

ENVIRONMENTAL SERVICES

The mission of the Environmental Services Department is to work with our community to conserve natural resources and safeguard the environment for future generations.

ENVIRONMENTAL SERVICES

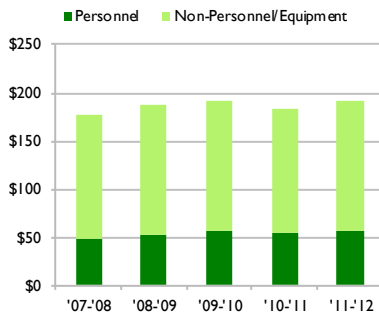
The Environmental Services Department (ESD) provides recycling and garbage services, wastewater treatment, potable water delivery, stormwater management, and recycled water management. ESD also manages programs to conserve water and energy resources and achieve other environmental goals. ESD provides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

Most ESD revenues come from various customer fees and charges; less than 1 percent of ESD's budget comes from the General Fund. The General Fund accounted for about \$389,000 of ESD's operating expenditures in 2011-12, down from about \$1.15 million five years ago.

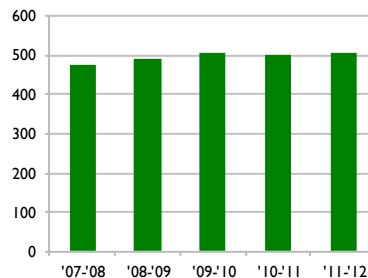
In 2011-12, ESD departmental operating expenditures totaled \$192.2 million*, 4 percent more than the previous year and up 8 percent from five years ago. Although staffing in 2011-12 included 506 full-time equivalent positions, up slightly from 2010-11 and 6 percent more from five years ago, department wide vacancy rates were nearly 20 percent by the end of fiscal year 2012.

* In addition, ESD spent \$5.5 million in Citywide expenses (including \$4.3 million for energy-related projects funded by the federal American Recovery and Reinvestment Act). Departmental expenditures also do not include capital expenditures, reserves, or some other program expenditures paid through ratepayer funds (including City overhead).

ESD Operating Expenditures (\$millions)



ESD Authorized Positions

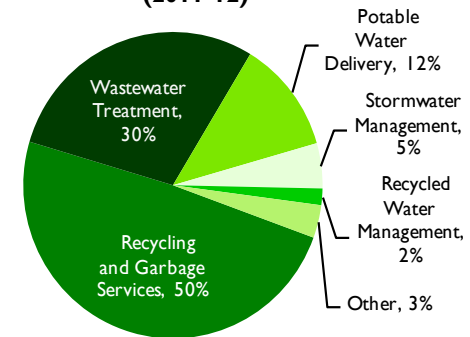


THE NATIONAL CITIZEN SURVEY™

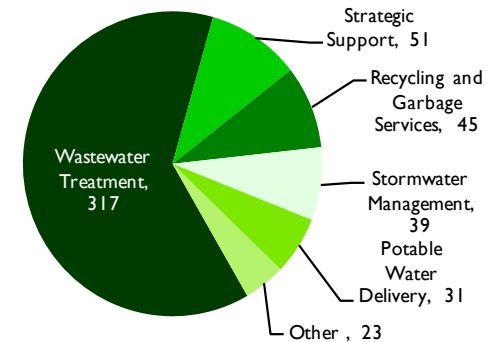
% of San José residents rating of their local environment as "excellent" or "good"

Cleanliness of San José	41%	Air quality	48%
Quality of overall natural environment in San José	48%	Preservation of natural areas such as open space, farmlands, and greenbelts	35%

ESD Operating Expenditures Breakdown (2011-12)



ESD Staffing Breakdown by Positions per Service (2011-12)



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. ESD also provides waste management programs and services for San José businesses, large events, public areas, and City facilities. New in 2012, the program began managing a franchise agreement with Republic Services for commercial collection and recyclables processing, a contract for organics processing with Zero Waste Energy Development Company, and approximately 15 non-exclusive franchise agreements with haulers providing construction waste collection services in the City of San José.

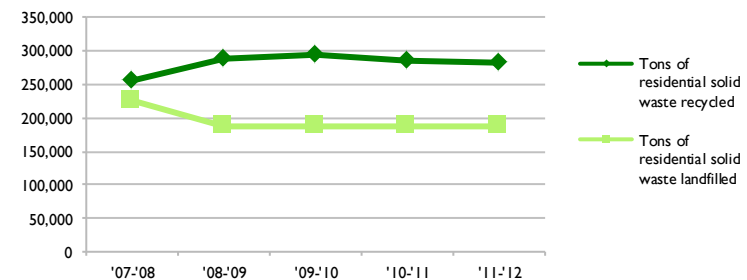
In 2008, the State passed legislation requiring the monitoring of each jurisdiction's "per capita disposal rate." The State mandate requires at least 50 percent of solid waste to be diverted* from landfills; San José has performed at or above 60 percent for the past five years, including 70 percent in 2011-12.

Operating expenditures for recycling and garbage services have increased 17 percent over the past five years, from \$80.6 million to \$94.2 million.

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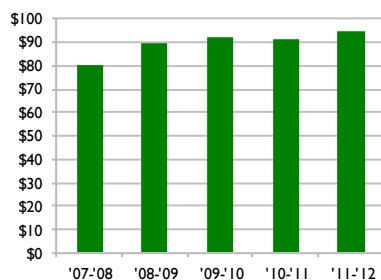
% of San José residents rating of their utility service as "excellent" or "good"	
66% of San José residents surveyed reported recycling used paper, cans or bottles at least 26 times in last 12 months	
Yard waste pick-up	72%
Recycling	78%
Garbage collection	77%

Tons of Residential Solid Waste Recycled vs. Landfilled

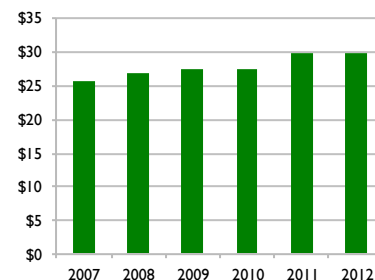


*"Diversion" refers to any combination of waste prevention, recycling, reuse, and composting activities that reduces waste disposed at landfills. (Source: CA Integrated Waste Management Board)

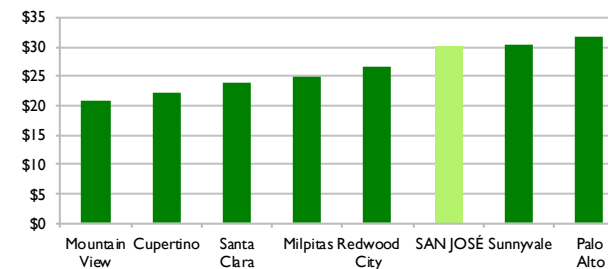
Operating Expenditures Recycling & Garbage Services (\$millions)



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



Comparison of Monthly Residential Garbage and Recycling Rates (2012)



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

ENVIRONMENTAL SERVICES

WASTEWATER TREATMENT

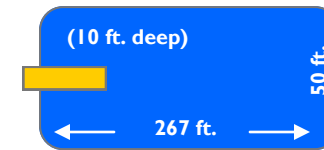
The City's Department of Transportation maintains the City's sanitary sewer system (see Transportation chapter) that flows to the San José/Santa Clara Water Pollution Control Plant. ESD staff at the Plant provide wastewater treatment for 1.4 million residents in San José, Santa Clara, Milpitas, Campbell, Cupertino, Los Gatos, Saratoga, and Monte Sereno. The Plant 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 2011-12, operating and maintenance expenditures totaled nearly \$56 million.

The Plant continues to meet the Regional Water Quality Control Board's permit requirements for water discharged into the San Francisco Bay. In 2011-12, pollutant discharge requirements were met or surpassed 99.8 percent of the time.

While there has been a decline in influent over the past several years, increasing maintenance and capital costs associated with aging infrastructure at the Plant have contributed to high operational costs. ESD is currently moving forward with an asset management program to track the condition of Plant assets. Additionally, the Plant Master Plan includes \$2.2 billion in capital improvements, \$1.2 billion of which is slated for rehabilitation and repair project improvements.

ESD wastewater treatment operations account for the largest share of ESD employees, 317 full time budgeted positions out of a total department of 506. Similar to ESD's department wide vacancy, wastewater treatment sustained a 20 percent vacancy rate throughout 2011-12.

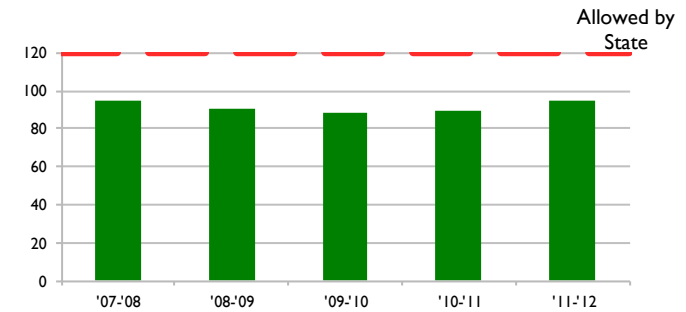
How Much is a Million Gallons of Water?



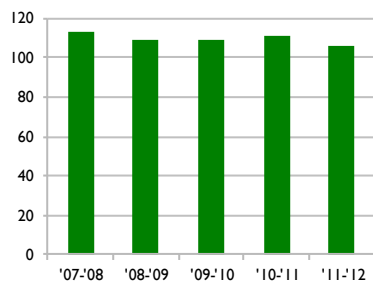
A million gallons of water would fit into a swimming pool about the length of a football field (267 feet long), 50 feet wide, and 10 feet deep.

Source: <http://ga.water.usgs.gov/edu/imgd.html>

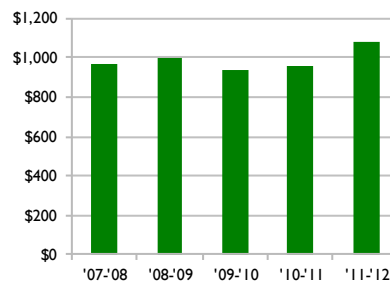
Millions of Gallons per Day Discharged to Bay During Average Dry Weather Season



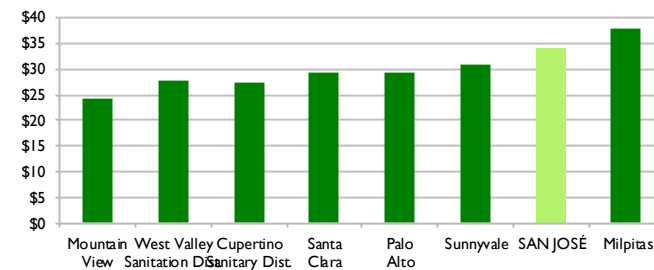
Millions of Gallons of Wastewater Treated per Day



Cost per Millions Gallons of Wastewater Treated



Comparison of Monthly Sewer Rates (2012)



* 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

DRINKING WATER

ESD operates and maintains the San José Municipal Water System (Muni Water) which serves about 26,500 customers annually in North San José, Alviso, Evergreen, Edenvale, and Coyote Valley. For 2011-12, operating expenditures totaled \$24 million and staffing included 30 authorized positions.

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 2011-12, Muni Water delivered 7,821 million gallons of water to its customers, about 8 percent increase from the prior year. According to ESD, water delivery levels are up primarily due to economic improvements and a low volume of local rainfall during winter months. Muni Water met federal water quality standards in 99.8 percent of water samples taken.

For 2012-13, ESD advises that Muni Water rates increase by nearly 9.5 percent to offset increased costs from the San Francisco Public Utilities Commission (for water purchases). In 2011-12, Muni Water rates increased by 6 percent and have increased by 32 percent over five years. These increases are less than those of other retail water providers whose rates increased 23 percent since 2010-11 and 39 percent over five years.

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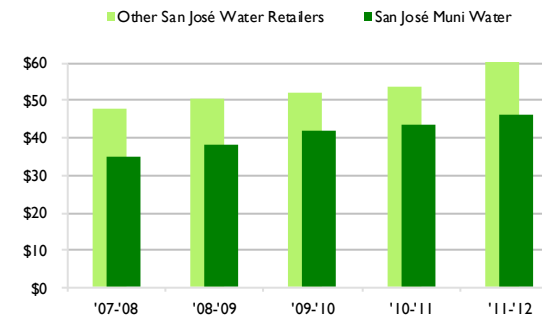
64% reported having water-saving fixtures such as low-flow shower heads or low-flush toilets in their home

53% of San José residents* surveyed rated the delivery of drinking water as "excellent" or "good"

64% reported that it was "essential" or "very important" to conserve water in their home

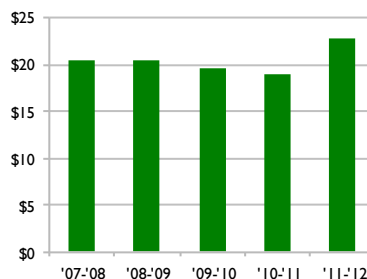
* Note, this includes Muni Water and non-Muni Water customers.

Comparison of Monthly Residential Water Bills

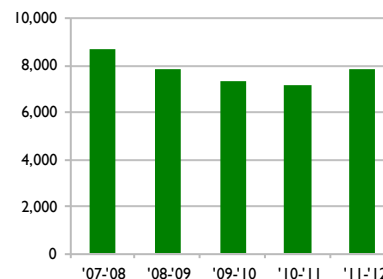


Source: ESD

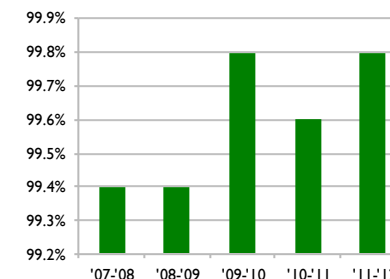
Operating Expenditures Potable Water Delivery (\$millions)



Millions of Gallons of Water Delivered to Muni Water Customers



% of Water Samples Meeting State and Federal Water Quality Standards



ENVIRONMENTAL SERVICES

STORMWATER MANAGEMENT

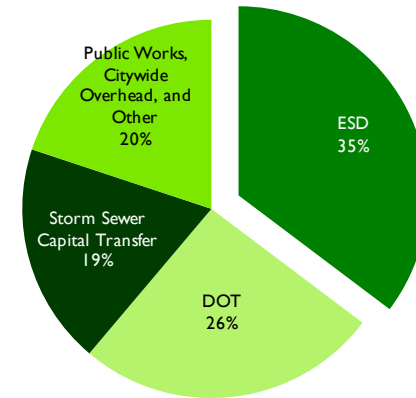
ESD, along with the Departments of Public Works and Transportation, manage the City's storm drains and storm sewer system, the purposes of which are to sustainably manage stormwater and prevent flooding of streets and neighborhoods by conveying rainwater into creeks, and eventually the South San Francisco 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. Included among these programs is the litter/creek clean up program. These programs and activities are largely directed by the City's National Pollutant Discharge Elimination System (NPDES) permit for municipal storm sewer systems.

The annual fee per residential unit in 2011-12 was \$94.44* (or a monthly charge of \$7.87), a 3 percent increase from last year and a 74 percent increase from five years ago. The rate increases are a result of increased costs to support infrastructure maintenance, fund rehabilitation and replacement projects, and meet regulatory requirements.

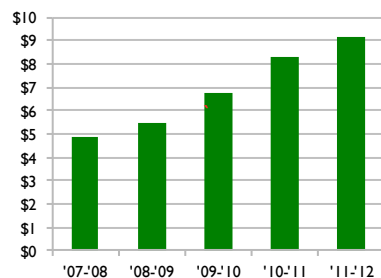
* This rate is for a single-family residence.

Breakdown of Storm Sewer Fund Budgeted Expenditures, 2011-12

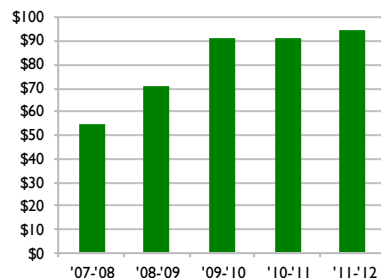


Source: 2012-13 Adopted Operating Budget

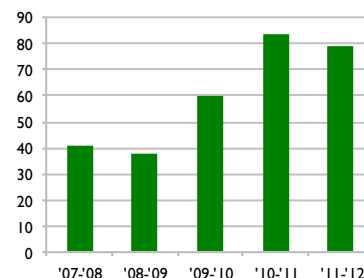
ESD Operating Expenditures Stormwater Management (\$millions)



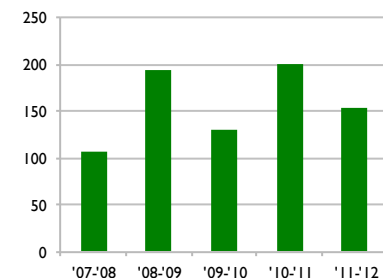
Annual Fee for Household Storm Sewer Service



Litter / Creek Clean-Ups



Tons of Litter Collected at Creek Clean-Ups



RECYCLED WATER

The City built the South Bay Water Recycling (SBWR) system to reduce wastewater effluent, thereby protecting 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.

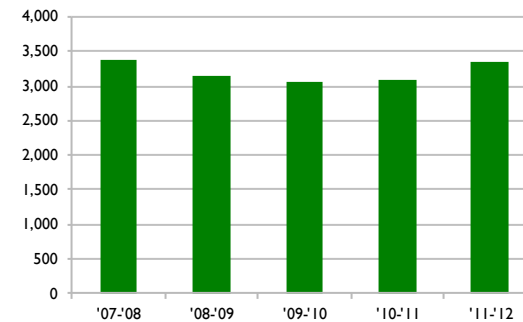
In 2011-12, SBWR delivered 3,339 million gallons of recycled water to 633 customers, charging \$1.00 to \$1.82* per hundred cubic feet of water depending on the use. SBWR customers used recycled water to irrigate parks, golf courses, schools, commercial landscape, and for cooling towers.

The SBWR program is not cost recovery; the cost per million gallons of recycled water delivered has increased over the last five years from \$952 in 2007-08 to \$1,610 in 2011-12. According to ESD, the increase in cost is due to more accurate accounting of the facility and programmatic costs to treat and deliver recycled water.

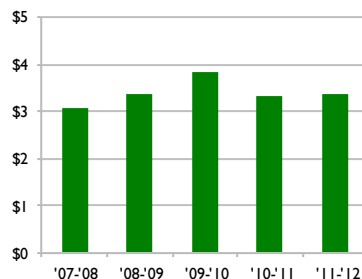
In 2011-12, 12 percent of wastewater influent was recycled for beneficial purposes during dry weather period. SBWR met recycled water quality standards 99.9 percent of the time during the same period.

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

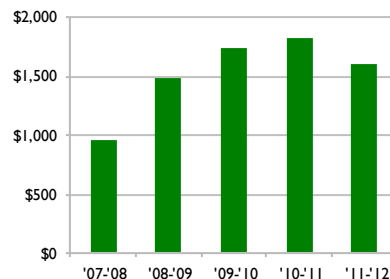
Millions of Gallons of Recycled Water Delivered Annually



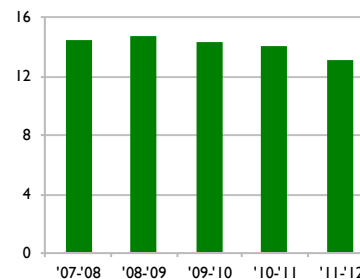
Operating Expenditures Recycled Water (\$millions)



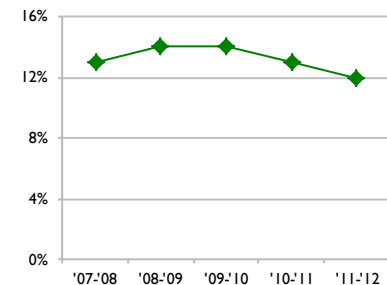
Cost per Million Gallons of Recycled Water Delivered



Millions of Gallons per Day Diverted During Dry Weather Periods



% of Wastewater Recycled for Beneficial Purposes 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 \$85 million in grant funding related to Green Vision projects. As Federal and State grant money, including federal stimulus dollars and tax credit allocations targeted at fostering and building the green economy are being expended, staff are evaluating strategies and work plans in order to advance the Green Vision initiatives with limited resources. For example, the City is partnering with industry leaders such as Armageddon Energy, PG&E, and Harvest Power to advance the City's Green Vision goals.

San José Green Vision Goals	Calendar Year 2011 Green Vision Key Achievements*
Create 25,000 clean tech jobs as the world center of clean tech innovation	155 new Clean Tech jobs in 2011; 7,000 total clean tech jobs to date. Over \$7 billion in total venture capital invested in Clean Tech companies in Silicon Valley to date, with \$1.7 billion invested in 2011 alone
Reduce per capita energy use by 50 percent	Energy efficiency measures implemented at City facilities have saved \$170,000 in cost savings and \$25,000 in rebates/incentives
Receive 100 percent of its electrical power from clean renewable sources	To date, 3,274 solar photovoltaic (PV) systems with a total capacity of over 44 MW have been installed in San José to date, which is equivalent to 11,099 4 kW residential systems Council approved agreement with SolarCity to install solar at 28 City facilities with total production potential of 4 MW
Build or retrofit 50 million square feet of green buildings	Over 5.4 million square feet of certified green buildings completed to date, including 17 municipal buildings totaling to 1.4 million square feet
Divert 100 percent of the waste from its landfill and convert waste to energy	Continuing to have the highest diversion rates in the nation including a 71% overall diversion rate, 77% multi-family, 84% City facilities
Recycle or beneficially reuse 100 percent of its wastewater (100 million gallons per day)	Over 10 miles of new recycled water pipes have been installed and various facility improvements are underway including construction of the Advanced Water Treatment Facility
Adopt General Plan with measurable standards for sustainable development	General Plan Update was adopted by the San José City Council on November 1, 2011
Ensure that 100 percent of public fleet vehicles run on alternative fuels	40% of City fleet on alternative fuel; fleet green house gas emissions reduced by 32% compared to 2003 baseline
Plant 100,000 new trees and replace 100 percent of streetlights with smart, zero-emission lighting	With the leadership of Our City Forest, planted 2,148 new trees, opened a community tree nursery, and completed over 60% of the street tree inventory with the help of grants and AmeriCorps volunteers With San José as a key advocate, the California Public Utility Commission (CPUC) approved a Pacific Gas & Electric (PG&E) tariff pilot for network controlled energy efficient Light Emitting Diode (LED), dimmable streetlights; awarded contract for 2,100 smart LED streetlights
Create 100 miles of interconnected trails	Over \$5.4 million in grant funding for trails and on street bike and pedestrian improvements Trail Count survey indicated a 5.7% increase in usage along downtown's Guadalupe River Trail and San José continues to be 20% above the national average in terms of commuting by bike

*As reported in the 2011 Green Vision Annual Report (<http://www.sanjoseca.gov/Index.aspx?NID=1417>)



San José implemented a ban on plastic shopping bags beginning in January 2012.

New bike lanes were installed on portions of Almaden Boulevard, Third Street, Fourth Street, Tenth Street and Eleventh Street by replacing traffic lanes. To enhance safety and encourage bicycle travel, most of the new bike lanes include a "buffer" area that increases the separation of bicyclists from motor vehicles.



Source: San José Green Vision Website