

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"/>
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Program LMI Endorsement Criteria

	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Supply Gap:	<i>Comments:</i> there is projected to be 1,221 annual job openings throughout Los Angeles and Orange counties for <i>first-line supervisors of landscaping, lawn service, and groundskeeping workers</i> , which is more than the 125 awards conferred by educational institutions .	
Living Wage: (Entry-Level, 25 th)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	<i>Comments:</i> Entry-level wages for first-line supervisors of landscaping, lawn service, and groundskeeping workers are \$18.46, which is significantly below the OC living wage of \$20.63.	
Education:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
	<i>Comments:</i> The typical entry-level education for <i>first-line supervisors of landscaping, lawn service, and groundskeeping workers</i> is a high school diploma or equivalent. However, a significant percentage of workers in the field have completed some college or an associate degree as their highest level of education.	

Emerging Occupation(s)

Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<i>Comments:</i> N/A	

The Orange County Center of Excellence for Labor Market Research (OC COE) prepared this report to determine whether there is a supply gap in the Los Angeles/Orange County regional labor market related to one middle-skill occupation:

- First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers (37-1012)

This proposed program is designed to teach students business skills that will allow them to create their own horticulture or landscape design business. These skills include reviewing and developing contracts, project and staff management, and billing and accounting. Throughout Los Angeles and Orange counties, nearly 78% of landscaping services businesses have fewer than 10 employees.

Additionally, 80% of *first-line supervisors of landscaping, lawn service, and groundskeeping workers* are considered self-employed in Los Angeles County. Self-employed workers have different earnings dynamics than wage and salaried workers, making direct comparisons difficult. For these reasons, wage data appears to be significantly lower than both the living wage and minimum wage in Los Angeles County.

In Orange County, only 10% of *first-line supervisors of landscaping, lawn service, and groundskeeping workers* are considered self-employed. Furthermore, employment for this occupations is heavily

concentrated in Los Angeles County, which accounts for 87% of demand for *first-line supervisors of landscaping, lawn service, and groundskeeping workers* in the LA/OC region.

Based on the available data appears to be a supply gap for *first-line supervisors of landscaping, lawn service, and groundskeeping workers* and typical education requirements for this occupation align with a community college education. However, typical entry-level wages are significantly below the 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: Occupational Demand and Supply in Los Angeles/Orange Counties

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
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers (37-1012)	LA: 1,067	LA: 52			
	OC: 155	OC: 73	OC: \$18.46	High school diploma or equivalent	30%
	TTL: 1,221	TTL: 125			
LA/OC Total	1,221	125	N/A	N/A	N/A

Demand:

- The number of jobs related to *first-line supervisors of landscaping, lawn service, and groundskeeping workers* is projected to increase 1% through 2026, equating to 1,221 annual job openings. Of those, 87% are in Los Angeles County.
- Hourly entry-level wages for *first-line supervisors of landscaping, lawn service, and groundskeeping workers* are \$18.46 in Orange County, which is significantly below the living wage of \$20.63.
- There were 180 online job postings for *first-line supervisors of landscaping, lawn service, and groundskeeping workers* over the past 12 months. The highest number of postings were for landscape crew leaders, landscape foremen, and landscape supervisors.
- The typical entry-level education for *first-line supervisors of landscaping, lawn service, and groundskeeping workers* is a high school diploma or equivalent.
- Approximately 30% 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 125 awards conferred by 7 community colleges in Los Angeles County from 2018 to 2021.
- Non-community college institutions did not confer any related awards from 2017 to 2020.
- Orange County community college students that exited landscape design and maintenance programs in the 2019-20 academic year had a median annual wage of \$30,696 after exiting the program and 35% attained the regional living wage.
- Throughout Orange County, 63% of landscape design and maintenance students that exited their program in 2018-19 reported that they are working in a job closely related to their field of study.

Demand

Occupational Projections:

Exhibit 2 shows the annual percentage change in jobs for *first-line supervisors of landscaping, lawn service, and groundskeeping workers* from 2016 through 2026. Employment for *first-line supervisors of landscaping, lawn service, and groundskeeping workers* declined 6% from 2019 to 2020 due to the COVID-19 pandemic, which is identical to the 6% decline across all occupations during the same period. Employment for *first-line supervisors of landscaping, lawn service, and groundskeeping workers* is projected to grow at a slightly lower rate compared to all occupations through 2026.

Exhibit 2: Annual Percent Change in Jobs for First-line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers, 2016-2026

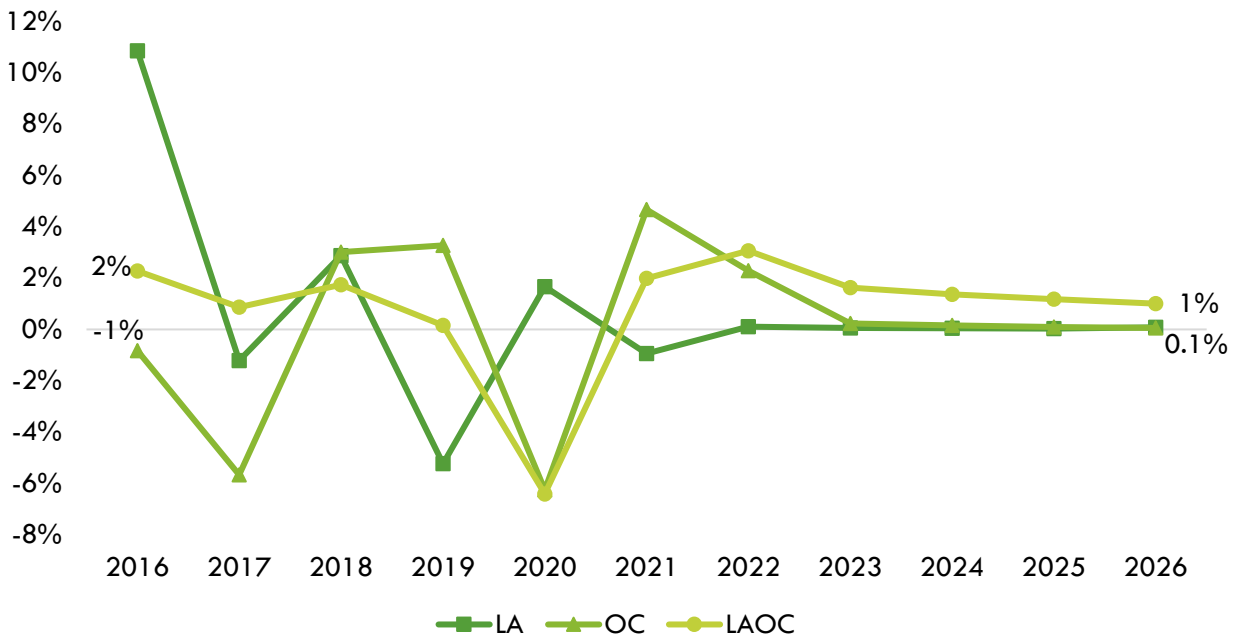


Exhibit 3 shows the five-year occupational demand projections for *first-line supervisors of landscaping, lawn service, and groundskeeping workers*. In Los Angeles/Orange County, the number of jobs for *first-line supervisors of landscaping, lawn service, and groundskeeping workers* is projected to increase by 1% through 2026. There is projected to be 1,221 jobs available annually. Of those, 87% are projected to be in Los Angeles County.

Exhibit 3: Occupational Demand in Los Angeles and Orange Counties¹

Geography	2021 Jobs	2026 Jobs	2021-2026 Change	2021-2026 % Change	Annual Openings
Los Angeles	9,979	10,011	32	0.3%	1,067
Orange	1,382	1,422	39	3%	155
Total	11,362	11,433	71	1%	1,221

¹ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

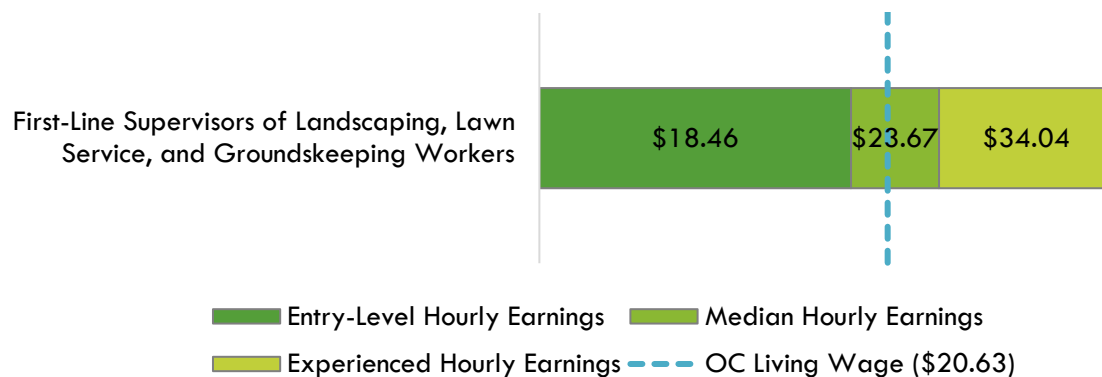
Wages:

The labor market endorsement in this report considers the entry-level hourly wages for *first-line supervisors of landscaping, lawn service, and groundskeeping workers* in Orange County as they relate to the county's living wage. Los Angeles County wages are included below in order to provide a complete analysis of the LA/OC region.

It is important to note that 80 % of *first-line supervisors of landscaping, lawn service, and groundskeeping workers* are considered self-employed in Los Angeles County; only 10% are considered self-employed in Orange County. Self-employed workers have different earnings dynamics than wage and salaried workers, making direct comparisons difficult. Examples include deciphering what is a return to labor versus a return to capital, as well as showing possible negative earnings if expenses or investments exceed gross receipts.² For these reasons, wage data appears to be significantly lower than both the living wage and minimum wage in Los Angeles County.

The typical entry-level hourly wages for *first-line supervisors of landscaping, lawn service, and groundskeeping workers* are \$18.46, which is significantly above the living wage for one adult (\$20.63 in Orange County). Median wages are \$23.67, which is above the living wage. Orange County's average wages are below the average statewide wage of \$28.39 for *first-line supervisors of landscaping, lawn service, and groundskeeping workers*. Exhibit 4 shows the wage range for *first-line supervisors of landscaping, lawn service, and groundskeeping workers* in Orange County and how it compares to the regional living wage.

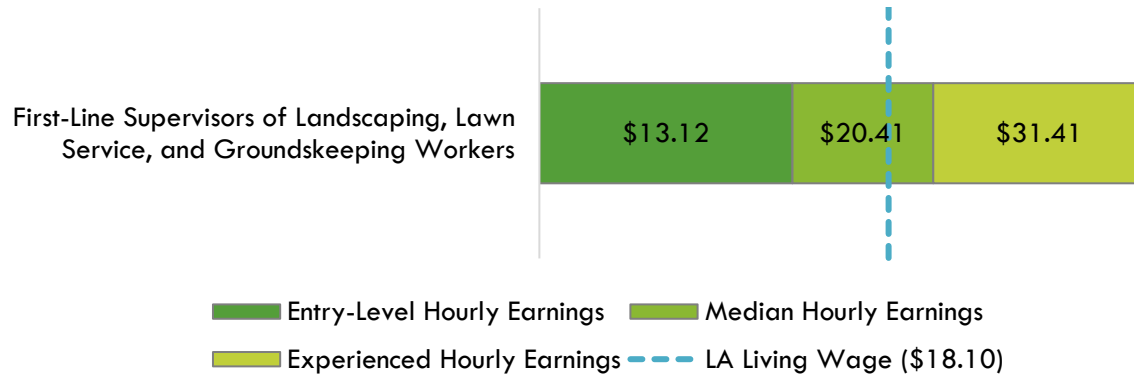
Exhibit 4: Wages by Occupation in Orange County



The typical entry-level hourly wages for *first-line supervisors of landscaping, lawn service, and groundskeeping workers* are \$13.12, which is significantly above the living wage for one adult (\$18.10 in Los Angeles County). Median wages are \$20.41. Los Angeles County's average wages are below the average statewide wage of \$28.39 for *first-line supervisors of landscaping, lawn service, and groundskeeping workers*. Exhibit 5 shows the wage range for *first-line supervisors of landscaping, lawn service, and groundskeeping workers* in Los Angeles County and how it compares to the regional living wage.

² https://www.brookings.edu/wp-content/uploads/2019/11/201911_Brookings-Metro_low-wage-workforce_Ross-Bateman.pdf

Exhibit 5: Wages by Occupation in Los Angeles County



Job Postings:

Important Online Job Postings Data Note: 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. 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.³ For these reasons, job postings could be assigned to the wrong employer, industry, or occupation within Lightcast’s database.

Additionally, 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.

There were 180 online job postings related to first-line supervisors of landscaping, lawn service, and groundskeeping workers listed in the past 12 months.

Exhibit 6: Number of Job Postings by Occupation (n=180)

Occupation	Job Postings	Percentage of Job Postings
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	180	100%

³ K. R. Chowdhary, Fundamentals of Artificial Intelligence (Basingstoke: Springer Nature, 2020), <https://link.springer.com/book/10.1007/978-81-322-3972-7>.

The top employers in the region, by number of job postings, are shown in Exhibit 7.

Exhibit 7: Top Employers by Number of Job Postings (n=180)

Employer	Job Postings	Percentage of Job Postings
Brightview	43	24%
Pacific Outdoor Living	8	4%
Moon Valley Nurseries	7	4%
Mr Electric Of Orange	6	3%
Arroyo Trabuco Golf Club	3	2%
Gothic Landscape	3	2%
Landcare Logic	3	2%
Service Corporation International	3	2%
Archdiocese Los Angeles Ed Off	2	1%
B.O.S.S Janitorial Services	2	1%

The top specialized, soft, and computer skills listed by those most frequently mentioned in job postings (denoted in parentheses) are shown in Exhibit 8.

Exhibit 8: Top Skills by Number of Job Postings (n=180)

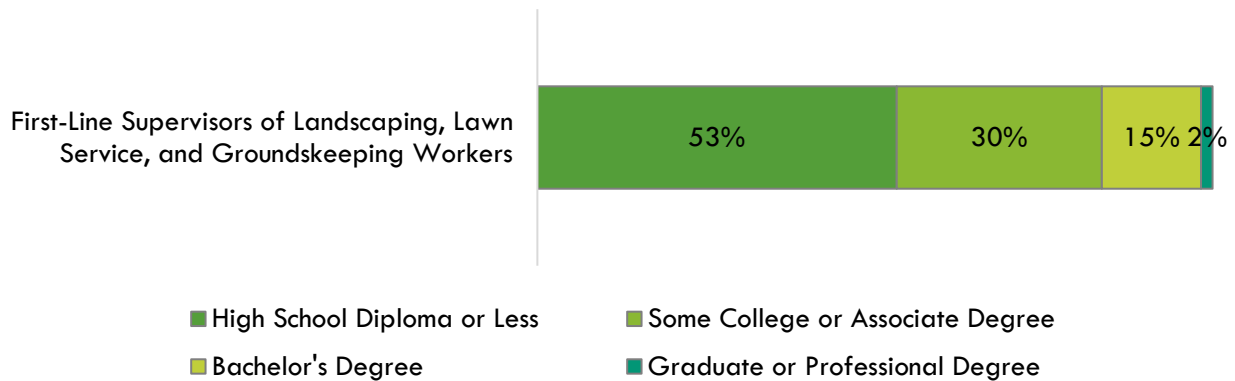
Top Specialized Skills	Top Soft Skills	Top Computer Skills
Landscaping (98)	Management (78)	Microsoft Office (13)
Irrigation (Landscaping And Agriculture) (83)	Operations (64)	Apache Maven (7)
Color Management (27)	Leadership (63)	Geographic Information Systems (5)
Production Management (27)	Communications (49)	Microsoft Word (4)
Construction (26)	Detail Oriented (35)	Microsoft Excel (3)
Landscape Maintenance (23)	Customer Service (33)	Microsoft Outlook (3)
Upselling (16)	Spanish Language (29)	Inventory Control Systems (2)
Fertilizers (15)	Multilingualism (28)	Construction Management Software (1)
Safety Training (13)	Good Driving Record (26)	Customer Relationship Management (CRM) Software (1)
Herbicides (12)	Sales (26)	Microsoft PowerPoint (1)

Educational Attainment:

The Bureau of Labor Statistics (BLS) lists a high school diploma or equivalent as the typical entry-level education for *first-line supervisors of landscaping, lawn service, and groundskeeping workers*. However, the national-level educational attainment data indicates 30% of workers in the field have completed some college or an associate degree as their highest level of education. Exhibit 9 shows the educational attainment for *first-line supervisors of landscaping, lawn service, and groundskeeping workers*.

Of the 26% of the cumulative job postings for *first-line supervisors of landscaping, lawn service, and groundskeeping workers* that listed a minimum education requirement in Los Angeles/Orange County, 76% (35) requested a high school diploma or an associate degree and 24% (11) requested a bachelor's or master's degree.

Exhibit 9: National-level Educational Attainment for Occupations



Educational Supply

Community College Supply:

Exhibit 10 shows the three-year average number of awards conferred by community colleges in the related TOP codes: Horticulture (0109.00), Landscape Design and Maintenance (0109.10), Nursery Technology (0109.30), and Turfgrass Technology (0109.40).

The colleges with the most completions in the region are Saddleback, Mt. San Antonio, and Orange Coast. Over the past 12 months, there were no other related program recommendation requests from regional community colleges.

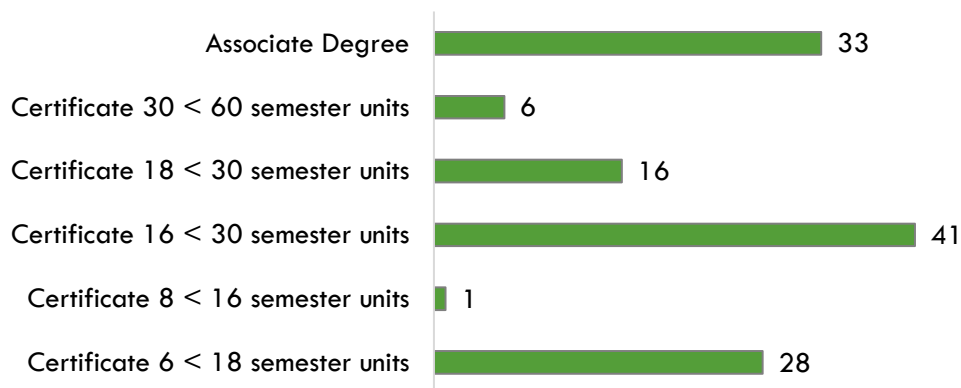
Exhibit 10: Regional Community College Awards (Certificates and Degrees), 2018-2021

TOP Code	Program	College	2018-2019 Awards	2019-2020 Awards	2020-2021 Awards	3-Year Award Average
0109.00	Horticulture	El Camino	1	10	6	5
		LA Pierce	5	6	3	4
		Long Beach	4	8	7	6
		Mt San Antonio	7	3	5	5
		LA Subtotal	17	27	21	20
		Fullerton	0	2	1	1

TOP Code	Program	College	2018-2019 Awards	2019-2020 Awards	2020-2021 Awards	3-Year Award Average
		Orange Coast	15	23	10	16
		Saddleback	13	17	47	25
		OC Subtotal	28	42	58	42
Supply Subtotal/Average			43	36	48	42
0109.10	Landscape Design and Maintenance	LA Pierce	0	0	1	0
		Mt San Antonio	33	11	26	23
		LA Subtotal	33	11	27	23
		Fullerton	3	5	2	3
		Orange Coast	2	3	1	2
		Saddleback	11	37	23	23
		OC Subtotal	16	45	26	28
Supply Subtotal/Average			49	56	53	51
0109.30	Nursery Technology	Mt San Antonio	8	1	5	5
		LA Subtotal	8	1	5	5
		Fullerton	4	4	1	3
		OC Subtotal	4	4	1	3
Supply Subtotal/Average			12	5	6	8
0109.40	Turfgrass Technology	Mt San Antonio	5	3	3	4
		LA Subtotal	5	3	3	4
		-	-	-	-	-
		OC Subtotal	-	-	-	-
Supply Subtotal/Average			5	3	3	4
Supply Subtotal/Average			111	133	141	125

Exhibit 11 shows the annual average community college awards by type from 2018-19 through 2020-21. The plurality of the awards are for certificates between 16 and less than 30 semester units, followed by associate degrees.

Exhibit 11: Annual Average Community College Awards by Type, 2018-2021



Community College Student Outcomes:

Exhibit 12 shows the Strong Workforce Program (SWP) metrics for landscape design and maintenance programs at South Orange County Community College District (SOCCCD) the Orange County Region, and California. Of the 212 landscape design and maintenance students in the 2020-21 academic year, 54% (115) attended a SOCCCD college.

Additionally, SOCCCD students that exited landscape design and maintenance programs in the 2019-20 academic year had lower annual earnings (\$26,600) compared to all Orange County landscape design and maintenance students (\$30,696). Both figures are significantly below the living wage and all landscape design and maintenance students statewide (\$38,304).

Exhibit 12: Landscape Design and Maintenance (0109.10) Strong Workforce Program Metrics, 2020-21⁴

SWP Metric	SOCCCD	OC Region	California
SWP Students	115	212	1,694
SWP Students Who Earned 9 or More Career Education Units in the District in a Single Year	51%	42%	35%
SWP Students Who Completed a Noncredit CTE or Workforce Preparation Course	Insufficient Data	Insufficient Data	71%
SWP Students Who Earned a Degree or Certificate or Attained Apprenticeship Journey Status	Insufficient Data	11	85
SWP Students Who Transferred to a Four-Year Postsecondary Institution (2019-20)	Insufficient Data	Insufficient Data	24
SWP Students with a Job Closely Related to Their Field of Study (2018-19)	Insufficient Data	63%	70%
Median Annual Earnings for SWP Exiting Students (2019-20)	\$26,600 (\$12.79)	\$30,696 (\$14.76)	\$38,304 (\$18.42)
Median Change in Earnings for SWP Exiting Students (2019-20)	Insufficient Data	12%	15%
SWP Exiting Students Who Attained the Living Wage (2019-20)	Insufficient Data	35%	50%

Non-Community College Supply:

For a comprehensive regional supply analysis, it is also important to consider the supply from other institutions in the region that provide training programs for *first-line supervisors of landscaping, lawn service, and groundskeeping workers*. Between 2017 and 2020, no related awards were conferred by non-community college institutions.

⁴ All SWP metrics are for 2020-21 unless otherwise noted.

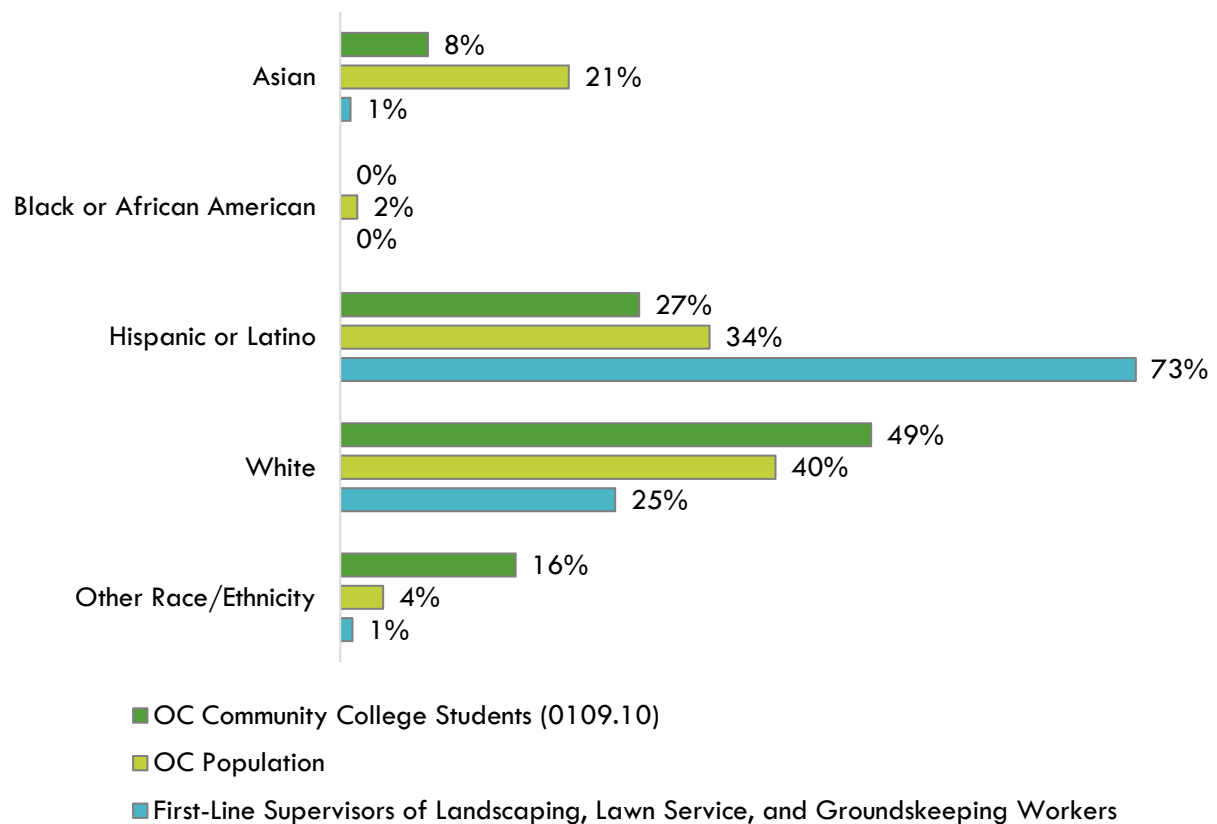
Regional Demographics

This section analyzes demographic data for Orange County community college students enrolled in landscape design and maintenance programs compared to the OC population, as well occupational data, for the purpose of identifying potential diversity and equity issues that can be addressed by community college programs.

Ethnicity:

Exhibit 13 shows the ethnicity of Orange County community college students enrolled in landscape design and maintenance programs compared to the overall Orange County population, as well as *first-line supervisors of landscaping, lawn service, and groundskeeping workers*. Notably, the vast majority (73%) of *first-line supervisors of landscaping, lawn service, and groundskeeping workers* are Hispanic or Latino, which is significantly higher the population (34%) and community college landscape design and maintenance students (27%). Conversely, 49% of community college landscape design and maintenance students are white, which is significantly higher than the population (40%) and *first-line supervisors of landscaping, lawn service, and groundskeeping workers* (25%).

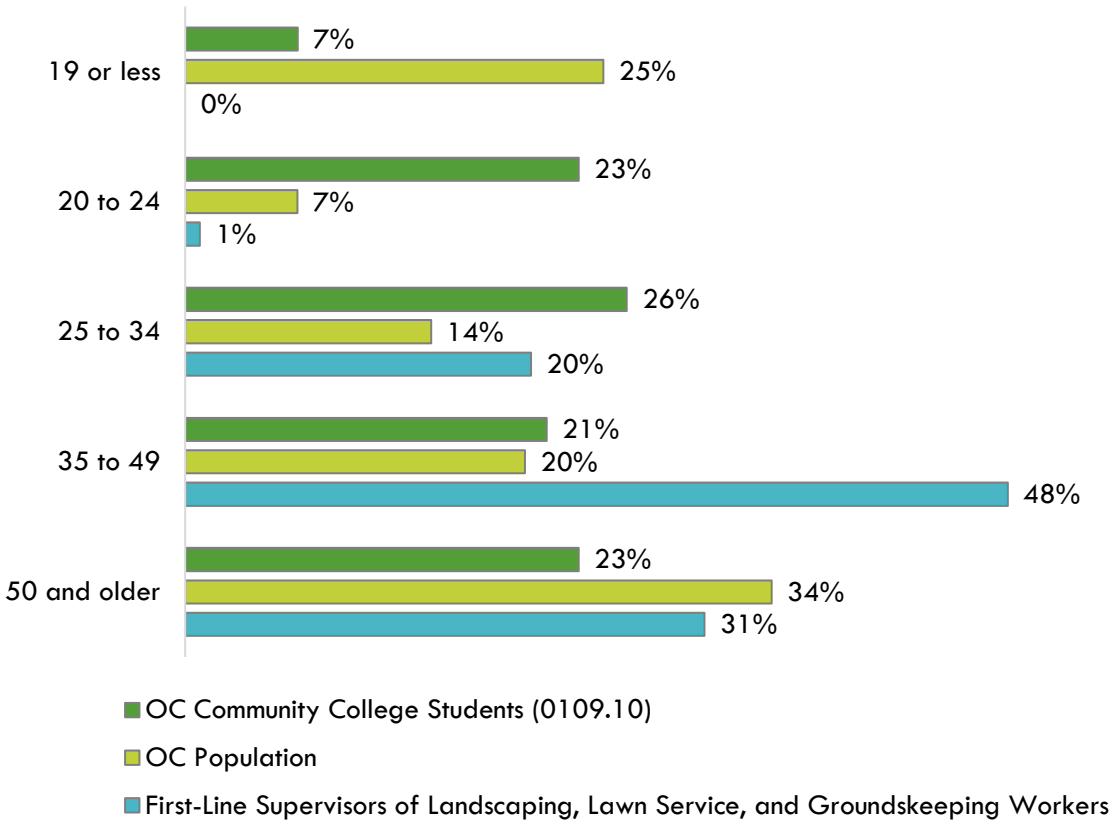
Exhibit 13: Program and County Demographics by Ethnicity



Age:

Exhibit 14 shows the age of Orange County community college students enrolled in landscape design and maintenance programs compared to the overall Orange County population, as well as *first-line supervisors of landscaping, lawn service, and groundskeeping workers*. The plurality of *first-line supervisors of landscaping, lawn service, and groundskeeping workers* are age 35 to 49 (48%), which is significantly higher than both the population (20%) and community college landscape design and maintenance students (21%).

Exhibit 14: Program and County Demographics by Age

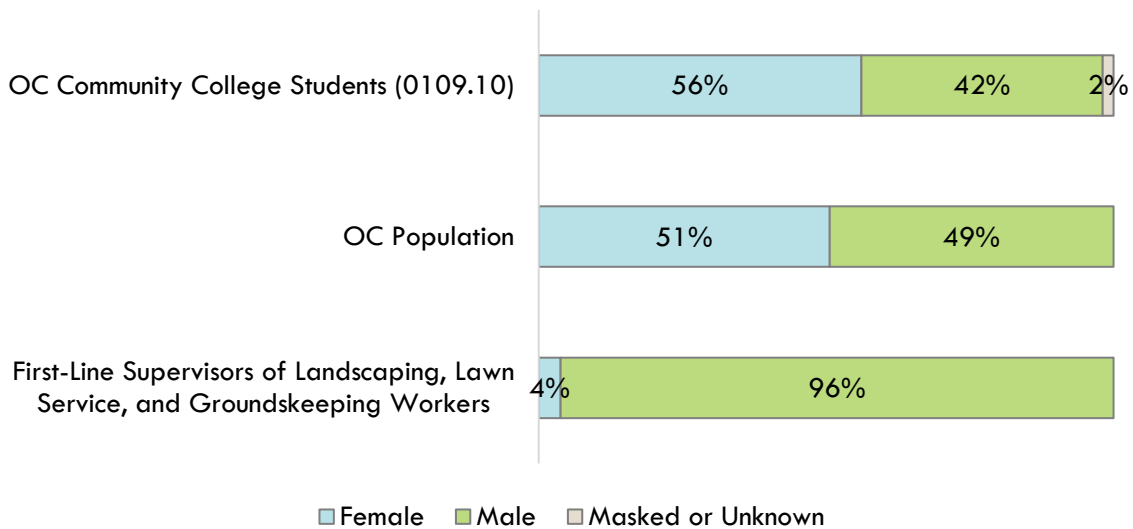


Sex:

Exhibit 15 shows the sex of Orange County community college students enrolled in landscape design and maintenance programs compared to the overall Orange County population as well as *first-line supervisors of landscaping, lawn service, and groundskeeping workers*.

Though the population is split nearly evenly, there is a higher percentage of female landscaped design and maintenance community college students (56%). However, the overwhelming majority (96%) of *first-line supervisors of landscaping, lawn service, and groundskeeping workers* (76%) are men.

Exhibit 15: Program and County Demographics by Sex



Appendix A: Methodology

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

Using a TOP-SOC crosswalk, the OC 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 OC 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.

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

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.

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. For more information, see https://lightcast.io/</p>
Living Wage	<p>The living wage is derived from the Insight Center’s California Family Needs Calculator, which measures the income necessary for an individual of family to afford basic expenses. The data assesses the cost of housing, food, child care, health care, transportation, and taxes. For more information, see: https://insightccd.org/family-needs-calculator/</p> <p>The living wage for one adult in Orange County is \$20.63 per hour (\$42,910.40 annually). This figure is used by the CCCCCO to calculate the percentage of students that attained the regional living wage.</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. 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>
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>LaunchBoard, a statewide data system supported by the California Community Colleges Chancellor's Office and hosted by Cal-PASS Plus, provides data on progress, success, employment, and earnings outcomes for California community college students. For more information, see: https://www.calpassplus.org/LaunchBoard/Home.aspx</p>

Data Type	Source
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>

For more information, please contact the Orange County Center of Excellence:

Jesse Crete, Ed. D., Director
 crete_jesse@rscdd.edu

Jacob Poore, Assistant Director
 poore_jacob@rscdd.edu

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