

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 also provides City-wide 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 Green Vision (see last page of this section) and regulatory requirements.

Most ESD revenue comes from various customer fees and charges; less than 1 percent of its budget comes from the General Fund (about \$705,000 in 2013-14, down from \$1.14 million ten years ago).

In 2013-14, ESD departmental operating expenditures totaled \$209 million*, 5 percent more than the previous year and up 50 percent from ten years ago. Staffing in 2013-14 included 504 full-time equivalent positions, up slightly from 2012-13, and up by 13 percent from ten years ago.

* In addition, ESD spent \$675,000 in Citywide expenses. Departmental expenditures also do not include capital expenditures, reserves, or some other program expenditures paid through ratepayer funds (including City overhead).

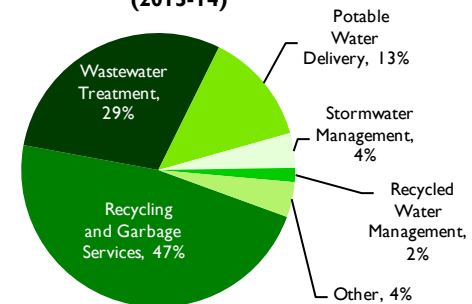
THE NATIONAL CITIZEN SURVEY™

% of San José residents rating of their local environment as "excellent" or "good"

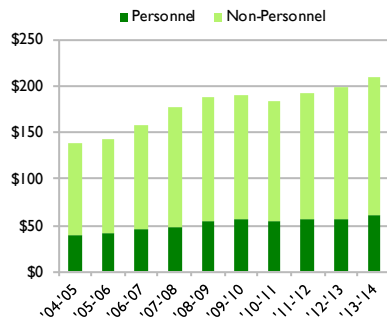
Cleanliness of San José	34%	Air quality	41%
Quality of overall natural environment in San José	50%	Preservation of natural areas such as open space, farmlands, and greenbelts	40%

85% of San José residents made efforts to make their home more energy efficient during the past 12 months

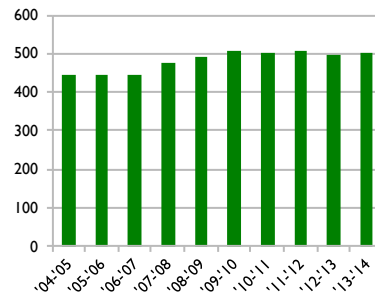
ESD Operating Expenditures Breakdown (2013-14)



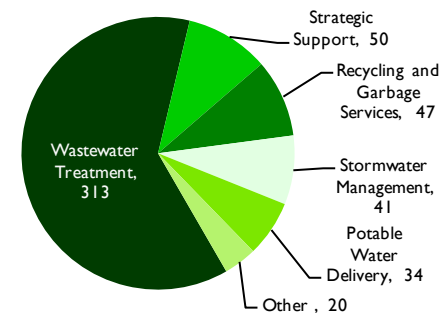
ESD Operating Expenditures (\$millions)



ESD Authorized Positions



ESD Staffing Breakdown by Positions per Service (2013-14)



ENVIRONMENTAL SERVICES

RECYCLING & GARBAGE SERVICES

ESD provides recycling and garbage services to more than 300,000 residential households in San José through contracted service providers, including California Waste Solutions, Garden City Sanitation Inc., Green Team of San José, and GreenWaste Recovery. Operating expenditures for recycling and garbage services have increased 59 percent over the past ten years, from \$62.2 million to \$98.8 million.

ESD also provides waste management programs and services for San José businesses, large events, public areas, and City facilities. The program manages a franchise agreement with Republic Services for commercial collection and recyclables processing, a contract for organics processing with Zero Waste Energy Development (ZWED) Company, and approximately 24 non-exclusive franchise agreements with haulers providing construction waste collection services in the City of San José. ESD also worked with ZWED to develop a dry fermentation anaerobic digestion facility, which opened in November 2013.

The State monitors each jurisdiction's "per capita disposal rate" and requires 50 percent of solid waste to be diverted* from landfills. According to ESD, the State is also implementing a goal of 75 percent "recycling" to be achieved by 2020. Since 2005, San José has diverted at least 60 percent of waste, including 73 percent in 2013.

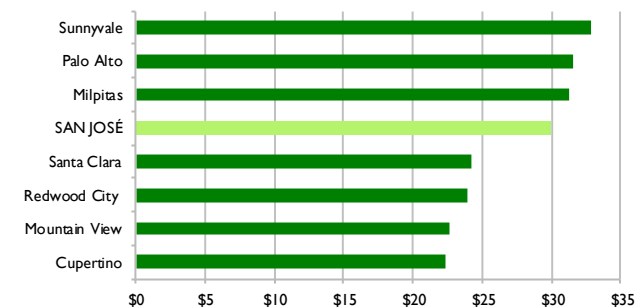
*"Diversion" refers to any combination of waste prevention, recycling, reuse, and composting activities that reduces waste disposed at landfills. (Source: CA Integrated Waste Management Board)

THE NATIONAL CITIZEN SURVEY™

% of San José residents rating of their utility service as "excellent" or "good"

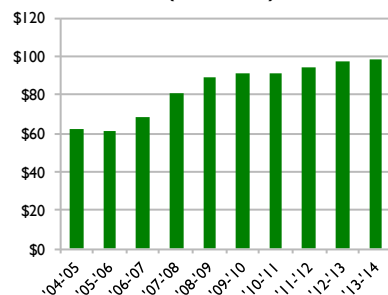
91% of San José residents surveyed reported recycling at home "usually" or "always"	Yard waste pick-up	70%
	Recycling	71%
	Garbage collection	71%
	Utility billing	50%

Comparison of Monthly Residential Garbage and Recycling Rates

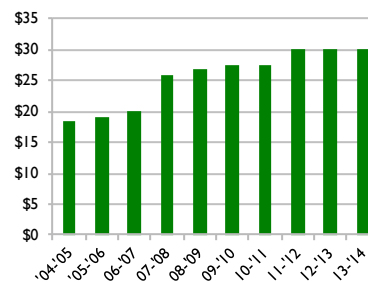


Sources: Rates listed on local government websites for those municipalities provided

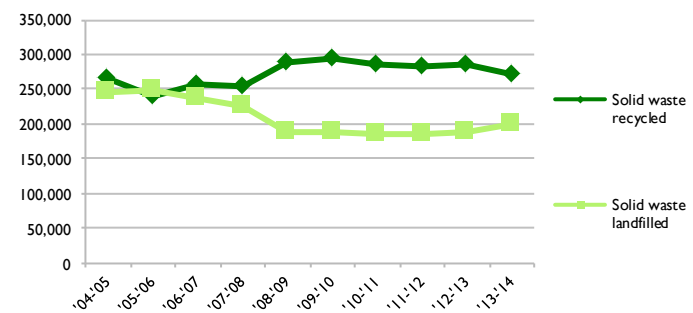
Operating Expenditures Recycling & Garbage Services (\$millions)



San José Garbage and Recycling Rates (32-gallon bin)



Tons of Residential Solid Waste Recycled vs. Landfilled



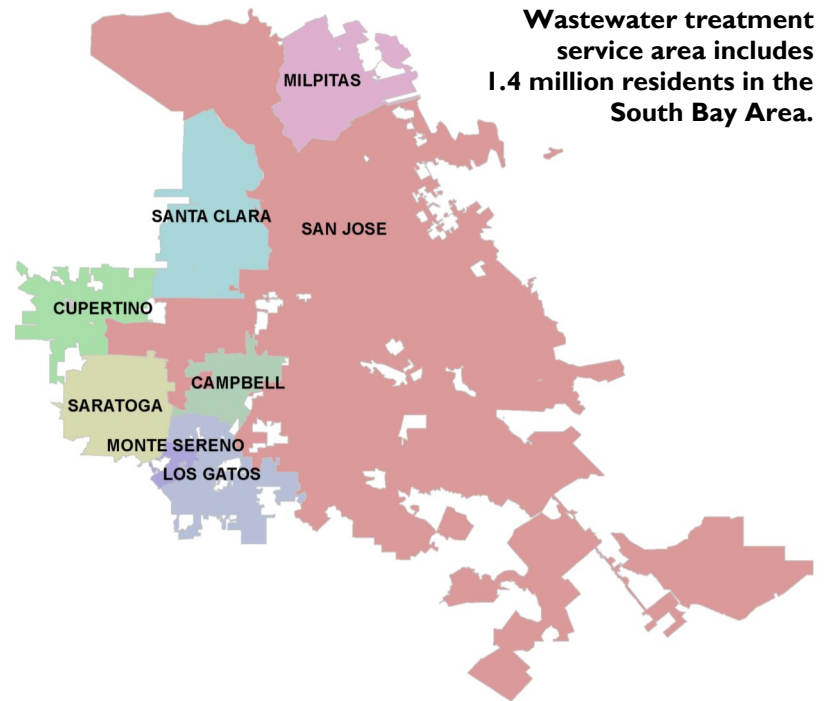
ENVIRONMENTAL SERVICES

WASTEWATER TREATMENT

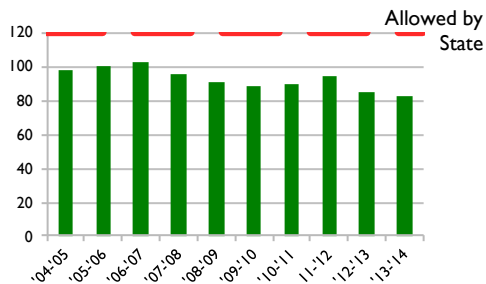
The City's Department of Transportation maintains the City's sanitary sewer system (see Transportation chapter) that flows to the San José-Santa Clara Regional Wastewater Facility. ESD staff at the Facility provide wastewater treatment for 1.4 million residents in San José, Santa Clara, Milpitas, Campbell, Cupertino, Los Gatos, Saratoga, and Monte Sereno. 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 2013-14, operating and maintenance expenditures totaled nearly \$61 million. ESD wastewater treatment operations account for the largest share of ESD employees, 313 full time budgeted positions out of a total department of 504.

The Wastewater Facility continues to meet the Regional Water Quality Control Board's permit requirements for water discharged into the San Francisco Bay. In 2013-14, pollutant discharge requirements were met or surpassed 100 percent of the time.

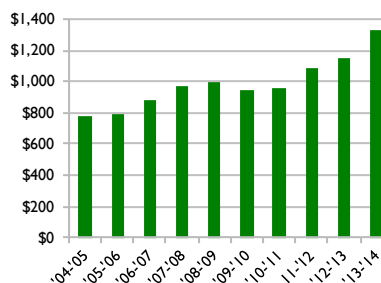
According to ESD, while there has been a decline in influent over the past several years, increasing maintenance and capital costs associated with aging infrastructure at the Facility have contributed to high operational costs (reaching \$1,324 per million gallons treated). ESD is moving forward with a Plant Master Plan, which includes \$2.2 billion in capital improvements, \$1.2 billion of which is slated for rehabilitation and repair project improvements. Additionally, ESD has made progress toward building the organizational structure needed to implement the master plan, most notably the retention of a program management consultant to oversee capital construction.



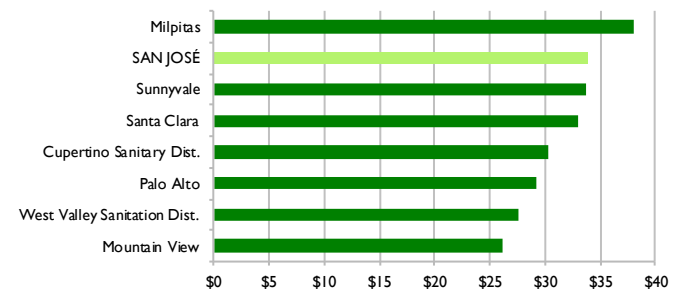
Millions of Gallons per Day Discharged to Bay During Average Dry Weather Season



Cost per Millions Gallons of Wastewater Treated



Comparison of Monthly Sewer Rates



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

RETAIL WATER DELIVERY

ESD operates and maintains the City of San José’s Municipal Water System (Muni Water) which serves about 26,850 customers in North San José, Alviso, Evergreen, Edenvale, and Coyote Valley. For 2013-14, operating expenditures totaled about \$28 million, up 76 percent over a ten-year period. According to ESD, this increase is primarily due to increases in wholesale water costs.

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).

In 2013-14, Muni Water delivered 7,960 million gallons of water to its customers, up 3 percent from the prior year. According to ESD, water delivery levels are influenced by economic improvements and volume of local rainfall during winter months. Muni Water met federal water quality standards in 99.8 percent of water samples taken.

Muni Water rates increased by 8 percent in 2013-14, and have increased by 79 percent over ten years. Other San José retail water providers have increased their rates less dramatically (50 percent over ten years). Nevertheless, Muni Water rates are lower than the average of other water retailers serving San José (Great Oaks and San José Water Company).

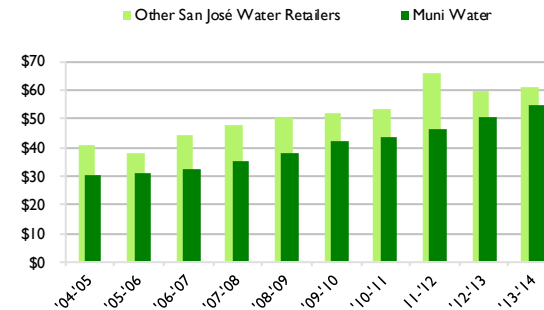
THE NATIONAL CITIZEN SURVEY™

97% of San José residents indicated they made efforts to conserve water during the past 12 months

52% of San José residents* surveyed rated the delivery of drinking water as “excellent” or “good”

* Note, this includes Muni Water and non-Muni Water customers.

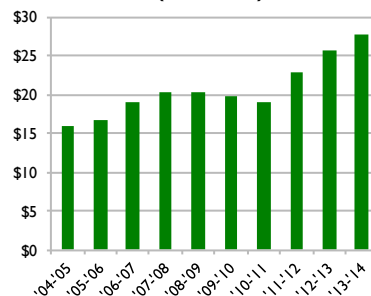
Comparison of Monthly Residential Water Bills



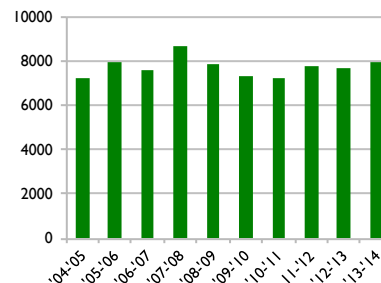
Source: ESD

Note: Monthly bill based on 15 HCF/month usage

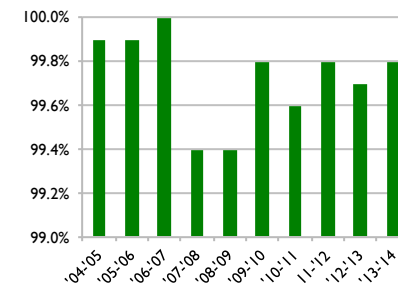
Operating Expenditures Retail Water Delivery (\$millions)



Millions of Gallons of Water Delivered to Muni Water Customers



% of Water Samples Meeting State and Federal Water Quality Standards



ENVIRONMENTAL SERVICES

STORMWATER MANAGEMENT

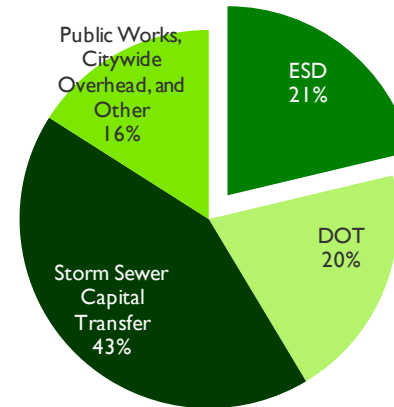
ESD, along with the Departments of Public Works and Transportation, manage the City's storm drains and storm sewer system, the purposes of which are to sustainably manage stormwater and prevent flooding of streets and neighborhoods by conveying rainwater into creeks, and eventually the South San Francisco Bay. ESD accounts for roughly one third of storm sewer expenditures.

Specifically, 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. These programs and activities are largely directed by the City's National Pollutant Discharge Elimination System (NPDES) permit for municipal storm sewer systems. Included among these programs is the litter/creek clean up program. Overall, 187 creek clean-up events were held and approximately 734 tons of trash were removed in 2013-14. This significant increase over last year's performance is due, in large part, to additional homeless encampment clean-up events conducted by the City's Homeless Encampment Response Program.

The annual fee per residential unit in 2013-14 was \$94.44*, a 106 percent increase from ten years ago. According to ESD, the rate increases are a result of increased costs to support infrastructure maintenance, fund rehabilitation and replacement projects, and meet regulatory requirements.

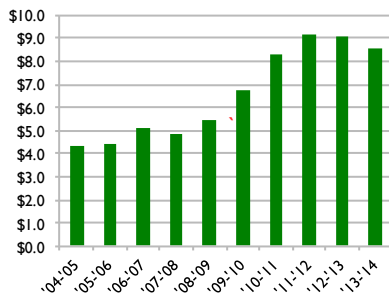
* This rate is for a single-family residence.

Breakdown of Storm Sewer Fund Budgeted Expenditures

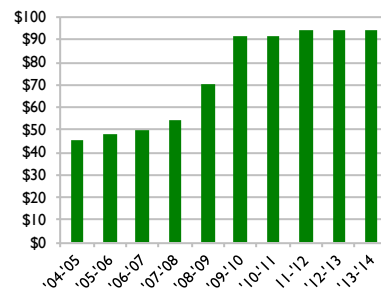


Source: 2014-15 Adopted Operating Budget

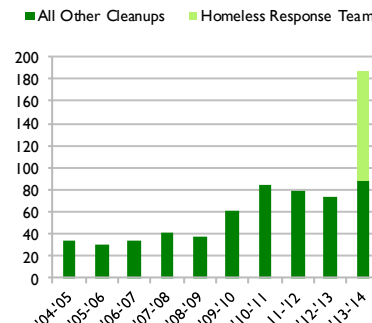
ESD Operating Expenditures Stormwater Management (\$millions)



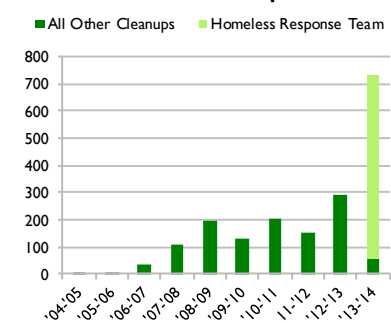
Annual Fee for Household Storm Sewer Service



Litter / Creek Clean-Ups



Tons of Litter Collected at Creek Clean-Ups



RECYCLED WATER

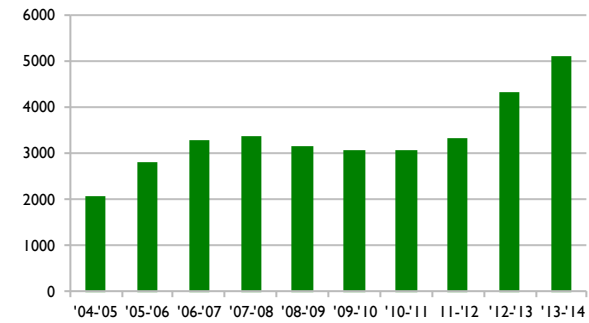
The City invests in South Bay Water Recycling (SBWR) in order to reduce wastewater effluent and protect the ecosystem of the South Bay, including the habitat of two federally endangered species, the Salt Marsh Harvest Mouse and the California Clapper Rail. SBWR serves the cities of Milpitas, Santa Clara,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

In 2013-14, SBWR delivered over 5,100 million gallons of recycled water to 759 customers, charging between \$1.13 to \$1.95* per hundred cubic feet of water depending on the use. SBWR customers used recycled water to irrigate parks, golf courses, schools, commercial landscape, and for cooling towers.

The cost per million gallons of recycled water delivered has decreased from a high of \$1,821 in 2010-11 to \$1,180 in 2013-14; it has decreased by 10 percent over a ten year period. According to ESD, the decrease is due to staffing and capital investment reductions and other cost control measures.

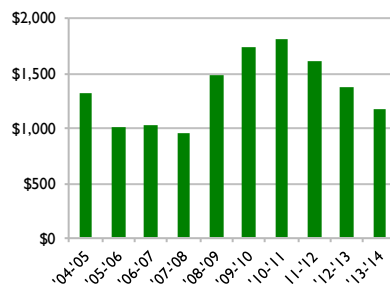
In 2013-14, 18 percent of wastewater influent was recycled for beneficial purposes during the dry weather period, an increase of 80 percent over ten years. SBWR met recycled water quality standards 100 percent of the time during the same period.

Millions of Gallons of Recycled Water Delivered Annually

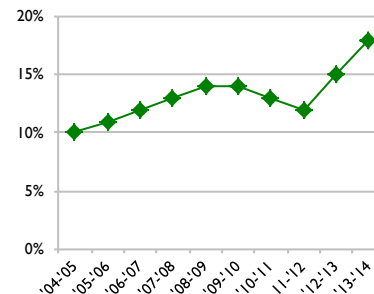


* This rate is for City of San José Municipal Water customers, other SBWR provider rates may vary.

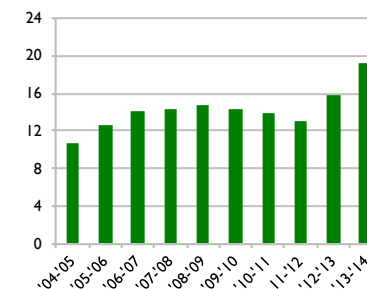
Cost per Million Gallons of Recycled Water Delivered



% of Wastewater Recycled for Beneficial Purposes During Dry Weather Periods



Millions of Gallons per Day Diverted During Dry Weather Periods



GREEN VISION

On October 30, 2007, the San José City Council adopted the Green Vision, a 15-year plan to transform San José into a world center of clean technology innovation, promote cutting-edge sustainable practices, and demonstrate that the goals of economic growth, environmental stewardship, and fiscal responsibility are inextricably linked.

The Green Vision lays out ten ambitious goals for the City, in partnership with residents and businesses, to achieve by 2022. To date, San José has received over \$170 million in grant funding related to Green Vision projects. Although substantive federal and state grants have been available in recent years, including federal stimulus dollars, most of these grants are nearing completion and staff is looking at other funding opportunities to advance Green Vision goals.

San José Green Vision Goals	Calendar Year 2013 Green Vision Key Achievements*
Create 25,000 clean tech jobs as the world center of clean tech innovation	1,712 new clean tech jobs in 2013 with more than 11,888 clean tech jobs in San José to date; nearly \$ 10.4 billion in total venture capital invested in Clean Tech companies in Silicon Valley, with \$2.4 billion invested in 2013 alone
Reduce per capita energy use by 50 percent	Completed 71 municipal energy efficiency projects funded by U.S. Department of Energy's Energy Efficiency and Conservation Block Grant, saving the City \$486,000 annually in energy costs
Receive 100 percent of its electrical power from clean renewable sources	Installed 11 solar photovoltaic (PV) systems on City facilities in 2013; to date, the City has installed 28 solar energy systems with a total generation capacity of 4.5 megawatts (MW) at City sites
Build or retrofit 50 million square feet of green buildings	Added nearly 2 million square feet of green building space in 2013, resulting in more than 8.3 million square feet of certified green buildings in San José to date, including 21 municipal buildings
Divert 100 percent of the waste from its landfill and convert waste to energy	In partnership with the City, Zero Waste Energy Development Company (ZWED) opened the world's largest dry fermentation anaerobic digestion facility to convert commercial organic waste into 1.6MW of renewable energy and 32,000 tons compost
Recycle or beneficially reuse 100 percent of its wastewater (100 million gallons per day)	749 customers used an average of 13.7 million gallons of recycled water per day, made possible by a 142-mile long network of recycled water pipelines, offsetting enough potable water to supply 29,444 average households
Adopt General Plan with measurable standards for sustainable development	Adopted Foam Food Container Phase-Out Ordinance, which will help reduce litter in waterways and minimize harm to fish and wildlife
Ensure that 100 percent of public fleet vehicles run on alternative fuels	Maintained 41 percent of the City's vehicle fleet to run on alternative fuel with a total of 974 alternative fuel vehicles
Plant 100,000 new trees and replace 100 percent of streetlights with smart, zero-emission lighting	Planted 2,082 new trees in 2013 in partnership with Our City Forest Converted nearly 900 streetlights to smart Light Emitting Diode (LED) streetlights in 2013; to date, approximately 3,400 LED streetlights have been installed in San José, saving over 1.16 million kWh of electricity
Create 100 miles of interconnected trails	Completed five miles of on-street bikeways in 2013 for a total of 221 miles of on-street bikeways and 55.3 miles of off-street trails to date Launched Bay Area Bike Share Program in 2013; 900 people traveled more than 13,000 miles on bicycle in the first four months of operation

*As reported in the 2013 Green Vision Annual Report (<http://www.sanjoseca.gov/DocumentCenter/View/127914>)