Inspectors, Testers, Sorters, Samplers, and Weighers
Labor Market Analysis: San Diego County

February 2019

Summary

According to available labor market information, there is a large demand for *Inspectors, Testers, Sorters, Samplers, and Weighers* in San Diego County. *Inspectors, Testers, Sorters, Samplers, and Weighers* has a labor market demand of 591 annual job openings, while average demand for an occupation in San Diego County is 276 annual job openings. This occupation's median wages are higher than the Self-Sufficiency Standard, suggesting that students who successfully complete a program and obtain employment in a related field may earn living wages.

The following list summarizes findings from the labor market analysis for *Inspectors, Testers, Sorters, Samplers, and Weighers*:

- Between 2018 and 2023, *Inspectors, Testers, Sorters, Samplers, and Weighers* are projected to decrease by 123 jobs or two percent.

- Employers in San Diego County will need to hire 591 workers annually to fill new jobs and backfill jobs due to attrition caused by turnover and retirement, for example.

- Between 2010 and 2018, there was an average of 601 online job postings per year for *Inspectors, Testers, Sorters, Samplers, and Weighers*.

- *Inspectors, Testers, Sorters, Samplers, and Weighers* earn median hourly earnings of $19.33; this is more than the Self-Sufficiency Standard for a single adult in San Diego County, which is $15.99 per hour.

- There are four Taxonomy of Programs (TOP) codes and 12 Classification of Instructional Programs (CIP) codes related to *Inspectors, Testers, Sorters, Samplers, and Weighers*.

- According to TOP and CIP data, six colleges supply the region with awards for this occupation: MiraCosta College, San Diego City College, San Diego Continuing Education, San Diego Mesa College, San Diego Miramar College, and Southwestern College.

- Comparing labor demand (annual openings) with labor supply suggests that there is a supply gap for this occupation in San Diego County, with 591 annual openings and 69 awards. Comparatively, there are 7,103 annual openings in California and 661 completions.

- Between January 1, 2016 and December 31, 2018, the top five employers in San Diego County for this occupation were American Consumer Panels, General Atomics, GKN Aerospace, Booz Allen Hamilton, and Meggitt Polymers & Composites.
- The typical training for this occupation is moderate-term on-the-job training. The typical entry-level education is a high school diploma or equivalent.

Introduction

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

Inspectors, Testers, Sorters, Samplers, and Weighers (SOC 51-9061): Inspect, test, sort, sample, or weigh nonagricultural raw materials or processed, machined, fabricated, or assembled parts or products for defects, wear, and deviations from specifications. May use precision measuring instruments and complex test equipment. Sample reported job titles include:

- Quality Control Inspector
- Quality Inspector
- Quality Control Technician
- Quality Assurance Inspector
- Pipe Inspector

- Lumber Inspector
- Test Technician
- Quality Technician
- Quality Control
- Process Checker

Projected Occupational Demand

Between 2018 and 2023, *Inspectors, Testers, Sorters, Samplers, and Weighers* are projected to decrease by 123 jobs or two percent (Exhibit 1). Employers in San Diego County will need to hire 591 workers annually to fill new jobs and backfill jobs due to attrition caused by turnover and retirement, for example.

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[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.

Exhibit 1: Number of Jobs for *Inspectors, Testers, Sorters, Samplers, and Weighers* (2008-2023)[2]
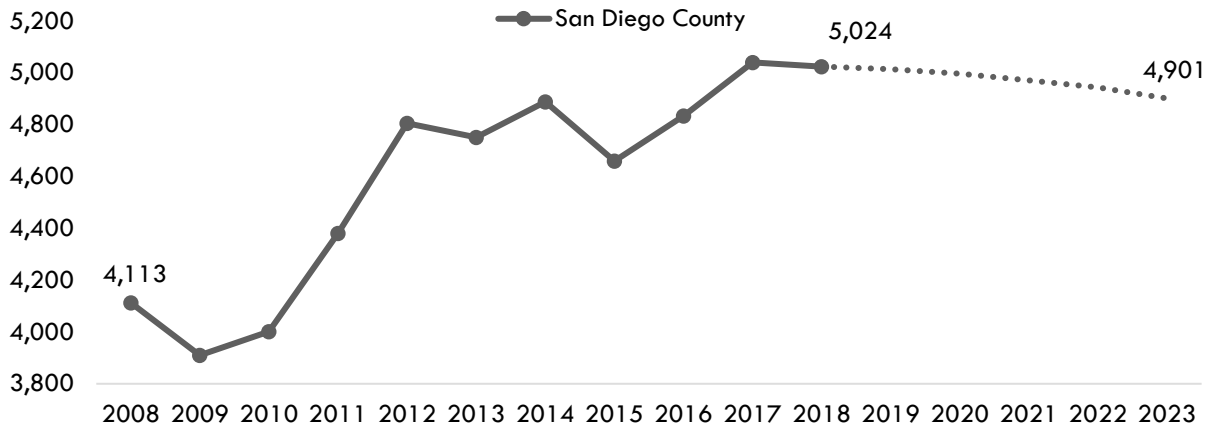
Online Job Postings

Between 2010 and 2018, there was an average of 601 online job postings per year for *Inspectors, Testers, Sorters, Samplers, and Weighers* (Exhibit 2).

Exhibit 2: Number of Online Job Postings for *Inspectors, Testers, Sorters, Samplers, and Weighers* in San Diego County (2010-2018)[3]
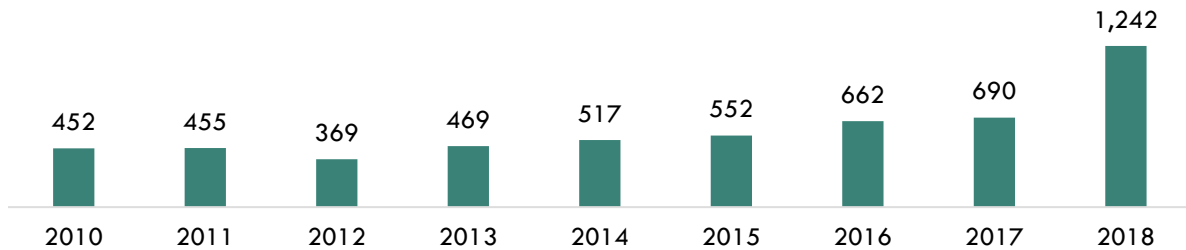

Earnings

Inspectors, Testers, Sorters, Samplers, and Weighers earn median hourly earnings of $19.33; this is more than the Self-Sufficiency Standard for a single adult in San Diego County, which is $15.99 per hour (Exhibit 3).[4]

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[2] Source: Emsi 2018.04; QCEW, Non-QCEW, Self-Employed.
[3] Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2010-2018.
[4] "Self-Sufficiency Standard," Insight: Center for Community Economic Development, last updated 2018. insightcced.org/2018-self-sufficiency-standard.

Exhibit 3: Hourly Earnings for *Inspectors, Testers, Sorters, Samplers, and Weighers* in San Diego County[5]
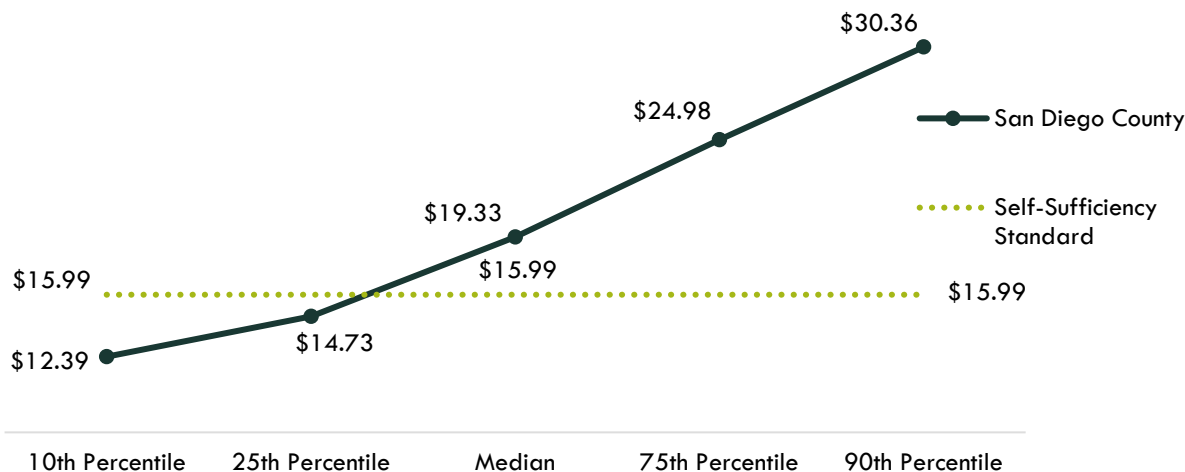
Educational Supply

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.[6] There are four TOP codes and 12 CIP codes related to *Inspectors, Testers, Sorters, Samplers, and Weighers* (Exhibit 4).

Exhibit 4: Related TOP and CIP Codes in San Diego County

SOC 51-9061: Inspectors, Testers, Sorters, Samplers, and Weighers
TOP 043000: Biotechnology and Biomedical Technology
TOP 095500: Laboratory Science Technology
TOP 095600: Manufacturing and Industrial Technology
TOP 095680: Industrial Quality Control
CIP 15.0401: Biomedical Technology/Technician
CIP 15.0405: Robotics Technology/Technician
CIP 15.0406: Automation Engineer Technology/Technician
CIP 15.0611: Metallurgical Technology/Technician
CIP 15.0613: Manufacturing Engineering Technology/Technician

SOC 51-9061: Inspectors, Testers, Sorters, Samplers, and Weighers
CIP 15.0702: Quality Control Technology/Technician
CIP 15.0803: Automotive Engineering Technology/Technician
CIP 15.0805: Mechanical Engineering/Mechanical Technology/Technician
CIP 26.1104: Computational Biology
CIP 41.0101: Biology Technician/Biotechnology Laboratory Technician
CIP 41.0301: Chemical Technology/Technician
CIP 50.0404: Industrial and Product Design

According to TOP and CIP data, six colleges supply the region with awards for this occupation: MiraCosta College, San Diego City College, San Diego Continuing Education, San Diego Mesa College, San Diego Miramar College, and Southwestern College (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)
043000	Biotechnology and Biomedical Technology	61	0	61
	• MiraCosta	31	0	
	• San Diego City	5	0	
	• San Diego Mesa	0	0	
	• San Diego Miramar	11	0	
	• Southwestern	14	0	
095500	Laboratory Science Technology	0	0	0
095600	Manufacturing and Industrial Technology	8	0	8
	• San Diego Continuing Ed.	0	0	
	• San Diego City	8	0	
095680	Industrial Quality Control	0	0	0
15.0401	Biomedical Technology/Technician	0	0	0

15.0405	Robotics Technology/Technician	0	0	0
15.0406	Automation Engineer Technology/Technician	0	0	0
15.0611	Metallurgical Technology/Technician	0	0	0
15.0613	Manufacturing Engineering Technology/Technician	0	0	0
15.0702	Quality Control Technology/Technician	0	0	0
15.0803	Automotive Engineering Technology/Technician	0	0	0
15.0805	Mechanical Engineering/Mechanical Technology/Technician	0	0	0
26.1104	Computational Biology	0	0	0
41.0101	Biology Technician/Biotechnology Laboratory Technician	0	0	0
41.0301	Chemical Technology/Technician	0	0	0
50.0404	Industrial and Product Design	0	0	0
			Total	**69**

Demand vs. Supply

Comparing labor demand (annual openings) with labor supply[7] suggests that there is a supply gap for this occupation in San Diego County, with 591 annual openings and 69 awards. Comparatively, there are 7,103 annual openings in California and 661 completions[8] (Exhibit 6).

Exhibit 6: Labor Demand (Annual Openings) Compared to 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	591	69	**522**
California	7,103	661	**6,442**

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[7] 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.
[8] Source: Emsi, 2018.04; QCEW, Non-QCEW, Self-Employed.

Please note: This is a basic analysis of supply and demand of labor. 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. 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 available in the CTE LaunchBoard, students who took courses in the related TOP codes exhibited the following outcomes (Exhibit 7).

Exhibit 7: Strong Workforce Program Metrics for *TOP 011300: Food Processing and Related Technologies* in San Diego-Imperial Region *vs. California* (PY2015-16)

Metric	San Diego-Imperial	California
Number of course enrollments[9]	19	291
Completed 12+ CTE units in one year[10]	N/A	19
Completed 48+ CTE contact hours in one year[11]	0	0
Number of students who got a degree or certificate[12]	N/A	11
Number of students who transferred[13]	N/A	N/A
Employed in the second fiscal quarter after exit[14]	N/A	78%
Employed in the fourth fiscal quarter after exit[15]	N/A	78%
Job closely related to field of study[16]	N/A	N/A
Median earnings in the second fiscal quarter after exit[17]	N/A	$8,137
Median change in earnings[18]	N/A	68%
Attained a living wage[19]	N/A	56%

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

[10] The number of students who completed 12 or more credit CTE units.

[11] The number of students who completed 48 or more noncredit CTE instructional contact hours.

[12] 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.

[13] 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.

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

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

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

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

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

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

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 American Consumer Panels, General Atomics, GKN Aerospace, Booz Allen Hamilton, and Meggitt Polymers & Composites (Exhibit 8).
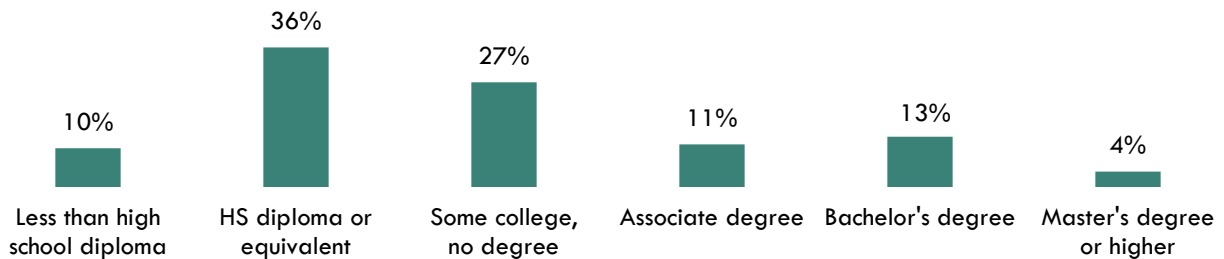
Exhibit 8: Top Employers in San Diego County for *Inspectors, Testers, Sorters, Samplers, and Weighers*[20]

Top Employers	
• American Consumer Panels	• US Navy
• General Atomics	• Alere
• GKN Aerospace	• Becton Dickinson & Compny
• Booz Allen Hamilton, Inc.	• PAE, Inc.
• Meggitt Polymers & Composites	• Vivint Solar

Skills, Education, and Certifications

Exhibit 9 indicates the educational attainment for the occupation found currently in the national labor force. The typical training for this occupation is moderate-term on-the-job training. The typical entry-level education is a high school diploma or equivalent.[21]

Exhibit 9: National Educational Attainment of *Inspectors, Testers, Sorters, Samplers, and Weighers*[22]

Less than high school diploma	HS diploma or equivalent	Some college, no degree	Associate degree	Bachelor's degree	Master's degree or higher
10%	36%	27%	11%	13%	4%

*May not add to 100% due to rounding

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

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[20] Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2010-2018.
[21] Source: Emsi, 2018.04; QCEW, Non-QCEW, Self-Employed.
[22] "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: Top Skills for *Inspectors, Testers, Sorters, Samplers, and Weighers* in San Diego County[23]

Specialized Skills	Soft Skills	Software Skills
• Quality Assurance and Control	• Communication Skills	• Microsoft Excel
• Calipers	• Detail-Oriented	• Microsoft Word
• Quality Management	• Computer Literacy	• Microsoft Powerpoint
• Micrometers	• Writing	• Enterprise Resource Planning
• Calibration	• Physical Abilities	• SAP

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