

Environmental Science and Protection Specialists, Including Health

Labor Market Analysis: Imperial County

March 2018

Summary

The following list summarizes findings from the labor market analysis below for *Environmental Science and Protection Specialists, Including Health*:

- Between 2017 and 2022, *Environmental Science and Protection Specialists, Including Health* are projected to increase by three jobs or 17 percent.
- Employers in Imperial County will need to hire two workers annually to backfill jobs due to attrition such as retirement or turnover.
- Between 2010 and 2017, there was an average of five online job postings per year for *Environmental Science and Protection Specialists, Including Health* in Imperial County.
- *Environmental Science and Protection Specialists, Including Health* earn median hourly earnings of \$37.57, more than the Self-Sufficiency Standard for two adults and two children (school-age) in Imperial County, which is \$11.32 per hour.
- According to the California Community Colleges Chancellor's Office Management Information System (MIS) Data Mart, there are two Taxonomy of Programs (TOP) codes associated with this occupation: TOP 030100 Environmental Science and 030200 Environmental Studies.
- According to the MIS Data Mart, no colleges supply the region with awards for this occupation.
- Comparing labor demand (annual openings) with labor supply suggests that there is a supply gap for this occupation in Imperial County with two annual openings and zero awards from colleges. Comparatively, there are 1,590 annual openings in California and 2,517 completions.
- Between January 1, 2015 and December 31, 2017, the top five employers in Imperial County for this occupation were Apollo Group/U of Phoenix, American Planning Association, Imperial County, Bureau of Land Management and Customs and Border Protection.
- The typical entry-level education is a bachelor's degree. This occupation may be considered for an Associate Degree for Transfer (ADT) program.

Introduction

This report provides labor market information in Imperial County for the following occupational code in the Standard Occupational Classification (SOC)¹ system:

Environmental Science and Protection Specialists, Including Health (SOC 19-2041): Conduct research or perform investigation for the purpose of identifying, abating, or eliminating sources of pollutants or hazards that affect either the environment or the health of the population. Using knowledge of various scientific disciplines, may collect, synthesize, study, report, and recommend action based on data derived from measurements or observations of air, food, soil, water, and other sources. Excludes "Zoologists and Wildlife Biologists" (19-1023), "Conservation Scientists" (19-1031), "Forest and Conservation Technicians" (19-4093), "Fish and Game Wardens" (33-3031), and "Forest and Conservation Workers" (45-4011). Sample reported job titles include:

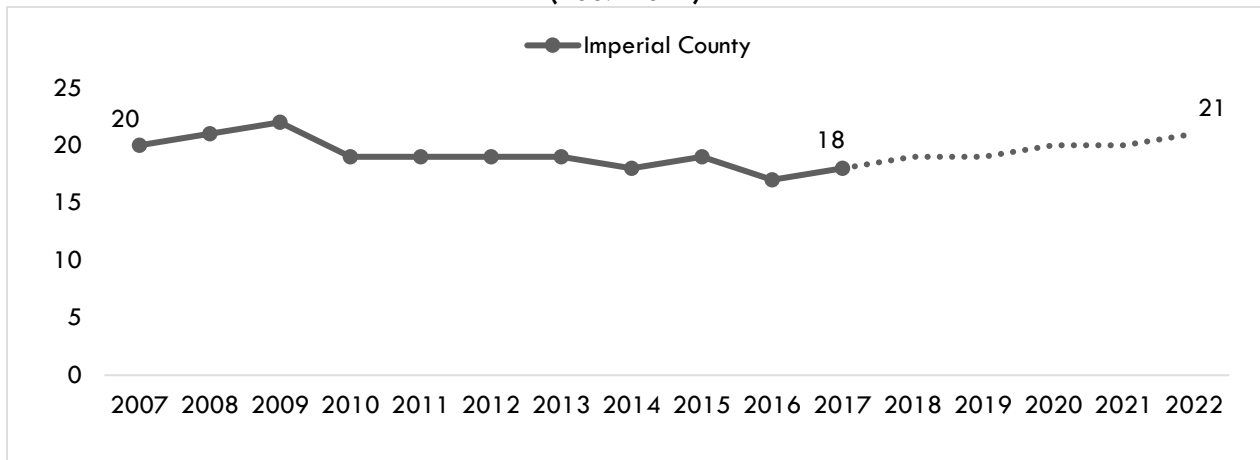
- Environmental Analyst
- Staff Climate Scientist
- Watershed Coordinator
- Researcher
- Hazardous Substances Scientist
- Senior Policy Associate
- Project Manager
- Research Scientist

¹ The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating or disseminating data. [bls.gov/soc](https://www.bls.gov/soc).

Projected Occupational Demand

Between 2017 and 2022, *Environmental Science and Protection Specialists, Including Health* are projected to increase by **three** jobs or **17** percent (Exhibit 1). Employers in Imperial County will need to hire **two** workers annually to backfill jobs due to attrition such as retirement or turnover.

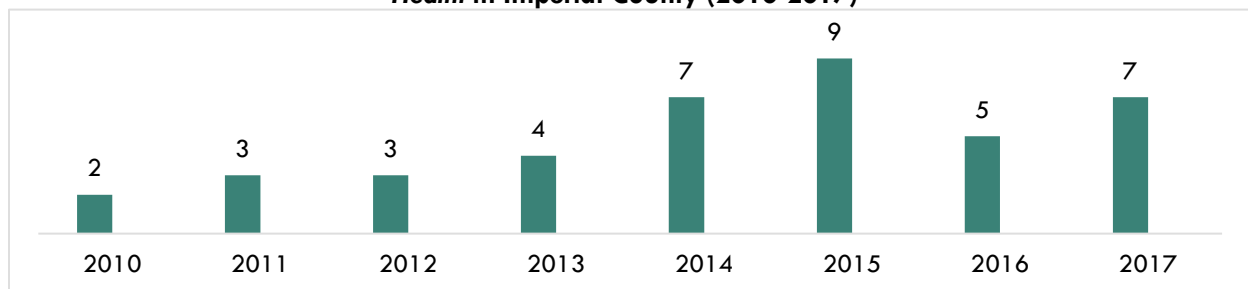
Exhibit 1: Number of Jobs for *Environmental Science and Protection Specialists, Including Health* (2007-2022)²



Online Job Postings

Between 2010 and 2017, there was an average of **five** online job postings per year for *Environmental Science and Protection Specialists, Including Health* in Imperial County (Exhibit 3).

Exhibit 3: Number of Online Job Postings for *Environmental Science and Protection Specialists, Including Health* in Imperial County (2010-2017)³



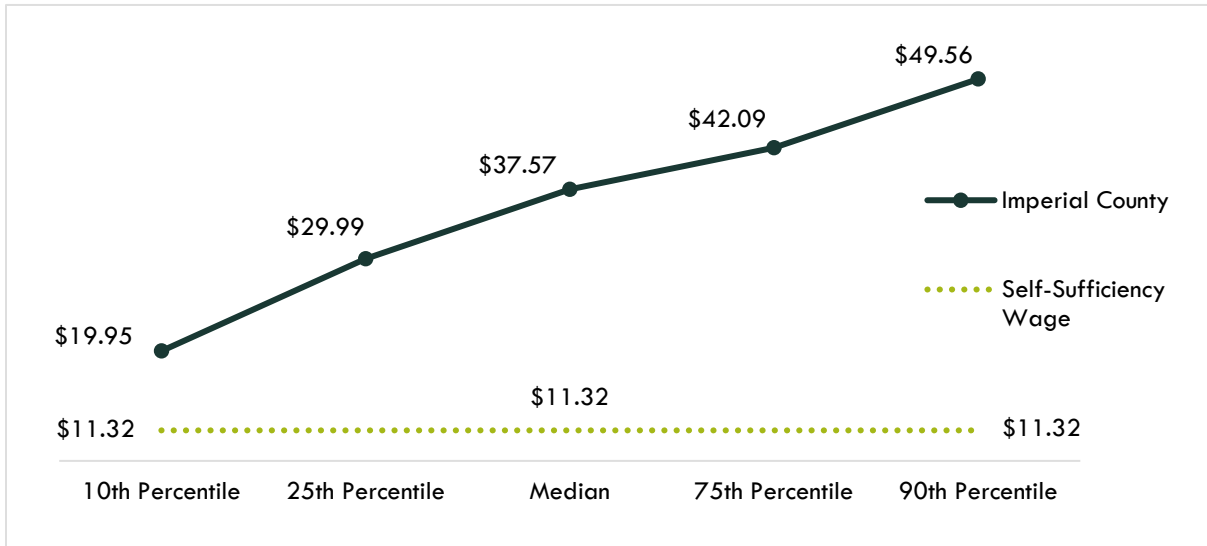
² Economic Modeling Specialists, Int'l. (EMSI). Imperial County (6025). 2018.01 Class of Worker. QCEW + Non-QCEW+ Self-Employed. 2007-2022.

³ Labor Insight Jobs. Burning Glass Technologies. Imperial, CA. Full years 2010-2017.

Earnings

Environmental Science and Protection Specialists, Including Health earn median hourly earnings of **\$37.57**, more than the Self-Sufficiency Standard for two adults and two children (school-age) in Imperial County, which is \$11.32 per hour (Exhibit 4).⁴

Exhibit 4: Hourly Earnings for *Environmental Science and Protection Specialists, Including Health* in Imperial County⁵



Educational Supply

Educational supply for an occupation can be estimated by analyzing the number of related program completers/graduates/awards in Imperial County. According to the California Community Colleges Chancellor's Office Management Information System (MIS) Data Mart, there are **two** Taxonomy of Programs (TOP) codes associated with this occupation: TOP 030100 Environmental Science and 030200 Environmental Studies (Exhibit 5).

Exhibit 5: Related TOP Codes in Imperial County

SOC 19-2041: Environmental Science and Protection Specialists, Including Health

TOP 030100 Environmental Science

TOP 030200 Environmental Studies

⁴ The standard for two adults and two children was chosen due to the 3.68 persons per household (2012-2016) as determined by the U.S. Census for Imperial County.

⁵ EMSI. Imperial County (6025). 2018.01 Class of Worker. QCEW + Non-QCEW + Self-Employed. 2017-2022.

According to the MIS Data Mart, **no** colleges supply the region with awards for this occupation.

Please note: An award is not equivalent to a single person in search of a job opening because a student may earn more than one award, such as an associate degree in addition to a certificate.

Demand vs. Supply

Comparing labor demand (annual openings) with labor supply⁶ suggests that there is a **supply gap** for this occupation in Imperial County with **two** annual openings and **zero** awards from colleges. Comparatively, there are **1,590** annual openings in California and **2,517** completions (Exhibit 6).⁷

Exhibit 6: Labor Demand (Annual Openings) Compared to Labor Supply (Average Annual Awards)

	Demand (Annual Openings)	Supply (Total Annual Supply)	Supply Gap or Oversupply
Imperial County	2	0	2
California	1,590	2,517	927

Please note: This is a basic analysis of supply and demand of labor for these occupations. This data should be used to discuss the potential gaps or oversupply of workers for these occupations; however, it should not be the only basis for determining whether or not a program should be developed. Additionally, the data does not include workers who are currently in the labor force who could fill these positions or workers who are not captured by publicly available data.

Student Outcomes

Based on the information in the CTE LaunchBoard,⁸ students who took courses in the related TOP codes exhibited the following outcomes (Exhibit 7).

⁶ Labor supply can be found from two different sources: EMSI or the California Community Colleges Chancellor's Office MIS Data Mart. EMSI uses CIP codes while MIS uses TOP codes. Different coding systems result in differences in the supply numbers.

⁷ EMSI. California (6); Imperial County (6025). 2018.01 Class of Worker. QCEW + Non-QCEW + Self-Employed. 2017-2022.

⁸ calpassplus.org/LaunchBoard/SWP.aspx.

**Exhibit 7: Strong Workforce Program Metrics for
TOP 030100 Environmental Science in the San Diego-Imperial Region (PY2014-15)**

Metric	San Diego-Imperial	California
Number of course enrollments ⁹	596	9,658
Number of students who got a degree or certificate ¹⁰	6	17
Number of students who transferred ¹¹	66	747
Employed in the second fiscal quarter after exit ¹²	60%	56%
Employed in the fourth fiscal quarter after exit ¹³	60%	56%
Job closely related to field of study ¹⁴	N/A	100%
Median earnings in the second fiscal quarter after exit ¹⁵	\$9,151	\$8,968
Median change in earnings ¹⁶	0%	40%
Attained a living wage ¹⁷	50%	50%

Top Employers and Work Locations

Between January 1, 2015 and December 31, 2017, the top five employers in Imperial County for this occupation were [Apollo Group/U of Phoenix](#), [American Planning Association](#), [Imperial County](#), [Bureau of Land Management](#) and [Customs and Border Protection](#) (Exhibit 8).

Exhibit 8: Top Employers in Imperial County for *Environmental Science and Protection Specialists, Including Health*

Top Employers
<ul style="list-style-type: none"> • Apollo Group/U of Phoenix • American Planning Association • Imperial County • Bureau of Land Management • Customs and Border Protection

⁹ The number of enrollments in courses assigned to the TOP code in the selected year.

¹⁰ The number of unduplicated students who earned a locally-issued certificate, Chancellor's Office approved certificate, associate degree, and/or California Community Colleges bachelor's degree in the selected TOP code.

¹¹ Students who took non-introductory courses or completed a California Community Colleges Chancellor's Office award in the selected TOP code in selected year who subsequently enrolled for the first time in a four-year institution the following year.

¹² Among all exiters with a valid SSN, the percentage who were employed two quarters after exiting California Community Colleges.

¹³ Among exiting students with a valid SSN, the percentage who were employed four quarters after exiting California Community Colleges.

¹⁴ Among students who responded to the CTEOS, the percentage reporting employment in the same or similar field as their program of study.

¹⁵ Among exiting students, the median second-quarter earnings one year after the year in which they exited California Community Colleges.

¹⁶ Among exiting students with a valid SSN, the percentage change in earnings one year before and one year after exiting California Community Colleges.

¹⁷ Among completers and skills-builders who exited, the proportion of students who attained a living wage.

Skills, Education and Certifications

Exhibit 9 indicates the educational attainment for the occupation found currently in the national labor force. There is no typical on-the-job training for this occupation. The typical entry-level education is a **bachelor's degree**.¹⁸

Exhibit 9: National Educational Attainment of Environmental Science and Protection Specialists, Including Health¹⁹

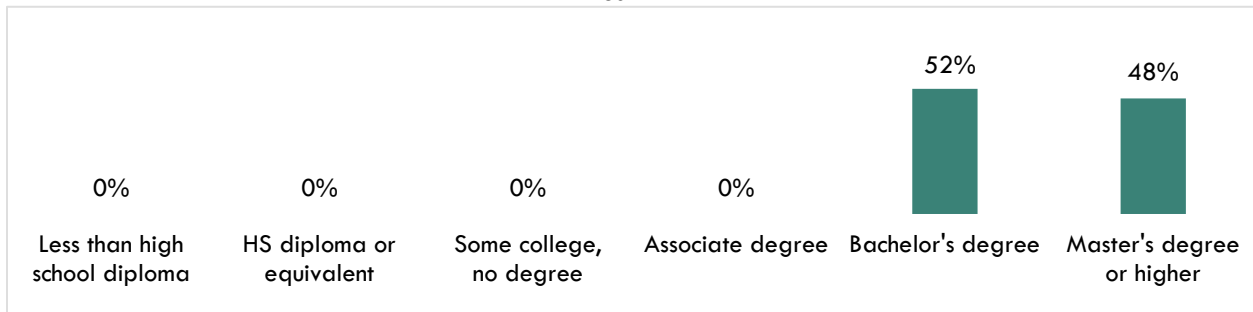


Exhibit 10 lists the top specialized and soft skills that appeared in online job postings between January 1, 2015 and December 31, 2017.

Exhibit 10: Top Skills for Environmental Science and Protection Specialists, Including Health in Imperial County²⁰

Specialized Skills	Soft Skills	Software Skills
<ul style="list-style-type: none"> • Hazardous Waste • Environmental Science • Land Use • Supervisory Skills • Urban Planning • Project Management • Environmental Regulations 	<ul style="list-style-type: none"> • Planning • Writing • Research • Building Effective Relationships • Leadership • Preparing Reports • Performance Analysis 	<ul style="list-style-type: none"> • Microsoft Office • Microsoft Vista

Tina Ngo Bartel, Director

John Edwards, Research Analyst

Center of Excellence, San Diego-Imperial Region

tngobartel@miracosta.edu

jedwards@miracosta.edu



¹⁸ EMSI. Imperial County (6025). 2018.01 Class of Worker. QCEW + Non-QCEW + Self-Employed. 2017-2022.

¹⁹ Bureau of Labor Statistics, Educational attainment for workers 25 years and older by detailed occupation. bls.gov/emp/ep_table_111.htm

²⁰ Labor Insight Jobs. Burning Glass Technologies. Imperial, CA. Full years 2015-2017.