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Memorandum

TO: HONORABLE MAYOR
AND CITY COUNCIL

FROM: John Stufflebean

SUBJECT: POLLUTION PREVENTION REPORT **DATE:** 03-01-11

Approved 

Date 3/2/11

INFORMATION

As the administering agency of the San José/Santa Clara Water Pollution Control Plant (Plant), the City operates the Plant under a complex set of regulatory requirements contained in the National Pollutant Discharge Elimination System (NPDES) permit, Order No. R2-2009-0038. The permit requires reporting on the Plant's pollution prevention programs and activities to be submitted to the San Francisco Bay Regional Water Quality Control Board (Regional Water Board) in February of each year.

The 2010 Annual Pollution Prevention Report was submitted to the Regional Water Board by February 28, 2011. The report is a summary of activities in place to prevent and minimize the Plant's contribution of priority pollutants to the South Bay. Highlights of the 2010 Pollution Prevention Report are outlined in the attached Executive Summary.

The entire 2010 Pollution Prevention Report is available on the Environmental Services website at www.sanjoseca.gov/esd/cbs.asp. If you wish to obtain a hard copy of the report, contact Roberta Dunlap of my staff at (408) 793-5328.

/s/
JOHN STUFFLEBEAN
Director, Environmental Services

For questions please contact Sharon Newton, Program Manager, at (408) 793-5351.

Attachment – Executive Summary

Executive Summary

The City of San José operates the San Jose/Santa Clara Water Pollution Control Plant (Plant) for the Tributary Agencies of the cities of San José, Santa Clara and Milpitas; Cupertino Sanitary District; West Valley Sanitary District including Campbell, Los Gatos, Monte Sereno and Saratoga; County Sanitation District 2-3; and Burbank Sanitary District. This 2010 Annual Pollution Prevention Report has been prepared in accordance with the requirements of Order Number R2-2009-0038, NPDES Permit no. CA0037842 issued to the San Jose/Santa Clara Water Pollution Control Plant on April 8, 2009.



San José has a long and esteemed history of implementing water quality programs, supporting and leading efforts to advance the scientific understanding of water quality issues, and actively engaging in local and regional forums to address watershed issues.

First adopted by the San José City Council in 1990, the City's Pollution Prevention program has evolved from small-scale waste minimization efforts to the current watershed-based approach in addressing pollutant issues. Over the years, the City has realized major reduction in various pollutants of concern by implementing strict industrial pollutant control activities, launching technical studies to understand the fate and transport of pollutants in the South Bay and the Plant, developing and practicing strategies to reduce pollutants in the Plant's effluent, and raising awareness of water quality issues and environmentally safe practices. These activities include the City developing waste minimization programs for specific industry types in the early 1990's; revision of the local limits for copper, nickel, and cyanide in 1994; initiating a New Development Review Program to ensure certain environmental requirements (flow, pollutant discharge, industrial wastewater reuse, etc.) are incorporated as a condition of development within the City; and developing the Flow Audit Studies Program. In addition, the City continually strives to maximize the use of regional venues, tools, and resources in addressing regional issues while implementing local solutions that effectively contribute to Bay-wide watershed protection. A summary of historical pollution prevention highlights is included in Section 2 of the report.

The pollutants of concern for the Plant are discussed in individual sections of this report:

- copper and nickel (Section 4),
- mercury (Section 5),
- cyanide (Section 6),

- fats, oils, and grease (FOG) (Section 7), and
- pesticides (Section 8).

Each section addresses the source and the estimated load of the pollutant, goals to address the pollutant, effectiveness measures and results of activities through the pollution prevention program for 2010, and outreach messages and activities planned for 2011.

In addition, the City continues to develop and implement programs that address other pollutants, and study the sources and prevention options for some emerging contaminants (Section 9).

Highlights for 2010 pollution prevention activities are summarized below.

Mercury

Significant progress was made toward implementation of the Dental Amalgam Program in 2010. The Tributary cities adopted ordinances, effective in January 2010, to regulate dental practices under a Dental Wastewater Permit, allowing expansion of the program into all of the Plant service area. Dental Wastewater Discharge Permit applications were mailed to all dentists located in the Tributary cities in February 2010. A total of 795 permits have been issued to dental practices in the program, representing 93% of all identified dentists.

In 2010, a total of 214 inspections of San José dental practices were completed. Inspections confirmed that amalgam separators were installed at 100 percent of these practices, confirming the accuracy of their previously submitted self-certification statements. In addition, most of the inspected dental practices were following the Dental Amalgam Program best management practices. When violations were identified, nearly all were corrected the same day. Inspections of the dental practices located in the Tributary cities will begin in 2011

Two program workshops and vendor fairs were conducted in January 2010 and attended by over 45 dentists practicing in the Plant service area. The workshop presentations covered the program requirements, permit process, and timeline. Attendees had the opportunity to speak with ten vendors and see samples of amalgam separators.

The City continued its public education program offering residents opportunities to exchange their mercury fever thermometers for a digital one free of charge. A total of 21 thermometer exchange events were held in the Tributary area in 2010. Approximately 1,422 Tributary area residents participated in the events and exchanged a total of 945 mercury thermometers and 17 miscellaneous mercury containing items, resulting in collection of approximately 523 grams of mercury. Beyond offering attendees a free digital thermometer in exchange for their mercury containing one, these events educated residents on mercury pollution prevention, proper disposal of household hazardous waste, and a broad array of prevention tips. The City plans to continue hosting thermometer exchanges in 2011.

Additional pollution prevention activities integrated into local solid waste programs include supporting the countywide household hazardous waste (HHW) residential drop

off program that collected 580 pounds of mercury containing products, 94,447 pounds of fluorescent lights, and 178,602 pounds of household batteries.

FOG

In 2009, the San José City Council approved an updated Municipal Code to support the FOG program. Specifically, the revisions codified existing best management practices formalized grease control requirements. Similar ordinances adopted by the Tributary Agencies became effective by January 2010.

During 2010, the City continued expansion of the Food Service Establishment (FSE) Inspection Program to other jurisdictions within the Tributary Area. The City is now providing FSE inspections in the cities of Cupertino, Milpitas, Santa Clara, Los Gatos, Saratoga, Monte Sereno, and Campbell. Approximately 815 FSEs were inspected in these cities in FY 09-10.

In 2010, the City conducted a grease hauler workshop. The purpose of the workshop was to educate grease haulers operating in the Tributary area on proper grease pumping and disposal BMPs.

A pilot residential grease collection event was held on November 27 at the San José Environmental Innovation Center. Seventy gallons (525 pounds) of used cooking oil and grease were collected from 17 households.



In addition, the City coordinated the Bay Area Pollution Prevention Group (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 Univision radio stations KSOL and KBRG; PSAs were aired on KSOL, KBRG, and, KVVF. Univision Spanish radio stations air in nine Bay Area counties, and reached an estimated 2 million listeners during the campaign.

Emerging Pollutants

Building upon the City's collaborative efforts to understand the environmental fate and occurrence of emerging contaminants (including PPCPs), City Staff conducted an Emerging Contaminant Fate and Transport study at the Plant in 2008 and 2009. In 2010, the City published results of this pilot investigation, which measured 166 microconstituents at the Plant. Overall, the study revealed that the Plant had a better than 75% removal efficiency of most quantified microconstituents based on mass balance calculations. Results of this study have been presented at multiple conferences

and symposia including WEFTEC 2009 in Orlando, FL; State of the Estuary Conference 2009 in Oakland, CA; American Chemical Society Conference in San Francisco, CA in 2010; and as a feature article in the July 2010 issue of the journal Water Environment and Technology (WE&T). The WE&T article is available online at http://www.sanjoseca.gov/esd/pub_res.asp under Technical Reports.

In 2010, the City continued to conduct activities to increase public awareness of the impact of emerging contaminants on the Bay. During National Pollution Prevention Week, September 19-26, 2010, the City coordinated six pharmaceutical collection events and educated residents not to flush unwanted medications down the drain. The events were held in Campbell, Milpitas, and San José at senior centers, community centers, and a hospital. A total of 1,986 pounds of medicines were collected from more than 700 residents.



In addition, the City of Santa Clara collects pharmaceuticals at its police station, utilizing a receptacle installed in 2009. Through this service 847 pounds of used and expired medicines were collected and disposed of properly this year. City staff promoted the County program at community events.

Household Hazardous Waste (HHW) Drop-Off Facility

The City relocated an HHW drop-off site to a centralized permanent location in San José. Phase I of the project was completed in June 2010, and consists of an exterior HHW drop-off facility. Monthly collection events have occurred at this location since July 2010. In Phase II of the project the HHW collection operation will be expanded to include a new permanent collection facility. Design of the expanded facility is complete, and an RFP for construction services will be released in early 2011.

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 2010:

In September, the City hosted activities in connection with National Pollution Prevention Week focused on engaging

the community and City employees. P2 Week highlights included a formal proclamation by the Mayor and Council declaring September 20-26 as Pollution Prevention Week. Six resource fairs were held at locations throughout the Tributary area. At these resource fairs, almost 700 Tributary area residents were able to collect resources to help them practice pollution prevention at home, exchange mercury containing thermometers, and safely dispose of unwanted medications.

2011 Work Plan Highlights

Future activities will include continued implementation of the Dental Amalgam Program dental facility inspections in San José and Tributary cities; evaluation of a Fats, Oils, and Grease (FOG) receiving station at the Plant, identification of opportunities to expand local pharmaceutical take back options, and continued collaboration with other agencies to promote legislation supporting Product Stewardship models to address pharmaceutical disposal and other pollutants of concern.