

## 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.

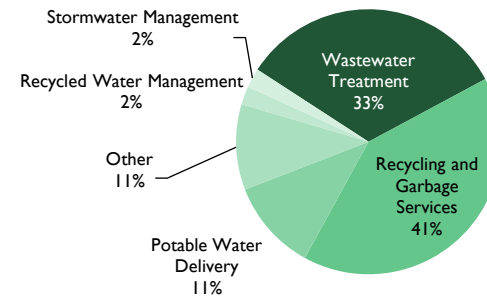
Most ESD revenue comes from various customer fees and charges; approximately \$6 million of its budget, representing 2 percent of its operating expenditures, came from the General Fund in 2020-21.

In 2020-21, ESD's operating expenditures totaled \$307.5 million, including personal and non-personal expenditures. In addition, the department was responsible for \$2 million in Citywide expenditures. Staffing in 2020-21 included 572 full-time equivalent positions, representing a 13 percent increase from ten years ago.

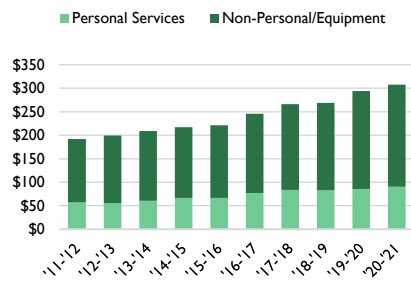
## COVID-19 RESPONSE

In 2020, ESD's Watershed Protection Division partnered with Stanford University to detect SARS-COV-2, the virus that causes COVID-19, in wastewater samples. This research can be used to track community infection rates and help health officials in responding to diseases like COVID-19. More information on this research can be found on [news.stanford.edu](https://news.stanford.edu).

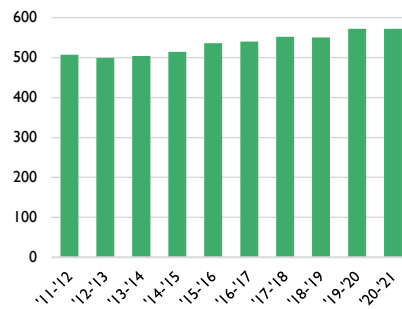
**ESD Adopted Operating Budget Breakdown (2020-21)**



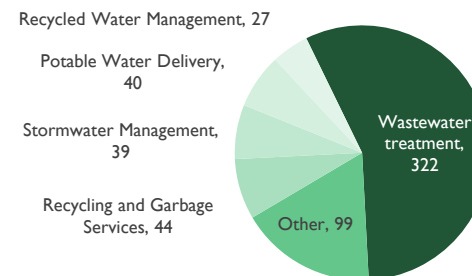
**ESD Operating Expenditures (\$millions)**



**ESD Authorized Positions**



**ESD Staffing Breakdown by Positions per Service (2020-21)**



# ENVIRONMENTAL SERVICES

## RECYCLING & GARBAGE SERVICES

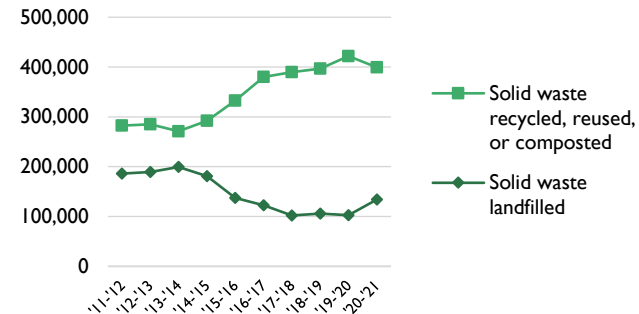
ESD provides recycling and garbage services to over 332,000 residential households in San José through contracted service providers. ESD also provides waste management programs and services for San José businesses, large events, public areas, and City facilities. It manages agreements for commercial collection and recyclables processing, organics processing, and residential and construction waste collection services in the city.

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 68 percent in 2020-21, despite increases in the amount of residential waste landfilled. 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)

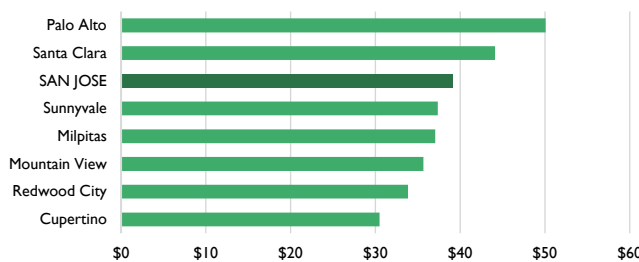
Tons of Residential Solid Waste Recycled vs. Landfilled



## COVID-19 RESPONSE

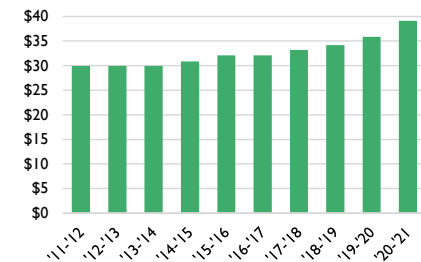
ESD staff worked with the City's recycling and garbage contractors to provide uninterrupted services throughout the pandemic and meet increased residential requests for junk pickup services, which combined with increased waste contamination, contributed to more residential waste being landfilled. ESD staff also reached out to San José businesses about stopping and resuming services in response to the County's shelter in place order. The amount of commercial waste decreased by approximately 26 percent while 900 business accounts were placed on hold or on call.

Comparison of Monthly Residential Garbage and Recycling Rates (2020-21)

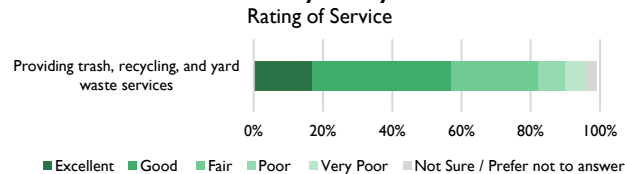


Sources: Rates listed on local government websites for municipalities provided. Note: Rates listed for all municipalities are for the 32-gallon cart size.

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



Community Survey 2021



Note: Due to rounding, percentage does not total to 100 percent.

# ENVIRONMENTAL SERVICES

## 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, 1,285 creek cleanup events were held and about 608 tons of trash were removed in 2020-21. Most of the cleanups in 2020-21 were performed as part of the City's BeautifySJ program, which is currently led by the Parks, Recreation and Neighborhood Services Department. The City's creek cleanup partners, which include Downtown Streets Teams, Keep Coyote Creek Beautiful and South Bay Clean Creeks Coalition, accounted for the remaining number of creek cleanups.

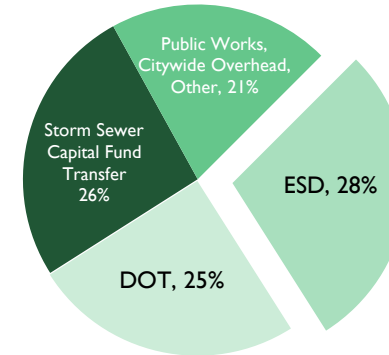
ESD estimates that the City has reduced the amount of trash discharged into receiving waters by 100 percent since 2009 and met the July 2022 requirement rate of 100 percent.\*\*

The annual fee for a single-family residence in 2020-21 was \$94.44. The annual fee has remained the same since 2011-12.

\* 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

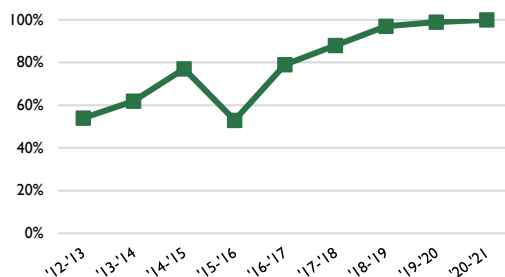


Source: 2020-21 Adopted Operating Budget

### Baykeeper Consent Decree

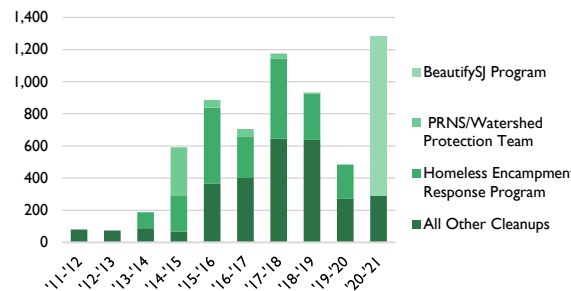
In June 2016, the City executed a consent decree to settle a lawsuit filed by the San Francisco Baykeeper. The consent decree stipulates that the City will appropriate \$100 million over a ten-year period to implement projects intended to reduce the flow of pollutants from the City’s urban areas to receiving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

Citywide Trash Load Reduction Rate (since 2009)



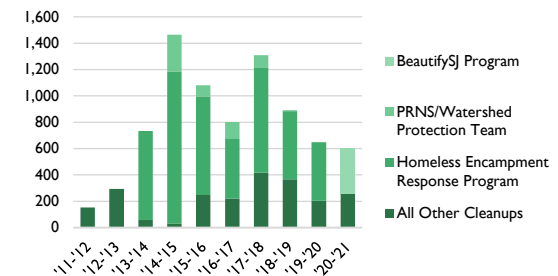
Note: Calculation is based on a method specified in the Municipal Regional Stormwater NPDES permit; regional permit requirements will be updated in 2021-22.

Number of Creek Cleanups



Note: The City's creek cleanups are now performed as part of the BeautifySJ Program. The Watershed Protection Team was dismantled in 2018-19 while the Homeless Response Team stopped performing encampment creek cleanups in 2019-20.

Tons of Litter Collected at Creek Cleanups



**RETAIL WATER DELIVERY**

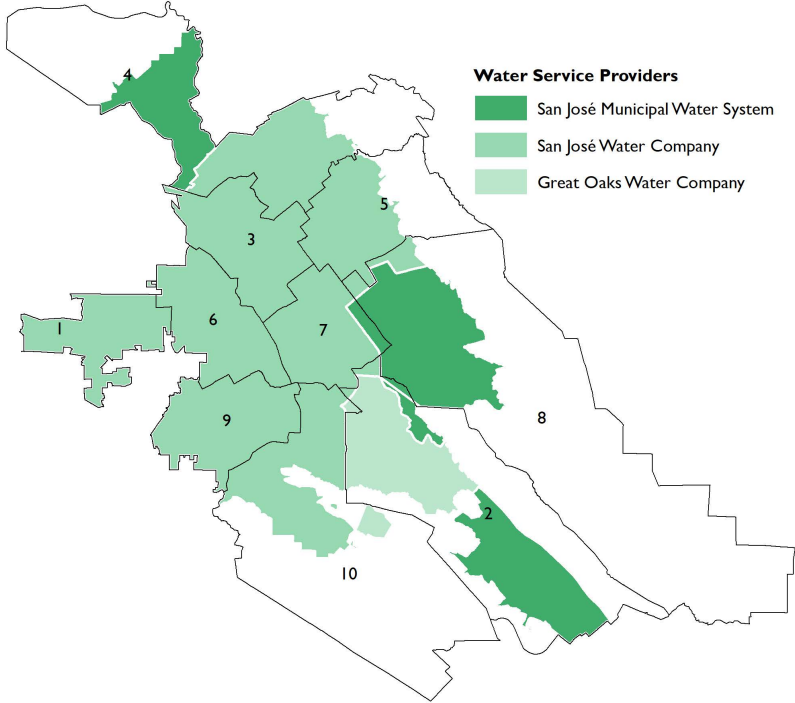
ESD operates and maintains the San José Municipal Water System (Muni Water), which serves about 26,800 customers in North San José, Alviso, Evergreen, Edenvale, and Coyote Valley. Other local San José water retailers include Great Oaks Water Company (which serves Blossom Valley, Santa Teresa, Edenvale, Coyote Valley, and Almaden Valley) and the San José Water Company (which serves Downtown, West San Jose, Alum Rock, and Almaden Valley, among others).

The average monthly water bill for Muni Water customers was \$87.15. 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 2020-21, Muni Water delivered 6,877 million gallons of water to its customers, down 12 percent from ten years ago. Muni Water met federal water quality standards in 99.96 percent of water samples taken.\*

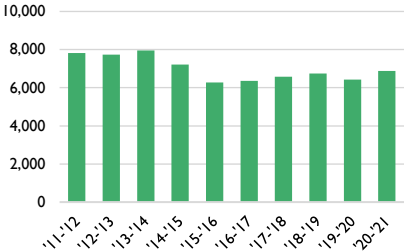
\* For more information on water quality, see the [2020 Water Quality Report](#).

For more information on Muni Water, see our 2021, [Municipal Water Billing and Customer Service: The City Can Take Steps to Enhance Customer Service During an Unprecedented Time](#)

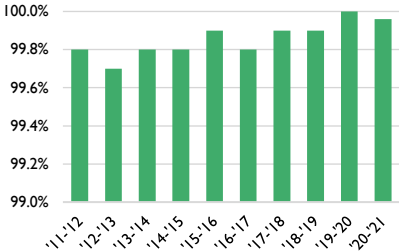


Note: According to ESD, areas in white are served by private well systems. Source: Auditor map based on Environmental Services Department data

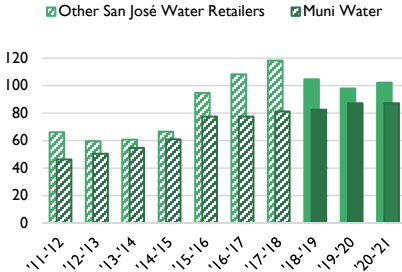
**Millions of Gallons of Water Delivered to Muni Water Customers**



**% of Water Samples Meeting State and Federal Water Quality Standards**



**Comparison of Monthly Residential Water Bills**



Note: Rates are based on water usage of 13 hundred cubic feet (HCF) whereas those prior to 2018-19 are based on 15 HCF; rates for 'Other San José Water Retailers' in 2018-19 are estimates.

# ENVIRONMENTAL SERVICES

## 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. ESD wastewater treatment operations account for the largest share of ESD employees: 322 full-time budgeted positions out of 572 total.

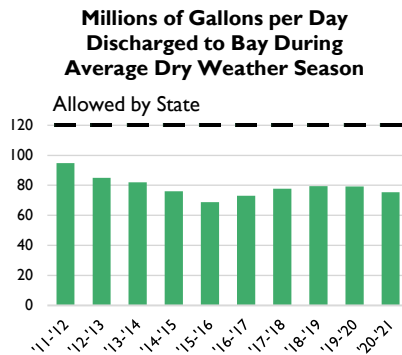
The Wastewater Facility continues to meet the Regional Water Quality Control Board’s permit requirements for water discharged into the San Francisco Bay. In 2020-21, pollutant discharge requirements were met or surpassed 100 percent of the time.

The cost per million gallons treated was \$1,682. 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.\*

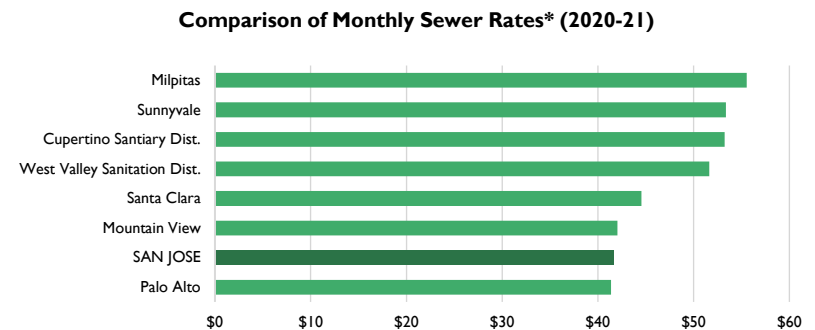
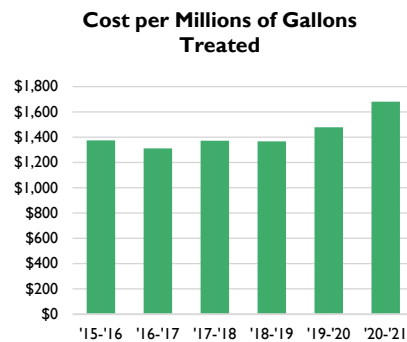
\* For more information, see the [Capital Improvement Program webpage](#).



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



Note: Based on [2020 Annual Self-Monitoring Report](#). In 2020, the dry weather period was from June to August.



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



# ENVIRONMENTAL SERVICES

## RECYCLED WATER

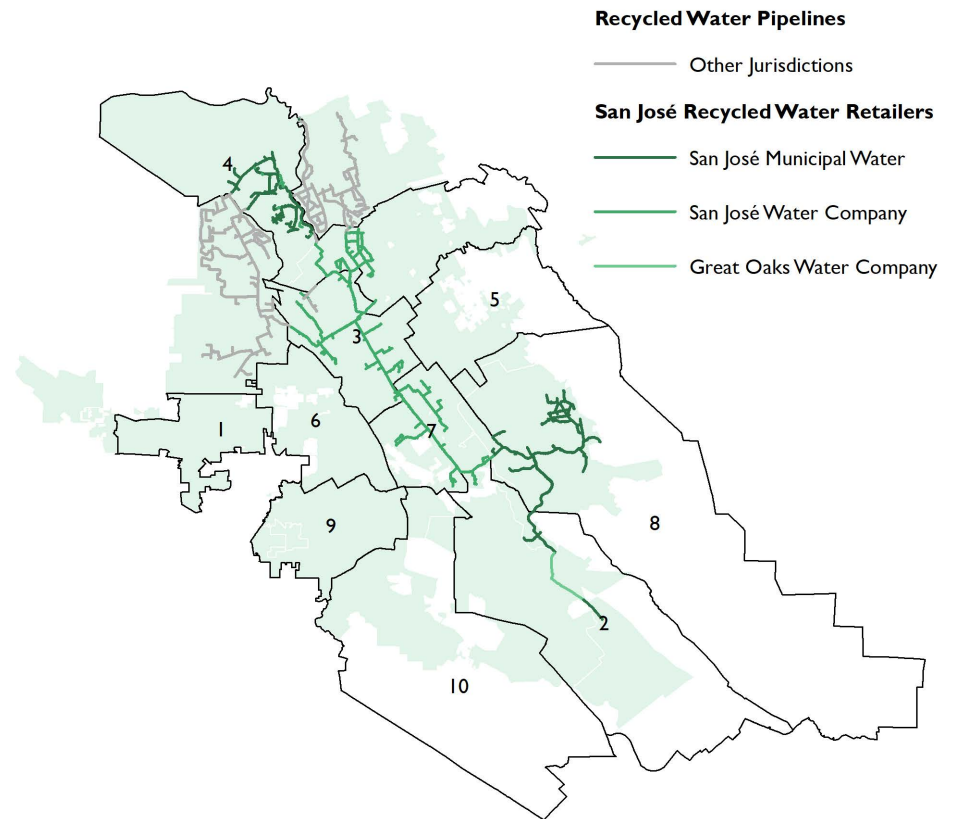
Since the South Bay Water Recycling System (SBWR) began operation in 1998, the recycled water system has been expanded to include over 153 miles of pipelines. In addition to providing recycled water for irrigating parks, golf courses, schools, and commercial landscapes, SBWR also provides recycled water for agricultural, commercial, and industrial uses including cooling towers, power generation plants, and data centers, among others. SBWR currently provides recycled water to the cities of San José, Santa Clara, and Milpitas.

To provide SBWR customers higher quality recycled water, the cities of San José and Santa Clara partner with the Santa Clara Valley Water District to produce up to 8 million gallons per day of highly purified water at the Silicon Valley Advanced Water Purification Center. The purified water is mixed with the recycled water produced by the Regional Wastewater Facility.

In 2020-21, SBWR delivered about 3.8 billion gallons of recycled water to 984 customers, who paid \$3.11\* per hundred cubic feet of water. SBWR met recycled water quality standards 100 percent of the time during the same period.

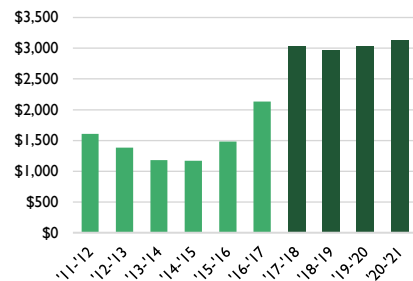
The cost per million gallons of recycled water delivered was \$3,132 in 2020-21.

\* This rate is for City of San José Municipal Water customers; other SBWR provider rates may vary; in 2020-21, SBWR offered the discounted wholesale rate of \$2.91 per hundred cubic feet to water recycling retailers.



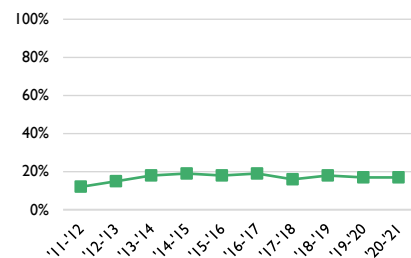
Source: Auditor map based on Environmental Services Department data

**Cost per Million Gallons of Recycled Water Delivered**



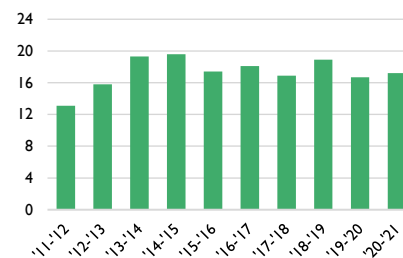
Note: Figures for 2017-18 and later are not comparable to those of prior fiscal years due to a change in accounting methodology.

**% of Wastewater Recycled for Beneficial Purposes during Dry Weather Periods**

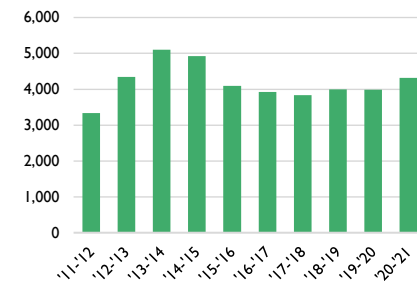


Note: In 2020, the dry weather period was from June to August.

**Millions of Gallons Per Day Diverted during Dry Weather Periods**



**Millions of Gallons of Recycled Water Delivered Annually**



## 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.

In November 2021, the San José City Council voted unanimously to adopt the goal of reaching net-zero greenhouse gas emissions by 2030, joining several cities across the nation. In doing so, the City announced its intention to offset the total amount of carbon dioxide it emits into the atmosphere through means such as using energy from carbon-free sources and encouraging more residents to drive electric vehicles.

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.	In 2020, SJCE's base offering, GreenSource, provides electricity that is 46 percent renewable and 80 percent carbon free. Its TotalGreen offering provided electricity that is 100 percent renewable and carbon free. (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 in San José at the end of June 2021 was 226 megawatts. (one gigawatt equals one thousand 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.	As of December 2020, 4.2 percent of all passenger vehicles registered in San José were electric.
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 an updated natural gas infrastructure prohibition that applies to all new construction with an application for a building permit submitted on or after August 1, 2021.
5. By 2030, San José will create an additional 22 million square feet of commercial workspace located within a half-mile of transit.	In 2020-21 the City issued building permits for approximately 12.2 million square feet of commercial, office, and 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 issued building permits for around 19,900 residential 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 2020, residential water consumption was 73.64 gallons per capita per day, an increase of 23 percent compared to 2009 levels. The increase is due, in part, to increased number of people working from home due to the COVID-19 pandemic.