

Air Traffic Controllers

Labor Market Analysis: San Diego County

December 2019

Summary



The brief provides labor market information about *Air Traffic Controllers* to assist the San Diego and Imperial Counties Community Colleges with decision-making in processes such as program development. According to available labor market information, *Air Traffic Controllers* have a labor market demand of 95 annual job openings, while average demand for an occupation in San Diego County is 277 annual job openings. No educational institutions in San Diego County supply awards for this occupation, suggesting that there is a supply gap. Similarly, there are 314 annual openings in California and 58 awards, suggesting a supply gap across the state. This occupation's entry-level and median wages are above the living wage. According to the California Community Colleges' outcomes data, 46 percent of students who completed programs in Air Traffic Control (TOP 302030) earned a living wage statewide, compared to 58 percent of students who complete Career Education programs in general. The typical entry-level education for *Air Traffic Controllers* is an associate degree. This brief recommends to proceed with a new program for this occupation.

Introduction

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

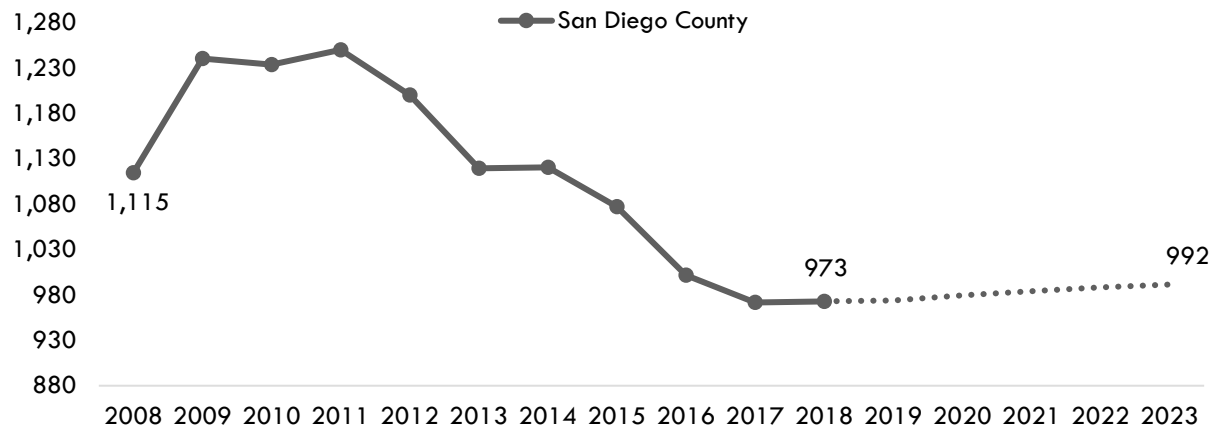
Air Traffic Controllers (SOC 53-2021): Control air traffic on and within vicinity of airport and movement of air traffic between altitude sectors and control centers according to established procedures and policies. Authorize, regulate, and control commercial airline flights according to government or company regulations to expedite and ensure flight safety. Sample reported job titles include:

- Air Traffic Control Specialist
- Control Tower Operator
- Radar Air Traffic Controller
- Certified Professional Controller
- Air Traffic Controller, Center
- Air Traffic Controller (Tower Option)
- Air Traffic Controller (Enroute Option)
- Air Traffic Control Specialist/Certified Professional Controller (ATC Specialist/CPC)

Projected Occupational Demand

Between 2018 and 2023, *Air Traffic Controllers* are projected to increase by 19 net jobs or two percent (Exhibit 1). Employers in San Diego County will need to hire 95 workers annually to fill new jobs and backfill jobs due to attrition caused by turnover and retirement, for example.

Exhibit 1: Number of Jobs for Air Traffic Controllers (2008-2023)²



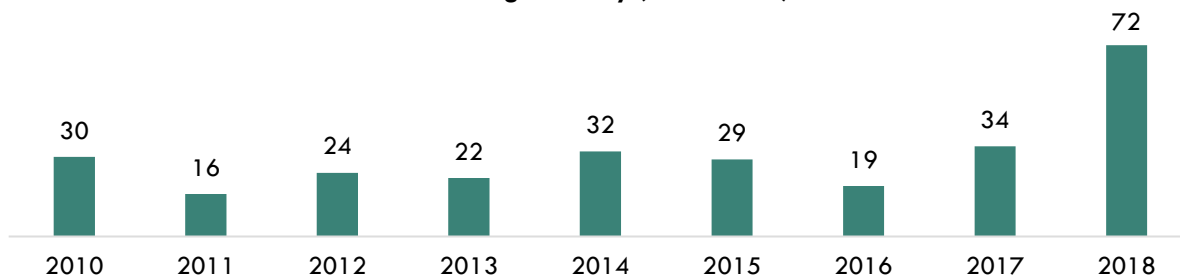
¹ The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating or disseminating data. [bls.gov/soc](https://www.bls.gov/soc/).

² Emsi 2019.04; QCEW, Non-QCEW, Self-Employed.

Online Job Postings

This report analyzes not only historical and projected (traditional LMI) data, but also recent data from online job postings (real-time LMI). Online job postings may provide additional insight about recent changes in the labor market demand that are not captured by historical data. Between 2010 and 2018, there was an average of 31 online job postings per year for *Air Traffic Controllers* in San Diego County (Exhibit 2).

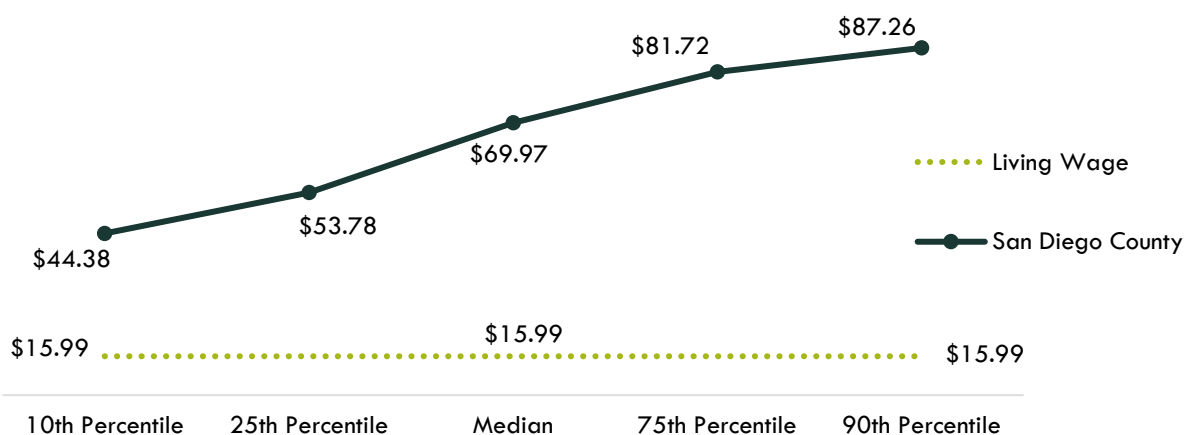
Exhibit 2: Number of Online Job Postings for Air Traffic Controllers in San Diego County (2010-2018)³



Earnings

Air Traffic Controllers receive median hourly earnings of \$69.97; this is more than the living wage for a single adult in San Diego County, which is \$15.99 per hour (Exhibit 3).⁴

Exhibit 3: Hourly Earnings⁵ for Air Traffic Controllers in San Diego County⁶



³ Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2010-2018.

⁴ "California Family Needs Calculator (formerly the Self-Sufficiency Standard)," Insight: Center for Community Economic Development, last updated 2018. insightccd.org/2018-self-sufficiency-standard.

⁵ 10th and 25th percentiles could be considered entry-level wages, and 75th and 90th percentiles could be considered experienced wages for individuals who may have been in the occupation longer, received more training than others, etc.

⁶ Emsi 2019.04; QCEW, Non-QCEW, Self-Employed.

Educational Supply

Educational supply for an occupation can be estimated by analyzing the number of awards in related Taxonomy of Programs (TOP) or Classification of Instructional Programs (CIP) codes.⁷ There is **one** TOP code and **one** CIP code related to *Air Traffic Controllers* (Exhibit 4).

Exhibit 4: Related TOP and CIP Codes for *Air Traffic Controllers*

<i>Air Traffic Controllers</i>
TOP 302030: Air Traffic Control
CIP 49.0105: Air Traffic Controller

According to TOP and CIP data, no educational institution supplies the region with awards for this occupation (Exhibit 5).

Exhibit 5: Number of Awards (Certificates and Degrees) Conferred by Postsecondary Institutions (Program Year 2013-14 through PY2016-17 Average)

TOP6 or CIP	TOP6 or CIP Title	3-Yr Annual Average CC Awards (PY14-15 to PY16-17)	Other Educational Institutions 3-Yr Annual Average Awards (PY13-14 to PY15-16)	3-Yr Total Average Supply (PY13-14 to PY16-17)
302030	Air Traffic Control	0	0	0
49.0105	Air Traffic Controller	0	0	0
			Total	0

⁷ TOP data comes from the California Community Colleges Chancellor's Office MIS Data Mart (datamart.cccco.edu) and CIP data comes from the Integrated Postsecondary Education Data System (nces.ed.gov/ipeds/use-the-data).

Demand vs. Supply

Comparing labor demand (annual openings) with labor supply⁸ suggests that there is a **supply gap** for this occupation in San Diego County, with **95** annual openings and **zero** awards. Comparatively, there are **314** annual openings in California and **58** awards⁹ (Exhibit 6).

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

Community Colleges and Other Postsecondary Educational Institutions	Demand (Annual Openings)	Supply (Total Annual Average Supply)	Supply Gap or OverSupply
San Diego	95	0	95
California	314	58	256

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

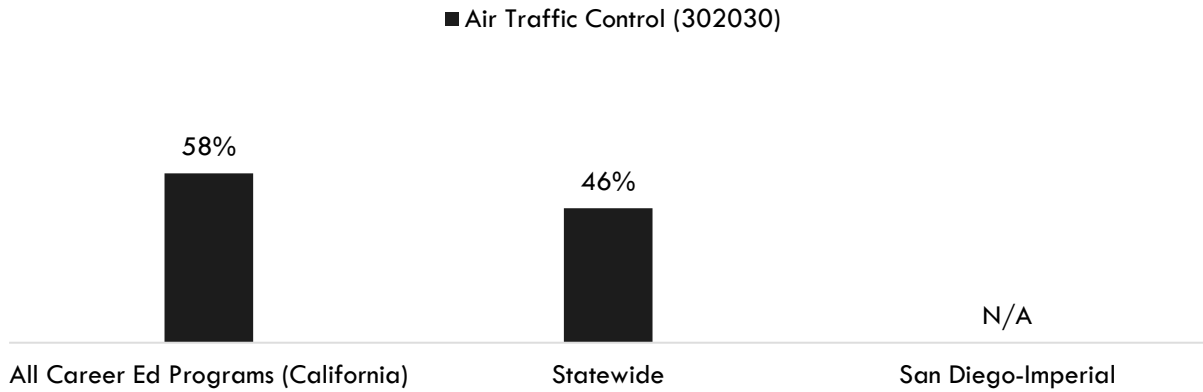
Student Outcomes and Regional Comparisons

According to the California Community Colleges LaunchBoard, 46 percent of students statewide earned a living wage after completing a program related to *Air Traffic Controllers*, compared to 58 percent of students who earned a living wage in Career Education programs across the state (Exhibit 7a).

⁸ 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.

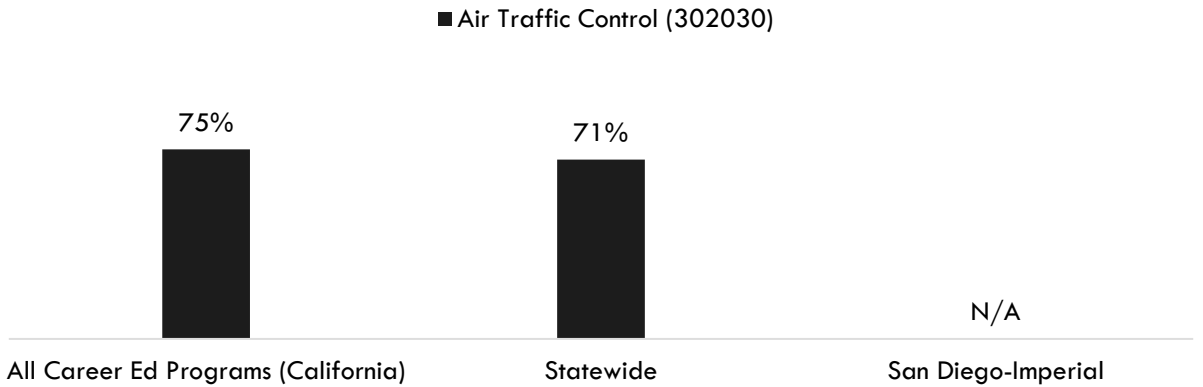
⁹ "Supply and Demand," Centers of Excellence Student Outcomes, coecc.net/Supply-and-Demand.aspx.

Exhibit 7a: Proportion of Students Who Earned a Living Wage, PY2015-16¹⁰



According to the California Community Colleges LaunchBoard, 71 percent of students obtained a job closely related to their field of study after completing a program related to *Air Traffic Controllers*, compared to 75 percent of students in Career Education programs in general across the state (Exhibit 7b).

Exhibit 7b: Percentage of Students in a Job Closely Related to Field of Study, PY2014-15¹¹



¹⁰ Among completers and skills builders who exited, the proportion of students who attained a living wage.

¹¹ Most recent year with available data is Program Year 2014-15. Percentage of Students in a Job Closely Related to Field of Study: Among students who responded to the CTEOS, the percentage reporting employment in the same or similar field as their program of study.

Top Employers and Work Locations

Between January 1, 2016 and December 31, 2018, the top five employers in San Diego County for this occupation were [Serco](#), [General Atomics](#), [CACI](#), [Federal Aviation Administration](#), and [Hawthorne Cat](#) (Exhibit 8).

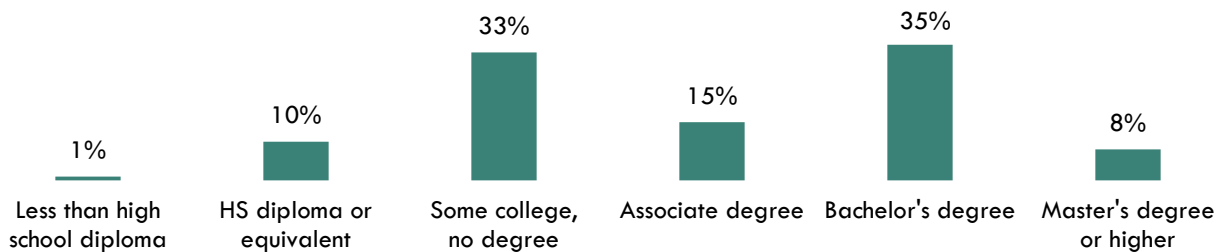
Exhibit 8: Top Employers in San Diego County for Air Traffic Controllers¹²

Top Employers	
<ul style="list-style-type: none"> • Serco • General Atomics • CACI • Federal Aviation Administration • Hawthorne Cat 	<ul style="list-style-type: none"> • US Army • San Diego County Regional Airport Authority • Northrop Grumman • US Government • US Department of Transportation

Skills, Education, and Certifications

Exhibit 9 indicates the educational attainment for the occupation found currently in the national labor force. The typical on-the-job training for this profession is [long-term on-the-job training](#). The typical entry-level education is an [associate degree](#).¹³

Exhibit 9: National Educational Attainment of Air Traffic Controllers¹⁴



*May not add to 100% due to rounding

¹² Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2016-2018.

¹³ Emsi 2019.04; QCEW, Non-QCEW, Self-Employed.

¹⁴ "Educational Attainment for Workers 25 Years and Older by Detailed Occupation," Bureau of Labor Statistics, last modified October 18, 2018. bls.gov/emp/tables/educational-attainment.htm.

Exhibit 10 lists the top specialized, soft, and software skills that appeared in online job postings between January 1, 2016 and December 31, 2018.

Exhibit 10: Top Skills for Air Traffic Controllers in San Diego County¹⁵

Specialized Skills	Soft Skills	Software Skills
<ul style="list-style-type: none"> • Air Traffic Management • Ground Control • Repair • Customer Service • Expediting Orders 	<ul style="list-style-type: none"> • Communication Skills • Computer Literacy • Planning • Physical Abilities • Writing 	<ul style="list-style-type: none"> • Microsoft Excel • Microsoft PowerPoint • Microsoft Word • Flickr • Microsoft Operating Systems

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Important Disclaimers

All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. This study examines the most recent data available at the time of the analysis; however, data sets are updated regularly and may not be consistent with previous reports. Efforts have been made to qualify and validate the accuracy of the data and the report findings; however, neither the Centers of Excellence for Labor Market Research (COE), COE host district, nor California Community Colleges Chancellor’s Office are responsible for the applications or decisions made by individuals and/or organizations based on this study or its recommendations.

¹⁵ Burning Glass Technologies, “Labor Insight Real-Time Labor Market Information Tool.” 2016-2018.