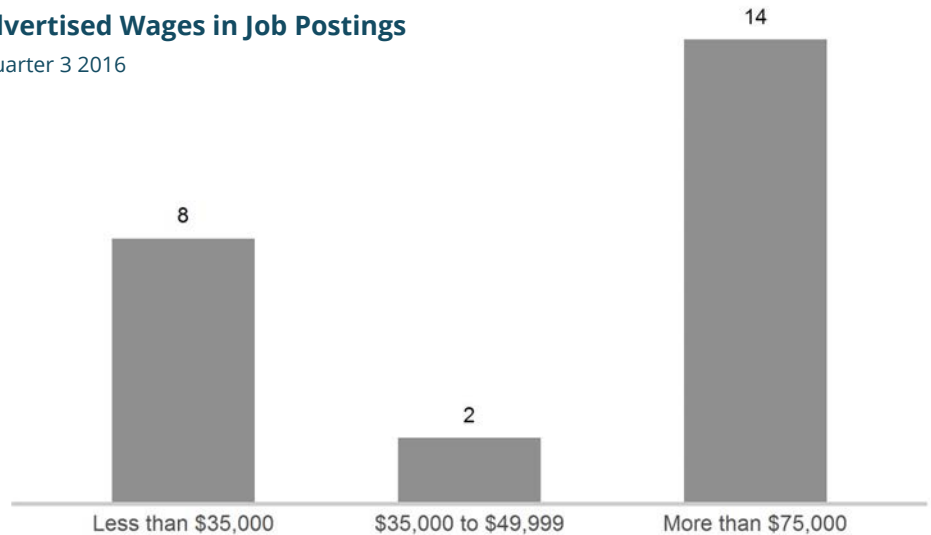
Factoid can go here but should only be two lines

Energy Wages

Few postings in Energy advertise a salary. Of those that did list a wage, most were either advertising less than \$35,000 or above \$75,000 annually. The average advertised wage in a posting during Q3 2016 was \$66,935. 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. Nuclear Engineers in particular reported median annual incomes greater than \$100,000.

Advertised Wages in Job Postings

Quarter 3 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
17-2071	Electrical Engineers	\$28.62	\$34.37	\$41.93	\$49.17	\$57.20
17-2161	Nuclear Engineers	\$35.80	\$43.46	\$50.81	\$56.88	\$64.21
17-2141	Mechanical Engineers	\$29.71	\$36.70	\$44.39	\$53.14	\$59.51
49-9071	Maintenance and Repair Workers, General	\$10.08	\$12.52	\$16.67	\$21.78	\$27.39
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	\$16.48	\$22.09	\$29.56	\$38.49	\$46.06
17-2061	Computer Hardware Engineers	\$27.68	\$36.27	\$45.03	\$55.19	\$66.96
11-9021	Construction Managers	\$30.31	\$34.60	\$42.23	\$54.12	\$75.10
49-9051	Electrical Power-Line Installers and Repairers	\$19.56	\$26.00	\$33.72	\$38.11	\$43.36
17-2051	Civil Engineers	\$23.15	\$27.80	\$33.73	\$39.42	\$46.77

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Engineers & Designers (Manufacturing Focused)

Introduction

Jobs in the manufacturing industry can range from assembly and production, to skilled trades and technicians, designers and engineers, and even computer-related occupations such as software development. Demand for engineers in the region has been consistent, and employment has been growing quickly.

Job Posting Analysis

Online job ads for advanced manufacturing-focused Engineering & Design occupations decreased 5 percent between Q2 and Q3 2016. Employer demand for these Engineering & Design occupations reached a new high in Q3 2015 when employers posted 10,433 online job ads for these workers. Although postings fluctuate from quarter to quarter, the overall trend has been toward greater demand for these highly educated workers.

Employment Analysis

Employment in Engineering and Designer occupations has increased 47.7% since the 2009 recession low, adding nearly 30,000 jobs. 2016 estimates show that over 90,000 individuals are employed in Engineer and Design-related jobs. Jobs are growing slowly and employers must add another 4,000 jobs to reach 2001 pre-recession highs.

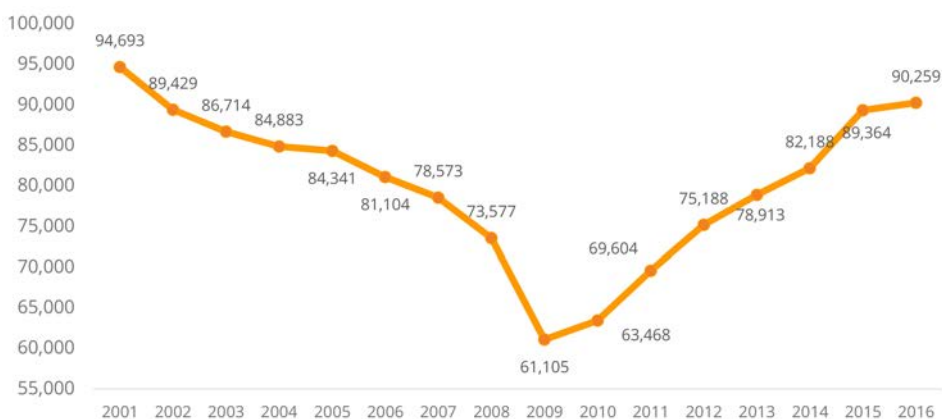
Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time

Quarter 3 2016



Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Now hiring: 8977 job ads

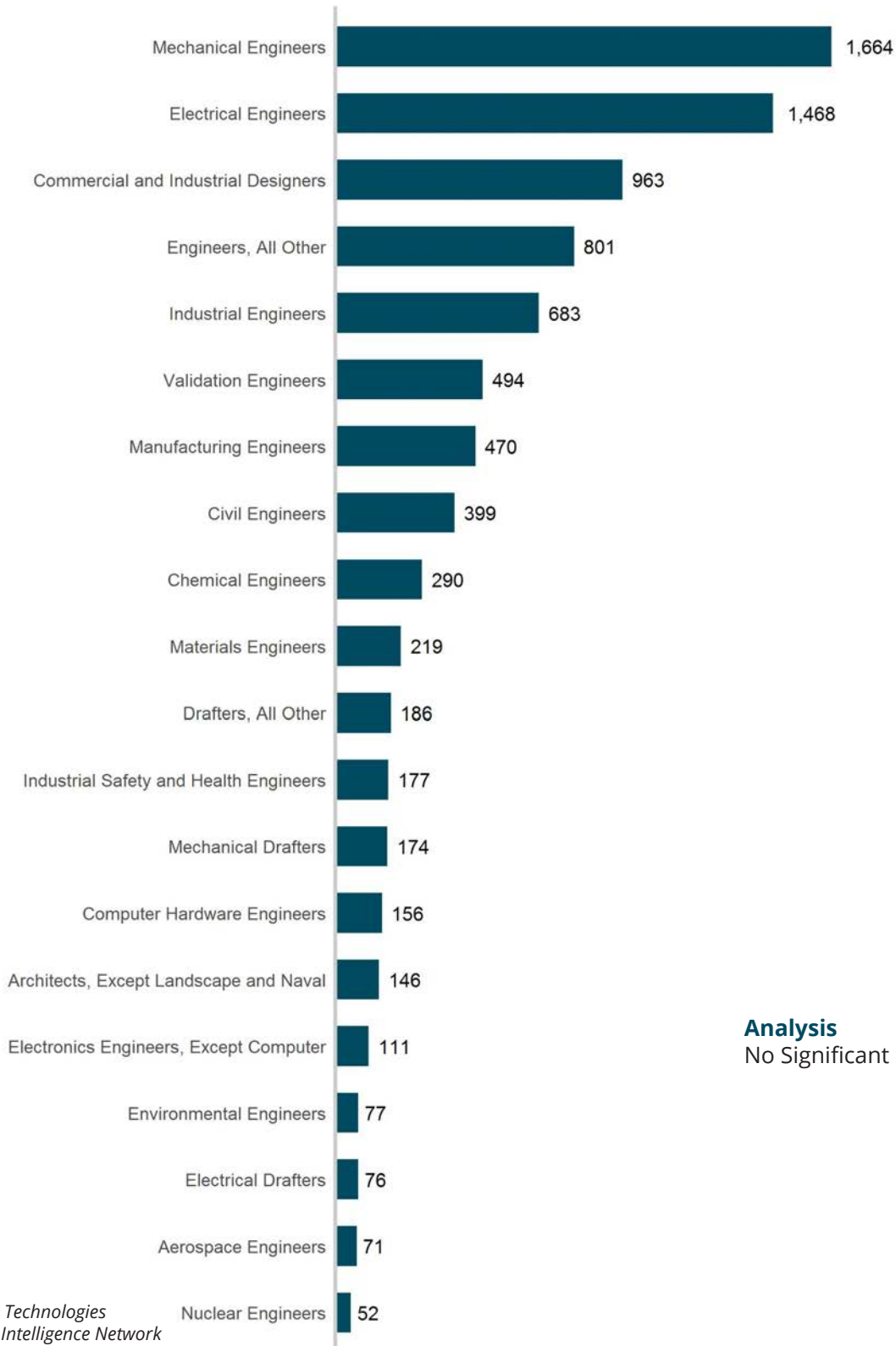


Knowledge areas: Engineering

Engineers & Designers

Top Jobs

Quarter 3 2016



Analysis

No Significant Change



Experience required: less than 5 years

%

Education required: Bachelor's degree

Engineers & Designers Educational Attainment Required

Of the 7,205 Engineering & Design job postings that specified a desired level of education during Q3 2016, 92 percent (6,656 postings) desired candidates with a bachelor's degree. 67 percent of Q3 postings advertised a desired level of experience and the overwhelming majority targeted workers with less than 5 years of experience. Of the postings that expressed desired experience, 3,247 postings (36%) sought those with 3 to 5 years of experience and 1,614 (18%) desired entry-level workers with 0 to 2 years of experience.

Areas of Study in-Demand Q3 2016

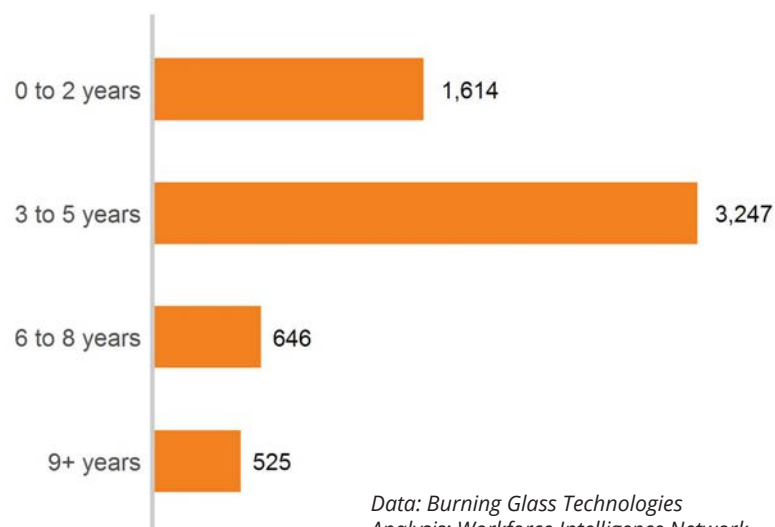
- Engineering
- Mechanical engineering
- Electrical and electronic engineering technologies/technicians, other
- Computer science
- Aerospace, Aeronautical and Astronautical engineering

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Average salaries greater than
\$50,000

56%

of adds are full-time positions

Engineers & Designers in-Demand Skills

Engineering & Design job candidates are expected to have baseline skills like communication and writing as prerequisites for employment. Another key skill that employers are looking for is project management. Employers also sought workers during Q3 2016 with technical skills in manufacturing processes, computer aided drafting, and knowledge in specialized areas of engineering. Management skills were also highly demanded which could indicate a higher volume of leadership positions becoming available.

Technical in-Demand Skills

- Mechanical Engineering
- Microsoft Office
- Validation
- Electrical Engineering
- Project Management

Foundational In-Demand Skills

- Communication skills
- Problem solving
- Writing and Planning
- Mathematics
- Problem solving and Troubleshooting

Job Type

- Full-time: 56.0%
- Part-time: 0.5%
- Temporary: 5.4%

Certifications In-Demand

- American board for engineering and technology accredited
- Six sigma certification
- Six sigma black and green belt
- Professional engineer
- Certified quality auditor



In-demand certifications: ABET, SSC, PE



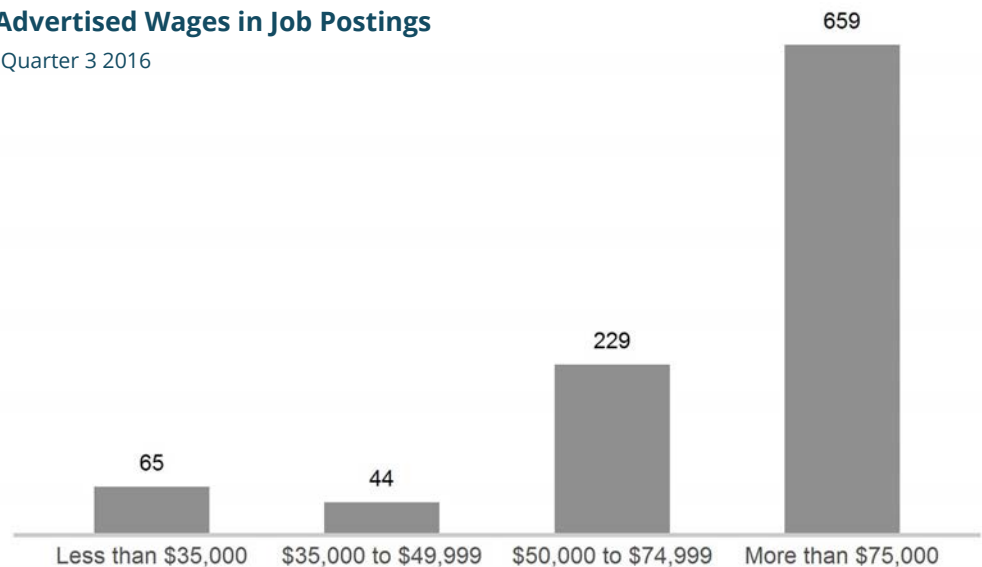
Mechanical and Electric Engineers in-demand

Engineers & Designers Wages

Few postings in Engineering & Design advertise a salary. The Engineering & Design occupations are some of the highest paying throughout southeast Michigan. Of the 997 online job postings that advertised a salary range during Q3, 89 percent (888 job postings) advertised a salary greater than \$50,000. Wage data from the Bureau of Labor Statistics for the most in-demand Engineering & Design jobs confirms that workers can earn high hourly wages after completing an engineering bachelor's degree.

Advertised Wages in Job Postings

Quarter 3 2016



Wage Data from Bureau of Labor Statistics 2015

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

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

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.

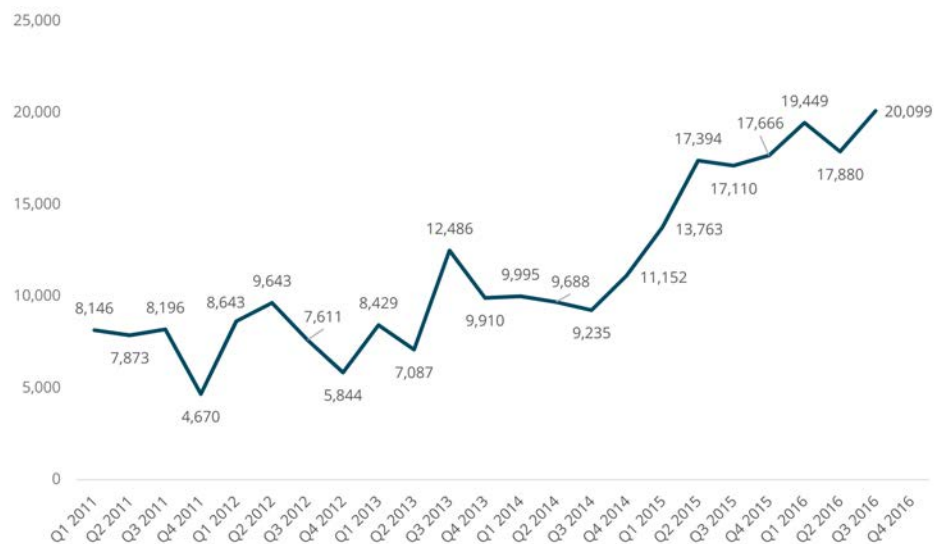
Job Posting Analysis

Health Care job ads rose by 12 percent, gaining 2219 postings between Q2 and Q3 2016 to reach a new high of 20,099 postings. Rebounding from an 8% drop between Q1 and Q2 2016, job postings for healthcare positions have shown generally consistent growth since late 2014.

Employment Analysis

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.

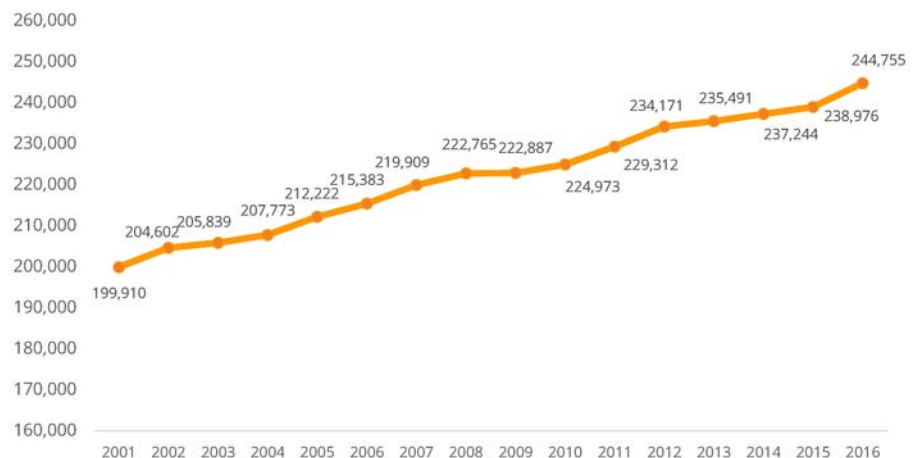
Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time

Quarter 3 2016



Data: EMSI, BLS
Analysis: Workforce Intelligence Network

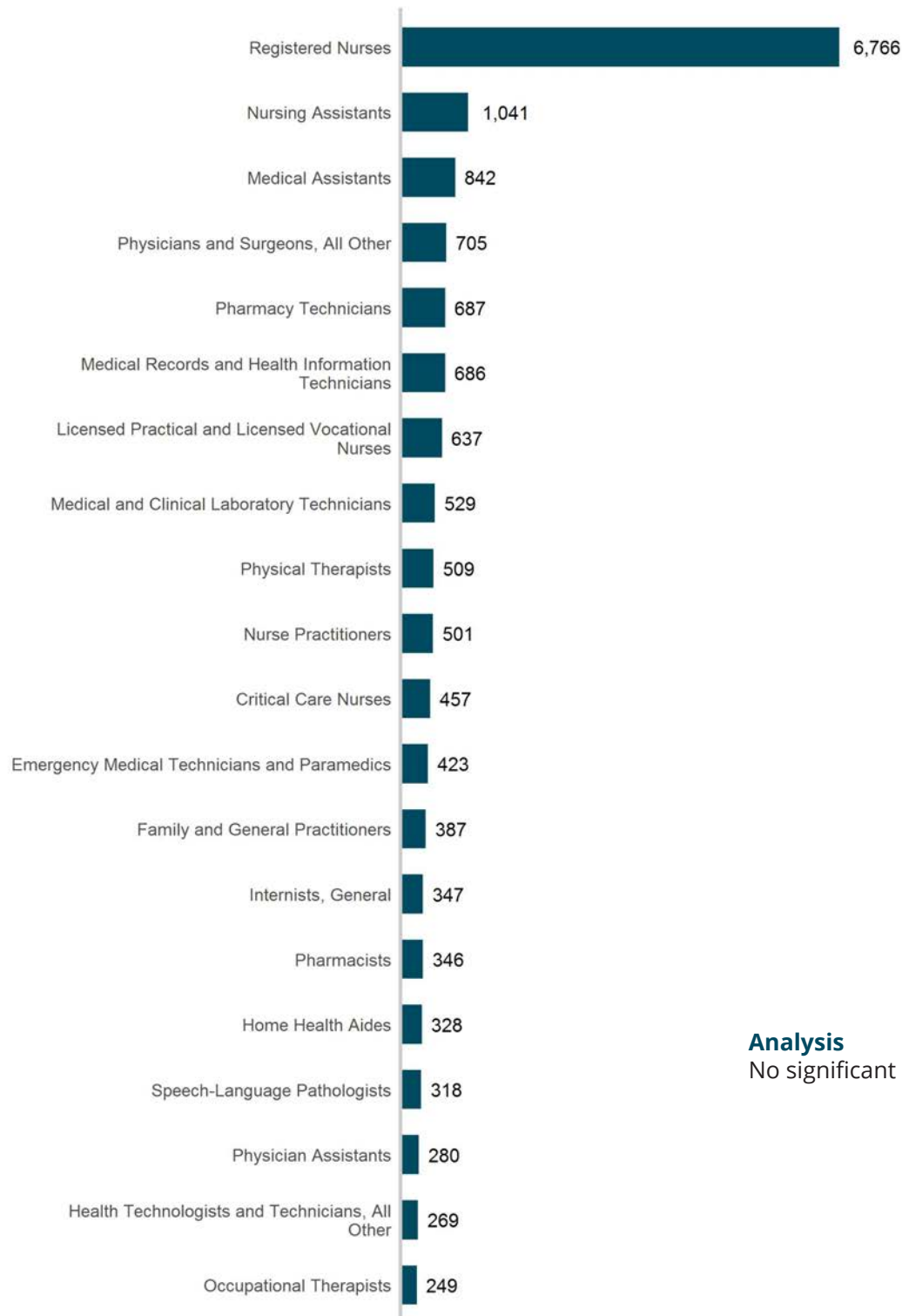


Job availabilities for most levels
of education



Average Salary: \$59,135

**Health Care
Top Jobs**
Quarter 3 2016



Analysis
No significant Change



20,099 Job Postings in Q3
2016

%

Stable Employment Demand at
record high of 244,755 workers

Health Care Educational Attainment Required

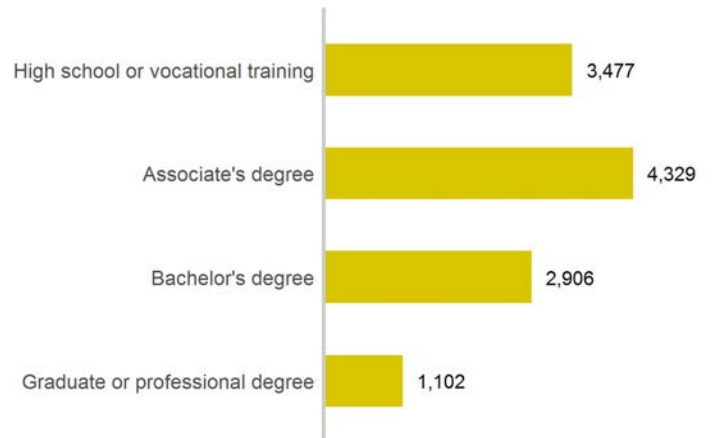
Educational attainment for the Health Care group is not uniform across occupations. Health Care careers are open to individuals across the educational attainment spectrum. Of course, higher paying positions such as registered nurses, physicians, and physical therapists require more education.

However, 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 of experience or fewer.

Areas of Study in-Demand Q3 2016

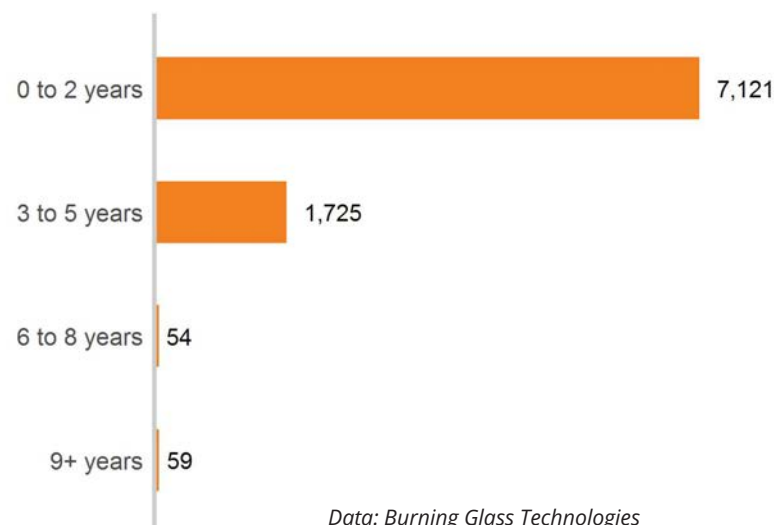
- Nursing Science
- Physical Therapy/Therapist
- Business Administration And Management
- Occupational Therapy/Therapist
- Public Health

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



CPR and ACLS Certifications in
high demand

45%

of postings are looking to fill
Full-time positions

Health Care in-Demand Skills

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 educate patients and families about treatment. Basic skills in planning, computers, and organization are necessary.

Technical in-Demand Skills

- Patient Care
- Treatment Planning
- Patient/Family Education and Instruction
- Cardiopulmonary Resuscitation (CPR)
- Scheduling

Foundational In-Demand Skills

- Communication Skills
- Team Work/ Collaboration
- Writing, English
- Organizational Skills
- Problem Solving

Job Type

- Full Time- 45.3%
- Part Time-7.6%
- Temp- 9.9%

Certifications In-Demand

- Registered Nurse
- First Aid CPR AED
- Nurse Practitioner
- Advanced Cardiac Life Support (ACLS) Certification
- Certified Nursing Assistant



Many entry-level positions
available



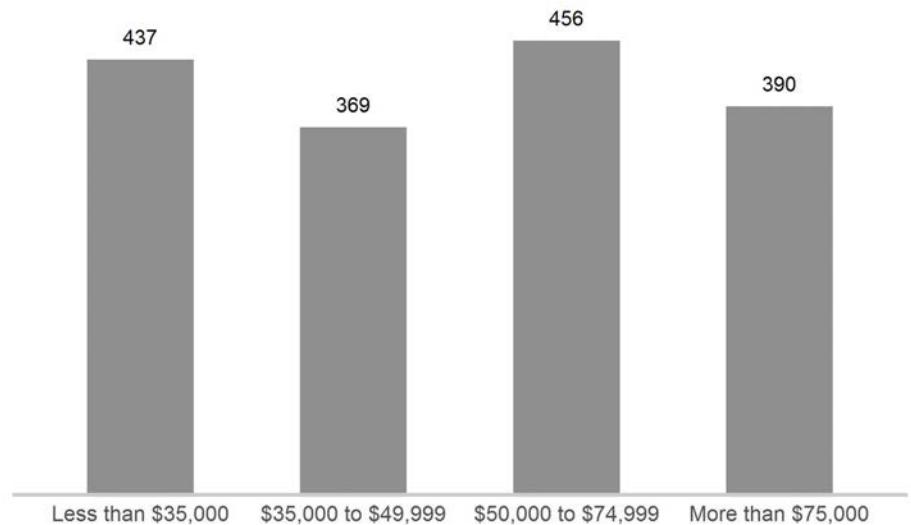
Skills in-demand: Patient Care,
Treatment Planning

Health Care Wages

Like educational attainment, salaries offered to Health Care workers vary. Higher wages are often available to workers with advanced education, but overall salary postings are evenly distributed across the spectrum. The average salary advertised in Health Care postings during Q3 2016 was \$59,135.

Advertised Wages in Job Postings

Quarter 3 2016



Wage Data from Bureau of Labor Statistics 2015

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

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
31-9092	Medical Assistants	\$10.53	\$12.07	\$13.83	\$16.16	\$18.59
29-1069	Physicians and Surgeons, All Other	\$28.85	\$48.69	\$82.63	\$97.98	\$152.21
29-2052	Pharmacy Technicians	\$9.26	\$11.38	\$14.08	\$16.71	\$19.00
29-2071	Medical Records and Health Information Technicians	\$11.70	\$14.01	\$17.78	\$21.89	\$25.65
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
29-1171	Nurse Practitioners	\$33.37	\$39.27	\$44.58	\$51.92	\$58.85

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Information Technology

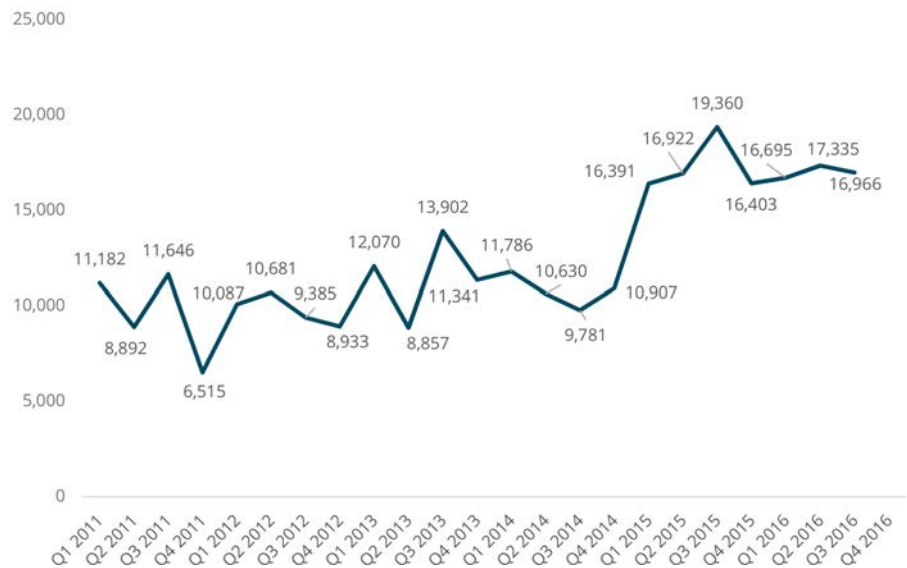
Introduction

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.

Job Posting Analysis

Following several quarters of steady growth, postings for IT workers decreased by 2 percent from 17,335 in Q2 2016 to 16,966 in Q3. Regardless, IT demand remains strong in the region.

Online Job Postings



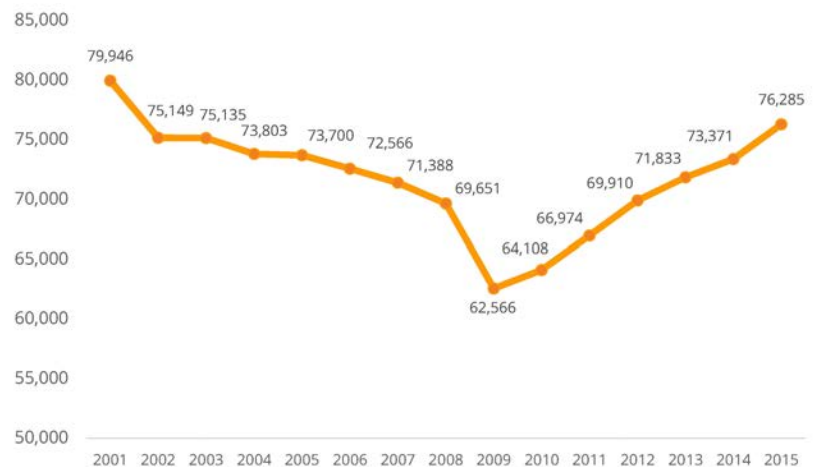
Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Analysis

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.

Employment Over Time

Quarter 3 2016



Data: EMSI, BLS
Analysis: Workforce Intelligence Network

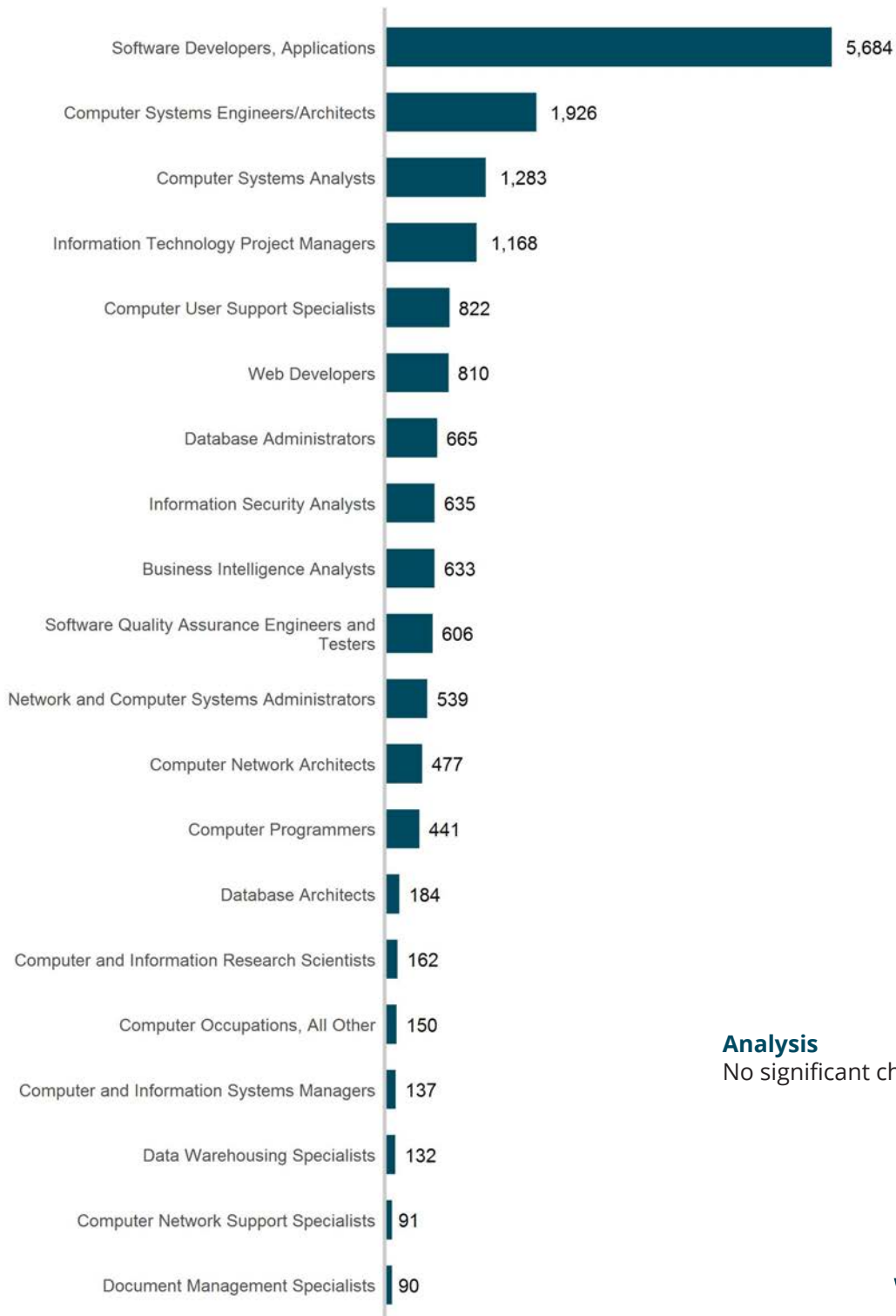


Average Advertised Salary:
\$85,662



Predominantly full time jobs
available

Information Technology Top Jobs Quarter 3 2016



Analysis
No significant change



Bachelor's degree preferred

%

16,966 IT job postings in Q3

Information Technology Educational Attainment Required

Of the employers that posted required educational attainment for IT jobs, almost all require workers to have a Bachelor's degree. About 1,400 Q3 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.

Areas of Study in-Demand Q3 2016

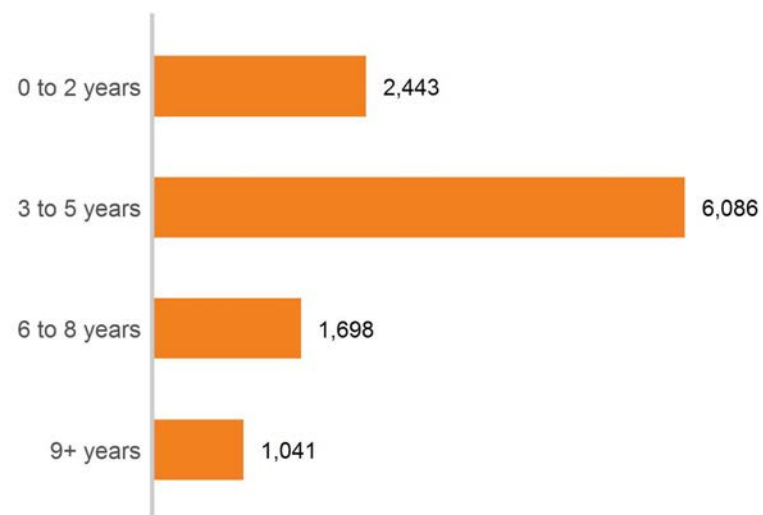
- Computer Science
- Engineering
- Electrical And Electronic Engineering Technologies/Technicians, Other
- Computer Engineering
- Mechanical Engineering

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Factoid can go here but should only be two lines

%

Factoid can go here but should only be two lines

Information Technology in-Demand Skills

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 including JAVA, SQL query, and HTML. Supervisory skills such as project management were also present in many postings. In-demand foundational skills include communications, writing, and customer service.

Technical in-Demand Skills

- Software Development
- SQL
- Project Management
- JAVA
- Software Engineering

Foundational In-Demand Skills

- Communication Skills
- Writing
- Problem Solving
- Troubleshooting
- Team Work/ Collaboration

Job Type

- Full Time- 51.6%
- Part Time- 1.4%
- Temp- 4.1%

Certifications In-Demand

- Project Management Certification (E.G. PMP)
- Certified Information Systems Security Professional (CISSP)
- American Board for Engineering and Technology (ABET) Accredited
- Six Sigma Certification
- Security Clearance



Software Developers most in-demand occupation



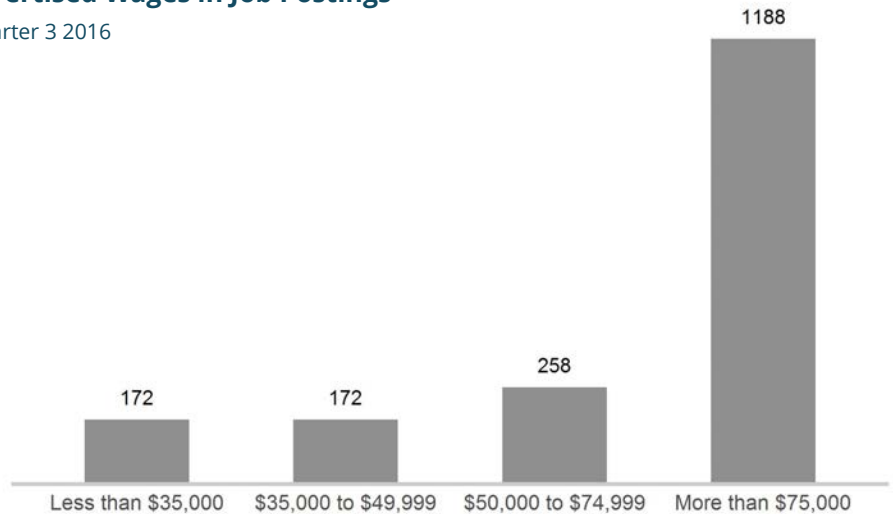
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Information Technology Wages

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 Q3 2016 was \$85,662, slightly lower than the Q2 average of \$86,462 but still well above average for workers overall.

Advertised Wages in Job Postings

Quarter 3 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
15-1134	Web Developers	\$18.26	\$22.41	\$29.30	\$37.46	\$45.63
15-1141	Database Administrators	\$23.68	\$31.25	\$40.92	\$49.92	\$58.00
15-1122	Information Security Analysts	\$23.99	\$28.40	\$39.21	\$48.71	\$57.13
15-1199	Business Intelligence Analysts	\$23.30	\$30.60	\$38.96	\$49.35	\$57.64
15-1199	Software Quality Assurance Engineers and Testers	\$23.30	\$30.60	\$38.96	\$49.35	\$57.64

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Skilled Trades & Technicians (Manufacturing Focused)

Introduction

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

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

Job Posting Analysis

Skilled trade job ads grew 6 percent between Q2 and Q3 2016, gaining 252 postings for a total of 4,755. Despite volatility during 2016, there were 346 more Skilled Trades postings this quarter than the same time in 2015. This puts the group about on par with the steady growth trend witnessed during 2014 and 2015.

Employment Analysis

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.

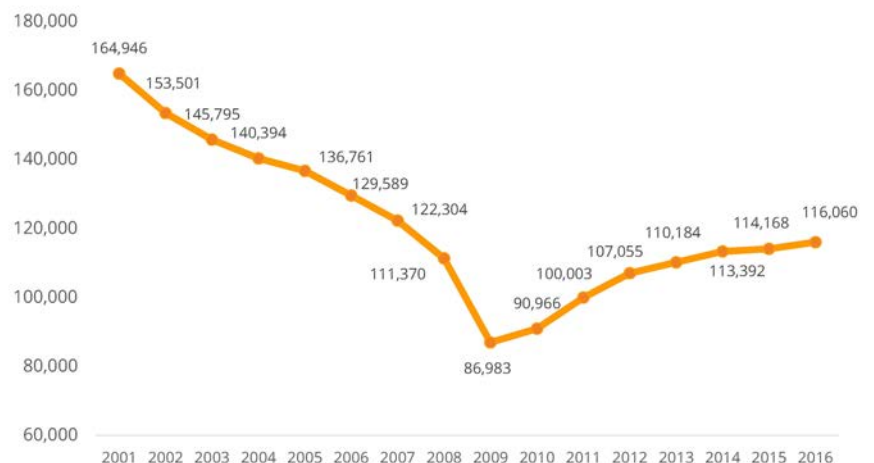
Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time

Quarter 3 2016



Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Total of 5,755 skilled trades and technicians postings

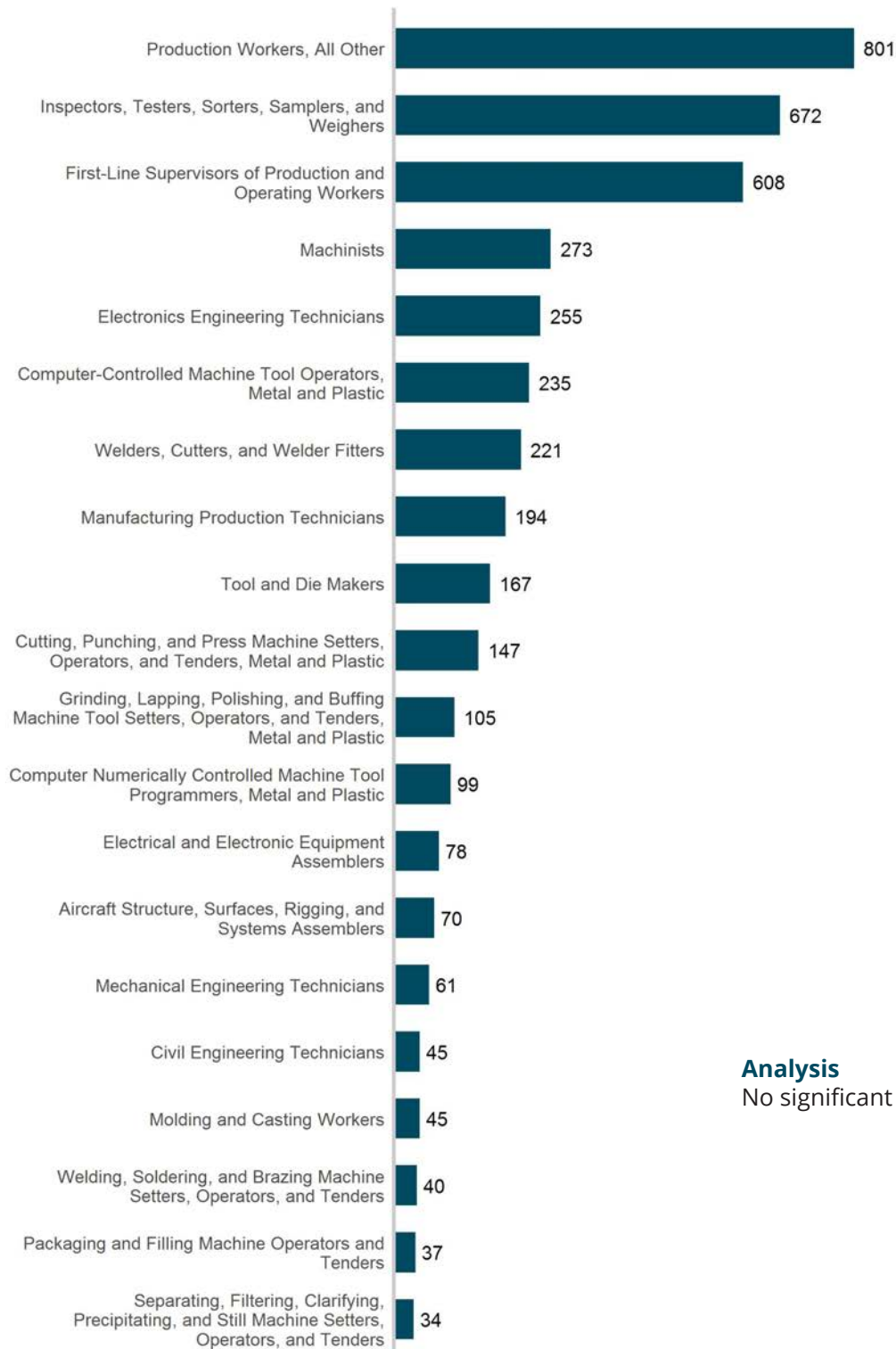


Production workers: Top in-demand job

Skilled Trades & Technicians

Top Jobs

Quarter 3 2016



Analysis

No significant change



Entry level positions available

%

Knowledge Area:
Engineering

Skilled Trades & Technicians Educational Attainment Required

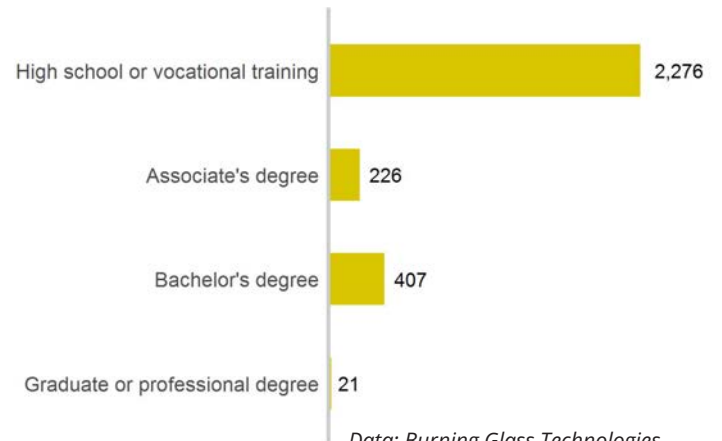
Most positions in the Skilled Trades and Technicians occupation group require specialized training. While employers do not generally require a degree, many seek workers with a certificate, registered apprenticeship, or other specialized training.

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

Areas of Study in-Demand Q3 2016

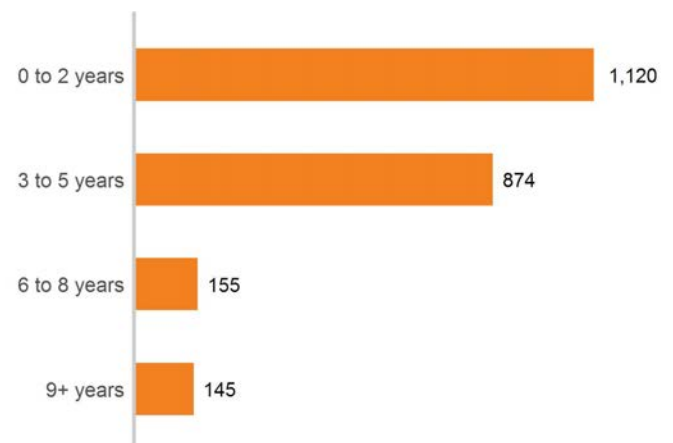
- Engineering
- Mechanical Engineering
- Electrical And Electronic Engineering Technologies/Technicians, Other
- Business Administration And Management
- Computer Science

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Certifications in-demand:
Forklift Operator and Welding

65%
of job postings are for full time
positions

Skilled Trades & Technicians in-Demand Skills

Workers in Skilled Trade and Technician positions must have a combination of technical and foundational skills. Employers during Q3 2016 were most in-demand of CNC machining, inspection, repair, and welding skills. Mathematics skills and scheduling ability 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, repair
- Computer Numerical Control (CNC)
- Machining
- Scheduling
- Welding

Foundational In-Demand Skills

- Communication Skills
- Detail-Oriented
- Writing
- Physical Demand
- Problem Solving, Mathematics

Job Type

- Full Time- 64.9%
- Part Time- 2.2%
- Temp- 10.6%

Certifications In-Demand

- Forklift Operator Certification
- Welding Certification (E.G AWS Certified Welder)
- Commercial Driver's License
- Automotive Service Excellence (ASE) Certification
- Certified Registered Central Service Technician



Average Advertised Wage:
\$36,626



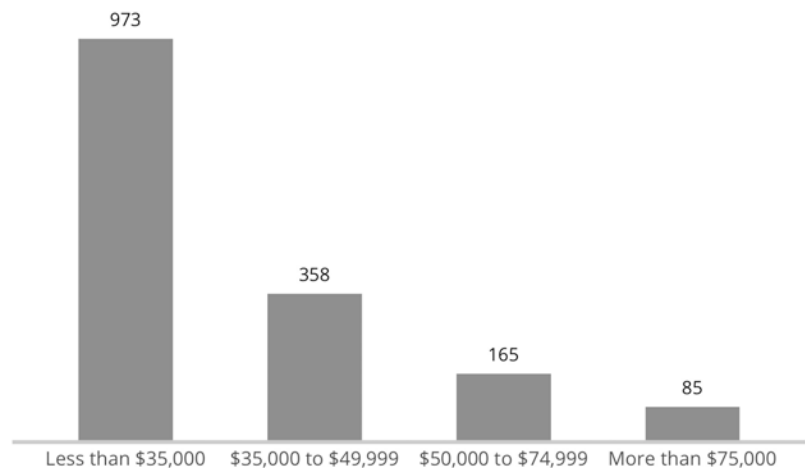
Manufacturing Production
Technicians offer high wage potential

Skilled Trades & Technicians Wages

About 70 percent of employers did not post wages or salaries in job postings for Skilled Trade and Technician workers. Of those that did, 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 Q3 2016 was \$36,626.

Advertised Wages in Job Postings

Quarter 3 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
51-4041	Machinists	\$12.08	\$15.37	\$19.57	\$25.29	\$30.40
17-3023	Electronics Engineering Technicians	\$15.36	\$19.52	\$24.83	\$31.34	\$36.25
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) 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.

Job Posting Analysis

Demand for TDL workers, specifically truck drivers, has made TDL the region's fastest growing occupation group in terms of employer demand. Between Q2 and Q3 2016 postings for TDL workers increased by 19 percent, or 2,168 postings. Job ads have reached yet another record high with 13,548 job ads in the region during Q3 2016. This recent growth is part of a long running trend of rapidly increasing demand for TDL workers.

Employment Analysis

Employment in TDL jobs has grown 15 percent 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.

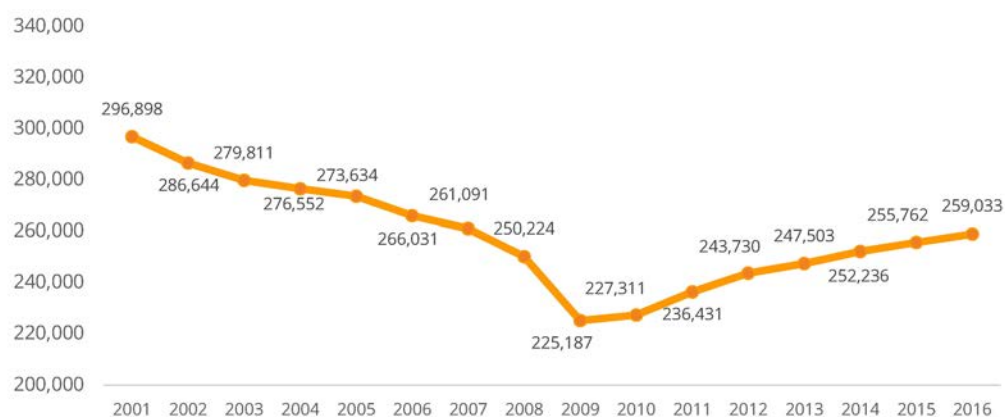
Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time

Quarter 3 2016



Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Postings increased by 19% to
Q3



13,548 TDL job postings in
WIN region

Transportation, Distribution, and Logistics (TDL)

Top Jobs

Quarter 3 2016



Analysis

No significant changes.



In-Demand Certification: Commercial Driver's License

25%
of postings are for Full-Time
positions

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

Many TDL jobs require specialized training and certifications for employment, with many employers seeking workers with vocational training. Jobs in management and logistics analytics often require a Bachelor's degree.

TDL employers have many open positions at the entry-level, with the majority of postings specifying entry level experience (0 to 2 years) as suitable, while about a quarter as many ads prefer workers with three to five years.

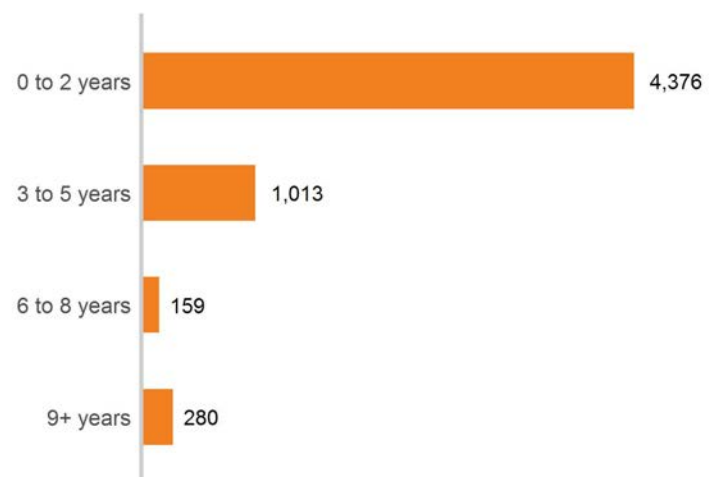
Areas of Study in-Demand Q3 2016

- Business Administration And Management
- Logistics, Materials, And Supply Chain Management
- Engineering
- Computer Science
- Mechanical Engineering

Educational Attainment



Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Over 1,700 jobs posted
salaries over \$75,000



Average posted salary:
\$66,694

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

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
- Customer service
- Forklift Operation
- Microsoft Office
- Auto repair

Foundational In-Demand Skills

- Communication Skills
- Ability to perform physical labor
- Organizational Skills, Detail-Oriented
- Writing
- Problem Solving

Job Type

- Full Time- 25.2%
- Part Time- 2.9%
- Temp- 5.5%

Certifications In-Demand

- CDL Class A, CDL Class B, Commercial Driver's License
- Automotive Service Excellence (ASE) Certification
- Forklift Operator Certification
- Air Brake Certified
- Hazardous Materials Certification



Entry level positions widely available



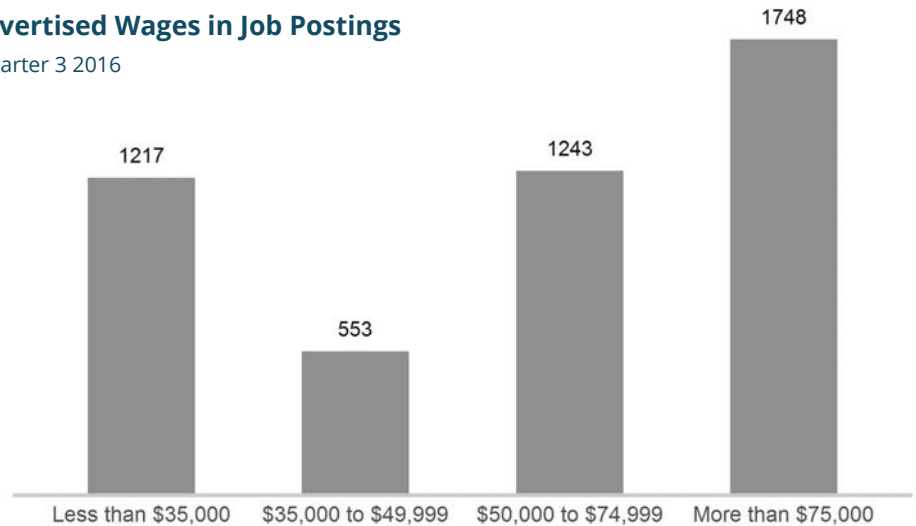
Over 9,000 postings for Truck Drivers

Transportation, Distribution, and Logistics (TDL) Wages

Wages for TDL workers vary widely between specific occupations. Most jobs offer wages either above \$50,000 or below \$35,000 with little in between. There are many high paying (over \$75,000 annually) positions in logistics and truck driving. These jobs are in high demand and require specialized training and/or higher education. Lower wage jobs include those in materials movement. The average wage in postings during Q3 2016 was \$66,694, slightly greater than the Q2 average of \$65,239. This quarter, over 1,700 positions posted offer wages over \$75,000.

Advertised Wages in Job Postings

Quarter 3 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
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
53-7051	Industrial Truck and Tractor Operators	\$9.94	\$12.22	\$15.80	\$21.01	\$24.94
13-1081	Logisticians	\$24.70	\$31.09	\$39.75	\$47.19	\$54.63
15-1199	Data Warehousing Specialists	\$23.30	\$30.60	\$38.96	\$49.35	\$57.64
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
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 Sept 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	2,748,561	64,373	2.4%
Employment	2,380,682	2,382,010	2,413,125	2,446,491	2,486,445	2,526,698	2,605,450	78,752	3.1%
Unemployment	367,888	292,593	257,194	253,368	211,643	157,490	143,111	-14,379	-9.1%
Unemployment Rate	13.4%	10.9%	9.6%	9.4%	7.8%	5.9%	5.2%	-0.7%	na

**Note: Monthly data averaged by year*

Data: Bureau of Labor Statistics

Quarterly Labor Market Data

	3rd Quarter 2015	4th Quarter 2015	1st Quarter 2016	2nd Quarter 2016	3rd Quarter 2016	Change from 2nd Quarter 2016	Percent Change from 2nd Quarter 2016	One-Year Change from 3rd Quarter 2015	One-Year Percent Change from 3rd Quarter 2015
Labor Force	2,695,813	2,688,123	2,724,484	2,746,001	2,775,197	29,196	1.1%	79,384	2.9%
Employment	2,532,827	2,552,065	2,580,366	2,613,162	2,622,821	9,659	0.4%	89,994	3.6%
Unemployment	162,986	136,058	144,118	132,839	152,376	19,537	14.7%	-10,610	-6.5%
Unemployment Rate	6.0%	5.1%	5.3%	4.8%	5.5%	0.7%	na	-0.6%	na

**Note: Monthly data averaged by quarter*

Data: Bureau of Labor Statistics












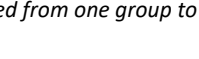
Monthly Labor Market Data

	July 2015	August 2015	September 2015	October 2015	November 2015	December 2015	January 2016	February 2016	March 2016	April 2016	May 2016	June 2017	July 2017	August 2017	September 2017
Labor Force	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	2,722,576	2,753,158	2,762,268	2,775,654	2,774,234	2,775,703
Employment	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	2,603,323	2,623,810	2,612,352	2,613,412	2,618,291	2,636,760
Unemployment	190,697	159,201	139,060	148,840	126,103	133,232	145,467	140,880	146,007	119,253	129,348	149,916	162,242	155,943	138,943
Unemployment Rate	7.0%	5.9%	5.2%	5.5%	4.7%	5.0%	5.4%	5.2%	5.3%	4.4%	4.7%	5.4%	5.8%	5.6%	5.0%

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

Data: Bureau of Labor Statistics



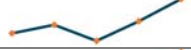
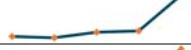





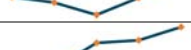





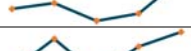

Job Posting Data by Occupation Group* Over Time

	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Change Over Time	Annual Change Q3 2015-Q3 2016	Quarter Growth Q1 2016-Q3 2016
Total Postings	129,794	140,225	126,959	139,765	149,379		15.1%	17.7%
Agriculture	1,644	1,578	1,426	1,835	1,776		8.0%	24.5%
Business & finance	9,437	10,547	8,884	9,011	9,044		-4.2%	1.8%
Construction	1,096	1,183	917	1,281	1,492		36.1%	62.7%
Customer service	25,802	30,285	27,235	30,303	34,218		32.6%	25.6%
Education	2,227	2,584	2,219	2,114	3,034		36.2%	36.7%
Energy	224	264	211	272	259		15.6%	22.7%
Engineers & designers	9,753	10,433	9,675	9,454	8,977		-8.0%	-7.2%
Health care	17,394	17,110	17,666	17,880	20,099		15.6%	13.8%
Information technology	16,922	19,360	16,403	17,335	16,966		0.3%	3.4%
Skilled trades & technicians	3,961	4,409	3,675	4,503	4,755		20.0%	29.4%
Transportation, distribution, and logistics	9,901	8,405	7,909	11,380	13,548		36.8%	71.3%

**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.*









Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Total Job Postings: WIN Partnership

	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Share of Q3 2016 Total	Change Over Time	Annual Change Q3 2015-Q3 2016	Quarter Growth Q1 2016-Q3 2016
WIN-Region Total	129,794	140,225	126,959	139,765	149,379	100.0%		15.1%	17.7%
Detroit	27,742	30,426	27,966	28,456	29,905	20.4%		7.8%	6.9%
Genesee & Shiawassee	5,071	5,465	4,721	5,631	6,667	4.0%		31.5%	41.2%
Hillsdale & Lenawee	1,495	1,467	1,580	1,606	2,329	1.1%		55.8%	47.4%
Jackson	2,415	2,373	2,099	2,181	2,618	1.6%		8.4%	24.7%
Livingston	2,151	2,274	2,048	2,162	2,727	1.5%		26.8%	33.2%
Macomb	13,586	14,136	12,658	14,257	15,085	10.2%		11.0%	19.2%
Monroe	1,871	1,778	1,662	1,694	3,196	1.2%		70.8%	92.3%
Oakland	40,219	44,474	39,030	43,058	42,873	30.8%		6.6%	9.8%
St. Clair	1,807	1,697	1,461	1,788	2,259	1.3%		25.0%	54.6%
Thumb Area	1,208	1,199	1,561	1,598	1,783	1.1%		47.6%	14.2%
Washtenaw	11,192	11,812	10,540	11,020	11,232	7.9%		0.4%	6.6%
Wayne	50,930	55,824	51,993	54,770	58,610	39.2%		15.1%	12.7%
Outer Wayne	23,188	25,398	24,027	26,314	28,705	18.8%		23.8%	19.5%
Prosperity Region 6	8,086	8,361	7,743	9,017	10,709	6.5%		32.4%	38.3%
Prosperity Region 9	19,124	19,704	17,929	18,663	22,102	13.4%		15.6%	23.3%
Prosperity Region 10	104,735	114,434	103,681	112,085	116,568	80.2%		11.3%	12.4%


















Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Agriculture Job Postings: WIN Partnership

	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Share of Q3 2016 Total	Change Over Time	Annual Change Q3 2015-Q3 2016	Quarter Growth Q1 2016-Q3 2016
WIN-Region Total	1,644	1,578	1,426	1,835	1,776	100.0%		8.0%	24.5%
Detroit	353	375	316	384	351	20.9%		-0.6%	11.1%
Genesee & Shiawassee	90	73	50	94	86	5.1%		-4.4%	72.0%
Hillsdale & Lenawee	22	15	7	18	26	1.0%		18.2%	271.4%
Jackson	19	21	35	33	19	1.8%		0.0%	-45.7%
Livingston	45	34	32	61	51	3.3%		13.3%	59.4%
Macomb	148	134	119	187	149	10.2%		0.7%	25.2%
Monroe	26	23	20	24	30	1.3%		15.4%	50.0%
Oakland	438	438	415	520	534	28.3%		21.9%	28.7%
St. Clair	27	23	14	33	20	1.8%		-25.9%	42.9%
Thumb Area	24	23	15	28	30	1.5%		25.0%	100.0%
Washtenaw	183	186	163	197	175	10.7%		-4.4%	7.4%
Wayne	622	608	556	640	656	34.9%		5.5%	18.0%
Outer Wayne	269	233	240	256	305	14.0%		13.4%	27.1%
Prosperity Region 6	141	119	79	155	136	8.4%		-3.5%	72.2%
Prosperity Region 9	295	279	257	333	301	18.1%		2.0%	17.1%
Prosperity Region 10	1,208	1,180	1,090	1,347	1,339	73.4%		10.8%	22.8%


















Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Business and Finance Job Postings: WIN Partnership

	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Share of Q3 2016 Total	Change Over Time	Annual Change Q3 2015-Q3 2016	Quarter Growth Q1 2016-Q3 2016
WIN-Region Total	9,437	10,547	8,884	9,011	9,044	100.0%		-4.2%	1.8%
Detroit	2,449	2,843	2,271	2,300	2,411	25.5%		-1.6%	6.2%
Genesee & Shiawassee	193	228	217	185	171	2.1%		-11.4%	-21.2%
Hillsdale & Lenawee	34	50	42	55	55	0.6%		61.8%	31.0%
Jackson	146	157	123	133	155	1.5%		6.2%	26.0%
Livingston	65	104	87	95	108	1.1%		66.2%	24.1%
Macomb	664	737	616	587	645	6.5%		-2.9%	4.7%
Monroe	119	108	133	112	169	1.2%		42.0%	27.1%
Oakland	3,432	3,730	3,165	3,273	3,017	36.3%		-12.1%	-4.7%
St. Clair	43	79	45	72	89	0.8%		107.0%	97.8%
Thumb Area	24	22	36	39	40	0.4%		66.7%	11.1%
Washtenaw	781	824	592	684	689	7.6%		-11.8%	16.4%
Wayne	3,936	4,508	3,828	3,776	3,906	41.9%		-0.8%	2.0%
Outer Wayne	1,487	1,665	1,557	1,476	1,495	16.4%		0.5%	-4.0%
Prosperity Region 6	260	329	298	296	300	3.3%		15.4%	0.7%
Prosperity Region 9	1,145	1,243	977	1,079	1,176	12.0%		2.7%	20.4%
Prosperity Region 10	8,032	8,975	7,609	7,636	7,568	84.7%		-5.8%	-0.5%













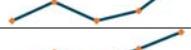

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Construction Job Postings: WIN Partnership

	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Share of Q3 2016 Total	Change Over Time	Annual Change Q3 2015-Q3 2016	Quarter Growth Q1 2016-Q3 2016
WIN-Region Total	1,096	1,183	917	1,281	1,492	100.0%		36.1%	62.7%
Detroit	204	236	220	215	261	16.8%		27.9%	18.6%
Genesee & Shiawassee	37	81	46	87	89	6.8%		140.5%	93.5%
Hillsdale & Lenawee	21	17	20	13	32	1.0%		52.4%	60.0%
Jackson	29	34	23	29	43	2.3%		48.3%	87.0%
Livingston	44	40	36	48	40	3.7%		-9.1%	11.1%
Macomb	147	162	102	176	184	13.7%		25.2%	80.4%
Monroe	14	19	14	31	28	2.4%		100.0%	100.0%
Oakland	331	310	228	329	414	25.7%		25.1%	81.6%
St. Clair	22	12	4	16	24	1.2%		9.1%	500.0%
Thumb Area	78	109	72	33	36	2.6%		-53.8%	-50.0%
Washtenaw	80	111	80	132	100	10.3%		25.0%	25.0%
Wayne	352	381	342	387	502	30.2%		42.6%	46.8%
Outer Wayne	148	145	122	172	241	13.4%		62.8%	97.5%
Prosperity Region 6	137	202	122	136	149	10.6%		8.8%	22.1%
Prosperity Region 9	188	221	173	253	243	19.8%		29.3%	40.5%
Prosperity Region 10	830	853	672	892	1,100	69.6%		32.5%	63.7%











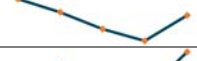






Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Customer Service Job Postings: WIN Partnership

	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Share of Q3 2016 Total	Change Over Time	Annual Change Q3 2015-Q3 2016	Quarter Growth Q1 2016-Q3 2016
WIN-Region Total	25,802	30,285	27,235	30,303	34,218	100.0%		32.6%	25.6%
Detroit	4,485	4,919	4,857	5,240	5,415	17.3%		20.7%	11.5%
Genesee & Shiawassee	1,206	1,570	1,170	1,417	1,698	4.7%		40.8%	45.1%
Hillsdale & Lenawee	288	372	332	339	464	1.1%		61.1%	39.8%
Jackson	470	534	451	465	560	1.5%		19.1%	24.2%
Livingston	591	699	660	665	857	2.2%		45.0%	29.8%
Macomb	2,609	3,171	2,826	3,260	3,792	10.8%		45.3%	34.2%
Monroe	407	425	355	414	567	1.4%		39.3%	59.7%
Oakland	8,277	9,717	8,642	9,403	10,413	31.0%		25.8%	20.5%
St. Clair	474	543	386	405	474	1.3%		0.0%	22.8%
Thumb Area	239	339	239	323	366	1.1%		53.1%	53.1%
Washtenaw	2,101	2,361	2,057	2,255	2,584	7.4%		23.0%	25.6%
Wayne	9,140	10,554	10,117	11,357	12,443	37.5%		36.1%	23.0%
Outer Wayne	4,655	5,635	5,260	6,117	7,028	20.2%		51.0%	33.6%
Prosperity Region 6	1,919	2,452	1,795	2,145	2,538	7.1%		32.3%	41.4%
Prosperity Region 9	3,857	4,391	3,855	4,138	5,032	13.7%		30.5%	30.5%
Prosperity Region 10	20,026	23,442	21,585	24,020	26,648	79.3%		33.1%	23.5%












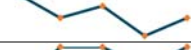


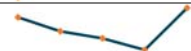


Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Education Job Postings: WIN Partnership

	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Share of Q3 2016 Total	Change Over Time	Annual Change Q3 2015-Q3 2016	Quarter Growth Q1 2016-Q3 2016
WIN-Region Total	2,227	2,584	2,219	2,114	3,034	100.0%		36.2%	36.7%
Detroit	698	482	404	413	391	19.5%		-44.0%	-3.2%
Genesee & Shiawassee	122	231	201	207	257	9.8%		110.7%	27.9%
Hillsdale & Lenawee	19	30	14	29	68	1.4%		257.9%	385.7%
Jackson	42	45	36	45	80	2.1%		90.5%	122.2%
Livingston	12	15	12	16	43	0.8%		258.3%	258.3%
Macomb	1,875	196	217	161	306	7.6%		-83.7%	41.0%
Monroe	28	53	24	48	58	2.3%		107.1%	141.7%
Oakland	528	728	566	543	796	25.7%		50.8%	40.6%
St. Clair	22	24	15	13	49	0.6%		122.7%	226.7%
Thumb Area	18	36	15	13	79	0.6%		338.9%	426.7%
Washtenaw	327	255	259	259	347	12.3%		6.1%	34.0%
Wayne	1,060	971	860	780	951	36.9%		-10.3%	10.6%
Outer Wayne	362	489	456	367	560	17.4%		54.7%	22.8%
Prosperity Region 6	162	291	231	233	385	11.0%		137.7%	66.7%
Prosperity Region 9	428	398	345	397	596	18.8%		39.3%	72.8%
Prosperity Region 10	3,463	1,895	1,643	1,484	2,053	70.2%		-40.7%	25.0%





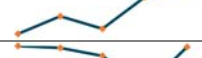

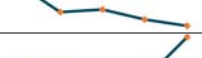
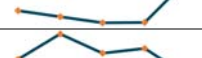









Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Energy Job Postings: WIN Partnership

	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Share of Q3 2016 Total	Change Over Time	Annual Change Q3 2015-Q3 2016	Quarter Growth Q1 2016-Q3 2016
WIN-Region Total	224	264	211	272	259	100.0%		15.6%	22.7%
Detroit	71	157	118	129	87	47.4%		22.5%	-26.3%
Genesee & Shiawassee	7	3	0	49	0	18.0%		-100.0%	N/A
Hillsdale & Lenawee	1	2	0	1	0	0.4%		-100.0%	N/A
Jackson	11	20	8	12	21	4.4%		90.9%	162.5%
Livingston	2	1	2	4	0	1.5%		-100.0%	-100.0%
Macomb	12	6	10	17	4	6.3%		-66.7%	-60.0%
Monroe	47	19	25	26	93	9.6%		97.9%	272.0%
Oakland	19	5	7	7	3	2.6%		-84.2%	-57.1%
St. Clair	8	7	8	5	7	1.8%		-12.5%	-12.5%
Thumb Area	9	5	7	2	5	0.7%		-44.4%	-28.6%
Washtenaw	3	5	5	4	5	1.5%		66.7%	0.0%
Wayne	101	181	139	145	121	53.3%		19.8%	-12.9%
Outer Wayne	30	24	21	16	34	5.9%		13.3%	61.9%
Prosperity Region 6	24	15	15	56	12	20.6%		-50.0%	-20.0%
Prosperity Region 9	64	47	40	47	119	17.3%		85.9%	197.5%
Prosperity Region 10	132	192	156	169	128	62.1%		-3.0%	-17.9%














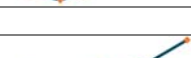


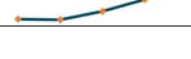
Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Engineers & Designers Job Postings: WIN Partnership

	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Share of Q3 2016 Total	Change Over Time	Annual Change Q3 2015-Q3 2016	Quarter Growth Q1 2016-Q3 2016
WIN-Region Total	9,753	10,433	9,675	9,454	8,977	100.0%		-8.0%	-7.2%
Detroit	1,214	1,378	1,298	1,057	1,273	11.2%		4.9%	-1.9%
Genesee & Shiawassee	101	108	97	123	99	1.3%		-2.0%	2.1%
Hillsdale & Lenawee	51	43	30	49	70	0.5%		37.3%	133.3%
Jackson	85	109	92	135	142	1.4%		67.1%	54.3%
Livingston	86	84	76	44	85	0.5%		-1.2%	11.8%
Macomb	1,584	1,266	1,294	1,181	1,108	12.5%		-30.1%	-14.4%
Monroe	107	91	75	76	187	0.8%		74.8%	149.3%
Oakland	3,822	4,324	3,941	4,039	3,493	42.7%		-8.6%	-11.4%
St. Clair	63	41	50	59	70	0.6%		11.1%	40.0%
Thumb Area	104	72	75	36	25	0.4%		-76.0%	-66.7%
Washtenaw	480	516	469	480	374	5.1%		-22.1%	-20.3%
Wayne	3,333	3,820	3,526	3,232	3,324	34.2%		-0.3%	-5.7%
Outer Wayne	2,119	2,442	2,228	2,175	2,051	23.0%		-3.2%	-7.9%
Prosperity Region 6	268	221	222	218	194	2.3%		-27.6%	-12.6%
Prosperity Region 9	809	843	742	784	858	8.3%		6.1%	15.6%
Prosperity Region 10	8,739	9,410	8,761	8,452	7,925	89.4%		-9.3%	-9.5%










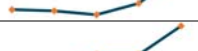







Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Health Care Job Postings: WIN Partnership

	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Share of Q3 2016 Total	Change Over Time	Annual Change Q3 2015-Q3 2016	Quarter Growth Q1 2016-Q3 2016
WIN-Region Total	17,394	17,110	17,666	17,880	20,099	100.0%		15.6%	13.8%
Detroit	4,467	4,531	4,908	5,123	5,403	28.7%		21.0%	10.1%
Genesee & Shiawassee	889	865	868	976	1,197	5.5%		34.6%	37.9%
Hillsdale & Lenawee	308	251	351	199	234	1.1%		-24.0%	-33.3%
Jackson	336	293	328	242	305	1.4%		-9.2%	-7.0%
Livingston	336	296	246	210	261	1.2%		-22.3%	6.1%
Macomb	1,875	1,933	1,936	1,839	2,055	10.3%		9.6%	6.1%
Monroe	277	200	178	110	647	0.6%		133.6%	263.5%
Oakland	4,146	4,183	3,937	4,205	4,291	23.5%		3.5%	9.0%
St. Clair	285	299	312	365	466	2.0%		63.5%	49.4%
Thumb Area	266	198	332	271	306	1.5%		15.0%	-7.8%
Washtenaw	1,692	1,737	1,692	1,614	1,778	9.0%		5.1%	5.1%
Wayne	6,984	6,855	7,486	7,849	8,559	43.9%		22.6%	14.3%
Outer Wayne	2,517	2,324	2,578	2,726	3,156	15.2%		25.4%	22.4%
Prosperity Region 6	1,440	1,362	1,512	1,612	1,969	9.0%		36.7%	30.2%
Prosperity Region 9	2,949	2,777	2,795	2,375	3,225	13.3%		9.4%	15.4%
Prosperity Region 10	13,005	12,971	13,359	13,893	14,905	77.7%		14.6%	11.6%










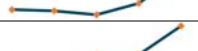







Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Information Technology Job Postings: WIN Partnership

	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Share of Q3 2016 Total	Change Over Time	Annual Change Q3 2015-Q3 2016	Quarter Growth Q1 2016-Q3 2016
WIN-Region Total	16,922	19,360	16,403	17,335	16,966	100.0%		0.3%	3.4%
Detroit	4,554	5,770	4,459	4,285	4,375	24.7%		-3.9%	-1.9%
Genesee & Shiawassee	209	168	130	208	223	1.2%		6.7%	71.5%
Hillsdale & Lenawee	31	43	52	32	67	0.2%		116.1%	28.8%
Jackson	193	147	143	124	154	0.7%		-20.2%	7.7%
Livingston	46	58	72	70	95	0.4%		106.5%	31.9%
Macomb	1,337	1,169	1,039	1,336	1,300	7.7%		-2.8%	25.1%
Monroe	117	97	82	70	95	0.4%		-18.8%	15.9%
Oakland	6,190	6,998	5,824	6,100	5,712	35.2%		-7.7%	-1.9%
St. Clair	30	28	21	41	95	0.2%		216.7%	352.4%
Thumb Area	16	14	20	20	33	0.1%		106.3%	65.0%
Washtenaw	1,554	1,749	1,446	1,499	1,207	8.6%		-22.3%	-16.5%
Wayne	7,199	8,871	7,588	7,835	8,018	45.2%		11.4%	5.7%
Outer Wayne	2,645	3,101	3,129	3,550	3,643	20.5%		37.7%	16.4%
Prosperity Region 6	255	210	171	269	351	1.6%		37.6%	105.3%
Prosperity Region 9	1,941	2,094	1,795	1,795	1,618	10.4%		-16.6%	-9.9%
Prosperity Region 10	14,726	17,038	14,451	15,271	15,030	88.1%		2.1%	4.0%















Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Information Technology Job Postings: WIN Partnership

	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Share of Q3 2016 Total	Change Over Time	Annual Change Q3 2015-Q3 2016	Quarter Growth Q1 2016-Q3 2016
WIN-Region Total	16,922	19,360	16,403	17,335	16,966	100.0%		0.3%	3.4%
Detroit	4,554	5,770	4,459	4,285	4,375	24.7%		-3.9%	-1.9%
Genesee & Shiawassee	209	168	130	208	223	1.2%		6.7%	71.5%
Hillsdale & Lenawee	31	43	52	32	67	0.2%		116.1%	28.8%
Jackson	193	147	143	124	154	0.7%		-20.2%	7.7%
Livingston	46	58	72	70	95	0.4%		106.5%	31.9%
Macomb	1,337	1,169	1,039	1,336	1,300	7.7%		-2.8%	25.1%
Monroe	117	97	82	70	95	0.4%		-18.8%	15.9%
Oakland	6,190	6,998	5,824	6,100	5,712	35.2%		-7.7%	-1.9%
St. Clair	30	28	21	41	95	0.2%		216.7%	352.4%
Thumb Area	16	14	20	20	33	0.1%		106.3%	65.0%
Washtenaw	1,554	1,749	1,446	1,499	1,207	8.6%		-22.3%	-16.5%
Wayne	7,199	8,871	7,588	7,835	8,018	45.2%		11.4%	5.7%
Outer Wayne	2,645	3,101	3,129	3,550	3,643	20.5%		37.7%	16.4%
Prosperity Region 6	255	210	171	269	351	1.6%		37.6%	105.3%
Prosperity Region 9	1,941	2,094	1,795	1,795	1,618	10.4%		-16.6%	-9.9%
Prosperity Region 10	14,726	17,038	14,451	15,271	15,030	88.1%		2.1%	4.0%


















Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Skilled Trade & Technician Job Postings: WIN Partnership

	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Share of Q3 2016 Total	Change Over Time	Annual Change Q3 2015-Q3 2016	Quarter Growth Q1 2016-Q3 2016
WIN-Region Total	3,961	4,409	3,675	4,503	4,755	100.0%		20.0%	29.4%
Detroit	419	503	443	446	494	9.9%		17.9%	11.5%
Genesee & Shiawassee	118	138	155	167	201	3.7%		70.3%	29.7%
Hillsdale & Lenawee	60	92	75	174	110	3.9%		83.3%	46.7%
Jackson	60	92	75	112	103	2.5%		71.7%	37.3%
Livingston	137	177	137	143	224	3.2%		63.5%	63.5%
Macomb	769	767	615	820	771	18.2%		0.3%	25.4%
Monroe	82	91	85	95	115	2.1%		40.2%	35.3%
Oakland	978	1,269	1,006	1,354	1,263	30.1%		29.1%	25.5%
St. Clair	96	75	50	85	126	1.9%		31.3%	152.0%
Thumb Area	64	82	66	92	135	2.0%		110.9%	104.5%
Washtenaw	309	198	298	286	290	6.4%		-6.1%	-2.7%
Wayne	1,238	1,312	1,132	1,295	1,419	28.8%		14.6%	25.4%
Outer Wayne	819	809	689	849	925	18.9%		12.9%	34.3%
Prosperity Region 6	278	295	271	344	462	7.6%		66.2%	70.5%
Prosperity Region 9	648	650	670	810	842	18.0%		29.9%	25.7%
Prosperity Region 10	2,985	3,348	2,753	3,469	3,453	77.0%		15.7%	25.4%

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Transportation, Distribution, and Logistics Job Postings: WIN Partnership

	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Share of Q3 2016 Total	Change Over Time	Annual Change Q3 2015-Q3 2016	Quarter Growth Q1 2016-Q3 2016
WIN-Region Total	9,901	8,405	7,909	11,380	13,548	100.0%		36.8%	71.3%
Detroit	1,571	1,622	1,492	1,652	1,704	14.5%		8.5%	14.2%
Genesee & Shiawassee	791	595	537	732	930	6.4%		17.6%	73.2%
Hillsdale & Lenawee	345	234	270	418	804	3.7%		133.0%	197.8%
Jackson	432	309	275	340	456	3.0%		5.6%	65.8%
Livingston	210	179	161	307	388	2.7%		84.8%	141.0%
Macomb	1,008	976	811	1,365	1,533	12.0%		52.1%	89.0%
Monroe	276	201	251	353	644	3.1%		133.3%	156.6%
Oakland	1,747	1,573	1,487	2,269	2,390	19.9%		36.8%	60.7%
St. Clair	238	167	158	305	463	2.7%		94.5%	193.0%
Thumb Area	181	144	199	385	412	3.4%		127.6%	107.0%
Washtenaw	691	515	477	646	687	5.7%		-0.6%	44.0%
Wayne	3,982	3,512	4,315	4,260	4,841	37.4%		21.6%	12.2%
Outer Wayne	2,411	1,890	2,823	2,608	3,137	22.9%		30.1%	11.1%
Prosperity Region 6	1,210	906	894	1,422	1,805	12.5%		49.2%	101.9%
Prosperity Region 9	1,954	1,438	1,434	2,064	2,979	18.1%		52.5%	107.7%
Prosperity Region 10	6,737	6,061	6,613	7,894	8,764	69.4%		30.1%	32.5%

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