



# Plumbing Occupations Labor Market Information Report Foothill College

**Prepared by the San Francisco Bay Center of Excellence for Labor Market Research  
May 2021**

## Recommendation

Based on all available data, there appears to be an “undersupply” of Plumbing workers compared to the demand for this cluster of occupations in the Bay region and in the Silicon Valley sub-region (Santa Clara county). There is a projected annual gap of about 1,754 students in the Bay region and 350 students in the Silicon Valley Sub-Region.

## Introduction

This report provides student outcomes data on employment and earnings for TOP 0952.30 - Plumbing, Pipefitting and Steamfitting 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 Foothill College and in the region.

This report profiles Plumbing Occupations in the 12 county Bay region and in the Silicon Valley sub-region for a program modification at Foothill College.

- **Plumbers, Pipefitters, and Steamfitters (47-2152):** Assemble, install, alter, and repair pipelines or pipe systems that carry water, steam, air, or other liquids or gases. May install heating and cooling equipment and mechanical control systems. Includes sprinklerfitters.  
 Entry-Level Educational Requirement: High school diploma or equivalent  
 Training Requirement: Apprenticeship  
 Percentage of Community College Award Holders or Some Postsecondary Coursework: 34%

## Occupational Demand

**Table 1. Employment Outlook for Plumbing Occupations in Bay Region**

Occupation	2019 Jobs	2024 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Plumbers, Pipefitters, and Steamfitters	13,623	14,833	1,210	9%	9,066	1,813	\$ 24.29	\$ 34.03
<b>Total</b>	<b>13,623</b>	<b>14,833</b>	<b>1,210</b>	<b>9%</b>	<b>9,066</b>	<b>1,813</b>	<b>\$24.29</b>	<b>\$34.03</b>

Source: EMSI 2020.4

**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 Plumbing Occupations in Silicon Valley Sub-region**

Occupation	2019 Jobs	2024 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Plumbers, Pipefitters, and Steamfitters	2,520	2,935	415	16%	1,902	380	\$ 25.03	\$ 34.02
<b>Total</b>	<b>2,520</b>	<b>2,935</b>	<b>415</b>	<b>16%</b>	<b>1,902</b>	<b>380</b>	<b>\$25.03</b>	<b>\$34.02</b>

Source: EMSI 2020.4

Silicon Valley Sub-Region includes: Santa Clara Counties

**Job Postings in Bay Region and Silicon Valley Sub-Region****Table 3. Number of Job Postings by Occupation for latest 12 months (Apr 2020 - Mar 2021)**

Occupation	Bay Region	Silicon Valley
Plumbers	1,012	254

Source: Burning Glass

**Table 4a. Top Job Titles for Plumbing Occupations for latest 12 months (Apr 2020 - Mar 2021) Bay Region**

Title	Bay	Title	Bay
Plumbing Service Technician	143	Plumbing Service Technician- Military/Veteran	16
Plumber	130	Residential Service Plumber	15
Service Plumber	49	Plumber Journeyman In ,   Careers At	15
Plumbing Technician	48	Residential Plumber	13
Journeyman Plumber	44	Plumbing Drain Technician	10
Plumbers	32	Plumber In ,   Careers At	10
Water Heater Technician	23	Plumbing Service Technician/Residential Plumber	9
Plumber Journeyman	22	Lead Plumber, Bay Areas Gc On Yelp	8
Lead Plumber	22	Sewer/Underground Technician	7

Source: Burning Glass

**Table 4b. Top Job Titles for Plumbing Occupations for latest 12 months (Apr 2020 - Mar 2021)****Silicon Valley Sub-Region**

Title	Silicon Valley	Title	Silicon Valley
Plumbing Service Technician	32	Construction Plumber	5
Plumber	29	Water Heater Technician	4
Plumbing Technician	15	Technician/Plumber	4
Service Plumber	14	Residential Plumbing Technician/Plumber	4
Journeyman Plumber	14	Plumber Journeyman In ,   Careers At	4
Plumbing Drain Technician	10	Plumbing Technician S Req	3
Plumbers	8	Construction Installation Plumber	3
Residential Plumber	5	Service/Journeyman Plumber	2
Plumber Journeyman	5	Service & Repair Plumber	2

Source: Burning Glass

## Industry Concentration

**Table 5. Industries hiring Plumbing Workers in Bay Region**

Industry – 6 Digit NAICS (No. American Industry Classification) Codes	Jobs in Industry (2019)	Jobs in Industry (2024)	% Change (2019-24)	% Occupation Group in Industry (2019)
Plumbing, Heating, and Air-Conditioning Contractors	8,712	7,906	-9%	66%
Residential Remodelers	434	495	14%	4%
Natural Gas Distribution	381	381	0%	4%
Commercial and Institutional Building Construction	343	316	-8%	3%
Local Government, Excluding Education and Hospitals	251	220	-13%	2%
Electrical Contractors and Other Wiring Installation Contractors	227	200	-12%	2%
New Single-Family Housing Construction (except For-Sale Builders)	200	191	-4%	2%
All Other Specialty Trade Contractors	199	182	-9%	2%
Water and Sewer Line and Related Structures Construction	216	183	-15%	2%
Site Preparation Contractors	141	125	-11%	1%

Source: EMSI 2020.4

**Table 6. Top Employers Posting Plumbing Occupations in Bay Region and Silicon Valley Sub-Region (Apr 2020 - Mar 2021)**

Employer	Bay	Employer	Silicon Valley
Roto Rooter	56	Mike Counsil Plumbing Incorporated	11
Skylight	29	Skylight	8
Roto Rooter Plumbing Drain	25	Ars Rescue Rooter	8
Mike Counsil Plumbing Incorporated	22	Ars	7
Life Chiropractic College West	22	American Residential Services	7
Jazz Home Services	20	Rooter Hero Plumbing	6
Rooter Hero Plumbing	19	Beutler Air Conditioning And Plumbing	6
Lunt Marymor Company	18	Benson Systems	6
Ars Rescue Rooter	15	Advanced Home Services	5
Kaiser Permanente	14	Giant Plumbing	4

Source: Burning Glass

## Educational Supply

There are four (4) community colleges in the Bay Region issuing 59 awards on average annually (last 3 years ending 2018-19) on TOP 0952.30 - Plumbing, Pipefitting and Steamfitting. In the Silicon Valley Sub-Region, there are two (2) community colleges that issued 30 awards on average annually (last 3 years) on this TOP code.

**Table 7. Community College Awards on TOP 0952.30 - Plumbing, Pipefitting and Steamfitting in Bay Region**

College	Subregion	Certificate Low	Total
Diablo Valley	East Bay	22	22
Foothill	Silicon Valley	20	20

College	Subregion	Certificate Low	Total
Mission	Silicon Valley	10	10
San Francisco	Mid-Peninsula	7	7
<b>Total</b>		<b>59</b>	<b>59</b>

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 1,813 annual openings for the Plumbing occupational cluster and 59 annual (3-year average) awards for an annual undersupply of 1,754 students. In the Silicon Valley Sub-Region, there is also a gap with 380 annual openings and 30 annual (3-year average) awards for an annual undersupply of 350 students.

## Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0952.30 - Plumbing, Pipefitting and Steamfitting**

Metric Outcomes	Bay All CTE Programs	Foothill All CTE Programs	State 0952.30	Bay 0952.30	Silicon Valley 0952.30	Foothill College 0952.30
Students with a Job Closely Related to Their Field of Study	75%	88%	91%	92%	92%	100%
Median Annual Earnings for SWP Exiting Students	\$44,575	\$63,206	\$67,451	\$103,140	\$115,704	\$115,927
Median Change in Earnings for SWP Exiting Students	31%	63%	96%	121%	145%	150%
Exiting Students Who Attained the Living Wage	52%	67%	77%	85%	93%	94%

Source: Launchboard Strong Workforce Program from version 2017-18.

## Skills, Certifications and Education

**Table 9. Top Skills for Plumbing Occupations in Bay Region (Apr 2020 - Mar 2021)**

Skill	Posting	Skill	Posting
Plumbing	987	Plumbing Maintenance	76
Repair	534	Service Plumbing	74
Water Heaters	201	Soldering	73
Residential Plumbing	146	Commercial Plumbing	69
Personal Protective Equipment (PPE)	140	Pipe Installation	63
Plumbing Systems	139	Schematic Diagrams	60
Cost Estimation	128	New Construction	58
Drain Cleaning	128	Building Codes	57
Pipe Repair	99	Valve Installation	51
Customer Service	96	Scheduling	50
Plumbing Repairs	92	Power Tools	49
Hand Tools	88	Pipe Systems	43
Video Conferencing	88	Faucet Repair	40
Cleaning	79	Retrofitting	40

Source: Burning Glass

**Table 10. Certifications for Plumbing Occupations in Bay Region (Apr 2020 - Mar 2021)**

Certification	Posting	Certification	Posting
Driver's License	523	Epa 608	2
Plumbing Certification	123	Ca License	2
Plumbing License	116	Business License	2
Backflow Prevention Certification	50	Occupational Safety and Health Administration Certification	1
Social Work License	18	OSHA Safety 10 Hour	1
Licensed Clinical Social Worker (LCSW)	18	Hazwoper	1
CDL Class A	7	Cdl Class B	1
Cdl Class C	4	Building Trade Certificate	1
Contractors License	3	Back-Flow Prevention Certificate	1

Source: Burning Glass

Note: 42% 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.

**Table 11. Education Requirements for Plumbing Occupations in Bay Region**

Education (minimum advertised)	Latest 12 Mos. Postings	Percent 12 Mos. Postings
High school or vocational training	172	97%
Associate's degree	6	3%

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 CCCCCO 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

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