

INTRODUCTION

This report fulfills the San Jose/Santa Clara Water Pollution Control Plant's (Plant) NPDES Permit requirement to submit an annual report to the San Francisco Bay Regional Water Quality Control Board (Regional Water Board). Unless otherwise noted, it covers activities that occurred during the period January 1, 2008 to December 31, 2008 under Permit Order R2 2003-0085. Provision E. 7b (Pollution Prevention and Minimization Plan) describes required annual reporting for the Pollution Prevention Plan. Provision E. 11 (South Bay Action Plan (SBAP), Provision E. 17 (Operations and Maintenance Manual and Reliability Report Updates), and Provision E. 18 (Contingency Plan Update) describe annual reporting requirements that drive the South Bay Action Plan.

The report is structured into two distinct sections that are stand-alone reports to facilitate review.

1. 2008 South Bay Action Plan Activity Report.
2. Annual Pollution Prevention (P2) Report.

EXECUTIVE SUMMARY

1. SOUTH BAY ACTION PLAN

The City has been submitting an annual South Bay Action Plan since 1991. This report responds to State Water Board concerns that treated effluent from the San Jose/Santa Clara Water Pollution Control Plant may threaten, or could potentially threaten, salt marsh habitat in the Lower South San Francisco Bay. The South Bay Action Plan provides annual reporting to the San Francisco Bay Regional Water Quality Control Board in compliance with several of the Plant's NPDES permit provisions:

- Permit provision E.11 mandates annual reporting of accomplishments and planned activities for Water Conservation and Water Recycling programs,
- Permit provisions E.13, and E.14 outline requirements for assessment of marsh habitat affected by the Plant discharge; and,
- Permit provisions E.17 and E.18 require annual reporting of the status and review of Plant Operations & Maintenance Manual, Reliability Report, and Contingency Plan.

Water Conservation and Water Recycling

The City continues to promote water conservation through public outreach and the Water Efficient Technologies (WET) program aimed at commercial and industrial water users. For 2008, the City estimates that an additional 0.23 million gallons per day (mgd) of water supply flow reduction were achieved over reductions already gained in previous years. And, at its tenth year of operation, the South Bay Water Recycling Program (SBWR) delivered an average of 14.7 million gallons per day (mgd) during the dry weather season. The City continues to work with the Santa Clara Valley Water District (Water District) to expand partnership opportunities. Construction of the Guadalupe Gardens project was completed in and the demonstration garden was opened to the public in 2008.

Plant Reliability

The Plant is engaged in a number of construction activities and procedural changes to improve our ability to provide safe and reliable wastewater treatment services for San Jose, Santa Clara and the rest of the Plant service area. The 2008 South Bay Action Plan provides a synopsis of these current projects:

- Plant on-line Operations and Maintenance Manual – The Plant's electronic O&M Manual has been expanding to improve documentation and accessibility to information.
- Process Piping Mapping and Assessment – This multi-year project has already documented a substantial amount of above ground and buried piping around the Plant. This information is being compiled in a Geographic Information System GIS database which will then improve construction planning and safety for the future.
- Reliability Improvement Project – This largest addition to the Plant in 20 years has been completed, operationally tested, and should be fully certified this spring.

Measures of Effectiveness – Marsh Assessments and Plant Flow Reduction

Both Plant annual average influent and effluent flows continue to drop. Overall Plant Influent Flow has declined steadily since 2000. On the effluent side, the 2008 Average Dry Weather Effluent Flow (ADWEF, the lowest of the three consecutive months between May and October) was 92 mgd – the lowest since 1978. We believe that continued reduction in flows is attributable to three major factors: Water Conservation, slightly slower economy activity in the region, and greater diversion of Plant effluent to recycled water.

We also see encouraging trends in the South Bay marshes. Environmental health of the South Bay was the chief concern that drove the South Bay Action Plan from the beginning in the early 1990s. The issue at that time was disappearing salt marsh and a major presumed cause for this disappearance was believed to be the fresh water discharge from the San Jose/Santa Clara Water Pollution Control Plant.

The 2008 South Bay Action Plan provides a synopsis of nearly 18 years of data collection in South Bay marshes. Years of study have demonstrated that the Plant is, at best, a minor influence on the overall salinity of regional marshes. More importantly, the last two years of study, 2007 and 2008, have documented a statistically significant growth of salt marsh acreage. We also see three factors in this shift: new salt marsh has been growing on deposited sediment in the vicinity of Calaveras Point for several years now, 2007 and 2008 were relatively dry years with lower than average rainfall, and several former Cargill salt ponds in the South Bay were opened to tidal circulation in 2005 and 2006.

2. ANNUAL POLLUTION PREVENTION REPORT

The pollution prevention (P2) program's mission and work extend beyond minimum permit requirements. Program features include elements such as a broad programmatic scope that supports pollutant reductions benefiting a variety of media (sanitary sewer, stormwater, biosolids, solid waste, and air), allows for resourceful collaboration taking advantage of partnering opportunities to solve regional issues, provides accessible outreach that actively works to create awareness and change behavior, and is responsive and adaptive enabling the best use of limited resources to proactively address issues instead of reacting only when it is mandated.

The City is committed to striving for excellence in its pollution prevention efforts. Highlights for 2009 pollution prevention activities are summarized below.

Mercury

The City continued to make progress toward implementation of a dental mercury amalgam program. During 2008, the program concentrated on gathering stakeholder input. A Stakeholder Input Meeting was held on August 29, 2008 for all dentists within the Plant's tributary area, and staff met twice with the Santa Clara County Dental Society Board of Directors to discuss the proposed program. Approval of an ordinance amending the San José Municipal Code to authorize regulation of dental practices under a Dental Wastewater Permit and require the installation of amalgam separators and implementation of Best Management Practices is scheduled to be presented

for approval at a Spring 2009 San José Council meeting. If approved, the amendments will become effective July 1, 2009. The Plant's tributary cities are scheduled to approve similar ordinances and/or operating codes in late 2009 to become effective by January 1, 2010.

The City led coordination of regional partners on a public education program offering residents throughout the Bay Area an opportunity to exchange their mercury fever thermometers for a digital one free of charge during Nation Pollution Prevention (P2) Week, September 15-21. The primary objectives of the Thermometer Exchange events were to provide residents with an easy way to help prevent pollution during P2 Week, educate them on day to day pollution prevention practices, and to collect and properly dispose of mercury fever thermometers. The City hosted six exchange events during P2 Week and an additional ten events throughout the year. A total of 775 mercury thermometers, equivalent to approximately 387.5 grams of mercury, were collected in 2008 from approximately 700 tributary area residents. The City plans to continue hosting thermometer exchanges in 2009.

In 2008, the City issued a support letter for Assembly Bill 2347, regarding take-back legislation for mercury added thermostats. The bill passed the Assembly and Senate and was signed into law by the Governor. This legislation provides consumers safe, free and convenient options for recycling their waste thermostats.

Additional pollution prevention activities funded by solid waste programs include supporting the countywide household hazardous waste (HHW) residential drop off program that collected 1,295 pounds of mercury containing products, 123,452 pounds of fluorescent lights, and 100,100 pounds of batteries.

FOG

In 2008 the City expanded FOG inspection service to other jurisdictions within the Plant tributary area. The City began providing FOG inspections in the cities of Santa Clara, Los Gatos, and Campbell. Inspections are planned to begin in the other tributary cities in 2009.

This year, the City began the process of updating the Municipal Code to better support the FOG program. In November 2008, the City hosted a FOG stakeholder

workshop to inform attendees about proposed changes code changes and to solicit feedback. The amendments to the San José Municipal Code are anticipated to clarify program requirements, formalize existing best management practices, and improve inspection efficiency. The proposed Code changes are scheduled for presentation to Council for approval on February 24, 2009. If approved, the revised ordinance is scheduled to become effective July 1, 2009. After the San José ordinance is approved, staff will work with tributary cities to adopt similar ordinances.

In addition, the City led coordination of the BAPPG regional Spanish radio advertising campaign promoting proper disposal of residential fats, oils, and grease. The advertisements aired during the Thanksgiving and Christmas holiday season on KSOL, a Spanish radio station that reaches nine Bay Area counties, and reached more than 2 million listeners over four weeks.

Emerging Pollutants

In 2008, the City continued to implement activities to increase public awareness of the impact of emerging contaminants on the Bay. A focus of City efforts this year was promoting the message of safe disposal of pharmaceuticals to the public and City employees. The City hosted six safe medicine disposal events in conjunction with the statewide No Drugs Down the Drain Campaign. A total of 1,695 pounds of medicines were collected throughout the campaign from more than 500 residents. The City continues to pursue a sustainable method of providing ongoing, safe, and convenient medicine disposal options for residents. Staff met with partners regarding implementation of a pharmaceutical collection pilot program and plans to continue to pursue the opportunity in 2009. Until an ongoing program has been implemented, residents will continue to be directed to the Santa Clara County Household Hazardous Waste (www.hhw.org) program for disposal of unwanted pharmaceuticals.

The City actively supports and monitors legislative efforts for establishing a state-wide solution for disposal of unused and expired pharmaceuticals. The City supported Senate Bill 966 (Simitian) which became law in 2007 and was intended to begin the process of creating model pharmaceutical disposal programs. In 2008, as a part of SB966 implementation the California Integrated Waste Management Board (CIWMB) initiated development of Criteria and Procedures for Model Home-Generated Pharmaceutical Collection programs. City staff reviewed the draft criteria and procedures, participated in stakeholder input meetings, and submitted comments to CIWMB.

A new bill SB26 (Simitian) was introduced to create and regulate consolidation points for home-generated pharmaceutical waste, and transportation and disposal of the waste by haulers and carriers. If the bill becomes law, the California State Board of Pharmacy would coordinate with state agencies, local governments, drug manufacturers, and pharmacies to develop sustainable, efficient policies and programs to properly manage pharmaceutical wastes and their disposal. The City plans to monitor and support SB26 during the 2009 legislative cycle.

City staff participated in the Product Stewardship Institute Pharmaceutical Dialogue which was formed to address federal regulatory obstacles to establishing collection programs. Participants are pursuing an extended producer responsibility based solution in the long term to alleviate the financial burden on local governments.

Household Hazardous Waste (HHW) Drop-Off Facility

The City continues efforts to relocate an HHW drop-off site to a centralized permanent location in San José. Facility and stormwater pollution prevention designs are near complete. A Request for Proposals for construction services is expected to be released for competitive bids in early 2009, with a facility grand opening for public services anticipated in Fall 2009. Mobile collection events will continue to be scheduled in 2009

Sewer Use Ordinance Changes

In December 2007, the City Council approved a revised Sewer Use Ordinance that incorporated the changes to the Local Limits and other changes to the Sewer Use Ordinance. In 2008, the local discharge regulations for the City of San José and all agencies tributary to the Water Pollution Control Plant were updated and adopted by the respective local governing bodies to include the new local limits.

General Pollution Prevention Outreach Efforts

In addition to pollutant specific outreach, the City produces general outreach materials and participates in events that promote fundamental water quality management and pollution prevention messages that address more than one specific pollutant. The following are highlights of the City's general outreach efforts in 2008:

In September, the City hosted activities in connection with National Pollution Prevention Week focused on engaging the community and City employees. P2 Week events kicked off with a formal proclamation by the Mayor and Council declaring September 15 - 21 as Pollution Prevention Week and recognizing the City's efforts to implement pollution prevention practices into municipal operations. Five resource fairs were held at senior centers, libraries, and community centers located throughout the tributary area. At these resource fairs, 565 Tributary Area residents were able to collect resources to help them practice pollution prevention at home. The week ended with a presentation on the effects of the giant plastic soup phenomenon that is located in the Central Pacific Gyre.

On September 16, 2008, the City Council adopted the Cities Keep It Clean Resolution making San José the first city in the Bay Area to join Save the Bay's Cities Keep It Clean Partnership. Recognizing that cities play a key role in providing services that help residents reduce Bay pollution and that cities can model Bay protection behaviors, Save the Bay initiated Cities Keep It Clean! to promote important actions cities can implement to reduce pollution. The partnership demonstrates the City's commitment to protecting the San Francisco Bay from trash, mercury, e-waste, pharmaceuticals, pesticides, vehicle pollution and run off.

2009 Work Plan Highlights

Future activities will include further implementation of City's Dental Amalgam Program (e.g. vendor fairs, application release, and permit issuance); further enhancement and expansion to the Fats, Oils, and Grease (FOG) program; additional research, collaboration, and implementation of a pilot collection program for pharmaceuticals, and continued collaboration with other agencies to promote legislation supporting Product Stewardship models to address pharmaceutical disposal and other pollutants of concern.