

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.

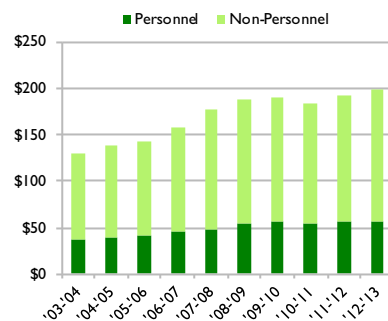
ESD provides City-wide coordination of efforts to protect and conserve air, land, water, and energy resources through policy development, education, and grant-seeking. This work is guided by the City's Green Vision (see *last page of this section*) and regulatory drivers.

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 \$419,000 of ESD's operating expenditures in 2012-13, down from about \$1.23 million ten years ago.

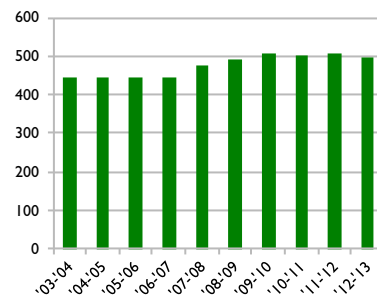
In 2012-13, ESD departmental operating expenditures totaled \$199.6 million*, 4 percent more than the previous year and up 53 percent from ten years ago. Staffing in 2012-13 included 499 full-time equivalent positions, down slightly from 2011-12, but up by 12 percent from ten years ago.

** In addition, ESD spent \$4.3 million in Citywide expenses (including \$3.2 million for 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

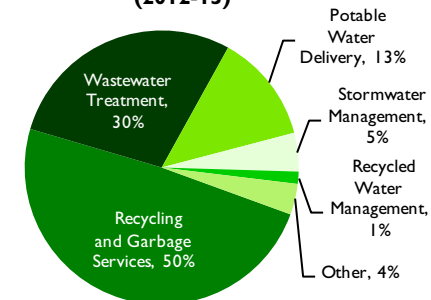


THE NATIONAL CITIZEN SURVEY™

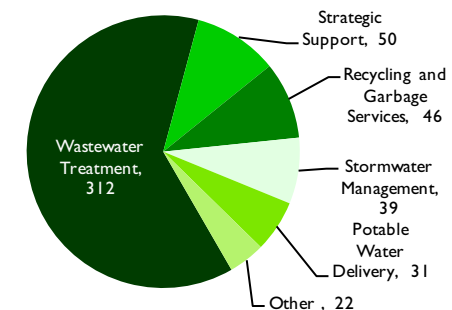
% of San José residents rating of their local environment as "excellent" or "good"

Cleanliness of San José	40%	Air quality	42%
Quality of overall natural environment in San José	44%	Preservation of natural areas such as open space, farmlands, and greenbelts	41%

ESD Operating Expenditures Breakdown (2012-13)



ESD Staffing Breakdown by Positions per Service (2012-13)



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 85 percent over the past ten years, from \$52.9 million to \$97.8 million. According to ESD, the increase is attributed to adjustments and program enhancements designed to meet the City's Green Vision goals.

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 26 non-exclusive franchise agreements with haulers providing construction waste collection services in the City of San José. ESD is also working 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, according to ESD, will begin mandating 75 percent of solid waste to be diverted* from landfills by 2020. Since 2007, San José has diverted at least 60 percent of waste, including 71 percent in 2012-13. According to ESD, they anticipate increasing this to 75 percent by January 2014.

*"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)

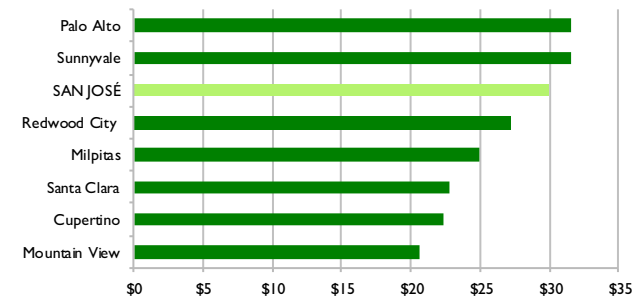
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66% of San José residents surveyed reported recycling used paper, cans or bottles at least 26 times in last 12 months

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

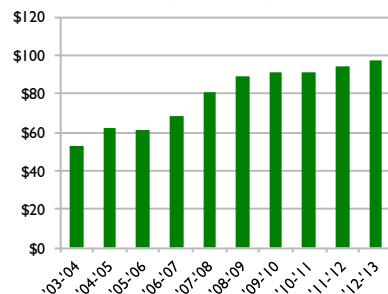
Yard waste pick-up	68%
Recycling	79%
Garbage collection	77%

Comparison of Monthly Residential Garbage and Recycling Rates

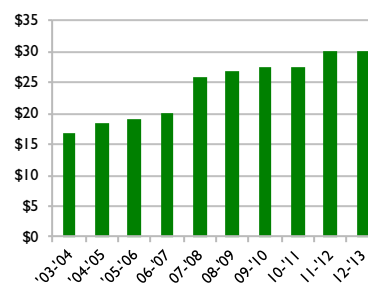


Sources: Rates listed on local government websites for those municipalities provided

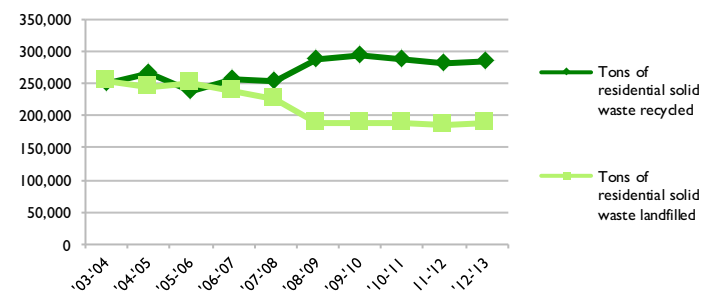
Operating Expenditures Recycling & Garbage Services (\$millions)



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



Tons of Residential Solid Waste Recycled vs. Landfilled



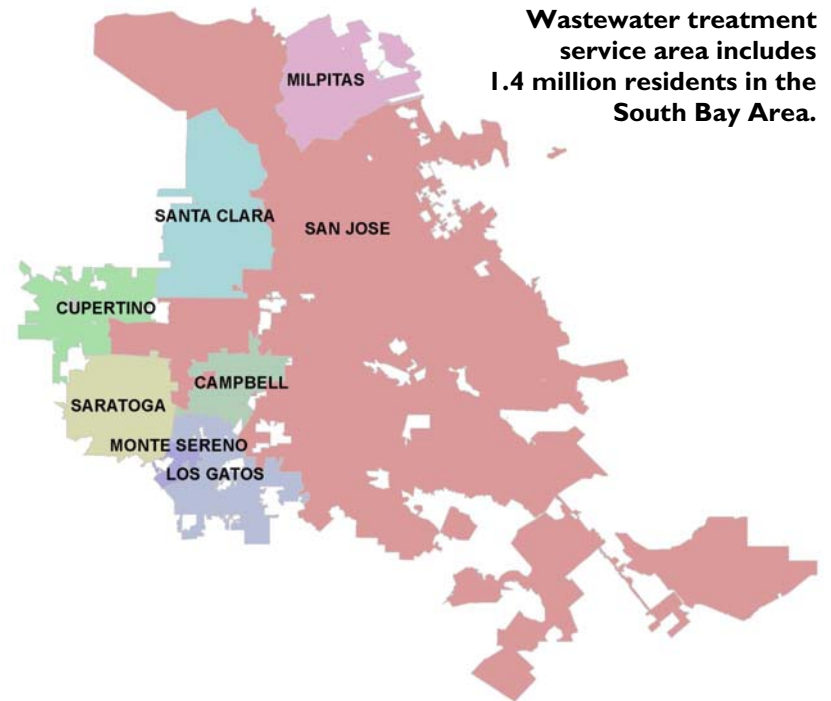
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WASTEWATER TREATMENT

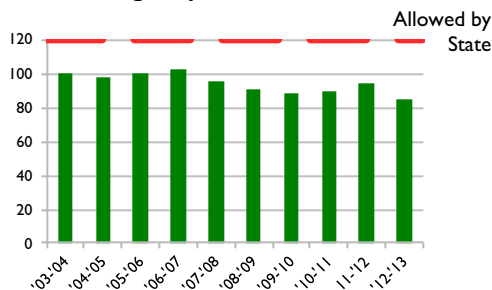
The City's Department of Transportation maintains the City's sanitary sewer system (see Transportation chapter) that flows to the San José-Santa Clara Regional Wastewater Facility. ESD staff at the Facility provide wastewater treatment for 1.4 million residents in San José, Santa Clara, Milpitas, Campbell, 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 2012-13, operating and maintenance expenditures totaled nearly \$57 million. ESD wastewater treatment operations account for the largest share of ESD employees, 312 full time budgeted positions out of a total department of 499.

The Wastewater Facility continues to meet the Regional Water Quality Control Board's permit requirements for water discharged into the San Francisco Bay. In 2012-13, pollutant discharge requirements were met or surpassed 100 percent of the time.

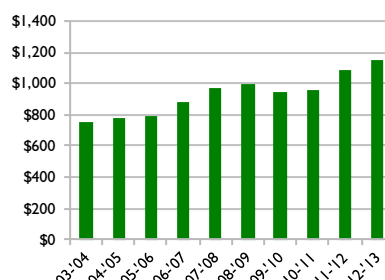
According to ESD, while there has been a decline in influent over the past several years, increasing maintenance and capital costs associated with aging infrastructure at the Plant have contributed to high operational costs (reaching \$1,150 per million gallons treated). ESD is moving forward with a Plant Master Plan (PMP), 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 PMP, most notably the release of an RFQ in Spring of 2013 for a Program Management Consultant to oversee capital construction.



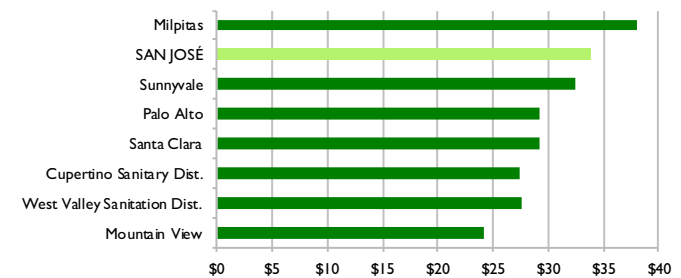
Millions of Gallons per Day Discharged to Bay During Average Dry Weather Season



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 26,700 customers annually in North San José, Alviso, Evergreen, Edenvale, and Coyote Valley. For 2012-13, operating expenditures totaled about \$26 million, up 58 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 2012-13, Muni Water delivered 7,724 million gallons of water to its customers, about the same as in 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 99.7 percent of water samples taken.

Muni Water rates increased by 9 percent in 2012-13, and have increased by 73 percent over ten years. These increases are about the same as those of other San José retail water providers, whose rates increased by 74 percent over ten years. However, Muni Water rates are still lower than the average of other water retailers serving San José.

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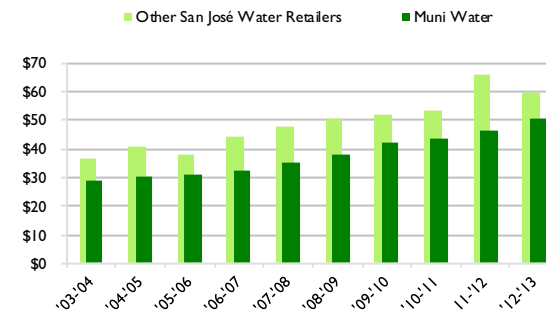
78% reported having water-saving fixtures such as low-flow shower heads or low-flush toilets in their home

76% reported that it was "essential" or "very important" to conserve water in their home

53% 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.

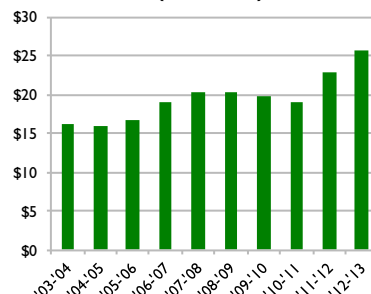
Comparison of Monthly Residential Water Bills



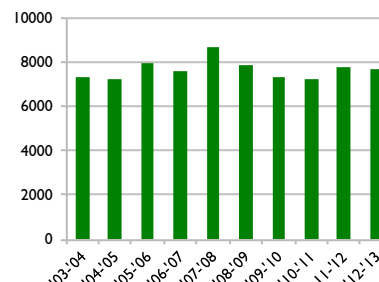
Source: ESD

Note: Monthly bill based on 15 HCF/month usage

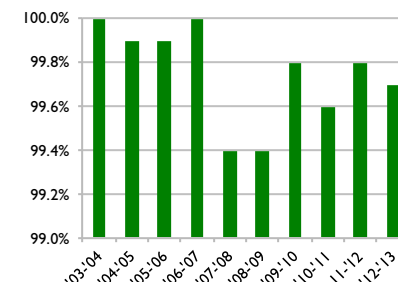
Operating Expenditures Potable Water Delivery (\$millions)



Millions of Gallons of Water Delivered to Muni Water Customers



% of Water Samples Meeting State and Federal Water Quality Standards



ENVIRONMENTAL SERVICES

STORMWATER MANAGEMENT

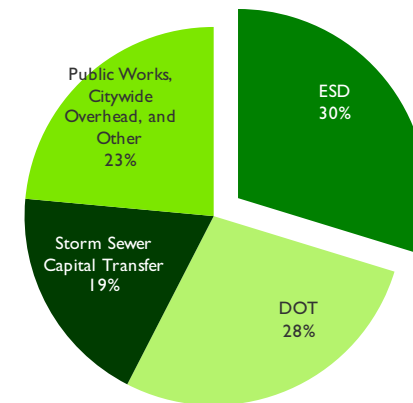
ESD, along with the Departments of Public Works and Transportation, manage the City's storm drains and storm sewer system, the purposes of which are to sustainably manage stormwater and prevent flooding of streets and neighborhoods by conveying rainwater into creeks, and eventually the South San Francisco 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. 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. The recent spike in tons of litter collected at creek clean-ups was due, in part, to increased homeless encampment clean-up events and trash clean-up during California Coastal Cleanup Day.

The annual fee per residential unit in 2012-13 was \$94.44* (or a monthly charge of \$7.87), a 115 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.

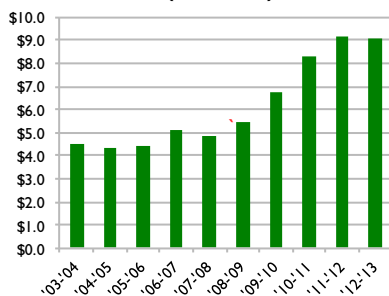
* This rate is for a single-family residence.

Breakdown of Storm Sewer Fund Budgeted Expenditures, 2012-13

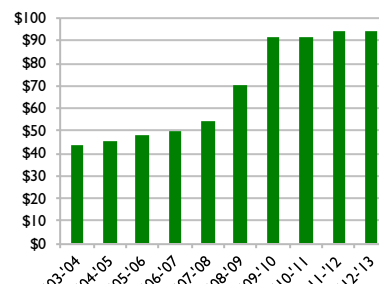


Source: 2013-14 Adopted Operating Budget

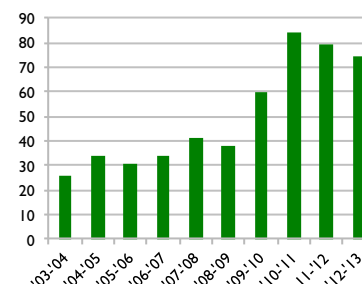
ESD Operating Expenditures Stormwater Management (\$millions)



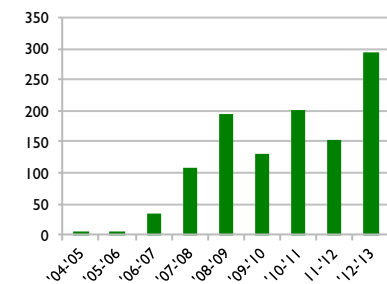
Annual Fee for Household Storm Sewer Service



Litter / Creek Clean-Ups



Tons of Litter Collected at Creek Clean-Ups



RECYCLED WATER

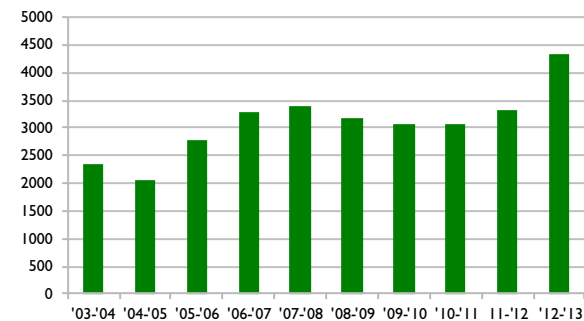
The City invests in South Bay Water Recycling (SBWR) in order to reduce wastewater effluent and protect the ecosystem of the South Bay, including the habitat of two federally endangered species, the Salt Marsh Harvest Mouse and the California Clapper Rail. SBWR serves the cities of Milpitas, Santa Clara,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

In 2012-13, SBWR delivered over 4,300 million gallons of recycled water to 724 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 \$1,382 in 2012-13; it has increased 37 percent over a ten year period. According to ESD, the five-year decrease is due to staffing and capital investment reductions and other cost control measures.

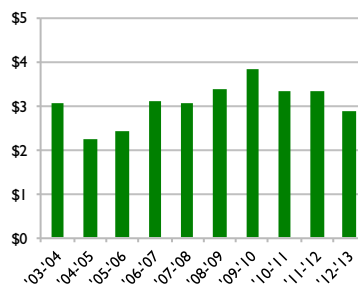
In 2012-13, 15 percent of wastewater influent was recycled for beneficial purposes during dry weather period. SBWR met recycled water quality standards 100 percent of the time during the same period.

Millions of Gallons of Recycled Water Delivered Annually

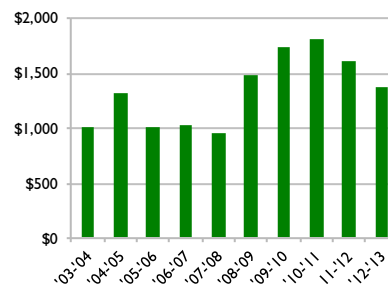


* This rate is for City of San José—Municipal Water customers, other SBWR provider rates may vary.

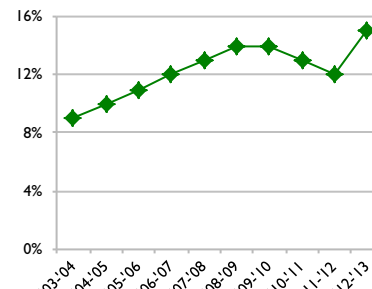
Operating Expenditures Recycled Water (\$millions)



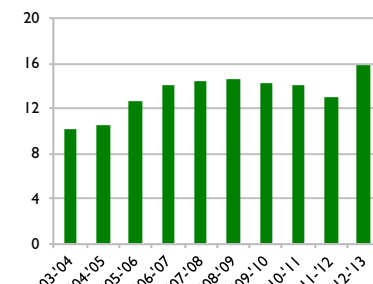
Cost per Million Gallons of Recycled Water Delivered



% 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 \$102 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. At this five year milestone in the fifteen year Green Vision strategy, it is important to evaluate the successes to date as well as identify challenges and opportunities over the next five years, and determine the best path forward in achieving the Green Vision goals.

San José Green Vision Goals	Calendar Year 2012 Green Vision Key Achievements*
Create 25,000 clean tech jobs as the world center of clean tech innovation	3,176 new Clean Tech jobs in 2012, 10,176 total clean tech jobs; nearly \$8.1 billion in total venture capital invested in Clean Tech companies in Silicon Valley, with \$1.08 billion invested in 2012 alone
Reduce per capita energy use by 50 percent	11 energy audits and 40 efficiency projects were completed in 2012 and are anticipated to generate an ongoing savings of \$230,000 per fiscal year
Receive 100 percent of its electrical power from clean renewable sources	To date, 3,514 solar photovoltaic (PV) systems with a total capacity of 47.8 MW have been installed in San José making it California's top solar city and a national leader
Build or retrofit 50 million square feet of green buildings	Over 6.7 million square feet of certified green buildings completed to date, including 19 municipal buildings totaling to over 2 million square feet
Divert 100 percent of the waste from its landfill and convert waste to energy	Constructing two of the nation's largest and most advanced solid waste processing facilities in San José: Republic's facility at Newby Island Landfill and the Zero Waste Energy Development (ZWED) plant on San José/Santa Clara Regional Wastewater Facility lands. These projects represent over \$80 million in infrastructure investment
Recycle or beneficially reuse 100 percent of its wastewater (100 million gallons per day)	Facility improvements underway including construction of the Silicon Valley Advanced Water Purification Center in partnership with the Santa Clara Valley Water District (SCVWD)
Adopt General Plan with measurable standards for sustainable development	The City adopted amendments to Title 20 (the Zoning Code) to further the Envision 2040 General Plan goals, policies and actions, including economic streamlining, increased maximum heights, increased allowable residential densities, reduced parking requirements and promotion of certified farmer's markets
Ensure that 100 percent of public fleet vehicles run on alternative fuels	In 2012, 40% of City fleet ran on alternative fuel; fleet GHG emissions reduced by 41% compared to 2003 baseline
Plant 100,000 new trees and replace 100 percent of streetlights with smart, zero-emission lighting	In partnership with Our City Forest (OCF), planted 2,031 new trees in 2012, celebrated the opening of OCF's community tree nursery, and completed over 60% of the street tree inventory with the help of grants and AmeriCorps volunteers To date, 0.8 million kWh of electricity has been saved as a result of installing 2,497 smart Light Emitting Diode (LED) streetlights in San José
Create 100 miles of interconnected trails	A total of 54.7 miles of trails and 216 miles of on-street bikeways. 2012 Trail Count survey indicated a 12% increase in trail usage across 6 count stations. Over \$10 million in grant funding in 2012 for trails and on-street bikeways and pedestrian improvements

*As reported in the 2012 Green Vision Annual Report (<http://www.sanjoseca.gov/DocumentCenter/View/14467>)