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Equinox Ten Year Trend Analysis: Transportation Choices

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Equinox
Ten Year Trend Analysis:
Transportation

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University of San Diego
SCHOOL OF LEADERSHIP AND EDUCATION SCIENCES

By
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The Nonprofit Institute is housed in the School of Leadership and Education Sciences at the University of San Diego. The Nonprofit Institute provides education, training and research to strengthen organizations that help meet critical community needs.

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About Center for Sustainable Energy

The Center for Sustainable Energy (CSE) is a nonprofit energy program administration and advisory services organization. Their mission is to decarbonize and their vision is a future with sustainable, equitable and resilient transportation, buildings and communities.

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Transportation in San Diego County

San Diego County offers residents and visitors a variety of transportation modes to meet their travel needs. Within the county, several organizations are dedicated to improving regional mobility, including the San Diego Metropolitan Transit System (MTS) and North County Transit District, offering intercounty train and light rail travel options, and first/last mile mobility alternatives like Uber, Lyft, LIME, Bird and others providing car-sharing and bicycle and scooter rentals.

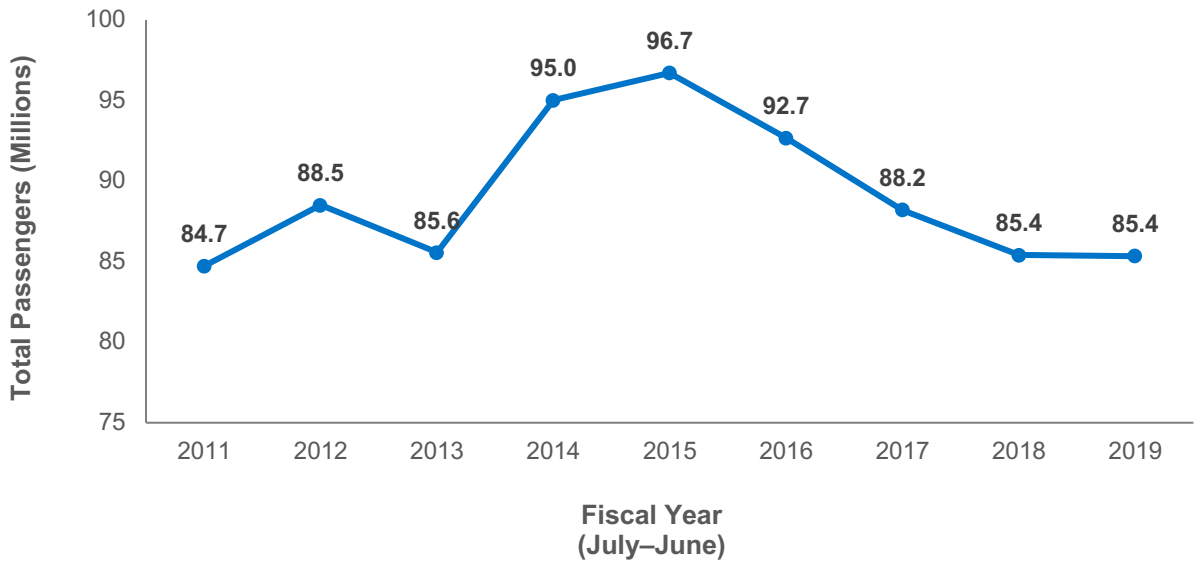
Despite the numerous options available to residents, most San Diegans continue to commute by car. According to the American Community Survey, the number of residents driving a car alone to work in San Diego County increased from 75.7% in 2016 to 76.3% in 2017.[1]

The following review explores how available transportation choices outside of single-occupancy vehicle commuting are utilized in San Diego County and provides insight into MTS ridership and utilization of other alternative transit modes.

What factors are impacting public transportation ridership in San Diego County?

San Diego MTS performance reports from 2011– 19 were aggregated to analyze the total number of passengers each year. Figure 1 shows overall MTS ridership.

Figure 1: San Diego MTS Passengers by Fiscal Year

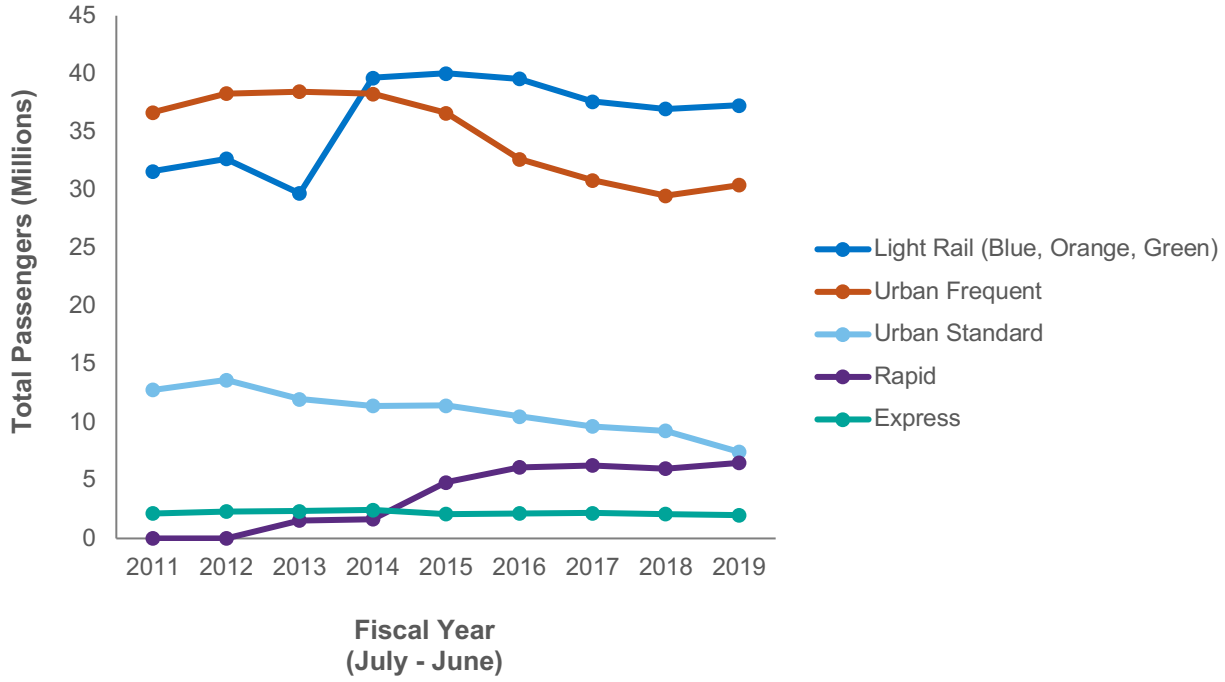


Data Source: San Diego Metropolitan Transit System, Performance Monitoring Reports, 2011–2019

MTS ridership has fluctuated over time, reaching a peak of 96,710,269 passengers in 2015. Since 2015, however, ridership has declined to nearly match 2011 levels, representing a ridership increase of only 1% over the nine-year period. There have been some differences in passenger participation for other modes of transportation offered by the MTS, including light rail and buses. Figure 2 shows MTS ridership by route category since 2011.

[1] https://www.sandiego.edu/soles/hub-nonprofit/initiatives/dashboard/transportation.php

Figure 2: San Diego MTS Passengers by Fiscal Year and Route Type



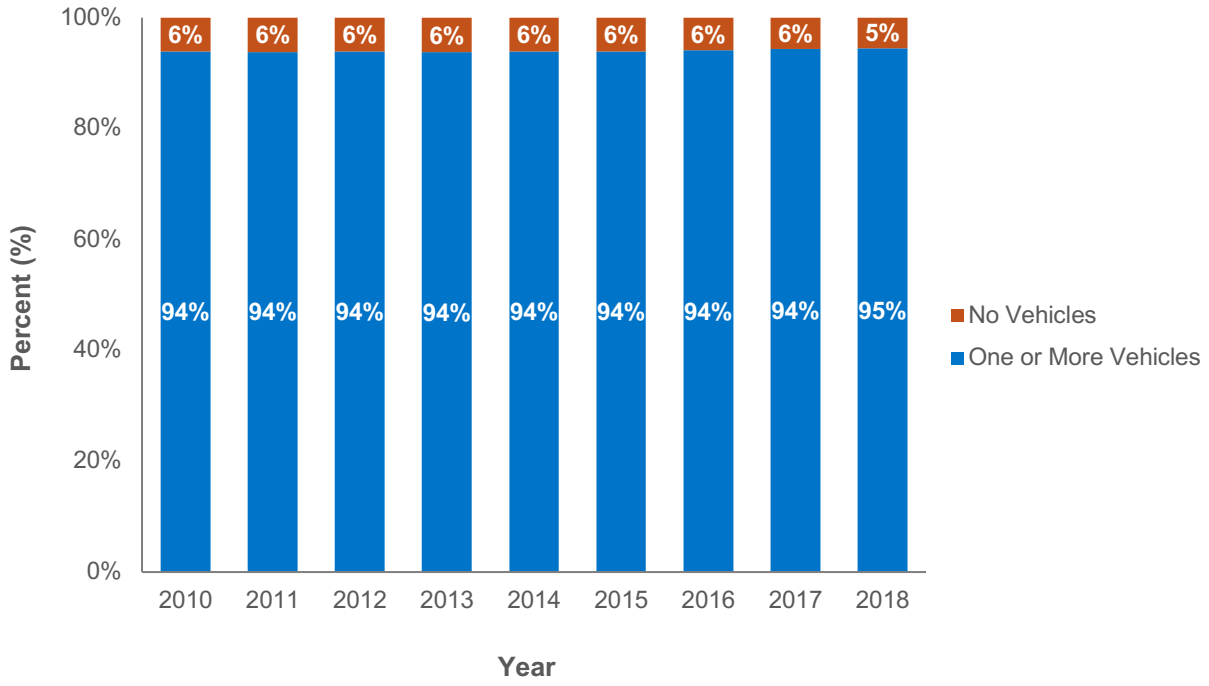
Data Source: San Diego Metropolitan Transit System, Performance Monitoring Reports, 2011–2019

The Urban Frequent bus system and the Blue, Green and Orange trolley lines are the largest and most used transit options in the MTS system. While Urban Frequent ridership dropped 17% compared to fiscal year 2011, Light Rail ridership increased by 18%. Although the Rural line (not pictured) only accounted for .04% of ridership in 2011 and .1% in 2019, the number of passengers using the system has increased by 124% since 2011.

One potential reason for decreasing public transportation ridership could be the increase in vehicles available at households. A report conducted by the Southern California Association of Governments (SCAG) in 2018 found that rising vehicle ownership could be a factor explaining the decline in public transit use. During 2000–15, the SCAG region had .95 vehicles per new resident, a significant increase from .25 vehicles per new resident in the previous 15 years.[2] Figure 3 shows the percentage of households that have at least one vehicle available in San Diego County.

[2] https://www.scag.ca.gov/Documents/ITS_SCAG_Transit_Ridership.pdf

Figure 3: Vehicle Availability by Year



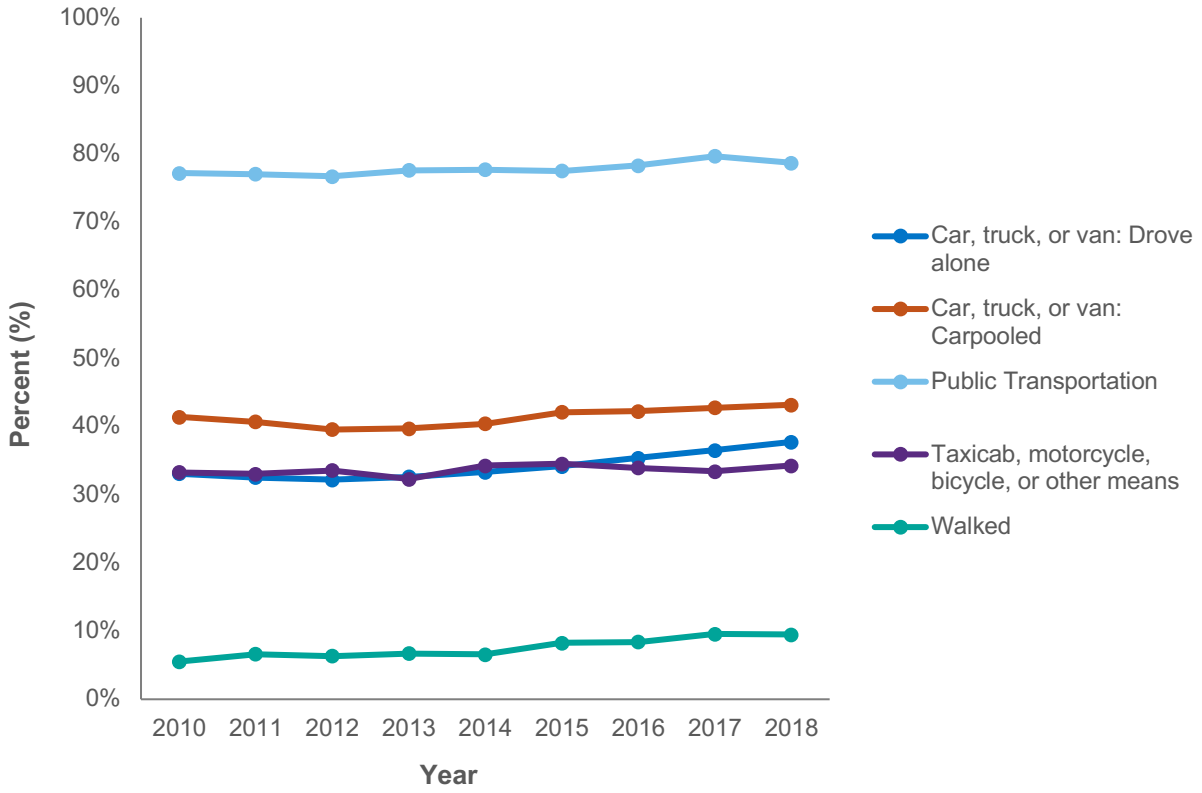
Data Source: U.S. Census Bureau, American Community Survey, Table B25044: Tenure by Vehicles Available, 2010–2018

The percentage of households with vehicle access has not changed much over time in San Diego County with 94% of households having access to at least one vehicle. However, increased access to vehicles could still reduce the need for commuters to rely on public transportation in the county. In an investigation of falling transit ridership in Southern California, UCLA researchers found that lower-income households dramatically increased vehicle ownership. While vehicle availability at these households may have increased, commuters might still rely on public transportation to meet commuting needs. The San Diego Association of Governments (SANDAG) 2015 On-Board Transit Passenger Survey found that nearly 68.5% of riders with at least one or more vehicles at home were unable to use one of their vehicles for their commute.[3]

The travel time to reach a destination could also be a factor reducing the use of alternative modes of transportation within the county. Figure 4 shows the percentage of workers with a commute over 30 minutes across different modes of transportation.

[3] https://www.sandag.org/uploads/projectid/projectid_494_21412.pdf

Figure 4: Percentage of Workers with a Commute Over 30 minutes (by Transit Mode)



Data Source: U.S. Census Bureau, American Community Survey, Table B08534: Means of Transportation to Work by Travel Time to Work for Workplace Geography, 2010–2018

Public transportation had the highest proportion of workers with commutes 30 minutes or longer, ranging between 77% and 80% between 2010 and 2018. Driving alone via a single-occupancy vehicle had one of the lowest proportions of workers with longer commutes, while walking had the lowest overall proportion.

Alternative transportation analysis and planning in San Diego County

SANDAG has studied commuter habits within the county to identify notable commuting trends and patterns. Their 2015 transit passenger survey obtained over 88,000 on-to-off count responses and almost 33,900 origin-destination responses across the Metropolitan Transit System and North County Transit District.[4] The survey found that approximately 34% of transit riders were commuting between home and work, 66% were employed at least part time and nearly 64% of riders had an annual household income below $40,000.[5] SANDAG also administered the 2018 Commute Behavior Survey, which analyzed the commute behaviors of employed persons and assessed their willingness to use alternative modes of transportation.[6] This study found convenience was the most important factor for respondents who chose to drive alone (29.5%) while cost was most important for all other modes of transportation (32%).[7]

[4] https://www.sandag.org/uploads/projectid/projectid_494_21412.pdf
[5] Ibid.
[6] https://www.sandag.org/uploads/publicationid/publicationid_4549_24879.PDF
[7] ibid.

In 2016, the City of Seattle had significant success with improving their public transportation system when they implemented a series of direct strategies and plans to enhance the flow of their transit system. They increased ridership while the national trend was declining by restricting roads and lanes for buses during peak travel periods, making small situation-specific improvements to remedy bottlenecks and communicating effectively with commuters about the impacts funding shortfalls would have on transit service.[8]

San Diego County has a variety of transportation projects and plans aimed at improving the current transportation network and increasing use of alternative transportation modes. Current projects for MTS include the following.

1. Boulevard Bus-Only Lane: Provides a dedicated bus lane for the Rapid 215, Route 1 and Route 6[9]
2. Iris Rapid: A new rapid bus line between Otay Mesa and Imperial Beach with connections to workplaces, activity centers and the trolley's Blue Line[10]

Some of the most recent transportation planning initiatives for San Diego County include the 2019 Regional Transportation Plan and the 5 Big Moves initiative. In September 2019, SANDAG's board of directors approved a $593.4 million budget for the 5 Big Moves initiative that will extend to 2025.[11] It has the following five key components.

1. Complete Corridors: A balanced variety of travel choices integrated with efficient monitoring and management[12]
2. Transit Leap: A network of high-speed and high-capacity frequent transit services that connect major residential areas with employment centers and tourist attractions[13]
3. Mobility Hubs: Central locations that provide connectivity to different modes of transportation[14]
4. Flexible Fleets: Different mobility options using shared mobility service to reduce the need to own a car[15]
5. Next Operating System: The "brain" of the transportation system using technology and data to connect and manage different modes of transit[16]

[8] https://www.citylab.com/transportation/2017/10/how-seattle-bucked-a-national-trend-and-got-more-people-to-ride-the-bus/542958/
[9] https://www.sdmts.com/inside-mts-current-projects/boulevard-bus-way
[10] https://www.sdmts.com/inside-mts-current-projects/iris-rapid
[11] https://www.10news.com/news/local-news/sandag-to-debate-594-million-in-transportation-funding
[12] https://www.sdforward.com/mobility-planning/complete-corridors
[13] https://www.sdforward.com/mobility-planning/transit-leap
[14] https://www.sdforward.com/mobility-planning/mobilityhubs
[15] https://www.sdforward.com/mobility-planning/flexible-fleets
[16] https://www.sdforward.com/mobility-planning/next-os

Rise and fall of Transportation Network Companies in the City of San Diego

Transportation Network Companies (TNC) like Uber and Lyft have introduced new modes of transportation to people across the U.S. App-rented bicycles and electric scooters can users with quick, inexpensive transportation connected to their mobile devices and TNC's grant users the ability to access transportation to desired locations quickly. While these services experienced significant peaks in popularity, safety concerns, traffic congestion, and a lack in regulation has prompted action from state and local governments.

The introduction and use of app-rented bicycles and electric scooters as first/last mile vehicles has been a bumpy ride in the City of San Diego. Public safety concerns, poorly managed vehicle parking and other issues have led to stringent regulations.

In 2014, San Diego approved a 10-year partnership with DecoBike, involving installation of 180–220 bike stations throughout the city representing at least 1,800 bikes—slated to generate between $1 million and $2.6 million in revenue during the contract.[17] Some residents felt that the placement of the stations in the partnership did not fully serve local needs and were concerned that the system did not reach into areas highly impacted by chronic mobility issues. For example, the initial placement of stations did not reach City Heights, an area with nearly four times the number of carless households as downtown, Mission Bay and Pacific Beach, where the first rollout of the bikes took place.[18]

During the ensuing years, DecoBike faced several setbacks. Only 88 of the initial 180 planned stations were installed in the first year. Advertising revenue was lower than expected. Coastal stations were removed and an expansion into La Jolla was canceled. [19] The city also faced backlash from residents for poor communication during the project. For example, property owners were regularly notified about new station developments, while tenants, nearby merchants and residents were not.[20] Still, DecoBike reported 103,000 rides between February 2015 and January 2016, however, most rides were completed by tourists—not residents using the network for daily commuting.[21]

However, the arrival of other mobility companies reinvigorated the bike- and scooter-sharing services. The following timeline documents all major scooter and app-sharing developments in the City of San Diego over the last two years.

[17] https://www.sandiegouniontribune.com/news/politics/sdut-bike-sharing-program-coming-san-diego-2013jul09-htmlstory.html
[18] https://www.kpbs.org/news/2014/may/08/not-everyone-happy-san-diegos-bike-share-locations/
[19] https://www.lajollalight.com/news/sd-city-removes-decobike-coastal-commission-20170913-story.html
[20] https://www.sandiegouniontribune.com/news/politics/sdut-climate-change-bike-walk-decobike0sharing-2016feb22-story.html
[21] ibid.

Figure 5: Timeline of App-Sharing Bicycle and Scooters in City of San Diego

Data Source: San Diego Union Tribune, KPBS, FOX 5 San Diego, NBC San Diego, 2018–2020

Ultimately, mandatory permitting, rising operation costs, impound and repossession fees and restricted operation in certain areas caused companies like Uber, Skip and Lime to halt scooter and bike operations within the city. Bird, Lyft, Spin and Wheels are currently the only authorized motorized scooter and bike companies operating in the City of San Diego and are permitted through 2020.[22]

[22] https://www.sandiego.gov/bicycling/bicycle-and-scooter-sharing/company-contacts

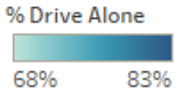
TNC's like Uber and Lyft have also experienced both increasing ridership and regulation. The report *The New Automobility: Lyft, Uber and the Future of American Cities,* the number of passengers using TNC's in the U.S. increased by 37% in 2017, representing 2.61 billion passengers.[23] Although TNC use has been increasing with time, traffic congestion, drops to transit ridership in major cities using the service, and other issues have impacted these services. One of the most significant roadblocks for TNC's is Assembly Bill 5, which requires companies to classify a worker providing services as an employee instead of an independent contractor and provide access to benefits like health coverage.[24]

Are fewer people driving alone to work?

Driving to work alone is still the preferred method of travel according to American Community Survey five-year estimates. Oceanside had the highest increase between 2010–18, moving up by five percent. San Marcos, Lemon Grove and Encinitas were the only jurisdictions where the percent of workers driving alone to work decreased. The City of San Diego has remained unchanged since 2011.

Figure 3: Percent of Workers Driving Alone

	Year								
Name	2010	2011	2012	2013	2014	2015	2016	2017	2018
Poway city	81%	82%	82%	82%	83%	83%	82%	82%	82%
El Cajon city	78%	78%	78%	79%	80%	80%	80%	81%	81%
Del Mar city	78%	77%	75%	75%	76%	80%	80%	82%	81%
La Mesa city	78%	80%	79%	78%	79%	79%	78%	79%	81%
Carlsbad city	78%	78%	78%	80%	80%	80%	80%	80%	80%
Escondido city	76%	77%	79%	82%	82%	81%	80%	80%	79%
Vista city	78%	79%	79%	80%	81%	80%	79%	79%	79%
Santee city	76%	78%	78%	78%	78%	79%	78%	79%	78%
Solana Beach city	75%	76%	76%	77%	72%	73%	75%	75%	78%
San Marcos city	79%	80%	80%	81%	81%	81%	79%	78%	77%
Oceanside city	72%	72%	72%	74%	75%	77%	78%	79%	77%
San Diego city	76%	77%	77%	77%	77%	77%	77%	77%	77%
Chula Vista city	76%	76%	77%	77%	77%	76%	76%	75%	76%
Coronado city	72%	75%	74%	75%	74%	72%	73%	73%	75%
Imperial Beach city	70%	71%	76%	72%	74%	71%	71%	71%	72%
National City city	70%	70%	70%	70%	70%	69%	69%	68%	71%
Encinitas city	72%	72%	72%	73%	72%	70%	71%	70%	69%
Lemon Grove city	76%	76%	76%	78%	73%	70%	69%	70%	69%



Data Source: U.S. Census Bureau, American Community Survey, Table B08601: Means of Transportation to Work for Workplace Geography, 2010–2018

[23] http://www.schallerconsult.com/rideservices/automobility.pdf
[24] https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB5