



LOS ANGELES COUNTY
ECONOMIC DEVELOPMENT CORPORATION

Collectively Advancing Opportunity and Prosperity for All

EMPLOYMENT IMPACT OF COVID-19: SOUTHERN CALIFORNIA

LAEDC INSTITUTE FOR APPLIED ECONOMICS (IAE)

APRIL 21, 2020

ESTIMATING IMPACTS REGIONAL AND SECTORAL

First appearing in California in late-February, the COVID-19 pandemic has brought business and life to a grinding halt for the past seven weeks. At the writing of this report, over 19,000 cases of COVID-19 have been confirmed in the 10-county Southern California region, with over 10,000 in Los Angeles County alone. California Governor Gavin Newsom ordered a stay-at-home order March 19th, which the County of Los Angeles reaffirmed on March 22nd. Social distancing measures have been enacted across California, and large gatherings have been banned. All nonessential businesses, which are generally defined as recreational and not critical to maintaining personal well-being, have been closed. Meanwhile, workers in occupations deemed essential during this pandemic must still be physically present to do their work. Those in the postal service, food delivery, grocery, medical and similar fields are continuing to work with the risk of exposing themselves, as well as those with whom they share their homes, to the virus. In light of the dramatic effect that the COVID-19 pandemic is having on employment across the United States, the LAEDC's Institute for Applied Economics has placed its focus on quantifying these impacts for the Southern California region.¹ Southern California includes 10 major counties that extend from San Luis Obispo to San Diego, and out to Nevada and Arizona at its farthest East. This region accounted for 10.3 million jobs last year, and includes the important hub of Los Angeles MSA, which itself contributes 6.5 million jobs to the economy. Jobs in the region are spread

across the entire spectrum of industry sectors, and as such workers across Southern California are feeling the burden of this pandemic and its adjustments to employment. As a result, we examine each of the region's eight component metropolitan statistical areas (MSA) and its many occupational groups to determine where the highest numbers of jobs will be lost and where unemployment will be most pronounced. It should be noted that the following estimates are based solely on the initial response to COVID-19 in the Southern California region. All of the uncertainties and changing conditions in terms of job losses, containing the virus, length of stay-at-home orders, consumption levels, supply changes and more, mean that **estimates made in the midst of this crisis could vary from real outcomes.** For example, if we had chosen to base our estimates on the assumption that the stay at home order would be lifted and activity would resume at the end of April, but the disruption continued into June, then our estimates for the quarter and the entire year would be optimistic. Policy responses and other variables affect these initial estimates of potential unemployment, and these estimates remain in flux as response action continues and evolves. **For that reason, LAEDC expressly points out that this is not a forecast or a projection.**

¹ Rather than focusing on the employment effects within specific industries, which would not permit for assessing the risks of each detailed occupation, this report focuses on occupational groups to determine which occupations have been, and will continue to be, most affected by COVID-19. For example, retailers may have employees in Management, Sales, Production, Transportation, Office and Administration, Legal Occupations and more; by using occupational groups we can identify the underlying components within

the industry that are expected to lose jobs, rather than giving an employment prediction for the entire retail industry regardless of its workforce composition. The Standard Occupational Classification system, used by federal government agencies, breaks the workforce into twenty-three major occupational groups, (covering 867 detailed occupations), which are included in this report.

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As such, these estimates should not be used as an argument to reopen businesses or ease social distancing requirements throughout the region. These outcomes would improve under different policy scenarios. With more clarity on the public sector response to COVID-19, which will develop over the coming weeks, we will be able to revise employment estimates to keep up to date with changing policies.

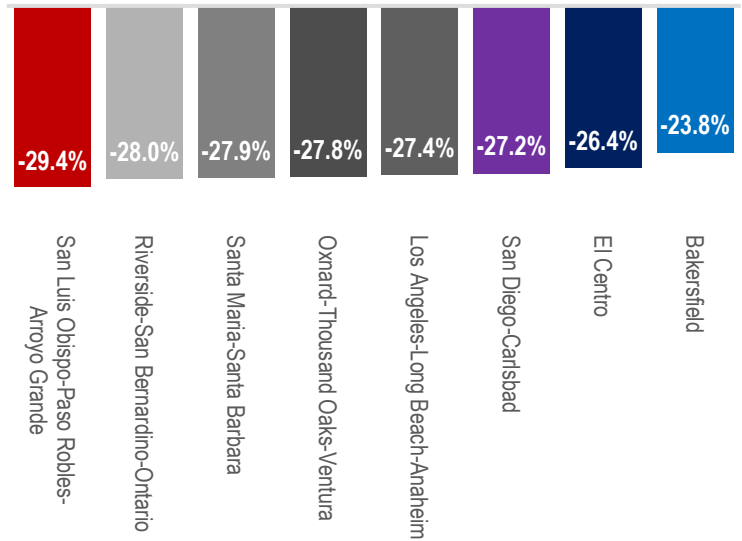
Regional

In the Southern California region as a whole, initial projections for the number of jobs lost in May 2020 from May of the previous year (2019) are close to 2,816,700 jobs, an employment decline of -27.4 percent, year-over-year. Employed workers in the region are estimated to number just under 7.5 million, well below May 2019's total of nearly 10.3 million workers. Initial projections for unemployment in the Southern California region are associated with an unemployment rate that may reach 31.4 percent in May 2020.

Food Preparation and Serving Related Occupations² is expected to be the most severely impacted major occupation group in Southern California. Counties in the region have followed directives to close all non-essential businesses, and restaurants and food locations must strictly operate on a takeout or delivery basis only. Due to the ban on dine-in eating and the resulting empty restaurants, those who find themselves out of work are waiters, servers, bartenders, chefs and cooks and more. Employment in May 2020 may decline by 68.8 percent, year-over-year, in this major occupation group, potentially affecting close to 700,000 workers. Other major industries facing great losses are Sales and Related Occupations,³ and Office and Administrative Support Occupations,⁴ which we will examine later in this report.

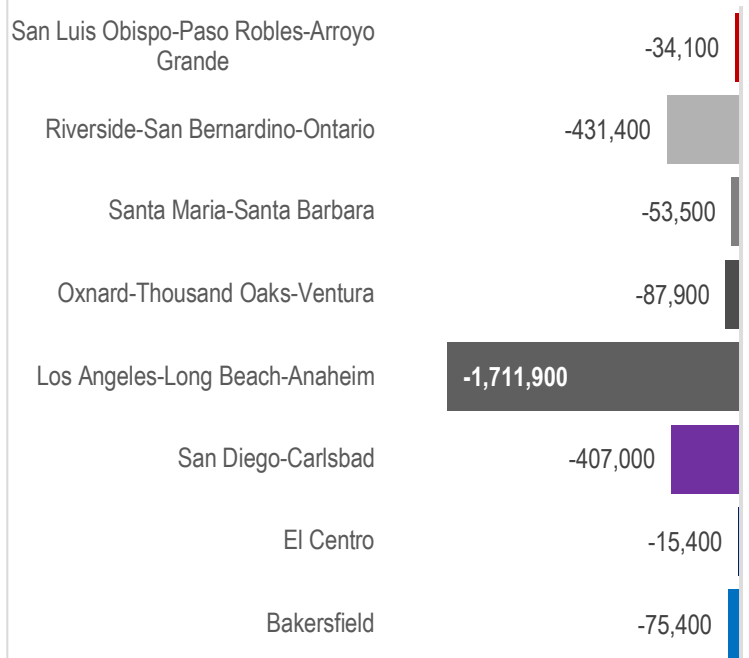
Preliminary Projections for May 2020

Year-Over-Year Change



Preliminary Projections for May 2020

Year-Over-Year Change



² This major occupational group includes 17 detailed occupations that are broken down into the following five minor occupational groups: supervisors of food prep and workers; cooks and food prep workers; food and beverage serving workers; other food prep and serving related workers

³ This major occupational group includes 22 detailed occupations that are broken down into the following five minor occupational groups: retail sales workers; sales representatives, services; sales representatives, wholesale

and manufacturing; other sales and related workers (including real estate brokers, sales engineers, telemarketers, etc.)

⁴ This major occupation includes 54 detailed positions that are broken down into the following seven minor occupational groups: supervisors of office and admin workers; communications equipment operators; financial clerks; information and record clerks; material recording, scheduling, dispatching, and distrusting workers; secretaries and admin assistants; other office and admin support workers

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Of the eight MSAs that make up the Southern California region, unemployment is expected to rise to between 23 percent and 30 percent across the board. The most affected MSA will be San Luis Obispo-Paso Robles-Arroyo Grande. While it had the lowest unemployment rate of the eight MSAs last year at 2.4 percent, this figure is estimated to rise 29.1 percent to 31.5 percent unemployment this May. San Luis Obispo County has a high concentration of jobs in tourism, hospitality and food; all of these sectors will struggle in the coming months from lack of business at what would otherwise be peak season. The food industry in particular, the county's largest occupation, will experience a 70 percent decline in employment. Meanwhile, there are much fewer workers in the higher-paying job occupational sectors such as science, engineering, management and professional positions, which will be relatively less affected.

At greatest risk is the El Centro MSA, which contains Imperial County in the southeastern corner of California. The unemployment rate in Imperial County was already high relative to other MSAs in 2019, at 16.5 percent, but with the spread of COVID-19 it is projected to reach 40 percent — nearly 10 percent higher than any other regional projection. Due to its lack of any major cities and relative isolation from California's business hubs, Imperial County has struggled to expand its economy beyond the public sector and farming. Moreover, travel restrictions have constrained its important border relationship with Mexico, which provides over one billion dollars annually in retail expenditures, as well as investment in the local economy. With nearly a quarter of residents living below the poverty line, rising unemployment will challenge an already distressed region.

On the opposite end, Bakersfield MSA is projected to be the least impacted region, with a 23.8 percent decrease in employment; however, the unemployment rate is still estimated to be higher than 30 percent. The Bakersfield MSA, which consists of Kern County, is farther inland and at a prime location for agriculture; it is the only metropolitan statistical area in Southern California where Farming is the largest occupation with nearly 42,000 workers. This sector is only projected to see a loss of 3.3 percent of employment through May. Kern County is also the largest oil-producing county in California and is a

nationally significant oil producer. Projections for this report indicate the initial response to COVID-19 in the Southern California region. As oil and gas companies continue to suffer in the coming weeks as a result of the global oil over-supply crisis, job losses in Kern and other oil-rich areas of the state are likely to increase.

The Los Angeles-Long Beach-Anaheim MSA employed nearly 6.5 million workers last year, more than all other MSAs in Southern California combined. It is estimated that this MSA, which includes Los Angeles County and Orange County, will lose over 1.7 million jobs to reach an unemployment rate of 31.7 percent. The MSA is extremely diverse by employment numbers. Dominant industries include retail, personal care, food, tourism, hospitality and accommodation, which are predicted to suffer significant employment losses; food serving is estimated to be most impacted with over 400,000 lost jobs while retail is forecasted to lose nearly 350,000. Another important sector is transportation, which employ over 500,000 in the MSA. Travel restrictions and the decrease in tourism will have a significant impact on employment in this occupation as time goes on. However, the status of "Los Angeles" as a focus of national and international business activity means that there are also strong sectors in management, business and finance, technology, engineering and legal occupations. These will all withstand the pandemic with estimated job losses only around 5 percent on average, as most workers are able to transition to remote work.

Occupational

In the face of wide-ranging stay-at-home orders, travel restrictions and closures of non-essential businesses, the impact on employment will vary significantly across occupations and sectors of the Southern California economy.

The two major occupational groups projected to lose the largest numbers of jobs are Food Preparing and Serving Related Occupations and Sales and Related Occupations, with estimated employment declines of 694,880 and 582,270 respectively. These are obvious categories of workers due to the closure of all non-essential business and the mandate for food service locations to operate solely on a takeout or delivery basis.

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Southern California is home to a significant retail occupation group that employed nearly one million workers last year; this can mainly be attributed to the large number of residents and tourists shopping in the region. The brick-and-mortar retail industry was already in a losing battle with online retailers, with notable brands closing locations throughout 2019. Current projections show nearly 60 percent of this major occupation group's workforce displaced in the short term, but the implications these closures will have are sure to harm the retail industry's future viability for employment as well.

Meanwhile, restaurants, bars and other dining locations are a primary source of employment in Southern California, contributing over one million jobs to the economy. With most bars, coffee shops and full-service restaurants closed and their staff presently out of work, this occupational group is predicted to contract by nearly 70 percent in employment from the previous year.

Other occupational groups estimated to suffer heavy losses (by percentage) to their workforce will be: Community and Social Service Occupations⁵; Arts/ Design/ Entertainment/ Sports/Media Occupations⁶; and Personal Care and Service Occupations⁷. Personal Care and Service, which includes workers such as hairdressers, travel agents, childcare workers, and fitness trainers, is estimated to lose 71.5 percent of employment year-over-year, which is the highest out of any occupational group. Due to the high amount of

close contact that this major group requires, social distancing regulations prevent business from taking place. Though employing just under 250,000 workers, the loss of 175,000 of those jobs is significant.

Another staple occupation group of the region, particularly in Los Angeles County, is art, design, entertainment, sports and media. Southern California is home to many internationally recognized and successful sports brands including the Los Angeles Rams, Los Angeles Lakers, Los Angeles Dodgers, San Diego Padres, and USC Trojans. The 2020 Major League Baseball season has been postponed until further notice, museums and entertainment facilities are closed, and although decisions have not yet been made, the cancellation of further sports seasons in the fall would have a dramatic impact on regional economics and employment. Likewise, entertainment is synonymous with Los Angeles, and the suspension of film and television productions (except for animated) will contribute to job losses in the county.

Across the region, COVID-19 has had mixed impacts on the region's 2.3 million "blue-collar" occupations. Construction and extraction; production; transportation and material moving; and installation, maintenance and repair occupations are estimated to suffer employment decreases around 20 percent across the board. Factories in particular may struggle, as some larger plants have chosen to shut down altogether, while others have attempted to impose social distancing

Metropolitan Statistical Areas	May 2019 Employment	May 2020 Projection	Projected Job Loss	Percent Change	Unemployment May 2019	Unemployment May 2020
Southern California	10,272,470	7,455,800	-2,816,700	27.4%	3.60%	31.4%
Los Angeles-Long Beach-Anaheim	6,239,710	4,527,780	-1,711,930	-27.4%	3.6%	31.7%
Riverside-San Bernardino-Ontario	1,538,390	1,107,000	-431,390	-28.0%	3.5%	31.9%
San Diego-Carlsbad	1,494,940	1,087,950	-406,990	-27.2%	2.7%	29.8%
Bakersfield	316,680	241,270	-75,410	-23.8%	7.2%	30.7%
Oxnard-Thousand Oaks-Ventura	316,640	228,750	-87,890	-27.8%	3.0%	30.1%
Santa Maria-Santa Barbara	191,660	138,140	-53,520	-27.9%	4.0%	29.9%
San Luis Obispo-Arroyo Grande	115,890	81,760	-34,130	-29.4%	2.4%	31.5%
El Centro	58,560	43,130	-15,430	-26.4%	16.5%	40.4%

⁵ This major occupational group includes 18 detailed occupations that are broken down into the following two minor occupational groups: Counselors, Social Workers, and Other Community and Social Service Specialists; and Religious Workers

⁶ This major occupational group includes 41 detailed occupations that are broken down into the following four minor occupational groups: art and design workers; entertainers and performers, sports and related;

media and communications workers; media and communication equipment workers

⁷ This major occupational group includes 33 detailed occupations that are broken down into the following eight minor occupational groups: supervisors of personal care and service workers; animal care and service workers; entertainment attendants and related workers; funeral service workers; personal appearance workers; baggage porters, bellhops, and concierges; tour travel guides; other personal care and service workers

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requirements during work. Some of these workers have retained work by shifting job duties in response to the pandemic. For example, transportation workers capable of delivering essential goods are high in demand.

While construction has been categorized as essential business, this is largely in reference to essential infrastructure and development projects. Plumbers, painters, electricians, and similar workers will experience employment declines as home improvement and private projects slow in response to decreased incomes and revenues. In the short term, farming occupations will be slower to see losses. Projections through May anticipate less than 4 percent in job losses relative to May 2019 employment. However, this is likely to increase as supply chains have been interrupted and demand falls.

The occupations most affected by the pandemic and the restrictions that have accompanied it are those with duties which

must be performed on-location and with the public.

Higher-skill jobs in business and finance, engineering, the sciences and legal services are much less prone to disruption. Most workers in these industries have transitioned to online work, with company communication done through platforms such as Zoom and Skype. Most of these sectors are estimated to lose fewer than 10 percent of jobs. Management Occupations, accounting for nearly 600,000 jobs in Southern California, are considered relatively sheltered from significant loss.

Occupations in healthcare and protective services remain strong in employment, due to their critical importance in the fight against COVID-19. However, there is a notable disparity between Healthcare Practitioners and Technical Occupations,⁸ which are estimated to decrease in employment by 8.3 percent, and Healthcare Support Occupations⁹, which are projected to lose 26.3 percent of jobs.

Southern California				
Occupation	May 2019 Employment	May 2020 Projection	Projected Job Loss	Percent Change
All	10,272,470	7,455,778	-2,816,692	-27.4%
Management	591,550	562,388	-29,162	-4.9%
Business and Financial Operations	589,760	503,784	-85,976	-14.6%
Computer and Mathematical	264,130	253,676	-10,454	-4.0%
Architecture and Engineering	194,190	184,512	-9,678	-5.0%
Life, Physical, and Social Science	93,490	88,934	-4,556	-4.9%
Community and Social Service	183,960	77,242	-106,718	-58.0%
Legal	83,990	74,839	-9,151	-10.9%
Educational Instruction and Library	625,620	493,917	-131,703	-21.1%
Arts, Design, Entertainment, Sports, and Media	222,770	107,061	-115,709	-51.9%
Healthcare Practitioners and Technical	510,760	465,886	-44,874	-8.8%
Healthcare Support	585,290	431,253	-154,037	-26.3%
Protective Service	250,310	232,196	-18,114	-7.2%
Food Preparation and Serving Related	1,009,750	314,869	-694,881	-68.8%
Building and Grounds Cleaning & Maintenance	288,000	272,502	-15,498	-5.4%
Personal Care and Service	244,960	69,780	-175,180	-71.5%
Sales and Related	994,990	412,718	-582,272	-58.5%
Office and Administrative Support	1,317,290	1,095,741	-221,549	-16.8%
Farming, Fishing, and Forestry	83,880	81,033	-2,847	-3.4%
Construction and Extraction	392,550	306,796	-85,754	-21.8%
Installation, Maintenance, and Repair	316,780	258,043	-58,737	-18.5%
Production	529,700	439,169	-90,531	-17.1%
Transportation and Material Moving	898,750	729,439	-169,311	-18.8%

*Showing totals for all of Southern California

⁸ This major occupational group includes 72 detailed occupations that are broken down into the following three minor occupational groups: Healthcare diagnosing or treating practitioners; health technologists and technicians; and other healthcare practitioners and technical occupations

⁹ This major occupational group includes 18 detailed occupations that are broken down into the following three minor occupational groups: home health, care aides and nursing assistants; occupational therapy and physical therapist assistants and aides; and other healthcare support occupations, such as massage therapists, and medical/dental assistants.

SOUTHERN CA

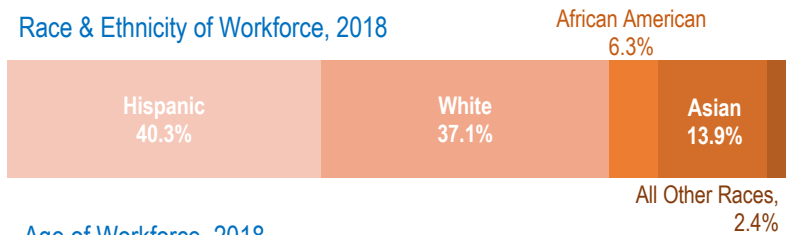
PROJECTED EMPLOYMENT IMPACT (MAY 2020)

The 10-county Southern California region¹⁰ is projected to experience 31.4% unemployment in May 2020. There is a projected loss of 2,816,700 jobs from one year ago (-27.4%).

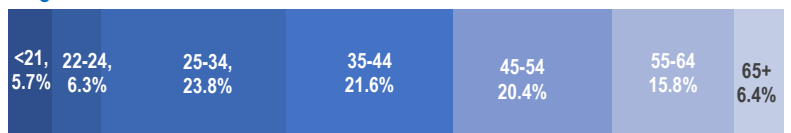
The occupations with the largest losses will be Food Preparation and Serving, Sales, and Office and Administrative Support. The occupation with the greatest losses by employment percentage will be Personal Care and Service (-71.5%).

Southern California's largest major occupation group is Office and Administrative Support, which is estimated to lose 221,600 jobs year-over-year for a 16.8% decrease in employment. When combined with Food Preparation and Serving and Sales, the top three regional major groups by employment will lose nearly 1.5 million jobs combined.

Race & Ethnicity of Workforce, 2018



Age of Workforce, 2018

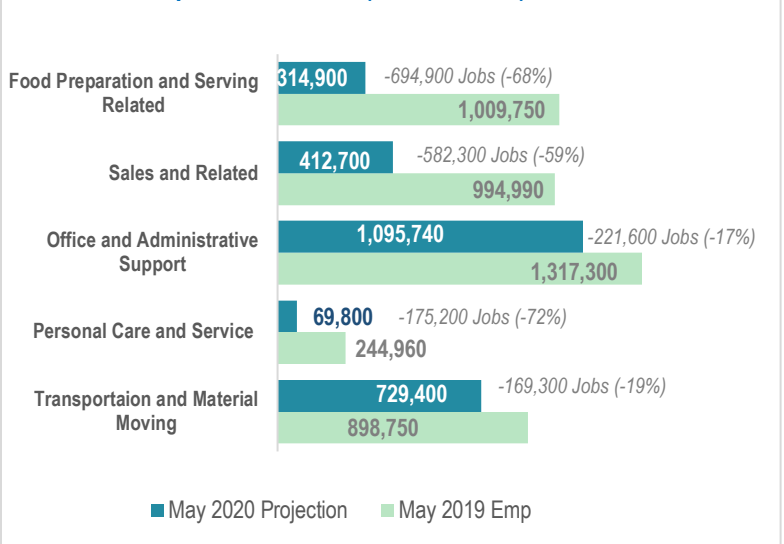


Educational Attainment of Workforce, 2018



	2019	2020f
Labor Force	10,659,940	10,871,100
May Employment	10,272,420	7,455,500
Unemployment Rate	3.6%	31.4%

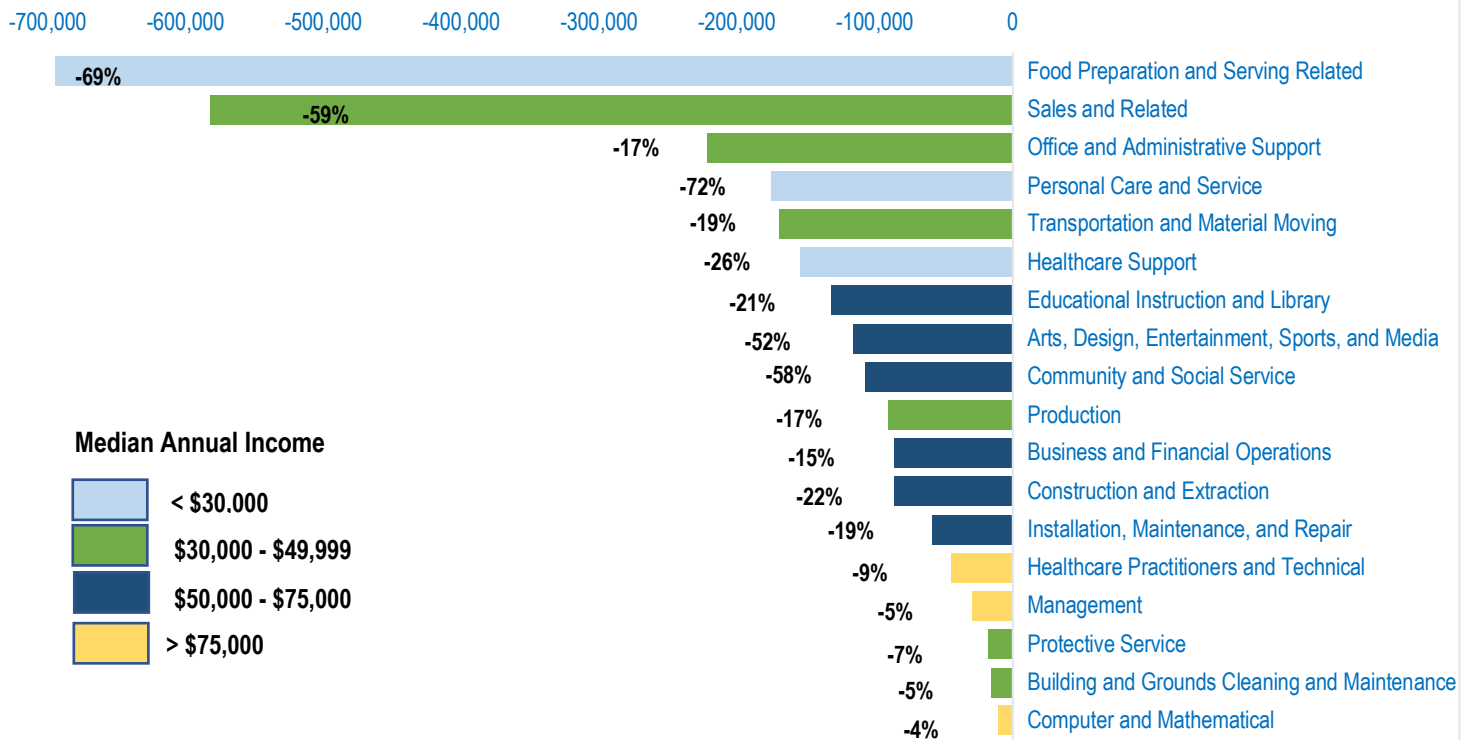
Greatest Occupational Losses (Southern CA)



¹⁰ Southern California is defined as the total of the following counties: San Diego, Imperial, Riverside, Orange, San Bernardino, Los Angeles, Ventura, Kern, Santa Barbara, San Luis Obispo.

EMPLOYMENT IMPACT OF COVID-19: SOUTHERN CALIFORNIA

Projected Jobs Lost by Occupational Group, May 2020



PAYROLL JOB IMPACTS BY OCCUPATION GROUP

Occupation	May 2019 Emp	May 2020 Projection	Projected Job Loss	% Change
All	10,272,470	7,455,800	-2,816,700	-27.4%
Business and Financial Operations	589,760	503,800	-86,000	-14.6%
Architecture and Engineering	194,190	184,500	-9,700	-5.0%
Community and Social Service	183,960	77,200	-106,700	-58.0%
Educational Instruction and Library	625,620	493,900	-131,700	-21.1%
Arts, Design, Entertainment, Sports, and Media	222,770	107,100	-115,700	-51.9%
Healthcare Practitioners and Technical	510,760	465,900	-44,900	-8.8%
Healthcare Support	585,290	431,300	-154,000	-26.3%
Protective Service	250,310	232,200	-18,100	-7.2%
Food Preparation and Serving Related	1,009,750	314,900	-694,900	-68.8%
Building and Grounds Cleaning and Maintenance	288,000	272,500	-15,500	-5.4%
Personal Care and Service	244,960	69,800	-175,200	-71.5%
Sales and Related	994,990	412,700	-582,300	-58.5%
Office and Administrative Support	1,317,290	1,095,700	-221,600	-16.8%
Farming, Fishing, and Forestry	83,880	81,000	-2,900	-3.4%
Construction and Extraction	392,550	306,800	-85,800	-21.8%
Installation, Maintenance, and Repair	316,780	258,000	-58,700	-18.5%
Production	529,700	439,200	-90,500	-17.1%
Transportation and Material Moving	898,750	729,400	-169,300	-18.8%

*Only select occupations shown, totals may not sum.

LOS ANGELES-ANAHEIM MSA

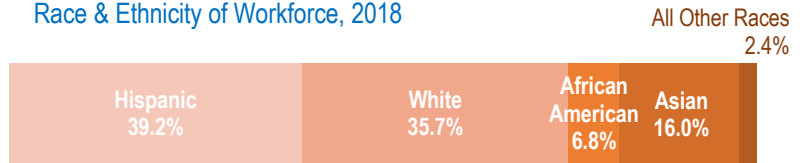
PROJECTED EMPLOYMENT IMPACT (MAY 2020)

The Los Angeles - Long Beach - Anaheim metropolitan statistical area (MSA), which consists of Los Angeles County and Orange County, is projected to experience 31.7% unemployment in May 2020. This equates to a projected loss of 1,711,900 jobs from one year ago (-27.4%).

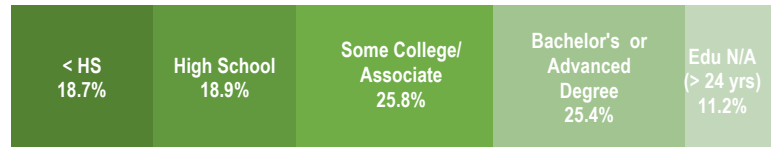
The occupations with the largest losses are estimated be Food Preparation and Serving, Sales and Office and Administrative Support. The occupation with the greatest losses by employment percentage is forecasted to be Personal Care and Service (-71.6%).

The MSA's largest major occupation group is Office and Administrative Support, which is estimated to lose 140,000 jobs year-over-year for a 16.8% decrease in employment. Overall, four of the top five major groups by employment are forecasted to lose over 100,000 jobs, with Sales and Food Preparation and Serving losing over 300,000 each.

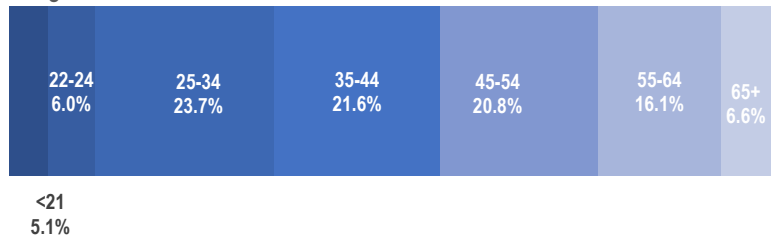
Race & Ethnicity of Workforce, 2018



Educational Attainment of Workforce, 2018

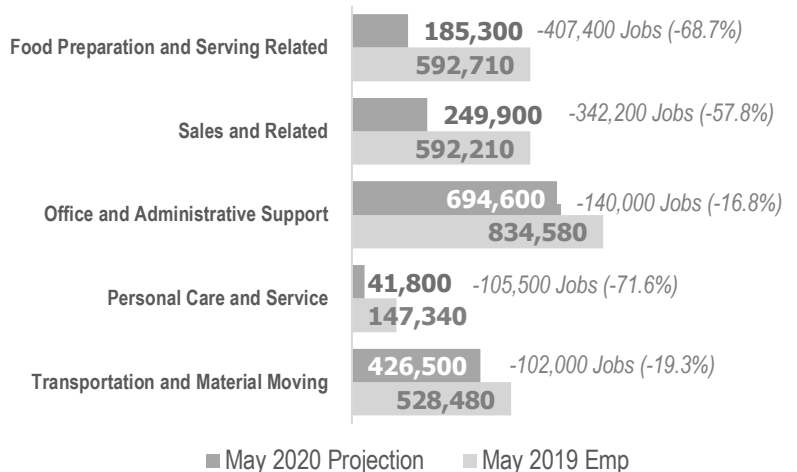


Age of Workforce, 2018



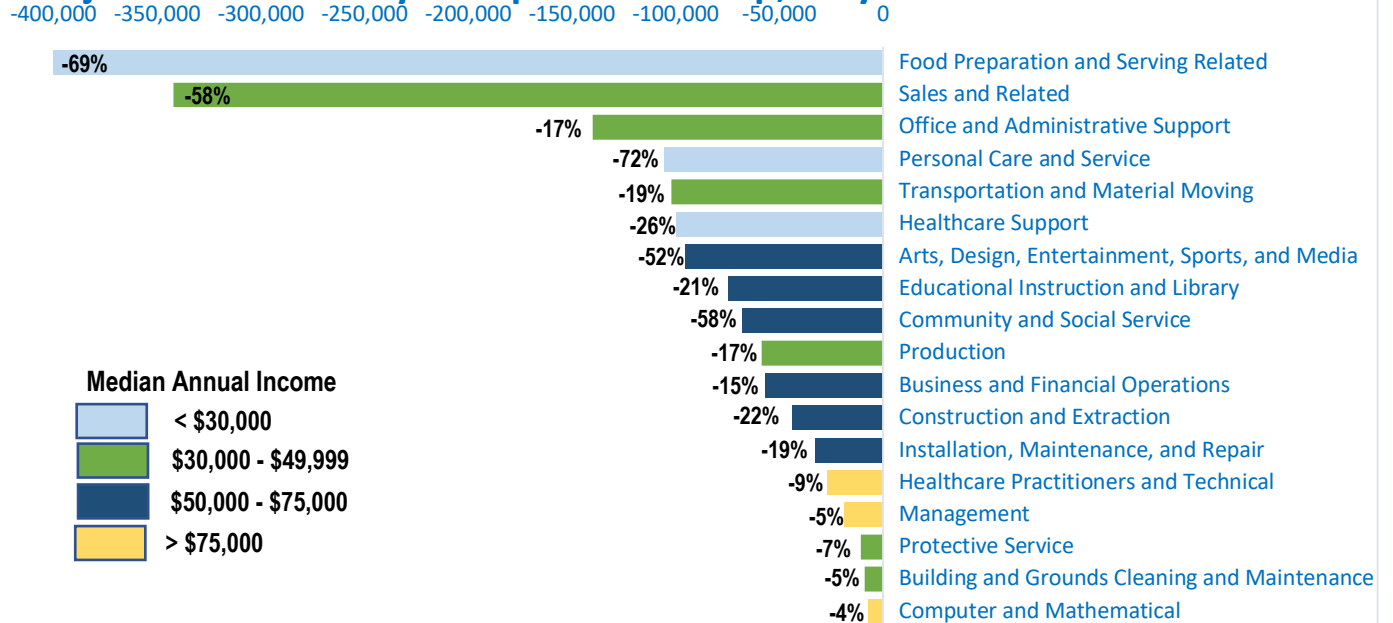
	2019	2020f
Labor Force	6,472,730	6,632,800
May Employment	6,239,710	4,527,800
Unemployment Rate	3.6%	31.7%

Greatest Occupational Losses



EMPLOYMENT IMPACT OF COVID-19: SOUTHERN CALIFORNIA

Projected Jobs Lost by Occupational Group, May 2020



Payroll Job Impacts by Occupation Group

Occupation	May 2019 Emp	May 2020 Projection	Projected Job Loss	% Change
All	6,239,710	4,527,800	-1,711,900	-27.4%
Food Preparation and Serving Related	592,710	185,300	-407,400	-68.7%
Sales and Related	592,210	250,000	-342,200	-57.8%
Office and Administrative Support	834,580	694,600	-140,000	-16.8%
Personal Care and Service	147,340	41,800	-105,500	-71.6%
Transportation and Material Moving	528,480	426,500	-102,000	-19.3%
Healthcare Support	380,700	281,000	-99,700	-26.2%
Arts, Design, Entertainment, Sports, and Media	182,490	87,200	-95,300	-52.2%
Educational Instruction and Library	359,240	284,900	-74,400	-20.7%
Community and Social Service	117,150	49,500	-67,700	-57.8%
Production	341,020	282,600	-58,400	-17.1%
Business and Financial Operations	390,730	334,000	-56,700	-14.5%
Construction and Extraction	199,790	156,300	-43,500	-21.8%
Installation, Maintenance, and Repair	175,720	143,000	-32,700	-18.6%
Healthcare Practitioners and Technical	303,100	276,500	-26,600	-8.8%
Management	381,080	362,400	-18,700	-4.9%
Protective Service	147,700	137,100	-10,700	-7.2%
Building and Grounds Cleaning and Maintenance	165,810	157,100	-8,800	-5.3%
Computer and Mathematical	172,880	166,100	-6,800	-3.9%
Legal	62,030	55,300	-6,800	-10.9%
Architecture and Engineering	111,160	105,600	-5,500	-5.0%
Life, Physical, and Social Science	47,830	45,500	-2,300	-4.9%
Farming, Fishing, and Forestry	5,960	5,700	-200	-4.0%

*Only select occupations shown, totals may not sum.

RIVERSIDE-ONTARIO MSA

PROJECTED EMPLOYMENT IMPACT (MAY 2020)

The Riverside – San Bernardino - Ontario metropolitan statistical area (MSA), which consists of Riverside County and San Bernardino County, is projected to experience 31.9% unemployment in May 2020. This equates to a projected loss of 431,000 jobs from one year ago (-28.0%).

The occupations with the largest losses are forecasted to be Food Preparation and Serving, Sales and Transportation and Material Moving. The occupation with the greatest losses by employment percentage is projected to be Personal Care and Service (-71.3%).

The MSA's largest major occupation group is Transportation and Material Moving, which is estimated to lose 37,000 jobs year-over-year for a 17.8% decrease in employment. Overall, all of the top five major groups by employment are estimated to lose over 22,000 jobs. Food Preparation and Serving and Sales will likely lose 107,900 and 93,400 jobs, respectively.

	2019	2020f
Labor Force	1,594,190	1,624,900
May Employment	1,538,390	1,107,000
Unemployment Rate	3.5%	31.9%

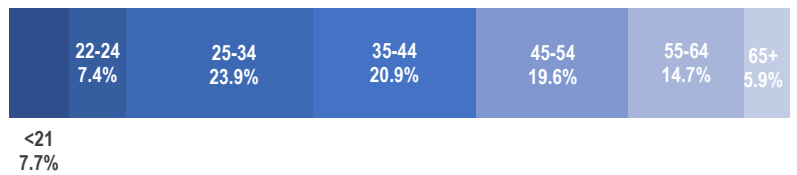
Race & Ethnicity of Workforce, 2018



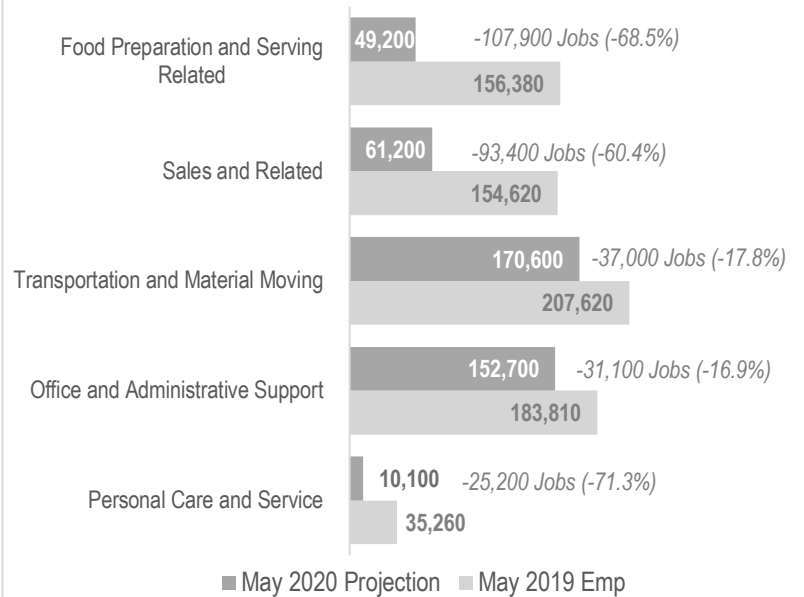
Educational Attainment of Workforce, 2018



Age of Workforce, 2018

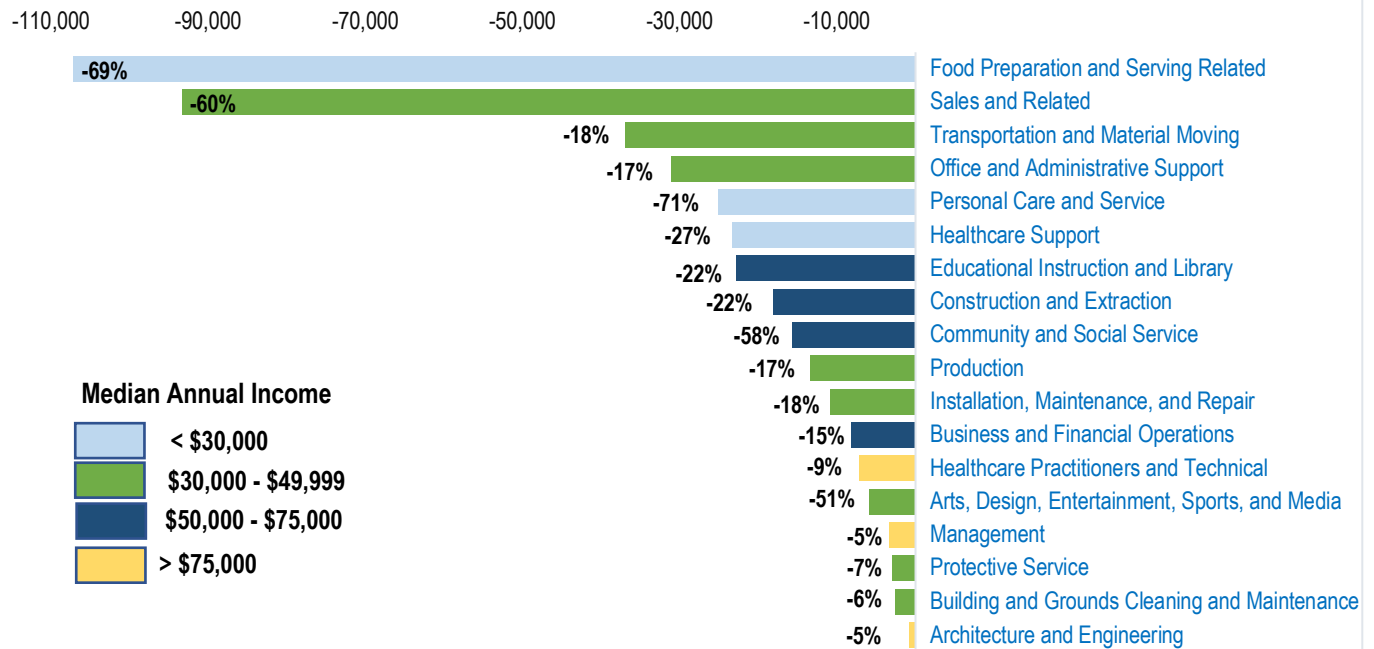


Greatest Occupational Losses



EMPLOYMENT IMPACT OF COVID-19: SOUTHERN CALIFORNIA

Projected Jobs Lost by Occupational Group, May 2020



Payroll Job Impacts by Occupation Group

Occupation	May 2019 Emp	May 2020 Projection	Projected Job Loss	% Change
All	1,538,390	1,107,000	-431,400	-28.0%
Food Preparation and Serving Related	156,380	49,200	-107,200	-68.5%
Sales and Related	154,620	61,200	-93,400	-60.4%
Transportation and Material Moving	207,620	170,600	-37,000	-17.8%
Office and Administrative Support	183,810	152,700	-31,100	-16.9%
Personal Care and Service	35,260	10,100	-25,200	-71.3%
Healthcare Support	88,130	64,800	-23,400	-26.5%
Educational Instruction and Library	104,940	82,100	-22,800	-21.7%
Construction and Extraction	82,200	64,100	-18,100	-22.1%
Community and Social Service	26,900	11,200	-15,700	-58.4%
Production	79,110	65,600	-13,500	-17.0%
Installation, Maintenance, and Repair	59,480	48,600	-10,900	-18.3%
Business and Financial Operations	55,700	47,500	-8,200	-14.7%
Healthcare Practitioners and Technical	81,960	74,800	-7,200	-8.8%
Arts, Design, Entertainment, Sports, and Media	11,590	5,700	-5,900	-51.1%
Management	66,840	63,500	-3,400	-5.0%
Protective Service	40,900	37,900	-3,000	-7.3%
Building and Grounds Cleaning and Maintenance	46,370	43,800	-2,600	-5.6%
Architecture and Engineering	15,410	14,600	-800	-5.0%
Computer and Mathematical	17,860	17,200	-700	-4.0%
Legal	5,620	5,000	-600	-11.2%
Life, Physical, and Social Science	10,000	9,500	-500	-5.0%
Farming, Fishing, and Forestry	7,690	7,400	-300	-3.6%

*Only select occupations shown, totals may not sum.

SAN DIEGO-CARLSBAD MSA

PROJECTED EMPLOYMENT IMPACT (MAY 2020)

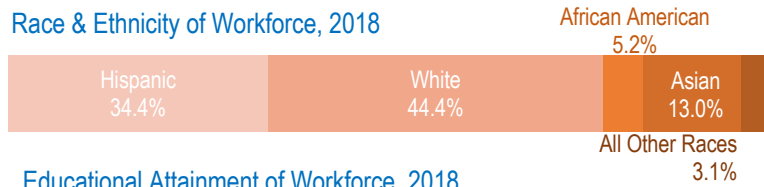
The San Diego - Carlsbad metropolitan statistical area (MSA), which consists of San Diego County, is projected to experience 29.8% unemployment in May 2020. This is a projected loss of 407,000 jobs from one year ago (-27.2%).

The occupations with the largest losses are estimated to be Food Preparation and Serving, Sales and Office and Administrative Support. The occupation with the greatest losses by employment percentage is projected to be Personal Care and Service (-72.4%).

The San Diego - Carlsbad MSA's largest major occupation group is Office and Administrative Support, which is estimated to lose 31,300 jobs year-over-year for a 17.0% decrease in employment. The second and third largest, Food Preparation and Serving and Sales, are forecasted to lose 110,692 and 88,315 jobs. However, Business and Financial Operations, which employed 98,300 in 2019, will likely only lose 14.8%.

	2019	2020f
Labor Force	1,536,420	1,549,500
May Employment	1,494,940	1,088,000
Unemployment Rate	2.7%	29.8%

Race & Ethnicity of Workforce, 2018



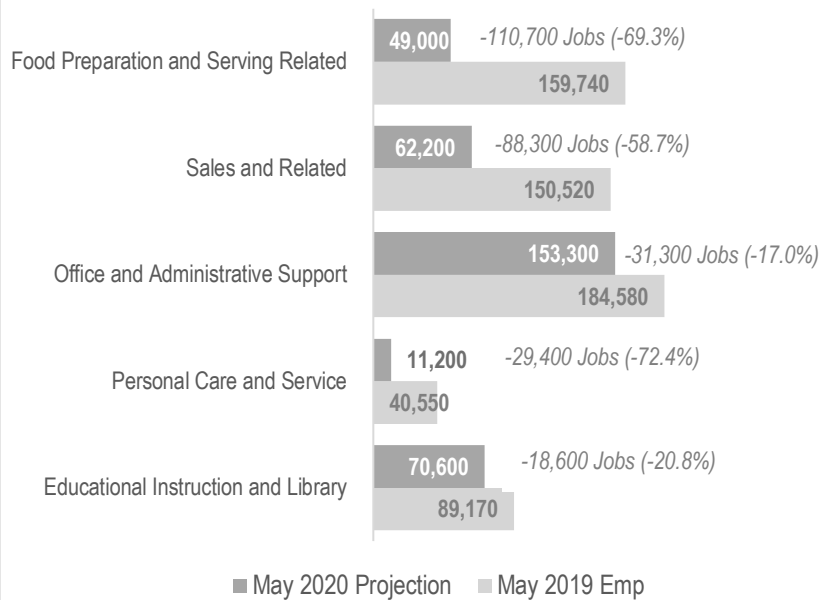
Educational Attainment of Workforce, 2018



Age of Workforce, 2018

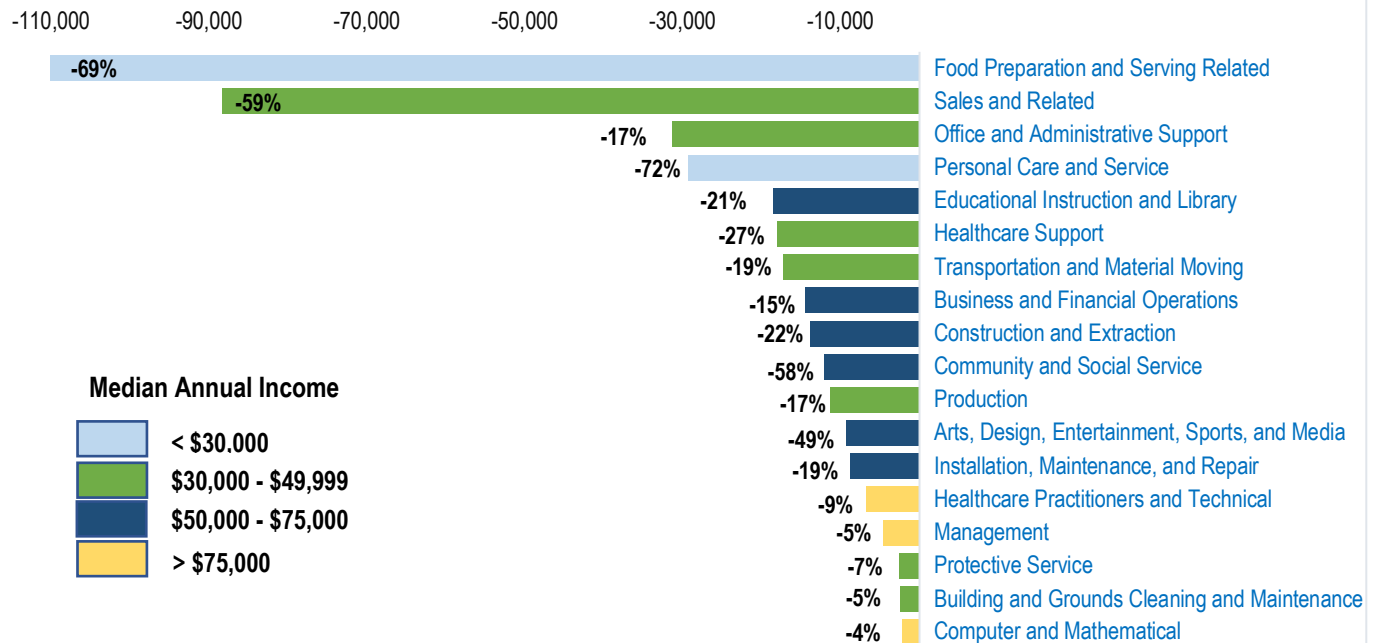


Greatest Occupational Losses



EMPLOYMENT IMPACT OF COVID-19: SOUTHERN CALIFORNIA

Projected Jobs Lost by Occupational Group, May 2020



Payroll Job Impacts by Occupation Group

Occupation	May 2019 Emp	May 2020 Projection	Projected Job Loss	% Change
All	1,494,940	1,088,000	-407,000	-27.2%
Food Preparation and Serving Related	159,740	49,100	-110,700	-69.3%
Sales and Related	150,520	62,200	-88,300	-58.7%
Office and Administrative Support	184,580	153,300	-31,300	-17.0%
Personal Care and Service	40,550	11,200	-29,400	-72.4%
Educational Instruction and Library	89,170	70,600	-18,500	-20.8%
Healthcare Support	67,740	49,700	-18,000	-26.6%
Transportation and Material Moving	90,420	73,200	-17,300	-19.1%
Business and Financial Operations	98,340	83,800	-14,500	-14.8%
Construction and Extraction	64,000	50,200	-13,900	-21.6%
Community and Social Service	20,910	8,800	-12,100	-58.0%
Production	66,800	55,400	-11,400	-17.1%
Arts, Design, Entertainment, Sports, and Media	18,720	9,500	-9,300	-49.4%
Installation, Maintenance, and Repair	47,480	38,700	-8,800	-18.6%
Healthcare Practitioners and Technical	77,430	70,600	-6,800	-8.8%
Management	94,520	89,900	-4,600	-4.9%
Protective Service	36,150	33,600	-2,600	-7.2%
Building and Grounds Cleaning and Maintenance	45,830	43,400	-2,500	-5.4%
Computer and Mathematical	57,080	54,800	-2,300	-4.0%
Architecture and Engineering	44,720	42,500	-2,200	-5.0%
Legal	11,680	10,400	-1,300	-10.7%
Life, Physical, and Social Science	25,270	24,100	-1,200	-4.8%
Farming, Fishing, and Forestry	3,290	3,200	-100	-3.6%

*Only select occupations shown, totals may not sum.

BAKERSFIELD MSA

PROJECTED EMPLOYMENT IMPACT (MAY 2020)

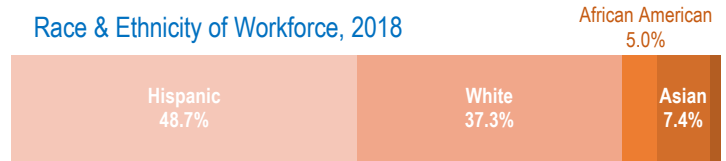
The Bakersfield metropolitan statistical area (MSA), which consists of Kern County, is projected to experience 31 percent unemployment by May 2020. This equates to a projected loss of 75,400 jobs from one year ago (-23.8%).

The occupations with the largest losses are forecasted to be Food Preparation and Serving, Sales, and Office and Administrative Support. The occupation with the greatest losses by employment percentage is estimated to be Personal Care and Service (-68.4%).

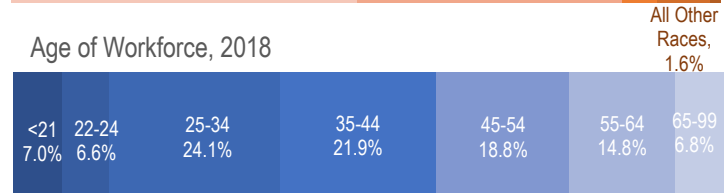
Bakersfield MSA's largest major occupation group is Farming, which is projected to only experience a 3.3% decrease in employment year-over-year. However, its fourth and fifth largest major group, Food Preparation and Sales respectively, will likely have lost nearly 33,000 jobs combined since last May.

	2019	2020f
Labor Force	341,250	348,300
May Employment	316,680	241,300
Unemployment Rate	7.2%	30.7%

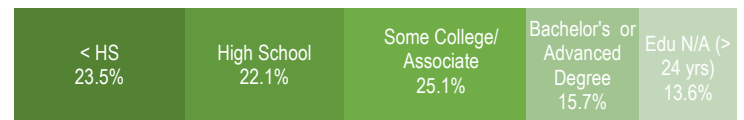
Race & Ethnicity of Workforce, 2018



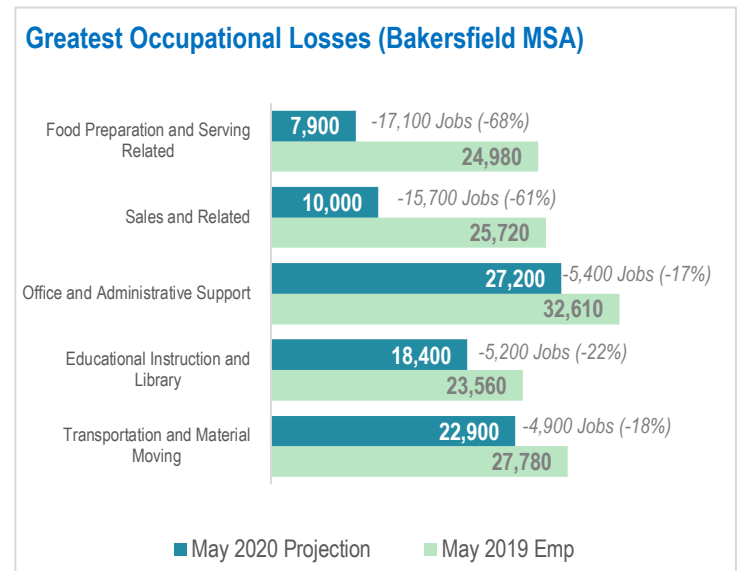
Age of Workforce, 2018



Educational Attainment of Workforce, 2018

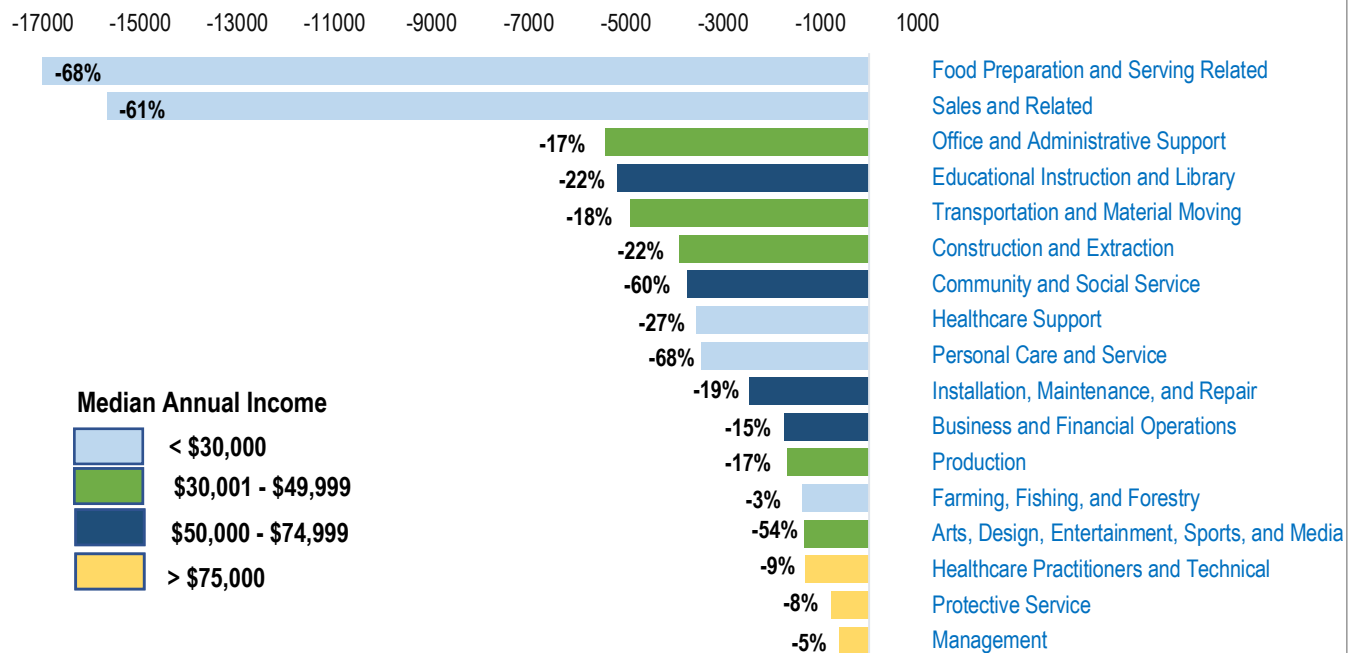


Greatest Occupational Losses (Bakersfield MSA)



EMPLOYMENT IMPACT OF COVID-19: SOUTHERN CALIFORNIA

Projected Jobs Lost by Occupational Group, May 2020



Payroll Job Impacts by Occupation Group

Occupation	May 2019 Emp	May 2020 Projection	Projected Job Loss	% Change
All Occupations	316,680	241,300	-75,400	-23.8%
Food Preparation and Serving Related	24,980	7,900	-17,100	-68.3%
Sales and Related	25,720	10,000	-15,700	-61.0%
Office and Administrative Support	32,610	27,200	-5,400	-16.6%
Educational Instruction and Library	23,560	18,400	-5,200	-22.0%
Transportation and Material Moving	27,780	22,900	-4,900	-17.7%
Construction and Extraction	17,630	13,700	-3,900	-22.2%
Community and Social Service	6,250	2,500	-3,700	-59.9%
Healthcare Support	13,370	9,800	-3,500	-26.5%
Personal Care and Service	5,060	1,600	-3,500	-68.4%
Installation, Maintenance, and Repair	13,110	10,700	-2,500	-18.7%
Business and Financial Operations	11,780	10,000	-1,700	-14.8%
Production	10,020	8,300	-1,700	-16.8%
Farming, Fishing, and Forestry	41,830	40,500	-1,400	-3.3%
Arts, Design, Entertainment, Sports, and Media	2,480	1,100	-1,300	-54.0%
Healthcare Practitioners and Technical	14,850	13,500	-1,300	-8.8%
Protective Service	10,140	9,400	-800	-7.7%
Management	12,080	11,500	-600	-5.0%
Architecture and Engineering	8,050	7,700	-400	-4.9%
Building and Grounds Cleaning and Maintenance	6,950	6,600	-400	-5.2%
Life, Physical, and Social Science	3,460	3,300	-200	-5.0%
Computer and Mathematical	3,920	3,800	-200	-4.1%
Legal	1,050	900	-100	-10.7%

*Only select occupations shown, totals may not sum.

OXNARD-VENTURA MSA

PROJECTED EMPLOYMENT IMPACT (MAY 2020)

The Oxnard – Thousand Oaks - Ventura metropolitan statistical area (MSA), which consists solely of Ventura County, is projected to experience 30.1% unemployment in May 2020. This equates to a projected loss of 87,900 jobs from one year ago (-27.8%).

The occupations with the largest losses are forecasted to be Food Preparation and Serving, Sales and Office and Administrative Support. The occupation with the greatest losses by employment percentage is estimated to be Personal Care and Service (-70.0%).

The MSA's largest major occupation group is Office and Administrative Support, which is estimated to lose 6,766 jobs year-over-year for a 16.8% decrease in employment. Overall, four of the top five major groups by employment are projected to lose over 4,500 jobs, with Sales and Food Preparation and Serving losing over 20,000 each. However, the fifth largest major group, Production, will likely only lose a projected 3,200 jobs (-17.1%).

	2019	2020f
Labor Force	326,430	327,400
May Employment	316,640	228,800
Unemployment Rate	3.0%	30.1%

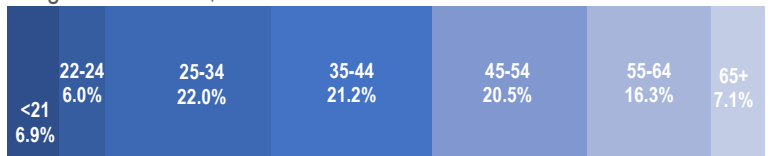
Race & Ethnicity of Workforce, 2018



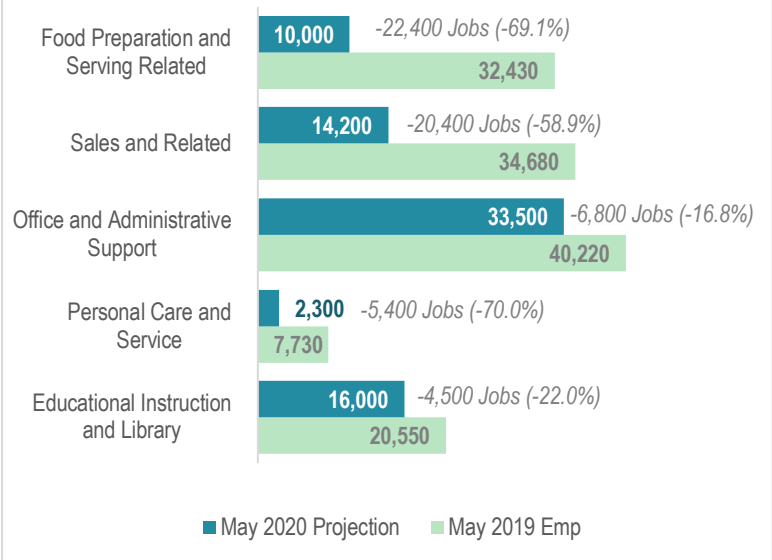
Educational Attainment of Workforce, 2018



Age of Workforce, 2018

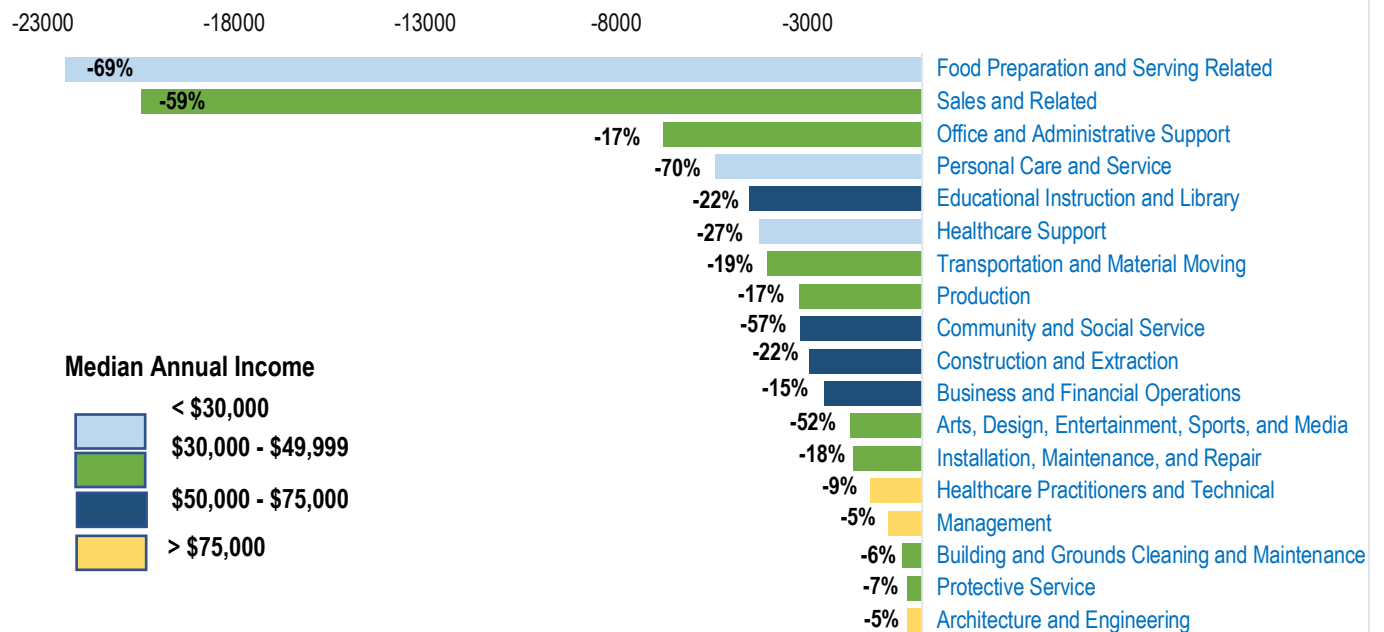


Greatest Occupational Losses



EMPLOYMENT IMPACT OF COVID-19: SOUTHERN CALIFORNIA

Projected Jobs Lost by Occupational Group, May 2020



Payroll Job Impacts by Occupation Group

Occupation	May 2019 Emp	May 2020 Projection	Projected Job Loss	% Change
All	316,640	228,800	-87,900	-27.8%
Food Preparation and Serving Related	32,430	10,000	-22,400	-69.1%
Sales and Related	34,680	14,200	-20,400	-58.9%
Office and Administrative Support	40,220	33,500	-6,800	-16.8%
Personal Care and Service	7,730	2,300	-5,400	-70.0%
Educational Instruction and Library	20,550	16,000	-4,500	-22.0%
Healthcare Support	16,110	11,900	-4,300	-26.5%
Transportation and Material Moving	21,870	17,800	-4,000	-18.5%
Production	18,760	15,500	-3,200	-17.1%
Community and Social Service	5,640	2,500	-3,200	-56.5%
Construction and Extraction	13,390	10,400	-3,000	-22.1%
Business and Financial Operations	17,650	15,100	-2,600	-14.5%
Arts, Design, Entertainment, Sports, and Media	3,640	1,800	-1,900	-51.7%
Installation, Maintenance, and Repair	9,780	8,000	-1,800	-18.4%
Healthcare Practitioners and Technical	15,290	13,900	-1,400	-8.8%
Management	17,540	16,700	-900	-5.0%
Building and Grounds Cleaning and Maintenance	8,870	8,400	-500	-5.8%
Protective Service	5,470	5,100	-400	-7.3%
Architecture and Engineering	7,920	7,500	-400	-5.0%
Computer and Mathematical	7,320	7,000	-300	-4.0%
Farming, Fishing, and Forestry	6,230	6,000	-200	-3.5%
Legal	1,920	1,700	-200	-10.9%
Life, Physical, and Social Science	3,630	3,500	-200	-4.9%

*Only select occupations shown, totals may not sum.

SANTA MARIA, SANTA BARBARA MSA

PROJECTED EMPLOYMENT IMPACT (MAY 2020)

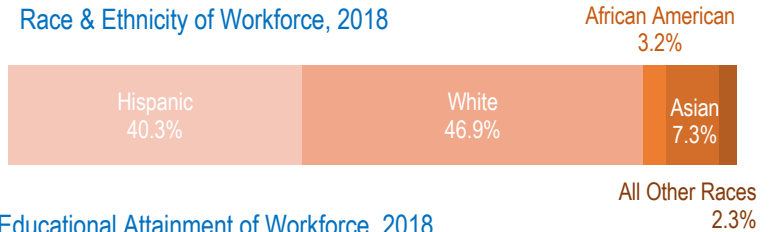
The Santa Maria – Santa Barbara metropolitan statistical area (MSA), which consists of Santa Barbara County, is projected to experience 29.9% unemployment in May 2020. This is a projected loss of 53,500 jobs from one year ago (-27.9%).

The occupations with the largest losses are projected to be Food Preparation and Serving, Sales and Office and Administrative Support. The occupation with the greatest losses by employment percentage is estimated to be Food Preparation and Serving (-69.1%).

The MSA's largest major occupation group, Food Preparation and Serving, is forecasted to be hit hardest with an estimated 16,800 jobs lost year-over-year for a 69.1% employment decrease. The second and third largest, Office and Administrative Support and Sales, are projected to lose 3,600 and 10,600 jobs respectively. However, Farming employs over 10,000 in this MSA and will likely only lose 300 jobs.

	2019	2020f
Labor Force	199,60	197,120
May Employment	191,660	138,140
Unemployment Rate	4.0%	29.9%

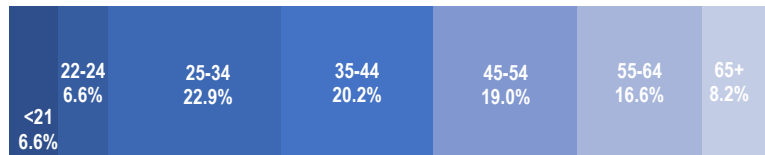
Race & Ethnicity of Workforce, 2018



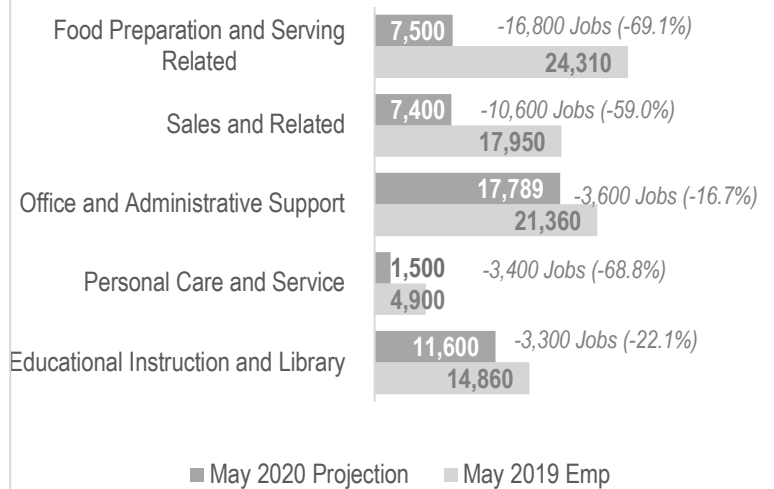
Educational Attainment of Workforce, 2018



Age of Workforce, 2018

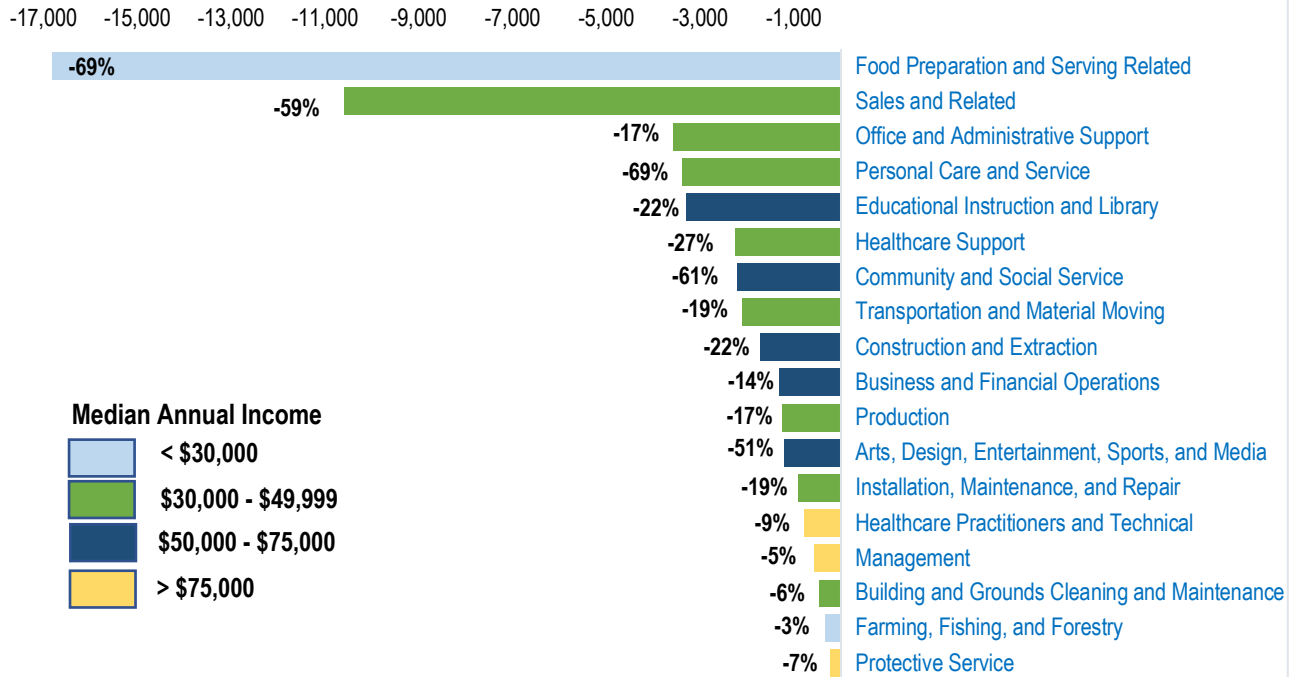


Greatest Occupational Losses



EMPLOYMENT IMPACT OF COVID-19: SOUTHERN CALIFORNIA

Projected Jobs Lost by Occupational Group, May 2020



Payroll Job Impacts by Occupation Group

Occupation	May 2019 Emp	May 2020 Projection	Projected Job Loss	% Change
All	191,660	138,100	-53,500	-27.9%
Food Preparation and Serving Related	24,310	7,500	-16,800	-69.1%
Sales and Related	17,950	7,300	-10,600	-59.0%
Office and Administrative Support	21,360	17,800	-3,600	-16.9%
Personal Care and Service	4,900	1,500	-3,400	-69.4%
Educational Instruction and Library	14,860	11,600	-3,300	-22.1%
Healthcare Support	8,500	6,300	-2,300	-26.5%
Community and Social Service	3,640	1,400	-2,200	-60.5%
Transportation and Material Moving	11,150	9,100	-2,100	-18.8%
Construction and Extraction	7,980	6,300	-1,700	-21.6%
Business and Financial Operations	9,120	7,800	-1,300	-14.3%
Production	7,370	6,100	-1,200	-16.8%
Arts, Design, Entertainment, Sports, and Media	2,340	1,100	-1,200	-51.3%
Installation, Maintenance, and Repair	4,850	3,900	-900	-18.7%
Healthcare Practitioners and Technical	8,820	8,000	-800	-8.8%
Management	11,060	10,500	-600	-5.0%
Building and Grounds Cleaning and Maintenance	8,040	7,600	-500	-5.7%
Farming, Fishing, and Forestry	10,020	9,700	-300	-3.4%
Protective Service	3,080	2,900	-200	-7.3%
Architecture and Engineering	4,460	4,200	-200	-6.5%
Computer and Mathematical	5,070	4,900	-200	-4.0%
Legal	920	800	-100	-11.0%
Life, Physical, and Social Science	1,860	1,800	-90	-4.70%

*Only select occupations shown, totals may not sum.

SAN LUIS OBISPO MSA

PROJECTED EMPLOYMENT IMPACT (MAY 2020)

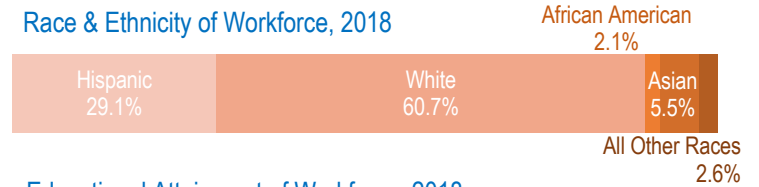
The San Luis Obispo – Paso Robles – Arroyo Grande metropolitan statistical area (MSA), which consists of San Luis Obispo County, is projected to experience 31.5% unemployment in May 2020. This is a projected loss of 34,100 jobs from one year ago (-29.4%).

The occupations with the largest losses are forecasted to be Food Preparation and Serving, Sales and Office and Administrative Support. The occupation with the greatest losses by employment percentage is estimated to be Personal Care and Service (-70.2%).

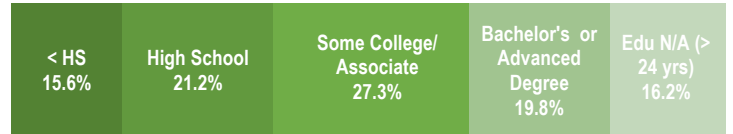
The MSA's largest major occupation group is Food Preparation and Serving, which is estimated to lose 10,300 jobs year-over-year for a 69.3% decrease in employment. The second and third largest, Office and Administrative Support and Sales, are projected to lose 2,200 and 7,800 jobs respectively.

	2019	2020f
Labor Force	118,740	119,400
May Employment	115,890	81,800
Unemployment Rate	2.4%	31.5%

Race & Ethnicity of Workforce, 2018



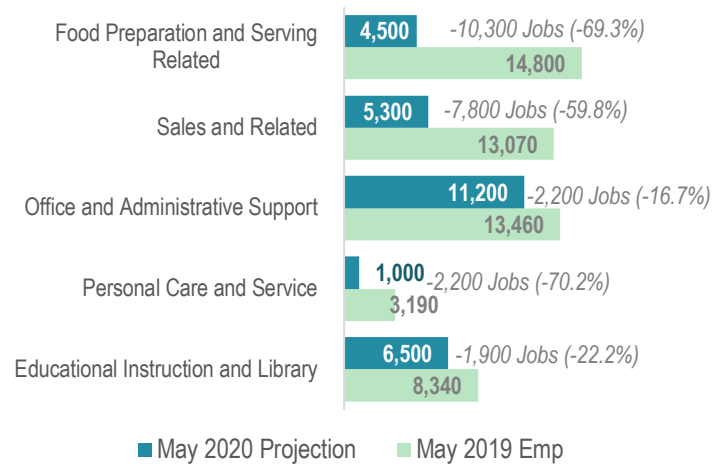
Educational Attainment of Workforce, 2018



Age of Workforce, 2018

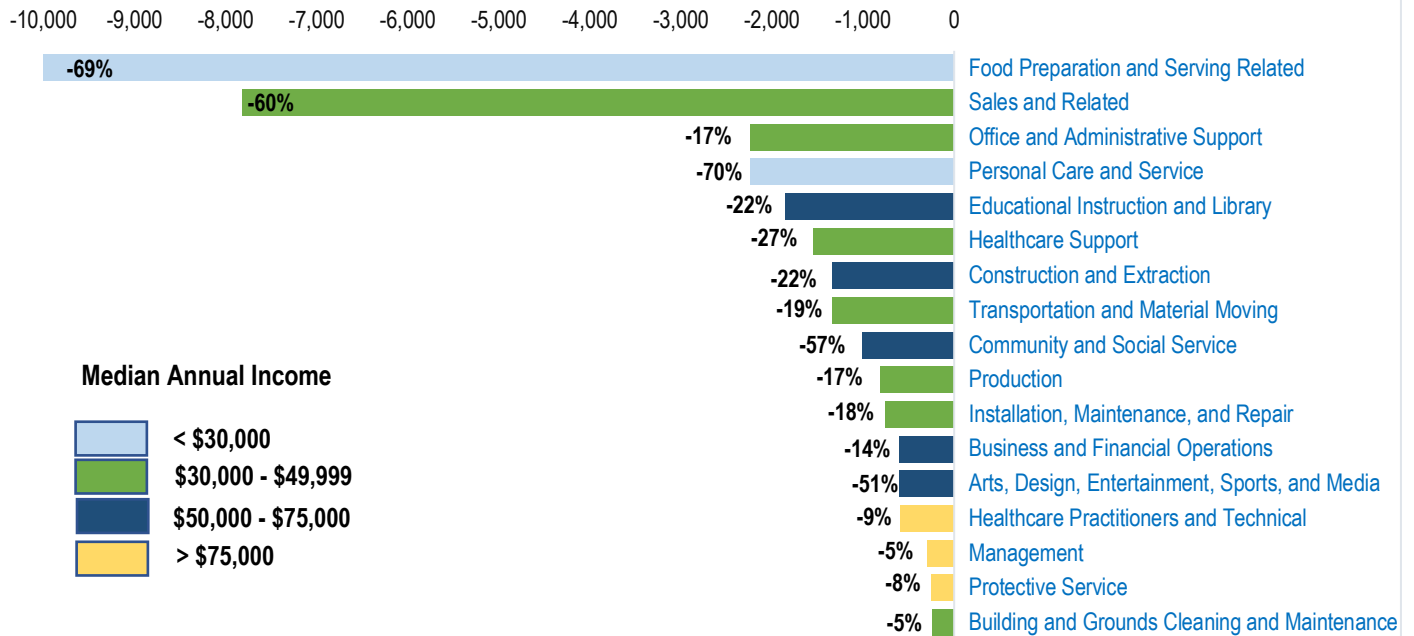


Greatest Occupational Losses



EMPLOYMENT IMPACT OF COVID-19: SOUTHERN CALIFORNIA

Projected Jobs Lost by Occupational Group, May 2020



Payroll Job Impacts by Occupation Group

Occupation	May 2019 Emp	May 2020 Projection	Projected Job Loss	% Change
All	115,890	81,800	-34,100	-29.4%
Food Preparation and Serving Related	14,800	4,500	-10,300	-69.3%
Sales and Related	13,070	5,300	-7,800	-59.8%
Office and Administrative Support	13,460	11,200	-2,200	-16.7%
Personal Care and Service	3,190	1,000	-2,200	-70.2%
Educational Instruction and Library	8,340	6,500	-1,900	-22.2%
Healthcare Support	5,660	4,100	-1,500	-27.3%
Construction and Extraction	6,110	4,800	-1,300	-22.0%
Transportation and Material Moving	7,190	5,900	-1,300	-18.6%
Community and Social Service	1,760	800	-1,000	-57.2%
Production	4,940	4,100	-800	-16.5%
Installation, Maintenance, and Repair	4,170	3,400	-800	-18.2%
Business and Financial Operations	4,360	3,800	-600	-13.8%
Arts, Design, Entertainment, Sports, and Media	1,170	600	-600	-51.3%
Healthcare Practitioners and Technical	6,740	6,200	-600	-8.7%
Management	5,970	5,700	-300	-5.0%
Protective Service	3,370	3,100	-300	-7.5%
Building and Grounds Cleaning and Maintenance	4,680	4,400	-300	-5.2%
Farming, Fishing, and Forestry	3,290	3,200	-100	-3.6%
Architecture and Engineering	2,150	2,100	-100	-4.9%
Farming, Fishing, and Forestry	3,150	3,100	-100	-3.3%
Legal	530	500	-50	-10.8%
Life, Physical, and Social Science	1,080	1,000	-50	-5.1%

*Only select occupations shown, totals may not sum.

EL CENTRO MSA

PROJECTED EMPLOYMENT IMPACT (MAY 2020)

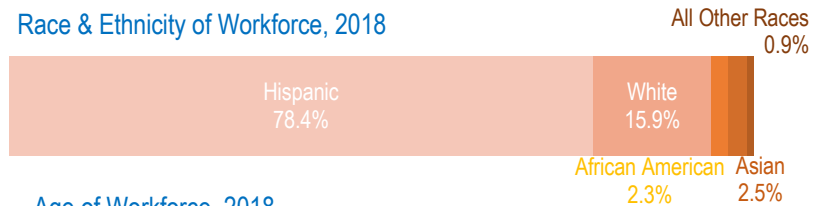
The El Centro metropolitan statistical area (MSA), which consists of Imperial County, is projected to experience 40.4% unemployment in May 2020. This equates to a projected loss of 15,400 jobs from one year ago (-26.4%).

The occupations with the largest losses are estimated to be Sales, Food Preparation and Serving and Healthcare Support. The occupation with the greatest losses by employment percentage is projected to be Personal Care and Service (-69.4%).

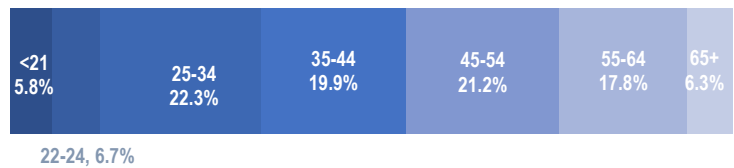
El Centro MSA's largest major occupation group is Office and Administrative Support, which is estimated to lose 1,143 jobs year-over-year for a 17.1% decrease in employment. Its second largest occupational group, Sales, is projected to lose 61.5% of total employment. Overall, although Farming is projected to remain strong, four of El Centro's top five major groups will likely lose over 1,000 jobs.

	2019	2020f
Labor Force	70,132	72,400
May Employment	58,560	43,100
Unemployment Rate	16.5%	40.4%

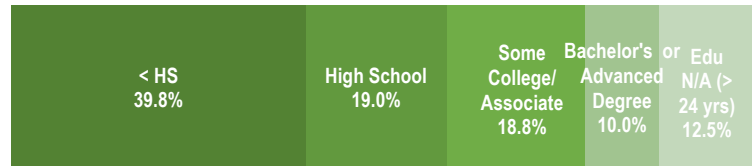
Race & Ethnicity of Workforce, 2018



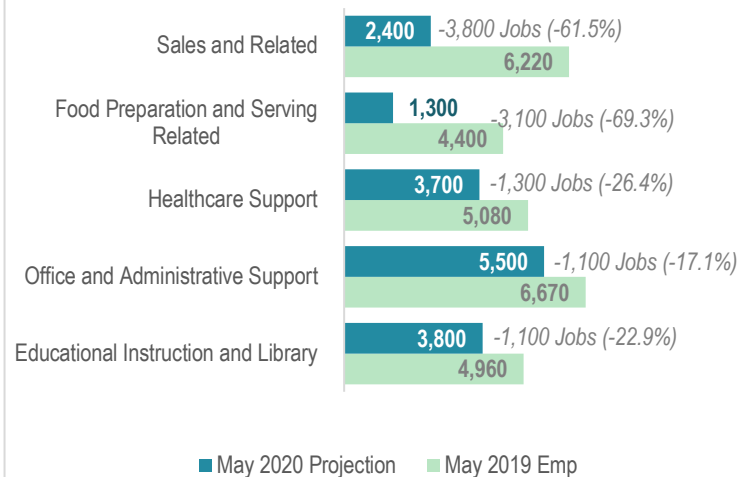
Age of Workforce, 2018



Educational Attainment of Workforce, 2018

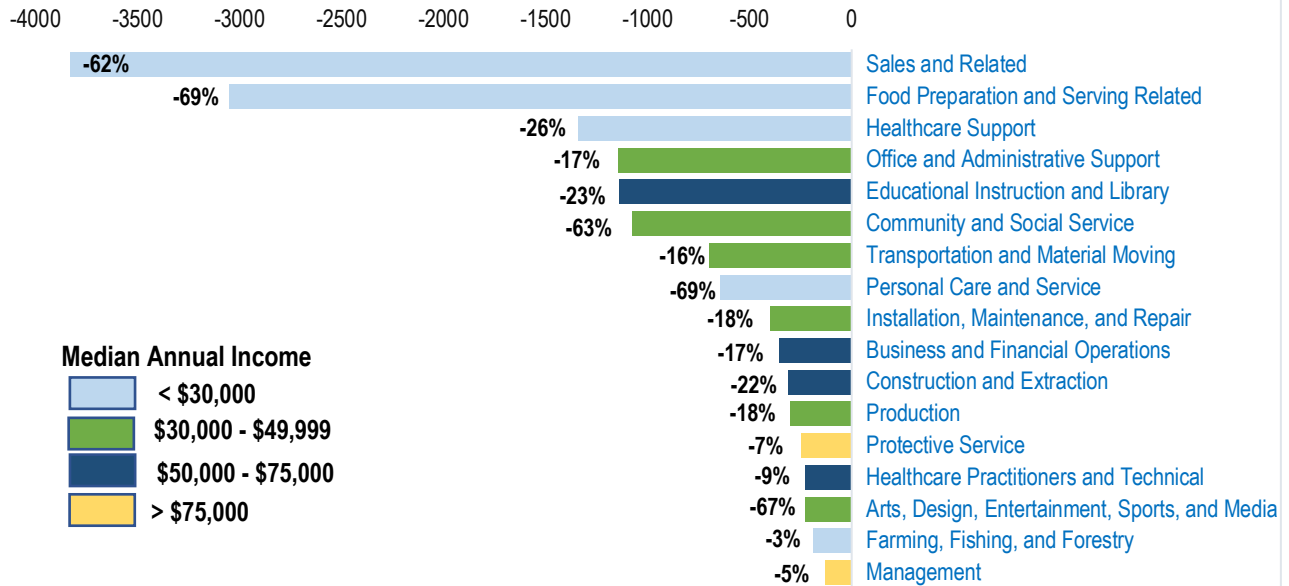


Greatest Occupational Losses (El Centro)



EMPLOYMENT IMPACT OF COVID-19: SOUTHERN CALIFORNIA

Projected Jobs Lost by Occupational Group, May 2020



Payroll Job Impacts by Occupation Group

Occupation	May 2019 Emp	May 2020 Projection	Projected Job Loss	% Change
All	58,560	43,100	-15,400	-26.4%
Sales and Related	6,220	2,300	-3,800	-61.5%
Food Preparation and Serving Related	4,400	1,300	-3,100	-69.3%
Healthcare Support	5,080	3,800	-1,300	-26.4%
Office and Administrative Support	6,670	5,500	-1,100	-17.1%
Educational Instruction and Library	4,960	3,800	-1,100	-22.9%
Community and Social Service	1,710	600	-1,100	-63.1%
Transportation and Material Moving	4,240	3,500	-700	-16.4%
Personal Care and Service	930	300	-700	-69.4%
Installation, Maintenance, and Repair	2,190	1,800	-400	-18.3%
Business and Financial Operations	2,080	1,700	-400	-17.0%
Construction and Extraction	1,450	1,100	-300	-21.5%
Production	1,680	1,400	-300	-17.9%
Protective Service	3,500	3,300	-300	-7.0%
Arts, Design, Entertainment, Sports, and Media	340	100	-200	-66.6%
Healthcare Practitioners and Technical	2,570	2,300	-200	-8.8%
Farming, Fishing, and Forestry	5,710	5,500	-200	-3.3%
Management	2,460	2,300	-100	-5.2%
Building and Grounds Cleaning and Maintenance	1,450	1,400	-100	-5.2%
Legal	240	200	-50	-10.8%
Life, Physical, and Social Science	360	300	-50	-4.8%
Architecture and Engineering	320	300	-50	-4.7%

*Only select occupations shown, totals may not sum.

Final Thoughts

In the face of this pandemic, Southern California, like the rest of the state and the country, will face significant economic challenges. How significant and for how long are still to be determined. Small businesses will face liquidity issues, particularly in Los Angeles County, where 93 percent of businesses employ fewer than 20 workers. Those in the non-essential and service sectors have lost the majority of their consumer base, and the short-term outlook for employee retention is suboptimal as operations attempt to simply keep themselves afloat. Layoffs have already begun and are expected to significantly increase. With projections indicating that unemployment will be close to reaching roughly 30 percent in each of the Southern California region's counties, households across the region will be without steady incomes and will require immediate assistance.

As the income distribution of the occupations hardest hit indicates, the immediate economic effects of COVID-19 have not been equally distributed. Higher-income workers in professional services, management, and computer and mathematical occupations have thus far managed to shift to a remote workplace. Not only are their jobs protected, but these households are also likely to have higher saving rates. In stark contrast, lower-income workers in personal care, retail, and food preparation occupations do not have the option to complete their duties without interacting with the public. As such, the rates of job losses in these three groups are overwhelming, ranging from 60 to 70 percent job loss throughout Southern California. Those willing and able to retain their jobs in these occupations do so with the health risk associated of being exposed to the public.

California and local governments have been proactive in developing short-term measures to assist with these massive losses for low-income workers, such as expanding food assistance benefits, paid sick leave, and unemployment benefits. However, discussions on how best to mitigate long-term losses will continue to develop in the coming months.

Additional uncertainties stem from the lack of a clear timetable for when businesses can expect to resume operations and workers to leave their homes. Governor Gavin Newsom has cautioned that lifting the stay-at-home order too soon could have dire consequences; as such, a gradual process of resuming economic activity is expected. Moreover, mounting COVID-19 case numbers suggest that resuming normal economic activity too soon may cause more harm than extending prohibitions on movement and business activity.

In sum, employment figures will take time to recover, and when they do, the composition of the regional and national workforce may look significantly different. Businesses may be forced to close after an extended period without income, and many workers may not have jobs to return to as social distancing measures are kept in place or as residents change their consumption behaviors to even beyond the eventual easing of social distancing measures; or until a vaccine is approved and widely available.

In future updates, the LAEDC will provide revised estimates about the state of employment in the Southern California region along with best practices for how best to address the wellbeing of the region.

Methodology

Numerous data sources and methodologies were used to measure the projections and employment makeup of each occupation within the identified geographic areas.

Occupations and Projections

Occupations are commonly classified using the Standard Occupational Classification (SOC) system, developed by the Bureau of Labor Statistics. This system classifies workers into 867 detailed occupations that share similar job duties, skills, education and training. These occupations are not industry-specific but are common to many industries. For example, retail salespersons are employed in a full spectrum of industries, from department and discount stores to computer systems design.

Projections included in this report use a bottom-up approach based on the latest, May 2019, Occupational Employment Statistics (OES) data from the U.S. Bureau of Labor Statistics for each of 10 metro areas included in the Southern California Region. The methodology used is based upon similar nationwide occupational job loss estimates recently produced by economists at the St. Louis Federal Reserve Bank, which used “high-risk” of job loss and estimates of the required physical proximity of work to produce unemployment rates and job loss. The LAEDC estimated probable job loss across occupational categories and applied those to OES data to generate estimated probable job loss and unemployment rates for each MSA in Southern California.

Data Sources

All data was obtained from the Bureau of Labor Statistics the U.S. Department of Labor and the U.S. Census Bureau. Occupational data (employment and wages) are from the Occupational Employment Statistics program. Physical proximity of work was obtained from O*NET. Workforce demographic data is from the Quarterly Workforce Indicators dataset. Unless noted otherwise, all base year data is for the 2018 calendar year.

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