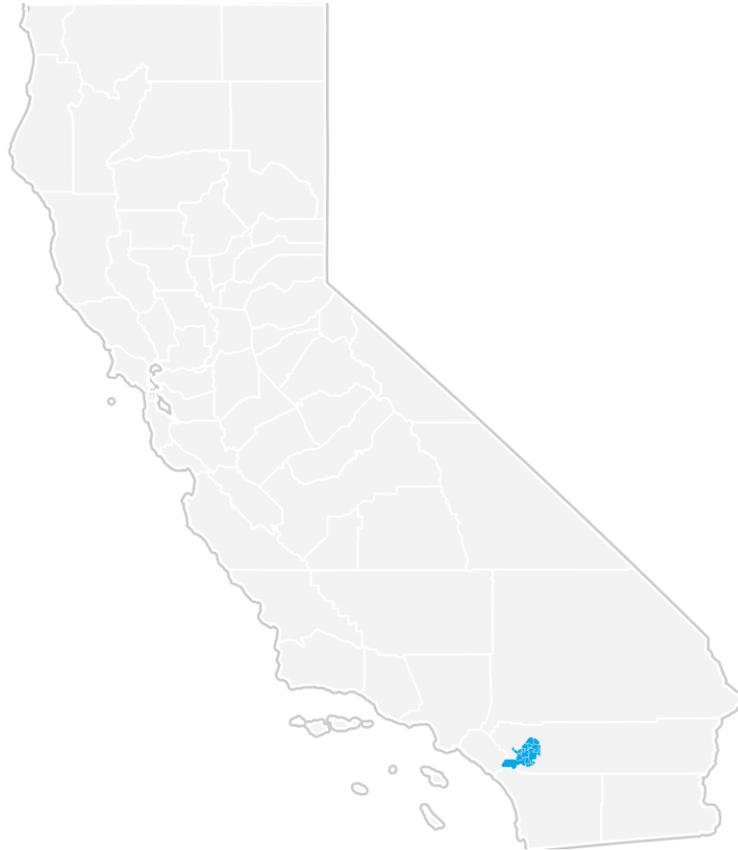


# Occupation Report for Firefighters MSJC



JOBS eQ

June 12, 2019

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# Definition of Firefighters, SOC 33-2011

Control and extinguish fires or respond to emergency situations where life, property, or the environment is at risk. Duties may include fire prevention, emergency medical service, hazardous material response, search and rescue, and disaster assistance.

# Occupation Snapshot

As of 2019Q1, total employment for Firefighters in the MSJC was 85. Over the past three years, this occupation shed 1 job in the region and is expected to increase by 9 jobs over the next seven years, or at an annual average rate of 1.4%.

Occupation Snapshot of Firefighters in MSJC, 2019q1

Current						3-Year History		7-Year Forecast				
Four Quarters Ending with 2019q1			----2019q1----			Total Change	Avg Ann % Chg in Empl	--Separations--			---Growth---	
Empl	Avg Ann Wages <sup>1</sup>	LQ	Unempl	Unempl Rate	Online Job Ads <sup>2</sup>	Empl	Region	Total New Demand	Exits	Transfers	Empl	Avg Ann Rate
85	\$65,900	0.39	20	6.0%	0	-1	-0.5%	50	14	27	9	1.4%

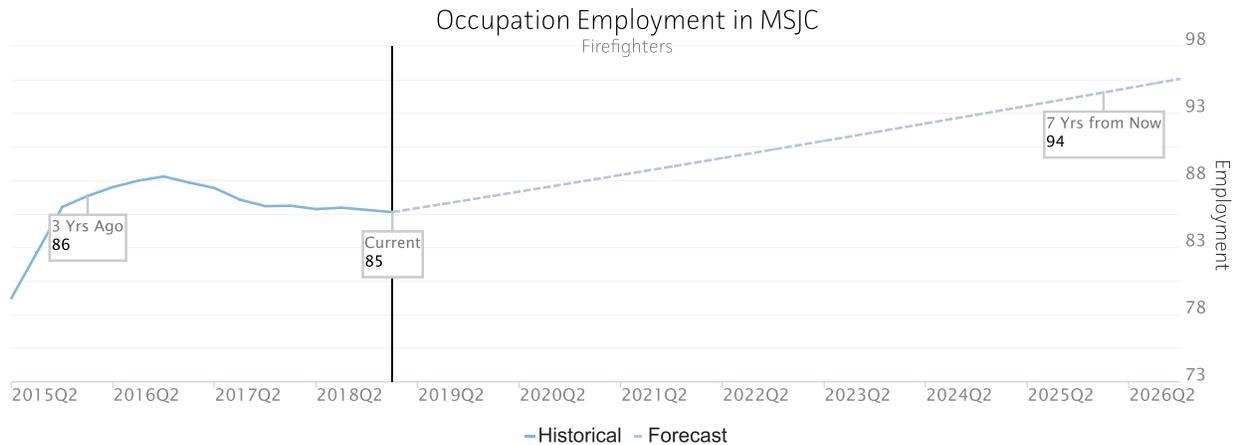
Source: JobsEQ®

Data as of 2019Q1 unless noted otherwise

Note: Figures may not sum due to rounding.

1. Occupation wages are as of 2017 and should be taken as the average for all Covered Employment

2. Data represent found online ads active within the last thirty days in the selected region; data represents a sampling rather than the complete universe of postings. Ads lacking zip code information but designating a place (city, town, etc.) may be assigned to the zip code with greatest employment in that place for queries in this analytic. Due to alternative county-assignment algorithms, ad counts in this analytic may not match that shown in RTI (nor in the popup window ad list).

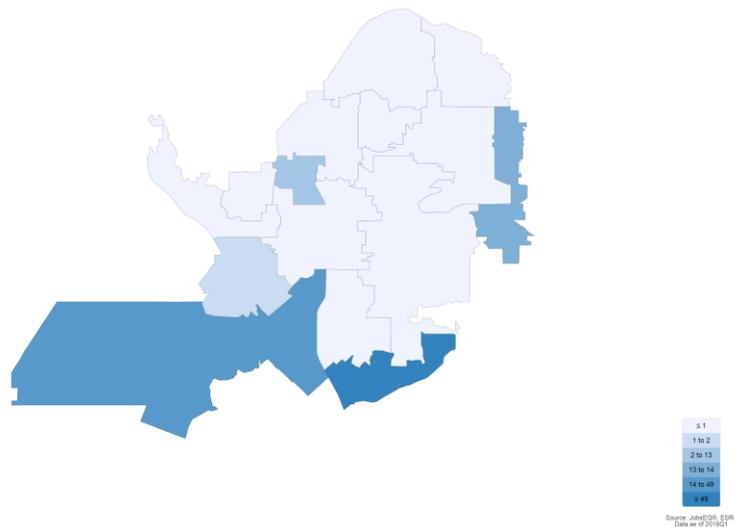


Occupation employment data are estimated via industry employment data and the industry/occupation mix. Industry employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and currently updated through 2018Q3, imputed where necessary with preliminary estimates updated to 2019Q1. Wages by occupation are as of 2017 provided by the BLS and imputed where necessary. Forecast employment growth uses national projections from the Bureau of Labor Statistics adapted for regional growth patterns. Occupation unemployment figures are imputed by Chmura.

# Geographic Distribution

The below maps illustrate the ZCTA-level distribution of employed Firefighters in the MSJC. Employment is shown by place of work and by residence.

Occupation Concentration by Place of Work for Firefighters



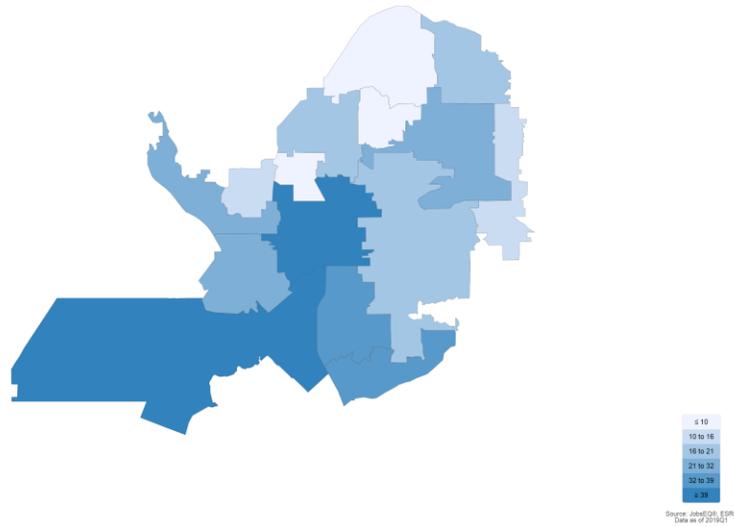
Top ZCTAs by Place of Work for Firefighters, 2019Q1

Region	Employment
ZCTA 92591	49
ZCTA 92562	15
ZCTA 92543	14
ZCTA 92586	2
ZCTA 92595	1
ZCTA 92563	1
ZCTA 92545	1
ZCTA 92587	1

Source: JobsEQ®

Occupation employment data are estimated via industry employment data and the industry/occupation mix. Industry employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and currently updated through 2018Q3, imputed where necessary with preliminary estimates updated to 2019Q1. Occupation by residence data are derived from the same in addition to commuting pattern data.

Occupation Concentration by Place of Residence for Firefighters



**Top ZCTAs by Place of Residence for Firefighters, 2019Q1**

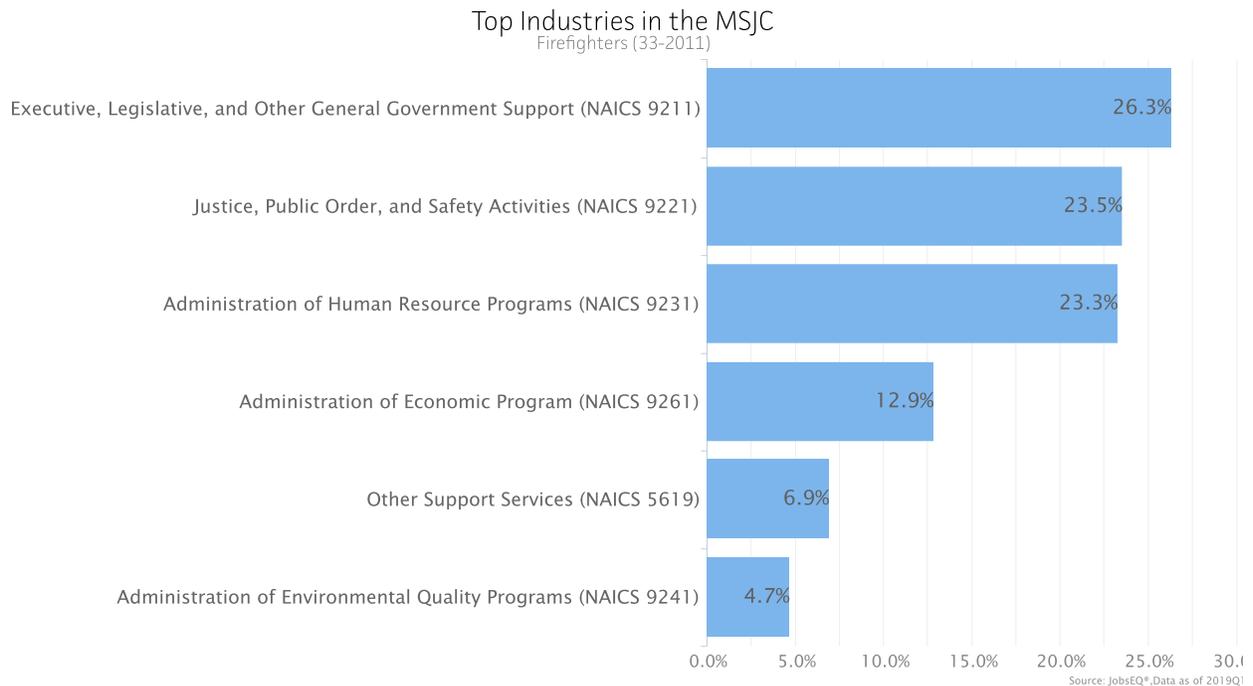
Region	Employment
ZCTA 92562	50
ZCTA 92584	39
ZCTA 92563	34
ZCTA 92591	33
ZCTA 92545	27
ZCTA 92532	22
ZCTA 92595	21
ZCTA 92585	19
ZCTA 92596	17
ZCTA 92582	16

Source: **JobsEQ®**

Occupation employment data are estimated via industry employment data and the industry/occupation mix. Industry employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and currently updated through 2018Q3, imputed where necessary with preliminary estimates updated to 2019Q1. Occupation by residence data are derived from the same in addition to commuting pattern data.

# Employment by Industry

The following chart and table illustrate the industries in the MSJC which most employ Firefighters. The single industry most employing this occupation in the region is Executive, Legislative, and Other General Government Support , NAICS 9211. This industry employs 22 Firefighters—employment which is expected to increase by 3 jobs over the next ten years; furthermore, 16 additional new workers in this occupation will be needed for this industry due to separation demand, that is, to replace workers in this occupation and industry that retire or move into a different occupation.



Occupation employment data are estimated via industry employment data and the industry/occupation mix. Industry employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and currently updated through 2018Q3, imputed where necessary with preliminary estimates updated to 2019Q1.

## Top Industry Distribution for Firefighters (33-2011) in MSJC

NAICS Code	Industry Title	Current Occupation Employment	10-Year Sep Demand	10-Year Growth Demand	10-Year Total Demand
9211	Executive, Legislative, and Other General Government Support	22	16	3	19
9221	Justice, Public Order, and Safety Activities	20	14	3	17
9231	Administration of Human Resource Programs	20	14	3	17
9261	Administration of Economic Program	11	8	2	9
5619	Other Support Services	6	4	1	5
9241	Administration of Environmental Quality Programs	4	3	1	3
-All Others-		2	1	0	2

Source: JobsEQ®

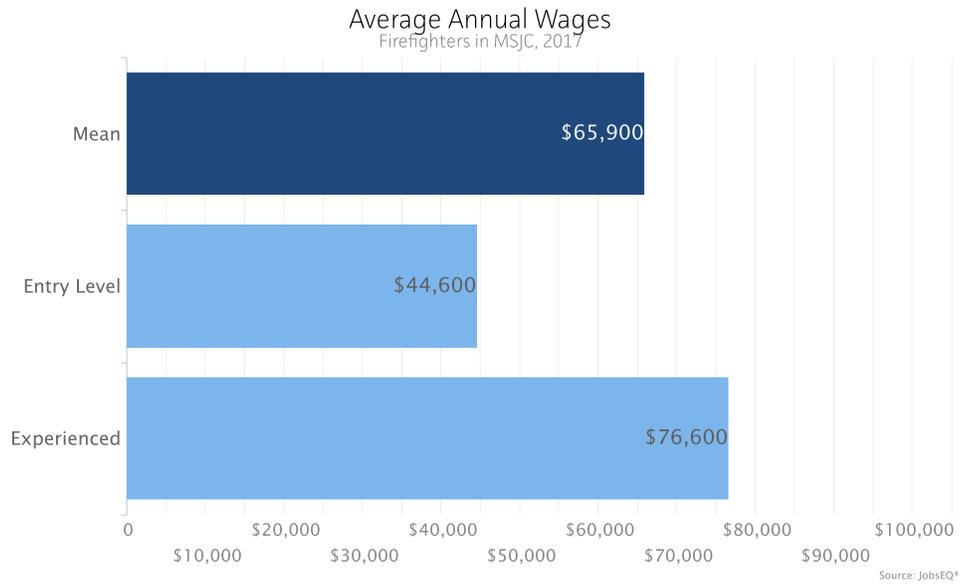
Data as of 2019Q1 except wages which are as of 2017. Note that occupation-by-industry wages represent adjusted national data and may not be consistent with regional, all-industry occupation wages shown elsewhere in JobsEQ.

Note: Figures may not sum due to rounding.

Occupation employment data are estimated via industry employment data and the industry/occupation mix. Industry employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and currently updated through 2018Q3, imputed where necessary with preliminary estimates updated to 2019Q1. Forecast employment growth uses national projections from the Bureau of Labor Statistics adapted for regional growth patterns.

# Wages

The average (mean) annual wage for Firefighters was \$65,900 in the MSJC as of 2017. For the same year, average entry level wages were approximately \$44,600 compared to an average of \$76,600 for experienced workers.



Occupation wages (mean, median, and percentiles) are as of 2017 provided by the BLS, modified and imputed by Chmura where necessary. Entry-level and experienced wages are derived from these source data, computed by Chmura.

# Education Profile

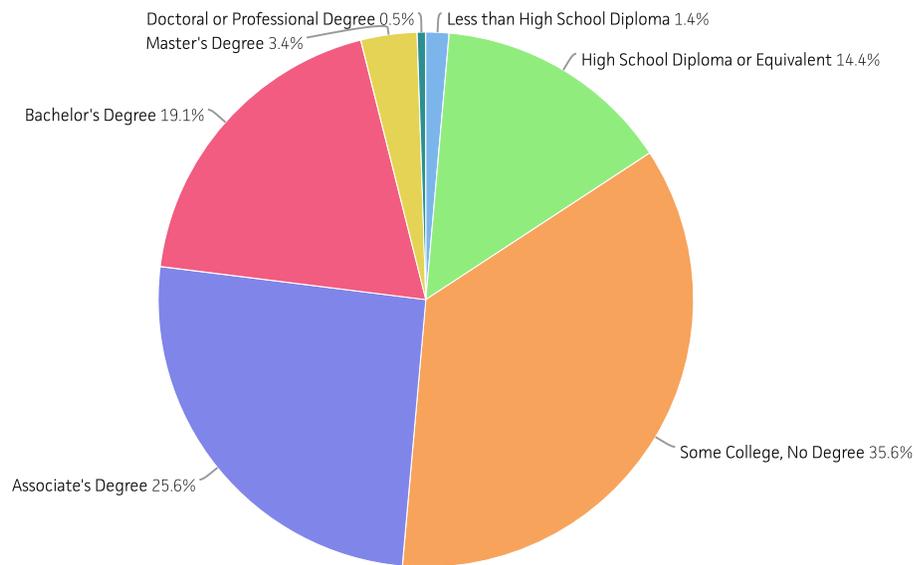
Typical education and training requirements for Firefighters are described below.

## Education and Training Requirements

Typical Entry-Level Education:	Postsecondary non-degree award
Previous Work Experience:	None
Typical On-the-Job Training:	Long-term on-the-job training

Source: JobsEQ®

## Educational Attainment Profile



Source: JobsEQ®

Education and training requirements are from the Bureau of Labor Statistics (BLS); educational attainment mix are regional data modeled by Chmura using Census educational attainment data projected to 2019Q1 along with source data from the BLS.

# Awards

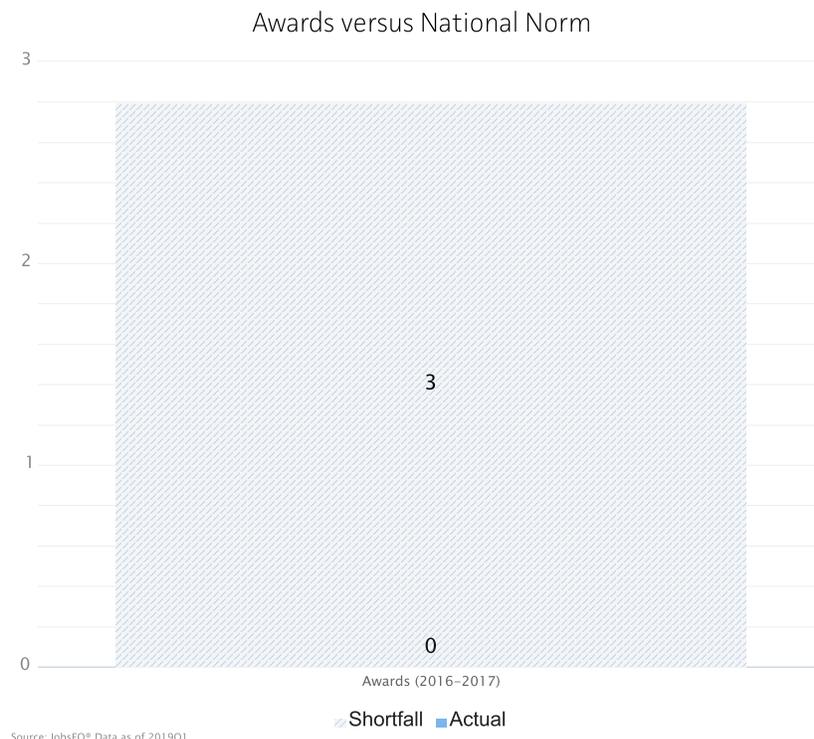
No postsecondary program awards were granted by postsecondary institutions located in the MSJC in the 2017 academic year in programs identified as providing training for Firefighters (for further details, see the source note).

Awards data are per the National Center for Education Statistics (NCES) and JobsEQ for the 2017 academic year. Any programs shown here have been identified as being linked with the occupation being analyzed. Other existing programs may also provide training in the region for this occupation but have not been so identified by the program-occupation crosswalk (see the FAQ section at the end of this report for more details). Furthermore, any programs shown here reflect only data reported to the NCES; reporting is required of all schools participating in any federal finance assistance program authorized by Title IV of the Higher Education Act of 1965, as amended—other training providers in the region that do not report data to the NCES are not reflected in the above.

# Training Concentration

In the 2016-2017 academic year, it is estimated that postsecondary schools in the MSJC granted awards for a potential 0 new Firefighters.<sup>1</sup> Given the size of this occupation in the region, this award output is below the national norm of 3 awards per year—put another way; it is at 0% of the national average.

Training concentrations above the national average can indicate that the region is an exporter of graduates for this occupation; in other words, some students may come from outside the region for this education and subsequently leave after the award to work outside the region. Training concentrations below the national average can indicate that the region is an importer of graduates for this occupation; in other words, some employers within the region who hire this occupation may need to hire workers who received this training outside of the region.



Awards data by occupation are estimates produced by JobsEQ and for the academic year 2016-2017.

<sup>1</sup> This figure may not match the total awards shown in the prior section since some of those awards may flow into more than one occupation.

# Apprenticeships

The apprenticeable specialties associated with this occupation are:

<b>Rapids Code</b>	<b>Rapids Title</b>
0192	Fire Fighter, Crash, Fire, and Rescue
0195	Fire Fighter
0535	Fire Apparatus Engineer
0541	Fire Engineer
0544	Wildland Fire Fighter Specialist
0754	Fire Medic
1088	Fire Suppression Technician
1091	Fire Fighter Paramedic
1092	Fire Fighter Diver

Source: [JobsEQ®](#)

Apprenticeable occupations are identified through the Department of Labor's Registered Apprenticeship program.

# Region Definition

**MSJC is defined as the following zip code tabulation areas:**

ZCTA 92532

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ZCTA 92543

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ZCTA 92545

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ZCTA 92548

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ZCTA 92562

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ZCTA 92563

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ZCTA 92567

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ZCTA 92582

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ZCTA 92584

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ZCTA 92585

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ZCTA 92586

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ZCTA 92587

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ZCTA 92591

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ZCTA 92595

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ZCTA 92596

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# FAQ

## What is SOC?

The Standard Occupational Classification system (SOC) is used to classify workers into occupational categories. All workers are classified into one of over 840 occupations according to their occupational definition. To facilitate classification, occupations are combined to form 23 major groups, 97 minor groups, and 461 occupation groups. Each occupation group includes detailed occupations requiring similar job duties, skills, education, or experience.

## What is a location quotient?

A location quotient (LQ) is a measurement of concentration in comparison to the nation. An LQ of 1.00 indicates a region has the same concentration of an occupation (or industry) as the nation. An LQ of 2.00 would mean the region has twice the expected employment compared to the nation and an LQ of 0.50 would mean the region has half the expected employment in comparison to the nation.

## What is training concentration?

The training concentration analysis compares local postsecondary training output compared to the national norm. Let's consider registered nurses as an example. If in the nation, one RN award is granted for every ten RNs employed, that 1:10 ratio is the national norm. If in your region your schools also grant one RN award for every ten RNs employed, then your region will be right at the national norm, or we say at 100% of the national norm which is termed a 100% training concentration. If your region grants two RN awards for every ten employed, your region would be at twice the national norm or have a 200% training concentration. Similarly, if your region grants one RN award for every twenty employed, your region would be at half the national norm or have a 50% training concentration.

## What is the program-to-occupation crosswalk?

Training programs are classified according to the Classification of Instructional Programs (CIP codes). For relating training programs, this report uses a modified version of the CIP to SOC crosswalk from the National Center for Education Statistics (NCES). While this is a very helpful crosswalk for estimating occupation production from training program awards data, the crosswalk is neither perfect nor comprehensive. Indeed, it is hard to imagine such a crosswalk being perfect since many training program graduates for one reason or another do not end up employed in occupations that are most related to the training program from which they graduated. Therefore, the education program analyses should be considered in this light.

As an example of the many scenarios that may unfold, consider a journalism degree that crosswalks into three occupations: editors, writers, and postsecondary communications teachers. Graduates with a journalism degree may get a job in one of these occupations—and that may be the most-likely scenario—but a good number of these graduates may get a job in a different occupation altogether (the job may be somewhat related, such as a reporter, or the job may be totally unrelated, such as a real estate agent). Furthermore, a graduate may stay in school or go back to school for a degree that will lead to other occupation possibilities. Still another possibility includes the graduate not entering the labor market (maybe being unemployed, being a non-participant, or moving to another region).

## What is separation demand?

Separation demand is the number of jobs required due to separations—labor force exits (including retirements) and turnover resulting from workers moving from one occupation into another. Note that separation demand does not include all turnover—it does not include when workers stay in the same occupation but switch employers. The total projected demand for an occupation is the sum of the separation demand and the growth demand (which is the increase or decrease of jobs in an occupation expected due to expansion or contraction of the overall number of jobs in that occupation).

## What is NAICS?

The North American Industry Classification System (NAICS) is used to classify business establishments according to the type of economic activity. The NAICS Code comprises six levels, from the “all industry” level to the 6-digit level. The first two digits define the top level category, known as the “sector,” which is the level examined in this report.

## About This Report

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