** Commercial Cut Flower and**

**Greenhouse Production** **Occupations**

**Labor Market Information Report**

**City College of San Francisco**

Prepared by the San Francisco Bay Center of Excellence

for Labor Market Research

April 2019

# Recommendation

Based on all available data, there appears to be a significant undersupply of Commercial Cut Flower and Greenhouse Production workers compared to the demand for this cluster of occupations in the Bay region and in the Mid-Peninsula sub-region (San Francisco and San Mateo Counties.) There is a projected annual gap of about 14,948 students in the Bay region and 1,175 students in the Mid-Peninsula Sub-Region.

This report also provides student outcomes data on employment and earnings for programs on TOP 0109.00 - Horticulture in the state and region. It is recommended that these data be reviewed to better understand how outcomes for students taking courses on this TOP code compare to potentially similar programs at colleges in the state and region, as well as to outcomes across all CTE programs at City College of San Francisco (CCSF) and in the region.

# Introduction

This report profiles Commercial Cut Flower and Greenhouse Production Occupations in the 12 county Bay region and in the Mid-Peninsula sub-region for the review of an existing program at City College of San Francisco.

|  |
| --- |
| * **Farmworkers and Laborers, Crop, Nursery, and Greenhouse (SOC 45-2092)**: Manually plant, cultivate, and harvest vegetables, fruits, nuts, horticultural specialties, and field crops. Use hand tools, such as shovels, trowels, hoes, tampers, pruning hooks, shears, and knives. Duties may include tilling soil and applying fertilizers; transplanting, weeding, thinning, or pruning crops; applying pesticides; or cleaning, grading, sorting, packing, and loading harvested products. May construct trellises, repair fences and farm buildings, or participate in irrigation activities. Excludes “Graders and Sorters, Agricultural Products" (45-2041) and “Forest, Conservation, and Logging Workers" (45-4011 through 45-4029). |
| Entry-Level Educational Requirement: No formal *educational credential* |
| Training Requirement: Short-term *on-the-job training* |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 12% |
|  |
| * **Floral Designers (SOC 27-1023)**: Design, cut, and arrange live, dried, or artificial flowers and foliage. |
| Entry-Level Educational Requirement: High *school diploma or equivalent* |
| Training Requirement: Moderate-term *on-the-job training* |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 29*%* |
|  |
| * **Landscaping and Groundskeeping Workers (SOC 37-3011):** Landscape or maintain grounds of property using hand or power tools or equipment. Workers typically perform a variety of tasks, which may include any combination of the following: sod laying, mowing, trimming, planting, watering, fertilizing, digging, raking, sprinkler installation, and installation of mortarless segmental concrete masonry wall units. Excludes "Farmworkers and Laborers, Crop, Nursery, and Greenhouse" (45-2092). |
| Entry-Level Educational Requirement: No *formal educational credential* |
| Training Requirement: Short-term *on-the-job training* |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 19*%* |
|  |
| * **First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers (SOC 37-1012):** Directly supervise and coordinate activities of workers engaged in landscaping or groundskeeping activities. Work may involve reviewing contracts to ascertain service, machine, and workforce requirements; answering inquiries from potential customers regarding methods, material, and price ranges; and preparing estimates according to labor, material, and machine costs. |
| Entry-Level Educational Requirement: High *school diploma or equivalent* |
| Training Requirement: None |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 33*%* |

# Occupational Demand

**Table 1. Employment Outlook for Commercial Cut Flower and Greenhouse Production Occupations in Bay Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Farmworkers and Laborers, Crop, Nursery, and Greenhouse | 56,325 | 60,130 | 3,804 | 7% | 48,323 | 9,665 | $10.51 | $12.23 |
| Floral Designers | 1,266 | 1,232 | (35) | (3%) | 609 | 122 | $9.51 | $13.23 |
| Landscaping and Groundskeeping Workers | 36,052 | 38,253 | 2,202 | 6% | 24,138 | 4,828 | $11.46 | $14.28 |
| First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers | 3,703 | 3,883 | 180 | 5% | 1,969 | 394 | $13.86 | $18.10 |
| **Total** | **97,346** | **103,498** | **6,152** | **6%** | **75,039** | **15,008** | **$10.98** | **$13.22** |

*Source: EMSI 2019.1*

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

**Table 2. Employment Outlook for Commercial Cut Flower and Greenhouse Production Occupations in Mid-Peninsula Sub-Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Farmworkers and Laborers, Crop, Nursery, and Greenhouse | 1,078 | 967 | (110) | (10%) | 820 | 164 | $10.54 | $14.43 |
| Floral Designers | 351 | 343 | (8) | (2%) | 171 | 34 | $9.54 | $16.79 |
| Landscaping and Groundskeeping Workers | 6,958 | 7,302 | 344 | 5% | 4,578 | 916 | $12.32 | $16.71 |
| First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers | 589 | 610 | 20 | 3% | 307 | 61 | $14.45 | $21.75 |
| **TOTAL** | **8,976** | **9,222** | **246** | **3%** | **5,876** | **1,175** | **$12.14** | **$16.77** |

*Source: EMSI 2019.1*

**Mid-Peninsula Sub-Region** includes San Francisco and San Mateo Counties

### Job Postings in Bay Region and Mid-Peninsula Sub-Region

**Table 3. Number of Job Postings by Occupation for latest 12 months (April 2018 - March 2019)**

| Occupation | Bay Region | Mid-Peninsula |
| --- | --- | --- |
| Landscaping and Groundskeeping Workers (37-3011.00) | 1,647 | 333 |
| First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers (37-1012.00) | 195 | 55 |
| Floral Designers (27-1023.00) | 69 | 26 |
| Nursery Workers (45-2092.01) | 6 | 4 |
| **Total** | **270** | **85** |

*Source: Burning Glass*

**Table 4.a Top Job Titles for Commercial Cut Flower and Greenhouse Production Occupations for latest 12 months (April 2018 - March 2019) Bay Region.**

|  |  |  |  |
| --- | --- | --- | --- |
| Common Title | Bay | Common Title | Bay |
| Groundskeeper | 436 | Landscaping Crew Leader | 19 |
| Gardener | 243 | Maintenance Manager | 19 |
| Landscaper | 111 | Construction Labourer | 17 |
| Irrigation Technician | 95 | Landscape Foreman | 17 |
| Landscape Labourer | 70 | Account Manager | 16 |
| Groundsman | 54 | Golf Course Maintenance | 16 |
| Grounds Worker | 46 | Grounds Specialist | 16 |
| Floral Designer | 42 | Caretaker, Service Industry | 14 |
| Maintenance Worker | 33 | Construction Foreman | 13 |
| Greenskeeper | 26 | Installer | 11 |
| Landscaping Crew Member | 23 | Supervisor | 11 |
| Landscape Technician | 19 | Landscape Crew Leader | 10 |

**Table 4.b Top Job Titles for Commercial Cut Flower and Greenhouse Production Occupations for latest 12 months (April 2018 - March 2019) Mid-Peninsula Sub-Region**

|  |  |  |  |
| --- | --- | --- | --- |
| Common Title | Bay | Common Title | Bay |
| Gardener | 77 | Landscape Technician | 5 |
| Groundskeeper | 59 | Landscaping Crew Leader | 5 |
| Irrigation Technician | 20 | Account Manager | 4 |
| Floral Designer | 16 | Maintenance Controller | 4 |
| Groundsman | 16 | Maintenance Technician | 4 |
| Landscape Labourer | 14 | Maintenance Worker | 4 |
| Landscape Crew Lead | 10 | Area Sales Manager | 3 |
| Maintenance Manager | 8 | Assistant Manager | 3 |
| Landscaper | 7 | Crew Leader | 3 |
| Caretaker, Service Industry | 6 | Crew Member | 3 |
| Greenskeeper | 6 | Grounds Specialist | 3 |
| Grounds Worker | 6 | Indoor Plant Care Person | 3 |
| Landscape Maintenance | 6 | Landscape Foreman | 3 |
| Promotions Crew | 6 | Landscape Maintenance Crew Leader | 3 |
| Golf Course Maintenance | 5 | Landscaping Irrigation Specialist | 3 |

*Source: Burning Glass*

# Industry Concentration

**Table 5. Industries hiring Commercial Cut Flower and Greenhouse Production Workers in Bay Region**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Industry – 6 Digit NAICS (No. American Industry Classification) Codes | Jobs in Industry (2018) | Jobs in Industry (2022) | % Change (2018-22) | % in Industry (2018) |
| Farm Labor Contractors and Crew Leaders (115115) | 1,204 | 20,484 | 34% | 77.1% |
| Crop Production (111000) | (714) | 11,533 | 22% | 33.0% |
| Postharvest Crop Activities (except Cotton Ginning) (115114) | 2,038 | 11,780 | 17% | 77.7% |
| Landscaping Services (561730) | 200 | 3,699 | 6% | 15.9% |
| Farm Management Services (115116) | (63) | 1,900 | 3% | 58.4% |
| Crop Harvesting, Primarily by Machine (115113) | 66 | 1,853 | 3% | 77.8% |
| Soil Preparation, Planting, and Cultivating (115112) | 97 | 1,254 | 2% | 60.8% |
| Wineries (312130) | 20 | 1,152 | 2% | 5.2% |
| Animal Production (112000) | (30) | 583 | 1% | 32.8% |

*Source: EMSI 2019.2*

**Table 6. Top Employers Posting Commercial Cut Flower and Greenhouse Production Occupations in Bay Region and Mid-Peninsula Sub-Region (April 2018 - March 2019)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Employer | Bay | Employer | Bay | Employer | Mid-Peninsula |
| Brightview | 105 | Northstar Inc. | 12 | Brightview | 20 |
| Cagwin Dorward | 25 | University California | 12 | Life Frames, Inc | 12 |
| Cagwin Dorward Landscape | 22 | Rubicon Programs | 11 | Greystar | 8 |
| Greystar | 21 | Fs Commercial Landscape Inc. | 10 | Cagwin Dorward | 7 |
| Landcare | 21 | Gothic Landscape Inc. | 10 | Arborwell | 6 |
| Arborwell | 16 | Frank And Grossman Landscape Contractors, Inc. | 9 | City and County of San Francisco | 6 |
| Brightview Landscapes, Llc | 15 | Monster Tree Service | 9 | Davey Tree Expert Co. | 5 |
| Davey Tree Expert Co. | 15 | A Plus Tree Service | 8 | Lcs Inc. | 5 |
| Monarch Landscape Companies | 15 | Alameda County Fair Association | 8 | Magic Gardens Landscaping | 5 |
| Winncompanies | 15 | City and County of San Francisco | 8 | Northstar Inc. | 5 |
| Everything Grows | 14 | Contra Costa Community College District | 8 | Sfmta | 5 |
| University Of California Berkeley | 14 | Service Corporation International | 8 | Abm | 4 |
| Fairfield Residential | 13 | Trench Plate Rental Co. | 8 | Cagwin Dorward Landscape | 4 |
| Fpi Management | 13 | Brightview Landscape Services | 7 | Fairfield Residential | 4 |
| Lcs Inc. | 13 | Fairfield Residential Llc | 7 | Korotkin Associates | 4 |
| Magic Gardens Landscaping | 13 | Lennar Corporation | 7 | Peninsula Golf Country Club | 4 |
| Stanford University | 13 | Philco Building Maintenance | 7 | Presidio Inc. | 4 |
| Abm | 12 | Pinnacle Property Management Services | 7 | US Government | 4 |
| Life Frames, Inc | 12 | ServiceMaster | 7 | University San Francisco | 4 |

*Source: Burning Glass*

# Educational Supply

There are six community colleges in the Bay Region issuing 60 awards on average annually (last 3 years) on TOP 0109.00 – Horticulture. There are no colleges in the Mid-Peninsula Sub-Region issuing awards on this TOP code.

**Table 7. Awards on TOP 0109.00 - Horticulture in the Bay Region**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| College | Sub-Region | Associates | Certificates | Noncredit | Total |
| **Cabrillo** | Santa Cruz & Monterey | 8 | 12 |  | 20 |
| **Diablo Valley** | East Bay |  | 8 |  | 8 |
| **Foothill** | Silicon Valley | 12 | 6 |  | 18 |
| **Merritt** | East Bay |  | 6 |  | 6 |
| **Monterey** | Santa Cruz & Monterey | 1 | 2 |  | 3 |
| **Solano** | North Bay | 1 | 4 |  | 5 |
| **Total Bay Region** | | **22** | **38** | **0** | **60** |
| **Total Mid-Peninsula Sub-Region** | | **0** | **0** | **0** | **0** |

# *Source: IPEDS, Data Mart and Launchboard*

NOTE: Headcount of students who took one or more courses is for 2016-17. The annual average for awards is 2014-17 unless there are only awards in 2016-17. The annual average for other postsecondary is for 2013-16.

# Gap Analysis

Based on the data included in this report, there is a large labor market gap in the Bay region with 15,008 annual openings for the Commercial Cut Flower and Greenhouse Flower occupational cluster and 60 annual (3-year average) awards for an annual undersupply of 14,948 students. In the Mid-Peninsula Sub-Region, there is also a gap with 1,175 annual openings and no annual (3-year average) awards for an annual undersupply of 1,175 students.

# Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0109.00 - Horticulture**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 2015-16 | Bay  (All CTE Programs) | City College of San Francisco (All CTE Programs) | State (0109.00) | Bay (0109.00) | Mid-Peninsula (0109.00) | City College of San Francisco (0109.00) |
| % Employed Four Quarters After Exit | 74% | 73% | 53% | 54% | 70% | 70% |
| Median Quarterly Earnings Two Quarters After Exit | $10,550 | $10,170 | $7,747 | $8,438 | $12,051 | $12,051 |
| Median % Change in Earnings | 46% | 50% | 42% | 42% | 64% | 64% |
| % of Students Earning a Living Wage | 63% | 55% | 47% | 50% | 55% | 55% |

*Source: Launchboard Pipeline (version available on 4/29/19)*

# Skills, Certifications and Education

**Table 9. Top Skills for Commercial Cut Flower and Greenhouse Production Occupations in Bay Region (April 2018 - March 2019)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Skill | Postings | Skill | Postings | Skill | Postings |
| Repair | 623 | Painting | 87 | Power Saws | 58 |
| Irrigation Systems | 256 | Budgeting | 80 | Occupational Health and Safety | 57 |
| Power Tools | 238 | Carpentry | 74 | Digging Trenches | 52 |
| Hand Tools | 213 | Masonry | 74 | Weed Eaters | 51 |
| Cleaning | 210 | Plumbing | 74 | Snow Removal | 49 |
| Oral Irrigation | 200 | Laundry | 72 | Hand Saws | 47 |
| Debris and Litter Control | 199 | Chain Saws | 69 | Rototillers | 47 |
| Lifting Ability | 193 | Heavy Lifting | 69 | Floral Design | 46 |
| Fertilizers | 180 | Lawnmowers | 65 | Lawn Care | 46 |
| Customer Service | 174 | Predictive / Preventative Maintenance | 65 | Quality Assurance and Control | 45 |
| Scheduling | 148 | Irrigation (Agriculture) | 63 | Plant Identification | 44 |
| Machinery | 137 | Staff Management | 62 | Employee Training | 39 |
| Landscaping | 117 | Equipment Operation | 61 | Personal Protective Equipment (PPE) | 39 |
| Herbicides | 112 | Forklift Operation | 60 | Riding Mowers | 39 |
| Customer Contact | 99 | Supervisory Skills | 60 | Record Keeping | 36 |

*Source: Burning Glass*

**Table 10. Certifications for Commercial Cut Flower and Greenhouse Production Occupations in the Bay Region (April 2018 - March 2019)**

Note: 56% of records have been excluded because they do not include a certification. As a result, the chart below may not be representative of the full sample.

|  |  |  |  |
| --- | --- | --- | --- |
| Certification | Postings | Certification | Postings |
| Driver's License | 829 | Certified Back-Flow Tester | 4 |
| Cdl Class C | 36 | Certified in Small Engine Repair | 4 |
| Pest Control Applicator | 31 | Irrigation Design Certification | 4 |
| Certified Pest Control | 15 | Master Gardener Certification | 4 |
| Back-Flow Certification | 8 | Security Clearance | 4 |
| First Aid Cpr Aed | 8 | Small Engine | 4 |
| Forklift Operator Certification | 8 | Certified Applicator | 3 |
| Air Brake Certified | 7 | Certified Pool/Spa Operator | 3 |
| Applicators License | 7 | Makeup Artist | 3 |
| Certified Arborist | 7 | Adobe Photoshop Certificate | 2 |
| Certified Landscape Irrigation Auditor | 7 | Ca License | 2 |
| Leadership In Energy And Environmental Design (LEED) Certified | 7 | Certified Commercial Applicator | 2 |
| Phlebotomy Certification | 7 | Certified Nursery Certificate | 2 |
| CDL Class A | 6 | Food Handler Certification | 2 |
| Certified Landscape Technician | 6 | Adult Education Certificate | 1 |
| Certified Teacher | 6 | Aquatic Facility Operator | 1 |
| Contractors License | 5 | Blue Flag Certification | 1 |
| Backflow Tester Certification | 4 | Business License | 1 |
| Cdl Class B | 4 | Casino Gaming License | 1 |

*Source: Burning Glass*

**Table 11. Education Requirements for Commercial Cut Flower and Greenhouse Production Occupations in Bay Region**

Note: 70% of records have been excluded because they do not include a degree level. As a result, the chart below may not be representative of the full sample.

|  |  |
| --- | --- |
| Education (minimum advertised) | Latest 12 Mos. Postings |
| High school or vocational training | 514 (87%) |
| Associate Degree | 19 (3%) |
| Bachelor’s Degree or Higher | 59 (10%) |

*Source: Burning Glass*

# Methodology

Occupations for this report were identified by use of skills listed in O\*Net descriptions and job descriptions in Burning Glass. Labor demand data is sourced from Economic Modeling Specialists International (EMSI) occupation data and Burning Glass job postings data. Educational supply and student outcomes data is retrieved from multiple sources, including CTE Launchboard and CCCCO Data Mart.

# Sources

O\*Net Online

Labor Insight/Jobs (Burning Glass)

Economic Modeling Specialists International (EMSI)

CTE LaunchBoard [www.calpassplus.org/Launchboard/](http://www.calpassplus.org/Launchboard/)

Statewide CTE Outcomes Survey

Employment Development Department Unemployment Insurance Dataset

Living Insight Center for Community Economic Development

Chancellor’s Office MIS system

# Contacts

For more information, please contact:

* Doreen O’Donovan, Data Research Analyst, for Bay Area Community College Consortium (BACCC) and Centers of Excellence (CoE), [doreen@baccc.net](mailto:doreen@baccc.net) or (831) 479-6481
* John Carrese, Director, San Francisco Bay Center of Excellence for Labor Market Research, [jcarrese@ccsf.edu](mailto:jcarrese@ccsf.edu) or (415) 267-6544