

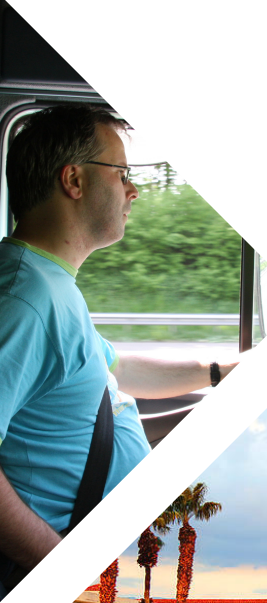


C·O·E

CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH



California
Community
Colleges



WORKFORCE DEMAND ASSESSMENT

San Bernardino County Metro Region

INLAND EMPIRE / DESERT

2024

coecc.net

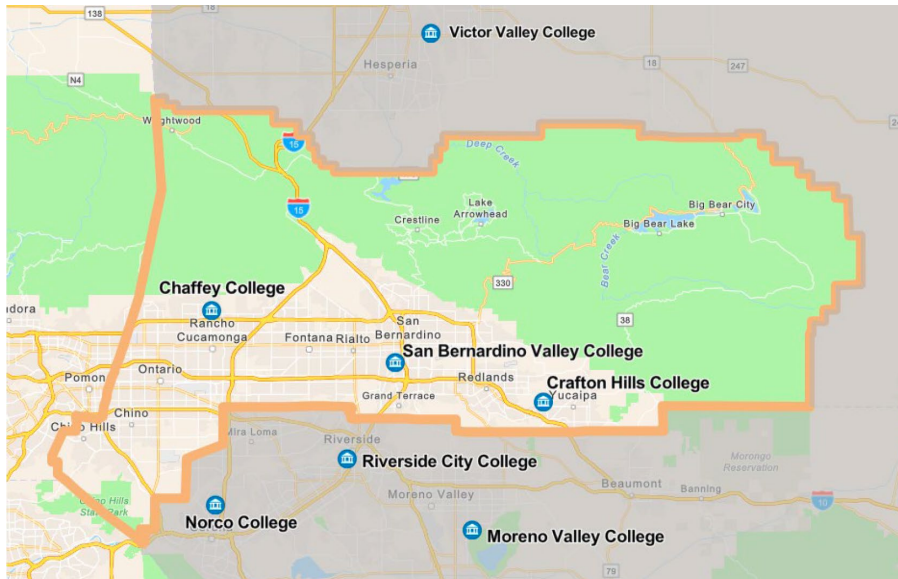
SAN BERNARDINO SUBREGIONAL OVERVIEW	3
OVERVIEW OF THE INLAND EMPIRE-SAN BERNARDINO COUNTY METRO SUBREGION	4
DEMOGRAPHICS AND LABOR FORCE	5
POPULATION	5
GENDER	6
AGE	6
ETHNICITY	8
EDUCATIONAL ATTAINMENT	9
LABOR FORCE AND UNEMPLOYMENT RATE	11
SUBREGIONAL INDUSTRIES	12
INDUSTRY GROUPS	14
JOB POSTING INFORMATION	17
BUSINESSES	18
OCCUPATIONAL OVERVIEW	19
ADVANCED MANUFACTURING.....	21
ADVANCED TRANSPORTATION AND LOGISTICS	24
AGRICULTURE, WATER, AND ENVIRONMENTAL TECHNOLOGIES	27
BUSINESS AND ENTREPRENEURSHIP	29
EDUCATION AND HUMAN DEVELOPMENT	33
ENERGY, CONSTRUCTION, AND UTILITIES	36
HEALTH	40
INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT)/DIGITAL MEDIA	43
PUBLIC SAFETY.....	46
RETAIL, HOSPITALITY, AND TOURISM.....	48
APPENDIX A: METHODOLOGIES AND DATA SOURCES	51
APPENDIX B: ZIP CODES USED IN THIS REPORT.	52
APPENDIX C: TERMS & DEFINITIONS	54
LABOR MARKET DEFINITIONS.....	54
EDUCATION DEFINITIONS	55
DEMOGRAPHIC DEFINITIONS	55
APPENDIX D: SECTOR CROSSWALK USED FOR PROGRAM INVENTORY	57

San Bernardino Subregional Overview

Encompassing the southwestern portion of San Bernardino County, the Inland Empire-San Bernardino County Metro Subregion borders Los Angeles and Orange counties to the west and San Bernardino County to the south. San Gabriel and San Bernardino mountains communities also find their home in this area. The subregion contains three community colleges, 15 high school districts, and California State University, San Bernardino. See Appendix B for a list of ZIP codes associated with this subregion.¹

To assist regional community colleges with strategic planning and career education (CE) program development, the Inland Empire/Desert Region Center of Excellence (COE) conducted a series of subregional workforce demand assessments to pinpoint high-quality job opportunities for program investment. This analysis identifies occupations that show strong workforce demand and offer median hourly earnings that exceed the state's living wage standard. The occupations highlighted in this assessment may be used to calibrate or develop CE training programs designed to address the region's in-demand and high-wage job opportunities. This subregional brief also presents demographic, industry, and occupation data in the Inland Empire-San Bernardino County Metro Subregion. See A for Methodology and Data Sources used in this report.

Community colleges in the San Bernardino Subregion



NOTE: The data presented in this report was derived from Lightcast's Analyst program, data set 2023.4 and U.S. Census Bureau American Community Survey tables and will be individually cited as applicable.

¹ ZIP-level data in Lightcast is based on county-level data using U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW) dataset. It is important to note that ZIP codes are not geographical areas and are typically points on a map that may be used to approximate geographical boundaries. (kb.lightcast.io/en/articles/6957501-zip-level-employment-data)

Overview of the Inland Empire-San Bernardino County Metro Subregion

Exhibit 1. Overview of the San Bernardino Subregion



1,653,753
Population (2022)

Population grew by 21,644 over the last 5 years and is projected to grow by 51,143 over the next 5 years.



\$67.4k
Avg. Earnings Per Job (2022)

Subregional average earnings per job are \$13,475 below the national average earnings of \$80,831 per job.



775,636
Total Regional Employment

Jobs grew by 93,325 over the last 5 years and are projected to grow by 83,328 over the next 5 years.



177,608
Projected Job Growth (2022)

From 2017 to 2022, jobs increased by 13.7% in San Bernardino Metro Region from 775,636 to 799,998. This change outpaced the national growth rate of 3.8% by 9.9%.



383,701

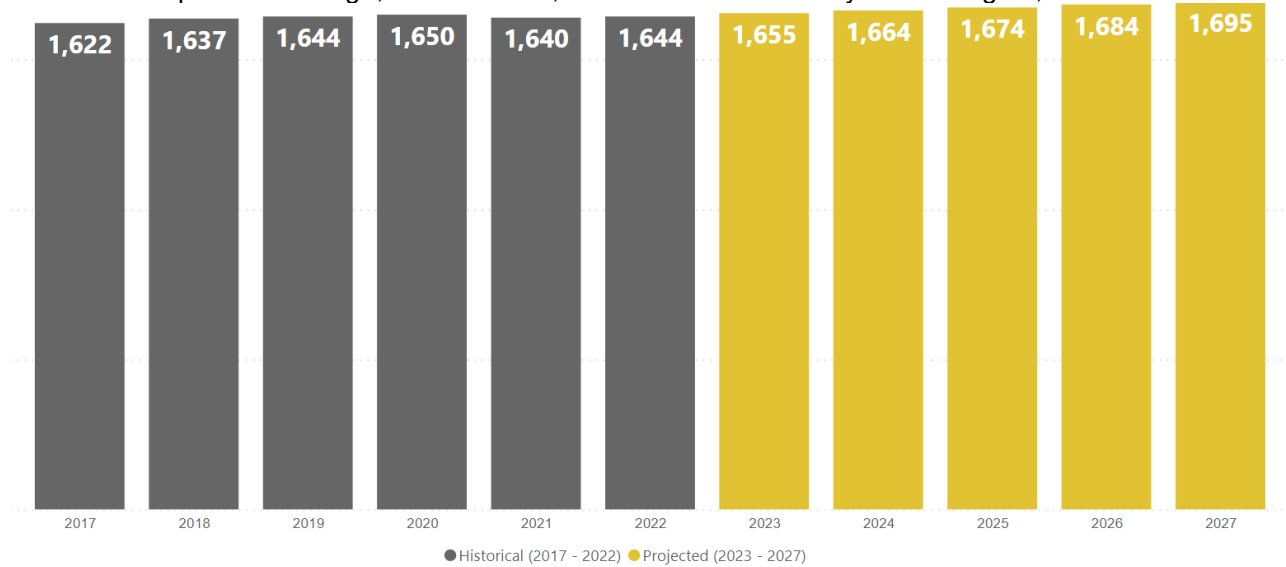
Retirement risk is low in your area. The national average for an area this size is 492,603 people 55 or older, while there are 383,701 here.

Demographics and Labor Force

Population

In 2022, the Inland Empire-San Bernardino County Metro Subregion contained 1,643,753 residents, or 35.1% of the region's 4.68 million residents (Exhibit 2). As of 2022 the subregion's population increased by 1.3% since 2017, growing by 21,644. Population is expected to increase by 3.1% between 2022 and 2027, adding 51,143.²

Exhibit 2. Population change, in thousands, San Bernardino County Metro Region, 2017-2027



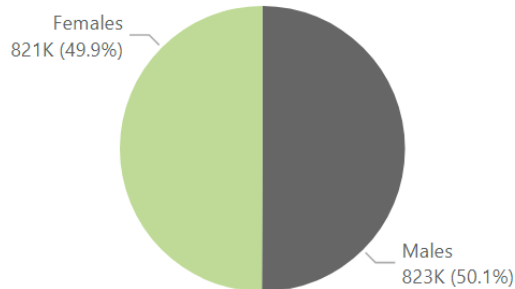
² Lightcast 2023.4 – QCEW, Non-QCEW Employees, Self-Employed

Gender

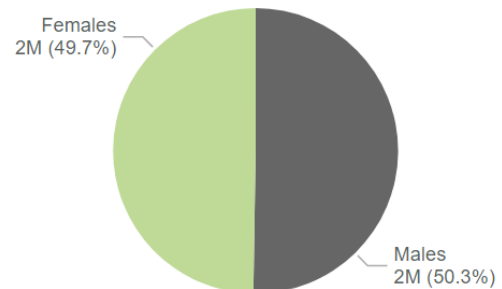
The subregion's population is evenly distributed amongst male (50.1%) and female (49.9%) residents (Exhibit 3) as compared to the region's population of male (50.3%) and female (49.7%).

Exhibit 3. Population Gender Region to Subregion comparison, Inland Empire-San Bernardino County Metro Subregion, 2022

Subregional 2022 Population by Gender



Regional 2022 Population by Gender



Age

The size of population represented in age categories may provide insight into future demand for housing, services, and educational enrollment needs. (Exhibit 4 & 5)

- ◆ School age is generally 0 – 24, which represented 34.8% of the subregion's ~1.65M 2022 population.
- ◆ Working-age is 25 – 64 which represented 53.1% of the subregion's ~1.65M 2022 population. This group is projected to grow slightly to 53.2% in 2027; whereas School age category is projected to decline to 33.7%.

An interesting way to further disaggregate this cohort is to filter the age of the working-age cohort to include between 25 and 64 years of age which equates to 872.4k individuals. (Exhibit 5) Note that the Bureau of Labor Statistics defines individuals between ages of 25 – 54 as the “prime-working-age”.

- Early career (< 35) represents 27.4% in 2022 of the working-age cohort and is projected to decrease to 25.7% by 2027.
 - Mid-career (35 – 54) represents 45.6% in 2022 of the working-age cohort and is projected to increase to 47.5% by 2027.
 - Late career (55+) represents 27.0% of the working-age cohort and is projected to decrease to 26.8% by 2027.
- ◆ Retirement age is +65 which represented 12.1% of the subregion's ~1.65M 2022 population. This group is projected to remain at 12.1% by 2027.

Exhibit 4. Working-age Distribution Comparison in Inland Empire/Desert Subregion, 2022

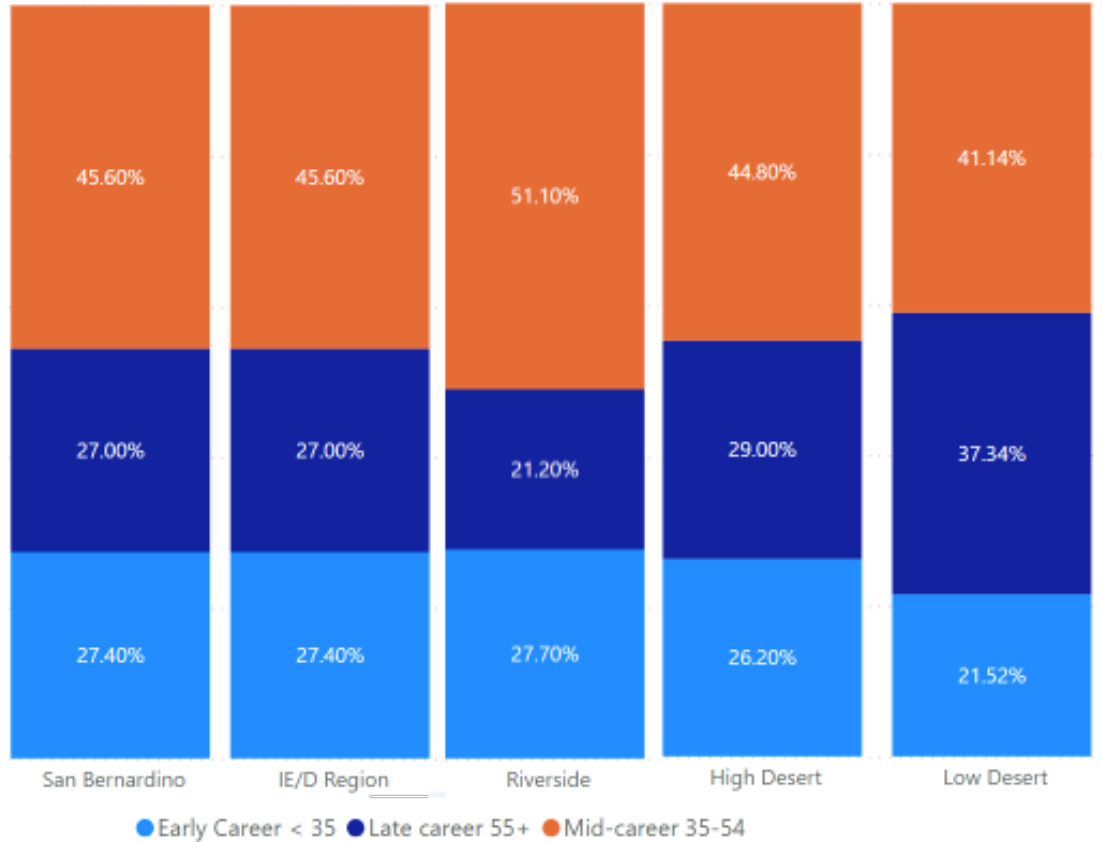
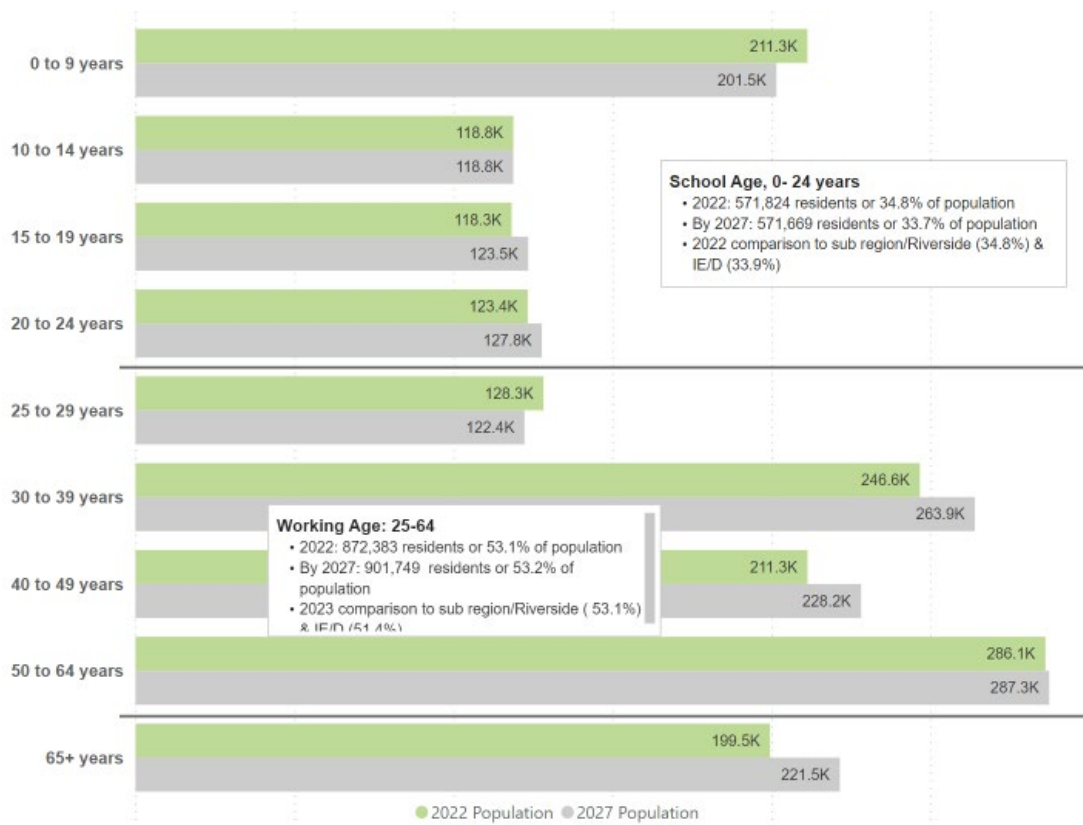


Exhibit 5 is showing the age distribution comparison between 2022 and 2027. The data shows a slight increase (4.4k) by 2027 in the traditional college going years (20–24-year-old) and decrease (5.9) in early career (25-29 old) individuals in this subregion.

Exhibit 5. Age Distribution 2022 - 2027 comparison in Inland Empire-San Bernardino County Metro Subregion



Ethnicity

The U.S. Census Bureau adheres to the U.S. Office of Management and Budget Guidelines when collecting race and ethnicity data from residents. This includes the decision to employ separate questions for race and ethnicity, as outlined in the Office of Management and Budget (OMB) 1994 directives. It's essential to acknowledge that while this approach complies with established guidelines, the Center of Excellence (COE) recognizes that this representation may not fully capture the nuanced diversity within the population.

Race and ethnicity data can be interpreted in several different ways:

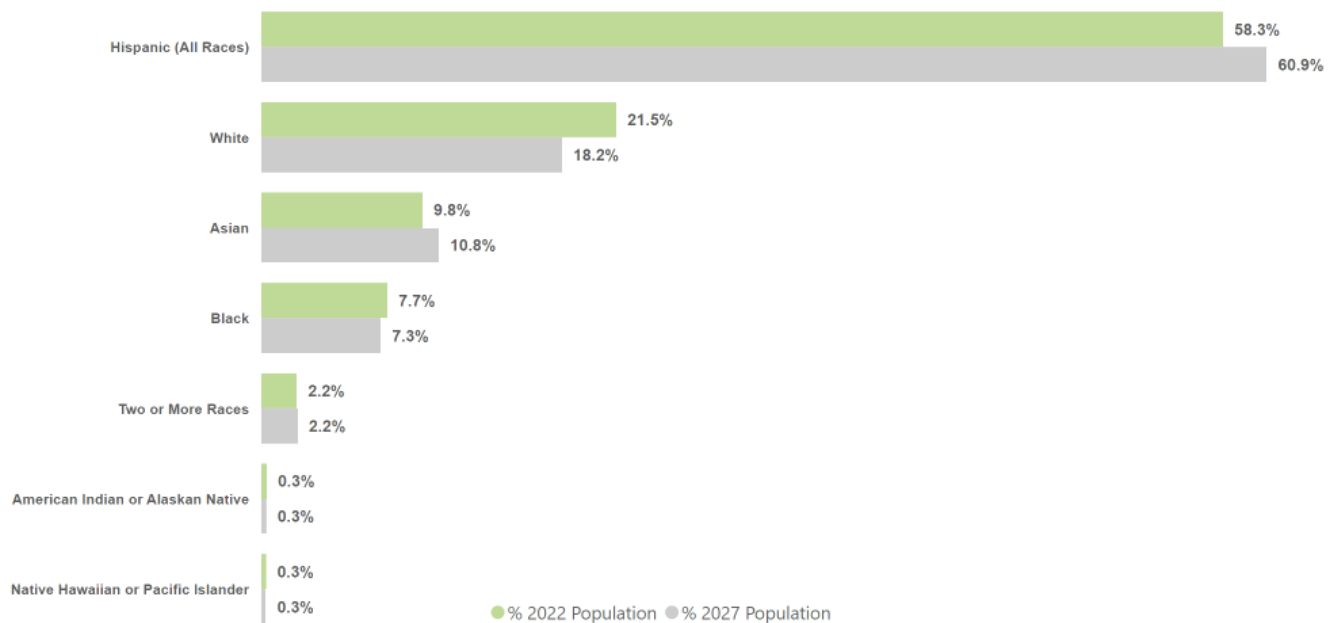
1. **Understanding Student Diversity:** Analyzing race and ethnicity figures helps faculty understand the demographic composition of their student body. This understanding is essential for creating inclusive learning environments and ensuring that programs are accessible and relevant to students from diverse backgrounds.
2. **Addressing Equity and Access:** Examining race and ethnicity data allows faculty to identify disparities in educational outcomes among different demographic groups. This information can inform efforts to address equity gaps

by implementing targeted support services, scholarships, and outreach programs to improve access and success for underrepresented minorities.

3. **Fostering Community Partnerships:** Race and ethnicity data can also inform efforts to build partnerships with community organizations, employers, and other stakeholders that serve diverse racial and ethnic communities. Collaborating with these partners can help faculty better understand the needs and preferences of local communities and ensure that program offerings are responsive to the cultural and linguistic diversity of the populations they serve.

In 2022, 58.8% of the San Bernardino Metro population was Hispanic (All races), which is more than 54.7% of the population in the entire Inland Empire region. By 2027, that percentage of Hispanic individuals in the San Bernardino Metro population is projected to increase to 60.9% (Exhibit 6). By 2027, percentage of White, Non-Hispanic individuals in the San Bernardino is expected to decrease from 21.5% to 18.2%.

Exhibit 6. Ethnicity 2022 - 2027 comparison in Inland Empire-San Bernardino County Metro Subregion



Educational Attainment

Educational attainment refers to the highest level of education that residents aged 25 and older have completed. Educational attainment data can be leveraged in several ways:

1. **Identifying Target Demographics:** Analyzing educational attainment data helps faculty understand the educational background of their potential student base. This information can guide them in tailoring program offerings to meet the needs and aspirations of specific demographic groups, such as first-generation college students or adult learners returning to education.

2. **Informing Curriculum Development:** Understanding the educational levels of the local population helps faculty design curricula that build upon existing knowledge and skills. Programs can be structured to provide foundational education for those with lower levels of educational attainment while offering advanced coursework and enrichment opportunities for more academically prepared students.
3. **Addressing Workforce Needs:** Educational attainment data can highlight areas where there is a need for workforce development initiatives. Faculty can develop programs that provide training and credentials aligned with the educational requirements of high-demand industries, thereby increasing employment opportunities for graduates, and contributing to economic growth in the community.

Exhibit 7. Educational Attainment comparison in Inland Empire-San Bernardino County Metro Subregion, 2022³

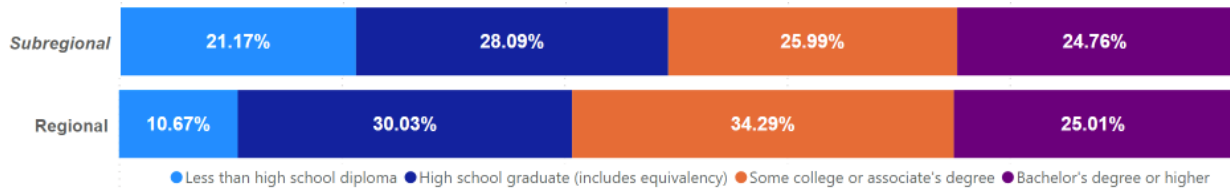
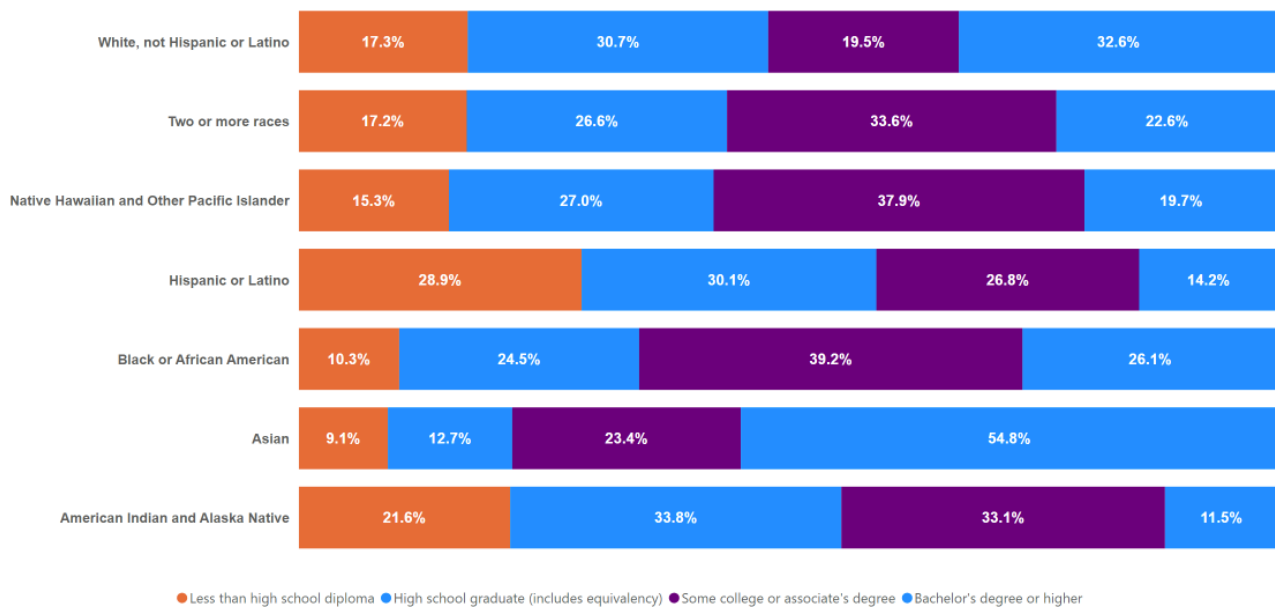


Exhibit 8. Educational Attainment Race & Ethnicity Distribution in Inland Empire-San Bernardino County Metro Subregion, 2022⁴



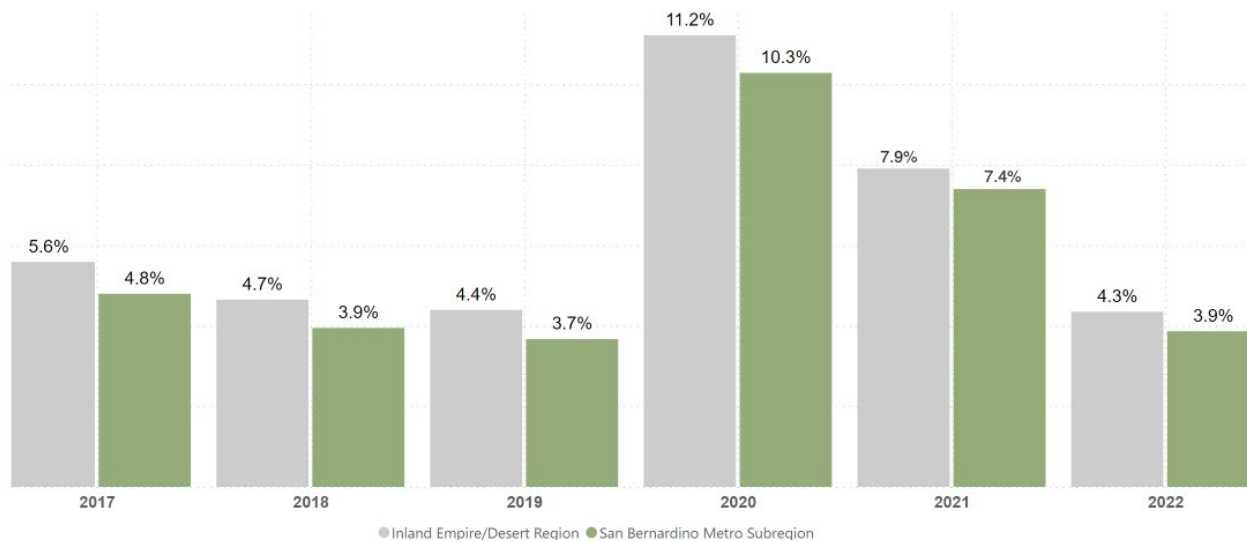
³ U.S. Census Bureau. (2022). American Community Survey C15002D Retrieved from Census Bureau website: <https://data.census.gov/>

Labor Force and Unemployment Rate

Labor force data reflects the employment status of people based on where they reside. The labor force is the total of employed residents or those that are unemployed and are seeking work. The unemployment rate represents the number of unemployed individuals as a share of the total labor force. Exhibit 9 displays city-level unemployment rates for those cities that have population greater than 25k and contain community college main campuses.

In 2022, 7 of the 14 cities represented in this cohort had greater unemployment rates than the Inland Empire/Desert region. Higher city-level unemployment compared to regional figures can impact students' abilities to find work due to localized labor market dynamics, limited job accessibility, transportation constraints, industry concentration, local policies, network effects, and cost of living considerations. Understanding these factors is essential for community college faculty to effectively support their students in navigating the job market and achieving successful employment outcomes.

Exhibit 9. Unemployment rate for Inland Empire-San Bernardino County Metro Subregion, 2017-2022⁴



⁴ U.S. Bureau of Labor Statistics. (2022). Labor Force Statistics, including the National Unemployment Rate Retrieved from BLS website: <https://www.bls.gov/data/>

Subregional Industries

Industries are groups of employer establishments and categorized by their primary business activity using a North American Industry Classification System (NAICS). NAICS codes are a standardized classification system used to categorize businesses and industries for the purpose of collecting, analyzing, and publishing statistical data. These codes are based on the economic activities of businesses and are used for various purposes, including economic analysis, policymaking, and business research.

In the subregion, industry employers reported 775,662 total jobs in 2022, or about 41.4% of the Inland Empire/Desert Region's total employment (nearly 1.87 million jobs) (Exhibit 10). Over the next five years, the subregion's industry employment is projected to grow by 8.9% which is slightly slower than the region's projected job growth of 10.8%. The subregion is projected to contribute over 41% of the region's net job growth over the next five years. Over the past five years, from 2017 to 2022, subregional employment rose by 13.7%, a net increase of over 93,359 jobs.

Exhibit 10. Historical and projected job trend in Inland Empire-San Bernardino County Metro Subregion, 2017-2027

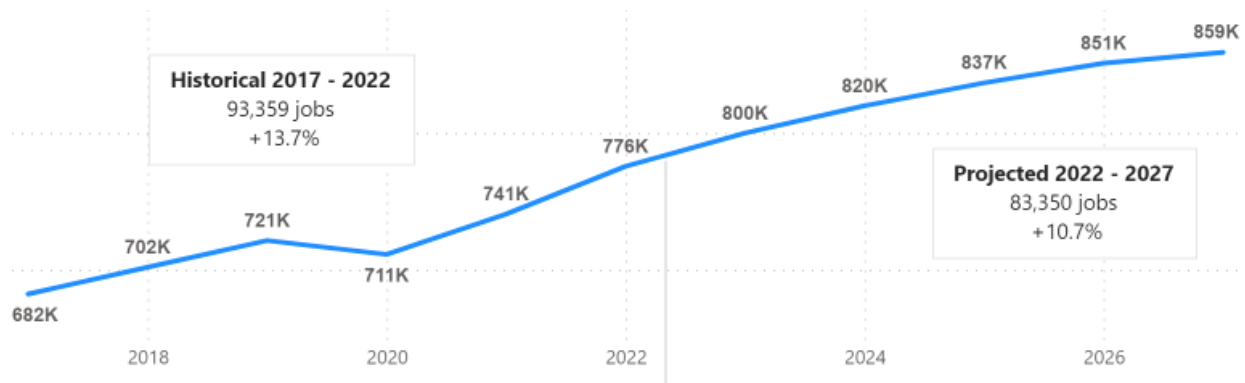


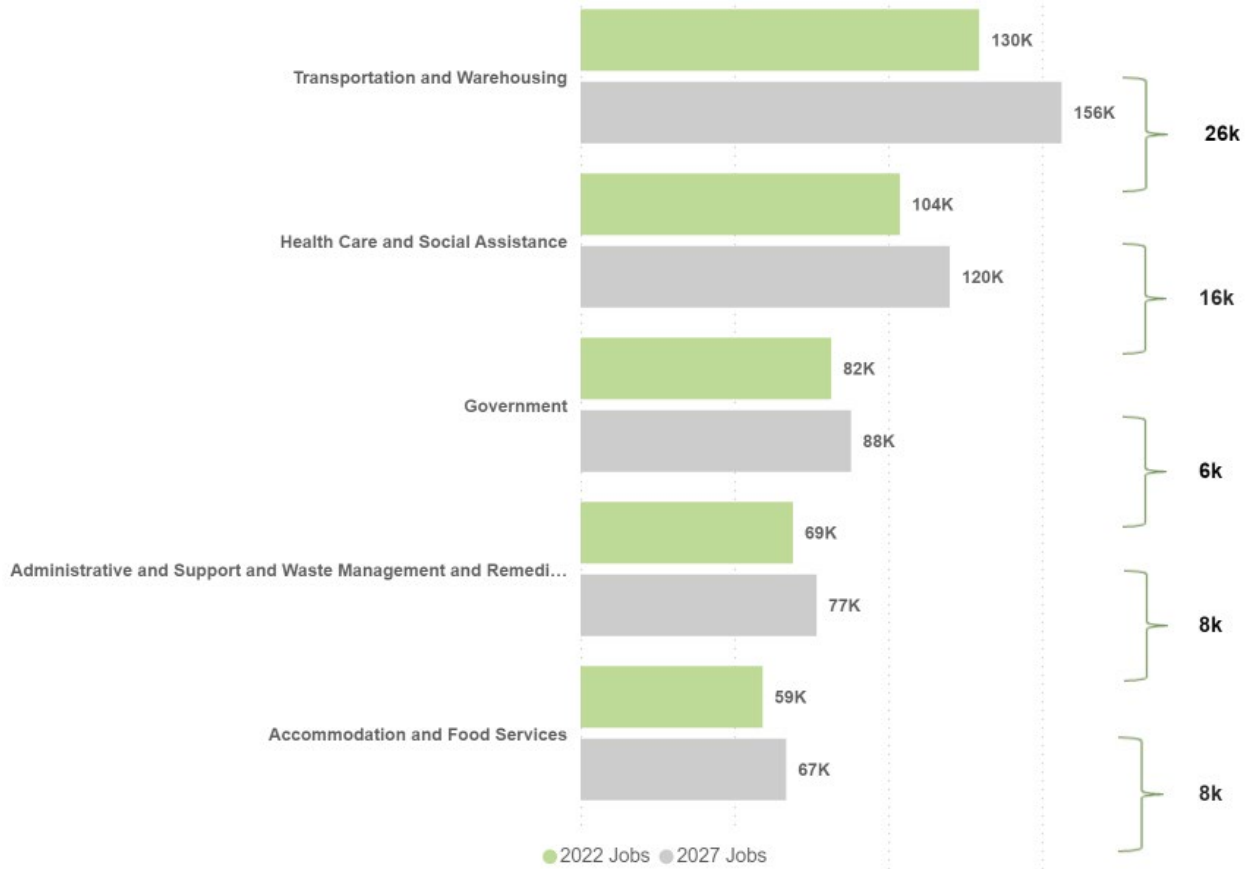
Exhibit 11 is reporting on the industries with the highest number of jobs reported in 2022 and includes 2027 projection and percentage of change. Each industry job is counted, whether full-time or part-time, usually where the business conducts its payroll activity. The labor force is the total count of residents working (employed) or seeking work (unemployed). The unemployment rate represents the number of unemployed individuals expressed as a percent of the total labor force.

In 2022, the top 5 industries that are producing the greatest number of jobs are shown as compared to the job number projection for 2027. The 2027 top industry project growth is Transportation and Warehousing (31.3%) producing 26,801 into the market over the next 5 years.

The top 5 industries adding jobs to the subregion are Government, Health Care and Social Assistance, Transportation and Warehousing, Accommodation and Food

Services, and Administrative/Support/Waste Management & Remediation. These industries are projected to contribute 32.1% of the total subregion’s job growth through 2027.

Exhibit 11. Job numbers by Industry & Projected Percentage Change in Inland Empire-San Bernardino County Metro Subregion, 2022,2027



Industry Groups

The previous section described the employment share of the region’s major industry sectors. NAICS codes facilitate a detailed analysis of subindustries within these major sectors. This analysis provides a clearer picture of industry activity that drives that regional economy.

Exhibit 12 provides a sample of high-quality industry groups for this subregion. High-quality industries are those that are growing faster than the region overall (at or above 9.0% growth), have average per-job earnings above the living wage standard (\$53,518 annually), and have a high location quotient at or above 1.2. A location quotient reflects the concentration of an industry in an area compared to the nation overall. Highly concentrated industries, those with a high location quotient, often describe the type of business activity an area is “known for.” See Appendix C for terms and definitions.

In 2022, over 172,00 jobs in these industry groups met the high-quality industry group definition and account for 22.2% of subregional employment (775k). These industry groups are projected to contribute 42.0% of the subregional job growth through 2027.

Exhibit 12. High-quality industry groups that are growing faster than the region in Inland Empire-San Bernardino County Metro Subregion, 2022-2027

Industry Group (NAICS4)	2022 Jobs	2022 - 2027 Change	Growth Rate	Location Quotient	Average Earnings per Job
Construction					
Electrical Contractors and Other Wiring Installation Contractors (238210)	6,821	1,168	17.1%	1.3	\$103,022
Painting and Wall Covering Contractors (238320)	2,025	278	13.7%	1.3	\$53,619
Structural Steel and Precast Concrete Contractors (238120)	1,928	219	11.4%	4.4	\$92,898
Health Care and Social Assistance					
HMO Medical Centers (621491)	6,280	1,210	19.3%	6.7	\$143,757
Kidney Dialysis Centers (621492)	782	98	12.5%	1.2	\$83,436
Manufacturing					
Guided Missile and Space Vehicle Manufacturing (336414)	530	302	57.0%	1.5	\$136,263
Bottled Water Manufacturing (312112)	583	202	34.6%	6.7	\$89,265
Cheese Manufacturing (311513)	413	167	40.5%	1.5	\$81,808
Mineral Wool Manufacturing (327993)	268	136	50.7%	3.4	\$135,517

Wood Container and Pallet Manufacturing (321920)	844	84	10.0%	2.7	\$60,820
Polystyrene Foam Product Manufacturing (326140)	286	79	27.8%	2.0	\$70,663
Precision Turned Product Manufacturing (332721)	473	77	16.4%	2.6	\$78,106
Spice and Extract Manufacturing (311942)	188	71	37.6%	1.5	\$82,469
All Other Miscellaneous Electrical Equipment and Component Manufacturing (335999)	385	71	18.4%	2.5	\$77,092
Confectionery Manufacturing from Purchased Chocolate (311352)	210	64	30.5%	1.4	\$72,021
All Other Miscellaneous Chemical Product and Preparation Manufacturing (325998)	347	64	18.3%	1.7	\$82,645
Plastics Pipe and Pipe Fitting Manufacturing (326122)	204	50	24.7%	1.4	\$75,909
Rice Milling (311212)	69	49	70.6%	2.8	\$74,386
Pesticide and Other Agricultural Chemical Manufacturing (325320)	80	42	52.4%	1.2	\$106,684
Mattress Manufacturing (337910)	380	42	11.0%	3.4	\$61,581
Analytical Laboratory Instrument Manufacturing (334516)	310	39	12.6%	1.4	\$89,609
Stationery Product Manufacturing (322230)	230	37	16.2%	3.3	\$96,013
Plastics Packaging Film and Sheet (including Laminated) Manufacturing (326112)	236	32	13.4%	2.1	\$69,164
Phosphatic Fertilizer Manufacturing (325312)	50	31	63.0%	1.9	\$65,590
Nitrogenous Fertilizer Manufacturing (325311)	75	27	36.4%	1.8	\$62,518
Plastics Bag and Pouch Manufacturing (326111)	231	27	11.8%	1.3	\$71,825
Metal Kitchen Cookware, Utensil, Cutlery, and Flatware (except Precious) Manufacturing (332215)	63	27	42.0%	1.4	\$60,617
Unlaminated Plastics Profile Shape Manufacturing (326121)	177	25	14.2%	1.7	\$63,347
Welding and Soldering Equipment Manufacturing (333992)	87	23	26.9%	1.2	\$89,314

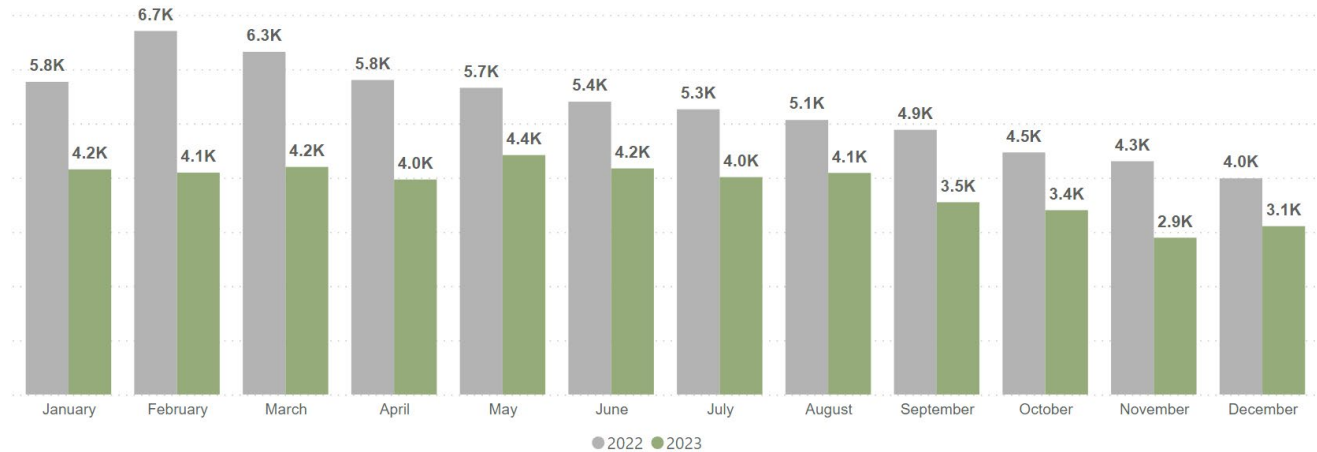
Packaging Machinery Manufacturing (333993)	143	19	13.6%	1.3	\$83,964
Concrete Block and Brick Manufacturing (327331)	141	17	12.0%	1.6	\$82,158
Fabricated Pipe and Pipe Fitting Manufacturing (332996)	176	16	9.3%	1.2	\$88,873
Alumina Refining and Primary Aluminum Production (331313)	57	14	23.9%	1.4	\$119,204
Flour Milling (311211)	108	13	12.0%	1.6	\$88,244
Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding (331491)	110	13	11.6%	1.7	\$119,696
Transportation and Warehousing					
General Warehousing and Storage (493110)	73,241	18,126	24.7%	8.9	\$57,105
Couriers and Express Delivery Services (492110)	16,106	3,267	20.3%	3.5	\$58,167
General Freight Trucking, Local (484110)	8,219	1,332	16.2%	4.8	\$80,544
Specialized Freight (except Used Goods) Trucking, Long-Distance (484230)	2,311	983	42.5%	3.6	\$83,521
General Freight Trucking, Long-Distance, Less Than Truckload (484122)	5,970	909	15.2%	4.3	\$85,918
General Freight Trucking, Long-Distance, Truckload (484121)	7,007	879	12.5%	2.2	\$81,576
Freight Transportation Arrangement (488510)	3,116	627	20.1%	2.2	\$75,440
Other Support Activities for Air Transportation (488190)	1,294	341	26.4%	2.1	\$66,070
Other Support Activities for Road Transportation (488490)	891	146	16.4%	4.3	\$55,290
Utilities					
Hydroelectric Power Generation (221111)	180	56	31.2%	5.0	\$135,927
Solar Electric Power Generation (221114)	72	48	66.6%	1.6	\$106,883
Biomass Electric Power Generation (221117)	15	3	18.4%	1.5	\$116,521

Job Posting Information

Job posting data can provide insights into employer demand and is different dataset versus job data we retrieve from BLS Quarterly Census of Employment and Wages (QCEW). The job posting data is collected from scraping online job boards such as LinkedIn, Indeed, Glassdoor and many others. The process Lightcast uses to assemble this data does have some limitations due to methods that recruitment professionals sometimes use (e.g., posting one job to fill multiple positions). For example, the number of jobs posted is not necessarily the same as the number of job vacancies. While not perfect, Lightcast leverages machine learning and other AI technologies as well as government data sourced from the Job Openings and Labor Turnover Survey (JOLTS), a monthly survey conducted by the Bureau of Labor Statistics (BLS), to enrich, deduplicate and aggregate this information to make it a meaningful dataset.

The following data was filtered to include jobs where the advertised educational requirement was High school or GED or associate degree as well as excluded jobs posted by staffing companies and internships.

Exhibit 13. Number of Unique Online Job Postings for all cities in this subregion, 2022 – 2023



Businesses

In 2023, 9,458 businesses in the San Bernardino County Metro Subregion posted a total of 46,035 unique job postings. Exhibit 14, lists the top 21 businesses with the greatest number of unique online job postings in this subregion.

Exhibit 14. Top Company Job Postings for all cities in this subregion, 2022 – 2023

Company Name	Unique Postings (Jan 2022 - Dec 2023)
Loma Linda University Health	5,306
Randstad	4,254
Kaiser Permanente	3,402
Healthcare Employment Network	3,193
California State University	3,096
Allied Universal	2,466
Inland Empire Health Plan	2,375
Aston Carter	2,168
Aerotek	2,048
Prime Healthcare Services	1,952
Yaamava' Resort & Casino At San Manuel	1,729
State of California	1,651
Walmart	1,611
Amazon	1,543
Esri	1,526
County of San Bernardino	1,433
Robert Half	1,389
Adecco	1,269
San Manuel Band Of Mission Indians	1,269
Target	1,268
AppleOne	1,246

Occupational Overview

An occupation is a collection of jobs, and job titles, which perform similar work tasks and share similar work knowledge, skills, and abilities. Employees who perform essentially the same tasks are classified in the same occupation, whether or not they are in the same industry. It's important to note that some occupations are concentrated in a few industries (e.g., police officers are only employed in government), whereas other occupations are found in most industries (e.g., information technology workers and maintenance workers).⁵

Inland Empire/Desert community colleges currently offer programs that train for occupations associated with the 10 CCCCCO. The following sections discuss current employment and future demand for high-quality occupations related to regional training programs that align with the CCCCCO sectors. For each sector, existing programs and programs not currently offered by community colleges in the subregion have been identified. The occupations listed for each sector meet the high-quality job designation, i.e., occupations that are both in-demand (at least 100 annual job openings) and high-wage (\$25.73 and higher).⁶

In this study, occupational employment in the subregion was analyzed in terms of each occupation's educational requirements, i.e., the entry-level education level needed to enter employment, such as a high school diploma; community college coursework, a degree, or certificate; or a bachelor's degree. Employers report typical entry-level educational requirements at the national level, and alternative paths to securing employment may exist depending on employer preferences and state licensing requirements.

California Community Colleges provide education and training that generally prepares workers to enter community-college-level jobs. These jobs typically require an education beyond a high school diploma but less than a four-year degree. Most community-college-level jobs offer a higher pay rate than jobs requiring less education, making them an excellent fit for community college students on a CE pathway who want to enter in-demand careers that offer a living wage.

High-school-level jobs illuminate possibilities open to those choosing to enter the workforce after securing a high school diploma or G.E.D., or jobs typically open to those who choose to work while attending college.

Bachelor's-level jobs require a four-year degree from a college or university. This assessment does not include occupations that typically require an education beyond a

⁵ "Concepts and Definitions," U.S. Bureau of Labor Statistics, 2022, accessed on August 8, 2022, <https://www.bls.gov/cps/definitions.htm>.

⁶ Note the UW self-sufficiency standard is currently used by the CO and other COEs as the self-sufficiency wage criteria for labor market assessment reports. Also note that this hourly rate was last updated by UW in 2021 and does not account for significant increases in the cost of living in the Inland Empire in the last three years and at \$14.00 is below the State of California minimum wage of \$16.00. For these reasons, the COE will provide an averaged living wage calculation from MIT in the analysis below as an additional reference point. MIT estimates, the living wage for an adult with no kids living in 2024 is \$26.30 in San Bernardino County and \$25.17 in San Bernardino County.

bachelor's degree, such as physicians, lawyers, and most scientists; however, other occupations may be included when the number of jobs that require a community college degree are low or non-existent in the report.

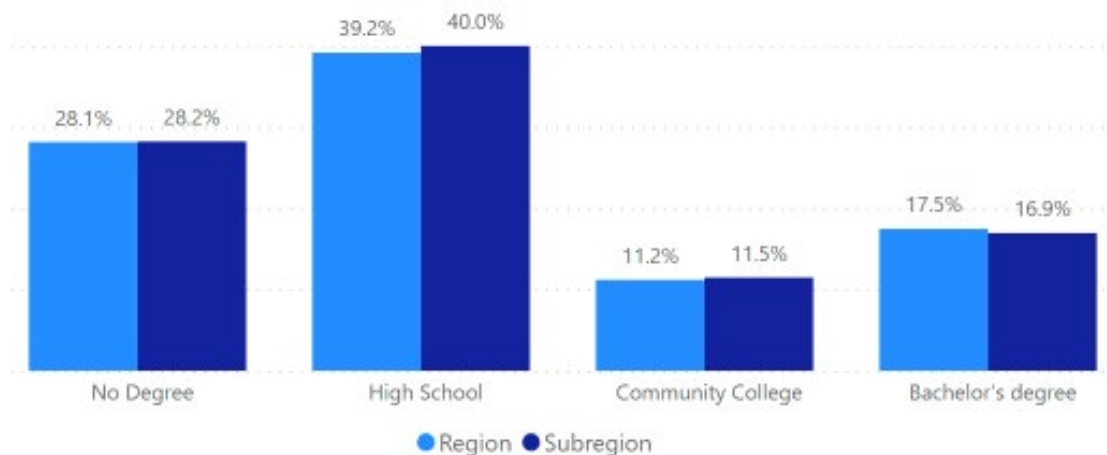
Also excluded are those occupations that do not typically require formal education to enter employment. Military occupations (in 2022 there were approximately 10,766 regional military jobs in the region) were also excluded from the following sections of this assessment. Definitions for education levels are available in Appendix C.

Of the ~775,600 jobs in the subregion in 2022, 56% are included in the following reports. A crosswalk file prepared in collaboration with regional COEs, associates TOP codes to occupations and the 10 CCCCCO sectors and used to produce the following sector specific reports. This data source included 479 occupations which were mapped to sectors. Also included in the dataset were 410 TOP codes, of which 272 were mapped to sectors.

Please be aware that the job demand figures presented in the following reports may not encompass total demand. It is recommended that you collaborate with the COE to assess occupations aligned with your specific program requirements.

Exhibit 15 includes over 436,000 jobs as a result of using the above crosswalk and displays the share of jobs by entry level educational requirements.

Exhibit 15. Share of jobs by education level, San Bernardino Subregion, and Inland Empire/Desert Region, 2022



Advanced Manufacturing

The CCCC CO advanced manufacturing sector aligns with the CDE manufacturing and product development sector. Two colleges in the Inland Empire-San Bernardino Subregion currently use 11 program codes for their advanced manufacturing programs.

Programs Offered:

0924.00 - Engineering Technology, General (requires Trigonometry)
0934.00 - Electronics and Electric Technology
0934.10 - Computer Electronics
0945.00 - Industrial Systems Technology and Maintenance
0950.00 - Aeronautical and Aviation Technology
0950.40 - Aircraft Electronics (Avionics)
0953.40 - Mechanical Drafting
0956.00 - Manufacturing and Industrial Technology
0956.30 - Machining and Machine Tools
0956.50 - Welding Technology
1303.30 - Fashion Production

Advanced manufacturing programs in the subregion prepare students for employment in one high-quality high-school-level occupation, four high-quality community-college-level occupation and one high-quality bachelor's degree-level occupation. High-quality occupations have at least 100 annual job openings and offer a median hourly wage of \$25.74 at the regional level.

In 2022, there were 8,670 high-quality advanced manufacturing jobs in the subregion related to subregional training programs (Exhibit 16).

By 2027, annual job opening projections:

- There are more than 170 high-school-level job openings projected annually for this occupational group in the subregion; over 360 job openings are projected annually in the greater region.
- There are more than 730 community college-level job openings projected annually for this occupational group in the subregion; over 1,670 job openings are projected annually in the greater region.
- There are more than 50 bachelor's degree-level job openings projected annually for this occupational group in the subregion; over 110 job openings are projected annually in the greater region.

Exhibit 16. Education level, projected demand, and earnings for high-quality occupations, 2022 – 2027

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
Industrial Machinery Mechanics	High School	1,653	179	365	\$29.80
Aircraft Mechanics and Service Technicians	Community College	1,189	133	238	\$36.35
Architectural and Civil Drafters	Community College	373	48	101	\$29.29
Automotive Service Technicians and Mechanics	Community College	4,345	504	1,211	\$25.88
Electrical and Electronics Repairers, Commercial and Industrial Equipment	Community College	509	54	121	\$30.13
Architectural and Engineering Managers	Bachelor's degree	601	54	113	\$74.96

Community College Programs Not Offered

In the subregion, fifteen programs in the advanced manufacturing sector are currently not offered (Exhibit 17).

Exhibit 17. Programs not offered by community colleges in the subregion.

Programs Not Offered:

- 0934.20 - Industrial Electronics
- 0934.80 - Laser and Optical Technology
- 0935.10 - Appliance Repair
- 0936.00 - Printing and Lithography
- 0943.00 - Instrumentation Technology
- 0950.50 - Aircraft Fabrication
- 0953.30 - Electrical, Electronic, and Electro-Mechanical Drafting
- 0953.60 - Technical Illustration
- 0954.20 - Plastics and Composites
- 0954.30 - Petroleum Technology
- 0956.70 - Industrial and Occupational Safety and Health
- 0956.80 - Industrial Quality Control
- 0957.30 - Surveying
- 0961.00 - Optics
- 1920.00 - Ocean Technology

Occupational Training Opportunities

There are three programs that community colleges are not currently offering in the subregion that align with high-quality, growing occupations:

- 0934.20 - Industrial Electronics
- 0950.50 - Aircraft Fabrication
- 0956.70 - Industrial and Occupational Safety and Health

In 2022, there were over 410 high-quality advanced manufacturing jobs in the subregion (Exhibit 18).

By 2027, annual job opening projections:

- There are no community college-level job openings projected annually for this occupational group in the greater region.
- There are more than 60 bachelor’s degree-level job openings projected annually for this occupational group in the subregion; over 140 job openings are projected annually in the greater region.

Exhibit 18. High-quality occupation without training programs in the subregion.

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
Occupational Health and Safety Specialists	Bachelor's degree	416	63	143	\$40.30

Finally, the below occupations are currently being served by existing programs offered in the subregion AND could also be served by the above programs that are not offered in the subregion. If one or more of the above programs are not currently offered in the subregion and are of interest, the COE can perform a full Labor Market Analysis (LMA) on the occupations below to analyze if additional education capacity is needed (Exhibit 19).

Exhibit 19. High-quality occupations with training programs in the subregion but aligned to training programs not offered.

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	High School	130	15	328	\$26.17

Advanced Transportation and Logistics

The CCCCCO advanced transportation and logistics sector aligns with the CDE transportation sector. Two colleges in the Inland Empire-San Bernardino Subregion currently use ten program codes for their advanced transportation and logistics programs (Exhibit 20).

Exhibit 20. Programs offered by community colleges in the subregion.

Programs Offered:

0510.00 - Logistics and Materials Transportation
0947.00 - Diesel Technology
0948.00 - Automotive Technology
0948.40 - Alternative Fuels and Advanced Transportation Technology
0949.00 - Automotive Collision Repair
0949.10 - Upholstery Repair - Automotive
0950.10 - Aviation Airframe Mechanics
0950.20 - Aviation Powerplant Mechanics
3020.00 - Aviation and Airport Management and Services
3020.10 - Aviation and Airport Management

Advanced transportation and logistics programs in the subregion prepare students for employment in two high-quality community-college-level occupations and six high-quality high school-level occupations. High-quality occupations have at least 100 annual job openings and offer a median hourly wage of \$25.74 at the regional level.

In 2022, there were more than 15,290 high-quality transportation and logistics jobs in the subregion related to subregional training programs (Exhibit 21).

By 2027, annual job opening projections:

- There are more than 1,130 high-school-level job openings projected annually for this occupational group in the subregion; over 2,630 job openings are projected annually in the greater region.
- There are more than 630 community college-level job openings projected annually for this occupational group in the subregion; over 1,440 job openings are projected annually in the greater region.

Exhibit 21. Education level, projected demand, and earnings for high-quality occupations, 2022 – 2027

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
Automotive Body and Related Repairers	High School	740	96	236	\$27.60
Bus and Truck Mechanics and Diesel Engine Specialists	High School	2,016	234	482	\$27.90
First-Line Supervisors of Mechanics, Installers, and Repairers	High School	2,409	268	655	\$36.86
Mobile Heavy Equipment Mechanics, Except Engines	High School	988	116	244	\$30.82
Operating Engineers and Other Construction Equipment Operators	High School	1,361	147	494	\$36.94
Transportation, Storage, and Distribution Managers	High School	2,244	278	522	\$39.44
Aircraft Mechanics and Service Technicians	Community College	1,189	133	238	\$36.35
Automotive Service Technicians and Mechanics	Community College	4,345	504	1,211	\$25.88

Community College Programs Not Offered

In the subregion, nine programs in the advanced transportation and logistics sector are currently not offered (Exhibit 22).

Exhibit 22. Programs not offered by community colleges in the subregion.

Programs Not Offered:

- 0947.20 - Heavy Equipment Maintenance
- 0947.30 - Heavy Equipment Operation
- 0947.40 - Railroad and Light Rail Operations
- 0947.50 - Truck and Bus Driving
- 0948.30 - Motorcycle, Outboard and Small Engine Repair
- 0948.50 - Recreational Vehicle Service
- 0959.00 - Marine Technology
- 3020.20 - Piloting
- 3020.30 - Air Traffic Control

Occupational Training Opportunities

There are five programs that community colleges are not currently offering in the subregion that align with high-quality, growing occupations:

- 0947.20 - Heavy Equipment Maintenance
- 0947.30 - Heavy Equipment Operation
- 0947.40 - Railroad and Light Rail Operations
- 0948.50 - Recreational Vehicle Service
- 3020.20 - Piloting

In 2022, there were over 5,060 high-quality advanced transportation and logistics jobs in the subregion (Exhibit 23).

By 2027, annual job opening projections:

- There are more than 690 high-school-level job openings projected annually for this occupational group in the subregion; over 1,320 job openings are projected annually in the greater region.
- There are more than 60 bachelor’s degree-level job openings projected annually for this occupational group in the subregion; over 130 job openings are projected annually in the greater region.

Exhibit 23. High-quality occupations without training programs in the subregion.

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	High School	4,632	696	1,322	\$29.62
Airline Pilots, Copilots, and Flight Engineers	Bachelor's degree	432	68	134	\$135.55

Finally, the below occupations are currently being served by existing programs offered in the subregion AND could also be served by the above programs that are not offered in the subregion. If one or more of the above programs are not currently offered in the subregion and are of interest, the COE can perform a full Labor Market Analysis (LMA) on the occupations below to analyze if additional education capacity is needed (Exhibit 24).

Exhibit 24. High-quality occupations with training programs in the subregion but aligned to training programs not offered.

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
First-Line Supervisors of Mechanics, Installers, and Repairers	High School	2,409	268	655	\$36.86
Mobile Heavy Equipment Mechanics, Except Engines	High School	988	116	244	\$30.82
Operating Engineers and Other Construction Equipment Operators	High School	1,361	147	494	\$36.94

Agriculture, Water, and Environmental Technologies

The CCCC agriculture, water, and environmental technologies sector aligns with the CDE agriculture and natural resources sector. Currently, no colleges in the Inland Empire-San Bernardino Subregion currently offers any programs in the agriculture, water, and environmental technologies sector.

Community College Programs Not Offered

In the subregion, 23 programs in the agriculture, water, and environmental technologies sector are currently not offered (Exhibit 25).

Exhibit 25. Programs not offered by community colleges in the subregion.

Programs Not Offered:

0101.00 - Agriculture Technology and Sciences, General
0102.00 - Animal Science
0102.10 - Veterinary Technician (Licensed)
0102.20 - Artificial Inseminator (Licensed)
0102.30 - Dairy Science
0102.40 - Equine Science
0103.00 - Plant Science
0103.10 - Agricultural Pest Control Adviser and Operator (Licensed)
0104.00 - Viticulture, Enology and Wine Business
0109.00 - Horticulture
0109.10 - Landscape Design and Maintenance
0109.20 - Floriculture / Floristry
0109.30 - Nursery Technology
0109.40 - Turfgrass Technology
0112.00 - Agriculture Business, Sales and Service
0113.00 - Food Processing and Related Technologies
0114.00 - Forestry
0115.00 - Natural Resources
0115.10 - Parks and Outdoor Recreation
0115.20 - Wildlife and Fisheries
0116.00 - Agricultural Power Equipment Technology
0199.00 - Other Agriculture and Natural Resources
0303.00 - Environmental Technology

Occupational Training Opportunities

There are three programs that community colleges are not currently offering in the subregion that align with high-quality, growing occupations:

- 0109.00 – Horticulture
- 0112.00 - Agriculture Business, Sales, and Service
- 0116.00 - Agricultural Power Equipment Technology

In 2022, there were more than 9,480 high-quality agriculture, water, and environmental technologies jobs in the subregion (Exhibit 26).

By 2027, annual job opening projections:

- There are more than 1,030 high-school-level job openings projected annually for this occupational group in the subregion; 2,100 job openings are projected annually in the greater region.
- There are no community college-level job openings projected annually for this occupational group in the region.

Exhibit 26. High-quality occupations without training programs in the subregion.

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	High School	920	103	328	\$26.17
Mobile Heavy Equipment Mechanics, Except Engines	High School	988	116	244	\$30.82
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	High School	7,575	817	1,528	\$29.84

Business and Entrepreneurship

The CCCC business and entrepreneurship sector aligns with both CDE Business and Finance and Marketing, Sales, and Services sectors. Three colleges in the Inland Empire-San Bernardino Subregion currently use ten program codes for their business and entrepreneurship programs (Exhibit 27).

Exhibit 27. Programs offered by community colleges in the subregion.

Programs Offered:

0502.00 - Accounting
0504.00 - Banking and Finance
0505.00 - Business Administration
0506.00 - Business Management
0506.30 - Management Development and Supervision
0506.40 - Small Business and Entrepreneurship
0508.00 - International Business and Trade
0509.00 - Marketing and Distribution
0511.00 - Real Estate
0599.00 - Other Business and Management

Business and entrepreneurship programs in the subregion prepare students for employment in seven high-quality high-school-level occupations and seventeen high-quality bachelor's degree-level occupations. High-quality occupations have at least 100 annual job openings and offer a median hourly wage of \$25.74 at the regional level.

In 2022, there were more than 56,900 high-quality business and entrepreneurship jobs in the subregion related to subregional training programs (Exhibit 28).

By 2027, annual job opening projections:

- There are more than 1,890 high-school-level job openings projected annually for this occupational group in the subregion; over 4,290 job openings are projected annually in the greater region.
- There are no community college-level job openings projected annually for this occupational group in the region.
- There are more than 4,150 bachelor's degree-level job openings projected annually for this occupational group in the subregion; over 9,490 job openings are projected annually in the greater region.

Exhibit 28. Education level, projected demand, and earnings for high-quality occupations, 2022 – 2027

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
First-Line Supervisors of Mechanics, Installers, and Repairers	High School	2,409	268	655	\$36.86
First-Line Supervisors of Office and Administrative Support Workers	High School	6,792	770	1,763	\$30.34
First-Line Supervisors of Production and Operating Workers	High School	2,381	252	553	\$29.58
Payroll and Timekeeping Clerks	High School	1,058	109	248	\$26.95
Property, Real Estate, and Community Association Managers	High School	1,430	143	355	\$29.59
Real Estate Brokers	High School	742	76	198	\$39.09
Transportation, Storage, and Distribution Managers	High School	2,244	278	522	\$39.44
Accountants and Auditors	Bachelor's degree	4,083	404	958	\$37.36
Computer and Information Systems Managers	Bachelor's degree	1,139	109	237	\$77.28
Construction Managers	Bachelor's degree	2,491	229	644	\$41.10
Cost Estimators	Bachelor's degree	1,380	133	370	\$35.61
Financial Managers	Bachelor's degree	2,310	219	507	\$63.05
General and Operations Managers	Bachelor's degree	9,787	1,099	2,550	\$48.75
Human Resources Managers	Bachelor's degree	625	63	142	\$61.26
Human Resources Specialists	Bachelor's degree	3,418	410	834	\$30.82
Industrial Production Managers	Bachelor's degree	888	70	147	\$47.04
Loan Officers	Bachelor's degree	1,095	74	163	\$30.08
Logisticians	Bachelor's degree	930	127	266	\$34.58
Management Analysts	Bachelor's degree	3,106	338	735	\$40.41
Market Research Analysts and Marketing Specialists	Bachelor's degree	2,655	330	728	\$29.79
Marketing Managers	Bachelor's degree	959	96	208	\$58.58
Personal Financial Advisors	Bachelor's degree	616	52	122	\$38.22
Sales Managers	Bachelor's degree	3,549	307	644	\$46.18
Social and Community Service Managers	Bachelor's degree	819	96	242	\$33.15

Community College Programs Not Offered

In the subregion, thirteen programs in the business and entrepreneurship sector are currently not offered (Exhibit 29).

Exhibit 29. Programs not offered by community colleges in the subregion.

Programs Not Offered:

0501.00 - Business and Commerce, General
0502.10 - Tax Studies
0509.10 - Advertising
0509.20 - Purchasing
0509.40 - Sales and Salesmanship
0509.70 - E-Commerce (Business emphasis)
0511.10 - Escrow
0512.00 - Insurance
0514.10 - Legal Office Technology
0518.00 - Customer Service
1255.00 - Mortuary Science
1262.00 - Massage Therapy
3007.00 - Cosmetology and Barbering

Occupational Training Opportunities

There are seven programs that community colleges are not currently offering in the subregion that align with high-quality, growing occupations:

- 0501.00 – Business and Commerce, General
- 0502.10 – Tax Studies
- 0509.20 – Purchasing
- 0509.40 – Sales and Salesmanship
- 0509.70 – E-Commerce (Business emphasis)
- 0511.10 – Escrow
- 0512.00 – Insurance

In 2022, there were over 8,680 high-quality business and entrepreneurship jobs in the subregion (Exhibit 30).

By 2027, annual job opening projections:

- There are more than 660 high-school-level job openings projected annually for this occupational group in the subregion; over 1,460 job openings are projected annually in the greater region.
- There are no community college-level job openings projected annually for this occupational group in the greater region.
- There are more than 260 bachelor’s degree-level job openings projected annually for this occupational group in the subregion; over 550 job openings are projected annually in the greater region.

Exhibit 30. High-quality occupations without training programs in the subregion.

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
Claims Adjusters, Examiners, and Investigators	High School	658	53	101	\$38.08
First-Line Supervisors of Non-Retail Sales Workers	High School	1,618	147	324	\$31.75
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	High School	3,873	462	1,039	\$27.58
Buyers and Purchasing Agents	Bachelor's degree	1,717	175	387	\$30.50
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	Bachelor's degree	816	89	170	\$39.78

Finally, the below occupations are currently being served by existing programs offered in the subregion AND could also be served by the above programs that are not offered in the subregion. If one or more of the above programs are not currently offered in the subregion and are of interest, the COE can perform a full Labor Market Analysis (LMA) on the occupations below to analyze if additional education capacity is needed (Exhibit 31).

Exhibit 31. High-quality occupations with training programs in the subregion but aligned to training programs not offered.

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
First-Line Supervisors of Office and Administrative Support Workers	High School	6,792	770	1,763	\$30.34
Property, Real Estate, and Community Association Managers	High School	1,430	143	355	\$29.59
Real Estate Brokers	High School	742	76	198	\$39.09
Transportation, Storage, and Distribution Managers	High School	2,244	278	522	\$39.44
Accountants and Auditors	Bachelor's degree	4,083	404	958	\$37.36
Construction Managers	Bachelor's degree	2,491	229	644	\$41.10
Cost Estimators	Bachelor's degree	1,380	133	370	\$35.61
Financial Managers	Bachelor's degree	2,310	219	507	\$63.05
General and Operations Managers	Bachelor's degree	9,787	1,099	2,550	\$48.75
Human Resources Managers	Bachelor's degree	625	63	142	\$61.26
Human Resources Specialists	Bachelor's degree	3,418	410	834	\$30.82
Industrial Production Managers	Bachelor's degree	888	70	147	\$47.04
Logisticians	Bachelor's degree	930	127	266	\$34.58
Management Analysts	Bachelor's degree	3,106	338	735	\$40.41
Market Research Analysts and Marketing Specialists	Bachelor's degree	2,655	330	728	\$29.79
Marketing Managers	Bachelor's degree	959	96	208	\$58.58
Sales Managers	Bachelor's degree	3,549	307	644	\$46.18
Social and Community Service Managers	Bachelor's degree	819	96	242	\$33.15

Education and Human Development

The CCCC CO education and human development sector aligns with CDE education, child development, and family services sector. Three colleges in the Inland Empire-San Bernardino Subregion currently use seven program codes for their business and entrepreneurship programs (Exhibit 32).

Exhibit 32. Programs offered by community colleges in the subregion.

Programs Offered:

0802.00 - Educational Aide (Teacher Assistant)
1305.00 - Child Development/Early Care and Education
1305.20 - Children with Special Needs
1305.40 - Preschool Age Children
1305.50 - The School Age Child
1305.80 - Child Development Administration and Management
1305.90 - Infants and Toddlers

Education and human development programs in the subregion prepare students for employment in four high-quality bachelor's degree-level occupations. High-quality occupations have at least 100 annual job openings and offer a median hourly wage of \$25.74 at the regional level.

In 2022, there were over 8,610 high-quality education and human development jobs in the subregion related to subregional training programs (Exhibit 33).

By 2027, annual job opening projections:

- There are no community college-level job openings projected annually for this occupational group in the greater region.
- There are more than 780 bachelor's degree-level job openings projected annually for this occupational group in the subregion; over 2,460 job openings are projected annually in the greater region.

Exhibit 33. Education level, projected demand, and earnings for high-quality occupations, 2022 – 2027

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
Child, Family, and School Social Workers	Bachelor's degree	1,430	160	454	\$29.56
Elementary School Teachers, Except Special Education	Bachelor's degree	5,976	516	1,658	\$46.56
Special Education Teachers, Kindergarten and Elementary School	Bachelor's degree	756	67	217	\$40.69
Special Education Teachers, Secondary School	Bachelor's degree	454	41	133	\$53.44

Community College Programs Not Offered

In the subregion, sixteen programs in the education and human development sector are currently not offered (Exhibit 34).

Exhibit 34. Programs not offered by community colleges in the subregion.

Programs Not Offered:

- 0802.10 - Educational Aide (Teacher Assistant), Bilingual
- 0809.00 - Special Education
- 0835.60 - Coaching
- 0836.00 - Recreation
- 0836.10 - Recreation Assistant
- 0850.10 - Sign Language Interpreting
- 0860.00 - Educational Technology
- 0899.00 - Other Education
- 1305.60 - Parenting and Family Education
- 1305.70 - Foster and Kinship Care
- 1308.00 - Family Studies

Occupational Training Opportunities

There are six programs that community colleges are not currently offering in the subregion that align with high-quality, growing occupations:

- 0802.10 - Educational Aide (Teacher Assistant), Bilingual
- 0809.00 - Special Education
- 0836.10 - Recreation Assistant
- 0850.10 - Sign Language Interpreting
- 0860.00 - Educational Technology
- 1308.00 - Family Studies

In 2022, there were over 16,360 high-quality education and human development jobs in the subregion (Exhibit 35).

By 2027, annual job opening projections:

- There are no community college-level job openings projected annually for this occupational group in the greater region.
- There are over 1,720 bachelor’s degree-level job openings projected annually for this occupational group in the subregion; over 4,320 job openings are projected annually in the greater region.

Exhibit 35. High-quality occupations without training programs in the subregion.

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
General and Operations Managers	Bachelor’s degree	9,787	1,099	2,550	\$48.75
Interpreters and Translators	Bachelor’s degree	292	38	111	\$27.67
Middle School Teachers, Except Special and Career/Technical Education	Bachelor’s degree	861	84	278	\$48.89
Personal Financial Advisors	Bachelor’s degree	616	52	122	\$38.22
Secondary School Teachers, Except Special and Career/Technical Education	Bachelor’s degree	3,200	266	856	\$50.72
Training and Development Specialists	Bachelor’s degree	1,605	187	407	\$27.18

Finally, the below occupations are currently being served by existing programs offered in the subregion AND could also be served by the above programs that are not offered in the subregion. If one or more of the above programs are not currently offered in the subregion and are of interest, the COE can perform a full Labor Market Analysis (LMA) on the occupations below to analyze if additional education capacity is needed (Exhibit 36).

Exhibit 36. High-quality occupations with training programs in the subregion but aligned to training programs not offered.

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
Elementary School Teachers, Except Special Education	Bachelor's degree	5,976	516	1,658	\$46.56
Special Education Teachers, Kindergarten and Elementary School	Bachelor's degree	756	67	217	\$40.69
Special Education Teachers, Secondary School	Bachelor's degree	454	41	133	\$53.44

Energy, Construction, and Utilities

The CCCC energy, environment, and utilities sector aligns with the CDE building and construction trades sector; energy, environment, and utilities sector; and engineering and architecture sector. In the San Bernardino Subregion, two colleges currently utilize seven energy, construction, and utilities program codes (Exhibit 37).

Exhibit 37. Programs offered by community colleges in the subregion.

Programs Offered:

0201.00 - Architecture and Architectural Technology
0934.40 - Electrical Systems and Power Transmission
0935.00 - Electro-Mechanical Technology
0946.00 - Environmental Control Technology
0953.10 - Architectural Drafting
0957.20 - Construction Inspection
0958.00 - Water and Wastewater Technology

Energy, construction, and utilities programs in the subregion prepare students for employment in five high-quality high-school-level occupations, two high-quality community college-level occupations, and one high-quality bachelor's degree-level occupation. High-quality occupations have at least 100 annual job openings and offer a median hourly wage of \$25.74 at the regional level.

In 2022, there were over 8,400 high-quality energy, construction, and utilities jobs in the subregion related to subregional training programs (Exhibit 38).

By 2027, annual job opening projections:

- There are more than 740 high-school-level job openings projected annually for this occupational group in the subregion; over 2,100 job openings are projected annually in the greater region.
- There are more than 100 community college-level job openings projected annually for this occupational group in the subregion; over 220 job openings are projected annually in the greater region.
- There are more than 50 bachelor's degree-level job openings projected annually for this occupational group in the subregion; over 110 job openings are projected annually in the greater region.

Exhibit 38. Education level, projected demand, and earnings for high-quality occupations, 2022 – 2027

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
Construction and Building Inspectors	High School	513	75	204	\$37.79
Electrical Power-Line Installers and Repairers	High School	547	46	137	\$47.27
First-Line Supervisors of Construction Trades and Extraction Workers	High School	2,979	298	945	\$36.47
First-Line Supervisors of Mechanics, Installers, and Repairers	High School	2,409	268	655	\$36.86
Water and Wastewater Treatment Plant and System Operators	High School	470	55	163	\$37.49
Architectural and Civil Drafters	Community College	373	48	101	\$29.29
Electrical and Electronics Repairers, Commercial and Industrial Equipment	Community College	509	54	121	\$30.13
Architectural and Engineering Managers	Bachelor's degree	601	54	113	\$74.96

Community College Programs Not Offered

In the subregion, seventeen programs in the energy, construction, and utilities sector are currently not offered (Exhibit 39).

Exhibit 39. Programs not offered by community colleges in the subregion.

Programs Not Offered:

- 0299.00 - Other Architecture and Environmental Design
- 0946.10 - Energy Systems Technology
- 0952.00 - Construction Crafts Technology
- 0952.10 - Carpentry
- 0952.20 - Electrical
- 0952.30 - Plumbing, Pipefitting and Steamfitting
- 0952.40 - Glazing
- 0952.50 - Mill and Cabinet Work
- 0952.60 - Masonry, Tile, Cement, Lath and Plaster
- 0952.70 - Painting, Decorating, and Flooring
- 0952.80 - Drywall and Insulation
- 0952.90 - Roofing
- 0953.00 - Drafting Technology
- 0953.20 - Civil Drafting
- 0956.40 - Sheet Metal and Structural Metal
- 0957.00 - Civil and Construction Management Technology
- 2102.10 - Public Works

Occupational Training Opportunities

There are seven programs that community colleges are not currently offering in the subregion that align with high-quality, growing occupations:

- 0946.10 – Energy Systems Technology
- 0952.00 – Construction Crafts Technology
- 0952.10 – Carpentry
- 0952.20 – Electrical
- 0952.30 – Plumbing, Pipefitting and Steamfitting
- 0952.40 – Glazing
- 0956.40 – Sheet Metal and Structural Metal

In 2022, there were more than 18,130 high-quality energy, construction, and utilities jobs in the subregion (Exhibit 40).

By 2027, annual job opening projections:

- There are more than 1,670 high-school-level job openings projected annually for this occupational group in the subregion; over 4,640 job openings are projected annually in the greater region.
- There are no community college-level job openings projected annually for this occupational group in the greater region.
- There are more than 220 bachelor’s degree-level job openings projected annually for this occupational group in the subregion; over 640 job openings are projected annually in the greater region.

Exhibit 40. High-quality occupations without training programs in the subregion.

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
Carpenters	High School	7,550	679	2,072	\$28.05
Electricians	High School	3,755	499	1,191	\$28.36
Glaziers	High School	320	40	123	\$27.07
Industrial Machinery Mechanics	High School	1,653	179	365	\$29.80
Plumbers, Pipefitters, and Steamfitters	High School	1,608	179	620	\$27.67
Security and Fire Alarm Systems Installers	High School	342	48	122	\$27.78
Sheet Metal Workers	High School	417	47	153	\$30.18
Construction Managers	Bachelor's degree	2,491	229	644	\$41.10

Finally, the below occupations are currently being served by existing programs offered in the subregion AND could also be served by the above programs that are not offered in the subregion. If one or more of the above programs are not currently offered in the subregion and are of interest, the COE can perform a full Labor Market Analysis (LMA) on the occupations below to analyze if additional education capacity is needed (Exhibit 41).

Exhibit 41. High-quality occupations with training programs in the subregion but aligned to training programs not offered.

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
Electrical Power-Line Installers and Repairers	High School	547	46	137	\$47.27
First-Line Supervisors of Construction Trades and Extraction Workers	High School	2,979	298	945	\$36.47
First-Line Supervisors of Mechanics, Installers, and Repairers	High School	2,409	268	655	\$36.86
Architectural and Civil Drafters	Community College	373	48	101	\$29.29
Architectural and Engineering Managers	Bachelor's degree	601	54	113	\$74.96

Health

The CCCC health sector aligns with the CDE health science and medical technology sector. In the San Bernardino Subregion, three colleges currently utilize seventeen health program codes (Exhibit 42).

Exhibit 42. Programs offered by community colleges in the subregion.

Programs Offered:

0514.20 - Medical Office Technology
1201.00 - Health Occupations, General
1210.00 - Respiratory Care/Therapy
1221.00 - Pharmacy Technology
1223.10 - Health Information Coding
1225.00 - Radiologic Technology
1228.00 - Athletic Training and Sports Medicine
1230.10 - Registered Nursing
1230.20 - Licensed Vocational Nursing
1239.00 - Psychiatric Technician
1240.10 - Dental Assistant
1250.00 - Emergency Medical Services
1251.00 - Paramedic
1306.00 - Nutrition, Foods, and Culinary Arts
1306.20 - Dietetic Services and Management
1309.00 - Gerontology
2104.40 - Alcohol and Controlled Substances

Health programs in the subregion prepare students for employment in one high-quality high school-level occupation, four community college-level occupations, and two high-quality bachelor's degree-level occupations. High-quality occupations have at least 100 annual job openings and offer a median hourly wage of \$25.74 at the regional level.

In 2022, there were over 22,520 high-quality health jobs in the subregion related to subregional training programs (Exhibit 43).

By 2027, annual job opening projections:

- There are more than 100 high-school-level job openings projected annually for this occupational group in the subregion; 290 job openings are projected annually in the greater region.
- There are more than 550 community college-level job openings projected annually for this occupational group in the subregion; 1,320 job openings are projected annually in the greater region.
- There are more than 1,290 bachelor's degree-level job openings projected annually for this occupational group in the subregion; over 3,100 job openings are projected annually in the greater region.

Exhibit 43. Education level, projected demand, and earnings for high-quality occupations, 2022 - 2027

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
Chefs and Head Cooks	High School	694	108	295	\$27.08
Licensed Practical and Licensed Vocational Nurses	Community College	3,682	373	873	\$30.36
Psychiatric Technicians	Community College	574	62	148	\$31.54
Radiologic Technologists and Technicians	Community College	789	62	156	\$45.54
Respiratory Therapists	Community College	833	62	143	\$37.99
Registered Nurses	Bachelor's degree	14,493	1,107	2,616	\$58.62
Substance Abuse, Behavioral Disorder, and Mental Health Counselors	Bachelor's degree	1,459	188	485	\$28.09

Community College Programs Not Offered

In the subregion, 32 programs in the health sector are currently not offered (Exhibit 44).

Exhibit 44. Programs not offered by community colleges in the subregion.

Programs Not Offered:	
1202.00 - Hospital and Health Care Administration	1219.00 - Optical Technology
1205.00 - Medical Laboratory Technology	1220.00 - Speech/Language Pathology and Audiology
1205.10 - Phlebotomy	1222.00 - Physical Therapist Assistant
1206.00 - Physicians Assistant	1223.00 - Health Information Technology
1208.00 - Medical Assisting	1224.00 - School Health Clerk
1208.10 - Clinical Medical Assisting	1226.00 - Radiation Therapy Technician
1208.20 - Administrative Medical Assisting	1227.00 - Diagnostic Medical Sonography
1208.30 - Health Facility Unit Coordinator	1230.00 - Nursing
1209.00 - Hospital Central Service Technician	1230.30 - Certified Nurse Assistant
1211.00 - Polysomnography	1230.80 - Home Health Aide
1212.00 - Electro-Neurodiagnostic Technology	1240.00 - Dental Occupations
1213.00 - Cardiovascular Technician	1240.20 - Dental Hygienist
1214.00 - Orthopedic Assistant	1240.30 - Dental Laboratory Technician
1215.00 - Electrocardiography	1261.00 - Community Health Care Worker
1217.00 - Surgical Technician	1299.00 - Other Health Occupations
1218.00 - Occupational Therapy Technology	1306.60 - Dietetic Technology

Occupational Training Opportunities

There are five programs that community colleges are not currently offering in the subregion that align with high-quality, growing occupations:

- 1202.00 – Hospital and Health Care Administration
- 1214.00 – Orthopedic Assistant
- 1226.00 – Radiation Therapy Technician
- 1230.00 – Nursing
- 1240.00 – Dental Occupations

In 2022, there were over 2,850 high-quality health jobs in the subregion (Exhibit 45).

By 2027, annual job opening projections:

- There are more than 120 community college-level job openings projected annually for this occupational group in the subregion; over 340 job openings are projected annually in the greater region.
- There are more than 230 bachelor’s degree-level job openings projected annually for this occupational group in the subregion; over 560 job openings are projected annually in the greater region.

Exhibit 45. High-quality occupations without training programs in the subregion.

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
Dental Hygienists	Community College	548	58	166	\$47.19
Physical Therapist Assistants	Community College	358	71	182	\$37.00
Medical and Health Services Managers	Bachelor's degree	1,952	235	562	\$59.13

Finally, the below occupations are currently being served by existing programs offered in the subregion AND could also be served by the above programs that are not offered in the subregion. If one or more of the above programs are not currently offered in the subregion and are of interest, the COE can perform a full Labor Market Analysis (LMA) on the occupations below to analyze if additional education capacity is needed (Exhibit 46).

Exhibit 46. High-quality occupations with training programs in the subregion but aligned to training programs not offered.

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
Licensed Practical and Licensed Vocational Nurses	Community College	3,682	373	873	\$30.36
Radiologic Technologists and Technicians	Community College	789	62	156	\$45.54
Registered Nurses	Bachelor's degree	14,493	1,107	2,616	\$58.62

Information and Communication Technologies (ICT)/Digital Media

The CCCCCO information and communication technologies/digital media (ICT/DM) sector aligns with the CDE arts, media, and entertainment sector and the information and communication technologies sector. Three colleges in the San Bernardino Subregion currently utilize 24 ICT/DM program codes (Exhibit 47).

Exhibit 47. Programs offered by community colleges in the subregion.

Programs Offered:

0514.00 - Office Technology/Office Computer Applications
0602.00 - Journalism
0604.00 - Radio and Television
0604.10 - Radio
0604.20 - Television (including combined TV/Film/Video)
0612.20 - Film Production
0614.00 - Digital Media
0614.10 - Multimedia
0614.30 - Website Design and Development
0614.60 - Computer Graphics and Digital Imagery
0701.00 - Information Technology, General
0702.00 - Computer Information Systems
0707.10 - Computer Programming
0708.00 - Computer Infrastructure and Support
0708.10 - Computer Networking
0708.20 - Computer Support
0709.00 - World Wide Web Administration
0799.00 - Other Information Technology
0934.30 - Telecommunications Technology
1005.00 - Commercial Music
1012.00 - Applied Photography
1013.00 - Commercial Art
1030.00 - Graphic Art and Design
2206.10 - Geographic Information Systems

ICT/DM programs in the subregion prepare students for employment in three high-quality high school-level occupations, two community college-level occupations, and six high-quality bachelor's degree-level occupations. High-quality occupations have at least 100 annual job openings and offer a median hourly wage of \$25.74 at the regional level.

In 2022, there were over 16,820 high-quality ICT/DM jobs in the subregion related to subregional training programs (Exhibit 48).

By 2027, annual job opening projections:

- There are more than 950 high-school-level job openings projected annually for this occupational group in the subregion; over 2,230 job openings are projected annually in the greater region.
- There are more than 210 community college-level job openings projected annually for this occupational group in the subregion; over 470 job openings are projected annually in the greater region.
- There are more than 550 bachelor’s degree-level job openings projected annually for this occupational group in the subregion; over 1,280 job openings are projected annually in the greater region.

Exhibit 48. Education level, projected demand, and earnings for high-quality occupations, 2022 - 2027

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
Executive Secretaries and Executive Administrative Assistants	High School	1,322	139	340	\$33.46
First-Line Supervisors of Office and Administrative Support Workers	High School	6,792	770	1,763	\$30.34
Telecommunications Line Installers and Repairers	High School	499	49	136	\$30.45
Computer User Support Specialists	Community College	1,633	152	326	\$29.25
Telecommunications Equipment Installers and Repairers, Except Line Installers	Community College	541	63	151	\$30.08
Computer and Information Systems Managers	Bachelor’s degree	1,139	109	237	\$77.28
Computer Occupations, All Other	Bachelor’s degree	1,497	131	302	\$36.36
Computer Systems Analysts	Bachelor’s degree	1,181	98	210	\$48.96
Graphic Designers	Bachelor’s degree	985	98	252	\$26.52
Network and Computer Systems Administrators	Bachelor’s degree	771	60	134	\$44.40
Writers and Authors	Bachelor’s degree	463	56	146	\$26.32

Community College Programs Not Offered

In the subregion, 12 programs in the ICT/DM sector are currently not offered (Exhibit 49).

Exhibit 49. Programs not offered by community colleges in the subregion.

Programs Not Offered:

0604.30 - Broadcast Journalism
0607.00 - Technical Communication
0610.00 - Mass Communications
0614.20 - Electronic Game Design
0614.40 - Animation
0614.50 - Desktop Publishing
0699.00 - Other Media and Communications
0702.10 - Software Applications
0707.00 - Computer Software Development
0707.20 - Database Design and Administration
0707.30 - Computer Systems Analysis
0709.10 - E-Commerce (Technology emphasis)

Occupational Training Opportunities

There are five programs that community colleges are not currently offering in the subregion that align with high-quality, growing occupations:

- 0604.30 - Broadcast Journalism
- 0702.10 - Software Applications
- 0707.00 - Computer Software Development
- 0707.30 - Computer Systems Analysis
- 0709.10 - E-Commerce (Technology emphasis)

Currently, all high-quality ICT/DM jobs in the subregion aligned with the above programs are being served by existing training programs.

However, the below occupations are currently being served by existing programs offered in the subregion AND could also be served by the above programs that are not offered in the subregion. If one or more of the above programs are not currently offered in the subregion and are of interest, the COE can perform a full Labor Market Analysis (LMA) on the occupations below to analyze if additional education capacity is needed (Exhibit 50).

Exhibit 50. High-quality occupations with training programs in the subregion but aligned to training programs not offered.

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
First-Line Supervisors of Office and Administrative Support Workers	High School	6,792	770	1,763	\$30.34
Computer and Information Systems Managers	Bachelor's degree	1,139	109	237	\$77.28
Computer Occupations, All Other	Bachelor's degree	1,497	131	302	\$36.36
Computer Systems Analysts	Bachelor's degree	1,181	98	210	\$48.96
Graphic Designers	Bachelor's degree	985	98	252	\$26.52
Writers and Authors	Bachelor's degree	463	56	146	\$26.32

Public Safety

The CCCC public safety sector aligns with the CDE public services sector. Three colleges in the San Bernardino Subregion currently utilize six public safety program codes (Exhibit 51).

Exhibit 51. Programs offered by community colleges in the subregion.

Programs Offered:

2105.00 - Administration of Justice
2105.10 - Corrections
2105.30 - Industrial and Transportation Security
2105.50 - Police Academy
2133.00 - Fire Technology
2133.50 - Fire Academy

Public safety programs in the subregion prepare students for employment in three high-quality high school-level occupations, one high-quality community college-level occupation, and one high-quality bachelor's degree-level occupation. High-quality occupations have at least 100 annual job openings and offer a median hourly wage of \$25.74 at the regional level.

In 2022, there were more than 6,130 high-quality public safety jobs in the subregion related to subregional training programs (Exhibit 52).

By 2027, annual job opening projections:

- There are 420 high-school-level job openings projected annually for this occupational group in the subregion; over 1,350 job openings are projected annually in the greater region.
- There are more than 110 community college-level job openings projected annually for this occupational group in the subregion; over 380 job openings are projected annually in the greater region.
- There are 160 bachelor's degree-level job openings projected annually for this occupational group in the subregion; over 450 job openings are projected annually in the greater region.

Exhibit 52. Education level, projected demand, and earnings for high-quality occupations, 2022 – 2027

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
Correctional Officers and Jailers	High School	1,339	146	441	\$42.42
Detectives and Criminal Investigators	High School	375	39	128	\$53.18
Police and Sheriff's Patrol Officers	High School	1,977	235	787	\$48.44
Firefighters	Community College	1,014	119	385	\$31.07
Child, Family, and School Social Workers	Bachelor's degree	1,430	160	454	\$29.56

Community College Programs Not Offered

In the subregion, four programs in the public safety sector are currently not offered (Exhibit 53).

Exhibit 53. Programs not offered by community colleges in the subregion.

Programs Not Offered:

- 2105.20 - Probation and Parole
- 2105.40 - Forensics, Evidence, and Investigation
- 2133.10 - Wildland Fire Technology
- 2199.00 - Other Public and Protective Services

Occupational Training Opportunities

There are three programs that community colleges are not currently offering in the subregion that align with high-quality, growing occupations:

- 2105.20 - Probation and Parole
- 2105.40 - Forensics, Evidence, and Investigation
- 2133.10 – Wildland Fire Technology

Currently, all high-quality public safety jobs in the subregion aligned with the above programs are being served by existing training programs.

However, the below occupations are currently being served by existing programs offered in the subregion AND could also be served by the above programs that are not offered in the subregion. If one or more of the above programs are not currently offered in the subregion and are of interest, the COE can perform a full Labor Market Analysis (LMA) on the occupations below to analyze if additional education capacity is needed (Exhibit 54).

Exhibit 54. High-quality occupations with training programs in the subregion but aligned to training programs not offered.

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
Correctional Officers and Jailers	High School	1,339	146	441	\$42.42
Detectives and Criminal Investigators	High School	375	39	128	\$53.18
Police and Sheriff's Patrol Officers	High School	1,977	235	787	\$48.44
Firefighters	Community College	1,014	119	385	\$31.07

Retail, Hospitality, and Tourism

The CCCC retail, hospitality, and tourism sector aligns with the CDE fashion and interior design sector and the hospitality, tourism, and recreation sector. Two colleges in the San Bernardino Subregion currently utilize nine retail, hospitality, and tourism program codes (Exhibit 55).

Exhibit 55. Programs offered by community colleges in the subregion.

Programs Offered:

0506.50 - Retail Store Operations and Management
0514.40 - Office Management
1302.00 - Interior Design and Merchandising
1303.10 - Fashion Design
1303.20 - Fashion Merchandising
1306.30 - Culinary Arts
1307.00 - Hospitality
1307.10 - Restaurant and Food Services and Management
1307.20 - Lodging Management

Retail, hospitality, and tourism programs in the subregion prepare students for employment in four high-quality high school-level occupations and five high-quality bachelor's degree-level occupations. High-quality occupations have at least 100 annual job openings and offer a median hourly wage of \$25.74 at the regional level.

In 2022, there were more than 34,410 high-quality retail, hospitality, and tourism jobs in the subregion related to subregional training programs (Exhibit 56).

By 2027, annual job opening projections:

- There are more than 2,150 high-school-level job openings projected annually for this occupational group in the subregion; over 4,620 job openings are projected annually in the greater region.
- There are no community college-level job openings projected annually for this occupational group in the greater region.
- There are more than 1,740 bachelor's degree-level job openings projected annually for this occupational group in the subregion; over 3,980 job openings are projected annually in the greater region.

Exhibit 56. Education level, projected demand, and earnings for high-quality occupations, 2022 – 2027

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
Chefs and Head Cooks	High School	694	108	295	\$27.08
First-Line Supervisors of Office and Administrative Support Workers	High School	6,792	770	1,763	\$30.34
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	High School	3,873	462	1,039	\$27.58
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	High School	7,575	817	1,528	\$29.84
Buyers and Purchasing Agents	Bachelor's degree	1,717	175	387	\$30.50
General and Operations Managers	Bachelor's degree	9,787	1,099	2,550	\$48.75
Interior Designers	Bachelor's degree	360	46	114	\$31.68
Market Research Analysts and Marketing Specialists	Bachelor's degree	2,655	330	728	\$29.79
Marketing Managers	Bachelor's degree	959	96	208	\$58.58

Community College Programs Not Offered

In the subregion, 12 programs in the retail, hospitality, and tourism sector are currently not offered (Exhibit 57).

Exhibit 57. Programs not offered by community colleges in the subregion.

Programs Not Offered:

0509.60 - Display
0516.00 - Labor and Industrial Relations
0606.00 - Public Relations
0835.70 - Aquatics and Lifesaving
0959.10 - Diving and Underwater Safety
1301.00 - Family and Consumer Sciences, General
1301.10 - Consumer Services
1303.00 - Fashion
1307.30 - Resort and Club Management
3008.00 - Dry Cleaning
3009.00 - Travel Services and Tourism
3020.40 - Flight Attendant

Occupational Training Opportunities

There are three programs that community colleges are not currently offering in the subregion that align with high-quality, growing occupations:

- 0509.60 - Display
- 0516.00 - Labor and Industrial Relations
- 1301.00 - Family and Consumer Sciences, General

In 2022, there were more than 10,730 high-quality retail, hospitality, and tourism jobs in the subregion (Exhibit 58).

By 2027, annual job opening projections:

- There are more than 840 high-school-level job openings projected annually for this occupational group in the subregion; over 1,640 job openings are projected annually in the greater region.
- There are no community college-level job openings projected annually for this occupational group in the greater region.
- There are more than 390 bachelor's degree-level job openings projected annually for this occupational group in the subregion; over 1,170 job openings are projected annually in the greater region.

Exhibit 58. High-quality occupations without training programs in the subregion.

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
First-Line Supervisors of Non-Retail Sales Workers	High School	1,618	147	324	\$31.75
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	High School	4,632	696	1,322	\$29.62
Compliance Officers	Bachelor's degree	1,283	131	319	\$34.02
Secondary School Teachers, Except Special and Career/Technical Education	Bachelor's degree	3,200	266	856	\$50.72

Finally, the below occupations are currently being served by existing programs offered in the subregion AND could also be served by the above programs that are not offered in the subregion. If one or more of the above programs are not currently offered in the subregion and are of interest, the COE can perform a full Labor Market Analysis (LMA) on the occupations below to analyze if additional education capacity is needed (Exhibit 59).

Exhibit 59. High-quality occupations with training programs in the subregion but aligned to training programs not offered.

Description	Entry level Education	Subregion 2022 Jobs	Subregion 2022 - 2027 Avg. Annual Openings	Regional 2022 - 2027 Avg. Annual Openings	Regional Median Hourly Earnings
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	High School	7,575	817	1,528	\$29.84
Buyers and Purchasing Agents	Bachelor's degree	1,717	175	387	\$30.50
Market Research Analysts and Marketing Specialists	Bachelor's degree	2,655	330	728	\$29.79

Appendix A: Methodologies and Data Sources

This report focuses on occupations identified through the Bureau of Labor Statistics (BLS) Standard Occupational Classification (SOC) System that are cross walked to California Community Colleges Taxonomy of Programs (TOP) codes. These occupations are most relevant for students who enroll in community college career education training programs (CE). This report analyzes occupations related to the 10 sectors designated by the California Community Colleges Chancellor's Office (CCCCO) with a typical entry-level education requirement of either high school, community college, or a bachelor's degree. The subregional analysis by sector allows for a comprehensive evaluation of where high-quality jobs exist and where colleges may invest in CE programs to address labor market demand.

A program inventory was conducted for each CCCCCO sector, examining programs offered by community colleges in the region. Education levels, current employment (2022 job count), projected occupational demand (annual job openings), and earnings associated with occupations in each sector are included in the assessment. For each sector, occupations that meet the high-quality job definition are highlighted, i.e., occupations that are both in-demand and have high-wages. For this study, an occupation is considered in-demand if it has 100 or more regional annual job openings over the next five years. Occupations are considered high wage if their median hourly wage meets or exceeds \$25.74 per hour, the MIT living wage standard for a single adult in California. Further information on MIT Living Wage Standard Methodology is available on their website.⁷

Labor market data in this report is sourced from Lightcast 2023.4. The community college program inventory was sourced from the Chancellor's Office Curriculum Inventory (COCI 2.0) and each community college's course catalog. Each college verified the program inventory to ensure the college offerings were current and accurate. Each sector contains a list of existing program offerings and programs currently not offered by community colleges in the subregion.

⁷ While the [UW self-sufficiency standard](#) is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2021, does not account for significant increases in the cost of living in the Inland Empire the last three years, and is below the State of California minimum wage of \$16.00. For these reasons, the COE will provide an alternative living wage calculation from MIT in the analysis below as an additional reference point. MIT estimates, the living wage for an adult with no kids living in 2024 is \$26.30 in Riverside County and \$25.17 in San Bernardino County.

Appendix B: Zip codes used in this report.

Population and Projected Population with change, Inland Empire-San Bernardino County Metro Subregion, 2022-2027

Zip Code and Area	2022 Population	2027 Population	Projected % Change
91729 Rancho Cucamonga	2,070	2,298	11.0%
91708 Chino	17,791	19,201	7.9%
92413 San Bernardino	2,484	2,650	6.7%
91764 Ontario	56,557	60,219	6.5%
92335 Fontana	96,635	102,549	6.1%
92427 San Bernardino	2,866	3,037	6.0%
92410 San Bernardino	45,671	48,301	5.8%
92337 Fontana	36,828	38,909	5.7%
92376 Rialto	84,756	89,282	5.3%
91763 Montclair	39,652	41,762	5.3%
92405 San Bernardino	29,011	30,536	5.3%
91761 Ontario	63,460	66,616	5.0%
91762 Ontario	63,550	66,699	5.0%
91709 Chino Hills	82,466	86,529	4.9%
92407 San Bernardino	65,895	69,113	4.9%
92411 San Bernardino	26,214	27,404	4.5%
92324 Colton	60,029	62,739	4.5%
92336 Fontana	98,531	102,918	4.5%
92404 San Bernardino	62,695	65,342	4.2%
92375 Redlands	1,077	1,122	4.2%
92334 Fontana	2,361	2,460	4.2%
92408 San Bernardino	13,958	14,537	4.2%
92406 San Bernardino	2,335	2,430	4.0%
92316 Bloomington	29,609	30,682	3.6%
92423 San Bernardino	1,579	1,636	3.6%
92401 San Bernardino	1,709	1,766	3.3%
91743 Guasti	1,113	1,150	3.3%
91786 Upland	54,521	56,233	3.1%
91739 Rancho Cucamonga	42,684	43,921	2.9%
91730 Rancho Cucamonga	71,431	73,406	2.8%
91710 Chino	82,517	84,733	2.7%
92377 Rialto	22,973	23,571	2.6%
92374 Redlands	45,434	46,141	1.6%
91785 Upland	2,087	2,117	1.4%

92346 Highland	63,664	64,558	1.4%
92369 Patton	1,745	1,764	1.1%
92354 Loma Linda	24,902	25,170	1.1%
92318 Bryn Mawr	175	175	0.0%
92313 Grand Terrace	12,058	12,043	-0.1%
92331 Fontana	1,488	1,479	-0.6%
92359 Mentone	8,712	8,601	-1.3%
92378 Rimforest	366	361	-1.4%
91701 Rancho Cucamonga	38,859	38,050	-2.1%
92399 Yucaipa	52,553	51,065	-2.8%
91737 Rancho Cucamonga	23,574	22,889	-2.9%
92373 Redlands	30,141	29,051	-3.6%
92402 San Bernardino	1,177	1,130	-4.0%
92341 Green Valley Lake	80	77	-4.1%
92391 Twin Peaks	3,129	2,976	-4.9%
91784 Upland	25,565	24,071	-5.8%
92325 Crestline	8,022	7,496	-6.6%
92315 Big Bear Lake	4,934	4,604	-6.7%
92382 Running Springs	4,545	4,215	-7.3%
92385 Skyforest	561	519	-7.4%
92305 Angelus Oaks	538	497	-7.6%
92339 Forest Falls	920	850	-7.6%
92322 Cedarpines Park	527	486	-7.7%
92314 Big Bear City	11,489	10,601	-7.7%
92386 Sugarloaf	951	854	-10.2%
92358 Lytle Creek	651	578	-11.2%
92352 Lake Arrowhead	4,361	3,868	-11.3%
92397 Wrightwood	4,556	4,040	-11.3%
92321 Cedar Glen	188	165	-12.5%
92317 Blue Jay	398	342	-14.0%
92333 Fawnskin	377	310	-17.7%

Appendix C: Terms & Definitions

Labor Market Definitions

Industry Employment is a count of jobs in a given geography. Businesses operating within the same industry produce similar goods and services and share comparable production processes for creating these goods and services. The North American Industry Classification System (NAICS) is the federal system used to classify all business establishments into specific industries. Staffing patterns show the distribution of occupational employment and demand for each industry. For example, Community Colleges employ faculty, but the institutions also hire a variety of administrators and support staff to maintain operations.

The same is true for most industries. Regional educational institutions should be aware of the types of industries in their area to help inform the needed industry-specific occupational skills that may be required by local employers.

A **location quotient** quantifies how concentrated a particular industry, cluster, occupation, or demographic group is in a region compared to the nation. It can reveal what makes a particular region “unique.” A high location quotient (1.2 times or greater concentration in the local region compared to the nation) reveals industries that are highly represented and make the area unique. Conversely, industries with a low location quotient account for a smaller share of jobs than the national average, indicating that while job seekers may find work in these industries, they are more likely to find a higher concentration of these jobs elsewhere in the nation.

An occupation is a set of activities or tasks employees are paid to perform. Employees that perform essentially the same tasks are in the same occupation, whether or not they work in the same industry. Some occupations are concentrated in a few particular industries; other occupations are found in many industries. For example, jobs for registered nurses are concentrated in the healthcare industry sector, but educational industries may also employ these jobs. The Standard Occupational Classification (SOC) System classifies 775 detailed occupations according to the tasks and duties of each job.

Annual Job Openings are calculated by the sum of projected growth and replacement jobs ($\text{Growth} + \text{Replacements} = \text{Openings}$). Growth captures the changes in the total number of workers employed in an occupation, while replacement jobs are estimates of workers permanently leaving an occupation and needing to be replaced by new hires. A combination of both numbers indicates the total openings for the time frame.

High-Quality Occupation Definition: The analysis identified high-quality occupations that show relatively strong workforce demand (100+ regional annual job openings) and offer a median hourly wage that is higher than the California living wage standard (\$25.74 per hour). As a result, the occupations highlighted in this report can be used to calibrate training programs to address regional in-demand jobs that pay self-sustaining earnings.

Education Definitions

- **No-degree-level:** Occupations that require no formal education.
- **High-school-level:** Occupations that require a high school diploma or equivalent.
- **Community-college-level:** Occupations that mostly require some college, a postsecondary certificate, or an associate degree. These are occupations relevant to community college training.
- **Bachelor’s-degree-level:** Occupations that mostly require a bachelor’s degree. These occupations are mostly trained by four-year colleges and universities.
- **Advanced-degree-level:** Occupations that typically require education and training beyond a bachelor’s degree.

Demographic Definitions⁸

White: includes all individuals who identify with one or more nationalities or ethnic groups originating in Europe, the Middle East, or North Africa. Examples of these groups include, but are not limited to, German, Irish, English, Italian, Lebanese, Egyptian, Polish, French, Iranian, Slavic, Cajun, and Chaldean.

Black or African American: includes all individuals who identify with one or more nationalities or ethnic groups originating in any of the black racial groups of Africa. Examples of these groups include, but are not limited to, African American, Jamaican, Haitian, Nigerian, Ethiopian, and Somali.

American Indian or Alaska Native: includes all individuals who identify with any of the original peoples of North and South America (including Central America) and who maintain tribal affiliation or community attachment. It includes people who identify as “American Indian” or “Alaska Native” and includes groups such as the Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, and Nome Eskimo Community.

Asian: includes all individuals who identify with one or more nationalities or ethnic groups originating in the Far East, Southeast Asia, or the Indian subcontinent. Examples of these groups include, but are not limited to, Chinese, Filipino, Asian Indian, Vietnamese, Korean, and Japanese. The category also includes groups such as Pakistani, Cambodian, Hmong, Thai, Bengali, Mien, etc.

Native Hawaiian and Pacific Islander: includes all individuals who identify with one or more nationalities or ethnic groups originating in Hawaii, Guam, Samoa, or other Pacific Islands. Examples of these groups include, but are not limited to, Native Hawaiian, Samoan, Chamorro, Tongan, Fijian, and Marshallese.

























⁸ This report uses race and ethnicity data from Lightcast collected by the U.S. Census Bureau through the American Community Survey. The terms in this document, including white, Hispanic, and Black, adhere to the terms and definitions the Census Bureau uses in collecting its data. For definitions, please refer to <https://www.census.gov/topics/population/race/about.html>.

Hispanic, Latino, or Spanish origin: includes all individuals who identify with one or more nationalities or ethnic groups originating in Mexico, Puerto Rico, Cuba, Central, and South America, and other Spanish cultures. Examples of these groups include, but are not limited to, Mexican or Mexican American, Puerto Rican, Cuban, Salvadoran, Dominican, Colombian, Guatemalan, Honduran, Spaniard, Ecuadorian, Peruvian, and Venezuelan.

Appendix D: Sector Crosswalk Used for Program Inventory

A program inventory study was conducted for each CCCC sector, examining each college with related programs that align with CDE sectors. The CDE developed Career Education (CE) Model Curriculum Standards for grades 7 through 12 that categorize courses and programs into 15 industry sectors. The CE model sectors are not to be confused with the NAICS employment industry sectors discussed in the previous section of this report or with the CCCC sectors. The CE model provides a useful way to classify postsecondary CE offerings and connect career pathways from high school to college. The relationship between the CDE and CCCC sectors is illustrated below.

Exhibit C1. Crosswalk showing CCCCO priority and emerging sector alignment with CDE sectors

CCCO Priority and Emerging Sectors		CDE Industry Sectors	
	Advanced Manufacturing	Manufacturing and Product Development	
	Advanced Transportation	Transportation	
	Agriculture, Water & Environmental Technologies	Agriculture and Natural Resources	
	Business & Entrepreneurship	Business and Finance	
		Marketing, Sales, and Services	
	Education & Human Development	Education, Child Development, and Family Services	
	Energy, Construction & Utilities	Building and Construction Trades	
		Energy, Environment, and Utilities	
		Engineering and Architecture	
	Health	Health Science and Medical Technology	
	Information & Communication Technologies (ICT)/Digital Media	Arts, Media, and Entertainment	
		Information and Communication Technologies	
	Public Safety	Public Services	
	Retail, Hospitality & Tourism	Fashion and Interior Design	
		Hospitality, Tourism, and Recreation	