

ENVIRONMENTAL SERVICES

The mission of the Environmental Services Department is to deliver world-class utility services and programs to improve our health, environment, and economy.

ENVIRONMENTAL SERVICES

The Environmental Services Department (ESD) provides recycling and garbage services, wastewater treatment, potable water delivery, stormwater management, and recycled water management. ESD also manages programs to conserve water and energy resources and achieve other environmental goals.

ESD provides Citywide coordination of efforts to protect and conserve air, land, water, and energy resources through policy development, education, and grant-seeking. This work is guided by the City's Climate Smart San José Plan and regulatory requirements.

Most ESD revenue comes from various customer fees and charges; approximately 1 percent of its budget comes from the General Fund (about \$4.8 million in 2019-20).

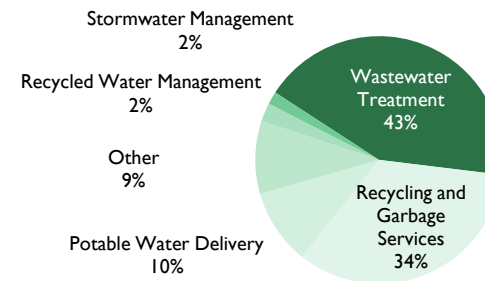
In 2019-20, ESD's operating expenditures totaled \$293.8 million, including personal and non-personal expenditures. In addition, the department was responsible for other expenditures including \$123.4 million in capital-related expenditures and \$1.7 million in Citywide expenditures. Staffing in 2019-20 included 572 full-time equivalent positions, representing a 14 percent increase from ten years ago.

RESIDENT SURVEY

% of San José residents surveyed who rated the following as "excellent" or "good"

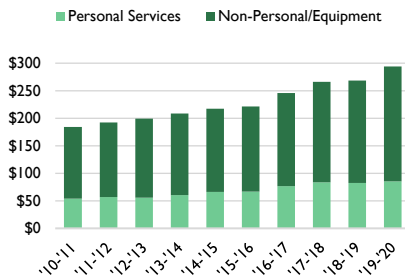
- 28% Air quality
- 41% Quality of overall natural environment in San José
- 46% Preservation of natural areas such as open space, farmlands, and greenbelts

ESD Budget Breakdown (2019-20)

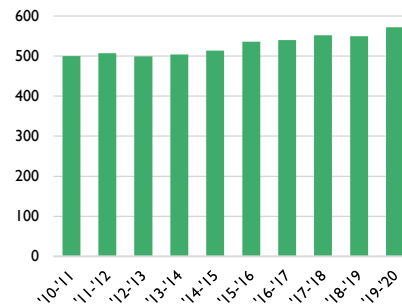


Note: Budget includes personal, non-personal, and capital-related expenditures

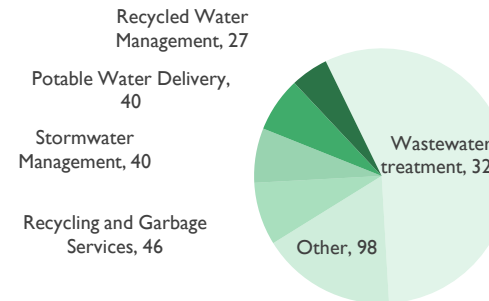
ESD Operating Expenditures (\$millions)



ESD Authorized Positions



ESD Staffing Breakdown by Positions per Service (2019-20)



ENVIRONMENTAL SERVICES

RECYCLING & GARBAGE SERVICES

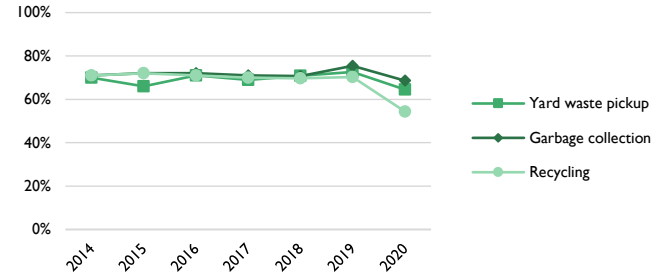
ESD provides recycling and garbage services to over 328,200 residential households in San José through contracted service providers. ESD also provides waste management programs and services for San José businesses, large events, public areas, and City facilities. It manages agreements for commercial collection and recyclables processing, organics processing, and residential and construction waste collection services in the City. ESD's operating expenditures for recycling and garbage services was \$152.3 million.

The state monitors each jurisdiction's "per capita disposal rate" and requires that 50 percent of solid waste be diverted* from landfills. The Department of Resources Recycling and Recovery, CalRecycle, has taken a statewide approach to decrease California's reliance on landfills.

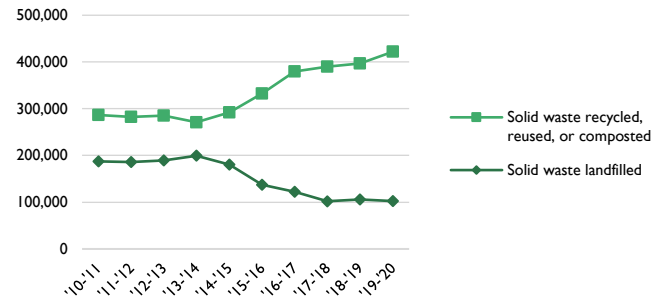
Since 2007, San José has diverted at least 60 percent of waste, including 66 percent in 2019. However, disruptions in the recyclables market have required the City to expand its efforts to meet current and future state diversion requirements. This includes outreach to inform residents on the importance of eliminating liquids and foods from recycling bins, and exploring infrastructure and partnership opportunities to manage recyclables domestically.

*"Diversion" refers to any combination of waste prevention, recycling, reuse, and composting activities that reduces waste disposed at landfills. (Source: CA Integrated Waste Management Board)

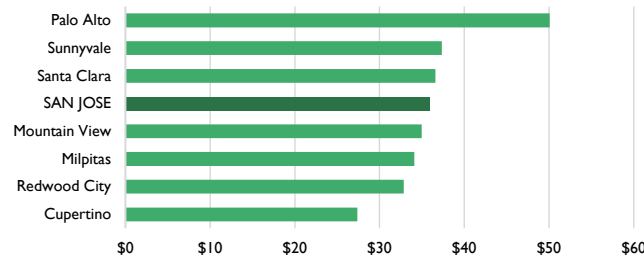
RESIDENT SURVEY
% of San José residents rating services as "excellent" or "good"



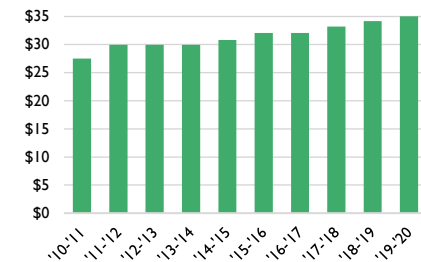
Tons of Residential Solid Waste Recycled vs. Landfilled



Comparison of Monthly Residential Garbage and Recycling Rates (2019-20)



San José Garbage and Recycling Monthly Bills (32-gallon cart)



Sources: Rates listed on local government websites for municipalities provided.
Note: Rates listed for all municipalities are for the 32-gallon cart size.

RESIDENT SURVEY
39% of San José residents rated utility billing "excellent" or "good"

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STORMWATER MANAGEMENT

ESD manages regulatory programs, initiatives, and activities to prevent pollution from entering the storm sewer system and waterways.* The Department of Transportation operates the City’s storm drains and storm sewer system, conveying rainwater into creeks and eventually the South San Francisco Bay (see Transportation chapter).

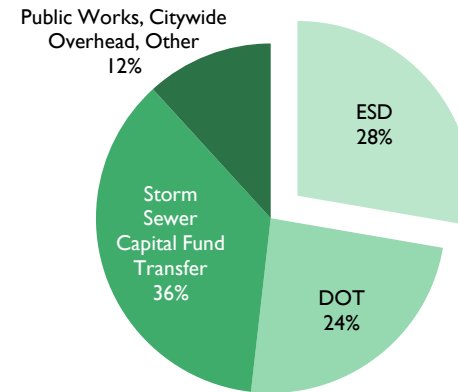
ESD’s programs protect water quality and the health of the South Bay watershed and the San Francisco Bay. One such program is the litter/creek cleanup program. Overall, 485 creek cleanup events were held and about 649 tons of trash were removed in 2019-20. There were fewer creek clean-ups than the prior year due to the public health orders in response to the COVID-19 pandemic. Over half of the cleanups in 2019-20 were performed by the City’s creek cleanup partners, which include the Downtown Streets Team and South Bay Clean Creeks Coalition, among others. The Housing Department’s Homeless Encampment Response Program accounted for the remaining number of creek cleanups. ESD estimates that the City has reduced the amount of trash discharged into receiving waters by 99 percent since 2009; the City is on track to meet the July 2022 requirement rate of 100 percent.**

The annual fee for a single-family residence in 2019-20 was \$94.44. The annual fee has remained relatively level since 2010-11.

* These programs and activities are regulated by a state permit for municipal storm water systems. For more information, see the [California Water Boards' webpage](#) on the subject.

** Calculation is based on a method specified in the Municipal Regional Stormwater NPDES permit; regional permit requirements will be updated in 2021-22.

Breakdown of Storm Sewer Operating Fund Budgeted Expenditures

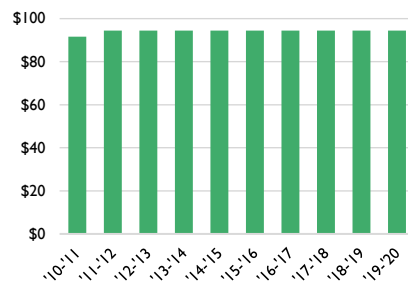


Source: 2019-20 Adopted Operating Budget

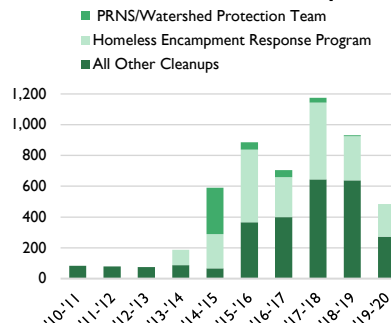
Baykeeper Consent Decree

In June 2016, the City executed a consent decree to settle a lawsuit filed by the San Francisco Baykeeper. The consent decree stipulates that the City will appropriate \$100 million over a ten-year period to implement projects intended to reduce the flow of pollutants from the City’s urban areas to receiving waters (e.g., green infrastructure).

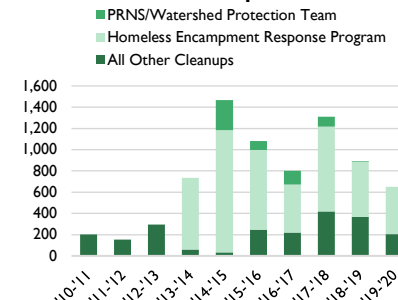
Annual Fee for Household Storm Sewer Service



Number of Creek Cleanups



Tons of Litter Collected at Creek Cleanups



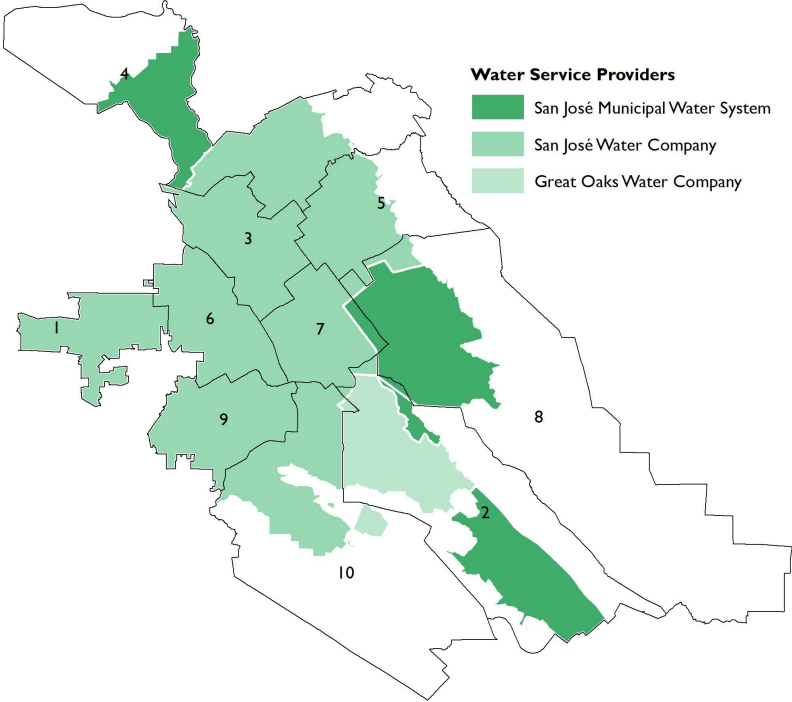
RETAIL WATER DELIVERY

ESD operates and maintains the San José Municipal Water System (Muni Water), which serves about 26,800 customers in North San José, Alviso, Evergreen, Edenvale, and Coyote Valley. Other local San José water retailers include Great Oaks Water Company (which serves Blossom Valley, Santa Teresa, Edenvale, Coyote Valley, and Almaden Valley) and the San José Water Company (which serves Downtown, West San Jose, Alum Rock, and Almaden Valley, among others). For 2019-20, operating expenditures for retail water delivery totaled about \$44.5 million.

The average monthly water bill for Muni Water customers was \$87.16. Muni water rates have increased in recent years due to higher wholesale water rates and other inflationary costs; the increase is consistent with those of other San José retail water providers.

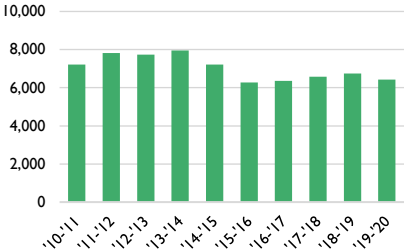
In 2019-20, Muni Water delivered 6,427 million gallons of water to its customers, down 11 percent from ten years ago. Fifty-six percent of City residents who responded to the resident survey rated drinking water delivery as "excellent" or "good". Muni Water met federal water quality standards in 100 percent of water samples taken.*

* For more information on water quality, see the [2019 Water Quality Report](#).

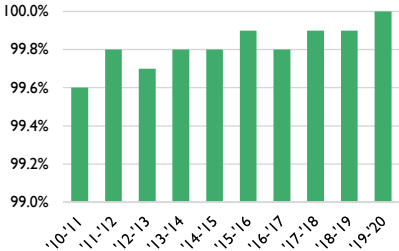


Note: Areas in white are served by private well systems, according to ESD
Source: Auditor map based on Environmental Services Department data

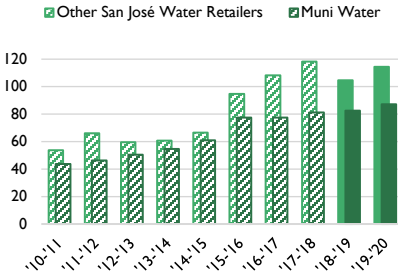
Millions of Gallons of Water Delivered to Muni Water Customers



% of Water Samples Meeting State and Federal Water Quality Standards



Comparison of Monthly Residential Water Bills



Note: Rates for 2018-19 and 2019-20 are based on water usage of 13 hundred cubic feet (HCF) whereas those of prior years are based on 15 HCF.

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WASTEWATER TREATMENT

ESD manages and operates the San José-Santa Clara Regional Wastewater Facility – the largest advanced wastewater treatment facility in the Western United States. The facility is co-owned with the City of Santa Clara, and provides wastewater treatment for approximately 1.5 million residents in San José and surrounding communities. The City’s Department of Transportation maintains the City’s sanitary sewer system (see Transportation chapter) that flows to the facility. ESD also manages pretreatment programs to control for pollutants at their source. For 2019-20, expenditures totaled \$192.8 million.* ESD wastewater treatment operations account for the largest share of ESD employees: 322 full-time budgeted positions out of 572 total.

The Wastewater Facility continues to meet the Regional Water Quality Control Board’s permit requirements for water discharged into the San Francisco Bay. In 2019-20, pollutant discharge requirements were met or surpassed 100 percent of the time.

The cost per million gallons treated was \$1,478. Aging infrastructure at the Facility has required increased maintenance and capital costs. In accordance with the Plant Master Plan adopted in 2013, the City is moving forward with over \$2 billion in long-term capital improvement projects to upgrade and rebuild the facility over the next 30 years.**

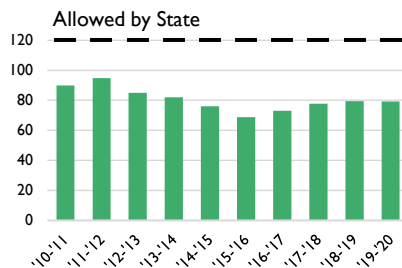
* Expenditures include personal, non-personal, capital and other expenses.

** For more information, see the [Capital Improvement Program webpage](#).



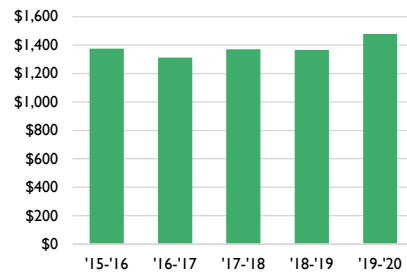
Aerial photo of the San José-Santa Clara Regional Wastewater Facility
Source: Environmental Services Department

Millions of Gallons per Day Discharged to Bay During Average Dry Weather Season

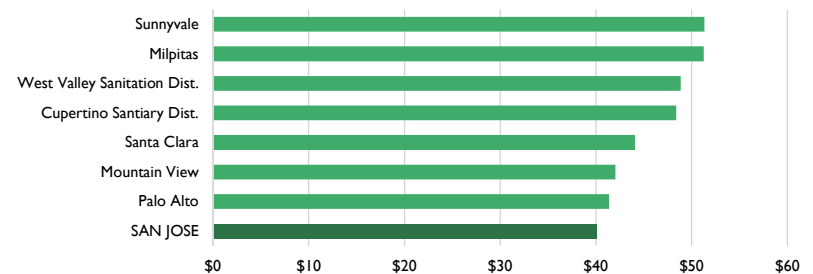


Note: Based on [2019 Annual Self-Monitoring Report](#).

Cost per Millions of Gallons Treated



Comparison of Monthly Sewer Rates* (2019-20)



* Sewer rates pay for costs of the sewer system as well as wastewater treatment.
Sources: Rates listed on local government websites for municipalities provided.

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RECYCLED WATER

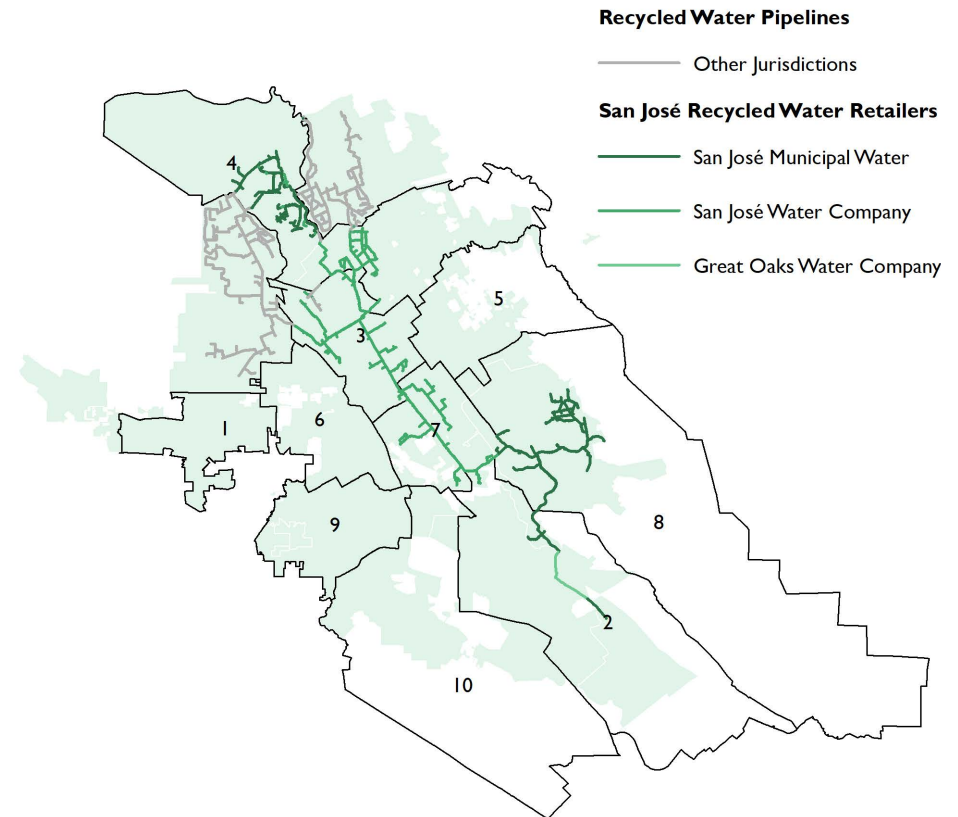
The City invested in South Bay Water Recycling (SBWR) in order to reduce wastewater effluent and protect the ecosystem of the South Bay, including the habitats of two federally endangered species, the Salt Marsh Harvest Mouse and the California Clapper Rail. SBWR serves the cities of Milpitas, Santa Clara, and San José.

In 2019-20, 17 percent of wastewater influent was recycled for beneficial purposes during the dry weather period, up from 13 percent ten years ago. SBWR customers used recycled water for cooling towers and to irrigate parks, golf courses, schools, and commercial landscape. SBWR met recycled water quality standards 100 percent of the time during the same period.

In 2019-20, SBWR delivered about 4 billion gallons of recycled water to 969 customers, who paid \$3.11* per hundred cubic feet of water. The Silicon Valley Advanced Water Purification Center, operated by the Santa Clara Valley Water District in partnership with San José and Santa Clara, produces up to 8 million gallons per day of highly purified water used to enhance the quality and supply of recycled water.

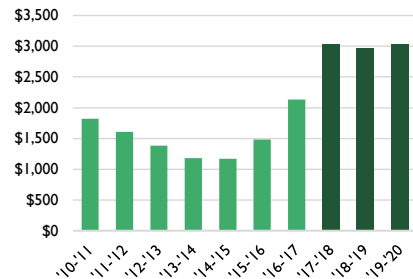
The cost per million gallons of recycled water delivered was \$3,032 in 2019-20.

* This rate is for City of San José Municipal Water customers; other SBWR provider rates may vary.

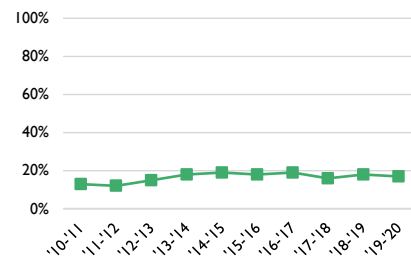


Source: Auditor map based on Environmental Services Department data

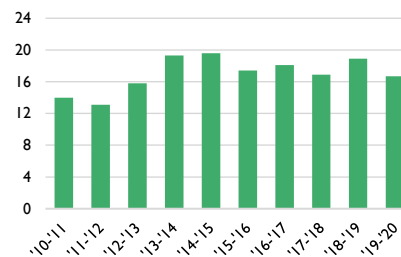
Cost per Million Gallons of Recycled Water Delivered



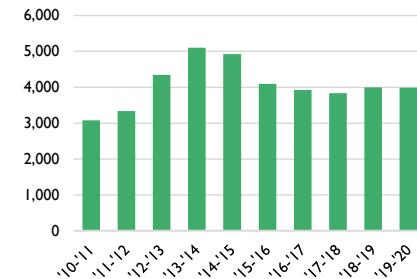
% of Wastewater Recycled for Beneficial Purposes during Dry Weather Periods



Millions of Gallons Per Day Diverted during Dry Weather Periods



Millions of Gallons of Recycled Water Delivered Annually



Note: Figures for 2017-18 and later are not comparable to those of prior fiscal years due to a change in accounting methodology.

CLIMATE SMART SAN JOSÉ

On February 27, 2018, the San José City Council adopted the [Climate Smart San José Plan](#). The plan is a continuation of the 2007 San José Green Vision, and represents San José's commitment to meeting the greenhouse gas (GHG) emission reduction targets of the Paris Climate Agreement. Climate Smart San José lays out eight goals, focusing on reducing air pollution, saving water, and creating a stronger and healthier community.

The City launched the Climate Smart Challenge to help San José residents take action to lower their carbon footprint and save money. The challenge allows residents to compete with fellow community members in reducing greenhouse gas emissions, and winners are eligible for special recognition and prizes. More information about the challenge can be found at: <https://climatesmartsjchallenge.org/>

Climate Smart Goals	Status to Date
1. By 2021, San José Clean Energy (SJCE) will offer 100 percent greenhouse gas-free power as a base product.	SJCE started serving both residents and businesses in February 2019. In 2020, SJCE provided electricity that is 45 percent renewable and 86 percent carbon free. SJCE is evaluating ways to provide power that is 100 percent carbon neutral by 2021. (See the Community Energy chapter for more information.)
2. By 2040, San José will be the world's first one gigawatt solar city.	Total solar capacity installed is 208 megawatts.
3. By 2030, 60 percent of all passenger vehicles in the City will be electric, making San José the electric car capital of the U.S.	The City Council adopted a building reach code that requires electric vehicle readiness in all buildings with an application for a building permit submitted on or after January 1, 2020.
4. Beginning in 2020, all new homes will be Zero Net Energy and, by 2030, 25 percent of all existing homes will be energy efficient and all-electric.	The City Council adopted a natural gas infrastructure prohibition for all new detached accessory dwelling units, single-family, and low-rise multi-family buildings with an application for a building permit submitted on or after January 1, 2020.
5. By 2030, San José will create an additional 22 million square feet of commercial workspace located within a half-mile of transit.	In 2019-20, the City issued permits totaling 2.35 million square feet of commercial, office, retail space within a half-mile of transit.
6. By 2030, San José will have developed 40,000 dwelling units in urban villages and focused growth areas.	Since the adoption of the General Plan in 2011, the City has permitted approximately 11,534 units within urban villages and focused growth areas.
7. By 2040, only four out of ten commute trips in San José will be taken in single-occupancy vehicles.	In 2019, an estimated 75 percent of commutes were taken in single-occupancy vehicles
8. By 2030, San José will reduce its per capita residential water consumption by 30 percent compared to 2009 levels.	In 2019, residential water consumption was 49.4 gallons per capita per day, a reduction of 19 percent compared to 2009 levels.