

# Labor Market Information Report

# Cannabis Business Management Occupations

# Diablo Valley College

## Prepared by the San Francisco Bay Center of Excellence for Labor Market Research

**April 2022**

## Recommendation

Based on all available data, there appears to be an “undersupply” of Cannabis Business Management workers compared to the demand for this cluster of occupations in the Bay region and in the East Bay sub-region (Alameda, Contra Costa counties). There is a projected annual gap of about 9,495 students in the Bay region and 2,222 students in the East Bay Sub-Region.

## Introduction

This report provides student outcomes data on employment and earnings for TOP 0506.00 Business Management programs 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 Diablo Valley College and in the region.

This report profiles Cannabis Business Management Occupations in the 12 county Bay region and in the East Bay sub-region for a Cannabis Studies certificate program review at Diablo Valley College.

* **Marketing Managers (11-2021):** Plan, direct, or coordinate marketing policies and programs, such as determining the demand for products and services offered by a firm and its competitors, and identify potential customers. Develop pricing strategies with the goal of maximizing the firm’s profits or share of the market while ensuring the firm’s customers are satisfied. Oversee product development or monitor trends that indicate the need for new products and services.  
    Entry-Level Educational Requirement: Bachelor’s degree  
    Training Requirement: None  
    Percentage of Community College Award Holders or Some Postsecondary Coursework: 15%
* **Financial Managers (11-3031):** Plan, direct, or coordinate accounting, investing, banking, insurance, securities, and other financial activities of a branch, office, or department of an establishment.  
    Entry-Level Educational Requirement: Bachelor’s degree  
    Training Requirement: None  
    Percentage of Community College Award Holders or Some Postsecondary Coursework: 25%
* **Purchasing Managers (11-3061):** Plan, direct, or coordinate the activities of buyers, purchasing officers, and related workers involved in purchasing materials, products, and services. Includes wholesale or retail trade merchandising managers and procurement managers.  
    Entry-Level Educational Requirement: Bachelor’s degree  
    Training Requirement: None  
    Percentage of Community College Award Holders or Some Postsecondary Coursework: 25%
* **Transportation, Storage, and Distribution Managers (11-3071):** Plan, direct, or coordinate transportation, storage, or distribution activities in accordance with organizational policies and applicable government laws or regulations. Includes logistics managers.  
    Entry-Level Educational Requirement: High school diploma or equivalent  
    Training Requirement: None  
    Percentage of Community College Award Holders or Some Postsecondary Coursework: 36%
* **Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other (11-9198):** All managers not listed separately.  
    Entry-Level Educational Requirement: Bachelor’s degree  
    Training Requirement: None  
    Percentage of Community College Award Holders or Some Postsecondary Coursework: 25%

## Occupational Demand

**Table 1. Employment Outlook for Cannabis Business Management Occupations in Bay Region**

| **Occupation** | **2020 Jobs** | **2025 Jobs** | **5-yr Change** | **5-yr % Change** | **5-yr Total Openings** | **Annual Openings** | **25% Hourly Earning** | **Median Hourly Wage** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Marketing Managers | 19,680 | 20,934 | 1,254 | 6% | 10,871 | 2,174 | $76 | $121 |
| Financial Managers | 31,724 | 34,459 | 2,734 | 9% | 16,177 | 3,235 | $65 | $111 |
| Purchasing Managers | 2,589 | 2,685 | 96 | 4% | 1,210 | 242 | $61 | $100 |
| Transportation, Storage, and Distribution Managers | 4,920 | 4,991 | 70 | 1% | 2,100 | 420 | $49 | $84 |
| Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other | 41,619 | 42,838 | 1,218 | 3% | 18,025 | 3,605 | $38 | $90 |
| **Total** | **100,532** | **105,907** | **5,375** | **5%** | **48,383** | **9,676** |  |  |
| Source: EMSI 2021.3 | | | | | | | | |

**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 Cannabis Business Management Occupations in East Bay Sub-region**

| **Occupation** | **2020 Jobs** | **2025 Jobs** | **5-yr Change** | **5-yr % Change** | **5-yr Total Openings** | **Annual Openings** | **25% Hourly Earning** | **Median Hourly Wage** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Marketing Managers | 4,124 | 4,181 | 57 | 1% | 1,988 | 398 | $66 | $108 |
| Financial Managers | 7,798 | 8,213 | 414 | 5% | 3,630 | 726 | $61 | $103 |
| Purchasing Managers | 709 | 726 | 16 | 2% | 317 | 63 | $58 | $95 |
| Transportation, Storage, and Distribution Managers | 1,531 | 1,568 | 37 | 2% | 667 | 133 | $47 | $78 |
| Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other | 11,814 | 12,047 | 233 | 2% | 4,930 | 986 | $35 | $81 |
| **Total** | **25,976** | **26,735** | **759** | **3%** | **11,532** | **2,306** |  |  |
| Source: EMSI 2021.3 | | | | | | | | |

**East Bay Sub-Region includes:** Alameda, Contra Costa Counties

### Job Postings in Bay Region and East Bay Sub-Region

**Table 3. Number of Job Postings by Occupation for latest 12 months (Apr 2021 - Mar 2022)**

| **Occupation** | **Bay Region** | **East Bay** |
| --- | --- | --- |
| Managers, All Other | 56,431 | 12,245 |
| Marketing Managers | 41,628 | 4,868 |
| Financial Managers, Branch or Department | 12,718 | 2,602 |
| Treasurers and Controllers | 4,015 | 945 |
| Purchasing Managers | 2,537 | 646 |
| Compliance Managers | 1,950 | 391 |
| Security Managers | 1,736 | 466 |
| Supply Chain Managers | 1,631 | 381 |
| Storage and Distribution Managers | 1,607 | 736 |
| Regulatory Affairs Managers | 800 | 152 |
| Source: Burning Glass | | |

**Table 4a. Top Job Titles for Cannabis Business Management Occupations for latest 12 months (Apr 2021 - Mar 2022) Bay Region**

| **Title** | **Bay** | **Title** | **Bay** |
| --- | --- | --- | --- |
| Project Manager | 2,869 | Senior Project Manager | 588 |
| Program Manager | 1,928 | Technical Program Manager | 544 |
| Product Manager | 1,666 | Finance Manager | 442 |
| Controller | 1,094 | Program Coordinator | 424 |
| Project Coordinator | 1,060 | Tax Manager | 416 |
| Accounting Manager | 868 | Warehouse Supervisor | 383 |
| Senior Product Manager | 845 | Branch Manager | 380 |
| Marketing Manager | 771 | Assistant Controller | 365 |
| Product Marketing Manager | 747 | Senior Program Manager | 348 |
| Source: Burning Glass | | | |

**Table 4b. Top Job Titles for Cannabis Business Management Occupations for latest 12 months (Apr 2021 - Mar 2022) East Bay Sub-Region**

| **Title** | **East Bay** | **Title** | **East Bay** |
| --- | --- | --- | --- |
| Project Manager | 816 | Tax Manager | 136 |
| Program Manager | 384 | Branch Manager | 133 |
| Project Coordinator | 340 | Program Coordinator | 125 |
| Product Manager | 326 | Senior Project Manager | 113 |
| Controller | 287 | Senior Product Manager | 109 |
| Accounting Manager | 253 | Manager | 100 |
| Warehouse Supervisor | 200 | Finance Manager | 98 |
| Warehouse Manager | 170 | Assistant Controller | 83 |
| Marketing Manager | 169 | Purchasing Manager | 75 |
| Source: Burning Glass | | | |

## Industry Concentration

**Table 5. Industries hiring Cannabis Business Management Workers in Bay Region**

| **Industry - 6 Digit NAICS (No. American Industry Classification) Codes** | **Jobs in Industry (2020)** | **Jobs in Industry (2025)** | **% Change (2020-25)** | **% Occupation Group in Industry (2020)** |
| --- | --- | --- | --- | --- |
| Corporate, Subsidiary, and Regional Managing Offices | 7,004 | 6,449 | -8% | 7% |
| Internet Publishing and Broadcasting and Web Search Portals | 4,977 | 6,232 | 25% | 5% |
| Custom Computer Programming Services | 3,866 | 4,333 | 12% | 4% |
| Local Government, Excluding Education and Hospitals | 3,458 | 3,446 | 0% | 3% |
| Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology) | 2,584 | 2,817 | 9% | 3% |
| Software Publishers | 2,599 | 2,881 | 11% | 3% |
| Commercial Banking | 2,487 | 2,514 | 1% | 3% |
| Electronic Computer Manufacturing | 2,155 | 2,325 | 8% | 2% |
| Computer Systems Design Services | 2,111 | 2,233 | 6% | 2% |
| Federal Government, Civilian, Excluding Postal Service | 2,076 | 2,099 | 1% | 2% |
| Source: EMSI 2021.3 | | | | |

**Table 6. Top Employers Posting Cannabis Business Management Occupations in Bay Region and East Bay Sub-Region (Apr 2021 - Mar 2022)**

| **Employer** | **Bay** | **Employer** | **East Bay** |
| --- | --- | --- | --- |
| Facebook | 2,459 | Lucid Motors Inc | 770 |
| Google Inc. | 2,247 | Workday, Inc | 443 |
| Lucid Motors Inc | 1,067 | Facebook | 278 |
| Amazon | 994 | Abbott Laboratories | 259 |
| Salesforce | 912 | University Of California | 250 |
| Deloitte | 905 | Tesla | 247 |
| Apple Inc. | 855 | Pacific Gas & Electric Company | 217 |
| Paypal | 814 | Allied Universal | 209 |
| Microsoft Corporation | 806 | Anthem Blue Cross | 198 |
| PricewaterhouseCoopers | 792 | Albertsons | 198 |
| Source: Burning Glass | | | |

## Educational Supply

There are 13 community colleges in the Bay Region issuing 181 awards on average annually (last 3 years ending 2018-19) on TOP 0506.00 Business Management. In the East Bay Sub-Region, there are five (5) community colleges that issued 84 awards on average annually (last 3 years) on this TOP code.

**Table 7. Community College Awards on TOP 0506.00 Business Management in Bay Region**

| **College** | **Subregion** | **Associate** | **Certificate Low** | **Total** |
| --- | --- | --- | --- | --- |
| Chabot | East Bay | 1 | 6 | 7 |
| Contra Costa | East Bay | 33 | 32 | 65 |
| De Anza | Silicon Valley | 9 | 22 | 31 |
| Diablo Valley | East Bay | 0 | 5 | 5 |
| Laney | East Bay | 3 | 0 | 3 |
| Merritt | East Bay | 0 | 4 | 4 |
| Monterey | SC-Monterey | 0 | 2 | 2 |
| Napa | North Bay | 1 | 0 | 1 |
| San Jose City | Silicon Valley | 3 | 7 | 10 |
| San Mateo | Mid-Peninsula | 6 | 8 | 14 |
| Santa Rosa | North Bay | 11 | 15 | 26 |
| Solano | North Bay | 4 | 1 | 5 |
| West Valley | Silicon Valley | 4 | 4 | 8 |
| **Total** |  | **75** | **106** | **181** |
| Source: Data Mart | | | | |

*Note: The annual average for awards is 2016-17 to 2018-19.*

## Gap Analysis

Based on the data included in this report, there is a large labor market gap in the Bay region with 9,676 annual openings for the Cannabis Business Management occupational cluster and 181 annual (3-year average) awards for an annual undersupply of 9,495 students. In the East Bay Sub-Region, there is also a gap with 2,306 annual openings and 84 annual (3-year average) awards for an annual undersupply of 2,222 students.

## Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0506.00 Business Management**

| **Metric Outcomes** | **Bay All CTE Programs** | **Diablo Valley All CTE Programs** | **State 0506.00** | **Bay 0506.00** | **East Bay 0506.00** | **Diablo Valley 0506.00** |
| --- | --- | --- | --- | --- | --- | --- |
| Students with a Job Closely Related to Their Field of Study | 74% | 71% | 73% | 76% | 70% | 76% |
| Median Annual Earnings for SWP Exiting Students | $47,419 | $37,187 | $36,134 | $44,660 | $41,084 | $44,556 |
| Median Change in Earnings for SWP Exiting Students | 23% | 25% | 17% | 19% | 20% | 30% |
| Exiting Students Who Attained the Living Wage | 52% | 44% | 53% | 53% | 53% | 54% |
| Source: Launchboard Strong Workforce Program Median of 2017 to 2020. | | | | | | |

## Skills, Certifications and Education

**Table 9. Top Skills for Cannabis Business Management Occupations in Bay Region (Apr 2021 - Mar 2022)**

| **Skill** | **Posting** | **Skill** | **Posting** |
| --- | --- | --- | --- |
| Project Management | 40,092 | Software as a Service (SaaS) | 9,156 |
| Budgeting | 32,465 | Project Planning & Development Skills | 9,011 |
| Product Management | 25,296 | Salesforce | 7,414 |
| Scheduling | 20,350 | Quality Assurance and Control | 7,279 |
| Program Management | 16,376 | Market Strategy | 7,084 |
| Product Development | 13,332 | Business-to-Business | 7,056 |
| Marketing | 13,299 | Customer Contact | 6,880 |
| Customer Service | 13,057 | Process Improvement | 6,583 |
| Accounting | 12,815 | Sales | 6,414 |
| Product Marketing | 11,252 | Marketing Management | 6,341 |
| Staff Management | 11,034 | Product Sales | 6,298 |
| Key Performance Indicators (KPIs) | 10,842 | Procurement | 6,214 |
| Stakeholder Management | 9,944 | Business Process | 6,054 |
| Business Development | 9,253 | Thought Leadership | 6,049 |
| Source: Burning Glass | | | |

**Table 10. Certifications for Cannabis Business Management Occupations in Bay Region (Apr 2021 - Mar 2022)**

| **Certification** | **Posting** | **Certification** | **Posting** |
| --- | --- | --- | --- |
| Certified Public Accountant (CPA) | 7,381 | Certified Information Systems Auditor (CISA) | 407 |
| Project Management Certification | 7,049 | Certified ScrumMaster (CSM) | 399 |
| Driver's License | 5,714 | Series 7 | 317 |
| Project Management Professional (PMP) | 4,855 | Licensed Professional Engineer | 303 |
| First Aid Cpr Aed | 719 | Social Work License | 272 |
| Registered Nurse | 569 | Certified Information Security Manager (CISM) | 272 |
| Certified Information Systems Security Professional (CISSP) | 483 | Financial Accounting Standards Board (FASB) | 249 |
| Six Sigma Certification | 481 | Lean Six Sigma Certification | 243 |
| Security Clearance | 441 | OSHA Forklift Certification | 239 |
| IT Infrastructure Library (ITIL) Certification | 432 | Certified in Production and Inventory Management (CPIM) | 204 |
| Source: Burning Glass | | | |

*Note: 79% of records have been excluded because they do not include a certification. As a result, the chart above may not be representative of the full sample.*

**Table 11. Education Requirements for Cannabis Business Management Occupations in Bay Region**

| **Education (minimum advertised)** | **Latest 12 Mos. Postings** | **Percent 12 Mos. Postings** |
| --- | --- | --- |
| High school or vocational training | 7,282 | 8% |
| Associate's degree | 1,794 | 2% |
| Bachelor's degree | 77,668 | 90% |
| 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/  
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:

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