

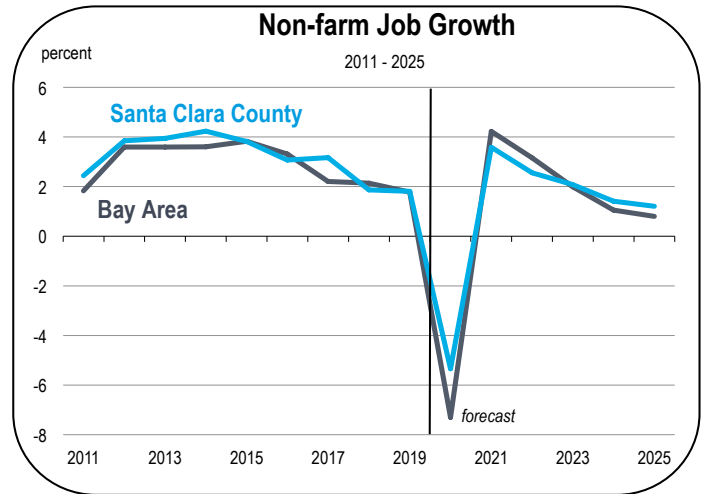
# Santa Clara County Economic Forecast

## Forecast Summary

- On an annual average basis, 50,000 to 65,000 non-farm jobs will be lost in Santa Clara County during 2020. Job losses will be very heavy in the first half of the year.
- Employment losses will be largest in leisure services, professional business services, construction, and retail.
- The unemployment rate averaged 2.5 percent in 2019. It will average between 9 and 11 percent for the 2020 calendar year.
- The Santa Clara County population grew slowly in 2019 and will continue to grow slowly in 2020. During the 2021-2025 period growth will accelerate.
- Housing production will decrease in 2020 and may not increase substantially during the forecast period.
- Home prices are not expected to change much in 2020 or 2021.

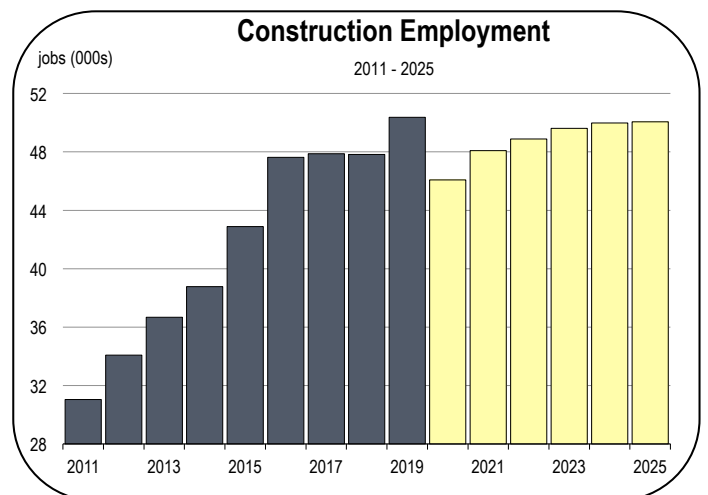
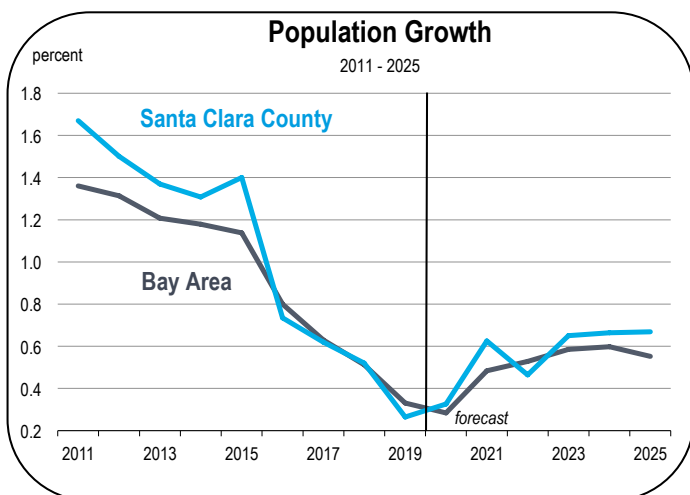
## Job Growth

- Total employment in Santa Clara County will decline by 4 to 6 percent in 2020 on an annual average basis.
- In 2021, the county is expected to re-gain many of the jobs that were lost during the Coronavirus Recession.

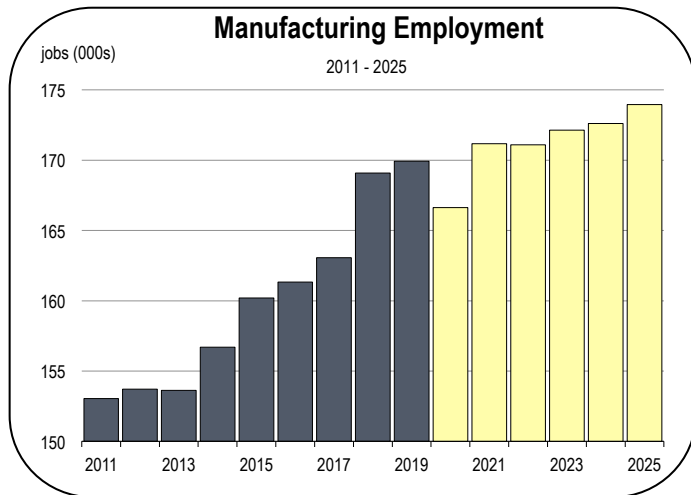


## Construction Employment

- The construction sector is expected to lose more than 4,000 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.
- Construction employment is expected to remain below pre-recession levels for a number of years.



# Santa Clara County Economic Forecast

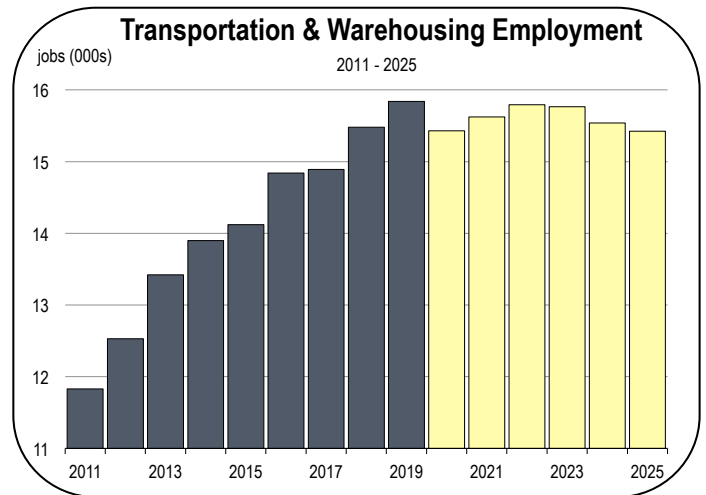


## Manufacturing Employment

- Approximately half of all manufacturing jobs in Santa Clara County are in computer and semiconductor manufacturing firms, such as Apple, Cisco, Intel, HP, and Netapp.
- Manufacturing employment is expected to fall by more than 3,000 jobs in 2020.
- Manufacturing activity is forecast to rebound sharply after the recession subsides, surpassing pre-lockdown levels as early as 2021.

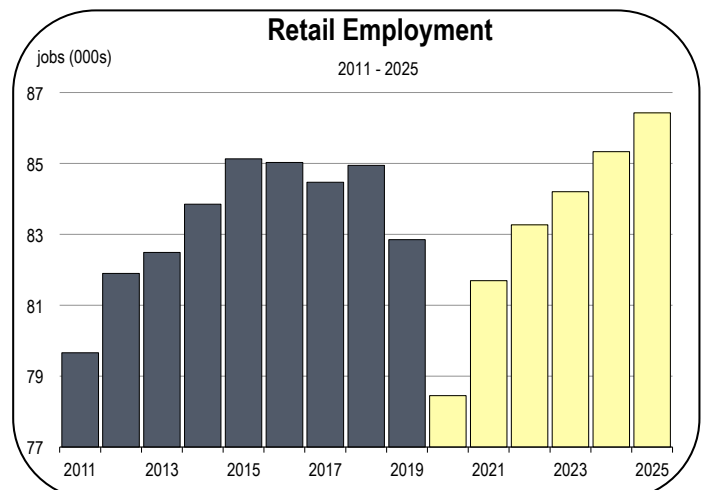
## Transportation and Warehousing Employment

- Most transportation jobs in Santa Clara County are in trucking and delivery services. A meaningful number are also located at the San Jose International Airport.
- Airline and airport companies experienced the sharpest job declines of any other transportation subsector during the 2020 Coronavirus Recession.
- Delivery firms hired large numbers of workers during the second quarter of 2020, including companies like UPS, FedEx, and Instacart. Delivery firms may be among the few corners of the labor market to expand throughout 2020.
- Overall transportation and warehousing employment will rebound slowly in 2021 and 2022.

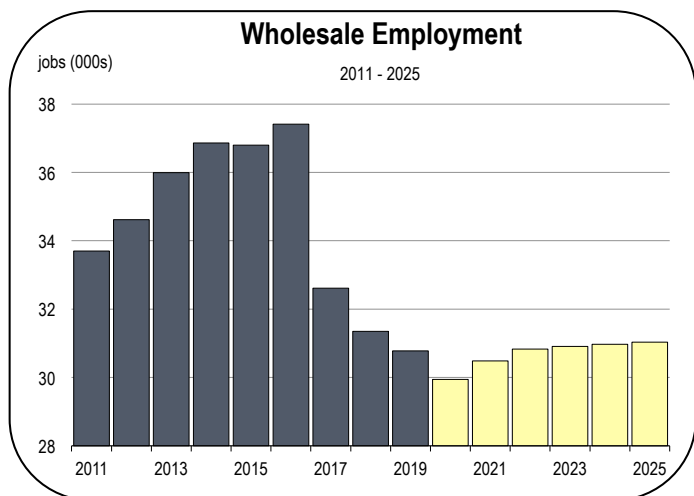


## Retail Trade Employment

- The retail sector is expected to lose more than 4,000 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 6,500 retail workers could be effectively not working, and not earning an income, on an annual average basis in 2020.



# Santa Clara County Economic Forecast



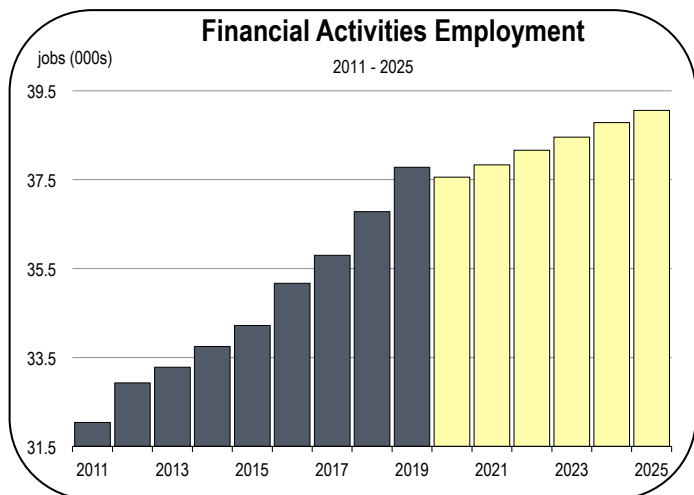
- Retail trade jobs will return after the social distancing protocols are lifted in a sustained way.
- In many parts of California, retail employment may not return to pre-recession levels. In Santa Clara County, retail employment has a much higher likelihood of surpassing pre-recession levels because Santa Clara County has a prominent number of e-commerce firms, and e-commerce activity is expected to expand substantially.

## Wholesale Trade Employment

- Wholesale trade employment is expected to fall by 2 or 3 percent on an annual average basis in 2020.
- Wholesale employment should rebound to pre-recession levels in 2021 or 2022, but is not expected to create a large number of jobs.

## Financial Activities Employment

- A small number of job losses are expected this year because some employers closed, committing their employees to shelter-in-place for health reasons.

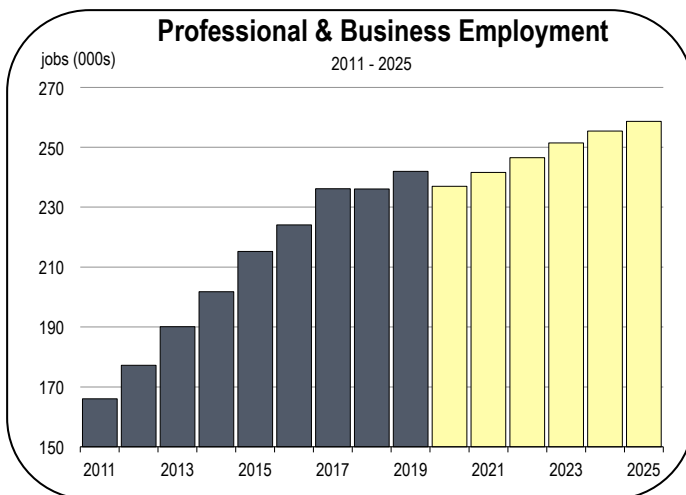


Financial Activities Sub-Sectors 2019	Jobs in Subsector (000s)	Subsector's Share of Overall Industry
Real Estate	13.1	34.6%
Banks and Mortgage Lending	12.6	33.3%
Asset Management	5.1	13.4%
Insurance	4.6	12.1%
Rental and Leasing Services	2.5	6.6%

- The most prominent losses are expected in real estate sales and lending.
- There have been far fewer homes on the market in 2020 than there were in 2019, which should translate into fewer home sales, reducing the need for real estate agents and mortgage brokers.
- Banks also reduced their head counts in 2020 due to a temporary reduction of in-person branch visits.
- Asset management is not expected to lose a significant number of jobs during or after the lockdowns.

## Professional and Business Services Employment

- The professional and business services industry has a diverse array of subsectors, and each will be affected differently during the recession and recovery phases of 2021 and 2022.
- Jobs in corporate security and building maintenance declined substantially during the recession but will rebound at office and industrial buildings with repopulating employment.
- Staffing agencies had significant losses during the contraction, but may bounce back quickly once the economy begins to expand again.



# Santa Clara County Economic Forecast

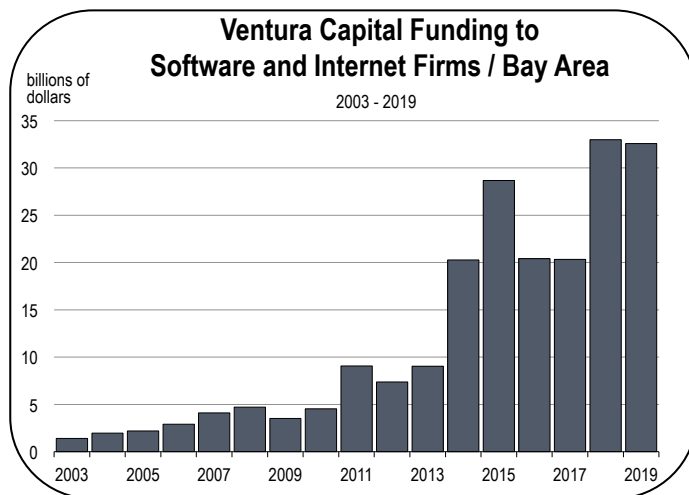
Professional & Business Services Sub-Sectors 2019	Jobs in Subsector (000s)	Subsector's Share of Overall Industry
Custom IT Services	89.1	36.8%
Building Maintenance	22.4	9.3%
Scientific Research	22.0	9.1%
Staffing Agencies	20.6	8.5%
Engineering & Architecture	17.0	7.0%
Corporate Headquarters	15.9	6.6%
Corporate Security	10.4	4.3%
Accounting & Bookkeeping	9.9	4.1%
Law	7.8	3.2%
Business Consulting	7.7	3.2%
Marketing and Advertising	1.8	0.7%
Other	17.5	7.2%

- 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.

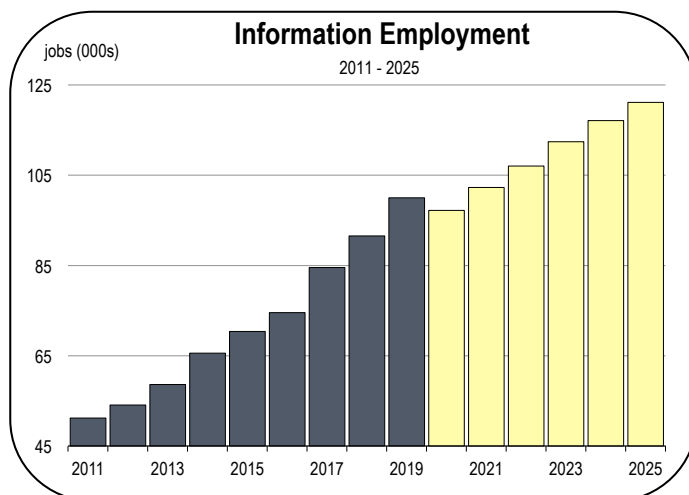
## Information Employment

- In Santa Clara County, the information sector is dominated by software publishers like Adobe and data/Internet service companies like Google and Facebook.
- Most Santa Clara software and Internet jobs are in publicly-traded companies, but job creation is more prolific in startups that rely on venture capital and other private funding.

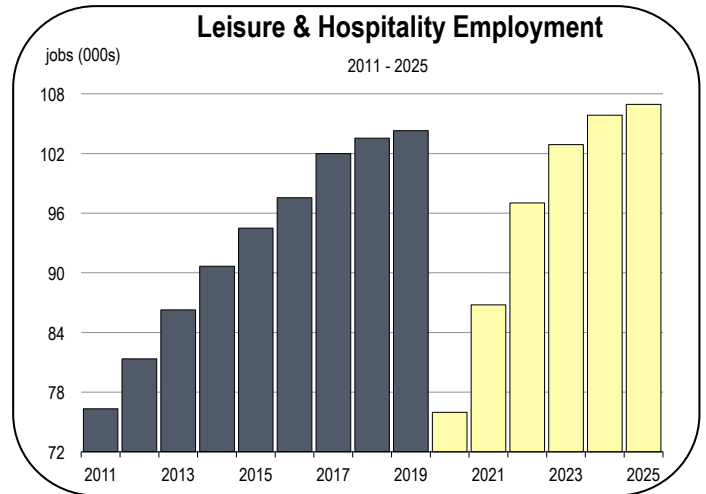
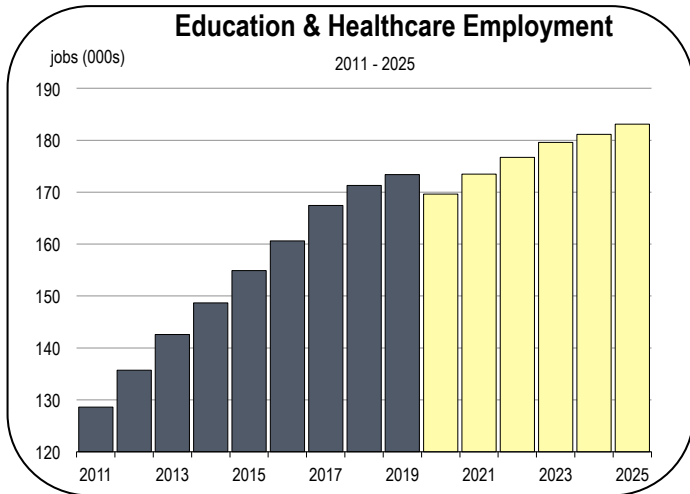
Information Sub-Sectors 2019	Jobs in Subsector (000s)	Subsector's Share of Overall Industry
Data & Internet Services	57.1	57.1%
Software Publishers	33.0	33.0%
Telecommunications	5.6	5.6%
Radio and Television Broadcasting	1.8	1.8%
Newspaper / Magazine / Book Publishing	1.7	1.7%
Movie Theaters	0.9	0.9%



- In 2019, Venture Capital deals surpassed \$32 billion for software and Internet firms, fueling a continuation of very rapid job growth in Santa Clara County.
- Telecommunications jobs were classified as essential and these workers largely remained employed throughout the recession.
- Many newspaper, magazine, and TV/radio workers were allowed to remain in their jobs, but these firms also rely on advertising revenues, giving employers little choice but to issue layoff notices.
- Job growth in software and Internet firms will be slow in 2021 and 2022 because many of these firms were not yet turning a profit before the Coronavirus Recession began. Consequently, expect more cautious hiring from these firms.
- Most other subsectors of the information industry are in long-term patterns of decline and will not create many jobs during the forecast period.



# Santa Clara County Economic Forecast



## Private Education and Healthcare Employment

- There were 86,000 healthcare jobs in Santa Clara County 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 hospitals reduced employment levels because resources were not being utilized as envisioned to support Coronavirus patients.
- There were approximately 40,000 social assistance jobs in 2019, including industries like childcare, housing shelters, and non-medical care for senior citizens.
- There were 40,000 jobs in private schools and colleges, tutoring services, vocational schools, and other educational organizations.
- Jobs in social assistance and education were mostly classified as essential, but there were still layoffs at institutions with revenue shortfalls.

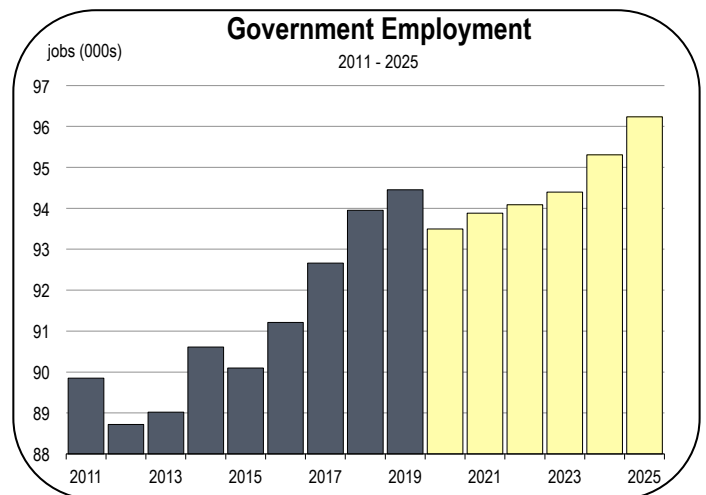
## Leisure and Hospitality Employment

- Leisure and hospitality firms were impacted by the recession more than almost any other sector of the labor market.
- In 2019, Santa Clara County had 89,000 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.
- Santa Clara also had 16,000 jobs in entertainment and recreation in 2019, including things like fitness centers, museums, performing arts venues, and professional sports teams. Many of these organizations will operate at reduced capacities through the end of 2020 and potentially into 2021.

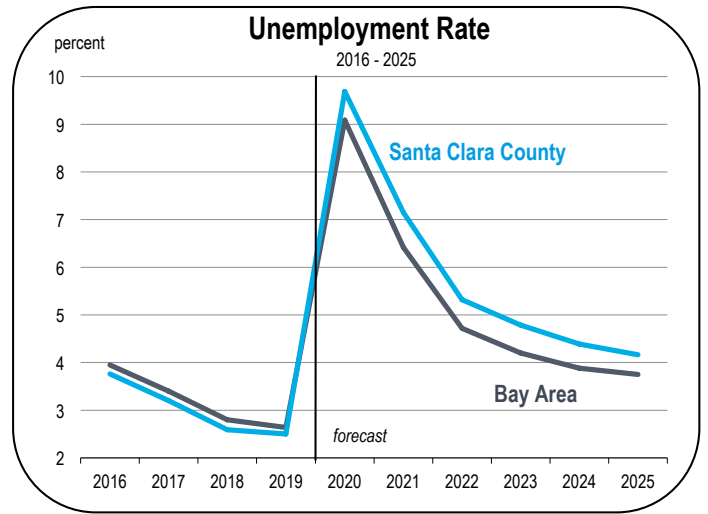
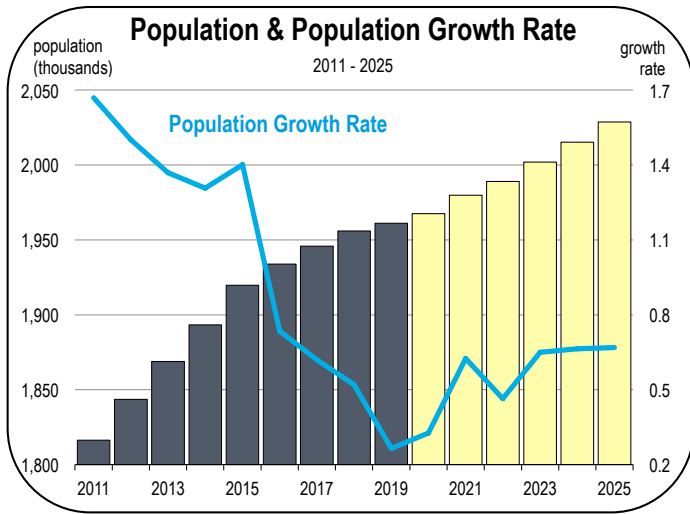
- Employment in the leisure and hospitality sector is expected to rebound at rapid rates in 2021 and 2022, but because there were so many losses, it will take several years to get back to pre-pandemic conditions.

## 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.



# Santa Clara County Economic Forecast

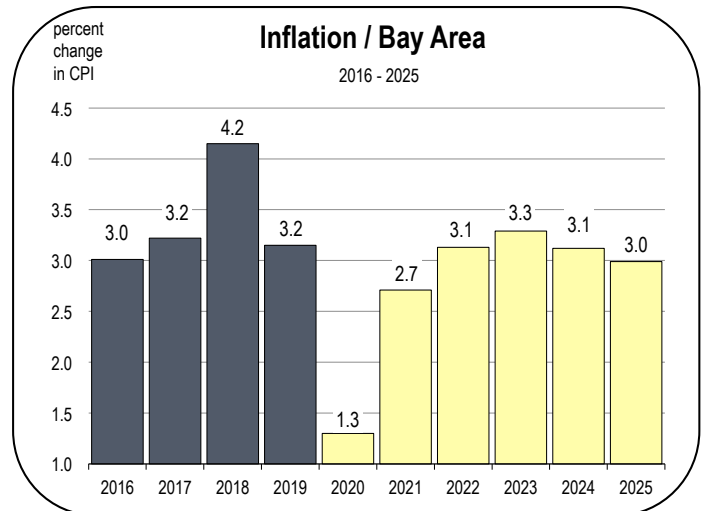
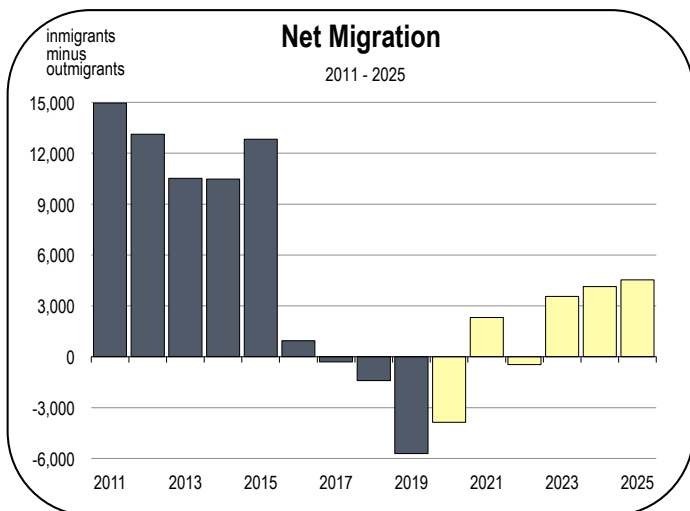


## Population Growth

- The Santa Clara County population is expected to increase by an average of 0.5 percent per year from 2020 to 2025.
- Net migration turned negative in 2017 as housing prices became prohibitively expensive, and went even more negative in 2018 and 2019.
- Almost 4,000 net migrants are expected to leave the county in 2020, but in-migration is expected to be positive during most of the 2020-2025 forecast period.
- By 2025 the Santa Clara County population will approach 2,030,000 residents.

## Unemployment and Inflation Rates

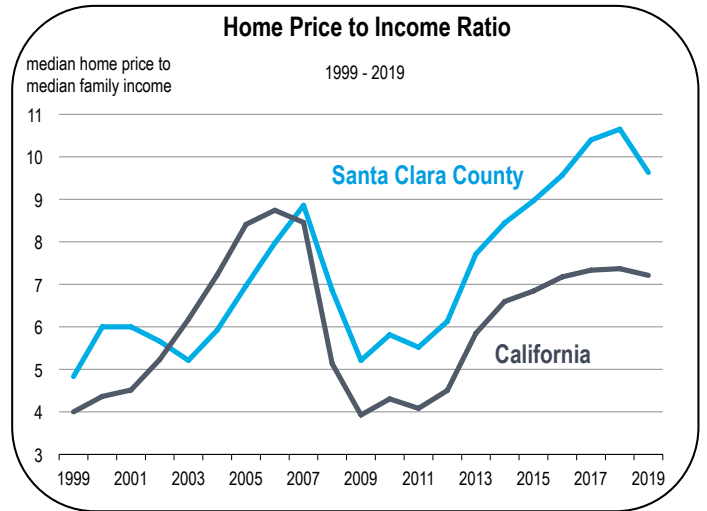
- The unemployment rate in Santa Clara County averaged 2.5 percent in 2019, below the composite rate for the Bay Area.
- The unemployment rate is expected to average between 9 and 11 percent during 2020.
- The unemployment rate is expected to remain elevated for several years, but is likely to improve 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.



# Santa Clara County Economic Forecast

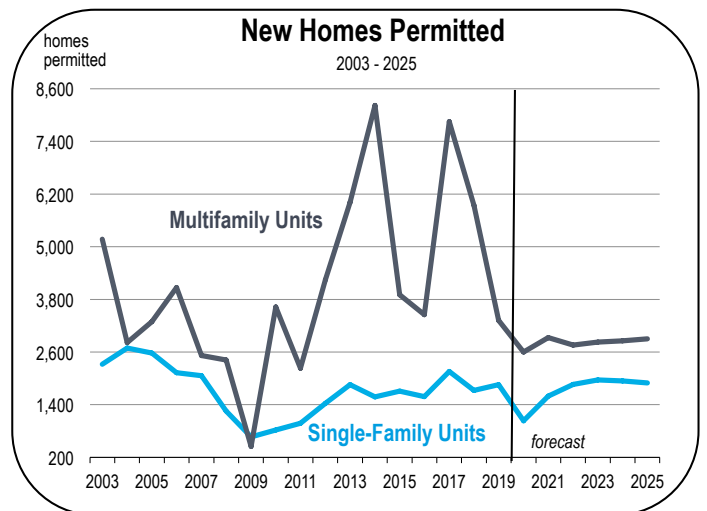
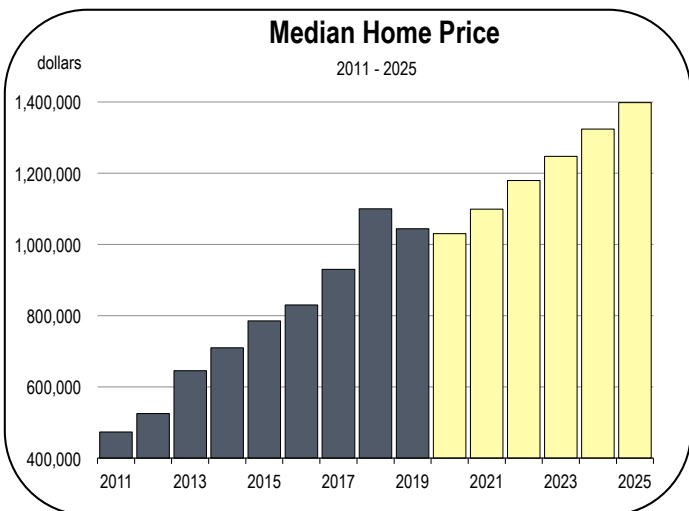
## Home Prices and New Housing Production

- In 2019 the median home price in Santa Clara County was \$1,040,000.
- The median price declined in 2019 because homes had simply become too expensive, causing residents to relocate to areas with more affordable housing options.
- In 2018, a typical household in Santa Clara County would have had to spend 52 percent of its pre-tax income to mortgage payments in order to afford the median-priced home. By 2019 this estimate had fallen to 43 percent, which is still very high.
- The median price is not expected to change much in 2020 or 2021.
- From 2014 to 2019, an average of 7,200 new homes were started per year. Approximately 75 percent were apartments and condos.
- Housing production is forecast to average 4,500 homes per year from 2020 to 2025 and will consist primarily of apartments and condos.
- There are 96,000 housing units in the Santa Clara County development pipeline.



Santa Clara County Residential Development Pipeline

Area	Units
San Jose	48,715
Santa Clara	19,743
Mountain View	17,959
Sunnyvale	4,924
Cupertino	3,735
Palo Alto	725



# Santa Clara County Economic Forecast

## 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 (thousands)	Inflation Rate (percent)
2015	1,919,736	623.6	12,819	5,616	1,651	\$165.3	\$23.4	\$41.5	\$77.3	\$98,339	4.1	\$319	2.6
2016	1,933,839	629.6	943	5,036	1,687	\$178.5	\$23.8	\$42.1	\$79.0	\$102,362	3.8	\$347	3.0
2017	1,945,829	632.4	-311	10,006	1,688	\$193.7	\$24.6	\$43.1	\$82.8	\$106,940	3.2	\$339	3.2
2018	1,955,946	637.7	-1,408	7,668	1,699	\$209.0	\$26.2	\$45.4	\$87.0	\$110,234	2.6	\$305	4.2
2019	1,961,117	641.0	-5,704	5,178	1,720	\$220.4	\$26.5	\$46.0	\$88.2	\$112,403	2.5	\$311	3.2
2020	1,967,525	645.3	-3,867	3,635	1,719	\$222.2	\$24.8	\$42.0	\$91.5	\$111,490	9.7	\$312	1.3
2021	1,979,827	649.2	2,313	4,525	1,733	\$229.6	\$26.9	\$46.4	\$91.8	\$111,443	7.1	\$313	2.7
2022	1,989,019	653.7	-463	4,622	1,743	\$243.0	\$28.1	\$48.5	\$92.5	\$113,867	5.3	\$314	3.1
2023	2,001,954	658.2	3,556	4,792	1,756	\$264.7	\$29.5	\$51.1	\$96.7	\$119,297	4.8	\$315	3.3
2024	2,015,249	662.7	4,137	4,797	1,771	\$288.2	\$31.0	\$53.8	\$101.5	\$125,130	4.4	\$315	3.1
2025	2,028,725	667.2	4,533	4,797	1,785	\$307.6	\$32.7	\$56.9	\$105.3	\$128,811	4.2	\$316	3.0
2026	2,041,189	671.7	3,697	4,669	1,799	\$325.8	\$34.3	\$59.9	\$108.5	\$131,730	3.9	\$316	2.9
2027	2,052,364	676.0	2,580	4,575	1,811	\$342.5	\$36.0	\$63.1	\$111.4	\$133,922	3.6	\$316	2.8
2028	2,062,810	680.2	1,953	4,537	1,822	\$362.7	\$37.8	\$66.5	\$114.9	\$137,151	3.6	\$316	2.9
2029	2,073,292	684.3	2,035	4,491	1,833	\$379.6	\$39.1	\$68.8	\$117.1	\$138,696	3.6	\$317	3.0
2030	2,082,655	688.4	960	4,376	1,843	\$396.9	\$40.3	\$70.8	\$119.5	\$140,326	3.7	\$317	2.9
2031	2,091,350	692.3	371	4,284	1,853	\$414.1	\$41.5	\$72.7	\$121.7	\$141,861	3.6	\$317	2.8
2032	2,100,212	696.2	573	4,243	1,862	\$430.3	\$42.8	\$74.8	\$123.2	\$142,533	3.7	\$317	3.0
2033	2,109,454	700.0	915	4,213	1,872	\$449.4	\$43.9	\$76.7	\$125.8	\$144,489	3.7	\$317	2.6
2034	2,119,188	703.8	1,416	4,212	1,883	\$469.4	\$45.2	\$78.8	\$128.4	\$146,145	3.7	\$317	2.8
2035	2,128,449	707.6	929	4,157	1,893	\$490.6	\$46.5	\$81.0	\$130.7	\$147,832	3.7	\$317	2.9
2036	2,137,570	711.4	810	4,126	1,903	\$511.6	\$48.1	\$83.6	\$132.3	\$148,648	3.8	\$317	3.3
2037	2,146,500	715.1	577	4,103	1,912	\$533.7	\$49.7	\$86.3	\$134.2	\$149,431	3.8	\$317	3.4
2038	2,156,478	718.8	1,660	4,114	1,923	\$557.5	\$51.3	\$89.0	\$136.2	\$150,603	3.8	\$317	3.2
2039	2,167,321	722.6	2,507	4,122	1,935	\$582.0	\$53.1	\$91.9	\$138.2	\$151,365	3.9	\$317	3.4
2040	2,177,175	726.3	1,539	4,054	1,945	\$607.1	\$54.9	\$94.8	\$140.2	\$152,220	3.9	\$317	3.3
2041	2,186,949	730.0	1,510	4,022	1,956	\$633.2	\$56.6	\$97.7	\$142.6	\$153,354	3.9	\$317	3.1
2042	2,196,809	733.7	1,719	3,993	1,966	\$659.9	\$58.4	\$100.5	\$145.0	\$154,511	3.9	\$317	3.0
2043	2,206,917	737.3	2,063	3,971	1,977	\$687.7	\$60.1	\$103.3	\$147.5	\$155,788	3.9	\$317	2.9
2044	2,217,158	740.9	2,375	3,941	1,988	\$716.2	\$61.8	\$106.0	\$149.8	\$157,281	3.9	\$317	2.7
2045	2,226,862	744.5	2,129	3,887	1,999	\$744.5	\$63.6	\$109.0	\$151.9	\$158,225	3.9	\$317	2.9
2046	2,235,438	748.0	1,252	3,809	2,008	\$773.2	\$65.5	\$112.0	\$154.0	\$159,269	3.9	\$317	2.8
2047	2,243,173	751.5	709	3,745	2,016	\$801.8	\$67.3	\$115.0	\$156.0	\$160,150	3.9	\$317	2.8
2048	2,250,523	754.9	619	3,694	2,024	\$831.8	\$69.3	\$118.1	\$157.7	\$161,124	3.9	\$317	2.8
2049	2,257,767	758.3	869	3,654	2,032	\$862.7	\$71.3	\$121.3	\$159.4	\$162,053	3.9	\$317	2.8
2050	2,264,780	761.6	967	3,612	2,040	\$894.3	\$73.3	\$124.6	\$161.1	\$162,951	3.9	\$317	2.8

## 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	1,029	3.7	42.9	160.2	14.1	121.9	34.2	215.2	70.4	154.9	94.5	90.1
2016	1,061	3.9	47.6	161.3	14.8	122.4	35.2	224.1	74.5	160.6	97.6	91.2
2017	1,094	3.6	47.9	163.1	14.9	117.1	35.8	236.2	84.6	167.4	102.0	92.7
2018	1,114	3.5	47.8	169.1	15.5	116.3	36.8	236.1	91.6	171.3	103.6	94.0
2019	1,134	3.3	50.4	169.9	15.8	113.6	37.8	242.0	100.0	173.4	104.3	94.5
2020	1,073	3.3	46.1	166.6	15.4	108.4	37.6	237.0	97.2	169.6	76.0	93.5
2021	1,112	3.3	48.1	171.2	15.6	112.2	37.8	241.6	102.3	173.5	86.8	93.9
2022	1,140	3.3	48.9	171.1	15.8	114.1	38.2	246.5	107.0	176.7	97.0	94.1
2023	1,164	3.3	49.6	172.1	15.8	115.1	38.5	251.4	112.4	179.6	102.9	94.4
2024	1,180	3.3	50.0	172.6	15.5	116.3	38.8	255.4	117.1	181.1	105.9	95.3
2025	1,194	3.4	50.1	174.0	15.4	117.5	39.1	258.7	121.1	183.1	106.9	96.2
2026	1,205	3.4	49.6	174.8	15.3	118.6	39.3	261.4	124.6	183.9	107.9	97.1
2027	1,214	3.4	49.1	175.9	15.3	119.8	39.6	263.7	127.7	184.6	108.4	97.5
2028	1,222	3.4	49.0	176.5	15.2	121.0	39.9	265.7	130.3	184.7	109.0	97.8
2029	1,229	3.4	49.4	176.8	15.1	121.5	40.2	267.6	132.7	185.1	109.3	98.0
2030	1,236	3.4	49.3	177.3	15.0	121.8	40.5	269.3	134.9	185.5	109.7	98.4
2031	1,241	3.4	49.0	177.5	15.0	122.1	40.8	270.8	136.7	185.6	110.2	98.7
2032	1,245	3.4	48.9	177.8	15.0	122.2	41.1	272.3	138.4	185.8	110.5	98.9
2033	1,250	3.4	48.8	177.7	14.9	122.5	41.4	273.8	139.9	186.0	110.8	99.3
2034	1,255	3.4	49.1	178.2	14.9	122.7	41.6	275.1	141.2	186.3	111.3	99.6
2035	1,260	3.4	49.4	178.1	14.8	122.9	41.9	276.5	142.5	186.7	111.9	100.0
2036	1,265	3.4	49.8	178.0	14.8	123.1	42.1	277.8	143.6	187.1	112.5	100.2
2037	1,270	3.4	50.1	178.5	14.8	123.3	42.3	279.2	144.6	187.8	113.0	100.4
2038	1,275	3.4	50.3	178.4	14.8	123.5	42.5	280.5	145.5	188.6	113.4	100.7
2039	1,280	3.4	50.4	178.9	14.8	123.7	42.7	281.8	146.4	189.5	113.9	100.9
2040	1,286	3.4	50.7	179.4	14.8	123.9	43.0	283.1	147.3	190.5	114.3	101.2
2041	1,291	3.4	50.9	179.9	14.8	124.1	43.2	284.4	148.2	191.7	114.7	101.4
2042	1,297	3.4	51.0	180.4	14.7	124.3	43.4	285.7	149.0	193.0	115.1	101.7
2043	1,303	3.4	51.2	180.8	14.7	124.5	43.7	287.0	149.8	194.5	115.6	102.1
2044	1,309	3.4	51.6	180.8	14.7	124.7	43.9	288.4	150.7	196.1	116.1	102.4
2045	1,315	3.4	52.0	181.0	14.7	124.9	44.1	289.7	151.5	197.8	116.5	102.8
2046	1,321	3.4	52.4	181.3	14.7	125.1	44.3	291.0	152.4	199.4	116.9	103.1
2047	1,327	3.4	52.8	181.6	14.7	125.3	44.5	292.4	153.3	201.2	117.3	103.4
2048	1,333	3.4	53.2	181.5	14.7	125.4	44.7	293.7	154.1	202.8	117.7	103.8
2049	1,339	3.4	53.7	181.4	14.7	125.6	44.9	295.0	155.0	204.3	118.1	104.1
2050	1,344	3.4	54.1	181.3	14.7	125.8	45.1	296.4	155.8	205.9	118.5	104.5



# Santa Clara County Economic Forecast

## Socioeconomic Indicators

