

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 \$4.1 million in the 2017-18).

In 2017-18, ESD's operating expenditures totaled \$266 million. This includes personal and non-personal expenditures. The department was also responsible for additional costs including \$1.6 million in Citywide expenses and other expenses totaling \$25.9 million. Staffing in 2017-18 included 552 full-time equivalent positions, a slight increase from 2016-17 and a 12 percent increase from ten years ago.

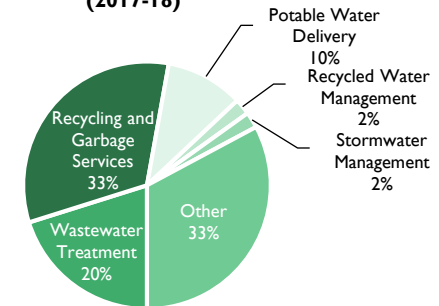
RESIDENT SURVEY

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

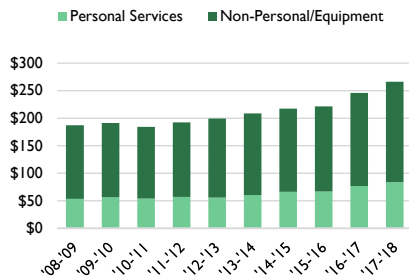
- 38%** Air quality
- 40%** Quality of overall natural environment in San José
- 41%** Preservation of natural areas such as open space, farmlands, and greenbelts

78% of San José residents made efforts to make their homes more energy efficient during the past 12 months

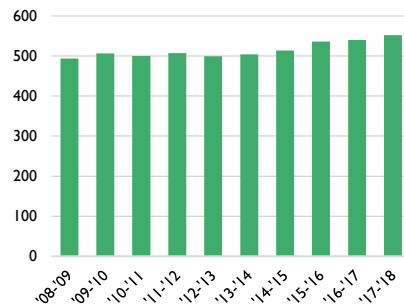
ESD Operating Budget Breakdown (2017-18)



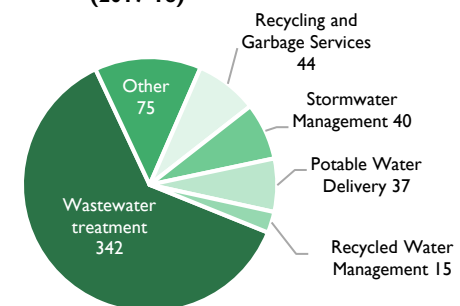
ESD Operating Expenditures (\$millions)



ESD Authorized Positions



ESD Staffing Breakdown by Positions per Service (2017-18)



ENVIRONMENTAL SERVICES

RECYCLING & GARBAGE SERVICES

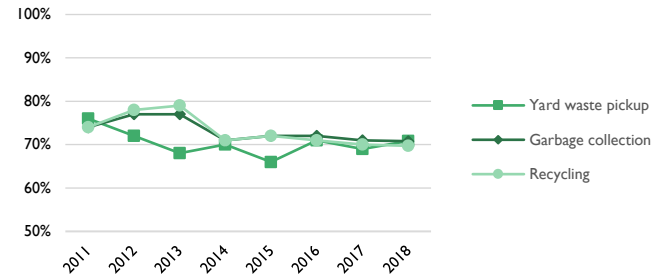
ESD provides recycling and garbage services to nearly 324,000 residential households in San José through contracted service providers. ESD also provides waste management programs and services for San José businesses, large events, public areas, and City facilities. It manages contracts for commercial collection and recyclables processing, organics processing, and construction waste collection services in the City. ESD's operating expenditures for recycling and garbage services was \$125.3 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 meet the State's goal of achieving 75 percent "recycling" by 2020. CalRecycle is in the process of implementing SB 1383 (Organic Waste Methane Emissions Reductions).

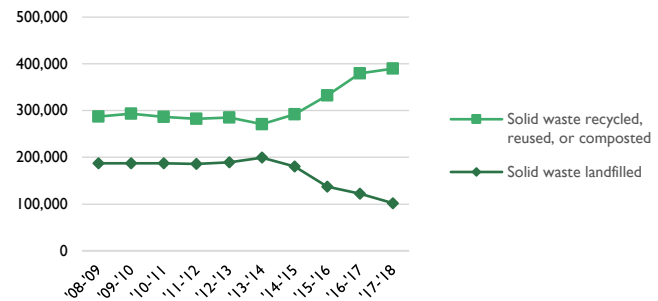
Since 2005, San José has diverted at least 60 percent of waste, including 64 percent in 2017. However, recent international developments restricting foreign imports of recyclable materials are impacting current City diversion rates and may impact the City's ability to meet State diversion requirements in future years. In March of 2018, China implemented its "National Sword" policy, restricting the imports of paper, cardboard, and plastics. California's local jurisdictions have historically relied on exporting recyclable materials to foreign nations, particularly to China, to meet State diversion goals.

* "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)

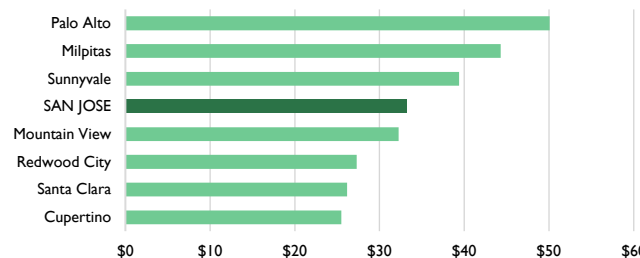
RESIDENT SURVEY
% of San José residents rating services as "excellent" or "good"



Tons of Residential Solid Waste Recycled vs. Landfilled



Comparison of Monthly Residential Garbage and Recycling Rates (2017-18)



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 (with the exception of Sunnyvale's 35-gallon cart). Although this is San José's smallest and standard cart, some municipalities offer smaller 20-gallon bins.

Resident Survey

94% of San José residents surveyed reported recycling at home "usually" or "always"

47% of San José residents rated utility billing "excellent" or "good"

ENVIRONMENTAL SERVICES

STORMWATER MANAGEMENT

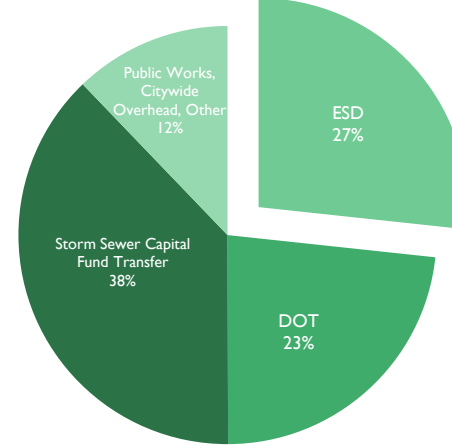
The Department of Transportation operates the City’s storm drains and storm sewer system, conveying rainwater into creeks and eventually the South San Francisco Bay (see Transportation chapter). ESD manages regulatory programs, initiatives, and activities to prevent pollution from entering the storm sewer system and waterways.* These efforts 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, 1,175 creek cleanup events were held and about 1,309 tons of trash were removed in 2017-18. The increase in cleanup events in the past four years is largely due to additional cleanups by the Housing Department’s Homeless Encampment Response Program and Volunteer Creek Cleanup Partners. The City has reduced the amount of trash discharged into receiving waters by 88 percent since 2009, outpacing the July 2019 reduction target of 80 percent.

The annual fee for a single-family residence in 2017-18 was \$94.44. While this is a 34 percent increase from 2008-09, the fee has remained relatively level since 2009-10.

* 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.

Breakdown of Storm Sewer Operating Fund Budgeted Expenditures

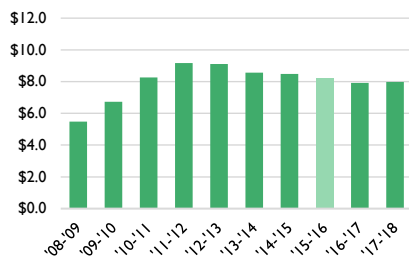


Source: 2017-18 Adopted Operating Budget

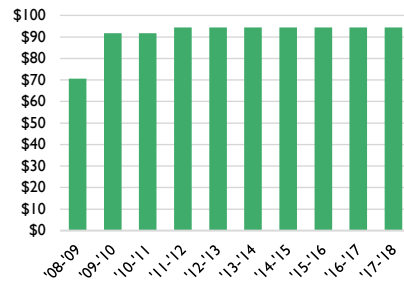
Baykeeper Consent Decree

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 multi-benefit projects (e.g., green infrastructure) intended to reduce the flow of pollutants from the City’s urban areas to receiving waters.

ESD Operating Expenditures Stormwater Management (\$millions)

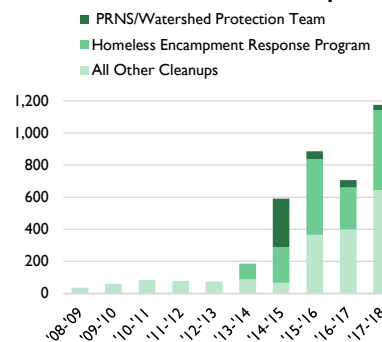


Annual Fee for Household Storm Sewer Service

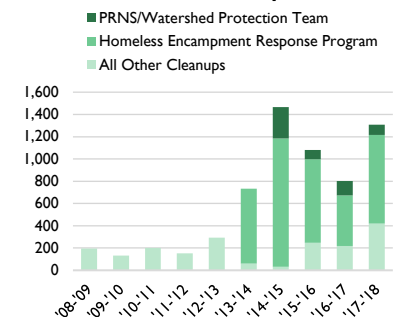


Note: 2015-16 expenditures were an estimate because of the implementation of a new budgeting system.

Number of Creek Cleanups



Tons of Litter Collected at Creek Cleanups



RETAIL WATER DELIVERY

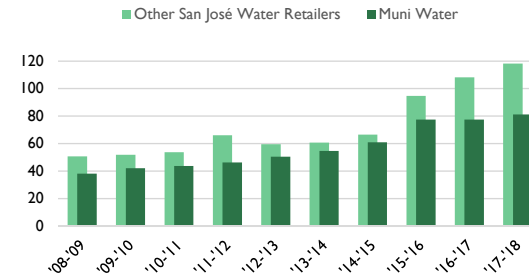
ESD operates and maintains the San José Municipal Water System (Muni Water), which serves about 27,000 customers in North San José, Alviso, Evergreen, Edenvale, and Coyote Valley. Other local San José water retailers include Great Oaks Water Company (which serves Blossom Valley, Santa Teresa, Edenvale, Coyote Valley, and Almaden Valley) and the San José Water Company (which serves the San José Metropolitan area). For 2017-18, operating expenditures for retail water delivery totaled about \$39.0 million.

Muni Water rates increased slightly in 2017-18, but are more than double from ten years ago. According to ESD, this increase is primarily due to increases in wholesale water costs. Other San José retail water providers have also increased their rates dramatically (133 percent over ten years).

In 2017-18, Muni Water delivered 6,583 million gallons of water to its customers, down 16 percent from ten years ago. Ninety-two percent of City residents who responded to the resident survey indicated they made efforts to conserve water the past year. Muni Water met federal water quality standards in 99.9 percent of water samples taken.*

* For more information on water quality, see the [2017 Water Quality Report](#).

Comparison of Monthly Residential Water Bills



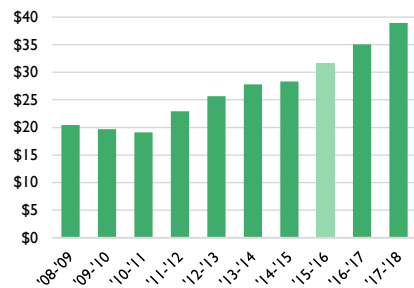
Source: ESD and Auditor Analysis

Note: Monthly bill based on 15 HCF / month usage. Average of other San José water retailers' rates weighted based on number of customers served.

RESIDENT SURVEY

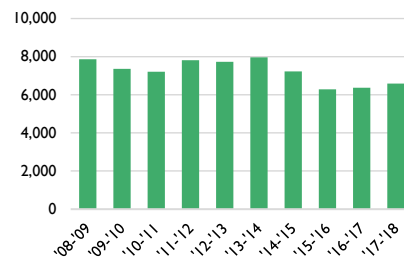
92% of San José residents indicated they made efforts to conserve water during the past 12 months.

Operating Expenditures Retail Water Delivery (\$millions)

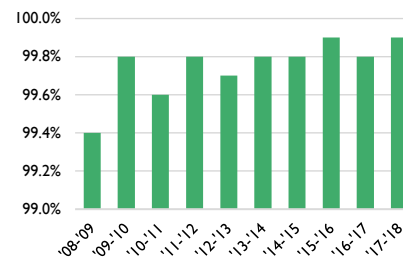


Note: 2015-16 expenditures were an estimate because of the implementation of a new budgeting system.

Millions of Gallons of Water Delivered to Muni Water Customers

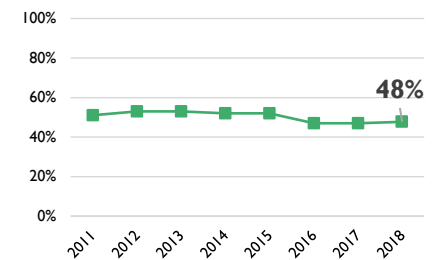


% of Water Samples Meeting State and Federal Water Quality Standards



RESIDENT SURVEY

% of San José residents rating drinking water delivery as "excellent" or "good"



ENVIRONMENTAL SERVICES

WASTEWATER TREATMENT

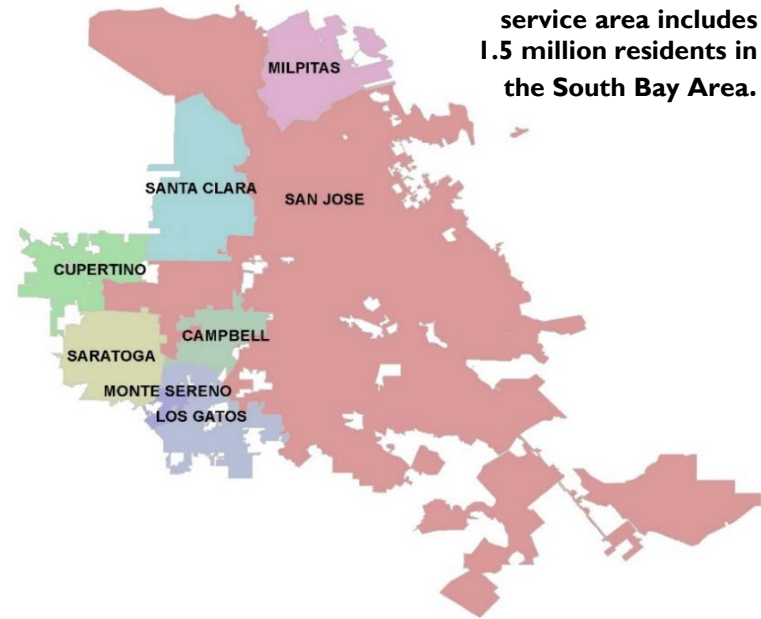
The City’s Department of Transportation maintains the City’s sanitary sewer system (see Transportation chapter) that flows to the San José-Santa Clara Regional Wastewater Facility. ESD staff at the Facility provides wastewater treatment for approximately 1.5 million residents in San José and surrounding communities. The Facility is co-owned with the City of Santa Clara; however, it is managed and operated by ESD. ESD also manages pretreatment programs to control for pollutants at their source. For 2017-18, operating expenditures totaled \$77.2 million. ESD wastewater treatment operations account for the largest share of ESD employees: 342 full-time budgeted positions out of 552 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 2017-18, pollutant discharge requirements were met or surpassed 100 percent of the time.

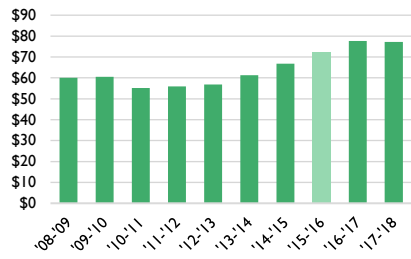
The cost per million gallons treated was \$1,372—a 38 percent increase from \$996 ten years ago. Increasing maintenance and capital costs due to aging infrastructure at the Facility have contributed to high operational costs. In accordance with the Plant Master Plan adopted in 2013, the City is moving 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](#).

Wastewater treatment service area includes 1.5 million residents in the South Bay Area.

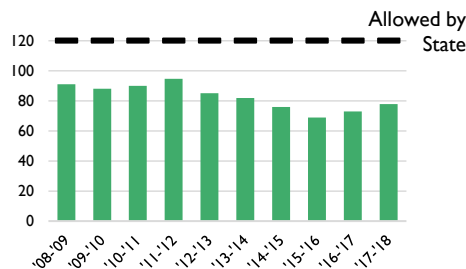


Operating Expenditures Wastewater Treatment (\$millions)



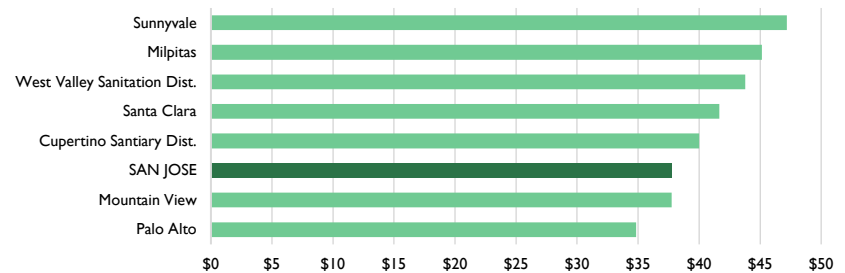
Note: 2015-16 expenditures were an estimate because of the implementation of a new budgeting system.

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



Note: Based on [2017 Annual Self-Monitoring Report](#). The dry weather period is July through September.

Comparison of Monthly Sewer Rates* (2017-18)



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

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.

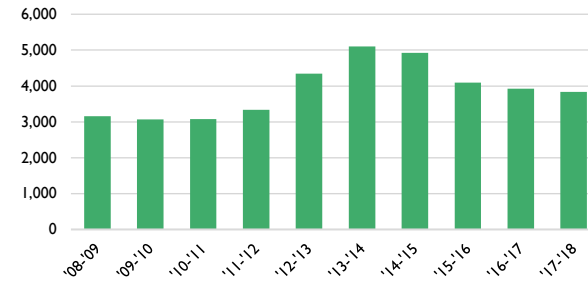
In 2017-18, 16 percent of wastewater influent was recycled for beneficial purposes during the dry weather period, up from 14 percent ten years ago. SBWR customers used recycled water for cooling towers and to irrigate parks, golf courses, schools, and commercial landscape. SBWR met recycled water quality standards 100 percent of the time during the same period.

In 2017-18, SBWR delivered about 3,800 million gallons of recycled water to 880 customers, who paid between \$2.45 and \$3.11* per hundred cubic feet of water, depending on the use. 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 \$3,034 in 2017-18. The increase in the measure from prior fiscal years is primarily due to a change in accounting methodology that resulted in higher expenses being recognized in fiscal year 2017-18.

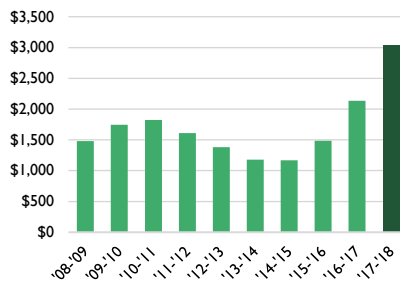
* This rate is for City of San José Municipal Water customers; other SBWR provider rates may vary.

Millions of Gallons of Recycled Water Delivered Annually



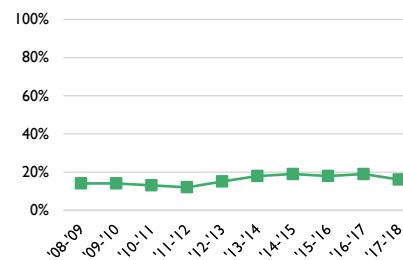
Note: 1 million gallons of water equals 1,336 hundred cubic feet.

Cost per Million Gallons of Recycled Water Delivered



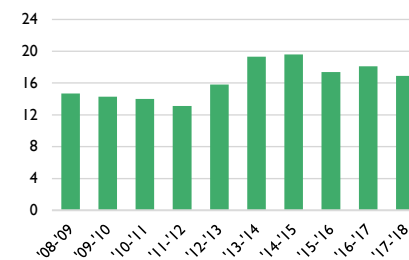
Note: The 17-18 figure is not comparable to those of prior fiscal years due to a recent change in accounting methodology.

% of Wastewater Recycled for Beneficial Purposes during Dry Weather Periods



Note: The dry weather period is July through September.

Millions of Gallons Per Day Diverted during Dry Weather Periods



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 and escalation of the 2007 San José Green Vision, and represents San José's commitment to meeting the greenhouse gas emission reduction targets of the Paris Climate Agreement, in lieu of Federal action. Climate Smart San José is composed of three pillars containing nine strategies focused on reducing air pollution, saving water, and creating a stronger and healthier community.

Pillar	Strategies	Objectives	Achievements to Date
I. A Sustainable & Climate Smart City	1. Transition to a renewable energy future	- Create a community choice energy (CCE) program that will make 100 percent carbon-free electricity available as a base offering to all users in the city by 2021.	- In May 2017, the City launched San José Clean Energy, making San José the largest city with a CCE program in the country and providing residents and businesses with renewable energy options.
	2. Embrace our Californian Climate	- Employ sustainable use practices of local water and green infrastructure to achieve a 30 percent reduction in residential water consumption to 42 gallons per day per capita by 2030.	- During the recent unprecedented period of drought, San José residents and businesses reduced water consumption by 28 percent.
	3. Densify our City to accommodate our future neighbors	- Make preparations for an expected 319,000 additional residents by 2050 through managed, mixed-use densification around planned City growth areas.	- San José 2040 General Plan outlines a plan of proactive densification clustered around focused growth areas. Densification plans are being coordinated with those of future public transit infrastructure.
II. A Vibrant City of Connected & Focused Growth	4. Make homes efficient and affordable for our residents	- All new homes built in San José from 2020 would be Zero Net Energy (ZNE) and existing homes will be retrofitted to reduce their energy consumption and eliminate their use of natural gas.	- The City-led Silicon Valley Energy Watch Program provides residents energy saving toolkits that help residents learn energy savings tips and techniques to lower energy bills. Over 2,000 toolkits have been checked out to residents across the County.
	5. Create clean, personalized mobility choices	- San José will work to develop clean, personalized, and shared mobility choices, reducing single-passenger, gasoline car use through a combination of bike-and ridesharing, passenger electric vehicles, and, in the future, autonomous vehicles (AVs).	- The City of San José has installed 64 public, electric charging stations; expanded the City's bike share program, at no cost to the City; and launched an AV pilot program.
	6. Develop integrated, accessible public transport infrastructure	- San José will continue supporting public transit infrastructure as a means of getting around the City, particularly the integration of multiple transport modes and transit-oriented development to reduce vehicle miles traveled.	- Participating in regional initiatives to support the expansion and enhancement of public transit infrastructure such as the Caltrain electrification project, Santa Clara Valley Transportation Authority (VTA), High Capacity Transit, and bringing BART to San José.
	7. Create local jobs in our City to reduce vehicle miles traveled.	- San José will work to create an additional 332,000 local jobs in our City by 2040.	- 50,200 jobs have been created in San José since 2012, and efforts are underway to bring businesses to San José at different income tiers in order to create inclusive and accessible middle income pathways for our residents. These include participating in the Bay Area Urban Manufacturing Initiative and plans to locate new commercial development and 85 percent of new jobs near transit modes.
III. An Economically Inclusive City of Opportunity	8. Improve our commercial building stock	- All new commercial buildings built in San José from 2025 will be ZNE and existing commercial will be retrofitted to reduce their energy consumption and eliminate their use of natural gas.	- The City-led Silicon Valley Energy Watch Program has helped businesses, municipalities, and schools achieve energy savings by providing project management support, performing benchmarking and energy audits, and promoting rebates and financing opportunities. The City also participates in the City Energy Project, an initiative to help improve the energy efficiency of large buildings.
	9. Make commercial goods movement clean & efficient	- San José will support its commercial and industrial sectors in reducing the carbon impact from goods movement by transitioning to clean and efficient logistics.	- The City began to transition its vehicle fleet to use alternative fuels in 2007. In 2017, San José joined 30 other U.S. cities through Climate Mayors to stimulate market demand for city-owned electric service vehicles.