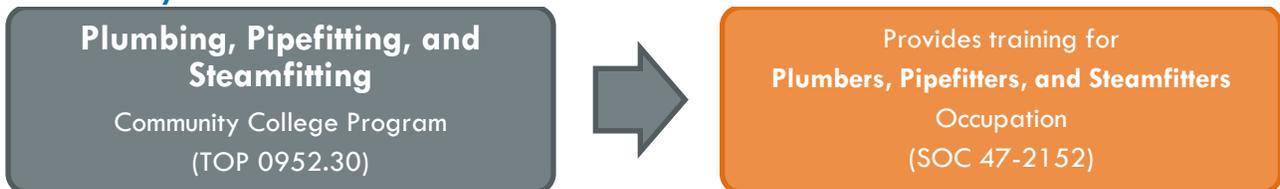


# Plumbing, Pipefitting, and Steamfitting

*Inland Empire/Desert Region (Riverside and San Bernardino counties)*

*This workforce demand report uses state and federal job projection data developed before the economic impact of COVID-19. The COE is monitoring the situation and will provide more information as it becomes available. Please consult with local employers to verify their current employment needs.*

## Summary



Over the next five years (2021-2026), plumbing, pipefitting, and steamfitting employment is projected to



The Inland Empire/Desert Centers of Excellence

 **Recommends**

Plumbing, Pipefitting, and Steamfitting Program Development to meet the need for more workers in the region

## Introduction

California Community College plumbing, pipefitting, and steamfitting programs (TOP 0952.30) prepare students for employment through the instruction of the theories, principles, methods, technical skills, and use of equipment in plumbing, pipefitting, and steamfitting (Taxonomy of Programs, 2012). The knowledge, skills, and abilities trained by plumbing, pipefitting, and steamfitting programs lead to the following occupation.

**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 sprinkler fitters.

**Sample job titles:** Drain Technician, Fire Sprinkler Service Technician, Pipe Fitter, Pipe Welder, Pipefitter, Plumber, Residential Plumber, Service Plumber, Sprinkler Fitter, Steamfitter

*Entry-Level Educational Requirement: High school diploma or equivalent*

*Training Requirement: Apprenticeship*

*Work Experience: None*

*Incumbent workers with a Community College Award or Some Postsecondary Coursework: 33%*

In 2021, the region had 6,212 plumbing, pipefitting, and steamfitting jobs. Employment for this occupation is projected to increase by 8% through 2026; 757 job openings are projected annually. Exhibit 1 displays the job counts, five-year projected job growth, job openings, and the share of incumbent workers aged 55 years and older in the region.

*Exhibit 1: Five-year projections for plumbers, pipefitters, and steamfitters, Inland Empire/Desert Region, 2021-2026*

Occupation	2021 Jobs	2026 Jobs	5-Yr % Change	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)	% of workers age 55+
Plumbers, Pipefitters, and Steamfitters	6,212	6,729	8%	3,783	757	21%

Source: Lightcast 2022.2

An online job ad search for plumbing, pipefitting, and steamfitting jobs was conducted to reveal the employers seeking these workers, including the time it takes to fill positions, earnings information, and in-demand skills. Exhibit 2 shows the number of job ads posted during the last 12 months and the regional and statewide average time to fill this job.

On average, employers in the local region fill online job ads for plumbers, pipefitters, and steamfitters in 39 days, two days shorter than the statewide average time to fill. Time to fill information indicates that employers in the region likely face similar challenges filling open positions as other employers in California.

*Exhibit 2: Job ads and time to fill, Inland Empire/Desert Region, July 2021 through June 2022*

Occupation	Job Ads	Regional Average Time to Fill (Days)	Statewide Average Time to Fill (Days)
Plumbers, Pipefitters, and Steamfitters	327	39	41

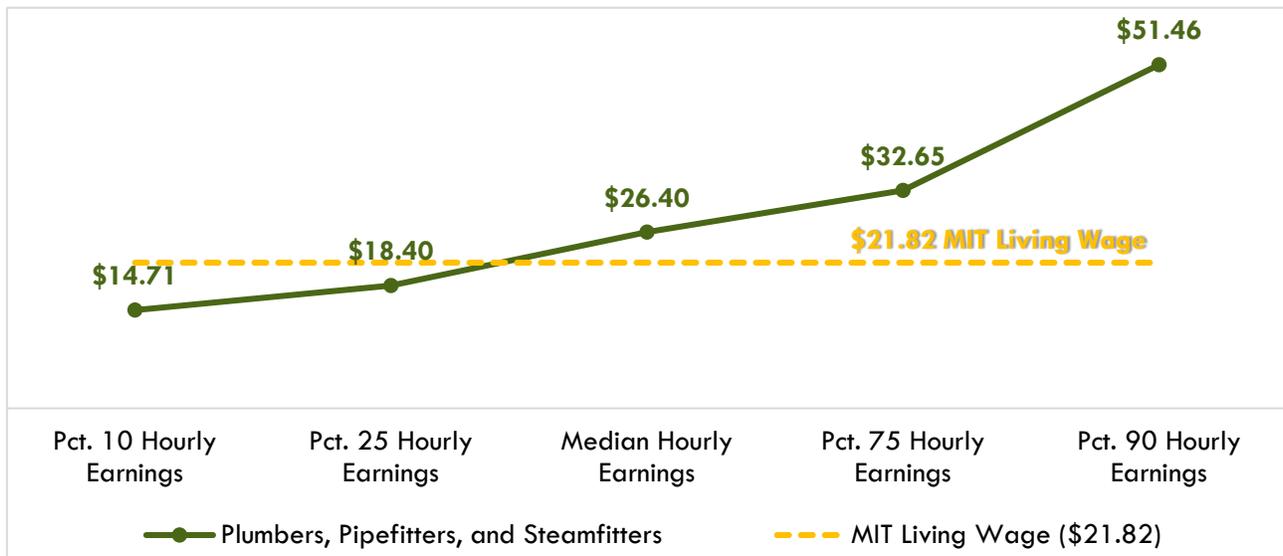
Source: Burning Glass – Labor Insights

## Earnings and Benefits

Community colleges should ensure their training programs lead to employment opportunities that provide a living wage. The MIT living wage calculator estimates that an individual must earn \$21.82 per hour or \$45,386 annually in California (Glasmeier, 2022).

Exhibit 3 displays the hourly earnings for plumbers, pipefitters, and steamfitters. The median hourly earnings for plumbers, pipefitters, and steamfitters are above the living wage standard, indicating that at least half of workers in this field earn a living wage.

*Exhibit 3: Hourly earnings by percentile for plumbers, pipefitters, and steamfitters, Inland Empire/Desert Region, 2021*



Source: Lightcast 2022.2

Benefits information, provided in the occupational guides developed by the California Labor Market Information Division, reveals that plumbers, pipefitters, and steamfitters typically receive health insurance, vacation, and retirement plans. Self-employed plumbers must provide for their own insurance and retirement benefits (Detailed Occupational Guides, 2022).

## Advertised Salary from Online Job Ads

Exhibit 4 displays online job ad salary data for plumbers, pipefitters, and steamfitters over the last 12 months. Online job ad salary information reveals that employers are willing to pay plumbers, pipefitters, and steamfitters \$68,000 annually, above the region's \$45,386 annual (\$21.82 hourly) living wage standard. Consider the salary information with caution since only 56% (184 out of 327) of online job ads for this occupation provided salary information. The salary figures are prorated to reflect full-time, annual wage status.

Exhibit 4: Advertised salary information, Inland Empire/Desert Region, July 2021 through June 2022

Occupation	Number of job ads	Real-Time Salary Information				Average Annual Salary
		Less than \$35,000	\$35,000 to \$49,999	\$50,000 to \$74,999	More than \$75,000	
Plumbers, Pipefitters, and Steamfitters	184	4%	26%	38%	32%	\$68,000

Source: Burning Glass – Labor Insights

### Employers, Skills, Education, and Work Experience

Exhibit 5 displays the employers that posted the most job ads during the last 12 months. Displaying employer names provides insight into where students may find employment after completing a program. Park West posted the most job ads for plumbers, pipefitters, and steamfitters in the region.

Exhibit 5: Employers posting the most job ads for plumbers, pipefitters, and steamfitters, Inland Empire/Desert Region, July 2021 through June 2022

Occupation	Top Employers
Plumbers, Pipefitters, and Steamfitters (n=327)	<ul style="list-style-type: none"> <li>• Park West</li> <li>• Canyon Hills Plumbing</li> <li>• Rooter Hero Plumbing</li> <li>• Sundt Construction Company</li> <li>• Henley's Plumbing &amp; Air</li> </ul>

Source: Burning Glass – Labor Insights

Exhibit 6 lists a sample of specialized and employability skills employers seek when seeking workers to fill positions as plumbers, pipefitters, and steamfitters. Specialized skills are occupation-specific skills that employers request for industry or job competency. Employability skills are foundational skills that transcend industries and occupations; this category is often referred to as "soft skills." The skills requested in job ads may be utilized to guide curriculum development.

Exhibit 6: Sample of in-demand skills from employer job ads, Inland Empire/Desert Region, July 2021 through June 2022

Occupation	Specialized skills	Employability skills
Plumbers, Pipefitters, and Steamfitters (n=285)	<ul style="list-style-type: none"> <li>• Repair</li> <li>• Water Heaters</li> <li>• Customer Service</li> <li>• Plumbing Systems</li> <li>• Predictive/Preventative Maintenance</li> </ul>	<ul style="list-style-type: none"> <li>• Communication Skills</li> <li>• Troubleshooting</li> <li>• Physical Abilities</li> <li>• Writing</li> <li>• Detail-Oriented</li> </ul>

Source: Burning Glass – Labor Insights

Exhibit 7 displays the typical entry-level education, educational attainment, and minimum advertised education requirements for plumbers, pipefitters, and steamfitters. According to the Bureau of Labor Statistics, 24%-33% of incumbent workers in this field hold a community college-level of educational attainment; "some college, no degree," and an "associate degree." All employers posting ads for plumbers, pipefitters, and steamfitters with minimum education requirements sought candidates with a high school diploma or vocational training.

*Exhibit 7: Typical entry-level education, educational attainment, and minimum advertised education requirements, Inland Empire/Desert Region, July 2021 through June 2022*

Occupation	Typical Entry-Level Education Requirement (National)	CC-Level Educational Attainment* (National)	Number of Job Ads	Real-Time Minimum Advertised Education Requirement		
				High school or vocational training	Associate degree	Bachelor's degree or higher
Plumbers, Pipefitters, and Steamfitters	High school diploma or equivalent	33%	98	100%	-	-

Source: Lightcast 2022.2, Burning Glass – Labor Insights

\*Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework

Exhibit 8 displays the work experience typically required for plumbers, pipefitters, and steamfitters and the real-time work experience requirements from employer job ads. Approximately 59% of employers sought plumbers, pipefitters, and steamfitters with three to five years of previous work experience.

*Exhibit 8: Work experience required and real-time work experience requirements, Inland Empire/Desert Region, July 2021 through June 2022*

Occupation	Work Experience Typically Required	Real-Time Work Experience			
		Number of job ads	0 – 2 years	3 – 5 years	6+ years
Plumbers, Pipefitters, and Steamfitters	None	206	40%	59%	1%

Source: Lightcast 2022.2, Burning Glass – Labor Insights

### Student Completions and Programs Outcomes

Regional community colleges do not currently offer plumbing, pipefitting, and steamfitting (TOP 0952.30) programs. Other postsecondary education institutions in the region have not issued awards in programs related to plumbing, pipefitting, and steamfitting.

### Summary of Findings

The knowledge, skills, and abilities trained by plumbing, pipefitting, and steamfitting programs (TOP 0952.30) lead to the plumbers, pipefitters, and steamfitters occupation. Plumbers, pipefitters, and steamfitters are expected to have 757 annual job openings and increase employment by 8% over the next five years. The median hourly earnings for plumbers, pipefitters, and steamfitters is \$26.40 per hour, surpassing the MIT

living wage standard of \$21.82 per hour. This indicates that at least 50% of workers in these occupations earn a living wage.

Regional community colleges do not currently offer plumbing, pipefitting, and steamfitting programs (0952.30). Other postsecondary educational institutions in the region have not issued awards related to plumbing, pipefitting, and steamfitting over the last three academic years.

The Centers of Excellence recommends developing plumbing, pipefitting, and steamfitting programs to meet the demand for these workers in the region. Colleges considering this program should have a strong partnership with the appropriate employers to document their demand for workers and the skills needed for students to work in this field shortly after exiting the program.

### Contact

Michael Goss  
Paul Vaccher  
Centers of Excellence, Inland Empire/Desert Region  
[michael.goss@chaffey.edu](mailto:michael.goss@chaffey.edu)  
July 2022

## References

Burning Glass Technologies. (2022). *Labor Insights/Jobs*. Retrieved from <https://www.burning-glass.com/>

California Community Colleges Chancellor's Office. (2022). *Chancellor's Office Curriculum Inventory (COCI), version 3.0*. Retrieved from <https://coci2.ccctechcenter.org/programs>

California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart. (2022). *Data Mart*. Retrieved from <https://datamart.cccco.edu/datamart.aspx>

California Community Colleges Chancellor's Office, Curriculum and Instructional Unit, Academic Affairs Division. (2012). *Taxonomy of Programs, 6<sup>th</sup> Edition, Corrected Version*. Retrieved from <https://www.cccco.edu/-/media/CCCCO-Website/About-Us/Divisions/Digital-Innovation-and-Infrastructure/Research/Files/TOPmanual6200909corrected12513.ashx?la=en&hash=94C709CA83C0380828415579395A5F536736C7C1>

Carnevale, A. P., Jayasundera, T., & Repnikov, D. (n.d.). Understanding Online Job Ads Data. Retrieved from [https://cew.georgetown.edu/wp-content/uploads/2014/11/OCLM.Tech\\_Web.pdf](https://cew.georgetown.edu/wp-content/uploads/2014/11/OCLM.Tech_Web.pdf)

Glasmeyer, A. K. (2022). Massachusetts Institute of Technology. Living Wage Calculator. *Living Wage Calculation for California*. Retrieved from <https://livingwage.mit.edu/states/06>

Labor Market Information Division. Employment Development Department of California. (2022). *Detailed Occupational Guides*. Retrieved from <https://www.labormarketinfo.edd.ca.gov/OccGuides/Search.aspx>

Lightcast. (2022). *Datarun 2022.2*. Retrieved from <https://www.economicmodeling.com/>

National Center for O\*NET Development. (2022). O\*NET OnLine. Retrieved from <https://www.onetonline.org/>

U.S. Department of Education. Institute of Education Sciences, National Center for Education Statistics. Integrated Postsecondary Education System (IPEDS). (2022). Retrieved from <https://nces.ed.gov/ipeds/use-the-data>

## Appendix: Methodology

Job ad data is limited to the information provided by employers and the ability of artificial intelligence search engines to identify this information. Additionally, preliminary calculations by Georgetown Center on Education and the Workforce found that "just 30 to 40 percent of openings for candidates with some college or an associate degree, and only 40 to 60 percent of openings for high school diploma holders appear online" (Carnevale et al., 2014). Online job ads often do not reveal employers' hiring intentions; it is unknown if employers plan to hire one or multiple workers from a single online job ad or collecting resumes for future hiring needs. A closed job ad may not be the result of a hired worker.

Table 1. 2021 to 2026 job growth, wages, entry-level education, training, and work experience required for plumbers, pipefitters, and steamfitters in the Inland Empire/Desert Region (Riverside and San Bernardino Counties combined)

Occupation (SOC)	2021 Jobs	5-Year Change	5-Year % Change	Annual Openings (New + Replacement Jobs)	Entry-Experienced Hourly Wage (10 <sup>th</sup> to 90 <sup>th</sup> percentile)	Median Hourly Wage (50 <sup>th</sup> percentile)	Average Annual Earnings	Entry-Level Education & On-The-Job-Training	Work Experience Required
Plumbers, Pipefitters, and Steamfitters (47-2152)	6,212	517	8%	757	\$14.71 to \$51.46	\$26.40	\$60,300	High school diploma or equivalent & Apprenticeship	None

Source: Lightcast 2022.2