

Labor Market Analysis for Program Recommendation:
 0104.00/Viticulture, Enology, and Wine Business
 (Winemaking Associate in Science)
 (Winemaking Certificate of Achievement)
 South Central Coast Center of Excellence, June 2025



Summary

| | | | |
|-------------------------|---|---|---|
| Program LMI Endorsement | Endorsed: All LMI Criteria Met <input type="checkbox"/> | Endorsed: Some LMI Criteria Met <input checked="" type="checkbox"/> | Not LMI Endorsed <input type="checkbox"/> |
|-------------------------|---|---|---|

Program LMI Endorsement Criteria

| | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
|--|--|--|
| Supply Gap: | <i>Comments:</i> there is projected to be 1,409 annual job openings in the South Central Coast (SCC) region for these winemaking occupations, which is more than the 292 awards conferred by educational institutions. | |
| Self-Sufficiency Standard Living Wage ¹ : | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| | <i>Comments:</i> All (100%) annual job openings for these winemaking occupations have entry-level hourly wages below the Santa Barbara County living wage of \$29.80. | |
| Education: | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| | <i>Comments:</i> Though all (100%) annual job openings for these winemaking occupations typically require a high school diploma or equivalent, between 31% and 35% of workers in the field have completed some college or an associate degree as their highest level of education. | |

Additional Considerations

| | | | |
|-------------------------|------------------------------|-------------------------------|--|
| Emerging Occupation(s): | Yes <input type="checkbox"/> | Some <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| | <i>Comments:</i> N/A | | |

The South Central Coast Center of Excellence for Labor Market Research (SCC COE) prepared this report to determine whether there is a supply gap in the SCC regional labor market related to two occupations:

- Below Middle-Skill
 - *Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders (51-9012)*
- Middle-Skill
 - *Farmers, Ranchers, and Other Agricultural Managers (11-9013)*

¹ At the direction of the California Community College Chancellor's Office, the living wage endorsement criteria in this report uses the University of Washington's Center for Women's Welfare Self-Sufficiency Standard, which the COE refers to as a living wage, to determine the living wage for Los Angeles, San Luis Obispo, Santa Barbara, and Ventura counties, last updated in March 2024.

Based on the available data there appears to be a supply gap for these winemaking occupations and typical education requirements for these occupations align with a community college education. However, all annual job openings have entry-level wages below the Self-Sufficiency Standard living wage. **Therefore, due to some of the regional labor market criteria being met, the COE endorses this proposed program.**

Exhibit 1 lists the occupational demand, supply, typical entry-level education, and educational attainment for the occupations included in this report.

Exhibit 1: Labor Market Endorsement Summary

| Occupation (SOC) | Demand (Annual Openings) | Supply (CC and Non-CC) | Entry-Level Hourly Earnings (25 th Percentile) | Typical Entry-Level Education | Community College Educational Attainment |
|---|--------------------------|------------------------|---|-----------------------------------|--|
| Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders (51-9012) | 101 | Accounted for Below | Santa Barbara: \$22.43 | High school diploma or equivalent | 35% |
| Farmers, Ranchers, and Other Agricultural Managers (11-9013) | 1,307 | 292 | Santa Barbara: \$15.50 | High school diploma or equivalent | 31% |
| Total | 1,409 | 292 | N/A | N/A | N/A |

Demand:

- The number of jobs related to these winemaking occupations is projected to increase 9% through 2028 in the SCC region. There is projected to be 1,409 annual jobs due to new job creation and replacements.
- Hourly entry-level wages for these winemaking occupations in Santa Barbara County range from \$15.50 to \$22.42; all (100%) annual job openings have entry-level wages below the Self-Sufficiency Standard living wage (\$29.80 for Santa Barbara County).
- There were 113 online job postings for these winemaking occupations over the past 12 months. The highest number of postings were for brewers, agricultural managers, and farm managers.
- The typical entry-level education for these winemaking occupations is a high school diploma or equivalent.
- Between 31% and 35% of workers in the field have completed some college or an associate degree as their highest level of education.

Supply:

- There was an average of 154 awards conferred by seven community colleges in the SCC Region from 2020 to 2023.
- Non-community college institutions conferred 138 related awards from 2019 to 2022.

- SCC community college students that exited Viticulture, Enology, and Wine Business programs in the 2021-22 academic year had a median annual wage of \$47,812 (\$22.99 per hour) after exiting the program and 54% attained the regional living wage (Self-Sufficiency Standard).
- Throughout California, 83% of Viticulture, Enology, and Wine Business students that exited their program in 2020-21 reported that they are working in a job closely related to their field of study.

Demand

Occupational Projections:

Exhibit 2 compares historical and projected changes in employment for these occupations compared to the number of jobs in 2018. Notably employment for these winemaking occupations in Northern Los Angeles saw the highest growth of 81% from 2018 to 2023, which is significantly higher when compared to employment for these occupations in California, the SCC Region, and all other counties in the SCC region. From 2023 to 2028, employment for these winemaking occupations is projected to grow in all areas, with the Santa Barbara County having the largest projected growth in employment (43%).

Exhibit 2: Historical and Projected Employment for Winemaking Occupations in the SCC Region, 2018-2028

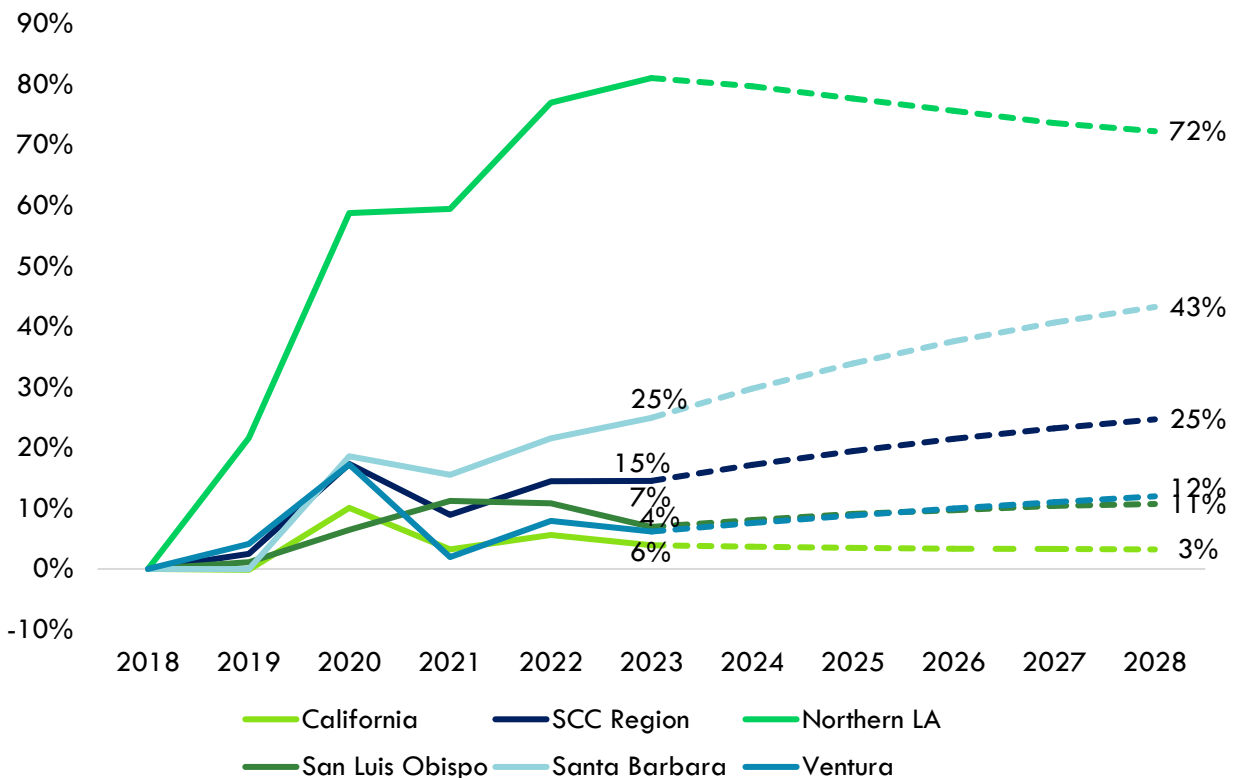


Exhibit 3 shows the five-year occupational demand projections for these winemaking occupations. In the SCC Region, the number of jobs related to these occupations is projected to increase 9% through 2028. There is projected to be 1,409 jobs available annually. Santa Barbara has the highest number of jobs and annual openings, with employment projected to grow in all counties except Northern LA, where there is a projected decline in employment through 2028.

Exhibit 3: Occupational Demand in SCC Region²

| Geography | 2023 Jobs | 2028 Jobs | 2023-2028 Change | 2023-2028 % Change | Annual Openings |
|-------------------|---------------|---------------|------------------|--------------------|-----------------|
| Northern LA | 268 | 255 | (13) | (5%) | 27 |
| San Luis Obispo | 1,047 | 1,083 | 36 | 3% | 115 |
| Santa Barbara | 4,699 | 5,387 | 688 | 15% | 652 |
| Ventura | 5,277 | 5,565 | 288 | 5% | 613 |
| SCC Region | 11,291 | 12,291 | 1,000 | 9% | 1,409 |

Wages:

The labor market endorsement in this report considers the entry-level hourly wages for these winemaking occupations in relation to the living wage of the county where the requesting community college is located. This report was requested by Allan Hancock College, which is in Santa Barbara County. Wages for other counties are included below to provide a complete analysis of the SCC Region.

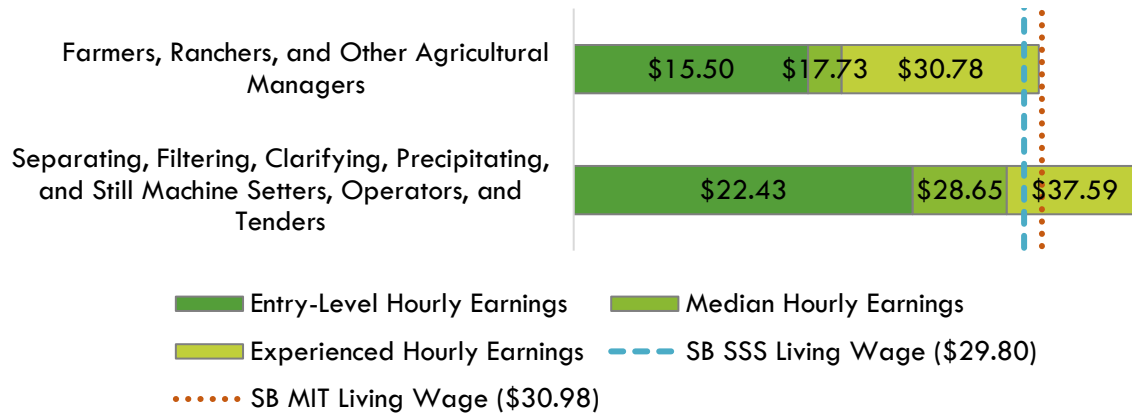
At the direction of the California Community College Chancellor’s Office, the living wage endorsement criteria in this report uses the University of Washington’s Center for Women’s Welfare Self-Sufficiency Standard which the COE refers to as a living wage, to determine each county’s living wage (last updated in March 2024). Additionally, data for the MIT Living Wage, updated on February 10, 2025, is provided as a reference. Both figures, which account for geographic-specific costs of necessities such as housing, food, health care, and transportation to assess the cost of living, are included in the exhibits below.

² Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations. It is important to note that adding jobs, change, and annual openings for each geographic area may not add to the total listed in the SCC Region row. This is due to how data is reported at the county vs. ZIP code level. For more information, see Appendix A: Methodology.

Santa Barbara

All (100%) annual openings for these winemaking occupations have entry-level below the Self-Sufficiency Standard living wage for one adult (\$29.80 in Santa Barbara County). Typical entry-level hourly wages range between \$15.50 and \$22.43. Experienced level wages for these winemaking occupations are above the living wage in Santa Barbara County. Exhibit 4 shows the wage range for each of these winemaking occupations in Santa Barbara County and how they compare to the regional living wage, sorted from lowest to highest entry-level wage.

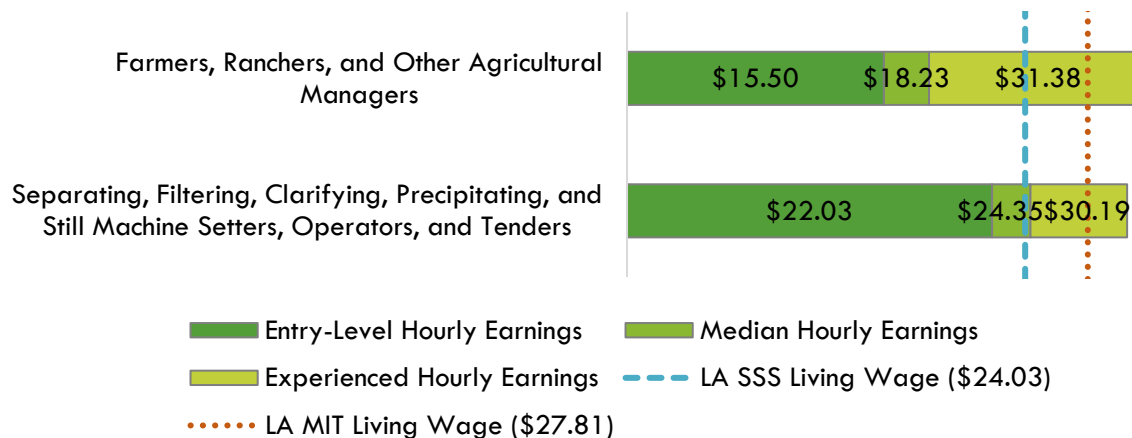
Exhibit 4: Wages by Occupation in Santa Barbara County



Northern Los Angeles

All (100%) annual openings for these winemaking occupations have entry-level wages below the Self-Sufficiency Standard living wage for one adult (\$24.03 in Los Angeles County). Typical entry-level hourly wages range between \$15.50 and \$22.03. *Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders (51-9012)* have median level wages above the living wage, while *Farmers, Ranchers, and Other Agricultural Managers (11-9013)* have experienced level wages above it. Exhibit 5 shows the wage range for each of these winemaking occupations in Northern Los Angeles and how they compare to the regional living wage, sorted from lowest to highest entry-level wage.

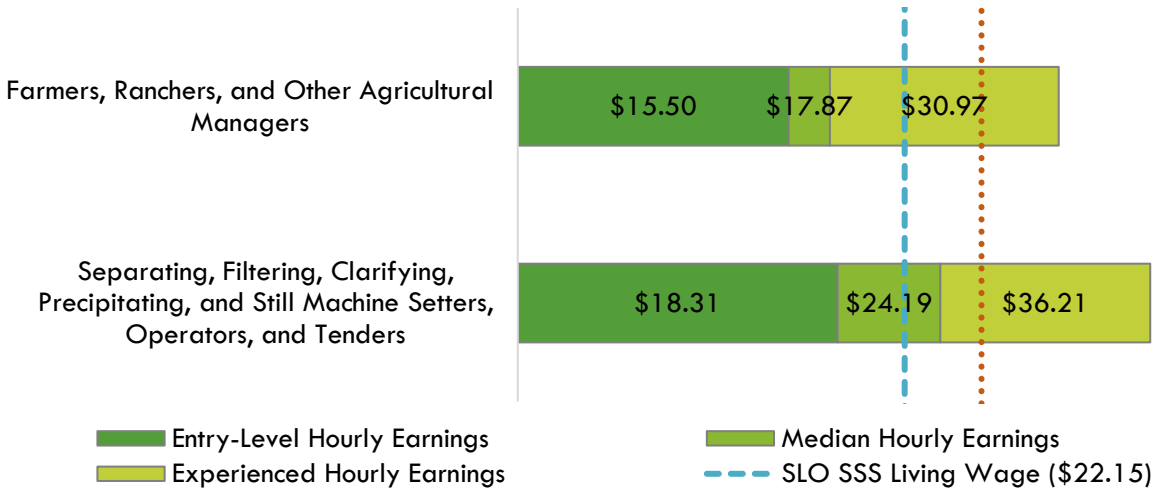
Exhibit 5: Wages by Occupation in Northern Los Angeles County



San Luis Obispo

All (100%) annual openings for these winemaking occupations have entry-level wages below the Self-Sufficiency Standard living wage for one adult (\$22.15 in San Luis Obispo County). Typical entry-level hourly wages range between \$15.50 and \$18.31. *Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders (51-9012)* have median level wages above the living wage in San Luis Obispo County, while *Farmers, Ranchers, and Other Agricultural Managers (11-9013)* have experienced level wages above it. Exhibit 6 shows the wage range for each of these winemaking occupations in San Luis Obispo County and how they compare to the regional living wage, sorted from lowest to highest entry-level wage.

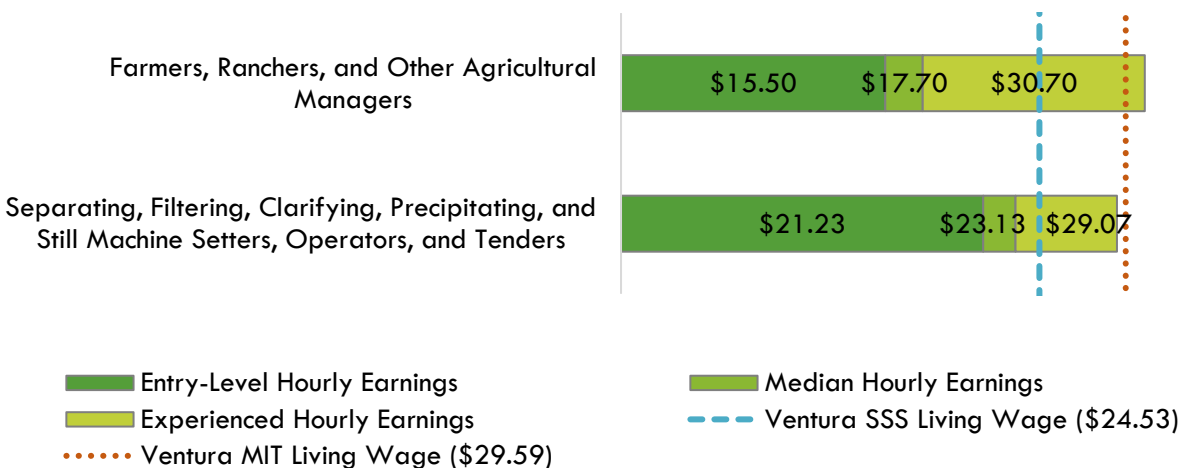
Exhibit 6: Wages by Occupation in San Luis Obispo County



Ventura

All (100%) annual openings for these winemaking occupations have entry-level wages below the Self-Sufficiency Standard living wage for one adult (\$24.53 in Ventura County). Typical entry-level hourly wages range between \$15.50 and \$21.23. Experienced level wages for these winemaking occupations in Ventura County are above the living wage. Exhibit 7 shows the wage range for each of these winemaking occupations in Ventura County and how they compare to the regional living wage, sorted from lowest to highest entry-level wage.

Exhibit 7: Wages by Occupation in Ventura County



Job Postings:

There were 113 online job postings related to these winemaking occupations listed in the past 12 months in the SCC Region. Exhibit 8 shows the number of job postings by occupation. Approximately 40% of job postings were in Ventura County.

Exhibit 8: Number of Job Postings by Sub-Region (n=113)

| County | Job Postings | Percentage of Job Postings |
|-----------------------|--------------|----------------------------|
| Ventura | 45 | 40% |
| San Luis Obispo | 35 | 31% |
| Santa Barbara | 29 | 26% |
| Northern Los Angeles | 4 | 4% |
| Total Postings | 113 | 100% |

Of the 113 postings, the majority (76%) were for *Farmers, Ranchers, and Other Agricultural Managers (11-9013)*, followed by *Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders (51-9012)*, as shown in Exhibit 9.

Exhibit 9: Number of Job Postings by Occupation (n=113)

| Occupation | Job Postings | Percentage of Job Postings |
|---|--------------|----------------------------|
| Farmers, Ranchers, and Other Agricultural Managers | 86 | 76% |
| Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders | 27 | 24% |
| Total Postings | 113 | 100% |

The top employers in the region, by number of job postings, are shown in Exhibit 10.

Exhibit 10: Top Employers by Number of Job Postings (n=113)

| Employer | Job Postings | Percentage of Job Postings |
|----------------------------------|--------------|----------------------------|
| Firestone Walker Brewing Company | 6 | 5% |
| Veralto | 5 | 4% |
| Calif | 4 | 4% |
| Norman's Nursery | 4 | 4% |
| Apricot Lane Farms | 3 | 3% |
| Bonita Packing | 3 | 3% |
| Ventura County | 3 | 3% |
| Antigua Brewing Company | 2 | 2% |
| Bonipak Produce | 2 | 2% |
| Empire Workforce Solutions | 2 | 2% |

The top specialized, soft, and computer skills listed by those most frequently mentioned in job postings (denoted in parentheses) are shown in Exhibit 11.

Exhibit 11: Top Skills by Number of Job Postings (n=113)

| Top Specialized Skills | Top Soft Skills | Top Computer Skills |
|---|------------------------|------------------------------------|
| Irrigation (Landscaping And Agriculture) (27) | Management (53) | Microsoft Excel (13) |
| Agriculture (23) | Communication (44) | Microsoft Office (11) |
| Inventory Management (15) | Operations (40) | Microsoft Outlook (10) |
| Landscaping (15) | Sales (36) | Spreadsheets (6) |
| Gardening (12) | Customer Service (33) | Salesforce (5) |
| Farming (10) | Leadership (29) | Microsoft PowerPoint (3) |
| Herbicides (10) | Planning (24) | Geographic Information Systems (2) |
| Marketing (10) | Lifting Ability (21) | ArcGIS (GIS Software) (1) |
| Fertilizers (9) | Problem Solving (21) | Database Software (1) |
| Horticulture (9) | Time Management (21) | Encompass (Mortgage Software) (1) |

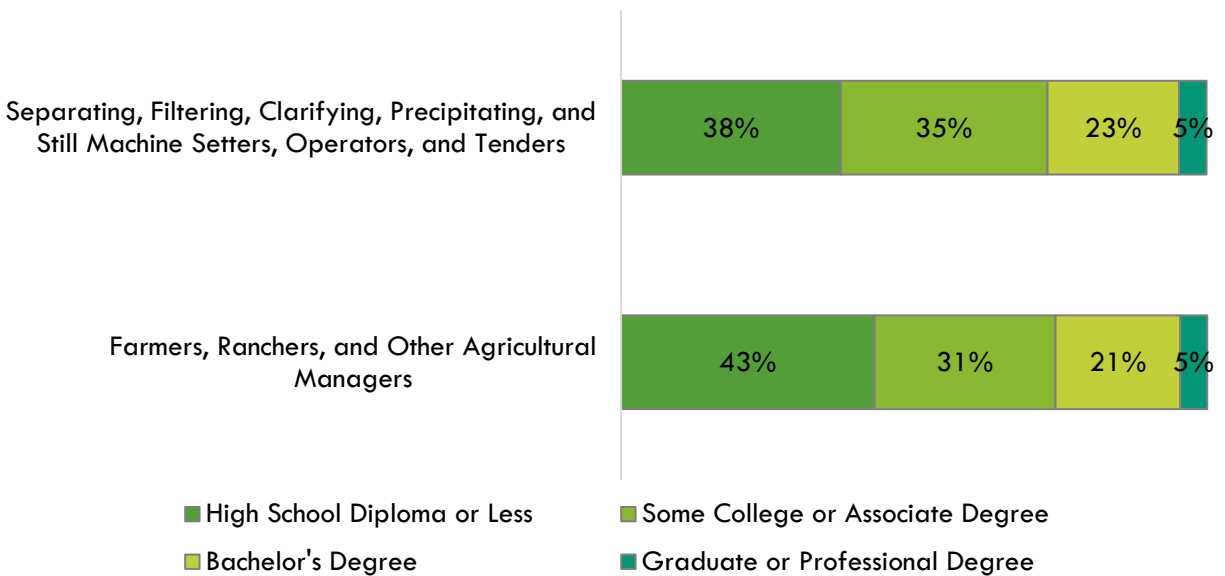
Educational Attainment:

The Bureau of Labor Statistics (BLS) lists the following as the typical entry-level education for these winemaking occupations:

- High School Diploma or Equivalent
 - *Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders (51-9012)*
 - *Farmers, Ranchers, and Other Agricultural Managers (11-9013)*

The national-level educational attainment data indicates between 31% and 35% of workers in the field have completed some college or an associate degree as their highest level of education. Exhibit 12 shows the educational attainment for each occupation, sorted by highest community college educational attainment to lowest.

Exhibit 12: National-level Educational Attainment for Occupations



Of the 28% of the cumulative job postings for these winemaking occupations that listed a minimum education requirement in the SCC Region, 56% (18) requested a high school diploma or an associate degree and 44% (14) requested a bachelor's degree.

Educational Supply

Community College Supply:

Exhibit 13 shows the three-year average number of awards conferred by community colleges in the related TOP codes:

- Agriculture Technology and Sciences, General (0101.00)
- Animal Science (0102.00)
- Plant Science (0103.00)
- Agricultural Pest Control Adviser and Operator (Licensed) (0103.10)
- Viticulture, Enology, and Wine Business (0104.00)
- Horticulture (0109.00)
- Nursery Technology (0109.30)
- Agriculture Business, Sales and Service (0112.00)

No awards were conferred for the following TOP codes:

- Dairy Science (0102.30)
- Equine Science (0102.40)
- Food Processing and Related Technologies (0113.00)
- Natural Resources (0115.00)

The college with the most completions in the region is Moorpark (69), followed by Allan Hancock (30), and Cuesta (30).

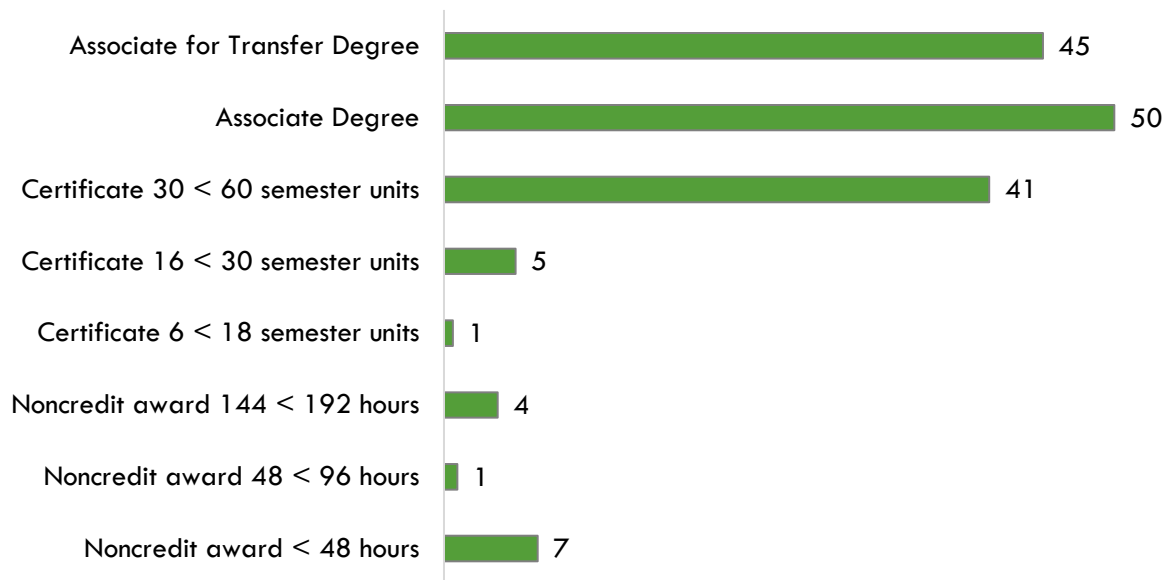
Exhibit 13: Regional Community College Awards (Certificates and Degrees), 2020-2023

| TOP Code | Program | College | 2020-2021 Awards | 2021-2022 Awards | 2022-2023 Awards | 3-Year Award Average |
|--------------------------------|---|-----------------|------------------|------------------|------------------|----------------------|
| 0101.00 | Agriculture Technology and Sciences, General | Allan Hancock | 7 | 6 | 7 | 7 |
| Supply Subtotal/Average | | | 7 | 6 | 7 | 7 |
| 0102.00 | Animal Science | Moorpark | 72 | 70 | 64 | 69 |
| Supply Subtotal/Average | | | 72 | 70 | 64 | 69 |
| 0103.00 | Plant Science | Allan Hancock | 4 | 12 | 6 | 7 |
| | | Cuesta | 10 | 17 | 7 | 11 |
| | | Ventura | 1 | 13 | 7 | 7 |
| Supply Subtotal/Average | | | 15 | 42 | 20 | 26 |
| 0103.10 | Agricultural Pest Control Adviser and Operator (Licensed) | Allan Hancock | 0 | 0 | 3 | 1 |
| Supply Subtotal/Average | | | 0 | 0 | 3 | 1 |
| 0104.00 | Horticulture | Allan Hancock | 3 | 0 | 0 | 1 |
| | | Antelope Valley | 5 | 1 | 7 | 4 |

| TOP Code | Program | College | 2020-2021 Awards | 2021-2022 Awards | 2022-2023 Awards | 3-Year Award Average |
|--------------------------------|---|---------------|------------------|------------------|------------------|----------------------|
| | | Canyons | 0 | 7 | 14 | 7 |
| | | Santa Barbara | 4 | 3 | 3 | 3 |
| Supply Subtotal/Average | | | 12 | 11 | 24 | 16 |
| 0109.30 | Nursery Technology | Santa Barbara | 1 | 0 | 0 | 0 |
| Supply Subtotal/Average | | | 1 | 0 | 0 | 0 |
| 0112.00 | Agriculture Business, Sales and Service | Allan Hancock | 4 | 3 | 1 | 3 |
| | | Cuesta | 16 | 18 | 20 | 18 |
| | | Ventura | 2 | 4 | 2 | 3 |
| Supply Subtotal/Average | | | 22 | 25 | 23 | 23 |
| Supply Total/Average | | | 147 | 167 | 147 | 154 |

Exhibit 14 shows the annual average community college awards by type from 2020-21 to 2022-23. The plurality of the awards are for associate degrees, followed by associate for transfer degrees, and certificates between 30 and less than 60 semester units.

Exhibit 14: Annual Average Community College Awards by Type, 2020-2023



Community College Student Outcomes:

Exhibit 15 shows the Strong Workforce Program (SWP) metrics for Viticulture, Enology, and Wine Business programs at Allan Hancock College (AHC), the SCC Region, and California. Of the 251 Viticulture, Enology, and Wine Business students throughout the region in the 2022-23 academic year, 73% (183) attended AHC.

AHC students that exited Viticulture, Enology, and Wine Business programs in the 2021-22 academic year had lower median annual earnings (\$42,320 or \$20.35 per hour) compared to all Viticulture, Enology, and Wine Business students in the SCC Region (\$47,812 or \$22.99 per hour); both figures are lower than statewide (\$65,232 or \$31.36 per hour). A lower percentage of AHC (41%) and SCC (54%) Viticulture, Enology and Wine Business students attained the living wage when compared to all Viticulture, Enology, and Wine Business students in the state (74%).

Exhibit 15: Viticulture, Enology, and Wine Business (0104.00) Strong Workforce Program Metrics, 2022-23³⁴

| SWP Metric | AHC | SCC Region | California |
|---|--------------------|--------------------|--------------------|
| SWP Students | 183 | 251 | 767 |
| SWP Students Who Earned 9 or More Career Education Units in the District in a Single Year | 37% | 32% | 24% |
| SWP Students Who Completed a Noncredit CTE or Workforce Preparation Course | Data Unavailable | Data Unavailable | Data Unavailable |
| SWP Students Who Earned a Degree or Certificate or Attained Apprenticeship Journey Status | Data Unavailable | Data Unavailable | 5% |
| SWP Students Who Transferred to a Four-Year Postsecondary Institution (2021-22) | 11% | 9% | 4% |
| SWP Students with a Job Closely Related to Their Field of Study (2020-21) | Data Unavailable | Data Unavailable | 83% |
| Median Annual Earnings for SWP Exiting Students (2021-22) | \$42,320 (\$20.35) | \$47,812 (\$22.99) | \$65,232 (\$31.36) |
| Median Change in Earnings for SWP Exiting Students (2021-22) | -5% | 3% | 19% |
| SWP Exiting Students Who Attained the Living Wage (2021-22) | 41% | 54% | 74% |

³ All SWP metrics are for 2022-23 unless otherwise noted. Metrics data is sourced from DataVista.

⁴ Data that is not available in DataVista is denoted in Exhibit 15 as “data unavailable.” Data may not be available for various reasons, including cases where data is masked to protect personally identifiable information.

Non-Community College Supply:

To comprehensively analyze the regional supply, it is crucial to include data from other institutions offering winemaking training programs. Over the past three years (2019-2022), there were 138 awards conferred by 1 non-community college institution under the related Classification of Instructional Programs (CIP) codes:

- Agribusiness/Agricultural Business Operations (01.0102)

No awards were conferred under the related Classification of Instructional Programs (CIP) codes:

- Farm/Farm and Ranch Management (01.0104)
- Animal/Livestock Husbandry and Production (01.0302)
- Crop Production (01.0304)
- Dairy Husbandry and Production (01.0306)
- Horse Husbandry/Equine Science and Management (01.0307)
- Agroecology and Sustainable Agriculture (01.0308)
- Viticulture and Enology (01.0309)
- Applied Horticulture/Horticulture Operations, General (01.0601)
- Plant Nursery Operations and Management (01.0606)
- Brewing Science (01.1003)
- Zymology/Fermentation Science (01.1005)
- Plant Sciences, General (01.1101)
- Plant Protection and Integrated Pest Management (01.1105)

Exhibit 16: Regional Non-Community College Awards, 2019-2022

| CIP Code | Program | College | 2019- 2020 Awards | 2020- 2021 Awards | 2021- 2022 Awards | 3-Year Award Average |
|-----------------------------|--|--|-------------------------|-------------------------|-------------------------|----------------------------|
| 01.0102 | Agribusiness/Agricultural Business Operations | California Polytechnic State University-San Luis Obispo | 162 | 132 | 120 | 138 |
| Supply Total/Average | | | 162 | 132 | 120 | 138 |

Regional Demographics

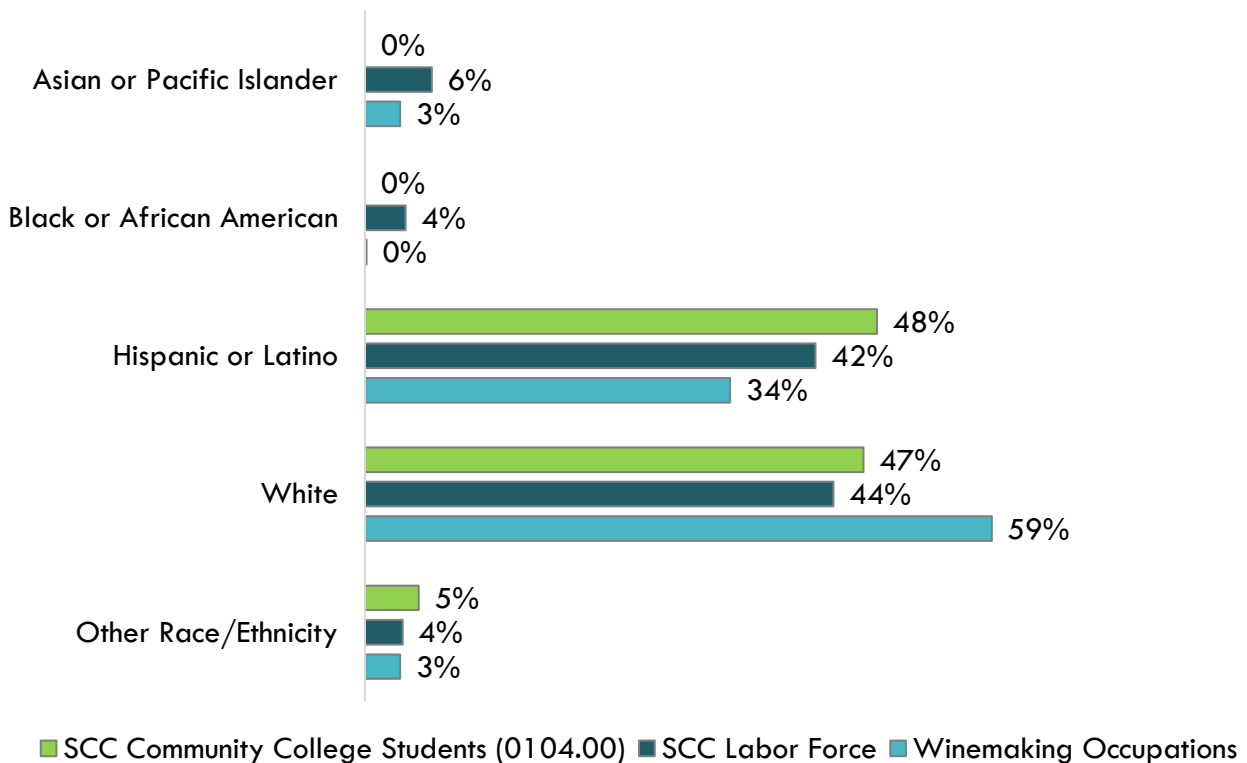
This section examines demographic data for SCC community college students in Viticulture, Enology, and Wine Business programs compared to the SCC labor force, along with occupational data, to identify potential diversity and equity issues addressable by community college programs.

Ethnicity:

Exhibit 17 compares the ethnicity of SCC community college students enrolled in Viticulture, Enology, and Wine Business programs, the overall SCC labor force, and occupation-specific data for the two winemaking occupations included in this report.

Notably, 59% of workers employed in these winemaking occupations are white, which is higher than the labor force (44%) and community college Viticulture, Enology, and Wine Business students (47%). Conversely, 48% of community college Viticulture, Enology, and Wine Business students are Hispanic or Latino which is higher than both the labor force (42%) and winemaking occupations (34%).

Exhibit 17: Program and County Demographics by Ethnicity

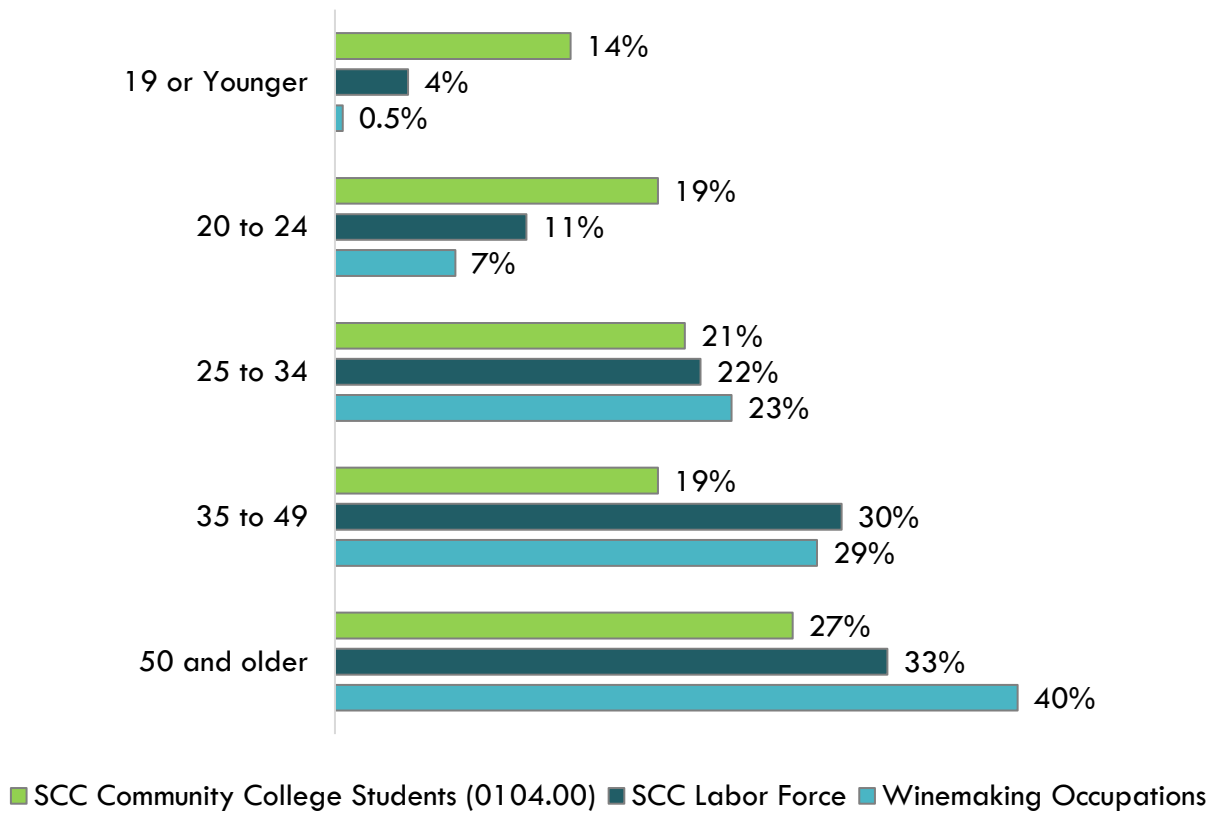


Age:

Exhibit 18 compares the age of SCC community college students enrolled in Viticulture, Enology, and Wine Business programs, the overall SCC labor force, and occupation-specific data for the two winemaking occupations included in this report.

The majority (69%) of workers in these winemaking occupations are age 35 and older, which is similar to the labor force (63%) and slightly higher than community college Viticulture, Enology, and Wine Business students (46%).

Exhibit 18: Program and County Demographics by Age

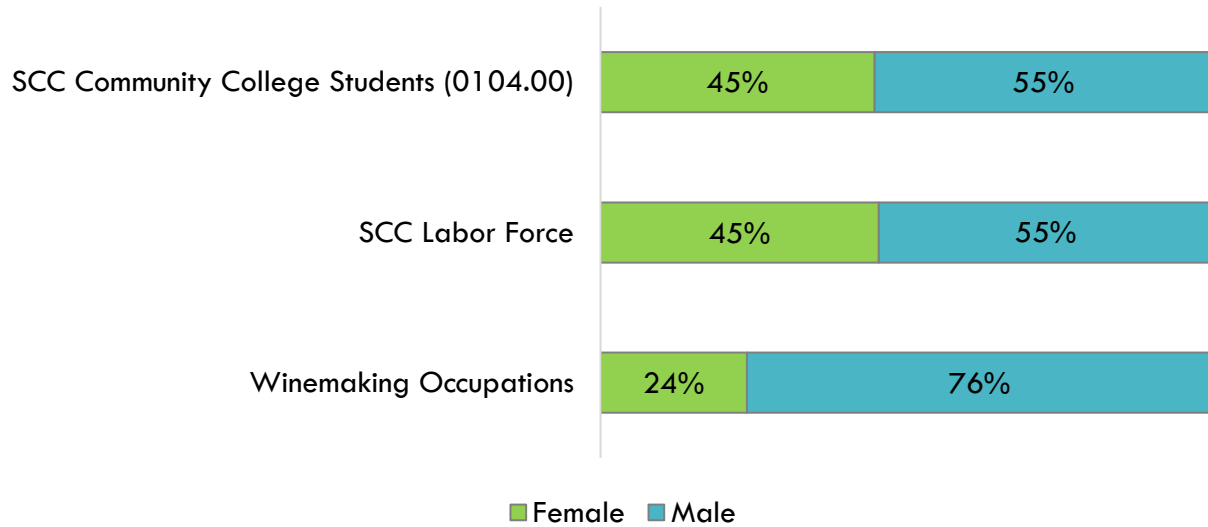


Sex:

Exhibit 19 compares the sex of SCC community college students enrolled in Viticulture, Enology, and Wine Business programs, the overall SCC labor force, and occupation-specific data for these winemaking occupations.

There is a majority of male students (55%) and workers (75%) in these winemaking occupations, which aligns with the labor force (55% male).

Exhibit 19: Program and County Demographics by Sex



Appendix A: Methodology

Traditional Labor Market Data

The SCC COE prepared this report by analyzing data from occupations and education programs. Occupational data is derived from Lightcast, a labor market analytics firm that consolidates data from the California Employment Development Department (EDD), U.S. Bureau of Labor Statistics (BLS) and other government agencies.

Data included in this analysis represents the labor market demand for relevant positions most closely related to the proposed program as expressed by the requesting college in consultation with the SCC COE. 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.

Program supply data is drawn from two systems: Taxonomy of Programs (TOP) and Classification of Instructional Programs (CIP).

Using a TOP-SOC crosswalk, the SCC COE identified middle-skill jobs for which programs within these TOP codes train. Middle-skill jobs include:

- All occupations that require an educational requirement of some college, associate degree or apprenticeship;
- All occupations that require a bachelor's degree, but also have more than one-third of their existing labor force with an educational attainment of some college or associate degree; or
- All occupations that require a high school diploma or equivalent or no formal education, but also require short- to long-term on-the-job training where multiple community colleges have existing programs.

The SCC COE determined labor market supply for an occupation or SOC code by analyzing the number of program completers or awards in a related TOP or CIP code. The COE developed a “supply table” with this information, which is the source of the program supply data for this report. TOP code data comes from the California Community Colleges Chancellor's Office MIS Data Mart (datamart.cccco.edu) and CIP code data comes from the Integrated Postsecondary Education Data System (nces.ed.gov/ipeds/use-the-data), also known as IPEDS.

TOP is a system of numerical codes used at the state level to collect and report information on California community college programs and courses throughout the state that have similar outcomes. CIP codes are a taxonomy of academic disciplines at institutions of higher education in the United States and Canada. Institutions outside of the California Community College system do not use TOP codes in their reporting systems.

Online Job Postings Data

Online job postings data, also known as real-time labor market information, captures job post advertisements for occupations relevant to the field of study which 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. Online job postings data is sourced from Lightcast, a labor market analytics firm that scrapes, collects, and organizes data from online job boards such as LinkedIn, Indeed, Glassdoor, Monster, GovernmentJobs.com, and thousands more.

There are several limitations when analyzing job postings. A single job posting may not represent a single job opening, as employers may be creating a pool of candidates for future openings or hiring for multiple positions with a single posting. Additionally, not all jobs are posted online, and jobs may be filled through other methods such as internal promotion, word-of-mouth advertising, physical job boards, or a variety of other channels.

Additionally, Lightcast uses natural language processing (NLP) to determine the related company, industry, occupation, and other information for each job posting. However, NLP has limitations that include understanding contextual words or phrases; determining differences in words that can be used as nouns, verbs, and/or adjectives; and misspellings or grammatical errors.⁵ For these reasons, job postings could be assigned to the wrong employer, industry, or occupation within Lightcast’s database.

Geography

The South Central Coast region encompasses San Luis Obispo, Santa Barbara, and Ventura counties, as well as parts of Northern Los Angeles County. The following 34 ZIP codes are used to define Northern Los Angeles County:

Exhibit 20: Northern Los Angeles ZIP Codes

| ZIP Code | Primary City | ZIP Code | Primary City |
|----------|-----------------|----------|--------------|
| 91310 | Castaic | 93532 | Lake Hughes |
| 91321 | Newhall | 93534 | Lancaster |
| 91322 | Newhall | 93535 | Lancaster |
| 91350 | Santa Clarita | 93536 | Lancaster |
| 91351 | Canyon Country | 93539 | Lancaster |
| 91354 | Valencia | 93543 | Littlerock |
| 91355 | Valencia | 93544 | Llano |
| 91380 | Santa Clarita | 93550 | Palmdale |
| 91381 | Stevenson Ranch | 93551 | Palmdale |
| 91382 | Santa Clarita | 93552 | Palmdale |
| 91383 | Santa Clarita | 93553 | Pearblossom |
| 91384 | Castaic | 93563 | Valyermo |
| 91385 | Valencia | 93584 | Lancaster |
| 91386 | Canyon Country | 93586 | Lancaster |
| 91387 | Canyon Country | 93590 | Palmdale |
| 91390 | Santa Clarita | 93591 | Palmdale |
| 93510 | Acton | 93599 | Palmdale |

Though traditional labor market information is available at the ZIP code level, it does not always add up to data reported at the county level for multiple reasons:

- ZIP codes are not official geographically bounded areas, unlike states and counties.
- ZIP codes may cross county lines, such as ZIP code 93461, which is primarily in San Luis Obispo County, but also crosses into Kern County.

⁵ K. R. Chowdhary, *Fundamentals of Artificial Intelligence* (Basingstoke: Springer Nature, 2020), <https://link.springer.com/book/10.1007/978-81-322-3972-7>.

For these reasons, the number of jobs and average annual openings for each county may not add up to the total for the SCC Region. However, considering jobseekers may cross county lines for opportunities, the traditional labor market data is reflective of opportunities available to jobseekers in the SCC Region.

Additionally, job postings data is available only at the city or county level. To analyze job postings for the entire SCC region, the SCC COE developed a list of cities available in Lightcast for analysis. Additionally, demographic data is not available at the ZIP code level but is available at the Census Bureau’s Public Use Microdata Area (PUMA) level. Demographic data was sourced via IPUMS and analyzed by the SCC COE. For more information, contact the SCC COE.

Appendix B: Data Sources

| Data Type | Source |
|---|--|
| Occupational Projections, Wages, and Job Postings | <p>Traditional labor market information data is sourced from Lightcast, a labor market analytics firm. Lightcast occupational employment data are based on final Lightcast industry data and final Lightcast staffing patterns. Wage estimates are based on Occupational Employment Statistics and the American Community Survey.</p> <p>For more information, see https://lightcast.io/</p> |
| Living Wage | <p>“Living Wage” measures the income necessary for an individual or family to afford basic expenses by assessing the costs such as housing, food, childcare, health care, transportation, and taxes. Per the CCCCO, this report’s endorsement criteria uses the University of Washington’s Center for Women’s Welfare Self-Sufficiency Standard for a single adult last updated in March 2024.</p> <p>For more information, see: http://www.selfsufficiencystandard.org/California</p> <p>The MIT Living Wage, updated on February 14, 2024, is a nationally recognized living wage metric and is provided for reference. For more information, see: https://livingwage.mit.edu/counties/06059</p> |
| Typical Education and Training Requirements, and Educational Attainment | <p>The Bureau of Labor Statistics (BLS) provides information about education and training requirements for hundreds of occupations. BLS uses a system to assign categories for entry-level education, work experience in a related occupation, and typical on-the-job training to each occupation for which BLS publishes projections data.</p> <p>For more information, see https://www.bls.gov/emp/documentation/education/tech.htm</p> |
| Emerging Occupation Descriptions, Additional Education Requirements, and Employer Preferences | <p>The O*NET database includes information on skills, abilities, knowledges, work activities, and interests associated with occupations. For more information, see https://www.onetonline.org/help/online/</p> |

| Data Type | Source |
|--|---|
| Educational Supply | <p>The CCCCCO Data Mart provides information about students, courses, student services, outcomes and faculty and staff. For more information, see: https://datamart.cccco.edu</p> <p>The National Center for Education Statistics (NCES) Integrated Postsecondary Integrated Data System (IPEDS) collects data on the number of postsecondary awards earned (completions). For more information, see https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions</p> |
| Student Metrics and Demographics | <p>DataVista, a statewide data system supported by the California Community Colleges Chancellor's Office, provides data on progress, success, employment, and earnings outcomes for California community college students. For more information, see: https://datavista.cccco.edu/</p> |
| Population and Occupation Demographics | <p>The Census Bureau's American Community Survey (ACS) is the premier source for detailed population and housing information. For more information, see: https://www.census.gov/programs-surveys/acs</p> <p>Data is sourced from IPUMS USA, a database providing access to ACS and other Census Bureau data products. For more information, see: https://usa.ipums.org/usa/about.shtml</p> |

All representations have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. The most recent data available at the time of the analysis was examined; 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 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.

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