

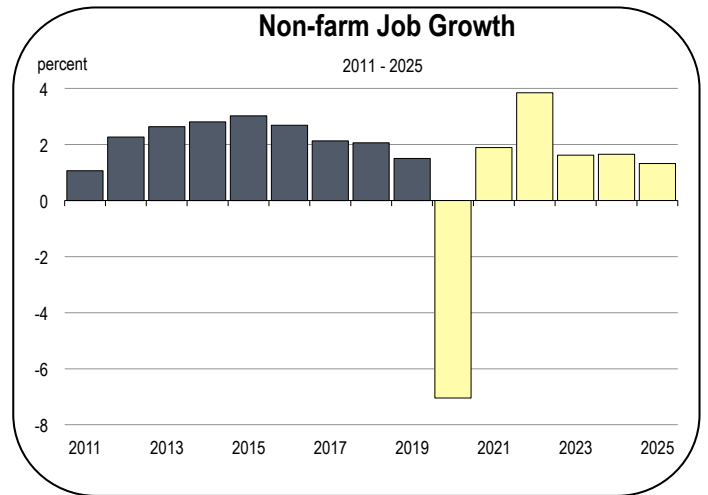
California Economic Forecast

Forecast Summary

- It is estimated that an average of 1.1 to 1.4 million jobs will be lost in California during 2020. Job losses will be heavy in the first half of the year.
- Employment losses will be largest in leisure services, retail trade, professional business services, and government.
- The unemployment rate averaged 4.1 percent in 2019. It will average between 10 percent and 12 percent for the 2020 calendar year.
- The California population is expected to grow very slowly during the 2020-2025 forecast period.
- Home values are expected to appreciate by approximately 5 percent in 2020 and 3 percent in 2021.
- More homes are expected to be built during the 2020-2025 forecast period than were built over the 2014-2019 period.

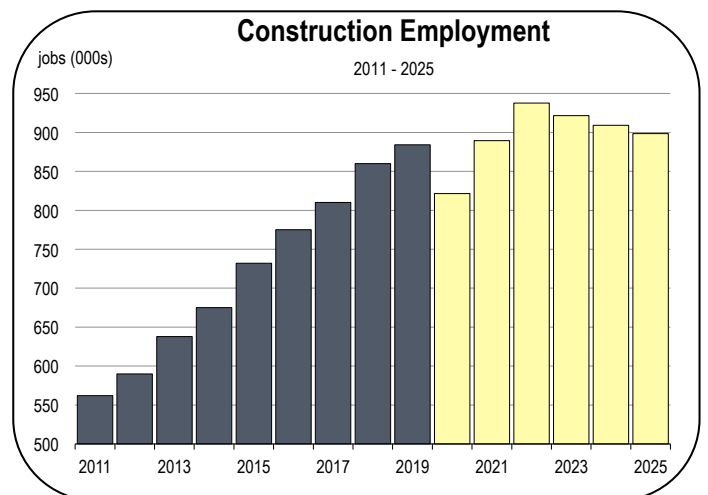
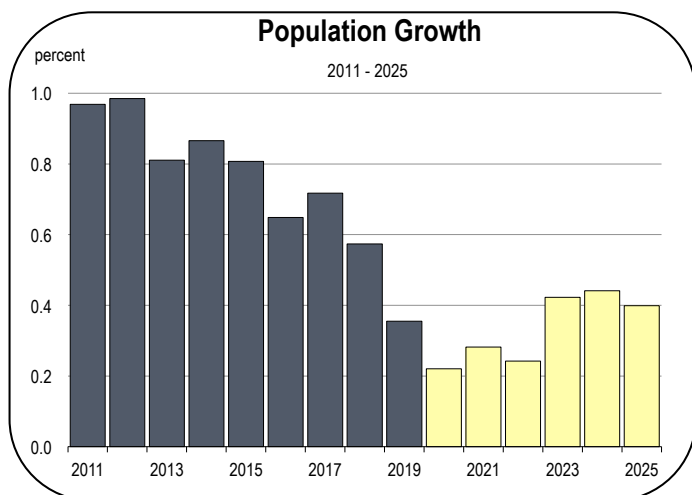
Job Growth

- Total employment in the county will decline by at least 6 percent in 2020. This is an annual average change from 2019.
- In 2021, California is expected to re-gain many of the jobs that were lost during the Coronavirus Recession.

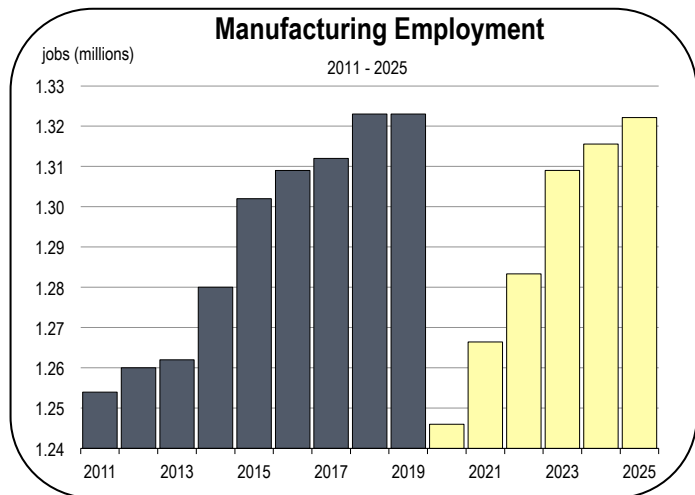


Construction Employment

- The construction sector is expected to lose 50,000 to 75,000 jobs in 2020 on an annual average basis. Employment levels should return to pre-pandemic levels by 2021 or 2022.
- Most California construction activity was deemed non-essential for portions of March and April of 2020, leading to construction layoffs.
- Restrictions on construction were lifted in late April, and overall construction activity began to ramp back up during the spring and summer.
- Construction projects will largely have resumed by 2021, but employment might decline again after 2022 as existing projects are completed and fewer new projects are started.



California Economic Forecast

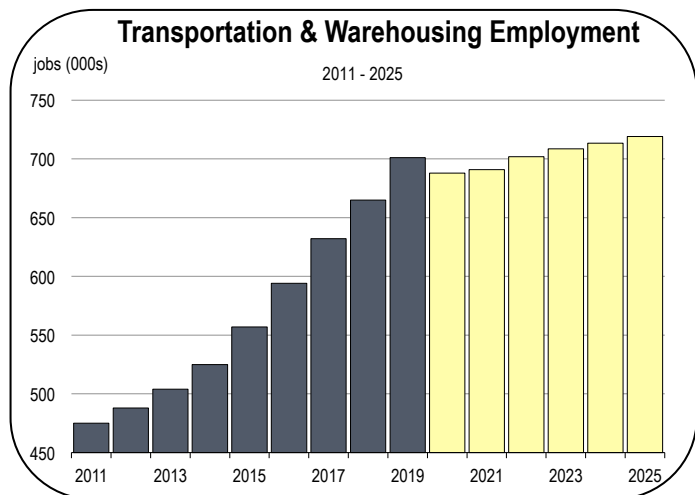


Manufacturing Employment

- Manufacturing employment is expected to decrease by 60,000 to 90,000 jobs in 2020 on an annual average basis.
- Manufacturing activity is forecast to rebound slowly in 2021 and 2022, and it is unclear if all jobs will be regained by the end of the 2020-2025 forecast period.

Transportation and Warehousing Employment

- Job losses in transportation, warehousing, and utilities are expected to be minimal in 2020.
- A meaningful share of California transportation jobs are in delivery firms like UPS, FedEx, and Instacart. Delivery firms hired large numbers of workers during the second quarter of 2020, and could be among the few corners of the labor market to expand throughout the year.



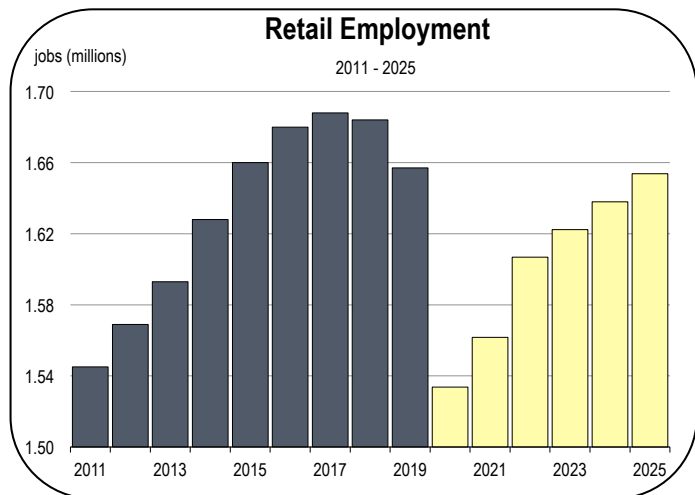
Transportation, Warehousing & Utilities / Sub-Sectors 2019	Jobs in Subsector (000s)	Subsector's Share of Overall Industry
Warehousing and Storage	143.8	20.5%
Utilities	129.9	18.5%
Trucking	123.2	17.6%
Passenger Transit	113.5	16.2%
Local Delivery	90.9	13.0%
Airports	83.3	11.9%
Other	16.5	2.4%

- More than a third of all transportation jobs in California are in trucking and warehousing, where firms deliver goods to and from local businesses, and store these goods in logistics facilities.
- Trucking and warehousing jobs declined during the Coronavirus Recession, but should rebound in tandem with broader business activity.
- Approximately 83,000 jobs are located at airports. Air travel declined sharply in 2020, and airport jobs are not expected to rebound meaningfully until the health threat of the coronavirus is more thoroughly contained.
- Passenger transit (which includes non-government public transportation, taxi companies, cruise lines, and similar types of businesses) lost approximately 15 percent of its workforce during the recession and will rebound very slowly.
- Very few job losses are expected in utilities in 2020.

Retail Trade Employment

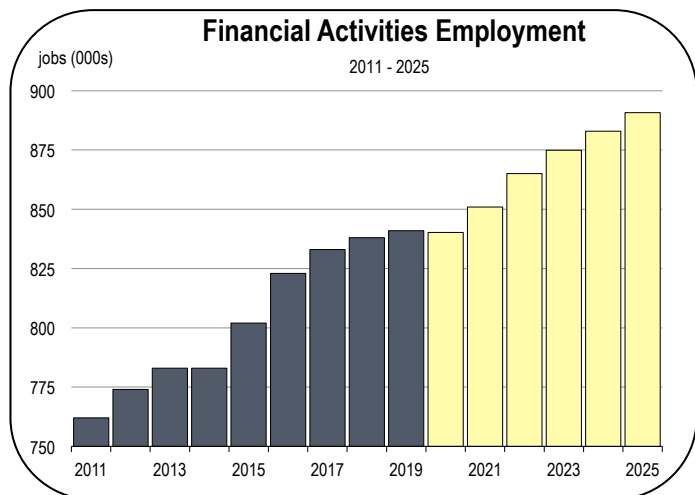
- The retail sector is expected to lose at least 100,000 jobs in 2020 on an annual average basis.
- Many retail chains chose to furlough their employees rather than lay them off completely, and furloughed workers are not considered to be unemployed. This is a technical detail that will mask the true number of work stoppages in the retail sector.
- Accounting for furloughed workers, more than 150,000 retail workers could be effectively not working and not earning an income on an annual average basis in 2020.
- Retail trade jobs will return after in-store shopping is permitted in a sustained way.

California Economic Forecast



Financial Activities Employment

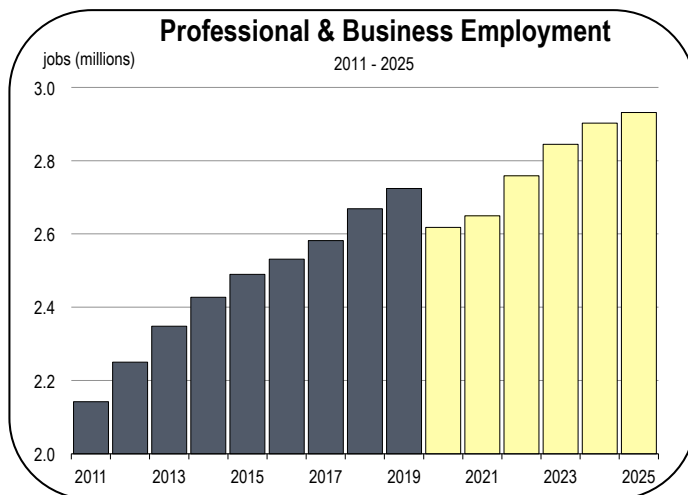
- The financial activities industry is primarily comprised of banks and credit unions, real estate companies, and insurance firms. Some large metro areas, like San Francisco and Los Angeles, also have prominent asset management sectors.
- Growth in financial activities jobs was slow during the years before the Coronavirus Recession, and there will be very little change in total financial activities employment in 2020.
- The financial activities sector is expected to expand convincingly in 2021 and 2022.
- The most prominent growth is expected in real estate. Banks and insurance firms have been consolidating for years, and are not expected to generate a substantial number of new jobs between 2020 and 2025.



Financial Activities Sub-Sectors 2019	Jobs in Subsector (000s)	Subsector's Share of Overall Industry
Banks & Credit Unions	235.1	28.0%
Real Estate	234.4	27.9%
Insurance	201.9	24.0%
Asset Management	95.0	11.3%
Rental & Leasing (other than real estate)	67.6	8.0%
Other	7.1	0.8%

Professional and Business Services Employment

- The professional and business services industry has a diverse array of subsectors, and each will be impacted differently during the recession and recovery phases of 2020 and 2021.
- Staffing agencies had significant losses during the contraction, but may bounce back quickly through 2021.
- Staffing agencies primarily employ temp workers, who are often laid off first in a downturn but hired back first during a recovery.
- Jobs in building maintenance and corporate security declined substantially during the shutdowns but are expected to rebound at office and industrial buildings with repopulating employment.
- Aside from maintenance, staffing agencies, some scientific research labs, and some in-person consulting services, most subsectors of the professional business services industry operated remotely and were largely unaffected by the shutdowns, although some had layoffs due to the recessionary macroeconomic conditions that persisted through the U.S.

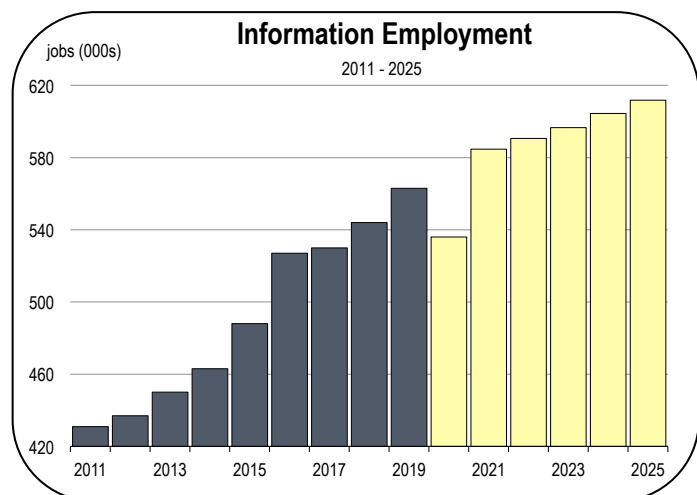


California Economic Forecast

Professional & Business Services Sub-Sectors 2019	Jobs in Subsector (000s)	Subsector's Share of Overall Industry
Staffing Agencies	458.0	16.8%
Custom IT Services	362.1	13.3%
Engineering & Scientific Research	355.0	13.0%
Building Maintenance	313.6	11.5%
Corporate Headquarters	270.5	9.9%
Corporate Security	158.9	5.8%
Business & Technical Consulting	154.1	5.7%
Law	151.0	5.5%
Accounting & Bookkeeping	139.3	5.1%
Marketing and Advertising	122.0	4.5%
Call Centers & Collections Agencies	62.7	2.3%
Other	176.9	6.5%

Information Employment

- In California, the information sector is dominated by Internet and data firms, software firms, and the movie and television production industry (e.g. feature film production). Virtually all data/Internet, software, and movie/TV production jobs can be found in Los Angeles County and the San Francisco Bay Area.
- Outside of Los Angeles County and the San Francisco Bay Area, the information industry is primarily comprised of telecommunications, local radio and TV broadcasting (e.g. local TV news), movie theaters, and local newspapers.
- The software, data, Internet, and movie/TV production industries have expanded incredibly rapidly in recent years. This expansion may pause in 2020, and some job losses may be observed, but growth is expected to be robust for the remainder of the 2020-2025 forecast period.

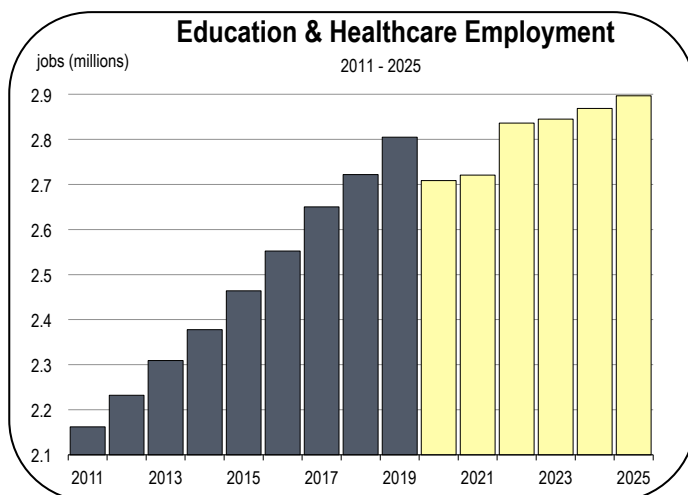


Information Sub-Sectors 2019	Jobs in Subsector (000s)	Subsector's Share of Overall Industry
Data & Internet/Cloud Services	178.5	29.4%
Movie & TV Production	109.6	18.1%
Software Publishers	104.4	17.2%
Telecommunications	72.4	11.9%
Local Radio & TV Broadcasting	47.9	7.9%
Newspaper / Book / Magazine Publishing	26.3	4.3%
Movie Theaters	23.8	3.9%

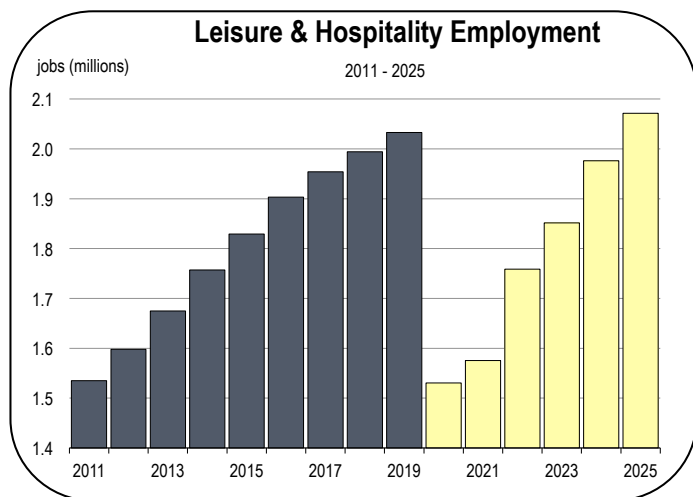
- Telecommunications, local radio and TV broadcasting, newspaper and book publishers, and movie theaters are all in long-term patterns of stagnation. These subsectors will not generate a meaningful number of jobs between 2020 and 2025.

Private Education and Healthcare Employment

- There were 1.6 million healthcare jobs in California in 2019.
- Healthcare jobs were recession proof during the 2008-2009 financial crisis. However, some non-essential medical offices had to close in 2020, and others reduced their employee headcounts because of budgetary issues.
- There were approximately 840,000 social assistance jobs in 2019, including industries like childcare, housing shelters, and non-medical care for senior citizens.
- There were 383,000 jobs in private schools and colleges, tutoring services, vocational schools, and other educational organizations.
- Jobs in social assistance and education declined during the spring and summer of 2020, and may not fully recover until a considerable time after the health threat of the coronavirus is more thoroughly contained.



California Economic Forecast

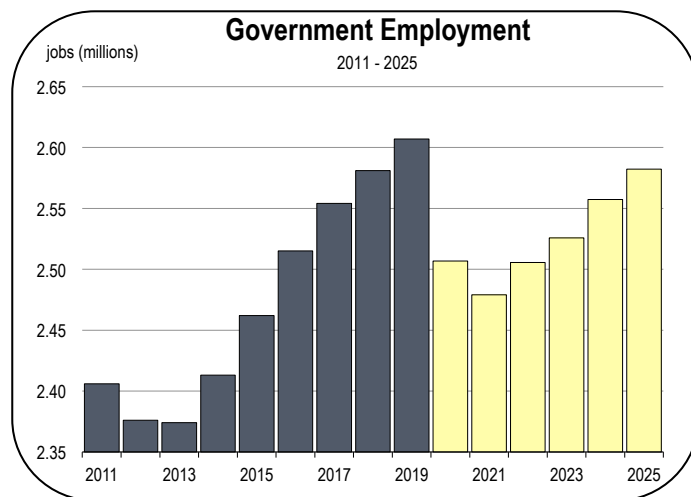


Leisure and Hospitality Employment

- The leisure and hospitality industry was devastated by the recession more than any other sector of the labor market.
- In 2019, California had 1.7 million jobs in restaurants, hotels, catering services, and bars. Almost 50 percent were laid off in March and April of 2020, and another 40 to 45 percent were furloughed or had their hours cut.
- California also had 327,000 jobs in entertainment and recreation in 2019, including facilities like fitness centers, museums, and event venues. Many of these organizations will operate at reduced capacities into 2021.
- The employment rebound in leisure and hospitality is expected to be slow, and it is unclear if total job counts will return to pre-pandemic levels before the end of the 2020-2025 forecast period.

Government Employment

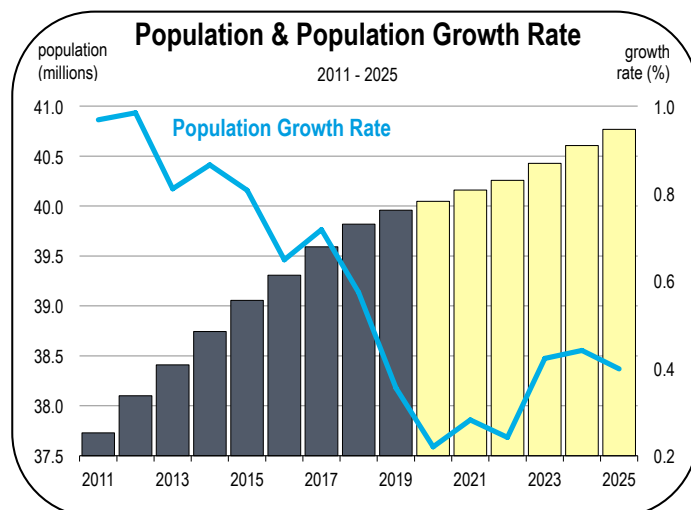
- Government agencies are expected to lose revenue from taxes and fees in 2020, and these revenue shortfalls will likely persist into 2021 and 2022.
- When government agencies need to reduce expenditures on salaries, many workers are expected to be given unpaid furlough days that are distributed throughout the year, and many staffing reductions could be the result of hiring freezes rather than layoffs.
- However, if revenue shortfalls are severe and Congress does not appropriate funding to mitigate these shortfalls, government agencies may have no choice but to issue layoffs.



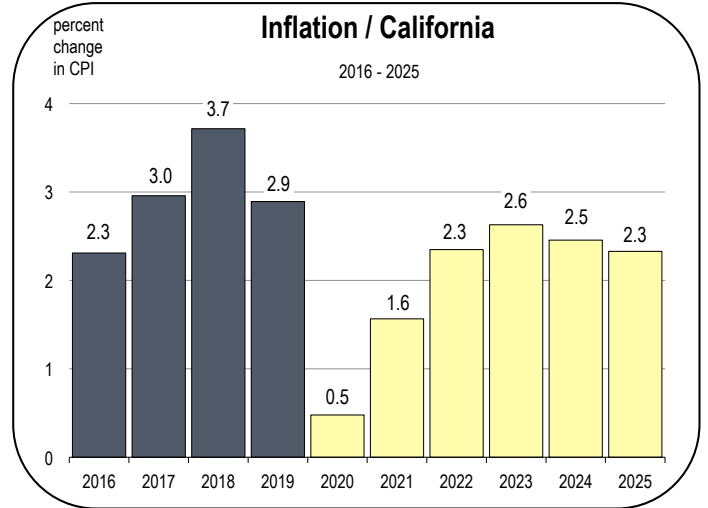
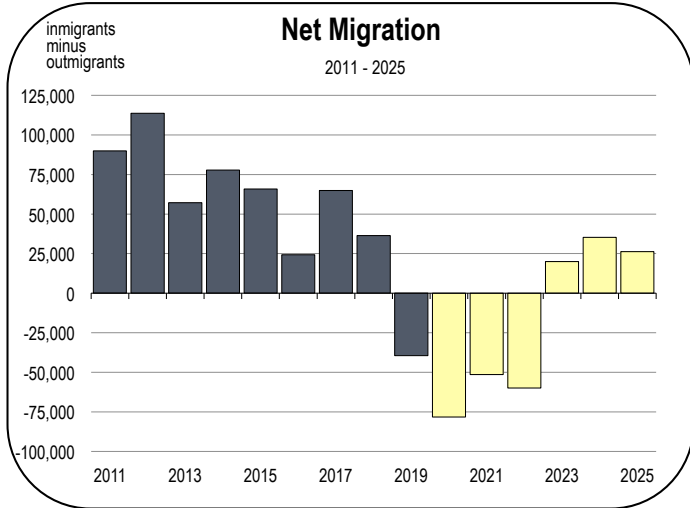
- Public education accounts for approximately half of all government jobs in California, and most public schools are not expected to return to in-person instruction until sometime in 2021 or later. Until in-person instruction is restored, staffing levels at public schools are unlikely to return to pre-recession levels.

Population Growth

- The California population is expected to grow slowly between 2020 and 2025.
- For most of the forecast period, the number of residents moving out of California is expected to surpass the number of people moving into the state.
- Over the 2020-2025 forecast period, virtually all population growth will be the result of new births.



California Economic Forecast



- The population will expand at an annual average rate of 0.3 percent per year from 2020 to 2025.
- By 2025 the California population will surpass 40.5 million residents.

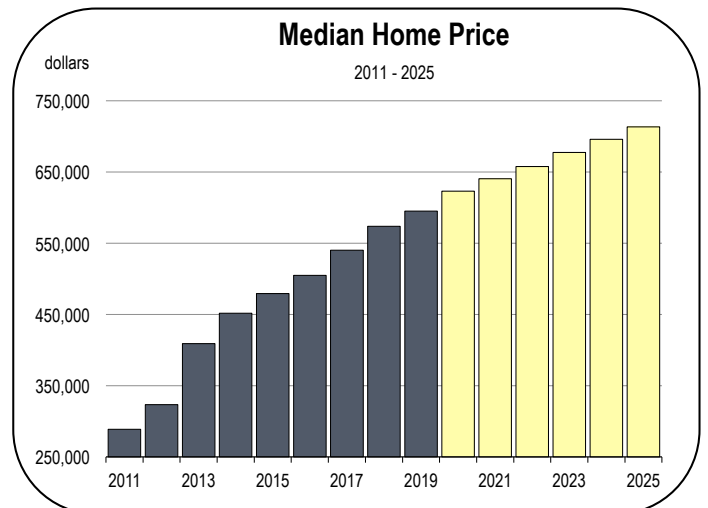
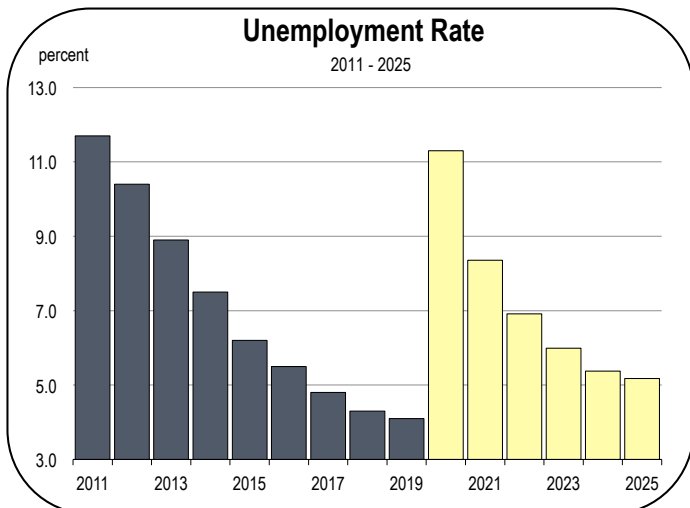
- Inflation decelerated in 2019 as energy prices declined and home prices increased more slowly than the previous year.
- Inflation is expected to be very low in 2020 but could accelerate in 2021 or 2022.

Unemployment and Inflation Rates

- The unemployment rate in California averaged 4.1 percent in 2019.
- The unemployment rate is expected to average between 10 and 12 percent during the 2020 calendar year.
- The unemployment rate is expected to remain elevated for several years, but is likely to improve more quickly than after the 2008-2009 recession.

Home Prices and New Housing Production

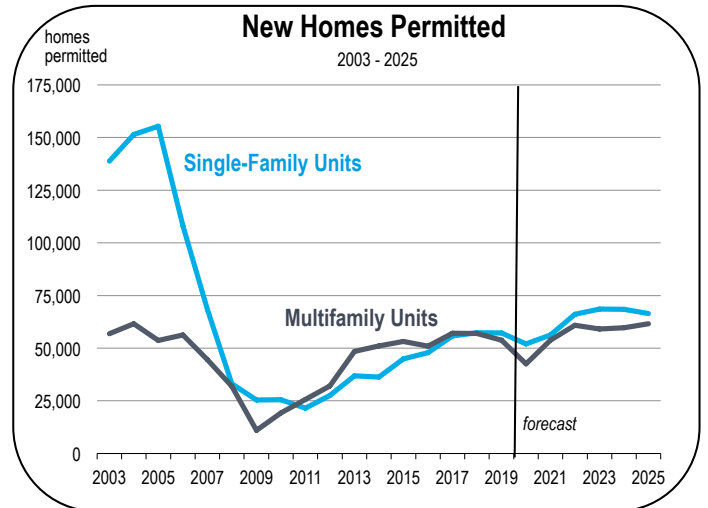
- In 2019 the median home price in California was \$595,100.
- The median price is expected to increase by approximately 5 percent in 2020 and 3 percent in 2021.
- Housing affordability has become a problem along Coastal California. In many parts of Coastal California, the typical household spends more than 35 percent of its income on mortgage



California Economic Forecast

payments or rent. In some locations, households often spend more than 50 percent of income on housing costs.

- From 2014 to 2019, an average of 104,000 new homes were started per year in California. Approximately half were single-family homes and the other half were apartments and condos.
- Housing production is expected to average 117,000 to 123,000 homes per year from 2020 to 2025, consisting of a relatively even mix of single-family homes and multifamily units.
- Housing production is expected to be prolific in Los Angeles County and the San Francisco Bay Area, where a number of large apartment and condo projects are in some stage of the development process.
- In the Sacramento Valley, the Central Valley, and parts of Los Angeles and San Diego Counties, huge master-planned communities could produce hundreds of thousands of homes over the next few decades.



- Between 2009 and 2019, California did not build enough new homes to accommodate population growth, and under building of new homes was the primary cause of high home prices.



Golden Gate Bridge

California Economic Forecast

Economic Indicators

2015-2019 History, 2020-2050 Forecast

	Population (millions)	House- holds (millions)	Net Migration (thousands)	New Homes Permitted (thousands)	Registered Vehicles (thousands)	Personal Income (trillions)	Taxable Retail Sales (billions)	Total Taxable Sales (billions)	Real Industrial Production (billions)	Real per Capita Income (dollars)	Unemployment Rate (percent)	Real Farm Production (billions)	Inflation Rate (percent)
2015	39.1	12.8	66	98	34	\$2.2	\$429	\$642	\$430	\$62,810	6.2	\$55	1.4
2016	39.3	12.9	24	99	35	\$2.3	\$438	\$657	\$433	\$63,579	5.5	\$52	2.3
2017	39.6	13.0	65	113	35	\$2.4	\$455	\$681	\$450	\$64,189	4.8	\$53	3.0
2018	39.8	13.1	36	114	36	\$2.5	\$476	\$710	\$460	\$65,277	4.3	\$52	3.7
2019	40.0	13.2	-39	111	36	\$2.6	\$482	\$730	\$470	\$66,231	4.1	\$52	2.9
2020	40.0	13.3	-78	95	37	\$2.7	\$420	\$633	\$499	\$68,269	11.3	\$53	0.5
2021	40.2	13.4	-51	110	37	\$2.7	\$446	\$689	\$481	\$66,126	8.4	\$53	1.6
2022	40.3	13.5	-60	127	37	\$2.8	\$467	\$721	\$479	\$67,179	6.9	\$54	2.3
2023	40.4	13.6	20	128	37	\$3.0	\$488	\$752	\$489	\$68,352	6.0	\$54	2.6
2024	40.6	13.7	35	128	37	\$3.1	\$511	\$785	\$496	\$69,680	5.4	\$55	2.5
2025	40.8	13.8	26	128	37	\$3.2	\$535	\$821	\$503	\$70,884	5.2	\$55	2.3
2026	40.9	13.9	31	126	37	\$3.4	\$549	\$843	\$511	\$71,966	4.9	\$56	2.3
2027	41.1	14.1	26	126	38	\$3.5	\$566	\$868	\$521	\$73,151	4.7	\$57	2.2
2028	41.2	14.2	10	128	38	\$3.7	\$582	\$893	\$532	\$74,362	4.8	\$58	2.2
2029	41.3	14.3	13	127	38	\$3.8	\$598	\$916	\$539	\$75,114	4.6	\$58	2.3
2030	41.4	14.4	18	125	38	\$3.9	\$615	\$943	\$546	\$75,918	4.6	\$59	2.2
2031	41.6	14.5	14	124	38	\$4.1	\$628	\$963	\$553	\$76,785	4.5	\$60	2.1
2032	41.6	14.6	9	122	38	\$4.2	\$644	\$987	\$558	\$77,420	4.4	\$60	2.3
2033	41.7	14.8	4	120	38	\$4.4	\$658	\$1,008	\$566	\$78,481	4.5	\$61	1.9
2034	41.8	14.9	5	119	38	\$4.5	\$673	\$1,030	\$574	\$79,459	4.6	\$62	2.1
2035	41.8	15.0	6	118	38	\$4.7	\$691	\$1,058	\$581	\$80,428	4.7	\$63	2.2
2036	41.9	15.1	11	116	38	\$4.9	\$713	\$1,091	\$586	\$81,102	4.8	\$64	2.6
2037	41.9	15.2	12	114	38	\$5.0	\$734	\$1,123	\$591	\$81,757	4.8	\$64	2.7
2038	41.9	15.3	2	112	38	\$5.2	\$754	\$1,154	\$597	\$82,627	4.8	\$65	2.5
2039	41.9	15.4	-2	110	38	\$5.4	\$776	\$1,187	\$602	\$83,382	4.9	\$66	2.7
2040	41.9	15.5	-6	108	38	\$5.6	\$796	\$1,218	\$607	\$84,207	4.9	\$67	2.6
2041	41.9	15.6	-5	107	38	\$5.8	\$815	\$1,246	\$615	\$85,323	5.0	\$68	2.2
2042	41.9	15.7	-4	105	38	\$6.0	\$833	\$1,274	\$623	\$86,506	5.0	\$69	2.1
2043	41.8	15.8	-9	103	38	\$6.2	\$852	\$1,303	\$631	\$87,756	5.1	\$70	2.0
2044	41.8	15.9	-2	102	38	\$6.4	\$867	\$1,326	\$640	\$89,134	5.0	\$71	1.8
2045	41.8	16.0	9	100	38	\$6.6	\$887	\$1,356	\$648	\$90,398	4.8	\$72	1.9
2046	41.7	16.1	15	98	38	\$6.8	\$906	\$1,386	\$655	\$91,543	4.9	\$73	2.0
2047	41.7	16.2	-2	97	38	\$7.0	\$926	\$1,416	\$661	\$92,527	4.8	\$74	2.2
2048	41.6	16.3	-7	95	38	\$7.3	\$950	\$1,453	\$666	\$93,455	4.9	\$75	2.3
2049	41.5	16.4	-11	94	38	\$7.5	\$972	\$1,486	\$674	\$94,676	5.0	\$76	2.0
2050	41.4	16.5	-14	92	38	\$7.7	\$996	\$1,521	\$680	\$95,858	5.1	\$77	2.1

Employment Sectors

2015-2019 History, 2020-2050 Forecast

	Total Wage & Salary	Farm	Construction	Manufac- turing	Transportation & Utilities	Wholesale & Retail Trade	Financial Activities	Professional Services	Information	Health & Education	Leisure	Government
	(thousands of jobs)											
2015	16,468	422	732	1,302	557	2,351	802	2,490	488	2,464	1,829	2,462
2016	16,902	425	775	1,309	594	2,373	823	2,531	527	2,552	1,903	2,515
2017	17,249	422	810	1,312	632	2,384	833	2,582	530	2,650	1,954	2,554
2018	17,595	422	860	1,323	665	2,383	838	2,669	544	2,722	1,994	2,581
2019	17,855	424	884	1,323	701	2,351	841	2,724	563	2,805	2,033	2,607
2020	16,577	374	822	1,246	688	2,199	840	2,618	536	2,709	1,530	2,507
2021	16,915	406	889	1,266	691	2,249	851	2,649	585	2,721	1,575	2,479
2022	17,563	420	938	1,283	702	2,313	865	2,759	591	2,836	1,759	2,506
2023	17,846	425	922	1,309	709	2,335	875	2,845	597	2,845	1,852	2,526
2024	18,138	429	909	1,316	713	2,357	883	2,902	604	2,869	1,976	2,557
2025	18,374	432	899	1,322	719	2,380	891	2,931	612	2,897	2,071	2,582
2026	18,532	432	887	1,329	725	2,391	899	2,946	619	2,921	2,131	2,607
2027	18,658	433	877	1,334	732	2,401	909	2,961	624	2,946	2,173	2,620
2028	18,757	433	867	1,339	740	2,409	919	2,976	630	2,966	2,194	2,632
2029	18,873	434	876	1,344	747	2,416	928	2,990	635	2,988	2,215	2,645
2030	18,986	434	883	1,347	755	2,422	937	3,006	640	3,009	2,236	2,657
2031	19,098	434	889	1,349	763	2,429	946	3,021	646	3,030	2,257	2,669
2032	19,208	434	891	1,352	771	2,436	954	3,036	651	3,053	2,279	2,681
2033	19,316	435	892	1,355	779	2,442	962	3,052	657	3,075	2,300	2,694
2034	19,423	435	894	1,357	787	2,449	970	3,067	663	3,097	2,322	2,706
2035	19,535	435	899	1,359	795	2,456	977	3,082	668	3,119	2,344	2,719
2036	19,642	436	901	1,362	803	2,463	984	3,098	674	3,140	2,365	2,731
2037	19,748	436	901	1,364	811	2,469	991	3,114	680	3,162	2,387	2,744
2038	19,860	436	905	1,366	820	2,474	997	3,129	686	3,186	2,409	2,757
2039	19,970	437	909	1,368	828	2,480	1,003	3,145	692	3,210	2,431	2,769
2040	20,080	437	912	1,370	837	2,485	1,009	3,161	698	3,233	2,454	2,782
2041	20,185	437	911	1,372	845	2,490	1,015	3,177	704	3,256	2,476	2,795
2042	20,292	438	912	1,374	854	2,495	1,020	3,193	710	3,279	2,498	2,808
2043	20,400	438	914	1,376	863	2,499	1,025	3,209	716	3,304	2,521	2,821
2044	20,506	438	914	1,377	872	2,504	1,030	3,225	722	3,326	2,543	2,834
2045	20,611	439	916	1,379	881	2,508	1,035	3,242	728	3,348	2,566	2,847
2046	20,721	439	921	1,381	890	2,512	1,039	3,258	734	3,370	2,589	2,860
2047	20,830	439	919	1,383	899	2,516	1,043	3,275	740	3,398	2,611	2,874
2048	20,939	440	920	1,384	908	2,520	1,047	3,291	747	3,423	2,634	2,887
2049	21,048	440	922	1,386	917	2,524	1,051	3,308	753	3,448	2,657	2,900
2050	21,159	440	923	1,387	927	2,527	1,055	3,324	760	3,473	2,680	2,914

California Economic Forecast

Socioeconomic Indicators

