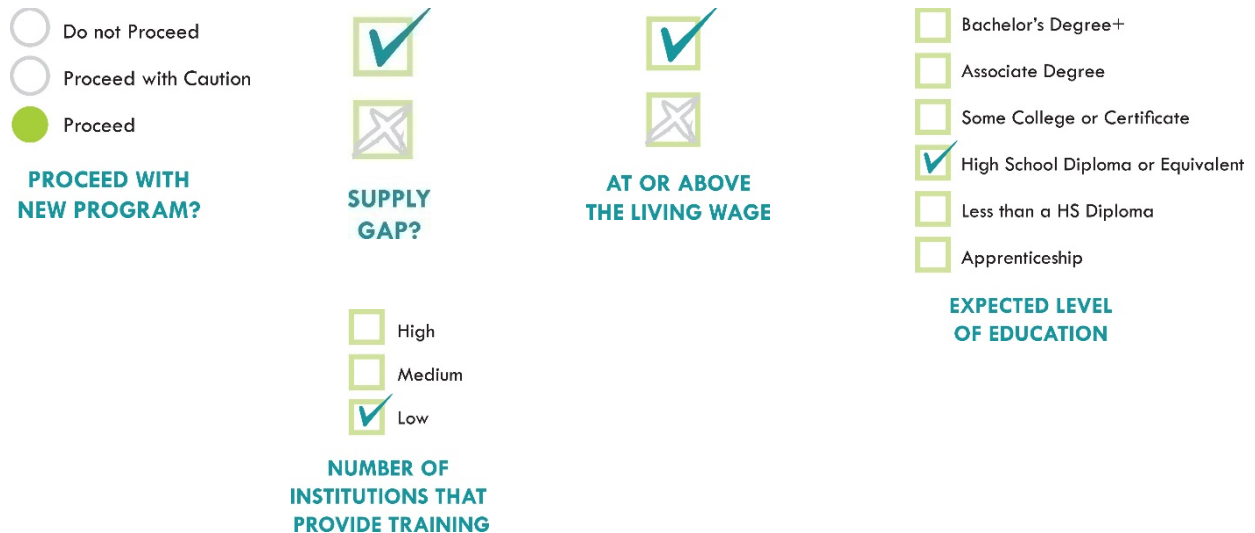


Freight Occupations

Labor Market Analysis: San Diego County

August 2019

Summary



The brief provides labor market information about *Engineering Technician Occupations* 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, there is a supply gap for occupations that could be trained by a *Freight Occupations* program. *Freight Occupations* include “Cargo & Freight Agents” and “Transportation, Storage, and Distribution Managers.” *Freight Occupations* in San Diego County have a labor market demand of 281 annual job openings, and three educational institutions in San Diego County supply 14 awards for these occupations, suggesting that there is a potential supply gap. This occupation’s entry-level and median wages are above the living wage, suggesting that students who successfully complete a program and obtain employment in a related field may earn a living wage. According to the California Community Colleges’ outcomes data, 59 percent of students who complete Logistics and Materials Transportation (TOP051000) programs earned a living wage, compared to 58 percent of students who complete Career Education programs in general. The top listed educational requirement for *Freight Occupations* is a high school diploma or equivalent.

Introduction

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

- **Cargo & Freight Agents** (SOC 43-5011): Expedite and route movement of incoming and outgoing cargo and freight shipments in airline, train, and trucking terminals, and shipping docks. Take orders from customers and arrange pickup of freight and cargo for delivery to loading platform. Prepare and examine bills of lading to determine shipping charges and tariffs. For this report, Cargo & Freight Agents include:
 - **Freight Forwarders** (SOC 43-5011.01): Research rates, routings, or modes of transport for shipment of products. Maintain awareness of regulations affecting the international movement of cargo. Make arrangements for additional services, such as storage or inland transportation.
- **Transportation, Storage, and Distribution Managers** (SOC 11-3071): Plan, direct, or coordinate transportation, storage, or distribution activities in accordance with organizational policies and applicable government laws or regulations. Includes logistics managers. For this report, Transportation, Storage, and Distribution Managers include:
 - **Transportation Managers** (SOC 11-3071.01): Plan, direct, or coordinate the transportation operations within an organization or the activities of organizations that provide transportation services.

For the purpose of this report, these occupations are referred to as *Freight Occupations*.

Projected Occupational Demand

Between 2018 and 2023, *Freight Occupations* are projected to increase by 256 jobs or nine percent (Exhibit 1). Employers in San Diego County will need to hire 281 workers annually to fill new jobs and backfill jobs due to attrition caused by turnover and retirement, for example.

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).

Exhibit 1: Number of Jobs for Freight Occupations (2008-2023)²

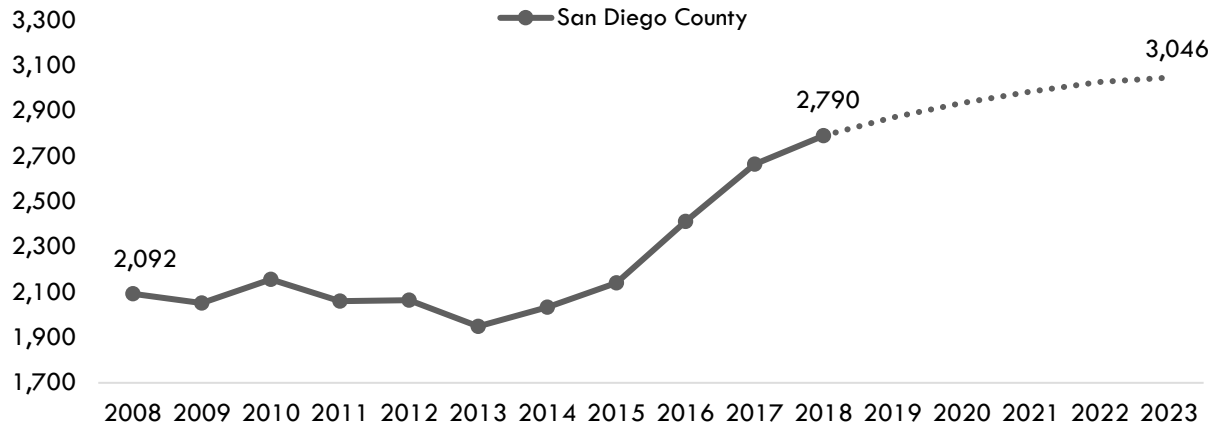


Exhibit 1b breaks down the projected number of jobs change by occupation more specifically. As Exhibit 1b shows, labor market demand for *Cargo and Freight Agents* is projected to increase by 145 total jobs between 2018 and 2023.

Exhibit 1b: Number of Jobs for Freight Occupations in San Diego County (2018-2023)

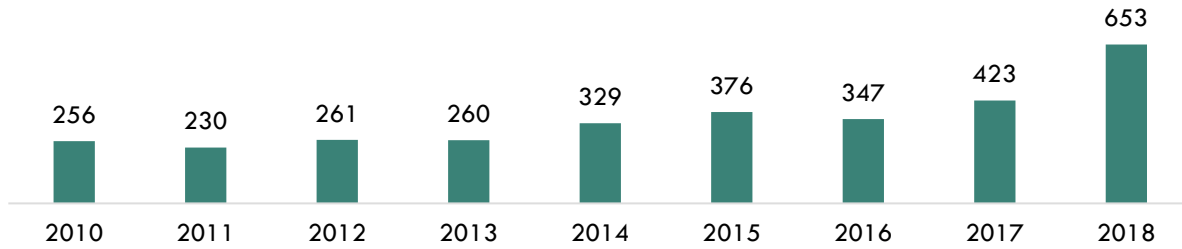
Occupational Title	2018 Jobs	2023 Jobs	2018 - 2023 Change	2018-2023 % Change	Annual Openings (Demand)
Cargo and Freight Agents	1,207	1,401	194	16%	145
Transportation, Storage, and Distribution Managers	1,583	1,645	62	4%	136
Total	2,790	3,046	256	9%	281

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 348 online job postings per year for *Freight Occupations* in San Diego County (Exhibit 2).

² Emsi 2019.03; QCEW, Non-QCEW, Self-Employed.

Exhibit 2: Number of Online Job Postings for Freight Occupations in San Diego County (2010-2018)³



Earnings

The median hourly earnings of *Freight Occupations* range from \$20.52 to \$41.60 (Exhibit 3a). On average, the median hourly earnings for *Freight Occupations* is \$31.06; this is more than the living wage for a single adult in San Diego County, which is \$15.99 per hour (Exhibit 3b).⁴

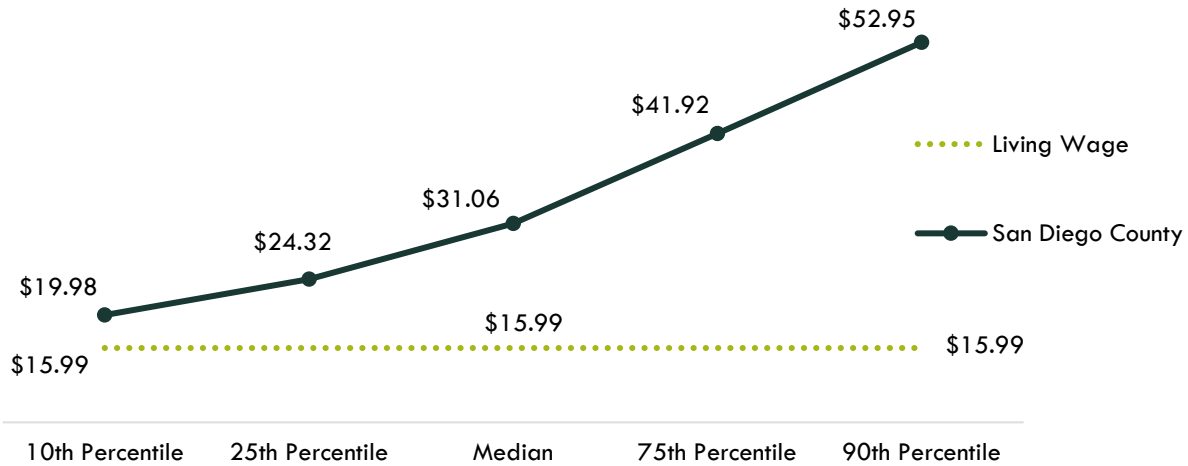
Exhibit 3a: Hourly Earnings for Freight Occupations in San Diego County

Occupational Title	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)
Transportation, Storage, and Distribution Managers	\$33.65	\$41.60	\$59.30
Cargo and Freight Agents	\$14.99	\$20.52	\$24.54

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.

Exhibit 3b: Hourly Earnings⁵ for Freight Occupations in San Diego County⁶



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 are **four** TOP codes and **four** CIP codes related to *Freight Occupations* (Exhibit 4). However, TOP 051400: Office Technology/ Office Computer Applications will not be included in this report because the program trains for various occupations.

Exhibit 4: Related TOP and CIP Codes for Freight Occupations

<i>Freight Occupations</i>
TOP 051000: Logistics and Materials Transportation
TOP 051400: Office Technology/Office Computer Applications
TOP 302000: Aviation and Airport Management and Services
TOP 302010: Aviation and Airport Management
CIP 49.0104: Aviation/Airway Management and Operations
CIP 49.9999: Transportation and Materials Moving, Other
CIP 52.0203: Logistics, Materials, and Supply Chain Management
CIP 52.0410: Traffic, Customs, and Transportation Clerk/Technician

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 2019.03; QCEW, Non-QCEW, Self-Employed.

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).

According to TOP data, **three** community colleges supply the region with awards for this occupation: **Palomar College, San Diego Miramar College, and Southwestern College**. According to CIP data, **no** non-community college supplies the region with awards (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)
051000	Logistics and Materials Transportation	4	0	4
	• Southwestern	4	0	
302000	Aviation and Airport Management and Services	3	0	3
	• Palomar	3	0	
302010	Aviation and Airport Management	7	0	7
	• San Diego Miramar	7	0	
			Total	14

Demand vs. Supply

Comparing labor demand (annual openings) with labor supply⁸ suggests that there is a **supply gap** for these occupations in San Diego County, with **281** annual openings and **14** awards. Comparatively, there are **3,253** annual openings in California and **469** 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	281	14	267
California	3,253	469	2,784

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.

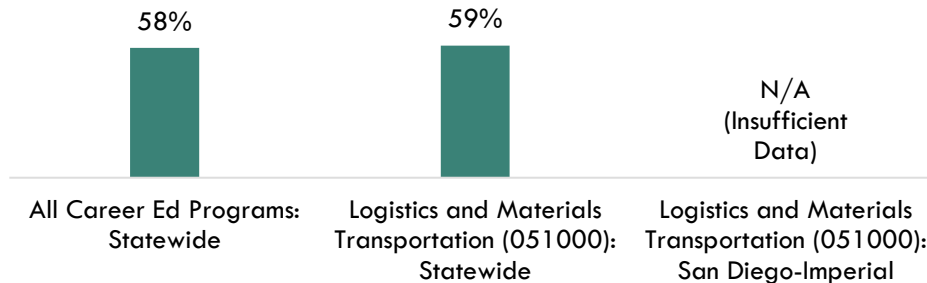
⁹ "Supply and Demand," Centers of Excellence Student Outcomes, coecc.net/Supply-and-Demand.aspx.

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, there was insufficient data to calculate the “Percentage of Students Employed in a Job Closely Related to Field of Study” in the San Diego-Imperial region and across the state for Logistics and Materials Transportation (051000); however, there was data for the “Proportion of Students Who Earned a Living Wage.” Statewide, 59 percent of students earned a living wage for Logistics and Materials Transportation (051000) program, compared to 58 percent of students who earned a living wage in Career Education programs across the state (Exhibit 7).

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



Top Employers and Work Locations

Between January 1, 2016 and December 31, 2018, the top five employers in San Diego County for these occupations were [The Home Depot](#), [General Atomics](#), [US Navy](#), [California Center For Sustainable Energy](#), and [United Parcel Service](#) (Exhibit 8).

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

Exhibit 8: Top Employers in San Diego County for Freight Occupations¹¹

Top Employers	
<ul style="list-style-type: none"> • The Home Depot Incorporated • General Atomics • US Navy • California Center For Sustainable Energy • United Parcel Service Incorporated 	<ul style="list-style-type: none"> • Harbor Freight Tools • Bank of America • Pathmark • Federal Aviation Administration • Nuvasive Incorporated

Skills, Education, and Certifications

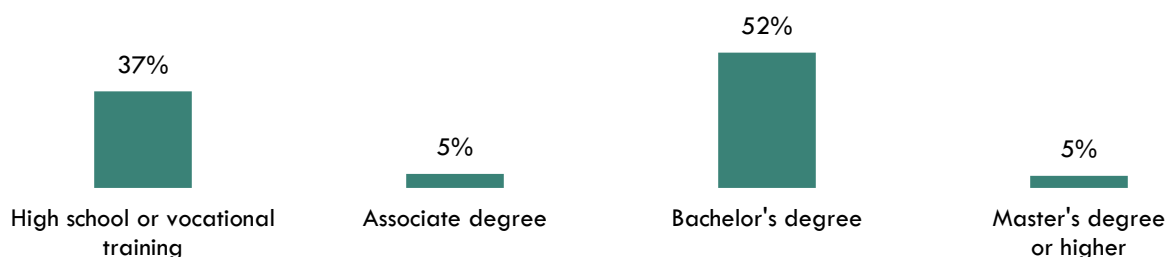
Freight Occupations have a national educational requirement of a [high school diploma or equivalent](#) (Exhibit 9a).

Exhibit 9a: National Educational Attainment for Freight Occupations¹²

Occupational Title	Typical Entry-Level Education
Cargo and Freight Agents	High school diploma or equivalent
Transportation, Storage, and Distribution Managers	High school diploma or equivalent

Based on online job postings between January 1, 2016 and December 31, 2018, the top listed educational requirement for *Freight Occupations* is a [bachelor's degree](#) (Exhibit 9b).¹³

Exhibit 9b: Educational Requirements for Freight Occupations in San Diego County¹⁴



*May not add to 100% due to rounding.

¹¹ Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2016-2018.

¹² Emsi 2019.03; QCEW, Non-QCEW, Self-Employed.

¹³ Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2016-2018.

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 *Freight Occupations* in San Diego County¹⁵

Specialized Skills	Soft Skills	Software Skills
<ul style="list-style-type: none"> • Logistics • Scheduling • Logistics Management • Customer Service • Budgeting 	<ul style="list-style-type: none"> • Communication Skills • Planning • Organizational Skills • Problem Solving • Teamwork / Collaboration 	<ul style="list-style-type: none"> • Microsoft Excel • Microsoft PowerPoint • Microsoft Word • Enterprise Resource Planning • SAP

Prepared by:

Tina Ngo Bartel, Director

John Edwards, Research Analyst

San Diego-Imperial Center of Excellence for Labor Market Research

tngobartel@miracosta.edu

jedwards@miracosta.edu



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.