

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 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 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 \$967,000 in the 2015-16 adopted budget).

In 2015-16, ESD's operating budget totaled \$246 million.* Staffing in 2015-16 included 536 full-time equivalent positions, a slight increase from 2014-15 and a 20 percent increase from ten years ago.

* In addition to expenditures paid out of its operating budget, ESD was also responsible for \$1.8 million in actual Citywide expenses. The operating budget also does not include capital expenditures, reserves, and some other program expenditures paid through ratepayer funds (including City overhead).

RESIDENT SURVEY

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

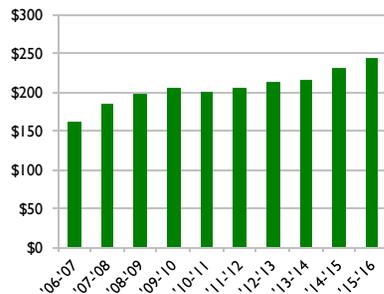
- 43%** Air quality
- 41%** Quality of overall natural environment in San José
- 41%** Preservation of natural areas such as open space, farmlands, and greenbelts

82% of San José residents made efforts to make their homes more energy efficient during the past 12 months

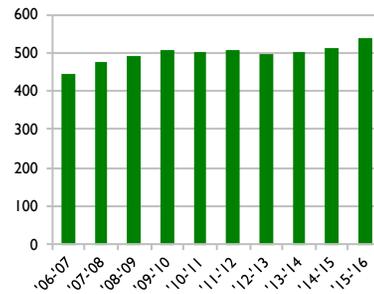
ESD Operating Budget (2015-16) (\$millions)



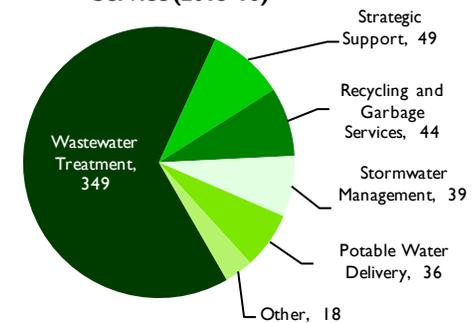
ESD Adopted Budget (\$millions)



ESD Authorized Positions



ESD Staffing Breakdown by Positions per Service (2015-16)



RECYCLING & GARBAGE SERVICES

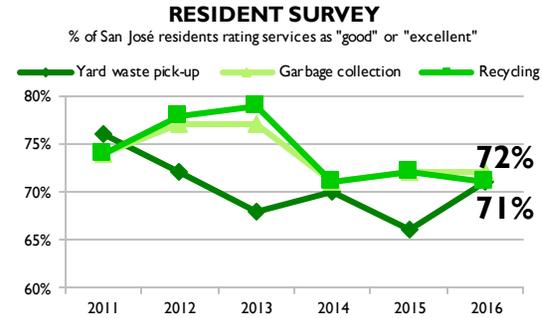
ESD provides recycling and garbage services to more than 320,000 residential households in San José through contracted service providers, including California Waste Solutions, Garden City Sanitation Inc., Green Team of San José, and GreenWaste Recovery.* ESD’s operating budget for recycling and garbage services was \$108.2 million.

ESD also provides waste management programs and services for San José businesses, large events, public areas, and City facilities. ESD 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 25 non-exclusive franchise agreements with haulers providing construction waste collection services in the City of San José.

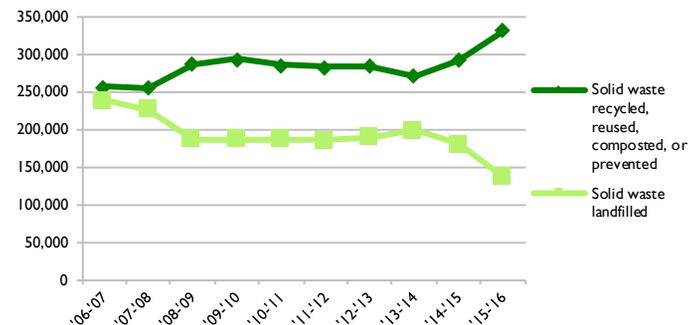
The State monitors each jurisdiction’s “per capita disposal rate” and requires that 50 percent of solid waste be diverted** from landfills. The Department of Resources Recycling and Recovery has taken a statewide approach to meet the State’s goal of achieving 75 percent “recycling” by 2020; it regulates AB 341 (Mandatory Commercial Recycling) and AB 1826 (Mandatory Commercial Organics Recycling, effective 2016). Since 2005, San José has diverted at least 60 percent of waste, including 66 percent in 2015.

*For information on single-family residential recycling, see the May 2015 audit [Curbside Recycling: The City Can Enhance Its Single-Family Residential Recycling Program to Improve Waste Diversion](#).

**“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

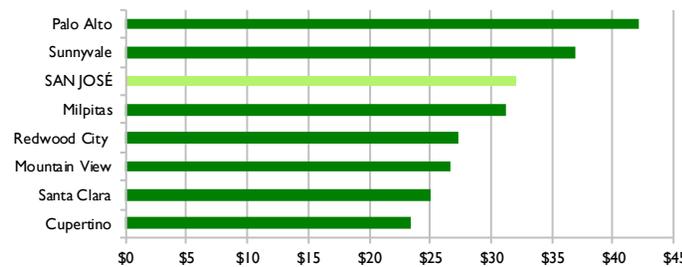


RESIDENT SURVEY

93% of San José residents surveyed reported recycling at home “usually” or “always”

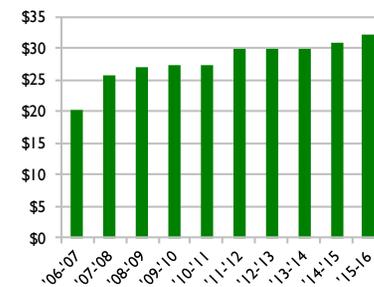
48% of San José residents rated utility billing “excellent” or “good”

Comparison of Monthly Residential Garbage and Recycling Rates (2015-16)



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.

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



ENVIRONMENTAL SERVICES

STORMWATER MANAGEMENT

ESD, with the Departments of Public Works and Transportation, oversees the City's storm drains and storm sewer system in order to sustainably manage stormwater, preventing 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.

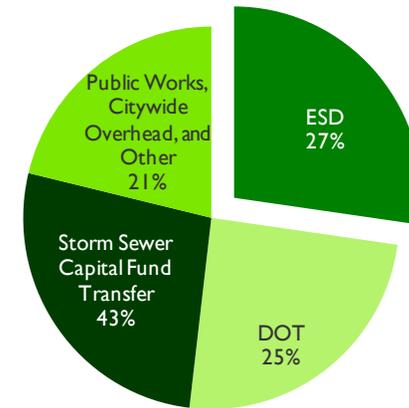
Specifically, ESD manages regulatory programs, initiatives, and activities to prevent pollution from entering the storm sewer system and waterways. These efforts protect water quality and the health of the South Bay watershed and the San Francisco Bay. These programs and activities are largely directed by the City's National Pollutant Discharge Elimination System (NPDES) permit for municipal storm sewer systems.

One such program is the litter/creek cleanup program. Overall, 893 creek cleanup events were held and about 1,090 tons of trash were removed in 2015-16. The significant performance increase in recent years is largely due to additional cleanups by the Housing Department's Homeless Encampment Response Program; the Parks, Recreation & Neighborhood Services Department's Watershed Protection Team; and the [South Bay Creeks Collaborative](#).

The annual fee per residential unit in 2015-16 was \$94.44,* an 89 percent increase since 2006-07. According to ESD, rate increases are a result of increased costs to support infrastructure maintenance, fund rehabilitation and replacement projects, and meet regulatory requirements.

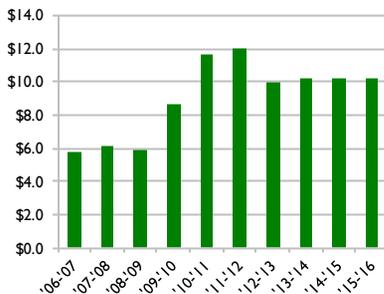
* This rate is for a single-family residence.

Breakdown of Storm Sewer Operating Fund Budgeted Expenditures

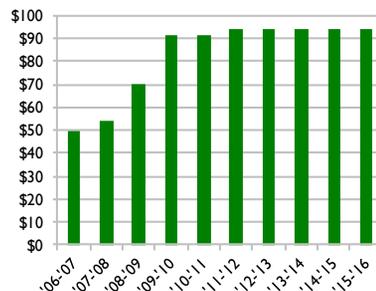


Source: 2015-16 Adopted Operating Budget

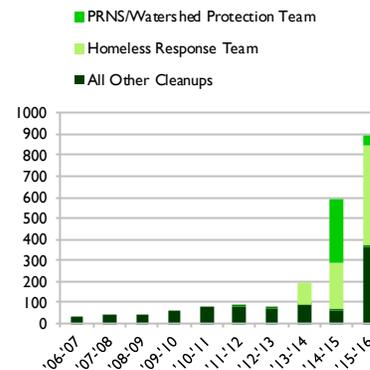
Adopted Budget for Stormwater Management (\$millions)



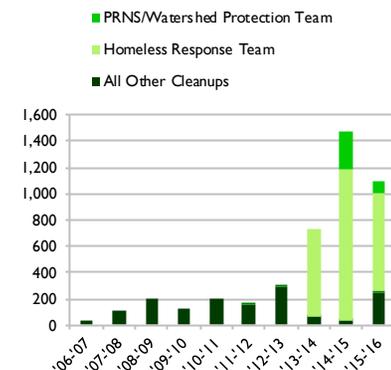
Annual Fee for Household Storm Sewer Service



Litter / Creek Cleanups



Tons of Litter Collected at Creek Cleanups



RETAIL WATER DELIVERY

ESD operates and maintains the City of San José’s Municipal Water System (Muni Water), which serves about 26,000 customers in North San José, Alviso, Evergreen, Edenvale, and Coyote Valley. For 2015-16, the operating budget for retail water delivery totaled about \$36 million. 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).

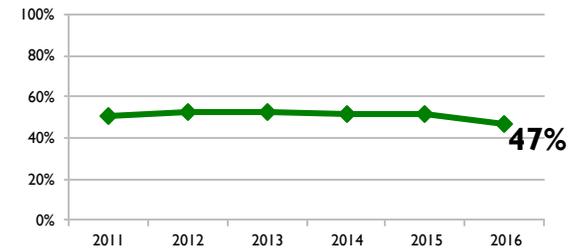
In 2015-16, Muni Water delivered 6,280 million gallons of water to its customers, down 13 percent from the prior year. In the response to a statewide water reduction mandate due to exceptional drought conditions, City Council approved a 30 percent water conservation target in April 2015 that extended to end of the fiscal year. 97 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 99.8 percent of water samples taken.*

Muni Water rates increased by 27 percent in 2015-16, and have increased by 137 percent over ten years. Other San José retail water providers have also increased their rates dramatically (113 percent over ten years).

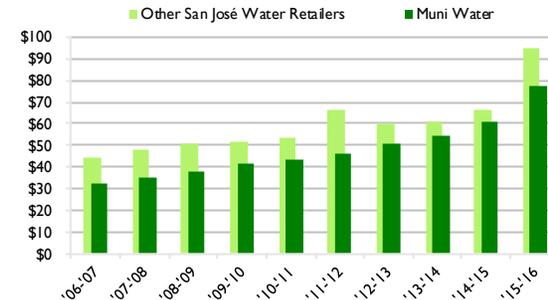
* For more information on water quality, see the [2015 Water Quality Report](#).

RESIDENT SURVEY

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



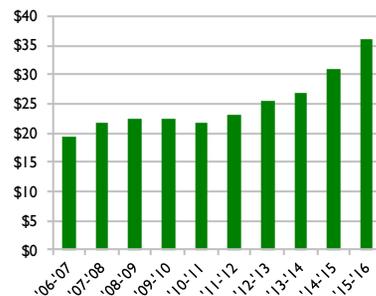
Comparison of Monthly Residential Water Bills



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.

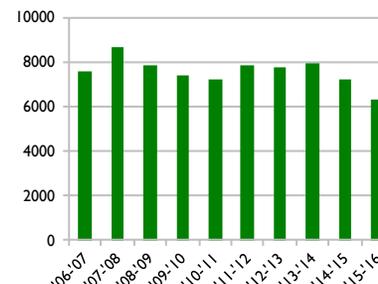
Adopted Budget for Retail Water Delivery (\$millions)



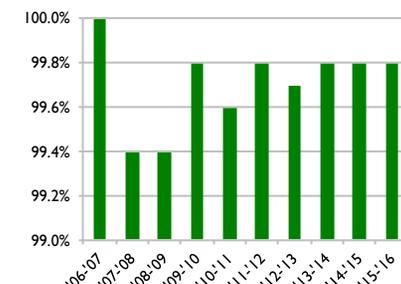
RESIDENT SURVEY

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

Millions of Gallons of Water Delivered to Muni Water Customers



% of Water Samples Meeting State and Federal Water Quality Standards



ENVIRONMENTAL SERVICES

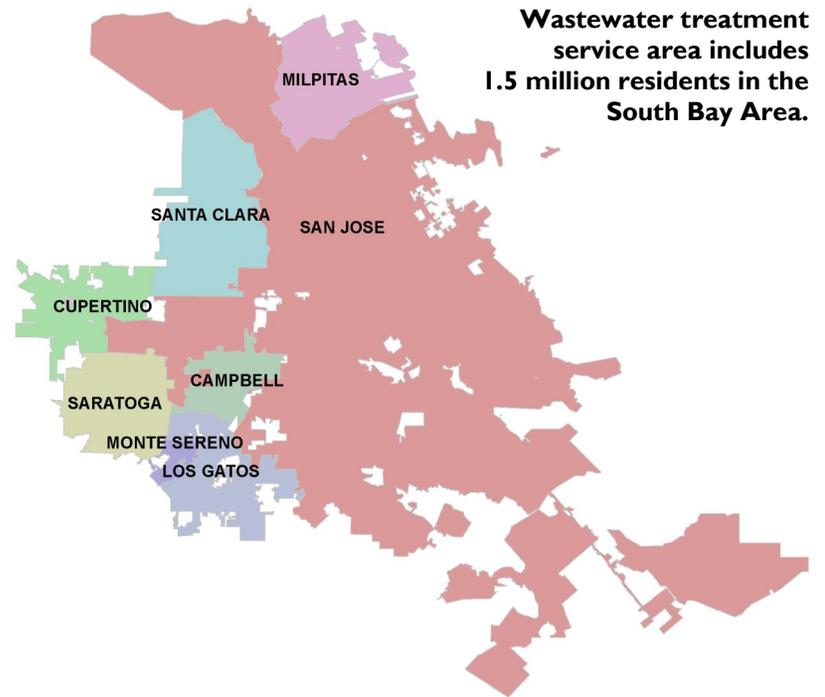
WASTEWATER TREATMENT

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 1.5 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 2015-16, budgeted operating expenditures totaled nearly \$78 million. ESD wastewater treatment operations account for the largest share of ESD employees: 349 full-time budgeted positions out of 536 total.

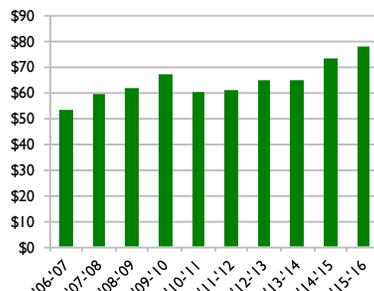
The Wastewater Facility continues to meet the Regional Water Quality Control Board's permit requirements for water discharged into the San Francisco Bay. In 2015-16, pollutant discharge requirements were met or surpassed 100 percent of the time.

The cost per million gallons treated reached \$1,375, a 55 percent increase from \$885 ten years ago. According to ESD, although there has been a decline in influent over the past several years, 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, with over \$1 billion in improvements occurring within the first 10 years. The City has retained a consultant to assist ESD in implementing the Capital Improvement Program.*

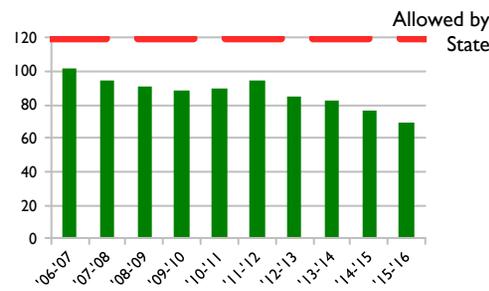
* For more information, see the [Capital Improvement Program webpage](#).



Adopted Budget for Wastewater Treatment (\$millions)



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



Note: Based on [2015 Annual Self-Monitoring Report](#).

Comparison of Monthly Sewer Rates* (2015-16)



* 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

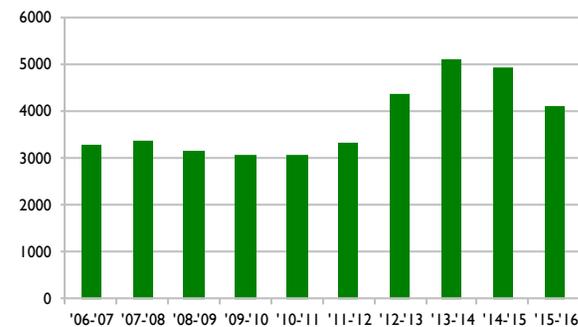
The City invests in South Bay Water Recycling (SBWR) in order to reduce wastewater effluent and protect the ecosystem of the South Bay, including the habitat of two federally endangered species, the Salt Marsh Harvest Mouse and the California Clapper Rail. SBWR serves the cities of Milpitas, Santa Clara,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

In 2015-16, 19 percent of wastewater influent was recycled for beneficial purposes during the dry weather period, up from 12 percent ten years ago. SBWR met recycled water quality standards 100 percent of the time during the same period.

In 2015-16, SBWR delivered nearly 4,100 million gallons of recycled water to 817 customers, who paid between \$1.80 and \$2.44* 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. SBWR customers used recycled water for cooling towers and to irrigate parks, golf courses, schools, and commercial landscape.**

The cost per million gallons of recycled water delivered was \$1,648 in 2015-16.

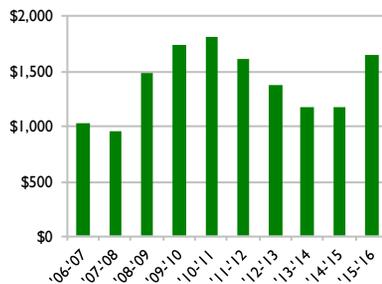
Millions of Gallons of Recycled Water Delivered Annually



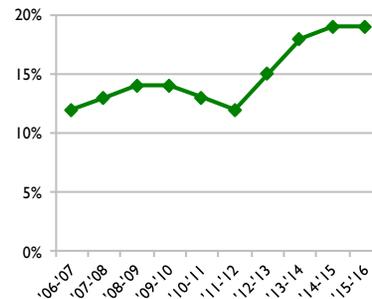
* This rate is for City of San José Municipal Water customers; other SBWR provider rates may vary.

** For more information, see the March 2016 audit [South Bay Water Recycling: Better Information and Renegotiation of Contractual Obligations Will Increase Transparency and Aid Program Success](#).

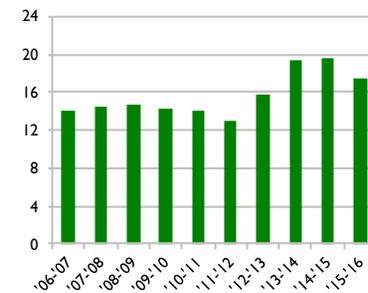
Cost per Million Gallons of Recycled Water Delivered



% 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.

San José Green Vision Goals	Green Vision Key Achievements To Date
Create 25,000 clean tech jobs as the world center of clean tech innovation	More than 12,000 clean tech jobs in San José have been created to date.
Reduce per capita energy use by 50 percent	Since the City's Green Vision was adopted in 2007, per capita energy use has been reduced by 11%, from 10,796 kilowatt hours (kWh) in 2007 to 9,640 kWh in 2015.
Receive 100 percent of its electrical power from clean renewable sources	In 2014, the City received approximately 29% of electrical power from clean renewable sources, an increase of 16% from 2007 levels. Solar photovoltaic (PV) installations in San Jose have increased from 5 megawatts (MW) in energy generation capacity in 2007 to 97 MW in 2015.
Build or retrofit 50 million square feet of green buildings	Nearly one million square feet (SF) of certified private sector green building space was added in 2014. More than 2.1 million SF of City facilities have achieved green building certification since 2004.
Divert 100 percent of the waste from its landfill and convert waste to energy	In 2014, the City and partner Zero Waste Energy Development Company (ZWED) opened Phase One of the world's largest dry fermentation anaerobic digestion facility, which accepts the City's commercial organic waste for conversion into 1.6 MW of renewable energy and 32,000 tons of compost.
Recycle or beneficially reuse 100 percent of its wastewater (100 million gallons per day)	817 customers, a record number, used an average of 11.2 million gallons of recycled water per day.
Adopt General Plan with measurable standards for sustainable development	In April 2016, the Envision San José 2040 Task Force recommended mid-course adjustments to the General Plan based on an evaluation of the City's achievement of planned job goals, implementation of the Urban Village concept, environmental indicators, and affordable housing needs. The City's environmental consultant is conducting an environmental analysis of the recommended amendments.
Ensure that 100 percent of public fleet vehicles run on alternative fuels	The City maintained 43 percent of its vehicle fleet to run on alternative fuel in 2015-16, with a total of 1,100 alternative fuel vehicles. The City completed B20 biodiesel infrastructure upgrades to achieve higher fuel efficiency, and received state and federal funding to purchase electric vehicles and chargers.
Plant 100,000 new trees and replace 100 percent of streetlights with smart, zero-emission lighting	Through a partnership with Our City Forest, 1,341 new trees were planted in 2015-16. To date, San José has converted about 24,000 streetlights to smart Light Emitting Diode (LED) streetlights; it continues to seek financing and grant opportunities to fund the remaining conversions. In addition, the City has newly installed about 700 LED streetlights.
Create 100 miles of interconnected trails	In 2015, the City completed 21 miles of on-street bikeways for a total of 259 miles. In addition, the City has reached about 58 miles of off-street trails to date. An additional 79 miles have been identified or are being studied for further development, or are in the planning or construction phases of development.

For more information, see the City's [Green Vision webpage](#).