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**Economic and  
workforce analysis  
of the wine industry  
in Placer County  
and the Sierra  
Foothills American  
Viticultural Area**

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Prepared by the Center of Excellence for Labor Market Research  
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# SUMMARY OF FINDINGS



This report presents the findings of an economic and workforce analysis of the wineries industry in Placer County, which is home to 25 wineries, most of them small operations owned by families and wine enthusiasts, and which is the site of a proposed large winery. Project 8 in Penryn would house Lecavalier Cellars on an 175-acre site and is of great interest to county business and workforce stakeholders.

Because data on the Placer County's wineries industry are not readily available, the economic and workforce analysis relied on data on the wineries industry in the eight-county Sierra Foothills wine-growing region, of which Placer County is a part. The analysis compared the wineries industry in that region with the wineries industry in the Santa Maria region on the Central Coast and to the wineries industry statewide.

The analysis found that the Sierra Foothills region's wineries industry has 931 jobs in 118 establishments, \$169.4 million in sales, \$38.8 million in earnings, and \$127.4 million in exports. These totals represent between 1.1% and 2.3% of California's wineries industry and between 0.2% and 0.4% of the region's total economic activity. The number of establishments indicates the region is comprised primarily of microbusinesses with fewer than 10 employees.

## *Economic Impact Analysis*

The economic impact analysis used a hypothetical scenario that significantly increased wineries' economic activity in the Sierra Foothills region. It also compared purchases by wineries from vendors in other industries inside that region to purchases by wineries in the Santa Maria region. The results indicate that new economic activity in the Sierra Foothills wineries industry would have the greatest effects (impacts) on crop production; warehousing and logistics; grocery and beverage wholesaling; manufacturing for glass, packaging, and precision products (semiconductors); restaurants; and business services, including realty, equipment leasing, insurance, and financial services. New economic activities in wineries would generate new business activity (and new businesses) in these industries in the local economy.

## *Labor Market Analysis*

The analysis revealed that the concentration of wineries industry employment (or location quotient) for the Sierra Foothills region (5.47) is higher than that of the state (4.48), suggesting that region has some comparative advantage over other regions in the state. In addition, wineries industry employment in the Sierra Foothills region has grown 13.4% in the last five years, more than five percentage points higher than the growth rate for the state.

Occupation employment in the wineries industry is remarkably similar in the Sierra Foothills region and the Santa Maria region. The data indicate that employment consists primarily of manufacturing-related occupations like cellar workers and technicians and maintenance and repair workers. Other common wineries industry occupations include marketers (especially tasting room salespeople and retail workers) and restaurant staff (cooks, waiters, and hosts) as well as farmworkers and truck drivers.

As in any industry, larger businesses need more specialized roles in management, financial services, human resources, logistics, and customer service. Employment totals for these jobs number in the dozens in the Santa Maria region. The jobs postings data indicate some potential hiring for enologists given industry expansion.

The average earnings per job in the Sierra Foothills wineries industry (\$41,723) is 55.6% of the average earnings in all industries (\$75,041), indicative of the staffing patterns of the industry in the Sierra Foothills region.

## *Education and Training*

California's community colleges have created viticulture and enology programs in some of the state's major wine-producing regions. These colleges include Las Positas College (Livermore), Santa Rosa Junior College, Mendocino College, and Folsom Lake College. On average, the community colleges annually produced 82 certificates and degrees in viticulture and enology between the 2018–2019 and 2020–2021 academic years. Folsom Lake College did not register awards for the most recent academic years.

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# INTRODUCTION



Small family-owned wineries have characterized Placer County's wine industry for decades, presenting visitors with a unique boutique experience in the Sacramento metropolitan region. The county is part of the Sierra Foothills American Viticultural Area (AVA) that includes Nevada County to its north and El Dorado and Amador counties to its south. A proposal for Project 8 in Penryn, which would house Lecavalier Cellars on an 175-acre site, is of great interest to county business and workforce stakeholders.

Several factors contribute to the hope for wine industry expansion in Placer County. The AVA is a draw for local and non-local customers, and Interstate 80 makes the region accessible. The region's soil characteristics and the availability of water from the American River provide the natural resources necessary for vineyards.

A group of community partners came together to explore the economic and workforce opportunities for the wine industry in Placer County. These partners include the Placer County Vintners Association (which promotes the Placer County Wine Trail), the Placer County Business Alliance, Sierra College, the County Agricultural Commissioner, the Placer County Office of Economic Development, and representatives of Lecavalier Cellars. The partners asked the Center of Excellence for the Greater Sacramento region to conduct a study of Placer County's wine industry, economy, and workforce.

The study presents economic and labor market data that provides a baseline assessment of employment, economic impacts, and future growth potential. It also presents data on workforce characteristics that may yield training and education opportunities. Data availability challenges analysis of Placer County, so the study focuses on the eight-county Sierra Foothills American Viticultural Area in which Placer County is located.

Finally, the study offers an overview of training and education programs in viticulture and enology programs at the community colleges in California, with an emphasis on Northern California and the Sacramento region.



# METHODOLOGY



The study is intended to inform workforce and economic development stakeholders about the wine industry in Placer County. It offers an economic impact analysis, with an expansion scenario; baseline employment data; occupation data (staffing patterns); jobs postings data; and an assessment of education and training assets.

## *Regional Comparison*

Given the lack of data availability for Placer County, the study primarily used the Sierra Foothills American Viticultural Area as the study geography. The eight-county Sierra Foothills region is an AVA designated by the U.S. Alcohol and Tobacco Trade Bureau.<sup>1</sup> The region includes Amador, Calaveras, El Dorado, Mariposa, Nevada, Placer, Tuolumne, and Yuba counties.

The Santa Maria Valley region was chosen as a comparison region because its total labor market is of a similar size as Placer County's. The region is comprised of San Luis Obispo and Santa Barbara counties.

The study compared the two study regions to the state.

## *Economic Impacts*

The research uses Lightcast's economic impact application based on input-output tables from the Bureau of Economic Analysis. The analysis calculates jobs, sales, establishments, earnings, and exports using the impact models for the wineries industry (NAICS 312130) in each comparison region.

This section of the report addresses a research question: what industrial effects would result from significant growth of the wineries industry? The analysis uses a modeled scenario, adding 3,500 jobs to the Sierra Foothills region, which is equivalent to the difference between the number of jobs in Santa Maria and that in the Sierra Foothills. The report discusses the results in terms of direct, indirect, and induced impacts based on the increase in the number of jobs.

The final input-output analysis compares the two study regions in terms of in-region versus out-of-region purchases using the wineries industry as a baseline and assessing purchases by region. The comparison highlights those industries that have a significantly larger share of in-region purchases in the Santa Maria region, compared with the Sierra Foothills region. The analysis also highlights and ranks those industries that have the largest economic impacts (direct, indirect, and induced) based on the above-described modeled scenario ("Leveraged Rank").

Using these two criteria, potential for more in-region activities and modeled impacts, the analysis identifies those industries that have the most growth potential.



<sup>1</sup> U.S. Alcohol and Tobacco Tax and Trade Bureau, American Viticultural Areas, <https://www.ttb.gov/wine/established-avas>

## *Industry Analysis*

The industry analysis presents data on jobs, historical and projected growth rates, average annual earnings, and location quotient. Location quotient accounts for the concentration of wineries employment in the region compared with wineries employment in the nation. The data are compared in the two regions to assess the significance and strength of the wineries industry.

## *Occupation Analysis*

The analysis used staffing patterns in the wineries industry to assess occupation categories and individual occupations and the U.S. Department of Labor's O\*NET to assess employment counts by occupational career cluster category. The staffing patterns indicate the overall workforce composition in the industry, which offers insight into the type of education and training that would produce qualified workers to support industry activities.

A comparison of the two study regions provides insight into the workforce characteristics of the industry in two markets and potential hiring needs in an expanding industry.

The appendix presents detailed occupation data for the two regions, including employment data, wage data, skill level, and career cluster. Middle-skill jobs are those jobs that require education and experience beyond high school, but less than a bachelor's degree. Above-middle-skill occupations typically require a bachelor's degree. Below-middle-skill occupations may require a high school diploma.

## *Job Postings*

The analysis used Lightcast, which scrapes online jobs boards; the O\*NET career clusters as criteria to display the top job titles in the study regions and Placer County; and three recent years of data, April 2020 to May 2023, to offer a relevant sample.

## *Education and Training*

The analysis identified the number of community college awards for the program code TOP 0104.00 Viticulture, Enology, and Wine Business. It counted the most recent three years of certificates and degrees for programs around the state. This report describes the active community college programs in Northern California, the San Francisco Bay Area, and the Sacramento region. Some programs (offered by Mendocino College) did not register awards. The report mentions the University of California Davis's Viticulture and Enology Program, but it does not analyze awards at four-year institutions or assess their programs.



# OVERVIEW OF THE INDUSTRY



Early European settlers planted the first wine grapes in the eight-county Sierra Foothills region. The region is known for several varieties (Zinfandel, Barbera, Syrah, Grenache) and destination small towns like Murphys in Calaveras County and local regions like Shenandoah Valley in Amador County and Apple Hill in El Dorado County. The Sierra Foothills has some 200 wineries. Some of the largest are identified in Exhibit 1.

Placer County is home to nearly two dozen small family-owned and enthusiast-owned wineries. Larger wineries like Wise Villa and the proposed Lecavalier add storage and production capacity as well as restaurants to wine-making operations and tasting rooms.

The study primarily compares the Sierra Foothills region to the Santa Maria Valley AVA, which includes Santa Barbara and San Luis Obispo counties and has 440 wineries.

**Exhibit 1. Top wineries employers, two study regions and California, June 2023**

Sierra Foothills	Santa Maria	Placer County
Boeger Winery	Firestone Vineyard	Wise Villa Winery
Lava Cap Winery	Terravant Wine	Dono dal Cielo
Terre Rouge and Easton Wines	Laetitia Vineyard and Winery	Ciotti Cellars
Scott Harvey Wines	Eos Estate Winery	Twin Rocks
Iron Hub Winery	Riverbench	Lecavalier Cellars
Nello Olivo Winery	Foxen Vineyard	Lone Buffalo Vineyards
Lewis Grace Winery	Flood Ranch	Casque Wines
Holly's Hill Vineyards	The Gainey Vineyard	Secret Ravine Vineyards
Element 79 Vineyards	Tobin James Cellars	Vina Castellano Winery
Polynesian Girl Wine	J. Lohr Winery	Mt. Vernon Winery

Source: EconoVue, Dun&Bradstreet, Lightcast, 2023.2, *Sacramento Business Journal*, and web searches, community input

# ECONOMIC IMPACTS



Exhibit 2 provides an overview of the results of the economic impact analysis of the wineries industry in the two study regions and California. In 2021, the eight-county Sierra Foothills region accounted for 931 jobs in 118 establishments, \$169.4 million in sales, \$38.8 million in earnings, and \$127.3 million in exports.

In general, the Sierra Foothills region totals represent a tenth to a fifth of Santa Maria’s totals (jobs, sales, exports). Establishments is the exception, owing to the number of microbusinesses in the Sierra Foothills region. The average establishment in the Sierra Foothills region has 8 jobs. The average in Santa Maria is 14, and in California, 20.

The Sierra Foothills’ jobs total (931 jobs) represents just 2.3% of the total in the state. Sales (\$169.4 million) represent 1.1% of the state total. Exports (\$127.4 million) account for 1.1% of the state total.

Earnings in the Sierra Foothills (\$38.8 million) are 13.5% of those in the Santa Maria region (\$287.3 million) and 1.1% of those in the state (\$12.0 billion). The Sierra Foothill’s exports (\$127.4 million) represent 10.8% of the Santa Maria region’s exports (1.17 billion) and 1% of the state’s exports (12.0 billion).

**Exhibit 2. Economic impact analysis of the wineries industry, two study regions and California, 2021**

Geography	2021 Jobs	2021 Sales	2021 Earnings	2021 Establishments	2021 Exports
Sierra Foothills	931	\$169,363,186	\$38,835,504	118	\$127,364,874
Santa Maria	4,214	\$1,252,783,688	\$287,267,186	301	\$1,173,422,029
California	40,735	\$15,312,359,893	\$3,511,171,624	2,036	\$12,039,933,939

Source: Lightcast 2023.2

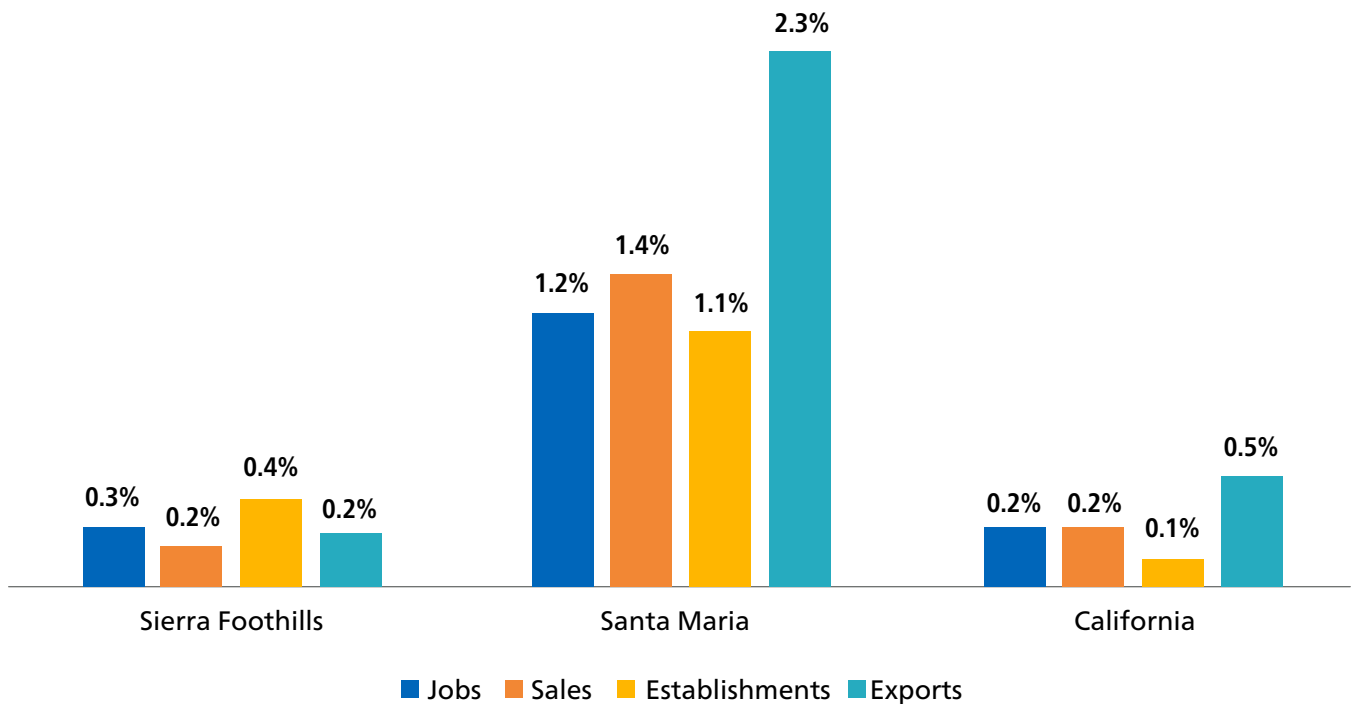




The analysis compared the impact analysis metrics for the wineries industry as a share of the total regional economy (Exhibit 3). Santa Maria's wineries industry jobs, sales, and establishments represent between 1.1% and 1.4% of the total economy. Exports from the wineries industry in Santa Maria represent 2.3% of total regional exports.

The Sierra Foothills wineries industry occupies a share of the economy similar to that of California's wineries industry. Jobs, sales, and exports account for between 0.2% and 0.3% of the regional economy in the Sierra Foothills region.

**Exhibit 3. Wineries industry as a percentage of the economy (jobs, sales, establishments, exports), two study regions and California, 2021**

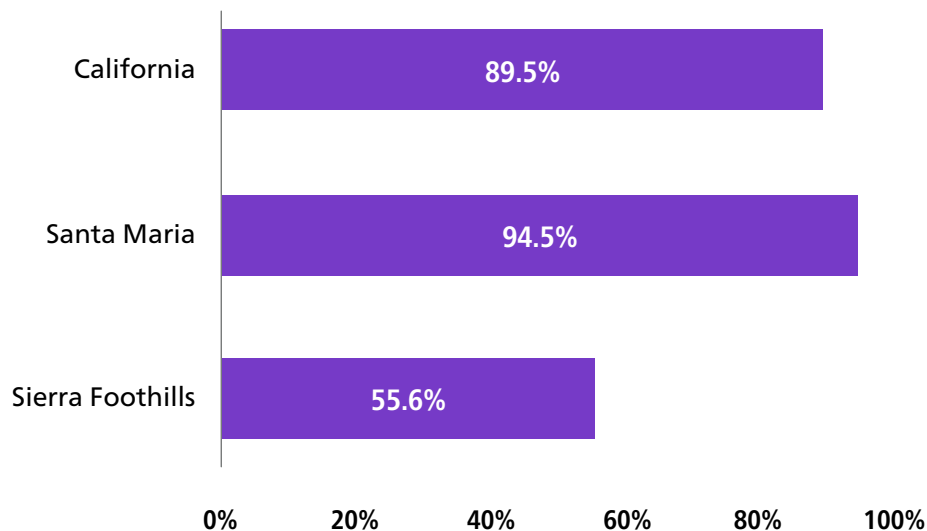


Source: Lightcast 2023.3



The strength of average annual earnings within and between the two study regional economies is one key indicator of an industry’s health and competitiveness. Average annual earnings in the wineries industry in California (\$86,195) is 89.5% of average annual earnings in all industries in the state. In the Santa Maria region, the figure (\$68,167) is 94.5% of average annual earnings in all industries. In the Sierra Foothills region, the figure (\$41,723) is just 55.6% of average annual earnings in the total economy.

**Exhibit 4. Wineries workers’ average earnings as a percent of average earnings of all jobs in the economy, two study regions and California, 2021**



Source: Lightcast 2023.3

Exhibit 5 illustrates a modeled scenario for the economic impacts of adding 3,500 jobs to the wineries industry in the Sierra Foothills region; that number would make wineries industry jobs in the Sierra Foothills region approximately equal to wineries industry jobs in the Santa Maria region. The scenario is ambitious because it represents an employment increase of more than 450%. Nonetheless, the scenario shows the industry where more new jobs could be needed should the industry significantly grow.

The initial effect represents the initial sales change in wineries due to the 3,500 job gain. Increasing the industry by this size is equivalent to an additional \$636.9 million circulating in the regional economy from added spending by the wineries industry. The direct effect is the first round of value change (spending) among the industries in the supply chain created by the initial job gain in wineries. The indirect effect is the value change (spending) in the supply chain of wineries’ supply chain (spending from suppliers of the suppliers). The induced effect is the income effect on economy (household spending from employees in the supply chain network).

The table is sorted by direct effects. The suppliers that would see the most new sales from additional activity in wineries are crop producers, insurance agencies, glass product manufacturers, lessors, truckers, and packaging machine manufacturers.

Totals from the direct, indirect, and induced effects indicate that increasing economic activity in the wineries industry produces the greatest multiplier effects on industries associated with real estate (realty, leasing, and corporate headquarters), warehousing and logistics (trucking and warehousing), manufacturing for distribution materials (glass bottles and packaging), and specialized wholesales and precision manufacturing. Other key impacted industries include restaurants (limited and full service) and business services (insurance and financial services such as banking and accounting).

**Exhibit 5. Economic impacts of adding 3,500 jobs to the wineries industry in the Sierra Foothills region, 2021 baseline (original total economic impacts)**

NAICS Code	Name	Original (2021)	Initial Impact	Direct	Indirect	Induced
312130	Wineries	\$169,363,186	\$636,850,011	\$13,258,986	\$283,877	\$85,712
111000	Crop Production	\$668,948,186	\$0	\$12,657,411	\$691,853	\$240,183
524210	Insurance Agencies and Brokerages	\$2,257,450,506	\$0	\$3,819,802	\$3,023,375	\$893,579
327215	Glass Product Manufacturing Made of Purchased Glass	\$39,262,299	\$0	\$3,728,114	\$263,193	\$27,236
533110	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	\$231,219,982	\$0	\$3,548,203	\$299,260	\$160,490
484121	General Freight Trucking, Long-Distance, Truckload	\$209,288,710	\$0	\$1,822,330	\$147,715	\$321,498
424990	Other Miscellaneous Nondurable Goods Merchant Wholesalers	\$101,381,130	\$0	\$1,745,622	\$102,250	\$140,884
484110	General Freight Trucking, Local	\$227,587,327	\$0	\$1,443,103	\$100,610	\$212,649
333993	Packaging Machinery Manufacturing	\$3,351,661	\$0	\$1,311,040	\$33,049	\$2,947
531210	Offices of Real Estate Agents and Brokers	\$1,693,602,642	\$0	\$960,815	\$621,074	\$1,141,055
424690	Other Chemical and Allied Products Merchant Wholesalers	\$56,154,245	\$0	\$878,461	\$48,141	\$57,361
541990	All Other Professional, Scientific, and Technical Services	\$337,143,587	\$0	\$845,342	\$191,228	\$188,487
531110	Lessors of Residential Buildings and Dwellings	\$862,763,627	\$0	\$795,246	\$637,068	\$1,238,022
332710	Machine Shops	\$95,269,273	\$0	\$791,416	\$38,561	\$10,323
424410	General Line Grocery Merchant Wholesalers	\$122,269,490	\$0	\$778,203	\$23,106	\$119,991

Source: Lightcast, 2023.2

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PLACER COUNTY AND THE SIERRA FOOTHILLS REGION

A second modeled scenario compared inter-industry trading relationships for the baseline year 2021 and considered especially those industries that have significantly higher in-region purchases in the Santa Maria region compared with the Sierra Foothills. The COE overlaid these data with the industries that had the largest total economic impacts (“leveraged rank”).

A third modeled scenario looked for a difference between the total amount of purchases in each of the two study regions, noting those industries that had large purchase shares in Santa Maria and small shares in the Sierra Foothills.

The analysis indicated the industries that are the most likely candidates for relocation from outside the region or for endogenous growth (entrepreneurship or existing business growth), given increased economic activity in the Sierra Foothills’ wineries industry (Exhibit 6). The industries that would grow include machinery manufacturing, farm supplies and machinery wholesalers, grocery and beverage wholesalers, and freight trucking. The semiconductor industry is highlighted for the large difference between its in-region purchases in Santa Maria and those purchases in the Sierra Foothills.

**Exhibit 6. In-region and total purchases, including modeled scenario impacts (“leveraged rank”), Sierra Foothills region, two study regions, 2021**

NAICS	Industry Description	% In-region Purchases		Total Purchases		Leveraged Rank
		Sierra Foothills	Santa Maria	Sierra Foothill	Santa Maria	
333993	Packaging Machinery Manufacturing	2.5%	0.4%	\$14,209,082	\$105,104,935	9
111000	Crop Production	42.3%	83.4%	\$7,962,225	\$58,896,779	2
312130	Wineries	93.4%	100.0%	\$3,775,977	\$27,930,995	1
424410	General Line Grocery Merchant Wholesalers	10.7%	28.1%	\$1,941,546	\$14,361,668	15
424490	Other Grocery and Related Products Merchant Wholesalers	10.0%	44.4%	\$1,938,542	\$14,339,443	19
327215	Glass Product Manufacturing Made of Purchased Glass	55.3%	5.2%	\$1,793,957	\$13,269,947	4
484121	General Freight Trucking, Long-Distance, Truckload	30.1%	16.5%	\$1,609,587	\$11,906,157	6
533110	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	60.2%	41.0%	\$1,568,693	\$11,603,658	5
423830	Industrial Machinery and Equipment Merchant Wholesalers	9.2%	13.1%	\$1,487,901	\$11,006,043	24
551114	Corporate, Subsidiary, and Regional Managing Offices	15.7%	40.3%	\$1,289,064	\$9,535,238	18
334413	Semiconductor and Related Device Manufacturing	13.9%	32.4%	\$1,161,489	\$8,591,563	23
424820	Wine and Distilled Alcoholic Beverage Merchant Wholesalers	32.0%	98.8%	\$604,628	\$4,472,452	20
424910	Farm Supplies Merchant Wholesalers	9.3%	99.8%	\$549,868	\$4,067,390	49

Source: Lightcast 2023.2

# INDUSTRY AND OCCUPATION ANALYSIS



The industry analysis draws primarily on payroll data. Exhibit 7 displays the 2021 baseline number of jobs in the wineries industry, the five-year historical trend, the five-year projected change, the average annual earnings, and the location quotient, a measure that compares the concentration of industry employment in the region to that in the nation.

Between 2016 and 2021, the number of wineries industry jobs in the Sierra Foothills grew (13.4% increase) by 5.2% more than those in the state. The Santa Maria region had even more impressive jobs growth (20.5% increase). The projected increase over the next five years is similarly significant: the Sierra Foothills wineries industry is projected to grow 15.4% by 2026. The figure for the Santa Maria region is 18.6%. The regional projections are significantly higher than the projections for the state (10.8%).

Santa Maria’s location quotient for the wineries industry, the ratio that compares the industry share of jobs in the region to the share of jobs in the state, is 24.85 times the national employment concentration. The Sierra Foothills’ location quotient is 5.47 times that concentration. California’s location quotient is 4.48 times the concentration of the nation. The data indicate that the study regions are highly specialized and have a comparative advantage over other regions nationally and across the state.

**Exhibit 7. Industry analysis of wineries, historical and projected change, average annual earnings, and location quotients, two study regions and California, 2016–2026**

Geography	2021 Jobs	2016–2021 Jobs Change	2021–2026 Projected Change	2021 Avg. Earnings Per Job	2021 LQ
Sierra Foothills	862	13.4%	15.4%	\$40,224	5.47
Santa Maria	3,951	20.5%	18.6%	\$67,438	24.85
California	39,179	8.2%	10.8%	\$87,014	4.48

Source: Lightcast, 2023.2



The wineries industry occupational structure is remarkably similar in the Sierra Foothills and in Santa Maria, but some differences are notable.

In both regions, occupation employment is concentrated in Manufacturing, Marketing, and Hospitality & Tourism. (Detailed occupation data are in the appendix).

Manufacturing occupations include grape processors, in-house logistics workers, and maintenance and repair workers. Marketing occupations include sales and retail clerks. Hospitality & Tourism employment includes food service workers like bartenders, wait staff, and cooks. Agriculture, Food & Natural Resources employs farmworkers almost exclusively. Transportation, Distribution & Logistics employs truck drivers almost exclusively.

Notable are the shares and numbers of jobs in two categories: Agriculture, Food & Natural Resources and Business Management & Administration. In the Agriculture, Food & Natural Resources category, Santa Maria has more farmworkers than the Sierra Foothills, indicating that it has more acres of vineyards. Santa Maria also has food scientists and technicians — but fewer than 30.

In the Business Management & Administration category, the Santa Maria region has a larger share of employment than the Sierra Foothills. Santa Maria’s wineries industry is more mature, and its large businesses have segmented job functions in management and business services. Occupations with job counts in this category include general management, logistics management, and production management. Santa Maria records employment in non-management occupations, including customer service and logistics, in the dozens; the Sierra Foothills records much less such employment.

**Exhibit 8. Occupation career cluster employment in the wineries industry, two study geographies, 2021**

Career Cluster	Employed in Wineries		% of Total Employed in Wineries	
	Sierra Foothills	Santa Maria	Sierra Foothills	Santa Maria
Manufacturing	220	1,111	34%	31%
Marketing	170	859	26%	24%
Hospitality & Tourism	157	733	24%	20%
Agriculture, Food & Natural Resources	39	317	6%	9%
Transportation, Distribution & Logistics	32	164	5%	5%
Business Management & Administration	27	336	4%	9%
Finance	0	20	0%	1%
Information Technology	0	45	0%	1%
Arts, Audio/Video Technology & Communications	0	0	0%	0%
Architecture & Construction	0	0	0%	0%
Health Science	0	0	0%	0%
Education & Training	0	0	0%	0%
Human Services	0	0	0%	0%
Law, Public Safety, Corrections & Security	0	0	0%	0%
Science, Technology, Engineering & Mathematics	0	0	0%	0%
Government & Public Administration	0	0	0%	0%

Source: O\*NET Career Clusters; Lightcast 2023.2

# JOBS POSTINGS



The research used the jobs postings tool in Lightcast to analyze jobs postings from the most recent three years in the wineries industry in the two study regions and Placer County. The data provide a general picture of job titles that employers have sought. The analysis found 117 job postings in the Sierra Foothills region and 690 jobs in the Santa Maria region.

Exhibit 9 presents the top job titles in the major occupation career cluster categories and the number of jobs postings that resulted from the search.

**Exhibit 9. Top job titles by occupation cluster in the Sierra Foothills and Santa Maria, June 2020–May 2023**

Career Cluster	Sierra Foothills	Santa Maria
Manufacturing	Cellar Workers (3)	Cellar Workers (19)
	Winemakers (2)	Cellar Technicians (17)
	Cellar Masters (2)	Samplers (10)
Marketing	Wine and Spirits Merchandisers (2)	Sales Account Executives (8)
	Sales Representatives (1)	Wine Club Coordinators (7)
		Hospitality Sales Associates (4)
Hospitality & Tourism	Tasting Room Representatives (2)	Wine Club Managers (11)
	Wine Club Managers (1)	Tasting Room Associates (71)
	Tasting Room Associates (24)	Tasting Room Leads (11)
Ag, Food & Natural Resources	Harvest Enologists (2)	Harvest Enologists (12)
		Enologists (7)
		Vineyard Managers (4)
Business Mgmt & Admin	Outreach Managers (1)	Tasting Room Managers (14)
		Hospitality Managers (6)

Source: O\*NET Career Clusters; Lightcast 2023.2



Placer County recorded just more than 20 postings in the wineries industry between June 2020 and May 2023.<sup>2</sup> They included jobs in restaurants and food service, truck driving, and tasting rooms. Community partners indicated that existing businesses in the region are expanding and that several key positions have been filled by word of mouth. They noted other positions that aligned with the hiring needs recorded in the Sierra Foothills region. Placer County jobs postings included the following positions:

- Marketing managers
- Cellar workers
- Tasting room associates and staff
- Restaurant managers, sous chefs, hosts/hostesses
- Truck drivers

Exhibit 10 details three main job categories that emerged from the jobs postings research and feedback from community and industry partners.

**Exhibit 10. Job descriptions for three main job categories in the wineries industry, Sierra Foothills region**

Job Category	Description
Cellar Workers	Process harvested grapes. Operate crush equipment. Rinse, fill, and top barrels. Receive, filter, bottle, and ship wine transfers. Use forklifts. Maintain tanks, hoses, and barrels. Obtain lab samples. Add chemicals and additives. Filter wines.
Harvest Enologists	Assist the winemaking staff monitoring cellar activities and fermentation. Conduct research projects and lab activities, including running trials and statistical analysis. Perform quality assurance.
Tasting Room Associates	Make wine sales and recommendations to customers, educating them on the wine region and the business. Create guest experiences. Do some food preparation. Sign up wine club members. Maintain tasting rooms and do event setup. Maintain social media accounts.

Source: Lightcast, 2023.<sup>2</sup>



<sup>2</sup> Jobs postings are one key indicator of hiring trends. Local employers typically have additional information about hiring needs, and community partner feedback was incorporated into this report.



# EDUCATION AND TRAINING



California’s community colleges have programs relevant to the wineries industry in some of the major wine-producing regions of the state. Between the 2018–2019 and 2020–2021 academic years, these colleges on average annually produced 82 certificates and degrees in viticulture and enology. Santa Rosa Community College and Napa Valley College produce the most such awards of any community college. Most schools generate fewer than 10 awards annually.

Some schools are relatively new to offering industry-relevant programs. Others (Foothill College in Los Altos Hills) have put such programs on the shelf. In the Sacramento region, Folsom Lake College has a new viticulture/enology program, but it recorded no awards during the study period.

The study did not focus on bachelor’s-granting programs or on noncredit or professional programs. In the Sacramento region, the University of California-Davis has well-known undergraduate and graduate programs in viticulture and enology as well as a winemaking certificate program in its Continuing and Professional Education Program. On average annually, UC Davis awarded 29 bachelor’s degrees and 12 master’s degrees in viticulture and enology between the 2019–2020 and 2021–2022 academic years.<sup>3</sup> No data on the number of professional degrees in viticulture and enology awarded by UC Davis were accessible.

California State University in Sacramento has no viticulture and enology programs.

**Exhibit 11. Viticulture-enology three-year average awards statewide, 2018–2019 to 2020–2021 academic years**

College	Associate Degrees	Certificates	Total Awards
Allan Hancock College	13	2	15
Canyons College	0	1	1
Cuyamaca College	0	1	1
Las Positas College	1	8	9
Mira Costa College	1	1	2
Napa Valley College	18	4	22
Reedley College	0	2	2
Santa Rosa College	15	15	30

Source: California Community College Chancellor’s Office DataMart, TOP Code 0104.00

<sup>3</sup> AggieData, Student Outcomes Degrees Awarded, Details of Degree Awarded report <https://aggiedata.ucdavis.edu/>

Exhibit 12 provides a brief description of the active community college viticulture and enology programs in Northern California, even those recording no awards. Folsom Lake College and Mendocino College had no recorded awards in the Chancellor’s Office DataMart.

**Exhibit 12. Active viticulture and enology programs at Northern California community colleges, 2023**

Institution	Location	Description
Folsom Lake College	Folsom	Associate of Science degree in Small Vineyard and Winery Management
Las Positas College	Livermore	Certificate of Achievement and Associate of Science degree in Viticulture Certificate of Achievement and Associate of Science degree in Enology Preparation for transfer and career preparation
Mendocino College	Ukiah	Viticulture skills certificate (listed under Agriculture program code)
Napa Valley College	Napa	Associate of Science degree in Viticulture Associate of Science degree in Wine Marketing and Sales Associate of Science degree in Winemaking Numerous certificates, including Wine Production, Vineyard Management, Vineyard Pest Scout, Viticulture Operations, and Wine Laboratory Technician
Santa Rosa Junior College	Santa Rosa	All programs under the title "Wine Studies" Associate of Science and Certificate of Achievement in Enology Associate of Science and Certificate of Achievement in Wine Marketing Associate of Science and Certificate of Achievement in Wine Hospitality and Direct Marketing

Source: California Community Colleges Chancellor’s Office Curriculum Inventory, <https://coci2.cctechcenter.org/>



# APPENDIX:

## DETAILED OCCUPATION DATA



Exhibit A1 presents detailed occupation employment data for the wineries industry in the two study regions, including the share of total wineries employment for each occupation.

**Exhibit A1. Occupation employment, wineries industry staffing patterns, Sierra Foothills and Santa Maria regions, 2021**

SOC	Description	Employed in Industry (2021)		% of Total Jobs in Industry (2021)	
		Sierra Foothills	Santa Maria	Sierra Foothills	Santa Maria
35-3011	Bartenders	92	293	10.6%	7.5%
51-9012	Separating, Filtering, Precipitating, & Still Machine Setters, Operators, & Tenders	64	377	7.4%	9.4%
51-9111	Packaging and Filling Machine Operators and Tenders	63	199	7.3%	5.2%
41-9011	Demonstrators and Product Promoters	56	376	6.3%	9.3%
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	41	188	4.8%	4.8%
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	38	157	4.5%	4.0%
35-3031	Waiters and Waitresses	38	166	4.4%	4.2%
45-2092	Farmworkers & Laborers, Crop, Nursery, & Greenhouse	39	276	4.3%	6.7%
27-1026	Merchandise Displayers and Window Trimmers	31	62	3.5%	1.6%
53-7051	Industrial Truck and Tractor Operators	21	78	2.4%	2.0%
35-2014	Cooks, Restaurant	17	76	2.0%	2.0%
11-1021	General and Operations Managers	16	68	1.9%	1.8%
51-1011	First-Line Supervisors of Production and Operating Workers	14	55	1.6%	1.4%
11-2022	Sales Managers	12	57	1.4%	1.4%

Continued

**Exhibit A1. Occupation employment, wineries industry staffing patterns, Sierra Foothills and Santa Maria regions, 2021**

Continued

SOC	Description	Employed in Industry (2021)		% of Total Jobs in Industry (2021)	
		Sierra Foothills	Santa Maria	Sierra Foothills	Santa Maria
53-3032	Heavy and Tractor-Trailer Truck Drivers	11	32	1.3%	0.8%
49-9071	Maintenance and Repair Workers, General	11	47	1.3%	1.2%
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	11	36	1.2%	0.9%
35-1012	First-Line Supervisors of Food Preparation & Servers	10	43	1.2%	1.1%
11-2021	Marketing Managers	<10	21	0.5%	0.5%
11-3031	Financial Managers	<10	15	0.3%	0.4%
11-3051	Industrial Production Managers	<10	29	0.6%	0.7%
11-3071	Transportation, Storage, and Distribution Managers	<10	15	0.3%	0.4%
13-1121	Meeting, Convention, and Event Planners	<10	21	0.4%	0.5%
13-1161	Market Research Analysts and Marketing Specialists	<10	45	1.0%	1.1%
13-1199	Business Operations Specialists, All Other	<10	15	0.3%	0.4%
13-2011	Accountants and Auditors	<10	20	0.6%	0.5%
19-4013	Food Science Technicians	<10	14	0.9%	0.4%

Source: Lightcast 2023.2

Exhibit A2 presents wage data in the two study regions for select wineries industry occupations.

**Exhibit A2. Occupation wages, wineries industry staffing patterns, Sierra Foothills and Santa Maria regions, 2021**

SOC	Description	Sierra Foothills	Santa Maria
35-3011	Bartenders	\$15.22	\$14.56
51-9012	Separating, Filtering, Precipitating, & Still Machine Setters, Operators, & Tenders	\$21.59	\$21.99
51-9111	Packaging and Filling Machine Operators and Tenders	\$17.01	\$17.25
41-9011	Demonstrators and Product Promoters	\$17.00	\$17.19
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	\$17.39	\$18.12
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$30.50	\$30.10
35-3031	Waiters and Waitresses	\$15.21	\$14.34
45-2092	Farmworkers & Laborers, Crop, Nursery, & Greenhouse	\$14.37	\$14.47
27-1026	Merchandise Displayers and Window Trimmers	\$19.90	\$17.26
53-7051	Industrial Truck and Tractor Operators	\$19.80	\$18.47
35-2014	Cooks, Restaurant	\$17.91	\$17.48
11-1021	General and Operations Managers	\$48.30	\$47.36
51-1011	First-Line Supervisors of Production and Operating Workers	\$30.70	\$29.76
11-2022	Sales Managers	\$50.13	\$52.00
53-3032	Heavy and Tractor-Trailer Truck Drivers	\$23.36	\$23.52
49-9071	Maintenance and Repair Workers, General	\$22.23	\$22.32
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	\$20.05	\$22.52
35-1012	First-Line Supervisors of Food Preparation & Servers	\$18.20	\$17.89
11-2021	Marketing Managers	\$62.77	\$65.88
11-3031	Financial Managers	\$60.50	\$61.69
11-3051	Industrial Production Managers	\$50.41	\$57.31
11-3071	Transportation, Storage, and Distribution Managers	\$48.01	\$47.44
13-1121	Meeting, Convention, and Event Planners	\$24.68	\$25.92
13-1161	Market Research Analysts and Marketing Specialists	\$30.39	\$31.17
13-1199	Business Operations Specialists, All Other	\$30.93	\$33.70
13-2011	Accountants and Auditors	\$38.02	\$37.85
19-4013	Food Science Technicians	\$24.63	\$22.33

Source: Lightcast 2023.2

Exhibit A3 displays the skill level for wineries industry occupations. Middle-skill jobs require education and experience beyond high school but do not require a bachelor's degree. Above-middle-skill occupations typically require a bachelor's degree. Below-middle-skill occupations may require a high school diploma.

The table also shows the corresponding career cluster for jobs postings.

**Exhibit A3. Occupation skill level and career cluster, wineries industry staffing patterns, Sierra Foothills and Santa Maria regions, 2021**

SOC	Description	Skill Level	Career Cluster
35-3011	Bartenders	Below Middle-Skill	Hospitality & Tourism
51-9012	Separating, Filtering, Precipitating, & Still Machine Setters, Operators, & Tenders	Below Middle-Skill	Manufacturing
51-9111	Packaging and Filling Machine Operators and Tenders	Below Middle-Skill	Manufacturing
41-9011	Demonstrators and Product Promoters	Below Middle-Skill	Marketing
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	Below Middle-Skill	Manufacturing
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	Middle-Skill	Marketing
35-3031	Waiters and Waitresses	Below Middle-Skill	Hospitality & Tourism
45-2092	Farmworkers & Laborers, Crop, Nursery, & Greenhouse	Below Middle-Skill	Agriculture, Food & Natural Resources
27-1026	Merchandise Displayers and Window Trimmers	Below Middle-Skill	Marketing
53-7051	Industrial Truck and Tractor Operators	Below Middle-Skill	Transportation, Distribution & Logistics
35-2014	Cooks, Restaurant	Below Middle-Skill	Hospitality & Tourism
11-1021	General and Operations Managers	Middle-Skill	Business Management & Administration
51-1011	First-Line Supervisors of Production and Operating Workers	Middle-Skill	Manufacturing
11-2022	Sales Managers	Above Middle-Skill	Marketing
53-3032	Heavy and Tractor-Trailer Truck Drivers	Middle-Skill	Transportation, Distribution & Logistics
49-9071	Maintenance and Repair Workers, General	Below Middle-Skill	Manufacturing
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	Middle-Skill	Manufacturing
35-1012	First-Line Supervisors of Food Preparation & Servers	Middle-Skill	Hospitality & Tourism
11-2021	Marketing Managers	Above Middle-Skill	Marketing
11-3031	Financial Managers	Above Middle-Skill	Business Management & Administration
11-3051	Industrial Production Managers	Above Middle-Skill	Business Management & Administration
11-3071	Transportation, Storage, and Distribution Managers	Middle-Skill	Business Management & Administration
13-1121	Meeting, Convention, and Event Planners	Above Middle-Skill	Business Management & Administration
13-1161	Market Research Analysts and Marketing Specialists	Above Middle-Skill	Information Technology
13-1199	Business Operations Specialists, All Other	Above Middle-Skill	Business Management & Administration
13-2011	Accountants and Auditors	Above Middle-Skill	Finance
19-4013	Food Science Technicians	Middle-Skill	Agriculture, Food & Natural Resources

Source: Lightcast, 2023.2, O\*NET Career Clusters



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