



# TRIBUTARY TRIBUNE

## San Jose / Santa Clara Water Pollution Control Plant

The Water Pollution Control Plant serves the cities of San Jose, Santa Clara, Milpitas, Cupertino Sanitary District, West Valley Sanitation District (including Campbell, Los Gatos, Monte Sereno, Saratoga), County Sanitation District 2-3, Sunol & Burbank Sanitary Districts.

Winter 1999

### Highlights from: The 1998 Clean Bay Strategy Report (South Bay Watershed Activities)

#### 1. Industrial Wastewater Recycle / Reuse

The Industrial Recycle/Reuse Program works with Industrial Users that discharge to the Plant on projects that will reduce use of potable water, encourage recycling of process water, and use reclaimed water from South Bay Water Recycling (SBWR) as source water in their facilities to the largest extent possible. Currently, ESD staff is coordinating directly with City Planning departments to capture new industries that move into the service area, and interact with those facilities that are in the planning stages of upgrading and/or expanding.

One element of the City's IWRR project is the Flow Audit Study Program. The Flow Audit Study program is an element of the Tier 1 Contingency Plan from the Clean Bay Strategy. The Flow Audit Study requires all dischargers with flow of over 100,000gpd to complete an audit in accordance with the newly developed protocol. The Flow Audit Protocol is available on-line at

[www.ci.san-jose.ca.us/esd](http://www.ci.san-jose.ca.us/esd)

Implementation of the protocol began in December 1998. Two workshops were held to introduce the project, one for staff and one for the dischargers.

Companies working directly with San Jose staff on water reduction efforts prior to the FAS include:

The Printed Circuit Board Research Study Workgroup (South Bay Circuits, Tyco, Paragon Electronic Systems, HADCO);  
The Semiconductor Group (Hewlett Packard, IBM, Intel, National Semiconductor and Siliconix);  
Candescent Technologies;  
California Paperboard;

LSI Logic;  
Dynamic Circuits;  
Hitachi;  
Maxmedia;  
Owens Corning Fiberglass;  
Calpine;  
San Jose State University; and  
Syva Company, San Jose.

The Recycle/Reuse Program offers financial incentives and technical support to all IUs that want to reduce flow.

The 1998 average discharge from permitted industry was 11.73mgd, which is a 0.8 mgd reduction from the 1997 average.

#### 2. Industrial Wastewater Discharge Municipal Code Change

It was necessary to change the tributary agencies' Municipal Codes in preparation for implementing the Flow Audit requirement from Tier I of the Contingency Plan.

The definition of Critical User was changed to read as follows:

Critical User means a discharger whose wastewater contains priority pollutants, or who discharges any waste other than sanitary sewage which has the potential to cause interference, or who discharges in excess of 100,000 gallons per day.

The change will result in the regulation of companies discharging greater than 100,000gpd to the sanitary sewer. As of January 1, 1999, San Jose, Santa Clara, Milpitas, Cupertino Sanitary District, and West Valley Sanitation District had all adopted the new definition. Burbank and Sunol Sanitary Districts will make the necessary change in 1999.

San Jose/Santa Clara Water Pollution Control Plant  
Environmental Services Department  
Environmental Enforcement Division  
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### 3. South Bay Water Recycling (SBWR), Phase 2

South Bay Water Recycling is a long-term program that benefits the Bay and brings a sustainable and drought-proof supply of water to the region and protects the endangered species habitat at the south end of San Francisco Bay.

Phase 2 continues the efforts of the first phase with the development of a Master Plan that includes both short and long-term alternatives for additional recycled water use. In the short-term, Phase 2 will focus on finding additional customers within the tributary area in order to divert another 15 million gallons per day. Long-term planning could result in reuse of up to 100 mgd by 2020. Alternatives may include additional landscape and agricultural irrigation, industrial reuse, various environmental alternatives and other reuse options.

In 1998, during the first season of operation, up to 4 mgd of recycled water was delivered to more than 100 customers in Santa Clara, San Jose, and Milpitas. Heavy spring rains, which caused high ground water and wet soils, as well as cooler summer weather, resulted in a reduced need for water for irrigation.

The 1997 Revised South Bay Action Plan requires that construction of infill and deferred extensions to the SBWR pipeline commence on or before January 31, 1999. To address this requirement, SBWR completed an evaluation and selection process for 12 separate projects, totaling 11,000 linear feet of pipe, in the cities of Santa Clara, Milpitas and San Jose. These projects were awarded in October 1998, three months ahead of schedule, and, combined, could yield a maximum dry weather usage of 3 mgd. The infill projects are scheduled to be operational before the commencement of the

### 4. South Bay Employees in Action

dry weather season on May 1, 1999.

In conjunction with the residential ULFT campaign, during the 1998 June through October period, efforts continued on the Slow the Flow and Save the Bay Local Business Awareness Campaign. The campaign was co-sponsored by the Silicon Valley Manufacturing Group, Silicon Valley Chamber of Commerce, Santa Clara Valley Water District, Silicon Valley Toxics Coalition, and tributary agencies of the Plant. The campaign's purpose was to encourage employees to purchase ULFTs for their homes. Participating companies ranged in size from Hewlett-Packard and Adobe Systems to Aki's Bakery.

Campaign elements included posters; brochure mailers; a special website for participants to request information; and presentations by City staff members at company sites. In addition to this, two news conferences were held to kick-off the campaign and to congratulate all the companies that participated and helped the campaign be successful. Information about the campaign appeared in the local newspapers and was televised on local stations. There was even an opinion letter published in the Mercury News Business section written by Craig Barrett, President of Intel Corporation, supporting the Slow the Flow campaign.

The campaign was very successful and contributed to the installation of nearly 30,000 ULFTs through ULFT programs during the 1998 dry weather season. This was the largest number of ULFTs installed in any 6 month period. The campaign also achieved its goal of signing up 100 companies to participate *and* delivered the Slow the Flow message to more than 100,000 Silicon Valley employees.

*For information on ULFT incentives available for your home or business, or to get your company involved in Slow the Flow for 1999, please call the Water Efficiency Program at (408) 277-8400.*

<b><i>1998 Treated wastewater discharge volumes</i></b>			
<b>Month</b>	<b>Influent Flow</b>	<b>Recycled Flow</b>	<b>Effluent Flow</b>
July	128.2	2.4	125.8
August	123.2	4.0	119.2
September	121.6	4.0	117.6
October	120.1	3.0	117.0
<i>(ADWEF) Lowest Consecutive 3-month Average</i>			<b>117.9</b>

**The Plant has remained under its 120 mgd flow limit during the 1998 average dry weather effluent flow monitoring period, as shown in the table above, through a combination of flow reduction projects (Industrial wastewater use/reuse, ultra low flush toilet retrofits, and SBWR efforts).**

**For a copy of the Clean Bay Strategy Report, please contact your Source Control Inspector, or call in a request at (408) 945-3000. The complete report can also be downloaded from our website: [www.ci.san-jose.ca.us/esd](http://www.ci.san-jose.ca.us/esd)**

## City of San Jose - Watershed Grant Program

In October 1998, San Jose City Council approved a Watershed Grant Program to provide resources and support for effective community and stakeholder involvement. The purpose of this program is to protect and restore those areas of the Santa Clara Basin Watershed within the Plant tributary area by supporting community participation and programs.

ESD convened a work group comprised of ESD staff, representatives of the Plant's Technical Advisory Committee, and staff from EPA Region IX, Santa Clara Valley Water District, and the Silicon Valley Community Foundation, to assist in the definition of program goals, guidelines, application procedures, and the selection criteria and process for the program.

The goals of the Program are to:

- foster and implement innovative solutions to local watershed problems
- encourage partnerships and joint ventures,
  - acquire new participants and challenge existing participants,
  - increase awareness of watershed issues, and
  - to leverage resources.



Two types of grants were available. **Operating Grants** support participation in the Watershed Management Initiative and other City Watershed activities. **Program Grants** are for specific projects such as projects designed to improve water quality, watershed restoration, waste load reduction, source control, flow reduction or other watershed related issues, scientific studies that would improve the knowledge related to watershed issues, and education-oriented projects and activities.

A total of \$361,300 was available for these grants, with the final award grants not to exceed \$25,000 for any operating grant and \$60,000 for any program grant. The Request for Proposals for the City's Watershed Grant Program was released on October 14, 1998 with proposals due by December 4, 1998. Thirteen proposals were received, requesting a total amount of \$500,000. The proposals included in-kind services and activities totaling over \$84,000.

The ten proposals below have been tentatively approved, with final approval pending grant agreement negotiations, and City Council approval (tentatively scheduled for March 16, 1999).

Almost \$300,000 will be awarded to the organizations listed below, with projected matching funds of almost \$76,000. The awardees will be meeting in February to finalize grant agreements and meet with their respective grant manager within ESD. We hope to give awardees a notice to proceed by March 31, 1999 for one-year projects.

If you have any questions on this program, please contact Mary Tucker at (408) 277-5533, or e-mail address:

**[mary.tucker@ci.sj.ca.us](mailto:mary.tucker@ci.sj.ca.us)**

Organization	Project Title
The Natural Heritage Institute	On-going participation in the FAHCE project
Silicon Valley Toxics Coalition	Operating support for Santa Clara Basin Watershed Management Initiative Participation
Silicon Valley Pollution Prevention Center (2)	Industrial Research and Technology Transfer and Operating support for Santa Clara Basin Watershed Management Initiative Participation
Aquatic Outreach Institute	Kids in Creeks Program
Silicon Valley Manufacturing Group (2)	Industrial Research and Technology Transfer and Operating support for Santa Clara Basin Watershed Management Initiative Participation
San Jose Silicon Valley Chamber of Commerce	Operating support for Santa Clara Basin Watershed Management Initiative Participation
Hacienda Involved Parents and Staff, San Jose Unified Educational Foundation Hacienda Science Magnet Elementary School	Watershed Teacher/Student Activities
San Francisco Bay Bird Observatory	Enhanced stream inventory activity and Operating support for Santa Clara Basin Watershed Management Initiative Participation

## CWEA Industry Awards

The annual industry awards were given at a luncheon on February 18, 1999 during the CWEA's Industrial and Hazardous Waste Conference, held in Berkeley, California.

These awards are given to companies that have met and exceeded the challenges they had in the area of pollution prevention and energy conservation. Local nominees were Dynamic Circuits, Prosil and LSI Logic. Dynamic Circuits was awarded a Certificate of Merit. Perhaps, next year, we will get more nominations from the local area.



## South Bay Circuits..... Water Wise Circuit Board Manufacturing

*In the spirit of spreading information about environmental issues in business, we have copied this excerpt on South Bay Circuits from **ecoOpportunities**, Summer 1998 edition.*

Mr. Chad Stump, Environmental Safety Manager at South Bay Circuits joined the City's Printed Circuit Board Research Study Workgroup because he thought it wise to be proactive in the regulatory process and he wanted to learn how to "self-regulate" so he would know what government inspectors would look for at his site, and what they would find. He also valued the opportunity to be involved in shaping future regulations and to network with his peers within other companies. Minimizing wastewater discharges also makes sense from the business perspective because companies usually reduce their operating costs and can receive financial incentives which recently increased from \$20,000 and \$2/ccf to \$4/ccf a year per project.

Through its 'partnership' with San Jose, South Bay Circuits made some simple but effective changes that benefit both parties.

South Bay Circuits, a manufacturer of printed circuit boards, sought opportunities for wastewater reduction very systematically. The first step was to inspect the plant to understand the flow of water and pollutants through the plant. Through this basic audit,

and with the help of the City of San Jose's Reasonable Control Measures, South Bay Circuits identified many opportunities to extend the useful life of their water and to even eliminate the initial need for some of the water. For example, reusing water from manufacturing and rinse tanks enabled them to reduce use from 90,000 to 33,000 gallons per day in a single manufacturing building. The audit also revealed that their waste treatment system was running at full capacity even when production was NOT. To remedy this, they implemented process improvements such as automated sprays, timing flow controls to limit the amount of water allotted per process, monitoring baths so that water was only added when the pH reached a certain level, and extending bath life with frequent analysis and adjustment of bath concentrations.

South Bay Circuits also evaluated their chemical inputs and found that they could substantially reduce their sludge, and consequently reduce the copper content of their discharge, by changing chemical suppliers. Administrative and training measures such as performing daily inspections and encouraging employee innovation for process improvements were also effective.

South Bay Circuits is continuing to seek out new opportunities for savings and is tracking results from their current improvements. They estimate that, since 1996, they have saved \$486,068 by conserving and recycling water and reducing chemical use. The company benefits from this \$162,023 annual savings, Mr. Stump benefits from the personal contacts he made, and the Bay benefits from the reduction in wastewater.

*Editor:* Laura Teksler

For more information on *ecoOpportunities*, logon to:

**BEN@PCCF.org**

Resources:

- Chad Stump, South Bay Circuits (408) 978-8992
- Reasonable Control Measures Documents, available from your Source Control Inspector



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## Calendar of Events

An Industrial Water Efficiency and Reuse Workshop, for Tier 1 Dischargers and other facilities, will be held on March 31, 1999. This all-day event takes place at the Hyatt Airport Hotel (Metro Station). For more information, contact the Silicon Valley P2 Center at (408) 291-0131 or contact your Source Control inspector at (408) 945-3000.



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