

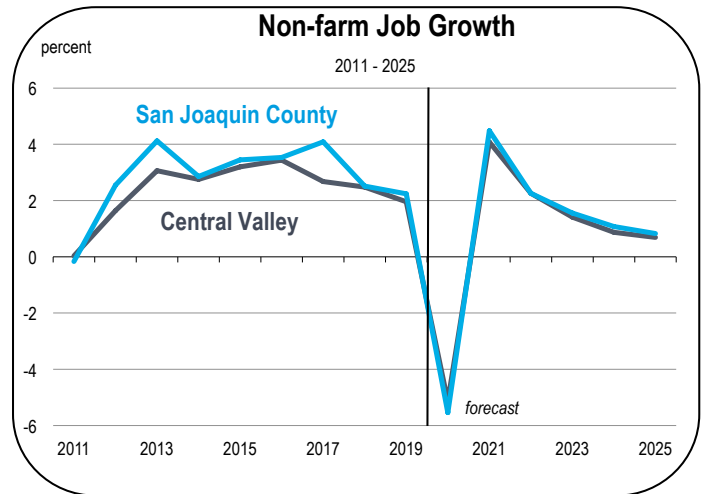
San Joaquin County Economic Forecast

Forecast Summary

- It is estimated that an average of 13,000 to 15,000 jobs will be lost in San Joaquin County during 2020. Job losses were heavy in the first half of the year.
- Employment losses will be largest in leisure services, professional business services, government, and transportation/warehousing.
- The unemployment rate averaged 5.9 percent in 2019. It will average between 12 and 14 percent in 2020.
- The San Joaquin County population is expected to grow more quickly than the broader Central Valley during most of the forecast period.
- Home values are not expected to change much in 2020 or 2021.
- Housing production is expected to decrease in 2020 but rebound in 2021 and 2022.

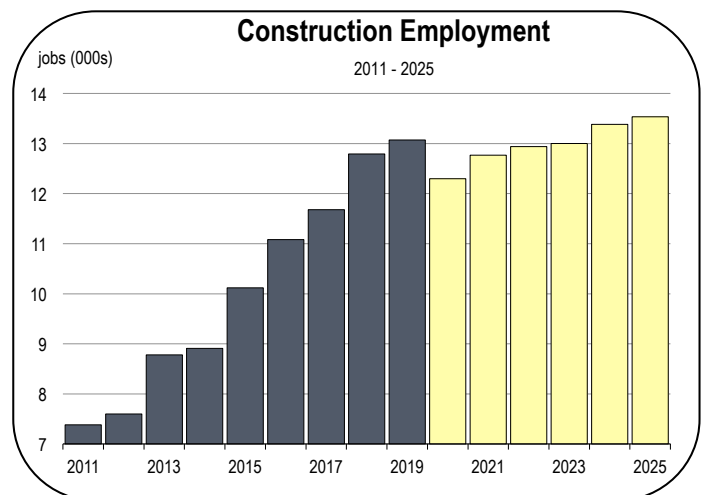
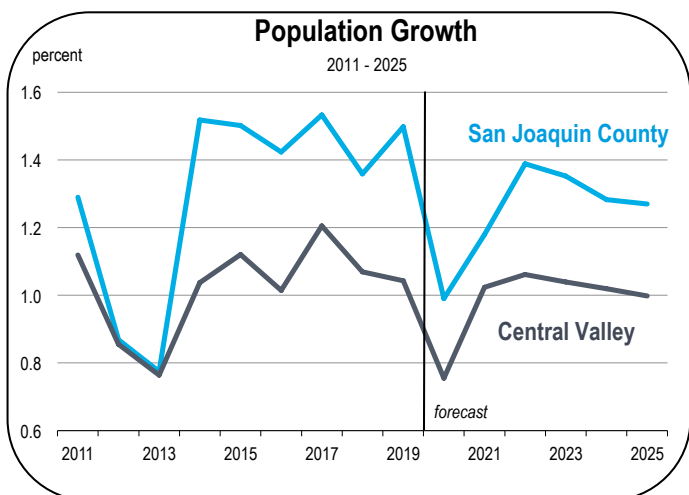
Job Growth

- Total employment in the County will decline between 5 and 6 percent in 2020. This is an annual average change from 2019.
- In 2021, San Joaquin County is expected to re-gain many of the jobs lost during the Coronavirus recession.

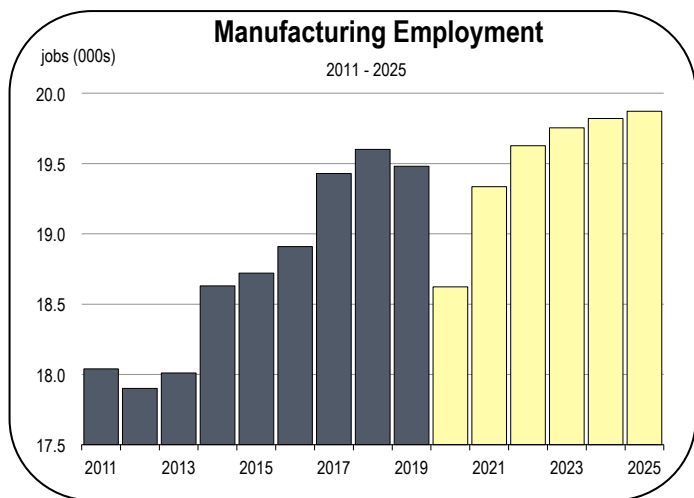


Construction Employment

- The construction sector is expected to lose more than 700 jobs in 2020.
- Most California construction activity was deemed non-essential for several weeks in March and April, leading to significant construction layoffs that average down total employment in 2020.
- Restrictions on construction were lifted in late April, and construction employment could return to pre-recession levels within the next few years.



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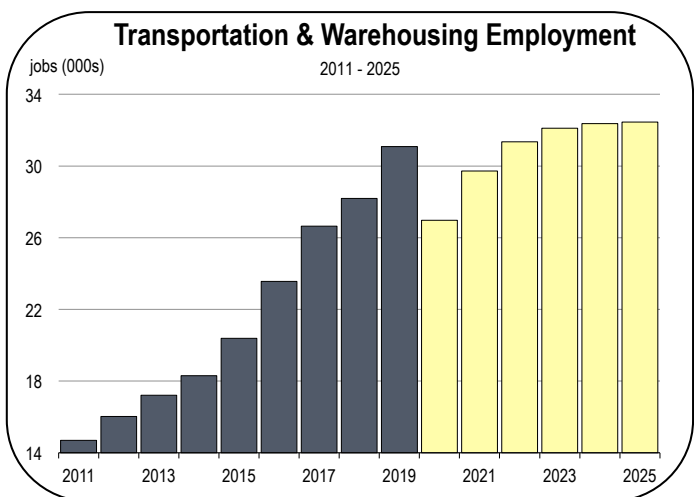


Manufacturing Employment

- San Joaquin county has heavy concentrations in food manufacturing and construction material manufacturing.
- The food and beverage manufacturing subsector lost several hundred jobs in 2019, before the onset of the Coronavirus recession. Construction material manufacturing employment was largely unchanged.
- Overall manufacturing employment declined by more than 1,500 jobs during the second quarter of 2020. It is expected to rebound in 2021 and could reach an expansion phase soon after.

Transportation and Warehousing Employment

- Most transportation jobs in San Joaquin County are in trucking and warehousing, where firms deliver goods to and from businesses and store these goods in logistics facilities.

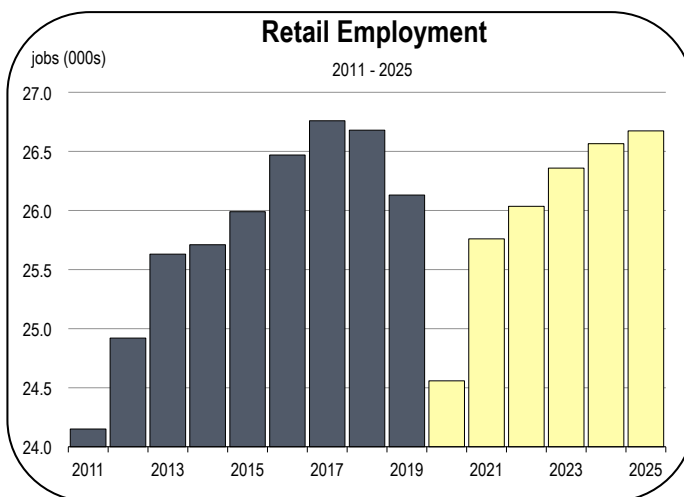


Transportation, Warehousing & Utilities / Sub-Sectors 2019	Jobs in Subsector	Subsector's Share of Overall Industry
Warehousing	17,700	57.1%
Trucking	6,900	22.3%
Local Delivery	3,300	10.6%
Utilities	1,400	4.5%
Airports	1,300	4.2%
Ground Passenger Transportation	400	1.3%

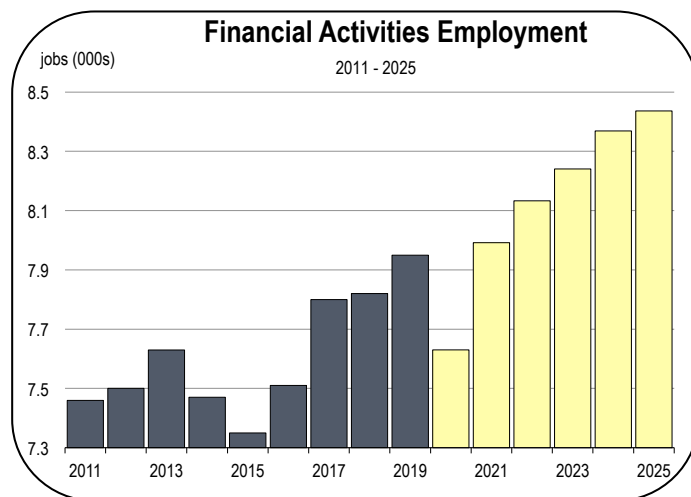
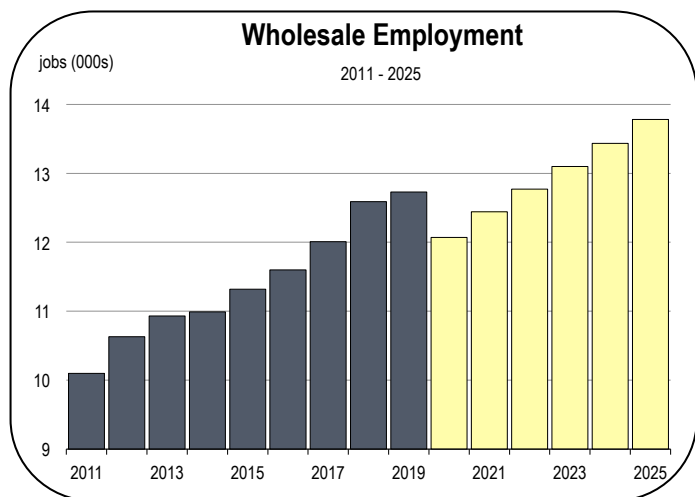
- Companies often choose San Joaquin County for their fulfillment centers due to its low cost real estate and proximity to the Port of Oakland.
- Job growth in trucking and warehousing exponential before the Coronavirus recession, with overall employment levels more than doubling between 2015 and 2019.
- A meaningful number of jobs are in delivery firms like UPS, FedEx, and Instacart. Delivery firms hired large numbers of workers during the second quarter of 2020.
- Transportation employment declined in March and April but began to expand again in May during Phase 2 of California's restart.

Retail Trade Employment

- The retail sector is expected to lose more than 1,500 jobs in 2020 on an annual average basis.
- Many large retail chains chose to furlough their employees rather than lay them off completely, and furloughed workers are not



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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 2,500 retail workers could be effectively not working and not earning an income on an annual average basis in 2020.
- It is unknown when and if retail employment will eclipse pre-recession levels because of the strengthening demand trend towards online purchasing.

Wholesale Trade Employment

- Wholesale trade employment is expected to fall by at least 600 jobs on an annual average basis in 2020.
- Wholesale employment is likely to expand in tandem with employment in manufacturing, retail, construction, and transportation/warehousing.

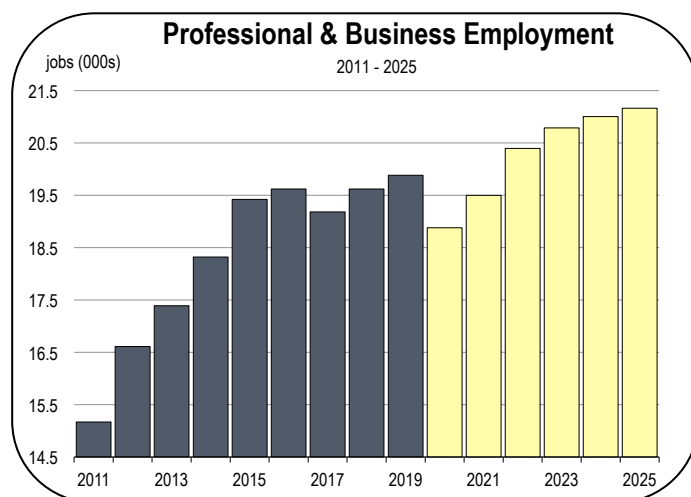
Financial Activities Employment

- Substantial job declines are expected in 2020 because many employers closed, committing their employees to shelter-in-place for health reasons.
- The most prominent losses were observed in real estate sales and lending.
- In 2020 there have been far fewer homes on the market than there were in 2019, and there has been far less interest from potential buyers. This should translate into fewer home sales, reducing the need for real estate agents and mortgage brokers.

- Banks also reduced their head counts in the second quarter of 2020 due to a temporary reduction of in-person branch visits.
- Financial activities companies are expected to re-gain a meaningful number of jobs through 2021, but may not surpass the employment totals that were observed in 2019.

Professional and Business Services Employment

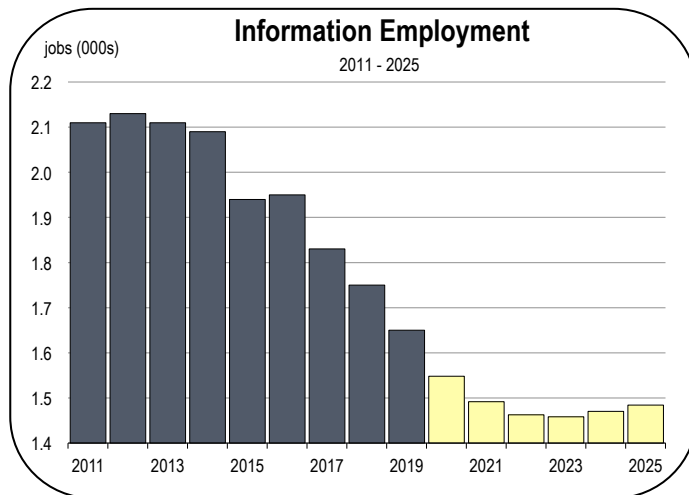
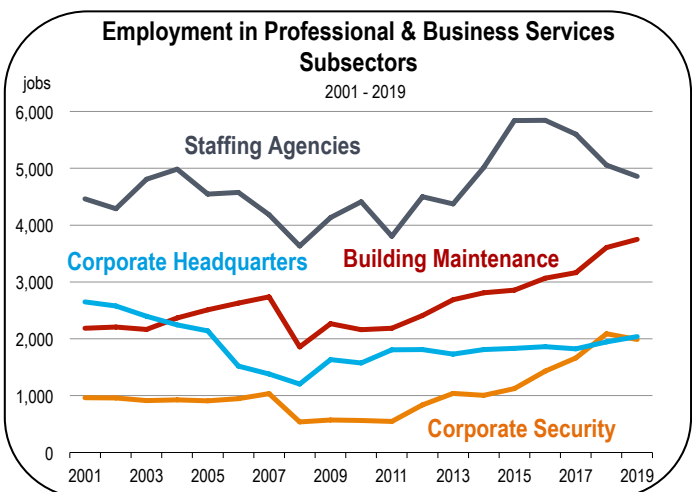
- The professional and business services industry has a diverse array of subsectors, and each will be impacted differently during the recession and recovery phases of 2020.
- Jobs in corporate security and building maintenance declined substantially during the shutdowns but began to rebound at office and industrial buildings with repopulating employment.



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Professional & Business Services Sub-Sectors 2019	Jobs in Subsector	Subsector's Share of Overall Industry
Staffing Agencies	5,100	25.4%
Building Maintenance	3,900	19.4%
Corporate Headquarters	2,100	10.4%
Corporate Security	2,100	10.4%
Accounting & Bookkeeping	1,000	5.0%
Call Centers & Collections Agencies	900	4.5%
Engineering & Architecture	800	4.0%
Law	700	3.5%
Business Consulting	600	3.0%
Marketing and Advertising	300	1.5%
Custom IT Services	300	1.5%
Other	2,300	11.4%

- Staffing agencies had significant losses during the contraction, but may bounce back quickly in 2021.
- Staffing agencies primarily employ temp workers. Temp workers are usually laid off first during a downturn but hired back first during a recovery.
- Aside from security, maintenance, and staffing agencies, most subsectors of the professional business services industry were able to operate remotely and were less affected by the recession.

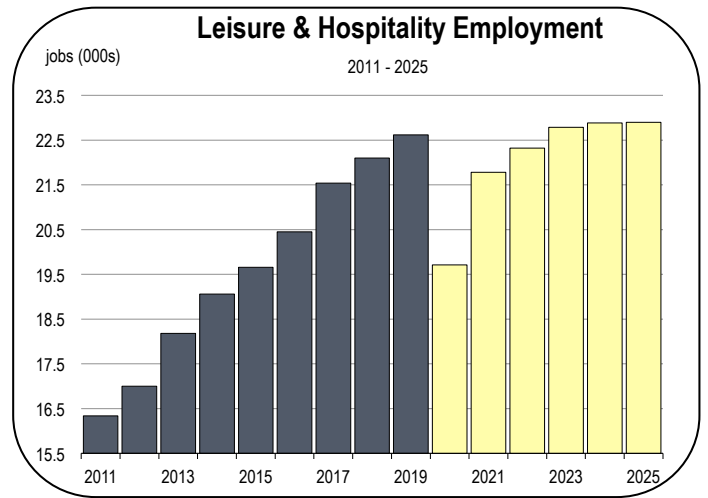
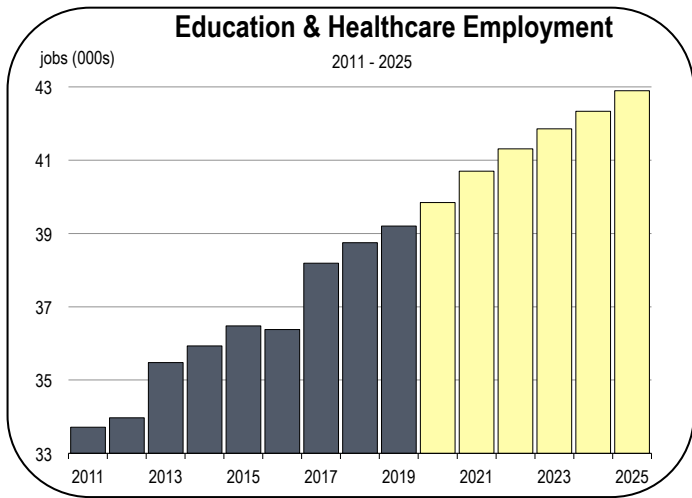


Information Employment

- In San Joaquin County, the information sector is largely comprised of radio and TV broadcasting, movie theaters, and telecommunications companies like Comcast.
- Telecommunications jobs were classified as essential and these workers remained employed during shelter-in-place. Consequently, employment was not impacted as it was in other sectors.
- Movie theater employment may not return to pre-recession levels until 2021 or later as strict social distancing policies will likely reduce the number of customers that are allowed into theaters.
- Many TV and radio workers were allowed to remain in their jobs, but advertising revenues shrank with the rest of the economy, giving employers little choice but to issue layoff notices.
- Virtually all information subsectors are in long-term patterns of decline or stagnation, and no meaningful job growth is expected during the forecast period.

Information Sub-Sectors 2019	Jobs in Subsector	Subsector's Share of Overall Industry
Telecommunications	600	35.3%
Radio & TV Broadcasting	300	17.6%
Movie Theaters	300	17.6%
Other	500	29.4%

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Private Education and Healthcare Employment

- There were 22,000 healthcare jobs in San Joaquin County in 2019.
- Healthcare jobs were recession proof during the 2008-2009 financial crisis. However, some non-essential medical offices have had to close in 2020, and hospitals reduced their employment levels because resources were not utilized as envisioned to support Coronavirus patients.
- There were approximately 11,000 social assistance jobs in 2019, including industries like childcare, housing shelters, and non-medical care for senior citizens.
- There were also 5,000 jobs in private schools and colleges, tutoring services, vocational schools, and other educational organizations during 2019.
- Jobs in social assistance and education were mostly classified as essential in 2020. Nevertheless there were layoffs at institutions with revenue shortfalls.

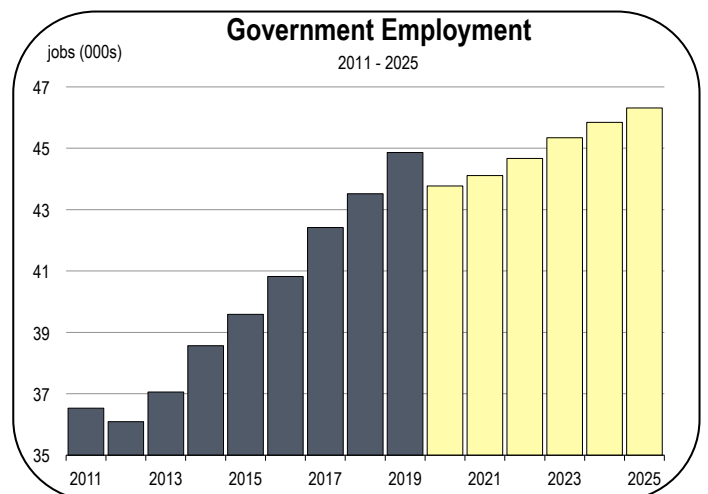
Leisure and Hospitality Employment

- The leisure and hospitality industry was devastated by the shutdown more than any other sector of the labor market.
- In 2019, San Joaquin County had 20,000 jobs in restaurants, hotels, and bars. Our research indicates that most were laid off, furloughed, or had their hours cut in the months of March and April
- Jobs in restaurants, hotels, and bars will slowly get back to work through 2021 but some restaurants will close permanently, preventing a full recovery from occurring for some time.

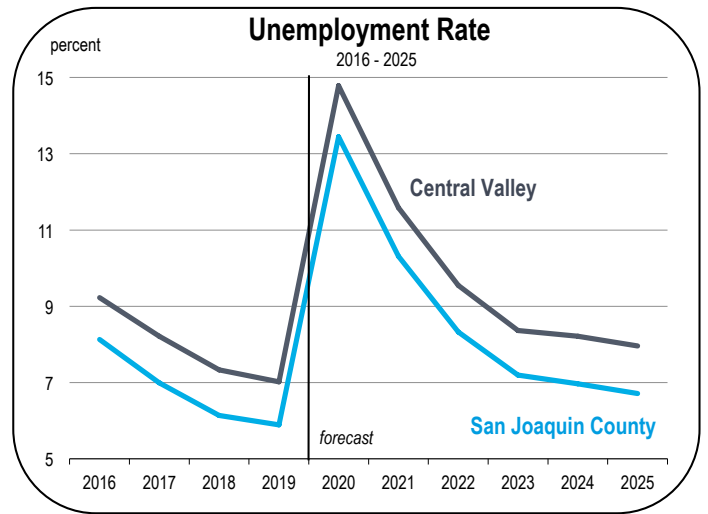
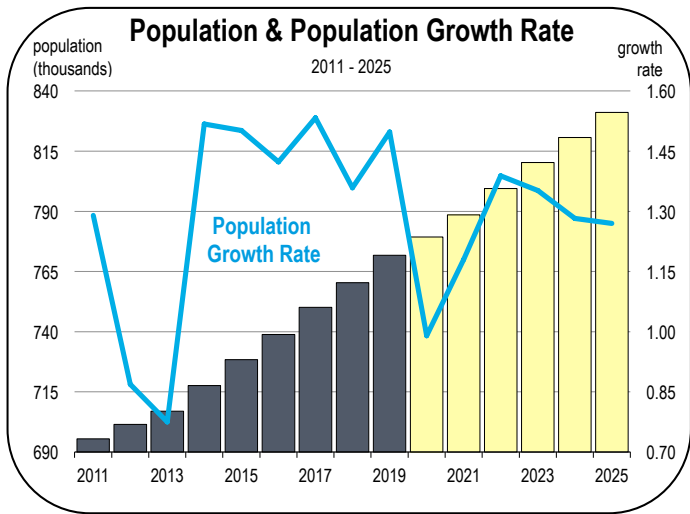
- In 2019, San Joaquin County also had 2,500 jobs in entertainment and recreation, including things like fitness centers, museums, and golf courses. Many of these organizations will operate at reduced capacities through the end of 2020 and potentially into 2021.

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.



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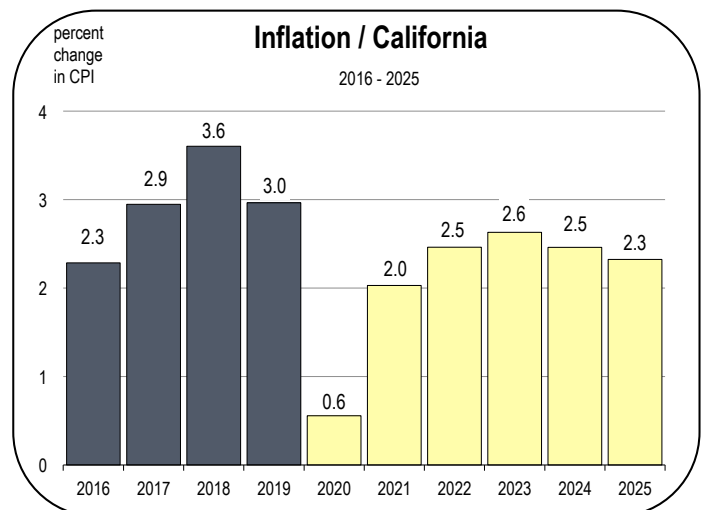
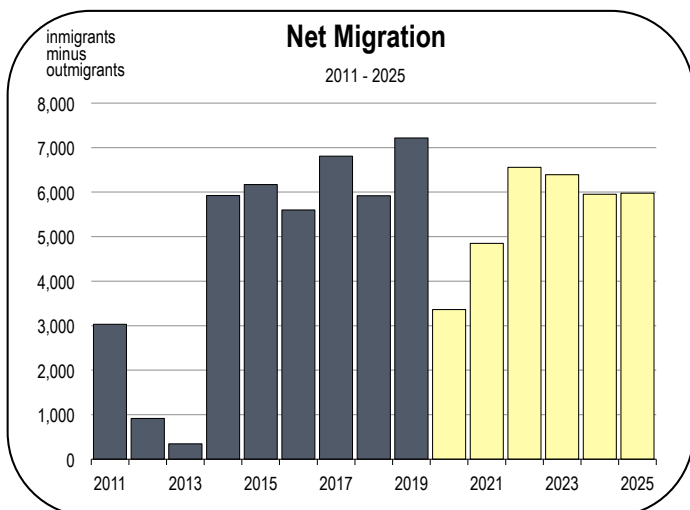


Population Growth

- The San Joaquin County population is expected to expand more quickly than the Central Valley average between 2020 and 2025.
- Net migration is expected to be a meaningful contributor to population growth as residents relocate from Coastal California for the affordable housing options in San Joaquin County.
- An average of 5,500 net migrants are expected to move into San Joaquin County each year between 2020 and 2025.
- The population will expand at an annual average rate of 1.2 percent per year from 2020 to 2025.
- By 2025, the San Joaquin County population will surpass 830,000 residents.

Unemployment and Inflation Rates

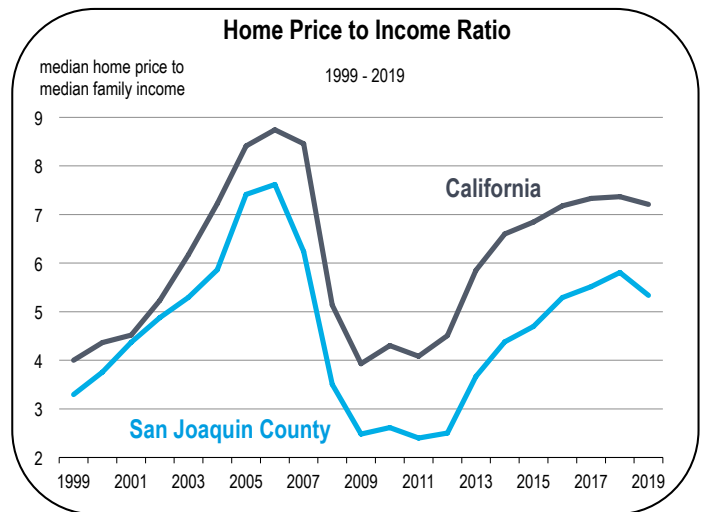
- The unemployment rate in San Joaquin County averaged 5.9 percent in 2019, which was similar to the composite rate for the Central Valley.
- The unemployment rate is expected to average between 12 and 14 percent in 2020.
- The unemployment rate is expected to remain elevated for several years, but is likely to improve more quickly than after the 2008-2009 recession.
- 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.



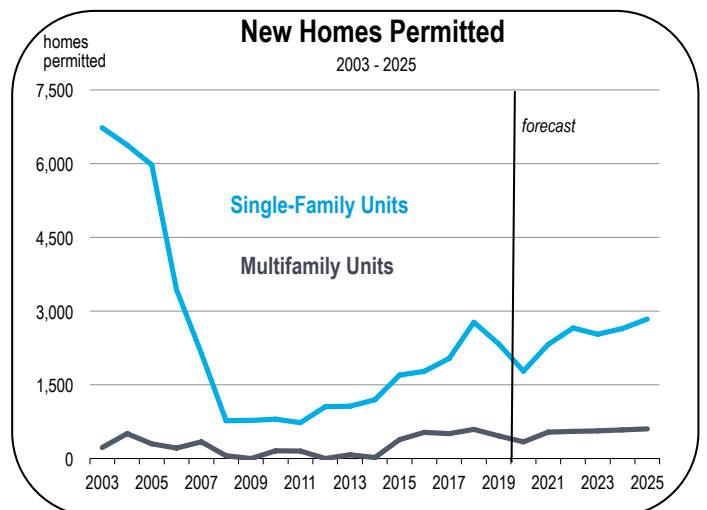
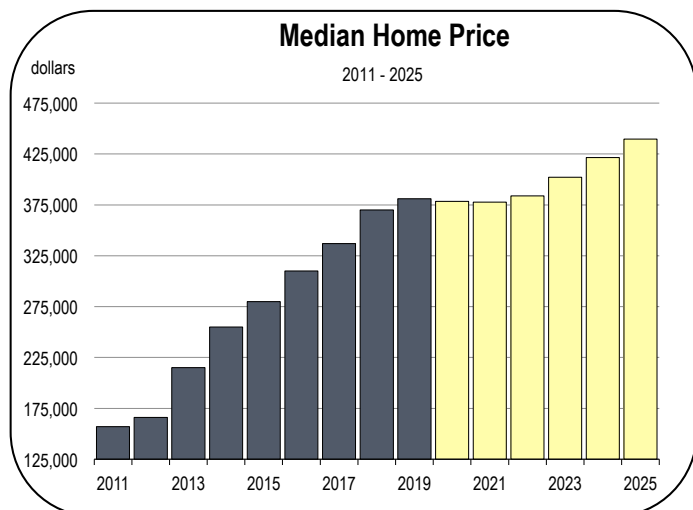
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Home Prices and New Housing Production

- In 2019 the median home price in San Joaquin County was \$380,900. The median price is not expected to change much in 2020 or 2021.
- Homes in San Joaquin County are more affordable than homes across California, especially Coastal California.
- In San Joaquin County, the typical household spends less than 25 percent of its pre-tax income on mortgage payments or rent.
- Along Coastal California the typical household spends more than 35 percent of income on housing costs, and in very expensive markets like San Francisco, housing costs often account for more than 50 percent of income.
- From 2014 to 2019, an average of 2,400 new homes were started per year in San Joaquin County. Approximately 83 percent were single-family homes.
- Housing production is expected to average 3,000 units per year from 2020 to 2025, consisting mostly of single-family homes.



- New homes will be built in many parts of the county, but activity will be heavily concentrated in Stockton, Manteca, and Tracy.
- Several large projects have been approved that could bring 20,000 new homes to Stockton, 6,800 homes to Manteca, and 1,400 homes to Tracy.



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Economic Indicators

2015-2019 History, 2020-2050 Forecast

	Population (people)	House- holds (thousands)	Net Migration (people)	New Homes Permitted (homes)	Registered Vehicles (thousands)	Personal Income (billions)	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	728,423	219.7	6,171	2,085	632	\$28.8	\$7.1	\$10.6	\$5.8	\$44,481	8.9	\$3.1	1.5
2016	738,792	222.5	5,600	2,305	659	\$30.1	\$7.5	\$11.1	\$5.6	\$44,724	8.1	\$2.6	2.3
2017	750,119	221.0	6,807	2,545	667	\$31.5	\$8.1	\$12.4	\$5.9	\$44,760	7.0	\$2.7	2.9
2018	760,310	222.2	5,921	3,362	683	\$33.9	\$8.7	\$13.5	\$6.3	\$45,862	6.1	\$2.7	3.6
2019	771,700	225.1	7,214	2,797	708	\$36.3	\$8.9	\$14.3	\$6.8	\$47,027	5.9	\$2.7	3.0
2020	779,340	227.6	3,362	2,119	718	\$36.2	\$8.4	\$13.4	\$6.4	\$46,205	13.4	\$2.7	0.6
2021	788,534	226.8	4,849	2,856	726	\$37.3	\$8.9	\$14.0	\$6.7	\$46,055	10.3	\$2.7	2.0
2022	799,481	233.4	6,557	3,207	735	\$39.5	\$9.3	\$14.6	\$7.1	\$46,960	8.3	\$2.8	2.5
2023	810,290	235.8	6,392	3,089	744	\$41.9	\$9.8	\$15.3	\$7.3	\$47,979	7.2	\$2.8	2.6
2024	820,683	238.6	5,953	3,227	752	\$44.3	\$10.3	\$16.1	\$7.5	\$48,886	7.0	\$2.8	2.5
2025	831,105	241.7	5,976	3,445	760	\$46.7	\$10.8	\$16.8	\$7.7	\$49,660	6.7	\$2.8	2.3
2026	840,846	245.0	5,259	3,446	766	\$48.7	\$11.2	\$17.5	\$7.8	\$50,097	6.6	\$2.8	2.3
2027	850,073	248.3	4,712	3,452	773	\$50.8	\$11.7	\$18.2	\$8.0	\$50,535	6.6	\$2.8	2.2
2028	858,229	251.7	3,588	3,446	779	\$52.9	\$12.2	\$19.0	\$8.1	\$51,003	6.3	\$2.9	2.2
2029	868,604	255.1	5,732	3,345	785	\$54.7	\$12.5	\$19.5	\$8.1	\$51,001	6.5	\$2.9	2.3
2030	879,200	258.4	5,942	3,239	792	\$56.7	\$12.8	\$20.0	\$8.2	\$51,034	6.7	\$2.9	2.2
2031	888,582	261.6	4,816	3,190	799	\$58.6	\$13.1	\$20.5	\$8.3	\$51,169	6.6	\$2.9	2.1
2032	896,993	264.8	4,040	3,266	806	\$60.6	\$13.4	\$21.0	\$8.3	\$51,236	6.6	\$2.9	2.3
2033	906,355	268.0	5,140	3,168	812	\$62.7	\$13.7	\$21.4	\$8.4	\$51,442	6.8	\$3.0	1.9
2034	916,593	271.2	6,211	3,093	818	\$64.9	\$14.0	\$21.9	\$8.5	\$51,562	6.6	\$3.0	2.1
2035	926,922	274.3	6,515	3,133	823	\$67.2	\$14.3	\$22.4	\$8.6	\$51,666	6.6	\$3.0	2.2
2036	936,316	277.4	5,850	3,147	828	\$69.6	\$14.7	\$23.0	\$8.6	\$51,654	6.8	\$3.0	2.6
2037	945,676	280.5	6,072	3,115	832	\$72.1	\$15.1	\$23.6	\$8.7	\$51,603	6.7	\$3.0	2.7
2038	954,484	283.6	5,822	3,031	839	\$74.7	\$15.5	\$24.3	\$8.7	\$51,667	6.7	\$3.1	2.5
2039	962,392	286.5	5,242	3,042	846	\$77.4	\$16.0	\$24.9	\$8.8	\$51,714	6.7	\$3.1	2.7
2040	970,364	289.6	5,662	2,984	853	\$80.2	\$16.4	\$25.6	\$8.9	\$51,772	6.7	\$3.1	2.6
2041	977,634	292.5	5,271	2,864	860	\$83.0	\$16.8	\$26.3	\$8.9	\$51,917	6.7	\$3.1	2.4
2042	983,715	295.3	4,321	2,746	869	\$85.8	\$17.3	\$26.9	\$9.0	\$52,151	6.7	\$3.1	2.3
2043	988,897	298.1	3,602	2,620	877	\$88.6	\$17.7	\$27.6	\$9.1	\$52,444	6.7	\$3.1	2.2
2044	995,399	300.6	5,122	2,503	885	\$91.4	\$18.1	\$28.2	\$9.1	\$52,709	6.7	\$3.1	2.0
2045	1,002,114	303.1	5,488	2,403	892	\$94.4	\$18.5	\$28.9	\$9.2	\$52,879	6.7	\$3.2	2.2
2046	1,008,258	305.5	5,025	2,347	899	\$97.4	\$19.0	\$29.6	\$9.3	\$53,100	6.7	\$3.2	2.1
2047	1,013,959	307.8	4,663	2,304	906	\$100.4	\$19.4	\$30.3	\$9.3	\$53,327	6.7	\$3.2	2.1
2048	1,019,464	310.1	4,586	2,253	912	\$103.5	\$19.9	\$31.0	\$9.4	\$53,562	6.7	\$3.2	2.1
2049	1,024,934	312.4	4,637	2,197	919	\$106.7	\$20.3	\$31.7	\$9.4	\$53,801	6.7	\$3.2	2.1
2050	1,030,385	314.5	4,767	2,139	926	\$110.0	\$20.8	\$32.4	\$9.5	\$54,042	6.7	\$3.2	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	234.9	16.7	10.1	18.7	20.4	37.3	7.4	19.4	1.9	36.5	19.7	39.6
2016	242.6	16.6	11.1	18.9	23.6	38.1	7.5	19.6	2.0	36.4	20.5	40.8
2017	251.6	16.3	11.7	19.4	26.7	38.8	7.8	19.2	1.8	38.2	21.5	42.4
2018	256.7	15.6	12.8	19.6	28.2	39.3	7.8	19.6	1.8	38.8	22.1	43.5
2019	261.4	14.8	13.1	19.5	31.1	38.9	8.0	19.9	1.7	39.2	22.6	44.9
2020	247.5	14.7	12.3	18.6	27.0	36.6	7.6	18.9	1.5	39.8	19.7	43.8
2021	257.8	14.5	12.8	19.3	29.7	38.2	8.0	19.5	1.5	40.7	21.8	44.1
2022	263.3	14.5	12.9	19.6	31.4	38.8	8.1	20.4	1.5	41.3	22.3	44.7
2023	267.1	14.4	13.0	19.8	32.1	39.5	8.2	20.8	1.5	41.9	22.8	45.3
2024	269.8	14.4	13.4	19.8	32.4	40.0	8.4	21.0	1.5	42.3	22.9	45.8
2025	272.0	14.4	13.5	19.9	32.5	40.5	8.4	21.2	1.5	42.9	22.9	46.3
2026	273.8	14.4	13.5	19.9	32.6	41.0	8.5	21.3	1.5	43.4	23.0	46.5
2027	275.6	14.4	13.5	20.0	32.7	41.5	8.5	21.4	1.5	44.0	23.1	46.8
2028	277.2	14.4	13.4	20.0	32.7	42.1	8.5	21.6	1.5	44.5	23.2	47.0
2029	278.5	14.4	13.1	20.1	32.7	42.6	8.6	21.7	1.6	45.0	23.2	47.2
2030	279.9	14.5	12.9	20.1	32.7	43.0	8.6	21.9	1.6	45.5	23.4	47.4
2031	281.4	14.5	12.7	20.1	32.7	43.4	8.7	22.0	1.6	46.0	23.5	47.6
2032	283.0	14.5	12.8	20.1	32.7	43.9	8.7	22.1	1.6	46.6	23.5	47.8
2033	284.6	14.5	12.8	20.1	32.8	44.3	8.8	22.3	1.6	47.1	23.5	48.1
2034	286.4	14.5	12.8	20.2	32.9	44.7	8.8	22.4	1.6	47.7	23.7	48.3
2035	288.3	14.5	12.8	20.2	33.1	45.1	8.9	22.6	1.7	48.2	23.9	48.6
2036	290.1	14.5	12.8	20.2	33.2	45.6	8.9	22.7	1.7	48.8	24.0	48.8
2037	291.7	14.5	12.7	20.2	33.3	45.9	9.0	22.8	1.7	49.4	24.1	49.0
2038	293.2	14.5	12.5	20.2	33.4	46.4	9.0	23.0	1.7	49.9	24.2	49.3
2039	294.9	14.5	12.5	20.2	33.5	46.8	9.1	23.1	1.7	50.4	24.3	49.5
2040	296.5	14.5	12.5	20.2	33.6	47.2	9.1	23.3	1.7	50.9	24.3	49.8
2041	298.0	14.5	12.4	20.2	33.7	47.6	9.2	23.4	1.7	51.3	24.4	50.0
2042	299.5	14.5	12.4	20.2	33.8	48.1	9.2	23.6	1.7	51.7	24.5	50.3
2043	301.0	14.5	12.3	20.2	33.9	48.5	9.3	23.7	1.7	52.1	24.5	50.5
2044	302.4	14.6	12.1	20.2	34.0	49.0	9.3	23.9	1.8	52.5	24.6	50.8
2045	303.9	14.6	11.9	20.2	34.1	49.4	9.4	24.0	1.8	53.0	24.8	51.0
2046	305.5	14.6	11.7	20.2	34.2	49.9	9.4	24.2	1.8	53.4	24.9	51.3
2047	307.0	14.6	11.6	20.2	34.3	50.3	9.4	24.3	1.8	53.8	24.9	51.5
2048	308.6	14.6	11.5	20.2	34.4	50.8	9.5	24.5	1.9	54.3	25.0	51.8
2049	310.1	14.6	11.5	20.2	34.5	51.2	9.5	24.6	1.9	54.7	25.1	52.0
2050	311.7	14.6	11.4	20.2	34.6	51.7	9.6	24.8	1.9	55.1	25.2	52.3

San Joaquin County Economic Forecast

Socioeconomic Indicators

