CENTER OF EXCELLENCE
FOR LABOR MARKET RESEARCH
BAY AREA

Labor Market Assessment
Land Stewardship and Sustainability Occupations

November 2026

Key Findings

California is projected to generate 356 annual openings for Conservation Scientists and Foresters from 2025 to 2035, including 105 in the Bay Region (approximately 29% of statewide openings). The selected regional programs award an annual average of 111 associate and bachelor's degrees, compared with 105 annual openings. This comparison does not identify a numerical workforce shortage. However, all 101 bachelor's awards reported for the selected programs come from one institution, UC Berkeley. West Valley College's proposed Land Stewardship and Sustainability bachelor's program could provide an additional pathway into occupations that typically require a bachelor's degree.

In California, entry-level Land Stewardship and Sustainability occupations typically earn approximately $33 per hour, which exceeds the living wage for a single adult ($17) and exceeds the living wage for adults with one preschooler ($31) or one school-age child ($31) or one teenager ($25). Median wages reach approximately $41 per hour, reflecting strong earning potential in the field. For Conservation Scientists, entry-level wages increase from approximately $24 per hour for associate degree holders to $26 per hour for those with a master or higher degree. Similarly, for Foresters, entry-level wages increase from approximately $36 per hour for high school degree holders to $37 per hour for those with a bachelor's degree. This wage progression highlights the importance of bachelor's-level education in helping workers achieve high and sustainable earnings over time.

In the Bay Region, the combined occupational entry level wage is $32 per hour and the median is $42 per hour. Both exceed the $27 hourly Self-Sufficiency Standard for one adult. The median also exceeds the $36 threshold for one adult with a teenager but remains below the thresholds for one adult with a younger child. Advertised wages by education do not show a consistent bachelor's degree wage premium. The proposed program's clearest workforce rationale is preparation for bachelor's-level occupations and an additional regional pathway into the field.

Introduction

This report profiles Land Stewardship and Sustainability occupations in California and the 12-County Bay Region for a proposed bachelor's degree program.

This report provides student outcomes data on employment and earnings for Natural Resources Program (TOP 0115.00) in the Bay Region. It is recommended that this data be reviewed to better understand how outcomes for students taking courses within these program areas compare to similar programs at colleges in the region.

This report evaluates labor market needs and workforce alignment for the proposed bachelor's degree program called "Land Stewardship and Sustainability." Using state and regional data, it presents insights into educational and occupational requirements, employment trends, wage levels, and degree alignment for Conservation Scientists and Foresters, two occupations directly aligned with this field.

The analysis shows that Conservation Scientists account for most of the employment and growth, while Foresters represent a smaller but specialized segment of the workforce. The findings indicate competitive wages supporting the creation of a bachelor's degree program to better align educational pathways with workforce needs in the Bay Region.

Occupation under Review

Conservation Scientists (19-1031): Manage, improve, and protect natural resources to maximize their use without damaging the environment. May conduct soil surveys and develop plans to eliminate soil erosion or to protect rangelands. May instruct farmers, agricultural production managers, or ranchers in best ways to use crop rotation, contour plowing, or terracing to conserve soil and water; in the number and kind of livestock and forage plants best suited to particular ranges; and in range and farm improvements, such as fencing and reservoirs for stock watering.

Occupational Characteristics	
Typical Entry Level Education	Bachelor's degree
Work Experience Required	None
Typical On-The-Job Training	None
Existing Workforce (% with assoc. degree, certificate, or some college)	0%

Foresters (19-1032): Manage public and private forested lands for economic, recreational, and conservation purposes. May inventory the type, amount, and location of standing timber, appraise the timber's worth, negotiate the purchase, and draw up contracts for procurement. May determine how to conserve wildlife habitats, creek beds, water quality, and soil stability, and how best to comply with environmental regulations. May devise plans for planting and growing new trees, monitor trees for healthy growth, and determine optimal harvesting schedules.

Occupational Characteristics	
Typical Entry Level Education	Bachelor's degree
Work Experience Required	None
Typical On-The-Job Training	None
Existing Workforce (% with assoc. degree, certificate, or some college)	0%

State Level Analysis

Table 1 presents selected licenses and certifications with a direct connection to land stewardship duties in California job postings for Conservation Scientists and Foresters. Certified Arborist is the most frequently listed of these selected credentials (70 postings; 2%) and is particularly relevant to tree assessment and urban forestry. Pesticide Applicator License and Drone Pilot Certificate each appear in five postings (less than 1%). These credentials are relevant to specific duties such as vegetation management and aerial monitoring; their low posting frequency does not establish whether they are required for a particular assignment.

Table 1. Selected Licenses and Certifications Related to Land Stewardship Duties in California

Licenses or Certifications	# of Job Postings	% of Total
Certified Arborist	70	2%
Pesticide Applicator License	5	<1%
Drone Pilot Certificate	5	<1%

"Job Posting Analytics." Oct. 2025 - Sep. 2026, Source: Lightcast 2026.3

Note: Selected credentials from the combined Conservation Scientist and Forester extract. Source percentages are retained and refer to the original posting base, not the selected rows. A posting may list multiple credentials. Selection reflects relevance to land management duties, not a universal occupational requirement.

Tables 2a and 2b show the educational levels listed on job postings for each occupation. Among postings with a reported education level, 31% for Conservation Scientists list a bachelor's degree, compared with 60% for Foresters. High school or GED is listed in 42% and 14%, respectively. The table notes indicate that 50% of Conservation Scientist records and 60% of Forester records lack education information; consequently, these distributions describe only the records with reported education. They do not distinguish required from preferred credentials. BLS identifies a bachelor's degree as the typical entry-level education for both occupations, supporting the proposed program's alignment with professional preparation.

The entry level advertised wages do not rise consistently with education. For Conservation Scientists, postings listing a bachelor's degree show $24 per hour, compared with $25 for an associate degree and $23 for high school or GED. For Foresters, bachelor's and associate degree postings both show $37 per hour, compared with $36 for high school or GED. These figures describe different sets of postings, not earnings trajectories for individual graduates, and do not establish a causal return to education. The proposed bachelor's program is better supported by occupational education requirements and potential access needs than by an advertised wage premium. Job-posting counts are not necessarily the number of postings with usable salary information.

Table 2a. Educational Level and Entry Level Wages for Conservation Scientists in California

Education Level	# of Job Postings	% of Total	25% Hourly Advertised Wage
High school or GED	321	42%	$23
Associate's degree	66	9%	$25
Bachelor's degree	240	31%	$24
Master's degree	126	16%	$26
Ph.D. or professional degree	17	2%	$26

"Job Posting Analytics." Oct. 2025 - Sep. 2026, Source: Lightcast 2026.3

Note: 50% of records have been excluded because they do not include a degree level. As a result, the chart above may not be representative of the full sample.

Table 2b. Educational Level and Entry Level Wages for Foresters in California

Education Level	# of Job Postings	% of Total	25% Hourly Advertised Wage
High school or GED	20	14%	$36
Associate's degree	14	10%	$37
Bachelor's degree	83	60%	$37
Master's degree	18	13%	$36
Ph.D. or professional degree	3	2%	$43

"Job Posting Analytics." Oct. 2025 - Sep. 2026, Source: Lightcast 2026.3

Note: 60% of records have been excluded because they do not include a degree level. As a result, the chart above may not be representative of the full sample.

Tables 3a and 3b indicate that most job postings require moderate levels of work experience. Among postings with reported experience, 86% for Conservation Scientists list 0 to 3 years and 10% list 4 to 6 years; for Foresters, the corresponding shares are approximately 62% and 32%. These distributions suggest opportunities for early-career applicants, particularly in conservation science. However, 59% and 68% of records, respectively, lack experience information. Applied projects and work-based learning could help students prepare for the experience expectations shown in the available postings.

Table 3a. Work Experience Requirement for Conservation Scientists in California

Working Experience Required	Job Postings	% of Total
0 - 1 Years	251	51%
2 - 3 Years	174	35%
4 - 6 Years	48	10%
7 - 9 Years	9	2%
10+ Years	11	2%

"Job Posting Analytics." Oct. 2025 - Sep. 2026, Source: Lightcast 2026.3

Note: 59% of records have been excluded because they do not include an experience level. As a result, the chart above may not be representative of the full sample.

Table 3b. Work Experience Requirement for Foresters in California

Working Experience Required	Job Postings	% of Total
0 - 1 Years	9	10%
2 - 3 Years	46	52%
4 - 6 Years	28	32%
7 - 9 Years	4	5%
10+ Years	1	1%

"Job Posting Analytics." Oct. 2025 - Sep. 2026, Source: Lightcast 2026.3

Note: 68% of records have been excluded because they do not include an experience level. As a result, the chart above may not be representative of the full sample.

Table 4 shows that employment in Land Stewardship and Sustainability-related occupations in California totaled 3,661 jobs in 2025 and is projected to grow by 10% over the next decade, indicating strong demand well above average occupational growth. Growth is driven by both occupations, with Conservation Scientists increasing by 12% (305 jobs) and Foresters increasing by 6% (68 jobs). The field is expected to generate approximately 356 annual job openings statewide, driven by both expansion and replacement demand. Entry-level wages average approximately $33 per hour, with median wages reaching $41 per hour, demonstrating strong earning potential across occupations.

Table 4. Employment Outlook for Land Stewardship and Sustainability Occupations in California

Occupation	2025 Jobs	2035 Jobs	10-yr Change	10-yr % Change	Annual Openings	Annual Replacement Rate	25% Hourly Earning	50% Hourly Wage
Conservation Scientists	2,555	2,860	305	12%	253	8%	$30	$37
Foresters	1,106	1,174	68	6%	103	8%	$40	$50
Total	**3,661**	**4,034**	**373**	**10%**	**356**	**8%**	**$33**	**$41**

Source: Lightcast

Regional Level Analysis

Employment Historical Trend for Land Stewardship and Sustainability

Table 5 shows the number of professionals employed in Conservation Scientists and Foresters over the past decade at both the state and regional levels. Employment for Conservation Scientists increased by 66% statewide and 60% in the Bay Region, while Foresters experienced more moderate growth, increasing by 23% statewide and 19% in the Bay Region. These trends indicate rapid expansion in the analyzed occupations, highlighting strong and sustained demand for land stewardship and sustainability-related roles in the region.

Table 5. Historical 10-Year Employment Trend for Natural Resources in the Bay Region vs. California

Occupation	Area	2015 Jobs	2025 Jobs	10-yr Change	10-yr % Change
Conservation Scientists	California	1,537	2,555	1,018	66%
Conservation Scientists	Bay Region	482	773	291	60%
Foresters	California	898	1,106	208	23%
Foresters	Bay Region	312	370	58	19%

Source: Lightcast

Figure 1 illustrates the historical employment trend for Conservation Scientists at both the state and regional levels. It shows that the Bay Region experienced growth roughly in line with the statewide rate, reflecting demand for land stewardship and sustainability-related roles in the region.

Figure 1. Historical 10 Year to Year Present Change in Employment for Conservation Scientists in the Bay Region vs. California

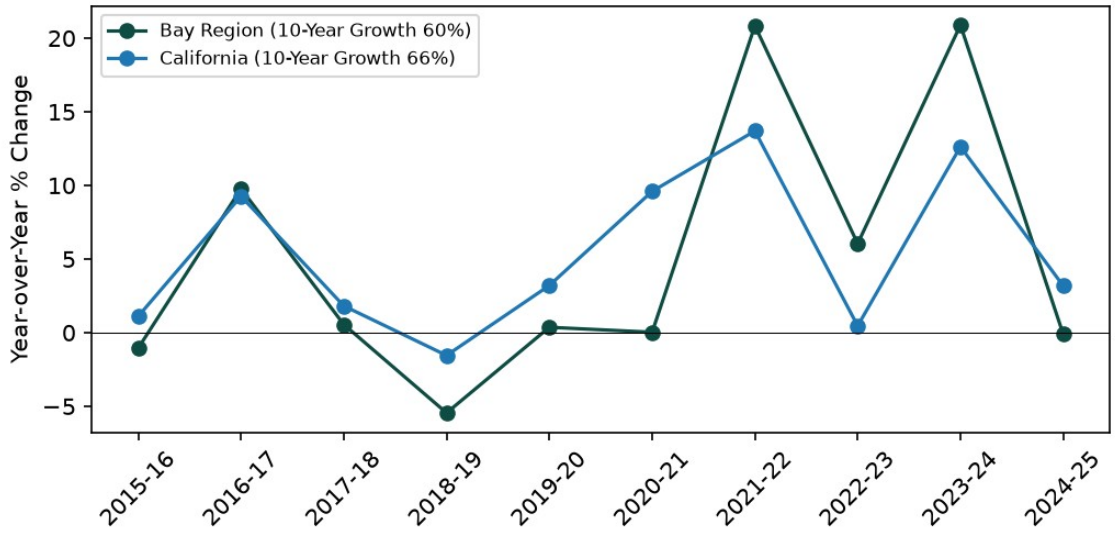
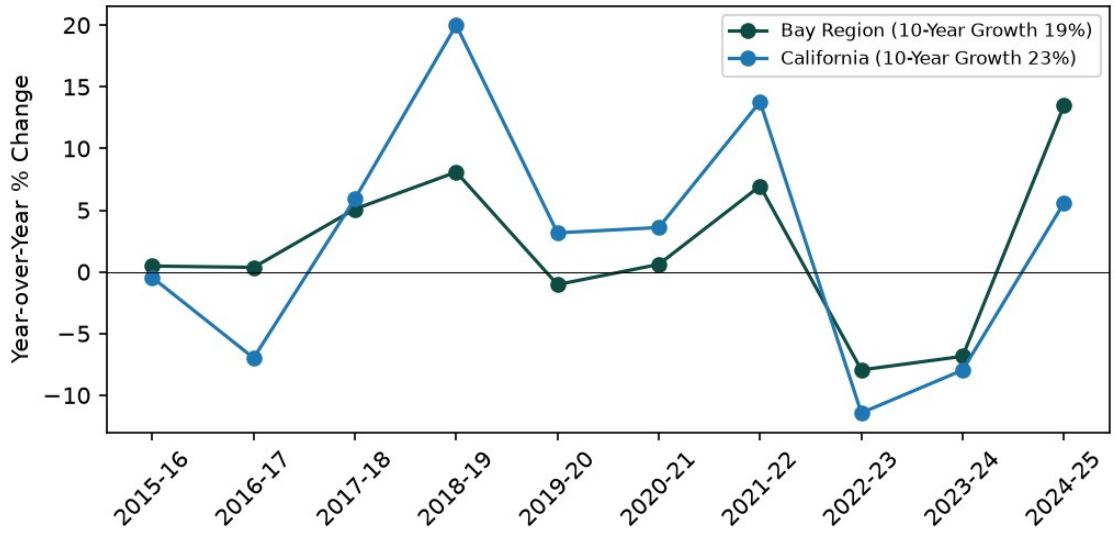


Figure 2 illustrates the historical employment trend for Foresters at both the state and regional levels. It shows that the Bay Region experienced growth over time, although slightly below the statewide growth rate, reflecting demand for land stewardship and sustainability-related roles in the region.

Figure 2. Historical 10 Year to Year Present Change in Employment for Foresters in the Bay Region vs. California



Occupational Demand

Table 6 shows that the Bay Region employed 1,143 workers in 2025 across Land Stewardship and Sustainability-related occupations. Employment is projected to grow by 7% over the next decade, with approximately 105 annual job openings. Conservation Scientists account for the majority of employment (773 jobs and 73 annual openings), while Foresters account for 370 jobs and 32 annual openings. Entry-level wages average approximately $32 per hour, with median wages reaching $42 per hour, indicating very strong earning potential in the region.

Table 6. Employment Outlook for Land Stewardship and Sustainability Occupations in the Bay Region

Occupation	2025 Jobs	2035 Jobs	10-yr Change	10-yr % Change	Annual Openings	Annual Replacement Rate	25% Hourly Earning	50% Hourly Wage
Conservation Scientists	773	840	67	9%	73	8%	$33	$43
Foresters	370	380	10	3%	32	8%	$30	$40
Total	**1,143**	**1,220**	***77***	***7%***	**105**	**8%**	**$32**	**$42**

Source: Lightcast

Bay Region includes: Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano and Sonoma Counties

Educational Supply

There is one community college in the Bay Region issuing 10 associate degree awards on average annually (last 3 years ending 2024-25) on TOP 0115.00 - Natural Resources.

There are no four-year institutions in the Bay Region issuing associate or bachelor's awards on average annually (last 3 years ending 2023-24) on CIP 03.0201- Environmental/Natural Resources Management and Policy.

There is one four-year institution in the Bay Region issuing 101 Bachelor awards on average annually (last 3 years ending 2023-24) on CIP 03.0101- Natural Resources/Conservation, General.

Although the proposed program will use CIP 03.0201, the educational supply analysis also includes CIP 03.0101 because it aligns with TOP 0115.00 and prepares graduates for the two occupations examined in this report: Conservation Scientists and Foresters. Including these related programs accounts for graduates who may enter the same occupations, regardless of the CIP code selected for the proposed program. Because no associate or bachelor's degree awards were identified under CIP 03.0201 during the reporting period, the combined educational supply remains 111 awards annually.

Table 7a. Community College Awards on TOP 0115.00 - Natural Resources in the Bay Region

College	Subregion	Associate Degree	Total
West Valley	Silicon Valley	10	10
Total		**10**	**10**

Source: CCCCO DataMart
Note: The annual average for awards is 2022-23 to 2024-25.

Table 7b. Bachelor's Degree Awards on CIP 03.0101- Natural Resources/Conservation, General in the Bay Region

College	Subregion	Bachelor's degree	Total
University of California-Berkeley	East Bay	101	101
Total		**101**	**101**

Source: IPEDS
Note: The annual average for awards is 2021-22 to 2023-24. CIP 03.0201, Environmental/Natural Resources Management and Policy, General, was also reviewed because it is the code selected for the proposed program. No associate or bachelor's degree awards were identified under this code in the Bay Region during 2021–22 through 2023–24. Awards under CIP 03.0101 are included because its graduates can enter the occupations examined in this report.

Gap Analysis

Based on the data included in this report, there is not a labor market shortage in the Bay Region, with approximately 105 annual openings for Land Stewardship and Sustainability occupations and 111 associate and bachelor annual (3-year average) awards from the related programs described in the Educational Supply section. This results in an annual oversupply of approximately 6 students.

While overall supply slightly exceeds demand, the bachelor's degrees are concentrated at a single four-year institution, indicating limited access to this program within the region. Expanding access to a community college-based bachelor's degree program would help diversify educational pathways and better align training opportunities with workforce needs.

Living Wage

The Self-Sufficiency Standard Calculator estimates the income needed to meet basic living costs in the Bay Region. Table 8 shows that entry-level wages for Land Stewardship and Sustainability occupations average $32 per hour, while median wages reach $42 per hour.

These wages exceed the regional living wage of $27 per hour for a single adult, indicating that entry-level earnings are sufficient to meet basic living needs independently. Median wages also exceed the living wage for a single adult and approach the threshold needed to support individuals with teenagers, although they may not fully meet the living wage requirements for households with multiple dependents. However, wages increase with experience and higher

levels of education, providing a pathway for workers to achieve greater financial stability over time. This reinforces the importance of bachelor's-level education in helping graduates access higher-paying roles and improve long-term earning potential.

Table 8. Hourly Living Wage compared to Entry- and Mid-Level Wages for Land Stewardship and Sustainability in the Bay Region

Earning Wage		Hourly Living Wage				
25% Hourly Wage	50% Hourly Wage	Adult Only	Adult + Infant	Adult + Preschool	Adult + School-age	Adult + teenage
$32	$42	$27	$56	$53	$45	$36

Source: Lightcast

Note. The Self-Sufficiency (SS) Standard for California (2024) Center for Women's Welfare, University of Washington. The data combines Conservation Scientists and Foresters.

Methodology

The occupation for this report was identified by West Valley College. Labor demand data is sourced from Lightcast occupation and job postings data. Educational supply and student outcomes data is retrieved from multiple sources, including CCCCO Data Mart.

Sources

Data and information referenced in this report were compiled from the following public and proprietary sources:

- Lightcast.
- California Community Colleges Chancellor's Office (CCCCO) DataMart.
- U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS).
- U.S. Department of Labor, Employment and Training Administration, Occupational Information Network (O*NET)
- Self-Sufficiency Standard at the Center for Women's Welfare, University of Washington. 2024 California Dataset.

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