



Environmental Horticulture & Design

Program Report For Greater South Bay and Peninsula Region (Santa Clara and San Mateo Counties)

September 2016

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Applied Horticulture/Horticulture Operations, General

CIP 2010: A program that focuses on the general production and processing of domesticated plants, shrubs, flowers, foliage, trees, groundcovers, and related plant materials; the management of technical and business operations connected with horticultural services; and the basic scientific principles needed to understand plants and their management and care.

Target Occupations‡

Farmers, Ranchers, and Other Agricultural Managers (11-9013)

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

Landscaping and Groundskeeping Workers (37-3011)

Tree Trimmers and Pruners (37-3013)

Grounds Maintenance Workers, All Other (37-3019)

‡Based on EMSI crosswalk of the Classification of Instructional Programs (CIP) codes with Standard Occupational Classification (SOC) codes as published by the U.S. Department of Education.

In 2016, the number of Applied Horticulture/Horticulture Operations jobs in the target occupations in Santa Clara and San Mateo Counties totaled 14,190. The Bureau of Labor Statistics (BLS) expects the total number of positions to increase by 1% over the next three years.

Occupation Summary for Applied Horticulture/Horticulture Operations

14,190 Jobs (2016) ¹ 30% below National average ²	1.1% % Change (2016-2019) ³ Nation: 1.4%	\$16.29/hr Median Hourly Earnings Nation: \$13.24/hr
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¹Based on total number of jobs for target occupations in Santa Clara and San Mateo Counties.

²Represents occupation density as compared to national average (national average=1).

³Based on turnover and new jobs.

Target occupations that are mapped to the Applied Horticulture/Horticulture Operations program are disaggregated to see which occupations are projected to see the highest number of annual openings (Landscaping and Groundskeeping Workers), highest percentage rate of growth over the next three year (Grounds Maintenance Workers), and the highest median hourly earnings (Farmers, Ranchers, and Other Agricultural Managers). While Grounds Maintenance Workers are expected to experience job growth (4%), Farmers, Ranchers, and Other Agriculture Manager positions are expected to decrease (-11%). Overall, these occupations are less represented and concentrated in our region (Santa Clara and San Mateo Counties) compared to the national average.

Target Occupations

Occupation	2016 Jobs	Annual Openings	Median Hourly Earnings	Growth (2016 - 2019)	Location Quotient (2016)
Landscaping and Groundskeeping Workers	11,545	285	\$14.89/hr	1.78%	0.88
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	1,107	25	\$21.60/hr	0.36%	0.75
Tree Trimmers and Pruners	693	16	\$20.24/hr	1.15%	1.08
Farmers, Ranchers, and Other Agricultural Managers	681	11	\$26.13/hr	-10.87%	0.14
Grounds Maintenance Workers, All Other	164	5	\$16.65/hr	3.66%	0.72

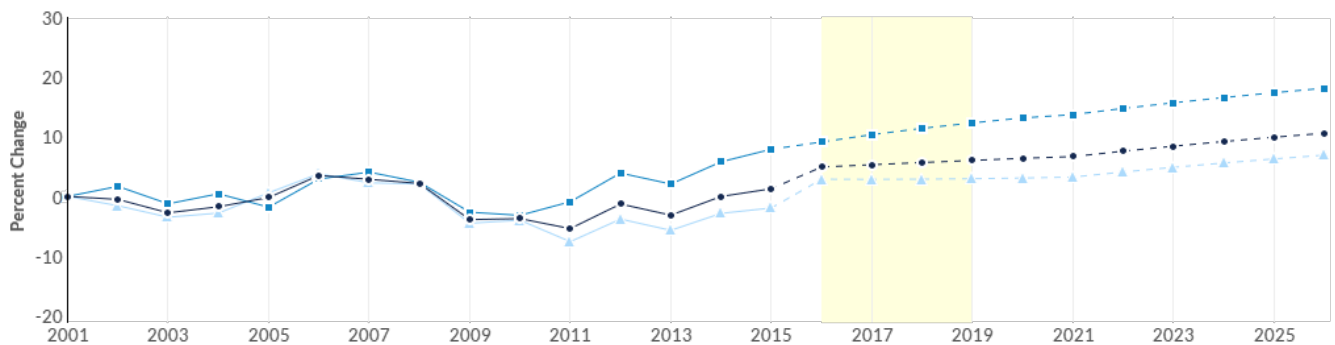
Growth in the Applied Horticulture/Horticulture Operations occupations show how each occupation is projected to increase or decrease in jobs over the next three years. A growth of about 1% is expected in the next three years for Applied Horticulture/Horticulture Operations.

Growth for Applied Horticulture/Horticulture Operations

14,190 2016 Jobs	14,340 2019 Jobs	150 Change (2016-2019)	1.1% % Change (2016-2019)
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Occupation	2016 Jobs	2019 Jobs	Change	% Change
Farmers, Ranchers, and Other Agricultural Managers (11-9013)	681	607	-74	-11%
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers (37-1012)	1,107	1,111	4	0%
Landscaping and Groundskeeping Workers (37-3011)	11,545	11,751	206	2%
Tree Trimmers and Pruners (37-3013)	693	701	8	1%
Grounds Maintenance Workers, All Other (37-3019)	164	170	6	4%

Regional Trends

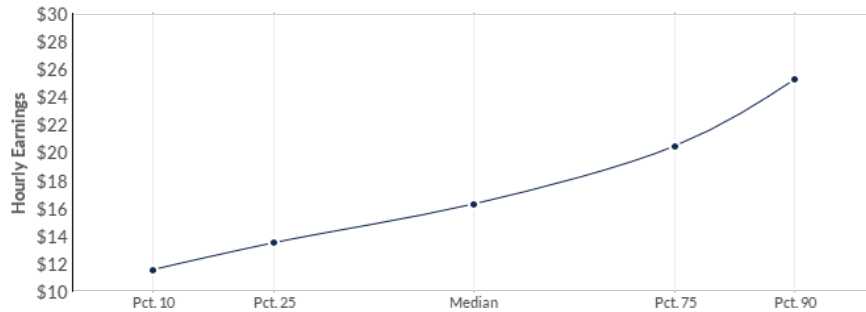


	Region	2016 Jobs	2019 Jobs	Change	% Change
●	Region	14,190	14,340	150	1.1%
●	San Mateo County, CA	4,835	4,977	142	2.9%
●	Santa Clara County, CA	9,355	9,363	8	0.1%

The percentile earnings table shows the range the Applied Horticulture/Horticulture Operations occupations earn in the region. While the median earnings are about \$16/hour, wages can range from below \$13/hour to above \$20/hour. Each of the target occupations' range in wages is also displayed.

Percentile Earnings for Applied Horticulture/Horticulture Operations

\$13.49/hr 25th Percentile Earnings	\$16.29/hr Median Earnings	\$20.45/hr 75th Percentile Earnings
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Occupation	25th Percentile Earnings	Median Earnings	75th Percentile Earnings
Farmers, Ranchers, and Other Agricultural Managers (11-9013)	\$20.05	\$26.13	\$32.93
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers (37-1012)	\$17.76	\$21.60	\$26.44
Landscaping and Groundskeeping Workers (37-3011)	\$12.38	\$14.89	\$18.78
Tree Trimmers and Pruners (37-3013)	\$17.92	\$20.24	\$24.37
Grounds Maintenance Workers, All Other (37-3019)	\$14.20	\$16.65	\$23.31

Program Completion Data

Program data reviews completion information about awards by institution and types of awards conferred in the region (Santa Clara and San Mateo Counties). Foothill College is the only regional institution that supports and prepares for Applied Horticulture/Horticulture Operations occupations.

Program Summary for Applied Horticulture/Horticulture Operations, General

1	15	793
Regional Institution	Regional Program Completions (2015)	Annual Openings (2015)
had Completions in the last 13 years	Foothill College Completions: 15	

Regional Completions by Institution

Institution	Certificates (2015)	Degrees (2015)	Total Completions (2015)
Foothill College	5	10	15

Regional Completions by Award Level

Award Level	Completions (2015)	Percent
Award of at least 1 but less than 2 academic years	5	33.3% 
Associates degree	10	66.7% 

Target Occupations Demographics

The demographics among those employed in Applied Horticulture/Horticulture Operations occupations in Santa Clara and San Mateo Counties for 2016 show that a majority of males (88%) and about a quarter are between the ages of 45-54 (25%) and a majority are Hispanic/Latino (58%).

Occupation Gender Breakdown

Gender	2016 Jobs	2016 Percent	
Males	12,447	87.7%	
Females	1,743	12.3%	

Occupation Age Breakdown

Age	2016 Jobs	2016 Percent	
14-18	198	1.4%	
19-24	1,155	8.1%	
25-34	2,752	19.4%	
35-44	3,024	21.3%	
45-54	3,515	24.8%	
55-64	2,444	17.2%	
65+	1,102	7.8%	

Occupation Race/Ethnicity Breakdown

Race/Ethnicity	2016 Jobs	2016 Percent	
Hispanic or Latino	8,170	57.6%	
White	4,445	31.3%	
Asian	822	5.8%	
Black or African American	508	3.6%	
Two or More Races	140	1.0%	
Native Hawaiian or Other Pacific Islander	58	0.4%	
American Indian or Alaska Native	47	0.3%	

Industries Employing Applied Horticulture/Horticulture Operations Occupations

A number of industries in Santa Clara and San Mateo Counties employ those trained in Applied Horticulture/Horticulture Operations and its related occupations. The following table represents a regional industry breakdown of the number of Applied Horticulture/Horticulture Operations positions employed, the percentage of Applied Horticulture/Horticulture Operations employed by industry and the Applied Horticulture/Horticulture Operations jobs represent within all jobs by each industry. While Landscaping Services employed 69% of all regional Applied Horticulture/Horticulture Operations positions in 2016, Applied Horticulture/Horticulture Operation occupations also composed a majority of jobs in that industry (85%).

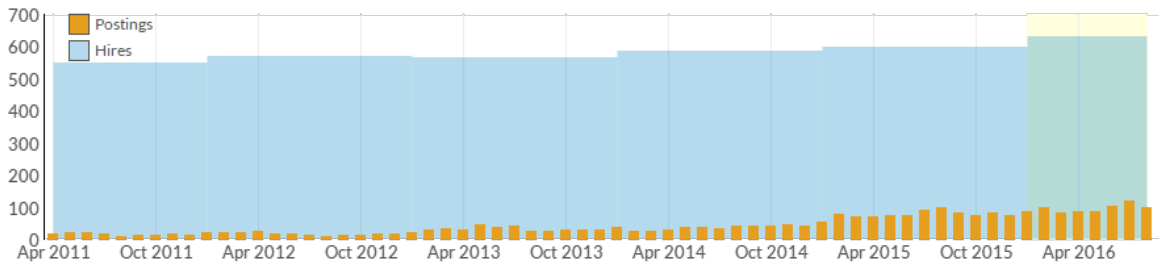
Industries Employing Applied Horticulture/Horticulture Operations

Industry	Occupation Group Jobs in Industry (2016)	% of Occupation Group in Industry (2016)	% of Total Jobs in Industry (2016)
Landscaping Services	9,774	68.9%	84.5%
Crop Production	651	4.6%	15.4%
Local Government, Excluding Education and Hospitals	630	4.4%	1.5%
Colleges, Universities, and Professional Schools	333	2.3%	1.0%
Golf Courses and Country Clubs	329	2.3%	12.2%

In an average month, there were 95 unique (internet) job postings for Applied Horticulture/Horticulture Operation jobs, and 629 actually hired from January 2016 to August 2016. This means there was approximately 7 hires for every 1 unique (internet) job posting for occupations in Applied Horticulture/Horticulture Operation. In cases where there were more hires compared to job postings, it suggests that the internet may not be the primary way that job openings for these occupations are advertised.

Job Postings vs. Hires

95	629
Avg. Monthly Postings (Jan 2016 - Aug 2016)	Avg. Monthly Hires (Jan 2016 - Aug 2016)



Occupation	Avg Monthly Postings (Jan 2016 - Aug 2016)	Avg Monthly Hires (Jan 2016 - Aug 2016)
Landscaping and Groundskeeping Workers	74	519
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	12	44
Tree Trimmers and Pruners	6	31
Farmers, Ranchers, and Other Agricultural Managers	1	26
Grounds Maintenance Workers, All Other	1	8

The top five concentrated hard and soft skills employers list in Applied Horticulture/Horticulture Operation job posting descriptions are listed below. Postings with skill is the total amount of (internet) job postings that mention the skill listed below. These numbers may be higher than the average monthly postings from above, because this number includes duplicated (internet) job postings. Concentration scores gauge relevance of the skill by representing the frequency in which this skill is being mentioned in (internet) job postings for Applied Horticulture/Horticulture Operation compared to all other (internet) job postings.

Concentrated Hard Skills

Skill	Concentration Score	Postings with Skill
Edger	195.42	70
Gardening	108.52	121
Mowing	62.47	274
Pruning	59.62	121
Irrigation (Agriculture)	59.52	230

Concentrated Soft Skills

Skill	Concentration Score	Postings with Skill
Depth Perception	1.33	64
Fine Motor Skills	0.65	8
Ethics	0.13	38
Leadership	0.12	171
Cleanliness	0.06	20

Appendix A - Data Sources and Calculations

Location Quotient

Location quotient (LQ) is a way of quantifying how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared to the nation. It can reveal what makes a particular region unique in comparison to the national average.

Occupation Data

Emsi occupation employment data are based on final Emsi industry data and final Emsi staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level Emsi earnings by industry.

Completers Data

The completers data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Institution Data

The institution data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

CareerBuilder/Emsi Job Postings

Job postings are collected from various sources and processed/enriched by Careerbuilder to provide information such as standardized company name, occupation, skills, and geography. Emsi performs additional filtering and processing to improve compatibility with Emsi data.

State Data Sources

This report uses state data from the following agencies: California Labor Market Information Department