



## Code Enforcement and Compliance

February 2018

Prepared by the Los Angeles/Orange County Center of Excellence for  
Labor Market Research

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### Program Recommendation

This report was compiled by the Los Angeles/Orange County Center of Excellence to provide regional labor market data for the program recommendation of code enforcement and compliance. This report can help determine whether there is demand in the local labor market that is not being met by the supply from programs of study.

Based on the data, the COE has determined there may be an unmet need for the code enforcement and compliance program in Orange County. Reasons include:

- There are currently no other code enforcement and compliance programs offered through the California Community College system under the Public Administration (2102.00) TOP Code
- While there are regional programs currently conferring awards in Construction Inspection (0957.20), there are on average only 58 awards conferred annually
- There were 126 job ads in Orange County during 2017 for building and/or construction inspectors, signaling a possible undersupply of qualified job seekers
- Each of the four occupations focused on in this data brief has average entry-level hourly earnings above the living wage for Orange County, ranging from \$20.08 to \$27.49

### Occupation Codes and Descriptions

California Assembly Bill 2228, which was approved by Governor Brown in August 2016, established a certification process for code enforcement officers, and the option to attain the title of Certified Code Enforcement Officer (CCEO). Public officers who meet the education, training and experience requirements, and have passed a comprehensive code enforcement examination are qualified to become CCEOs. Current and prospective CCEOs can voluntarily enroll in a program that will train qualified public officers to enforce laws and codes necessary to help preserve safe, well-ordered communities.<sup>1</sup>

While there are many middle-skill occupations that list code enforcement within the job description, this brief will concentrate on three occupations within the standard occupational classification (SOC) system, and one emerging occupation<sup>2</sup> that are most closely-related to the CCEO occupation. The occupation titles and descriptions, as well as reported job titles are included in Exhibit 1.

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<sup>1</sup> [http://www.leginfo.ca.gov/pub/15-16/bill/asm/ab\\_2201-2250/ab\\_2228\\_bill\\_20160830\\_chaptered.html](http://www.leginfo.ca.gov/pub/15-16/bill/asm/ab_2201-2250/ab_2228_bill_20160830_chaptered.html)

<sup>2</sup> New and emerging occupations (N&E) are incorporated into the O\*NET-SOC classification system based on the evolving nature of workforce requirements stemming from changes in technology, society, law, and business practices. Incorporating N&E occupations into the O\*NET system makes O\*NET information more beneficial and responsive.  
<https://www.onetcenter.org/reports/NewEmerging.html>

**Exhibit 1 – Occupations, descriptions, and sample job titles**

<b>SOC Code</b>	<b>Title</b>	<b>Description</b>	<b>Sample of Reported Job Titles</b>
13-1041.01	Environmental Compliance Inspectors	Inspect and investigate sources of pollution to protect the public and environment and ensure conformance with Federal, State, and local regulations and ordinances.	Compliance Investigator, Enforcement Officer, Environmental Compliance Officer, Environmental Protection Specialist, Environmental Quality Analyst, Environmental Specialist, Oil Program Compliance Specialist, Resource Conservation and Recovery Act Enforcement Officer (RCRA Enforcement Officer), Toxics Program Officer, Waste Management Specialist
33-3041	Parking Enforcement Workers	Patrol assigned area, such as public parking lot or city streets to issue tickets to overtime parking violators and illegally parked vehicles.	College Service Officer, Community Service Officer, Parking Control Officer, Parking Enforcement Officer (PEO), Parking Enforcement Technician, Parking Enforcer, Parking Officer, Parking Regulation Enforcement Officer, Parking Technician, Ticket Writer
33-9011	Animal Control Workers	Handle animals for the purpose of investigations of mistreatment, or control of abandoned, dangerous, or unattended animals.	Animal Attendant, Animal Control Officer, Animal Park Code Enforcement Officer, Community Service Officer, Dog Control Officer
47-4011	Construction and Building Inspectors	Inspect structures using engineering skills to determine structural soundness and compliance with specifications, building codes, and other regulations. Inspections may be general in nature or may be limited to a specific area, such as electrical systems or plumbing.	Building Code Administrator, Building Inspection Engineer, Building Inspector, Building Official, Combination Building Inspector, Construction Inspector, Construction Materials Testing Technician, Elevator Inspector, Inspector, Plumbing Inspector

Source: O\*NET Online

## Current and Future Employment

In Orange County, the number of jobs related to code enforcement and compliance occupations is expected to increase by 5% over the next five years. Nearly 530 job opportunities will be available annually for this group of occupations through 2022 due to new job growth and replacement need (e.g., retirements). Exhibit 2 contains detailed employment projections data for these occupations. It is important to consider that the SOC code for Compliance Officers (13-1041) includes data on a group of specific occupations, including the following new and emerging occupations:

13-1041.01	Environmental Compliance Inspectors
13-1041.02	Licensing Examiners and Inspectors
13-1041.03	Equal Opportunity Representatives and Officers
13-1041.04	Government Property Inspectors and Investigators
13-1041.06	Coroners
13-1041.07	Regulatory Affairs Specialists

Therefore, employment projections for Compliance Officers (13-1041) represent the entire group of occupations, and are not solely representative of environmental compliance inspectors (13-1041.01).

### Exhibit 2 – Five-year projections for code enforcement and compliance occupations

SOC	Occupation	2017 Jobs	2022 Jobs	2017 - 2022 Change	2017 - 2022 % Change	Annual Openings
13-1041	Compliance Officers	3,867	4,077	210	5%	351
47-4011	Construction and Building Inspectors	1,260	1,335	75	6%	155
33-9011	Animal Control Workers	110	115	5	5%	13
33-3041	Parking Enforcement Workers	97	94	(3)	(3%)	9
	<b>Total</b>	<b>5,334</b>	<b>5,621</b>	<b>287</b>	<b>5%</b>	<b>528</b>

Source: Economic Modeling Specialists International (EMSI)

## Earnings

In Orange County, the entry-level average wage for each of the four code enforcement and compliance occupations is above the MIT Living Wage<sup>3</sup> estimate of \$15.31 per hour for a single adult. Construction and building inspectors have the highest entry-level wages (\$27.49) for this occupation group, and have average annual earnings of \$80,000 per year, assuming full-time employment.

Exhibit 3 contains hourly wages and annual average earnings for these occupations. Entry-level hourly earnings is represented by the 10<sup>th</sup> percentile of wages, median hourly earnings is represented by the 50<sup>th</sup> percentile of wages, and experienced hourly earnings is represented by the 90<sup>th</sup> percentile of wages, demonstrating various levels of employment.

**Exhibit 3 – Earnings for code enforcement and compliance occupations**

SOC	Occupation	Entry-Level Hourly Earnings	Median Hourly Earnings	Experienced Hourly Earnings	Average Annual Earnings
47-4011	Construction and Building Inspectors	\$27.49	\$37.04	\$55.31	\$80,000
13-1041	Compliance Officers	\$24.08	\$38.41	\$57.24	\$83,000
33-9011	Animal Control Workers	\$22.46	\$28.05	\$33.36	\$58,000
33-3041	Parking Enforcement Workers	\$20.08	\$27.45	\$31.23	\$56,000

Source: Economic Modeling Specialists International (EMSI)

## Employer Job Postings

In this research brief, real-time labor market information is used to provide a more nuanced view of the current job market, as it captures job advertisements for occupations relevant to the field of study. Employer job postings are consulted to understand who is employing code enforcement and compliance workers, and what they are looking for in potential candidates. Real-time labor market information is also able to separate new and emerging O\*NET code job postings data, and therefore job posting data on environmental compliance inspectors (13.1041.01) can be analyzed. To identify job postings related to these occupations, the SOC and/or O\*NET codes were used.

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<sup>3</sup> MIT Living Wage Calculator. <http://livingwage.mit.edu/>

### Top Occupations

In 2017, there were 176 job postings for code enforcement and compliance occupations. Over two-thirds of the postings (70%) were for construction and building inspectors (126 job postings). There were 132 job postings for the same cluster of occupations in 2016, and 120 job postings in 2015.

**Exhibit 4 – Top occupations in job postings (n=176)**

<b>SOC/O*Net Code</b>	<b>Occupation</b>	<b>Job Postings, Full Year 2017</b>
47-4011	Construction and Building Inspectors	126
13-1041.01	Environmental Compliance Inspectors	28
33-3041	Parking Enforcement Workers	17
33-9011	Animal Control Workers	10

Source: Labor Insight/Jobs (Burning Glass)

### Top Titles

The top job titles for employers posting ads for code enforcement and compliance occupations are listed in Exhibit 5. Inspector is mentioned as the job title in 26% of all relevant job postings (45 postings), followed by building inspector (18%) and construction inspector (14%).

**Exhibit 5 –Job titles (n=176)**

<b>Title</b>	<b>Job Postings, Full Year 2017</b>
Inspector	45
Building Inspector	32
Construction Inspector	24
Environmental Specialist/Compliance	17
Bridge Inspector	8
Civil Inspector	7
Regulatory Compliance	6
Parking Officer	5
Animal Services Officer	4
Code Enforcement Officer	4
Security Officer	4

Source: Labor Insight/Jobs (Burning Glass)

### Top Employers

Exhibit 6 lists the major employers hiring code enforcement and compliance professionals. Top employers postings job ads included AECOM Technology Corporation, Orange County, and the City of Irvine. Sixteen different cities and/or government agencies posted jobs for code enforcement and compliance throughout 2017. The top worksite cities in the region for these occupations were Irvine, Orange, Santa Ana and Anaheim.

**Exhibit 6 – Top employers (n=141)**

Employer	Job Postings, Full Year 2017
AECOM Technology Corporation	11
Orange County	9
City of Irvine	6
The Kleinfelder Group, Inc.	5
City of Anaheim	4

Source: Labor Insight/Jobs (Burning Glass)

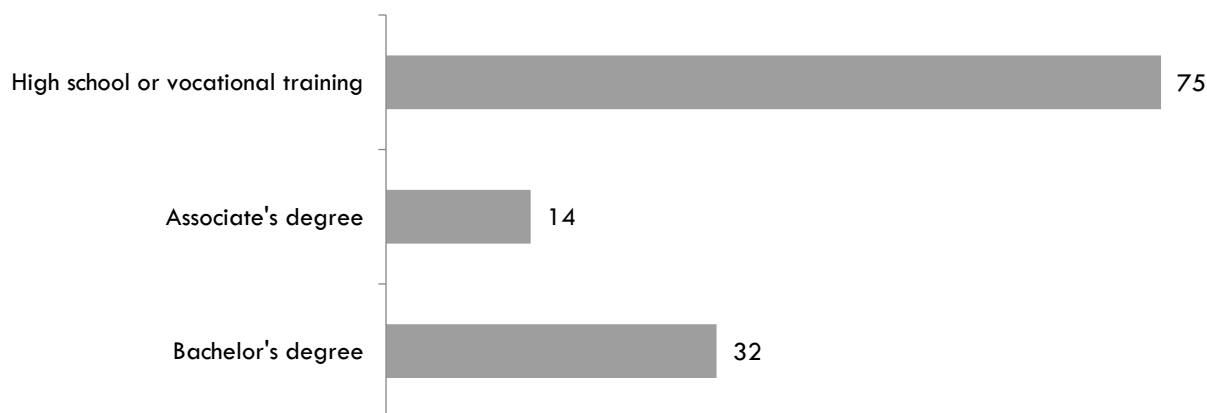
### Certifications and Skills

The only applicable certifications listed on job postings were Certified Building Inspector (13 postings) and Certified Building Official (2 postings). Certified Building Inspector was listed on 30% of the postings that specified a certification.

### Advertised Education Levels

Exhibit 7 displays the education level requested by employers in online job ads. The majority of employers were looking for a candidate with high school or vocational training (62%).

**Exhibit 7 – Education requirements for code enforcement and compliance occupations (n=121)**



Source: Labor Insight/Jobs (Burning Glass)

## Education and Training

Exhibit 8 shows the typical entry-level education requirement for the occupations of interest, along with the typical on-the-job training, and percentage of workers in the field who hold a community college award or have completed some postsecondary courses. Between 40-45% of the workforce in three of the code enforcement occupations (animal control workers, parking enforcement workers, and construction and building inspectors) have completed some community college education as their highest level of education.

**Exhibit 8 – Education and training requirements**

SOC	Occupation	Typical entry-level education	Typical on-the-job training	% of Community College Award Holders or Some Postsecondary Coursework
13-1041	Compliance Officers	Bachelor's degree	Moderate-term on-the-job training	28%
33-9011	Animal Control Workers	HS diploma or equivalent	Moderate-term on-the-job training	41%
33-3041	Parking Enforcement Workers	HS diploma or equivalent	Short-term on-the-job training	40%
47-4011	Construction and Building Inspectors	HS diploma or equivalent	Moderate-term on-the-job training	45%

Source: Economic Modeling Specialists International, Bureau of Labor Statistics Employment Projections (Educational Attainment)

Currently, four community colleges in Orange County have conferred awards in construction inspection, public administration, or public works programs. Exhibit 9 displays the annual community college awards for each of the colleges training in this field.

Between 2013 and 2016, the total annual average community college awards conferred was 61 across two programs: Construction Inspection (0957.20) and Public Works (2102.10).

**Exhibit 9 – CCC Student Awards (by TOP and College)**

TOP Code	Program	College	2013-2016 Annual Average			Total Average CC Awards
			2013-14 Awards	2014-15 Awards	2015-2016 Awards	
0957.20	Construction Inspection	Coastline	40	26	16	27
		Fullerton	2	5	2	3
		Saddleback	-	-	2	2
2102.00	Public Administration	<i>not offered in region / no data</i>				
2102.10	Public Works	Santiago College	59	11	19	30
<b>Total</b>			<b>101</b>	<b>42</b>	<b>39</b>	<b>61</b>

Source: California Community Colleges Chancellor's Office MIS Data Mart

According to CCCC MIS Data Mart, there are two other community colleges in California that currently offer award programs in Public Administration: Palomar College (San Marcos) and Southwestern College (Chula Vista).

**Student Outcomes**

The CTE LaunchBoard provides student outcome data on the effectiveness of CTE programs. The following student outcome information was collected from exiters from each of the applicable Taxonomy of Program (TOP) codes in Orange County for the 2014-15 academic year.

Construction Inspection (0957.20)

- The median annual wage after program completion is \$15,371
- 75% of students are earning a living wage
- 76% of students are employed within six months after completing a program

Public Works (2102.10)

- The median annual wage after program completion is \$73,160
- 81% of students are earning a living wage
- 93% of students are employed within six months after completing a program

Source: CTE LaunchBoard

**Sources**

O\*Net Online, Labor Insight/Jobs (Burning Glass), Economic Modeling Specialists International (EMSI), MIT Living Wage Calculator, Bureau of Labor Statistics (BLS) Education Attainment, California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart, and CTE LaunchBoard



## Notes

Data included in this analysis represents the labor market demand for positions most closely related to code enforcement and compliance. Standard occupational classification (SOC) codes were chosen based on the national education level required for employment (associate degree and postsecondary certificate) as well as the proportion of current workers who hold a community college award or have had some community college training. This selection process narrows the labor market analysis to the most relevant employment opportunities for students with community college education and/or training.

Traditional labor market information was used to show current and projected employment based on data trends, as well as annual average awards granted by regional community colleges. Real-time labor market information captures job post advertisements for occupations relevant to the field of study and should not be used to establish current job openings, because the numbers may include duplicate job postings or postings intended to gather a pool of applicants. Real-time labor market information can signal demand and show what employers are looking for in potential employees, but is not a perfect measure of the quantity of open positions.