

2023

WORKFORCE DEMAND ASSESSMENT HIGH DESERT SUBREGION



INLAND EMPIRE/DESERT
REGIONAL CONSORTIUM
STRONG WORKFORCE



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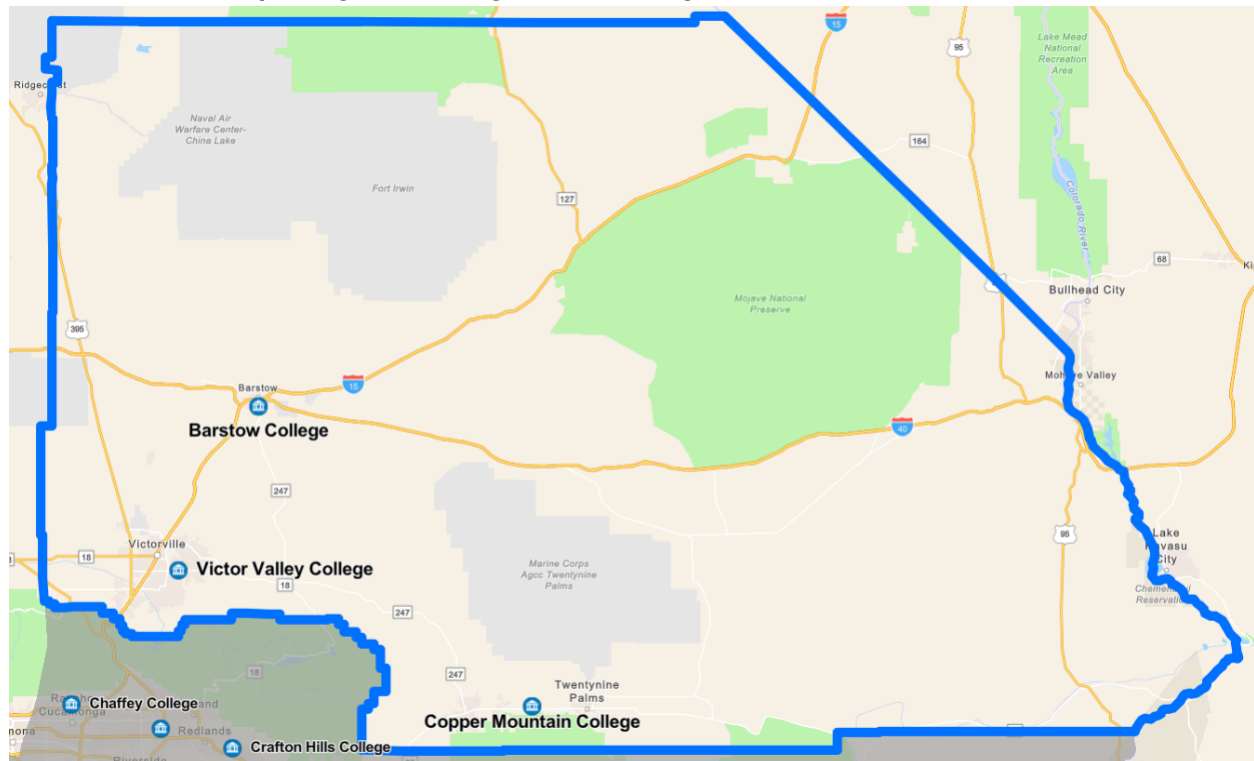
High Desert Subregional Overview

San Bernardino County’s High Desert Subregion extends north from the San Bernardino Mountains and San Gabriel Mountains to the southern border of Inyo County. The subregion extends east from the Los Angeles County border to the Arizona and Nevada state lines. The High Desert subregion is the largest of the four subregions by area but contains about 11% of the regional population and 9% of its jobs. The subregion is home to three community colleges and 10 high school districts (See Appendix A for a map of all subregions and a list of ZIP codes associated with this subregion.)

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.

Information on regional demographics, industries, and high-quality jobs is available in the latest Inland Empire/Desert Regional Workforce Demand Assessment: <https://bit.ly/2022IED>.

Exhibit 1. Community colleges in the High Desert Subregion



Methodology and Data Sources

This report focuses on occupations identified through the Bureau of Labor Statistics (BLS) Standard Occupational Classification (SOC) System are crosswalked to California Community Colleges Taxonomy of Programs (TOP) codes. These occupations are most relevant for students who enroll in community college education and training programs. 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 or community college. 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. Current employment (2021 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 \$21.82 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.¹

Labor market data in this report is sourced from Lightcast 2022.4. 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 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.

¹ "Living Wage Calculator for California," MIT Living Wage, 2023, accessed January 18, 2023, <https://livingwage.mit.edu/states/06>.

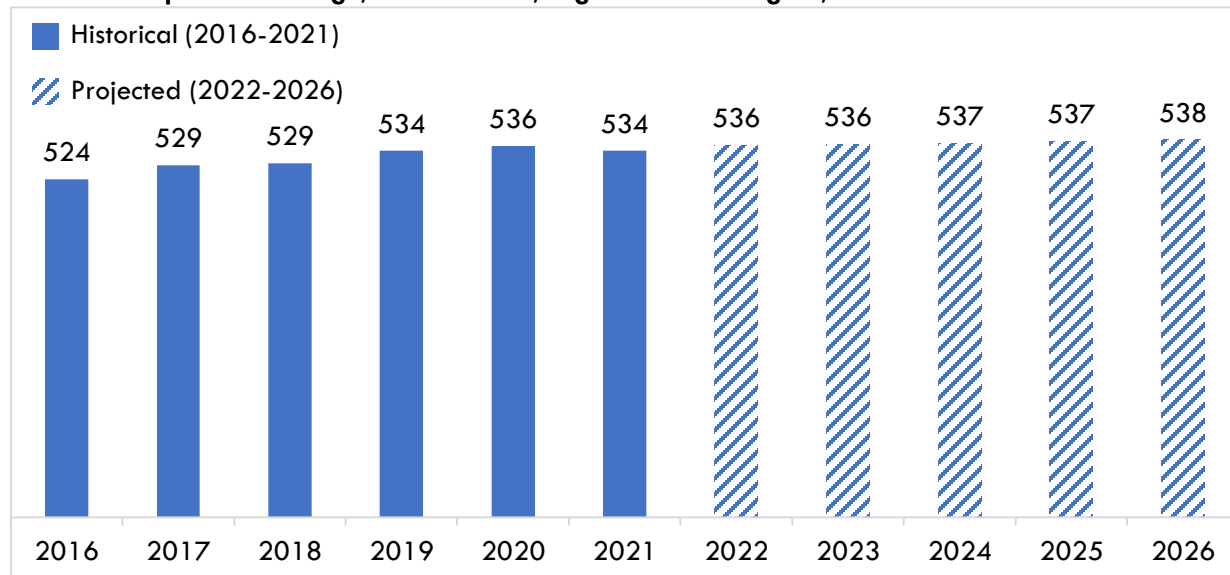
High Desert Subregion Demographics and Labor Force

This section analyzes the High Desert Subregion’s demographic characteristics, including population size, gender, race/ethnicity, age, educational attainment, and labor force participation. Providing foundational information on a subregion’s demographic composition ensures that all residents are equitably served by local educational institutions. The demographic data displayed in this report reflects the examined subregional area and may not directly reflect a postsecondary institution’s student population.

Population

In 2021, the High Desert Subregion contained about 533,900 residents, or 11.5% of the region’s 4.65 million residents (Exhibit 2). Between 2016 and 2021, the subregion’s population increased by nearly 10,300 residents or by 2%, while the greater region increased by 3.2%. Over the next five years, between 2021 and 2026, the subregion’s population is projected to increase by 0.8%, adding more than 4,000 residents. Population growth in this subregion is expected to grow slower than the overall region (up by 4.1%) but faster than the state (declining by -0.4%).

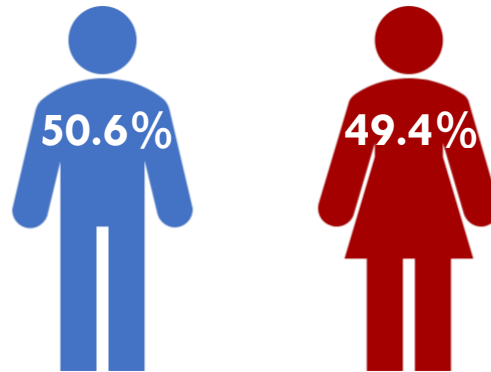
Exhibit 2. Population change, in thousands, High Desert Subregion, 2016-2026



Gender

The subregion's population has slightly more male (50.6%) than female (49.4%) residents (Exhibit 3). These numbers are similar to the greater region's gender composition, in which 50.3% of residents are male and 49.7% are female.

Exhibit 3. Gender composition, High Desert Subregion, 2021



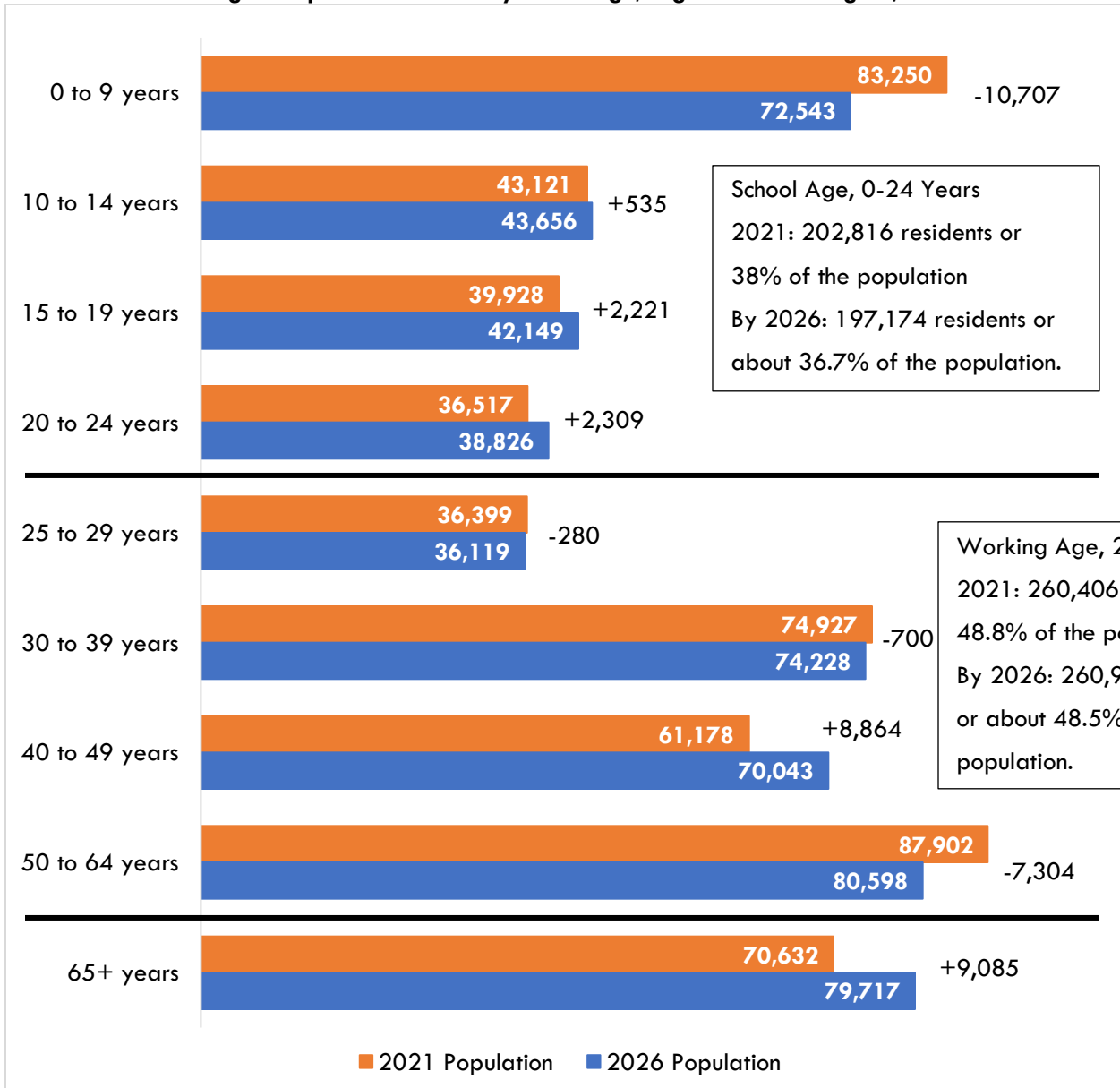
Age

The size of resident age categories may provide insight into future demand for housing, services, and educational enrollment needs. In 2021, the school-age population, the 0-to-24 age group represented 38% of the subregion's population (Exhibit 4). By 2026, this age group is projected to decrease by nearly 3% or 5,642 residents. The most notable decline in population is projected to occur in the 0-to-9 age group (down 12.9%).

The working-age population, the 25-to-64 age group, comprised nearly 49% of the subregion's population in 2021. Over the next five years, the working-age population is expected to gain about 581 residents, expanding by 0.2%. Within the working-age population, notable growth over the next five years is projected in the 40-to-49 age group, increasing by 14.5%. The 50-to-64 age group was the largest age group in the subregion in 2021.

The age group comprising residents 65 years and older is projected to rise by 12.9% over the next five years, adding nearly 9,100 residents.

Exhibit 4. Resident age composition and five-year change, High Desert Subregion, 2021-2026

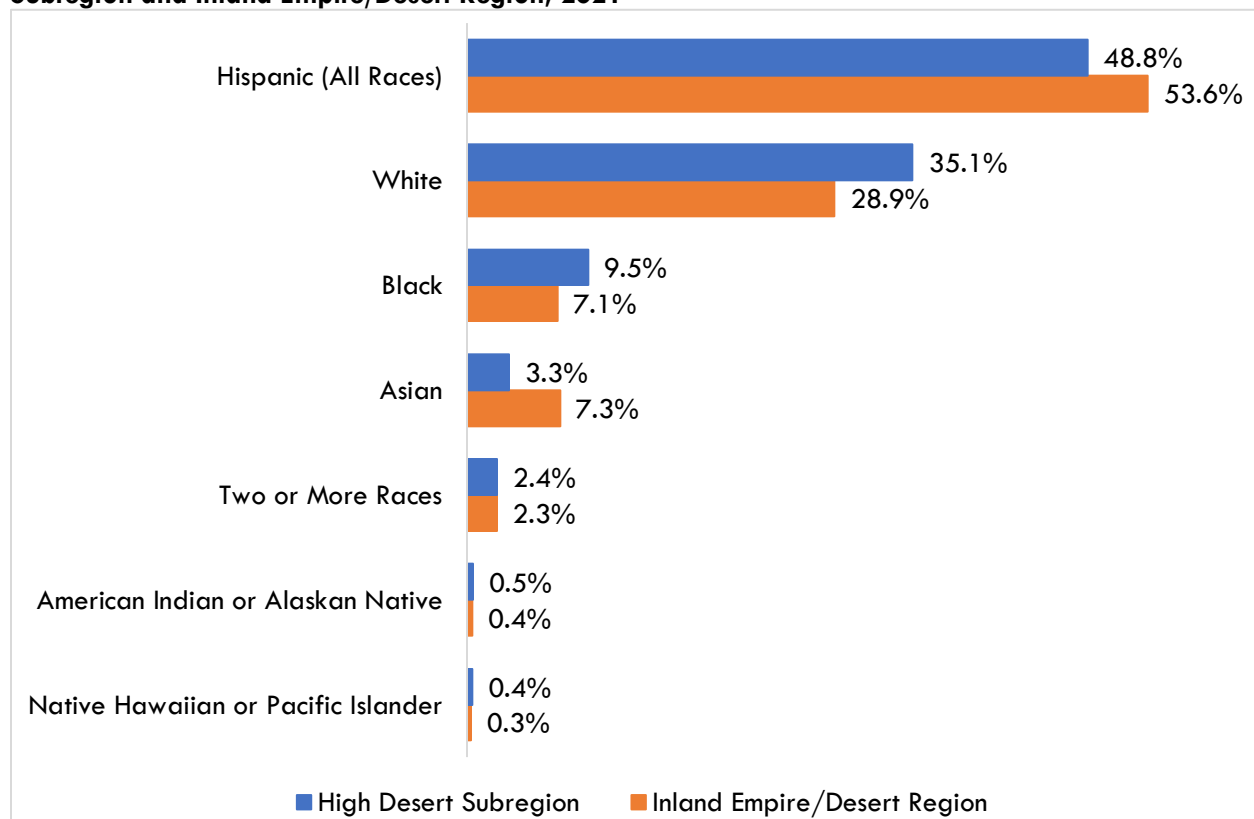


Race and Ethnicity

The U.S. Census Bureau collects race and ethnicity data from residents in accordance with the U.S. Office of Management and Budget’s guidelines.² The Census questionnaire asks each resident to self-identify by selecting their race and whether they are of Hispanic origin. These are categories that generally reflect an individual’s social definition and are “not an attempt to define race biologically, anthropologically, or genetically.” Race and ethnicity data is particularly critical in federal and state civil rights policymaking, such as providing equal employment opportunities and addressing racial disparities in health and environmental assessments.³ (See Appendix B for terms and definitions related to population demographics.)

In 2021, residents identifying as Hispanic (all races) made up nearly half (about 49%) of the subregion’s population, a smaller share than the region’s 54% (Exhibit 5). The subregion contains a larger share of Black (alone) residents than the region, about 10% compared to about 7%, respectively. Asian (alone) residents comprised a significantly smaller portion of the population in the subregion at about 3%, compared to about 7% in the greater region. White residents comprise a larger proportion of the subregion’s population, just over 35%, compared to the region’s, nearly 29%.

Exhibit 5. Race (non-Hispanic) and ethnicity (Hispanic or Latino, all races) composition, High Desert Subregion and Inland Empire/Desert Region, 2021



² 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>.

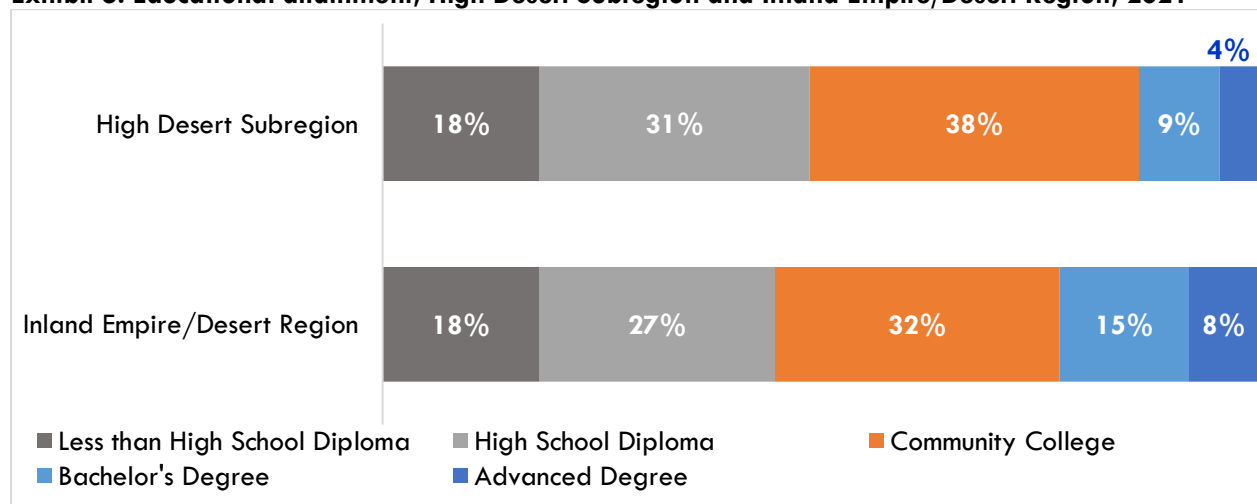
³ “2020 Census Frequently Asked Questions About Race and Ethnicity,” United States Census Bureau, 2023, accessed January 23, 2023, <https://www.census.gov/programs-surveys/decennial-census/decade/2020/planning-management/release/faqs-race-ethnicity.html>.

Educational Attainment

Educational attainment refers to the highest level of education that residents age 25 and older have completed. Educational attainment data may illuminate mismatches between resident skills and employment needs and the need for additional regional postsecondary program offerings.

Approximately 49% of the residents in the subregion have a high school diploma or less, a 4% greater share than the Inland Empire/Desert Region (Exhibit 6). This may indicate an opportunity for more CE program outreach with the goal of increasing educational attainment in the region. The subregion has a greater share of residents with a community college education (some college but no degree, or an associate degree), 38%, than the region, 32%. Compared to the region, the subregion has significantly fewer residents who have completed a bachelor's degree or higher than the region, with only 14% of residents possessing this level of education in the subregion, compared to 23% in the region.

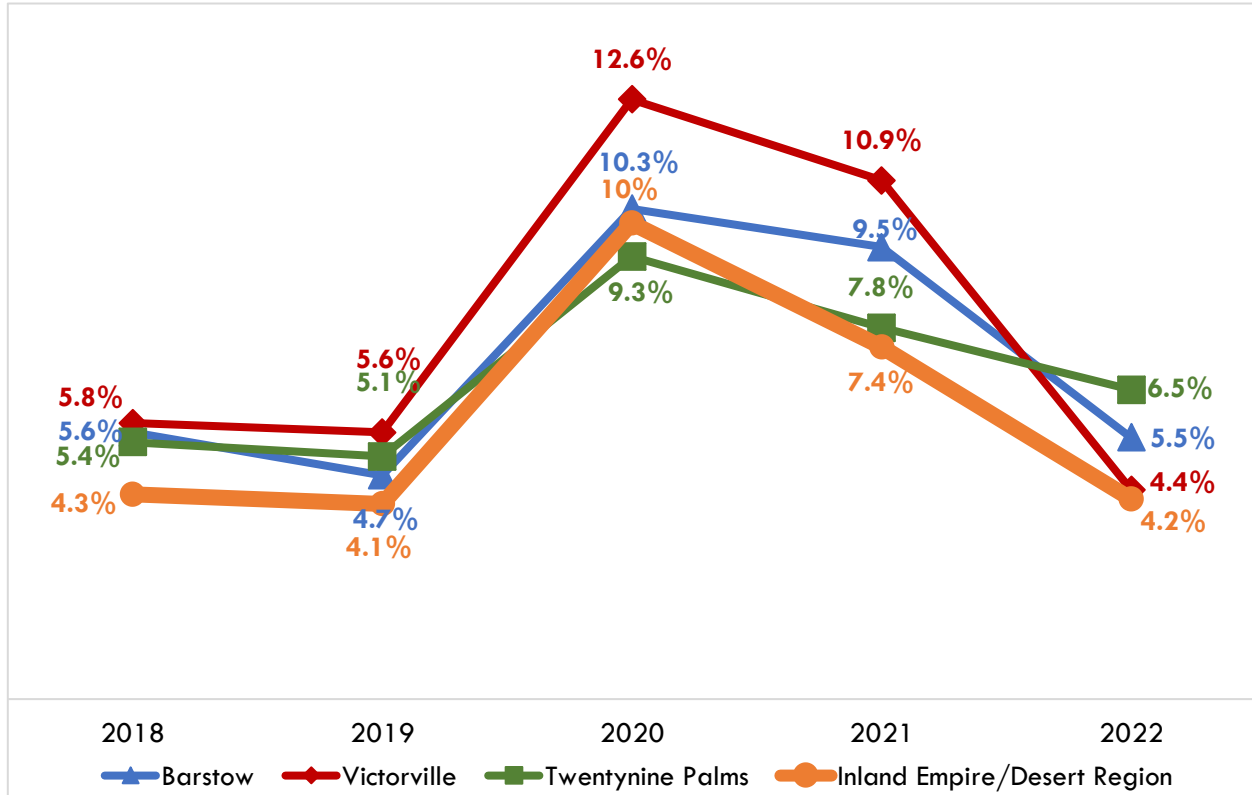
Exhibit 6. Educational attainment, High Desert Subregion and Inland Empire/Desert Region, 2021



Labor Force and Unemployment Rate

Labor force data reflects the employment status of people by where they live. 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 share of the total labor force. Exhibit 7 displays city-level unemployment rate trends for cities containing community college main campuses.

Exhibit 7. Annual average unemployment rate for High Desert Cities, 2018-2022 (Preliminary)



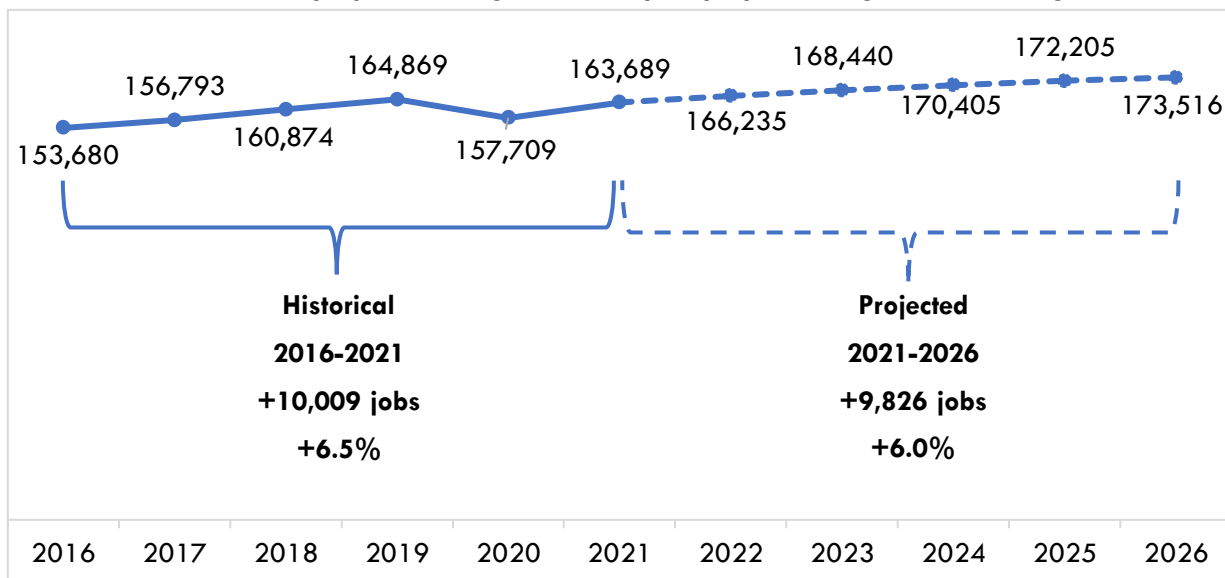
High Desert Subregional Industries

Industries are groups of employer establishments categorized by their primary business activity, e.g., what they produce, sell, or the services they provide.⁴ Industries can be measured using many methods. This assessment analyzes industries by their current job count, job change over the next five years, average earnings per worker, and location quotient. It is essential to recognize that industries hire dozens of occupations that support a business’s activity, including management, business and financial operations, health care, food preparation, sales, and production occupational categories, to name a few. Each industry job is counted, whether full-time or part-time, usually where the business conducts its payroll activity.

In the subregion, industry employers reported nearly 163,700 total jobs in 2021 or about 9% of the Inland Empire/Desert Region’s total employment (nearly 1.74 million jobs) (Exhibit 8). Over the next five years, the subregion’s industry employment is projected to grow by 6% (adding more than 9,800 jobs), at a slower pace than the greater region’s projected job growth of 8.6%. The subregion is projected to contribute 6.6% of the region’s net job growth over the next five years.

Over the past five years, from 2016 to 2021, subregional employment rose by 6.5%, a net increase of over 10,000 jobs. Average employment in the subregion experienced a slight drop in 2020 due to the effects of the COVID-19 pandemic, shedding an average of nearly 7,200 jobs or about 4% of total employment.

Exhibit 8. Historical and projected change in industry employment, High Desert Subregion, 2016-2026

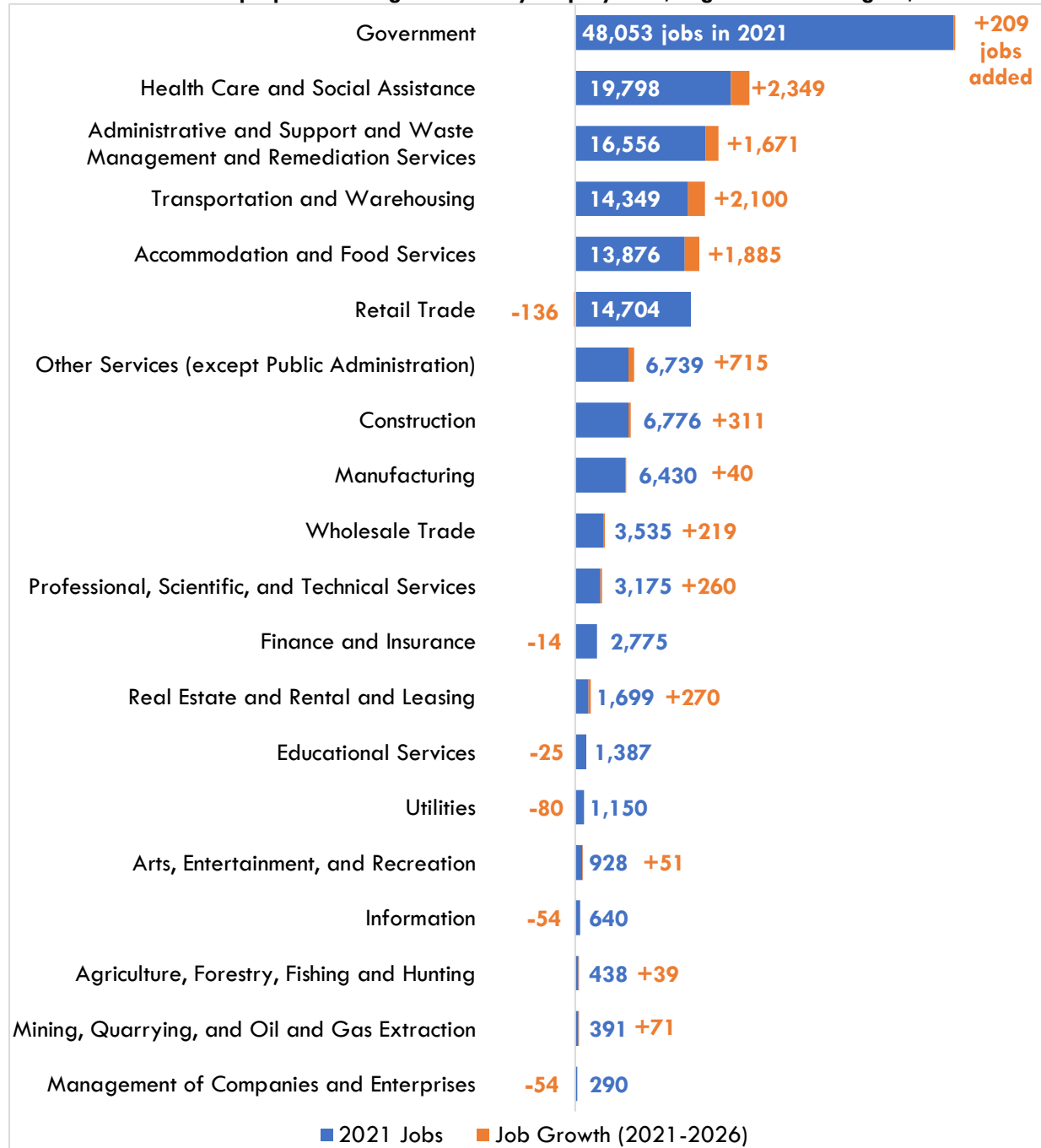


In 2021, the largest industries by employment were government; health care and social assistance; administrative and support and waste management and remediation services; transportation and warehousing; and retail trade (Exhibit 9). These industries accounted for nearly 113,500 jobs or approximately 69% of subregional employment.

⁴ “North American Industry Classification System (NAICS),” United States Census Bureau, 2017, accessed January 18, 2023, <https://www.census.gov/naics/?58967?yearbck=2017>.

The top five industries adding the most jobs to the subregion by 2026 are health care and social assistance; transportation and warehousing; accommodation and food services; administrative and support and waste management and remediation services; and other services (except public administration). These five industries are projected to contribute 89% of the subregion’s job growth over the next five years.

Exhibit 9. Current and projected change in industry employment, High Desert Subregion, 2021-2026



2021 Industry Employment

Employer industries are organized in a hierarchical structure known as the North American Industry Classification System (NAICS). This structure of categorization allows deeper and more detailed analysis of industry sectors and provides a better understanding of the employer activity that powers the region.

Industry Groups

The previous section described the employment share of the region’s high-level industry sectors. NAICS codes facilitate a detailed analysis of subindustries within these major sectors. This analysis provides a clearer picture of industry activity that is growing and offers a living wage.

Exhibit 10 provides a sample of high-quality industry groups. High-quality industries are those that are growing faster than the region overall (at or above 8.6% growth), have average per-job earnings above the living wage standard (\$45,386 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 B for terms and definitions.)

In 2021, nearly 17,300 jobs were employed by industry groups that met the high-quality industry group definition. While high-quality industry groups accounted for nearly 11% of subregional employment in 2021, these industry groups are projected to add 32% of subregional jobs over the next five years.

Exhibit 10. Industry groups with high-quality jobs, High Desert Subregion, 2021-2026

Industry Groups (NAICS4)	2021 Jobs	2021-2026 Job Change	Growth Rate	Location Quotient	Average Earnings Per Job
Transportation and Warehousing					
General Freight Trucking (4841)	4,781	576	12%	3.6	\$75,650
Warehousing and Storage (4931)	3,846	806	21%	2.3	\$56,256
Specialized Freight Trucking (4842)	1,312	329	25%	2.9	\$83,866
Freight Transportation Arrangement (4885)	349	78	22%	1.2	\$71,337
Support Activities for Rail Transportation (4882)	194	56	29%	5.7	\$62,446
Other Pipeline Transportation (4869)	109	21	19%	13.3	\$128,312
Other Support Activities for Transportation (4889)	106	9	9%	3	\$60,113
Other Services (except Public Administration)					
Automotive Repair and Maintenance (8111)	1,603	194	12%	1.3	\$52,675
Drycleaning and Laundry Services (8123)	815	278	34%	3.1	\$85,883
Death Care Services (8122)	177	26	14%	1.2	\$90,461
Administrative and Support and Waste Management and Remediation Services					
Facilities Support Services (5612)	1,538	256	17%	9.8	\$83,962
Remediation and Other Waste Management Services (5629)	318	28	9%	1.9	\$86,682

Industry Groups (NAICS4)	2021 Jobs	2021-2026 Job Change	Growth Rate	Location Quotient	Average Earnings Per Job
Real Estate and Rental and Leasing					
<i>Automotive Equipment Rental and Leasing (5321)</i>	473	177	37%	2.5	\$71,219
Mining, Quarrying, and Oil and Gas Extraction					
<i>Nonmetallic Mineral Mining and Quarrying (2123)</i>	373	69	19%	3.8	\$114,522
Manufacturing					
<i>Animal Food Manufacturing (3111)</i>	317	49	15%	4.6	\$75,656
<i>Soap, Cleaning Compound, and Toilet Preparation Manufacturing (3256)</i>	240	53	22%	2	\$88,012
<i>Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing (3253)</i>	152	48	32%	4	\$79,064
<i>Nonferrous Metal (except Aluminum) Production and Processing (3314)</i>	112	13	12%	2	\$95,339
Health Care and Social Assistance					
<i>Psychiatric and Substance Abuse Hospitals (6222)</i>	240	27	11%	1.9	\$69,604
Construction					
<i>Other Heavy and Civil Engineering Construction (2379)</i>	202	18	9%	1.3	\$99,969

The detailed industry groups displayed above are notable due to their growth, strong earnings, and concentration in the subregion compared to the nation overall. While location quotient data may provide insight into the unique presence of certain industries that may define a region, there are an additional 42 industry groups that are growing and have average earnings per job above the regional living wage standard. In 2021, industry groups that met these criteria accounted for nearly 9% of subregional employment, with nearly 14,100 jobs. These industry groups are projected to contribute 24% of subregional job growth through 2026.

High Desert 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 the majority of 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 and 15 CDE sectors. 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 and have high wages.

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. Typical entry-level educational requirements are reported by employers at the national level, and alternative paths to securing employment may exist depending on employer preferences and state licensing requirements. For example, registered nurses (RNs) typically must possess a bachelor's degree to enter employment in most states; however, California RN licensing may be attained after completing an Associate Degree in Nursing (ADN) through the California Community Colleges.⁶

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 rate of pay than jobs that require 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.

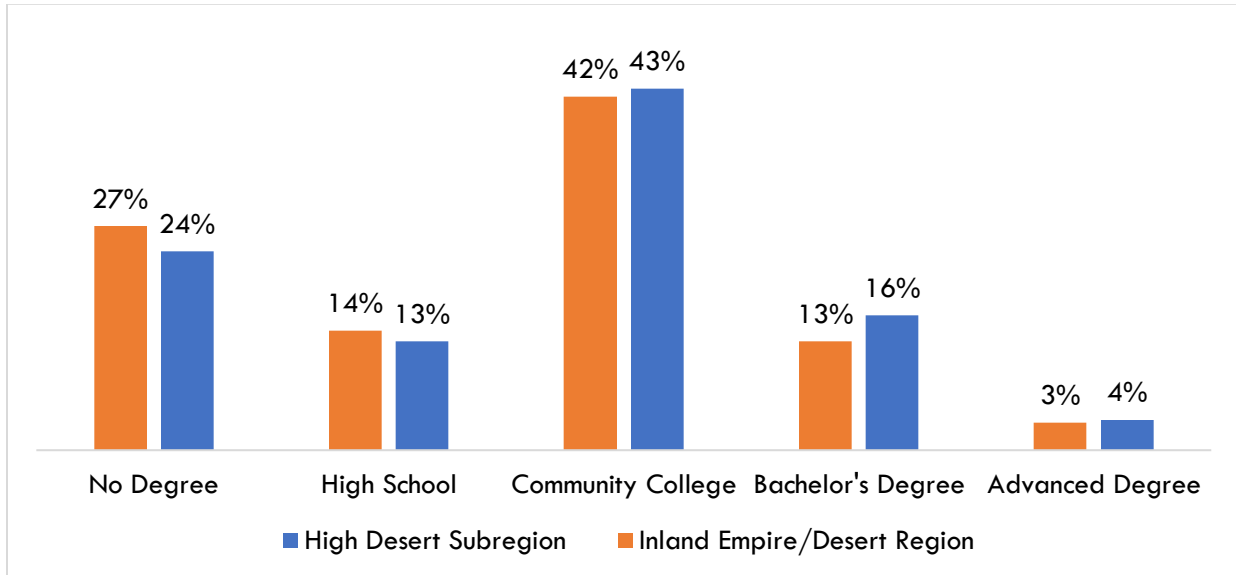
Bachelor's-degree-level jobs are those that require a four-year degree from a college or university. High-school-level jobs illuminate possibilities open to those choosing to enter the workforce after securing a high school diploma or G.E.D., or jobs typically open to those who choose to work while attending college. This assessment does not include occupations that typically require an education beyond a bachelor's degree, such as physicians, lawyers, and most scientists, or occupations that do not typically require formal education to enter employment. Military occupations (about 8,000 regional military jobs in the region) were also excluded from the following sections of this assessment. Definitions for education levels are available in Appendix B.

Of the approximately 155,700 jobs in the region in 2021, approximately 72% of the jobs are included in this report. Exhibit 11 displays the share of jobs by educational level. For occupational wage information by educational level, please review the regional workforce demand assessment report.

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

⁶ "Steps to Become a California Registered Nurse," California Board of Registered Nursing, accessed on August 8, 2022, <https://www.rn.ca.gov/careers/steps.shtml>.

Exhibit 11. Share of jobs by education level, High Desert Subregion and Inland Empire/Desert Region, 2021



Advanced Manufacturing

The CCCC advanced manufacturing sector aligns with the CDE manufacturing and product development sector. Two colleges in the High Desert Subregion currently use three program codes for their advanced manufacturing programs.

Programs Offered (TOP code – TOP title)

- 0934.00 - Electronics and Electric Technology
- 0945.00 - Industrial Systems Technology and Maintenance
- 0956.50 - Welding Technology

Advanced manufacturing programs in the subregion prepare students for employment in two high-quality community-college-level occupations. High-quality occupations have at least 100 annual job openings and offer a median hourly rate of \$21.82 at the regional level.

In 2021, there were more than 600 high-quality advanced manufacturing jobs in the subregion related to existing training programs (Exhibit 12). Through 2026, more than 50 job openings are projected annually for this occupational group in the subregion; more than 700 job openings are projected annually in the greater region.

Exhibit 12. Education level, projected demand, and earnings for high-quality occupations

Occupations	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings Through 2026	Regional Annual Job Openings	Regional Median Hourly Earnings
Welders, Cutters, Solderers, and Brazers	CC	357	40	458	\$22.53
Industrial Machinery Mechanics	CC	246	28	284	\$28.82

Community College Programs Not Offered

In the High Desert Subregion, 20 programs in the advanced manufacturing sector are currently not offered (Exhibit 13).

Exhibit 13. Programs not offered by community colleges in the subregion

Subregional Programs Not Offered	
0924.00 - Engineering Technology, General	0953.40 - Mechanical Drafting
0934.20 - Industrial Electronics	0953.60 - Technical Illustration
0934.70 - Electron Microscopy	0954.00 - Chemical Technology
0934.80 - Laser and Optical Technology	0954.20 - Plastics and Composites
0935.00 - Electro-Mechanical Technology	0956.00 - Manufacturing and Industrial Technology
0935.10 - Appliance Repair	0956.30 - Machining and Machine Tools
0936.00 - Printing and Lithography	0956.70 - Industrial and Occupational Safety and Health
0943.00 - Instrumentation Technology	0956.80 - Industrial Quality Control
0943.30 - Vacuum Technology	0961.00 - Optics
0953.30 - Electrical, Electronic and Electro-Mechanical Drafting	0999.00 - Other Engineering and Related Industrial Technologies

Occupational Training Opportunities

There is one high-quality occupation aligned with two programs that community colleges may choose to address in the subregion.

- 0924.00 - Engineering Technology, General
- 0956.00 - Manufacturing and Industrial Technology

In 2021, there were about 400 jobs for first-line supervisors of production and operating workers in the subregion (Exhibit 14). Nearly 50 annual job openings are projected annually for this occupation in the subregion, with more than 500 job openings projected annually in the greater region. The colleges may consider adding leadership coursework to these programs to address the need for more supervisor positions.

Exhibit 14. High-quality occupation without training programs in the subregion

Occupation	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings	Regional Annual Job Openings	Regional Median Hourly Earnings
First-Line Supervisors of Production and Operating Workers	CC	408	47	513	\$28.84

Advanced Transportation and Logistics

The CCCCO advanced transportation and logistics sector aligns with the CDE transportation sector. Three colleges in the High Desert Subregion currently use eight program codes for their advanced transportation and logistics programs.

Programs Offered

- 0510.00 - Logistics and Materials Transportation
- 0947.00 - Diesel Technology
- 0948.00 - Automotive Technology
- 0948.40 - Alternative Fuels and Advanced Transportation Technology
- 0950.00 - Aeronautical and Aviation Technology
- 0950.10 - Aviation Airframe Mechanics
- 0950.20 - Aviation Powerplant Mechanics
- 0950.50 - Aircraft Fabrication

Advanced transportation and logistics programs in the subregion prepare students for employment in nine high-quality community-college-level occupations. High-quality occupations have at least 100 annual job openings and offer a median hourly rate of \$21.82 at the regional level.

In 2021, these occupations accounted for more than 4,400 jobs in the subregion (Exhibit 15). Nearly 500 job openings are projected annually for the high-quality advanced transportation and logistics occupational group through 2026, with more than 4,800 job openings expected annually in the greater region.

Exhibit 15. Education level, projected demand, and earnings for high-quality occupations

Occupations	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings	Regional Annual Job Openings	Regional Median Hourly Earnings
Automotive Service Technicians and Mechanics	CC	854	100	976	\$23.26
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	CC	679	92	1,307	\$28.53
Aircraft Mechanics and Service Technicians	CC	633	55	196	\$36.07
First-Line Supervisors of Mechanics, Installers, and Repairers	CC	587	60	550	\$37.01
Bus and Truck Mechanics and Diesel Engine Specialists	CC	447	54	408	\$28.28
Logisticians	CC	348	37	245	\$36.41
Production, Planning, and Expediting Clerks	CC	347	42	546	\$22.70
Transportation, Storage, and Distribution Managers	CC	302	29	353	\$44.82
Mobile Heavy Equipment Mechanics, Except Engines	CC	214	25	248	\$29.51

Community College Programs Not Offered

In the High Desert Subregion, 13 programs in the advanced transportation and logistics sector are currently not offered (Exhibit 16).

Exhibit 16. Programs not offered by community colleges in the subregion

Subregional Programs Not Offered	
0947.20 - Heavy Equipment Maintenance	0950.40 - Aircraft Electronics (Avionics)
0947.40 - Railroad and Light Rail Operations	0959.00 - Marine Technology
0947.50 - Truck and Bus Driving	3020.00 - Aviation and Airport Management and Services
0948.30 - Motorcycle, Outboard and Small Engine Repair	3020.10 - Aviation and Airport Management
0948.50 - Recreational Vehicle Service	3020.20 - Piloting
0949.00 - Automotive Collision Repair	3020.30 - Air Traffic Control
0949.10 - Upholstery Repair - Automotive	

Occupational Training Opportunities

There are three high-quality community-college-level occupations and one high-quality bachelor's degree-level occupation aligned with the following programs that community colleges may choose to address in the subregion.

- 0947.50 - Truck and Bus Driving
- 0949.00 - Automotive Collision Repair
- 3020.20 - Piloting

In 2021, these occupations accounted for nearly 6,200 jobs in the subregion (Exhibit 17). Through 2026, these high-quality occupations are projected to have more than 800 annual job openings, with nearly 7,100 annual job openings expected in the greater region.

Exhibit 17. High-quality occupations without training programs in the subregion

Occupations	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings	Regional Annual Job Openings	Regional Median Hourly Earnings
Airline Pilots, Copilots, and Flight Engineers	BS	370	40	120	\$133.20
Heavy and Tractor-Trailer Truck Drivers	CC	5,504	773	6,560	\$23.17
Bus Drivers, Transit and Intercity	CC	190	26	224	\$24.39
Automotive Body and Related Repairers	CC	122	16	157	\$27.07

Agriculture, Water, and Environmental Technologies

The CCCCO agriculture, water, and environmental technologies sector aligns with the CDE agriculture and natural resources sector. One college in the High Desert Subregion currently offers six programs in the agriculture, water, and environmental technologies sector.

Programs Offered

- 0102.00 - Animal Science
- 0102.40 - Equine Science
- 0103.00 - Plant Science
- 0109.00 - Horticulture
- 0109.30 - Nursery Technology
- 0115.00 - Natural Resources

Agriculture, water, and environmental technologies programs in the subregion prepare students for employment in one high-quality community-college-level occupation. High-quality occupations have at least 100 annual job openings and offer a median hourly rate of \$21.82 at the regional level.

In 2021, there were nearly 100 first-line supervisors of landscaping, lawn service, and groundskeeping worker jobs in the subregion (Exhibit 18). Over the next five years, 12 annual job openings for this occupation are projected in the subregion, and 200 job openings are projected in the region.

Exhibit 18. Education level, projected demand, and earnings for high-quality occupation

Occupation	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings	Regional Annual Job Openings	Regional Median Hourly Earnings
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	CC	97	12	196	\$28.25

Community College Programs Not Offered

In the High Desert subregion, 18 programs in the agriculture, water, and environmental technologies sector are currently not offered (Exhibit 19).

Exhibit 19. Programs not offered by community colleges in the subregion

Subregional Programs Not Offered	
0101.00 - Agriculture Technology and Sciences, General	0112.00 - Agriculture Business, Sales and Service
0102.10 - Veterinary Technician (Licensed)	0113.00 - Food Processing and Related Technologies
0102.20 - Artificial Inseminator (Licensed)	0114.00 - Forestry
0102.30 - Dairy Science	0115.10 - Parks and Outdoor Recreation
0103.10 - Agricultural Pest Control Adviser and Operator (Licensed)	0115.20 - Wildlife and Fisheries
0104.00 - Viticulture, Enology, and Wine Business	0116.00 - Agricultural Power Equipment Technology
0109.10 - Landscape Design and Maintenance	0199.00 - Other Agriculture and Natural Resources
0109.20 - Floriculture/Floristry	0303.00 - Environmental Technology
0109.40 - Turfgrass Technology	1920.00 - Ocean Technology

Occupational Training Opportunities

There is one high-quality high-school-level occupation aligned with one program that community colleges may choose to address in the subregion.

- 0109.10 - Landscape Design and Maintenance

This occupation is projected to have nine annual job openings in the subregion and 162 annual job openings in the greater region (Exhibit 20).

Exhibit 20. High-quality occupation without training programs in the subregion

Occupation	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings	Regional Annual Job Openings	Regional Median Hourly Earnings
Tree Trimmers and Pruners	HS	62	9	162	\$23.50

Business and Entrepreneurship

The CCCCO business and entrepreneurship sector aligns with the CDE business and finance sector; and marketing, sales, and services sector. Three colleges in the High Desert Subregion currently utilize nine business and entrepreneurship program codes.

Programs Offered

- 0501.00 - Business and Commerce, General
- 0502.00 - Accounting
- 0505.00 - Business Administration
- 0506.00 - Business Management
- 0506.40 - Small Business and Entrepreneurship
- 0511.00 - Real Estate
- 0511.10 - Escrow
- 0514.00 - Office Technology/Office Computer Applications
- 3007.00 - Cosmetology and Barbering

Business and entrepreneurship programs in the subregion prepare students for employment in 24 high-quality occupations, of which nine are bachelor’s degree-level, 13 are community-college-level, and two are high-school-level occupations. High-quality occupations have at least 100 annual job openings and offer a median hourly rate of \$21.82 at the regional level.

In 2021, there were more than 10,700 high-quality jobs related to subregional business and entrepreneurship training programs (Exhibit 21). Through 2026, more than 1,100 annual job openings are projected in the subregion, with more than 13,100 annual job openings projected in the greater region.

Exhibit 21. Education levels, projected demand, and earnings for high-quality occupations

Occupations	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings	Regional Annual Job Openings	Regional Median Hourly Earnings
Human Resources Specialists	BS	1,078	119	792	\$30.24
Accountants and Auditors	BS	667	67	800	\$36.84
Project Management Specialists	BS	449	40	454	\$39.40
Management Analysts	BS	427	48	446	\$38.04
Sales Managers	BS	404	37	527	\$47.35
Market Research Analysts and Marketing Specialists	BS	343	43	597	\$29.96
Human Resources Managers	BS	223	19	138	\$50.54
Chief Executives	BS	214	16	182	\$75.12
Cost Estimators	BS	172	17	283	\$35.23
General and Operations Managers	CC	1,965	202	2,397	\$46.18
First-Line Supervisors of Office and Administrative Support Workers	CC	1,352	140	1,759	\$28.96
Bookkeeping, Accounting, and Auditing Clerks	CC	1,290	148	1,751	\$22.31
Billing and Posting Clerks	CC	373	40	512	\$21.82

Occupations	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings	Regional Annual Job Openings	Regional Median Hourly Earnings
Executive Secretaries and Executive Administrative Assistants	CC	307	32	340	\$30.39
Property, Real Estate, and Community Association Managers	CC	215	20	342	\$23.70
Administrative Services Managers	CC	214	20	211	\$46.62
Payroll and Timekeeping Clerks	CC	179	18	172	\$23.27
Human Resources Assistants, Except Payroll and Timekeeping	CC	171	17	145	\$22.56
Facilities Managers	CC	127	11	112	\$46.21
Real Estate Sales Agents	CC	91	10	534	\$26.07
Tax Preparers	CC	69	8	102	\$22.24
Real Estate Brokers	CC	45	5	191	\$33.98
Insurance Claims and Policy Processing Clerks	HS	205	20	217	\$22.14
Word Processors and Typists	HS	124	13	105	\$22.61

Community College Programs Not Offered

In the High Desert Subregion, 18 programs in the business and entrepreneurship sector are currently not offered (Exhibit 22).

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

Subregional Programs Not Offered	
0502.10 - Tax Studies	0512.00 - Insurance
0504.00 - Banking and Finance	0514.10 - Legal Office Technology
0506.30 - Management Development and Supervision	0514.40 - Office Management
0508.00 - International Business and Trade	0516.00 - Labor and Industrial Relations
0509.00 - Marketing and Distribution	0518.00 - Customer Service
0509.10 - Advertising	0599.00 - Other Business and Management
0509.20 - Purchasing	0606.00 - Public Relations
0509.40 - Sales and Salesmanship	1255.00 - Mortuary Science
0509.70 - E-commerce (business emphasis)	3005.00 - Custodial Services

Occupational Training Opportunities

There are seven high-quality community-college-level occupations and four high-quality bachelor's degree-level occupations aligned with the following programs that community colleges may choose to address in the subregion.

- 0504.00 - Banking and Finance
- 0509.00 - Marketing and Distribution
- 0509.40 - Sales and Salesmanship
- 0512.00 - Insurance

These high-quality business occupations accounted for nearly 3,500 jobs in 2021 (Exhibit 23). These training opportunities are projected to have nearly 400 annual job openings in the subregion and nearly 4,900 annual job openings in the region through 2026.

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

Occupations	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings	Regional Annual Job Openings	Regional Median Hourly Earnings
Financial Managers	BS	429	38	433	\$60.47
Loan Officers	BS	206	15	158	\$29.63
Marketing Managers	BS	103	10	144	\$58.96
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	BS	85	9	182	\$43.18
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	CC	791	93	1,521	\$29.06
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	CC	652	87	1,070	\$23.16
Insurance Sales Agents	CC	399	46	582	\$23.90
Buyers and Purchasing Agents	CC	308	32	339	\$29.68
Claims Adjusters, Examiners, and Investigators	CC	231	18	120	\$36.42
First-Line Supervisors of Non-Retail Sales Workers	CC	130	14	216	\$34.85
Loan Interviewers and Clerks	CC	117	10	106	\$22.40

Education and Human Development

The CCCCO education and human development sector aligns with the CDE education, child development, and family services sector. Three colleges in the High Desert Subregion currently utilize three education and human development program codes.

Programs Offered

- 0835.60 - Coaching
- 1305.00 - Child Development/Early Care and Education
- 1305.80 - Child Development Administration and Management

Education and human development programs in the subregion prepare students for employment in one high-quality bachelor's degree-level occupation and one high-quality community-college-level occupation. High-quality occupations have at least 100 annual job openings and offer a median hourly rate of \$21.82 at the regional level.

In 2021, there were more than 2,700 jobs related to subregional education and human development training programs (Exhibit 24). Through 2026, more than 200 job openings are projected annually for these occupations in the subregion, with nearly 1,700 annual job openings in the greater region.

Exhibit 24. Education levels, projected demand, and earnings for high-quality occupations

Occupations	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings	Regional Annual Job Openings	Regional Median Hourly Earnings
Elementary School Teachers, Except Special Education	BS	2,564	185	1,282	\$46.47
Exercise Trainers and Group Fitness Instructors	CC	167	26	405	\$22.19

Community College Programs Not Offered

In the High Desert Subregion, 19 programs in the education and human development sector are currently not offered (Exhibit 25). The 0835.20 - Fitness Trainer program may provide training for exercise trainers and group fitness instructors.

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

Subregional Programs Not Offered	
0802.00 - Educational Aide (Teacher Assistant)	1305.40 - Preschool Age Children
0802.10 - Educational Aide (Teacher Assistant), Bilingual	1305.50 - The School Age Child
0809.00 - Special Education	1305.60 - Parenting and Family Education
0835.20 - Fitness Trainer	1305.70 - Foster and Kinship Care
0850.10 - Sign Language Interpreting	1305.90 - Infants and Toddlers
0860.00 - Educational Technology	1308.00 - Family Studies
0899.00 - Other Education	2104.00 - Human Services
1301.00 - Family and Consumer Sciences, General	2104.40 - Alcohol and Controlled Substances
1305.10 - Child and Adolescent Development	2140.00 - Legal and Community Interpretation
1305.20 - Children with Special Needs	

Occupational Training Opportunities

There are eight high-quality bachelor's degree-level occupations and one high-quality community-college-level occupation aligned with the following programs that community colleges may choose to address in the subregion.

- 0802.10 - Educational Aide (Teacher Assistant), Bilingual
- 0809.00 - Special Education
- 0850.10 - Sign Language Interpreting
- 0860.00 - Educational Technology
- 1301.00 - Family and Consumer Sciences, General
- 1305.20 - Children with Special Needs
- 1308.00 - Family Studies
- 2104.00 - Human Services
- 2104.40 - Alcohol and Controlled Substances
- 2140.00 - Legal and Community Interpretation

In 2021, there were more than 4,100 high-quality education and human development jobs in the subregion (Exhibit 26). While these occupations are projected to have more than 300 annual job openings in the subregion, the greater region is projected to have more than 2,900 annual job openings through 2026.

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

Occupations	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings	Regional Annual Job Openings	Regional Median Hourly Earnings
Secondary School Teachers, Except Special and Career/Technical Education	BS	1,627	111	779	\$47.68
Middle School Teachers, Except Special and Career/Technical Education	BS	631	46	325	\$47.72
Child, Family, and School Social Workers	BS	434	47	456	\$29.20
Special Education Teachers, Kindergarten and Elementary School	BS	337	25	171	\$39.51
Substance Abuse, Behavioral Disorder, and Mental Health Counselors	BS	320	40	468	\$23.87
Training and Development Specialists	BS	262	28	312	\$29.19
Special Education Teachers, Secondary School	BS	212	16	109	\$48.36
Social and Community Service Managers	BS	160	17	208	\$35.54
Interpreters and Translators	CC	116	14	112	\$30.76

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 High Desert Subregion, three colleges currently utilize six energy, construction, and utilities program codes.

Programs Offered

- 0952.00 - Construction Crafts Technology
- 0952.20 - Electrical
- 0953.00 - Drafting Technology
- 0953.10 - Architectural Drafting
- 0957.00 - Civil and Construction Management Technology
- 0957.20 - Construction Inspection

Energy, construction, and utilities programs in the subregion prepare students for employment in one high-quality bachelor's degree-level occupation, six high-quality community-college-level occupations, and one high-quality high-school-level occupation. High-quality occupations have at least 100 annual job openings and offer a median hourly rate of \$21.82 at the regional level.

In 2021, there were more than 3,500 jobs related to subregional training programs (Exhibit 27). Through 2026, nearly 400 annual job openings are projected for the high-quality energy, construction, and utilities occupational group in the subregion, with nearly 5,100 annual job openings projected for these occupations in the greater region.

Exhibit 27. Education levels, projected demand, and earnings for high-quality occupations

Occupations	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings	Regional Annual Job Openings	Regional Median Hourly Earnings
Construction Managers	BS	334	32	624	\$36.87
Maintenance and Repair Workers, General	CC	1,504	166	1,715	\$22.38
Electricians	CC	653	88	1,169	\$28.63
First-Line Supervisors of Construction Trades and Extraction Workers	CC	577	62	1,027	\$35.65
Electrical Power-Line Installers and Repairers	CC	191	17	131	\$47.71
Construction and Building Inspectors	CC	116	15	156	\$36.66
Architectural and Civil Drafters	CC	63	7	109	\$29.05
Security and Fire Alarm Systems Installers	HS	75	9	137	\$28.32

Community College Programs Not Offered

In the High Desert Subregion, 23 programs in the energy, construction, and utilities sector are currently not offered (Exhibit 28).

Exhibit 28. Programs not offered by community colleges in the subregion

Subregional Programs Not Offered	
0201.00 - Architecture and Architectural Technology	0952.70 - Painting, Decorating and Flooring
0299.00 - Other Architecture and Environmental Design	0952.80 - Drywall and Insulation
0934.30 - Telecommunications Technology	0952.90 - Roofing
0934.40 - Electrical Systems and Power Transmission	0953.20 - Civil Drafting
0946.00 - Environmental Control Technology	0954.30 - Petroleum Technology
0946.10 - Energy Systems Technology	0956.40 - Sheet Metal and Structural Metal
0947.30 - Heavy Equipment Operation	0957.30 - Surveying
0952.10 - Carpentry	0958.00 - Water and Wastewater Technology
0952.30 - Plumbing, Pipefitting and Steamfitting	0959.10 - Diving and Underwater Safety
0952.40 - Glazing	2102.10 - Public Works
0952.50 - Mill and Cabinet Work	2206.10 - Geographic Information Systems
0952.60 - Masonry, Tile, Cement, Lath and Plaster	

Occupational Training Opportunities

There are 12 high-quality community-college-level occupations and one high-quality bachelor's degree-level occupation aligned with the following programs that community colleges may choose to address in the subregion. Please note Barstow College offers a broad program coded as an industrial systems technology and maintenance program (TOP 0945.00), covering the following topics: safety, hand and power tools, print reading, electrical, HVAC/R, welding, plumbing, and basic construction principles.

- 0201.00 - Architecture and Architectural Technology
- 0934.30 - Telecommunications Technology
- 0946.00 - Environmental Control Technology
- 0946.10 - Energy Systems Technology
- 0947.30 - Heavy Equipment Operation
- 0952.10 - Carpentry
- 0952.30 - Plumbing, Pipefitting and Steamfitting
- 0952.40 - Glazing
- 0952.60 - Masonry, Tile, Cement, Lath and Plaster
- 0956.40 - Sheet Metal and Structural Metal
- 0958.00 - Water and Wastewater Technology

These energy, construction, and utilities occupations accounted for nearly 3,000 jobs in 2021. High-quality energy, construction, and utilities training opportunities are expected to have more than 300 annual job openings in the subregion and more than 5,200 annual job openings in the greater region through 2026 (Exhibit 29).

Exhibit 29. High-quality occupations without training programs in the subregion

Occupations	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings	Regional Annual Job Openings	Regional Median Hourly Earnings
Architectural and Engineering Managers	BS	132	11	115	\$72.93
Carpenters	CC	990	104	2,117	\$26.30
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	CC	445	46	697	\$22.23
Operating Engineers and Other Construction Equipment Operators	CC	347	40	477	\$35.78
Plumbers, Pipefitters, and Steamfitters	CC	326	38	617	\$27.87
Water and Wastewater Treatment Plant and System Operators	CC	177	17	127	\$35.83
Telecommunications Equipment Installers and Repairers, Except Line Installers	CC	128	15	158	\$28.65
Sheet Metal Workers	CC	89	9	139	\$26.99
Telecommunications Line Installers and Repairers	CC	89	9	149	\$30.31
Structural Iron and Steel Workers	CC	78	10	180	\$29.83
Solar Photovoltaic Installers	CC	74	12	180	\$22.54
Plasterers and Stucco Masons	CC	70	6	166	\$23.22
Glaziers	CC	44	6	119	\$23.01

Health

The CCCC health sector aligns with the CDE health science and medical technology sector. Three colleges in the High Desert Subregion currently utilize 10 health program codes.

Programs Offered

- 0514.20 - Medical Office Technology
- 1201.00 - Health Occupations, General
- 1208.00 - Medical Assisting
- 1210.00 - Respiratory Care/Therapy
- 1230.10 - Registered Nursing
- 1230.20 - Licensed Vocational Nursing
- 1230.30 - Certified Nurse Assistant
- 1230.80 - Home Health Aide
- 1250.00 - Emergency Medical Services
- 1251.00 - Paramedic

Health programs in the subregion prepare students for employment in four high-quality community-college-level occupations. High-quality occupations have at least 100 annual job openings and offer a median hourly rate of \$21.82 at the regional level.

In 2021, there were more than 3,700 high-quality jobs related to subregional training programs (Exhibit 30). Through 2026, nearly 300 annual job openings are projected for the high-quality health occupational group in the subregion, and nearly 3,400 annual job openings are projected in the greater region.

Exhibit 30. Education level, projected demand, and earnings for high-quality occupations

Occupations	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings	Regional Annual Job Openings	Regional Median Hourly Earnings
Registered Nurses	CC	2,684	178	2,324	\$48.48
Licensed Vocational Nurses	CC	761	68	774	\$28.50
Medical Records Specialists	CC	138	11	133	\$22.60
Respiratory Therapists	CC	117	8	123	\$37.31

Community College Programs Not Offered

In the High Desert Subregion, 39 programs in the health sector are currently not offered (Exhibit 31).

Exhibit 31. Programs not offered by community colleges in the subregion

Subregional Programs Not Offered	
0430.00 - Biotechnology and Biomedical Technology	1221.00 - Pharmacy Technology
0934.60 - Biomedical Instrumentation	1222.00 - Physical Therapist Assistant
0955.00 - Laboratory Science Technology	1223.00 - Health Information Technology
1202.00 - Hospital and Health Care Administration	1223.10 - Health Information Coding
1205.00 - Medical Laboratory Technology	1224.00 - School Health Clerk
1205.10 - Phlebotomy	1225.00 - Radiologic Technology
1206.00 - Physicians Assistant	1226.00 - Radiation Therapy Technician
1208.10 - Clinical Medical Assisting	1227.00 - Diagnostic Medical Sonography
1208.20 - Administrative Medical Assisting	1228.00 - Athletic Training and Sports Medicine
1208.30 - Health Facility Unit Coordinator	1230.00 - Nursing
1209.00 - Hospital Central Service Technician	1239.00 - Psychiatric Technician
1211.00 - Polysomnography	1240.00 - Dental Occupations
1212.00 - Electro-Neurodiagnostic Technology	1240.10 - Dental Assistant
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	1262.00 - Massage Therapy
1218.00 - Occupational Therapy Technology	1299.00 - Other Health Occupations
1219.00 - Optical Technology	1309.00 - Gerontology
1220.00 - Speech/Language Pathology and Audiology	

Occupational Training Opportunities

There are nine high-quality health occupations aligned with the following programs that community colleges may choose to address in the subregion.

- 1205.00 - Medical Laboratory Technology
- 1205.10 - Phlebotomy
- 1219.00 - Optical Technology
- 1221.00 - Pharmacy Technology
- 1222.00 - Physical Therapist Assistant
- 1225.00 - Radiologic Technology
- 1240.20 - Dental Hygienist
- 1262.00 - Massage Therapy

These high-quality health occupations accounted for more than 1,500 jobs in 2021. High-quality health training opportunities are expected to have nearly 200 annual job openings in the subregion through 2026, with more than 1,900 annual job openings in the greater region (Exhibit 32).

Exhibit 32. High-quality occupations without training programs in the subregion

Occupations	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings	Regional Annual Job Openings	Regional Median Hourly Earnings
Medical and Health Services Managers	BS	418	47	581	\$48.73
Pharmacy Technicians	CC	361	30	342	\$22.17
Phlebotomists	CC	170	22	231	\$22.04
Radiologic Technologists and Technicians	CC	136	11	165	\$43.91
Clinical Laboratory Technologists and Technicians	CC	135	11	127	\$29.17
Dental Hygienists	CC	103	9	104	\$48.52
Opticians, Dispensing	CC	87	7	100	\$22.20
Massage Therapists	CC	74	13	158	\$22.00
Physical Therapist Assistants	CC	48	8	132	\$35.77

Information and Communication Technologies (ICT)/Digital Media

The CCCCO 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 High Desert Subregion currently utilize 10 ICT/DM program codes.

Programs Offered

- 0614.00 - Digital Media
- 0614.40 - Animation
- 0702.00 - Computer Information Systems
- 0702.10 - Software Applications
- 0707.10 - Computer Programming
- 0707.20 - Database Design and Administration
- 0708.00 - Computer Infrastructure and Support
- 0708.10 - Computer Networking
- 0934.10 - Computer Electronics
- 1012.00 - Applied Photography

ICT/DM programs in the subregion prepare students for employment in four high-quality bachelor's degree-level occupations and three high-quality community-college-level occupations. High-quality occupations have at least 100 annual job openings and offer a median hourly rate of \$21.82 at the regional level.

In 2021, there were nearly 1,400 high-quality ICT/DM jobs related to subregional training programs (Exhibit 33). Through 2026, more than 100 high-quality job annual job openings are projected in the subregion, with more than 1,500 annual job openings projected in the region.

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

Occupations	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings	Regional Annual Job Openings	Regional Median Hourly Earnings
Software Developers	BS	250	29	383	\$50.08
Computer Systems Analysts	BS	231	19	194	\$45.73
Computer and Information Systems Managers	BS	193	16	191	\$65.70
Graphic Designers	BS	120	12	167	\$23.50
Computer User Support Specialists	CC	264	24	261	\$28.01
Network and Computer Systems Administrators	CC	158	12	107	\$40.12
Photographers	CC	150	20	222	\$23.31

Community College Programs Not Offered

In the High Desert Subregion, 26 programs in the ICT/DM sector are currently not offered (Exhibit 34).

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

Subregional Programs Not Offered	
0602.00 - Journalism	0699.00 - Other Media and Communications
0604.00 - Radio and Television	0701.00 - Information Technology, General
0604.10 - Radio	0707.00 - Computer Software Development
0604.20 - Television (including combined TV/Film/Video)	0707.30 - Computer Systems Analysis
0604.30 - Broadcast Journalism	0708.20 - Computer Support
0607.00 - Technical Communication	0709.00 - World Wide Web Administration
0610.00 - Mass Communications	0709.10 - E-Commerce (technology emphasis)
0612.20 - Film Production	0799.00 - Other Information Technology
0614.10 - Multimedia	1005.00 - Commercial Music
0614.20 - Electronic Game Design	1006.00 - Technical Theater
0614.30 - Website Design and Development	1009.00 - Applied Design
0614.50 - Desktop Publishing	1013.00 - Commercial Art
0614.60 - Computer Graphics and Digital Imagery	1030.00 - Graphic Art and Design

Occupational Training Opportunities

There are two high-quality ICT/DM occupations aligned with the following programs that community colleges may choose to address in the subregion.

- 1005.00 - Commercial Music
- 0602.00 - Journalism
- 0604.30 - Broadcast Journalism

In 2021, there were more than 100 high-quality training opportunity jobs in the subregion (Exhibit 35). While these occupations are projected to have only 19 annual job openings in the subregion, the greater region is projected to have more than 300 annual job openings through 2026.

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

Occupation	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings	Regional Annual Job Openings	Regional Median Hourly Earnings
Writers and Authors	BS	32	4	140	\$26.53
Musicians and Singers	CC	113	15	183	\$23.07

Public Safety

The CCCC public safety sector aligns with the CDE public services sector. Three colleges in the High Desert Subregion currently utilize five public safety program codes.

Programs Offered

- 1402.00 - Paralegal
- 2105.00 - Administration of Justice
- 2105.10 - Corrections
- 2133.00 - Fire Technology
- 2133.50 - Fire Academy

Public safety programs in the subregion prepare students for employment in one high-quality high-school-level occupation and six high-quality community-college-level occupations. High-quality occupations have at least 100 annual job openings and offer a median hourly rate of \$21.82 at the regional level.

In 2021, there were nearly 2,500 public safety jobs related to subregional training programs (Exhibit 36). More than 200 high-quality job openings are projected annually in the subregion through 2026, and more than 1,800 annual job openings are projected in the greater region.

Exhibit 36. Education levels, projected demand, and earnings for high-quality occupations

Occupations	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings	Regional Annual Job Openings	Regional Median Hourly Earnings
Police and Sheriff's Patrol Officers	CC	931	86	626	\$47.40
Correctional Officers and Jailers	CC	617	64	420	\$39.33
Firefighters	CC	359	34	297	\$30.74
Detectives and Criminal Investigators	CC	218	18	111	\$51.18
Paralegals and Legal Assistants	CC	175	23	171	\$29.37
Court, Municipal, and License Clerks	CC	98	13	120	\$24.04
Public Safety Telecommunicators	HS	94	11	104	\$29.22

Community College Programs Not Offered

In the High Desert Subregion, nine programs in the public safety sector are currently not offered (Exhibit 37).

Exhibit 37. Programs not offered by community colleges in the subregion

Subregional Programs Not Offered	
0514.30 - Court Reporting	2105.50 - Police Academy
1602.00 - Library Technician (Aide)	2133.10 - Wildland Fire Technology
2105.20 - Probation and Parole	2199.00 - Other Public and Protective Services
2105.30 - Industrial and Transportation Security	4931.00 - Vocational ESL
2105.40 - Forensics, Evidence and Investigation	

Occupational Training Opportunities

There are four high-quality public safety occupations aligned with the following programs that community colleges may choose to address in the subregion.

- 1602.00 - Library Technician (Aide)
- 2105.20 - Probation and Parole
- 2105.30 - Industrial and Transportation Security

There were nearly 700 high-quality public safety jobs in the subregion in 2021 (Exhibit 38). Through 2026, these public safety training opportunities are projected to have nearly 100 annual job openings in the subregion, while the greater region is projected to have more than 500 annual job openings.

Exhibit 38. High-quality occupations without training programs in the subregion

Occupations	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings	Regional Annual Job Openings	Regional Median Hourly Earnings
Probation Officers and Correctional Treatment Specialists	BS	184	19	159	\$37.72
Transportation Security Screeners	CC	316	28	108	\$23.92
Library Technicians	CC	109	16	151	\$23.01
First-Line Supervisors of Security Workers	CC	45	5	102	\$23.85

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 High Desert Subregion currently utilize six retail, hospitality, and tourism program codes.

Programs Offered

- 1303.00 - Fashion
- 1303.10 - Fashion Design
- 1306.00 - Nutrition, Foods, and Culinary Arts
- 1306.30 - Culinary Arts
- 1307.00 - Hospitality
- 1307.10 - Restaurant and Food Services and Management

Retail, hospitality, and tourism programs in the subregion prepare students for employment in one high-quality bachelor's degree-level occupation and two high-quality community-college-level occupations. High-quality occupations have at least 100 annual job openings and offer a median hourly rate of \$21.82 at the regional level.

In 2021, there were more than 600 high-quality retail, hospitality, and tourism jobs in the subregion (Exhibit 39). Nearly 100 high-quality job openings are projected annually in the subregion, and nearly 1,000 annual job openings are projected in the greater region through 2026.

Exhibit 39. Education levels, projected demand, and earnings for high-quality occupations

Occupations	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings	Regional Annual Job Openings	Regional Median Hourly Earnings
Meeting, Convention, and Event Planners	BS	68	9	132	\$24.89
Food Service Managers	CC	344	48	504	\$27.52
Chefs and Head Cooks	CC	220	33	358	\$22.24

Community College Programs Not Offered

In the High Desert Subregion, 15 programs in the retail, hospitality, and tourism sector are currently not offered (Exhibit 40).

Exhibit 40. Programs not offered by community colleges in the subregion

Subregional Programs Not Offered	
0506.50 - Retail Store Operations and Management	1306.20 - Dietetic Services and Management
0509.60 - Display	1306.60 - Dietetic Technology
0835.70 - Aquatics and Lifesaving	1307.20 - Lodging Management
0836.10 - Recreation Assistant	1307.30 - Resort and Club Management
1301.10 - Consumer Services	3008.00 - Dry Cleaning
1302.00 - Interior Design and Merchandising	3009.00 - Travel Services and Tourism
1303.20 - Fashion Merchandising	3020.40 - Flight Attendant
1303.30 - Fashion Production	

Occupational Training Opportunities

All high-quality occupations related to the retail, hospitality, and tourism sector are being addressed by community colleges in the subregion.

Unassigned/No Sector Assignments

No Unassigned Codes for Existing Programs

Most CE community college programs have assigned sector designations, but a handful are unassigned. There are no existing programs in the High Desert Subregion that have unassigned codes.

Community College Programs Not Offered

There are eight unassigned programs that community colleges may choose to address in the subregion (Exhibit 41).

Exhibit 41. Programs not offered by community colleges in the subregion

Subregional Programs Not Offered	
0962.00 - Musical Instrument Repair	2102.00 - Public Administration
1008.10 - Commercial Dance	2104.50 - Disability Services
1099.00 - Other Fine and Applied Arts	3099.00 - Other Commercial Services
1399.00 - Other Family and Consumer Sciences	4932.00 - General Work Experience

Occupational Training Opportunities

The 2102.00 - public administration program may lead to high-quality occupations, depending on the coursework focus. This program trains for careers in two high-school-level occupations (Exhibit 42).

Exhibit 42. High-quality occupations without training programs in the subregion

Occupations	Education Level	Subregional 2021 Jobs	Subregional Annual Job Openings	Regional Annual Job Openings	Regional Median Hourly Earnings
Postal Service Mail Carriers	HS	537	37	238	\$25.16
Eligibility Interviewers, Government Programs	HS	471	48	365	\$22.90

Appendix A: Subregional Boundaries and ZIP Codes

This appendix details the boundaries of the four subregions comprising the Inland Empire/Desert Region and includes a list of the ZIP codes defining the High Desert Subregion. The High Desert Subregion contains 44 ZIP codes.

The map shows the following subregions:

- High Desert (Blue)
- Low Desert (Red)
- Inland Empire-Riverside County Metro (Green)
- Inland Empire-San Bernardino County Metro (Yellow)

Exhibit A1. Map of the four subregions along with their community colleges comprising the Inland Empire/Desert Region

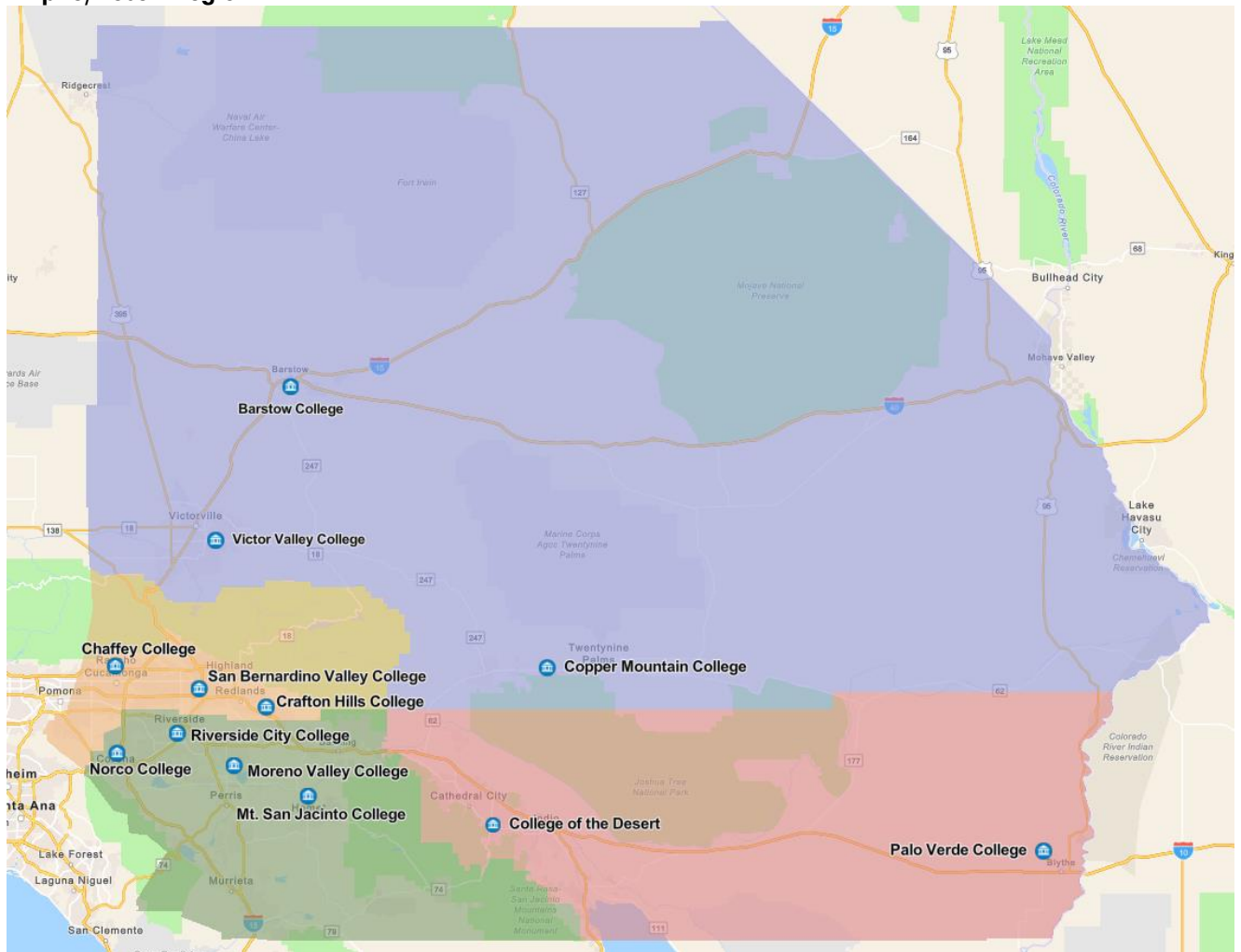


Exhibit A2. ZIP codes comprising the High Desert Subregion

ZIP Code (City/Community)		
92242 (Earp)	92309 (Baker)	92363 (Needles)
92252 (Joshua Tree)	92310 (Fort Irwin)	92364 (Nipton)
92256 (Morongo Valley)	92311 (Barstow)	92365 (Newberry Springs)
92267 (Parker Dam)	92312 (Barstow)	92366 (Mountain Pass)
92268 (Pioneertown)	92323 (Cima)	92368 (Oro Grande)
92277 (Twentynine Palms)	92327 (Daggett)	92371 (Phelan)
92278 (Twentynine Palms)	92329 (Phelan)	92372 (Pinon Hills)
92280 (Vidal)	92332 (Essex)	92392 (Victorville)
92284 (Yucca Valley)	92338 (Ludlow)	92393 (Victorville)
92285 (Landers)	92340 (Hesperia)	92394 (Victorville)
92286 (Yucca Valley)	92342 (Helendale)	92395 (Victorville)
92301 (Adelanto)	92344 (Hesperia)	92398 (Yermo)
92304 (Amboy)	92345 (Hesperia)	93562 (Trona)
92307 (Apple Valley)	92347 (Hinkley)	93592 (Trona)
92308 (Apple Valley)	92356 (Lucerne Valley)	

ZIP Code Limitations

ZIP codes were developed by the U.S. Post Office for the purpose of efficient mail delivery. Unlike official state, county, and sometimes metropolitan statistical area (MSA) designations, ZIP code boundaries may morph over time based on changes in carrier routes. Some ZIP codes cover an area of land, and others are location points (e.g., designated by some post office locations). ZIP codes may not cover highly rural areas, such as mountain tops, large patches of desert, or open water. Lightcast makes every effort to ensure multiple data sources align in their ZIP code reporting standards. All four subregional workforce assessments sum to the Riverside-San Bernardino-Ontario MSA regional total.

Appendix B: 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 (\$21.82 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

Education Level Categories

- 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 Definitions⁷

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.



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.

⁷ 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>.

Appendix C: 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 CCCC priority and emerging sector alignment with CDE sectors

CCCCO 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	