

TRIBUTARY TRIBUNE

SAN JOSE/SANTA CLARA
WATER POLLUTION
CONTROL PLANT

SUMMER 2000

DRAFT COPPER AND NICKEL ACTION PLANS

In 1996 the U.S. Environmental Protection Agency (EPA) included the South Bay on the 303 (d) impaired water body list as a high priority impaired water body.

In 1998 the Regional Water Quality Control Board (Regional Board) and the EPA updated the list and specifically identified copper, nickel, mercury, and selenium as the pollutants of concern.

The listing triggered a Clean Water Act mandate for the State of California, specifically the Regional Board, to establish Total Maximum Daily Loads (TMDLs) for these pollutants of concern.

To address National Pollution Discharge Elimination System (NPDES) permit issues for its wastewater treatment plant, the City of San José voluntarily funded the development of the copper and nickel TMDLs for the South Bay.

In 1998, the Copper and Nickel TMDL Work Group (Work Group)

was formed by the Santa Clara Basin Watershed Management Initiative (WMI) to provide guidance for the development of the TMDLs for copper and nickel in the lower South San Francisco Bay (South Bay).

The Work Group participants include representatives from regulatory and resource agencies, environmental advocacy groups, industry, and municipalities.

The Work Group oversaw the preparation and review of several technical reports. These reports provide the basis for conclusions and recommendations from the group regarding the effects of ambient concentrations of copper and nickel on the beneficial uses of the South Bay. One of the key reports was the *Impairment Assessment Report for Copper and Nickel in Lower South San Francisco Bay*.

The purpose of the Impairment Assessment was to present new information, and to

PLANT UPDATE

- *The Plant's zinc effluent mass loading recently reached an all time high of 22,324 lbs.*
- *The zinc level is close to the Plant's 22,748-lb. permit limit.*
- *Try to reduce your zinc influent now before zinc becomes the next pollutant of concern.*

reevaluate the determination that the beneficial uses of the South Bay were impaired due to ambient concentrations of copper and nickel.

The Impairment Assessment uses ecological indicators to assess the existence and maintenance of beneficial uses of the South Bay.

The three key findings of this report were:

- Impairment to beneficial uses of the South Bay due to ambient copper and nickel concentrations is unlikely.

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The **Tributary Tribune** 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 Districts 2-3, Sunol & Burbank Sanitary Districts



- The ranges of proposed site-specific objectives for copper (5 to 12 µg/l) and nickel (12 to 24 µg/l) are scientifically defensible.
- Uncertainties regarding the scientific information remain.

Stakeholders agreed to the adoption of site-specific objectives for copper and nickel in the South Bay contingent upon the adoption of an Action Plan to maintain current water quality. The preparation of Copper and Nickel Action Plans is now nearing completion.

These action plans are part of a non-

The Action Plans are designed to ensure that existing water quality is maintained and that beneficial uses are protected in the South Bay.



degradation strategy based upon a tiered pollution prevention approach. The plans will be implemented in NPDES permits for wastewater treatment plants and the stormwater program. They will ensure that existing water quality is maintained, and that beneficial uses are protected in the South Bay. Action Plan development was sponsored jointly by the City of San José and the Copper Development Association.

The Copper Action Plan is part of a non-degradation strategy, and will be integrated in the NPDES permits to ensure that existing water quality is maintained, beneficial uses are protected, and the site-specific water quality objectives for copper are not exceeded in the South Bay.

The Copper Action Plan identifies:

- The current control measures/actions being used to minimize copper releases to the bay.
- The *triggers* that would initiate additional measures/actions.
- A proactive framework for addressing increases to future copper concentrations in the South Bay, if they occur.

The foundation of the Copper Action Plan is the monitoring and pollution prevention activities. The

measurement of dissolved copper in the lower South San Francisco Bay is proposed as the key monitoring parameter. The Phase I trigger is 4.0 µg/l and the Phase II trigger in 4.4 µg/l of dissolved copper. The current concentration is 3.2 µg/l. Additionally, source monitoring is included in the Plan.

The Copper Action Plan describes baseline actions. Phase I actions would be implemented if the first trigger is

are intended to reduce controllable sources further to maintain compliance with site-specific water quality objectives.

The specific control activities were based on controls identified by the 1994 Copper Dialogue, and efforts conducted by the South Bay treatment plants as part of their source control, recycling and plant optimization programs.

Treatment Plant baseline actions include tracking loadings,



exceeded. Phase II actions would be implemented if the second-level trigger were exceeded.

Baseline actions include programmatic actions by public agencies; tracking special studies to address uncertainties; and studies to track, evaluate, or develop additional indicators.

Phase I actions consist of both specific remedial actions, and the planning for Phase II actions. Phase II actions

encouraging water recycling, and tracking closed-loop water efficiency measures.

The Nickel Action Plan is a companion document to the Copper Action Plan. This document adheres closely to the format of the Copper Action Plan. However, the situation for copper and nickel in the South Bay is quite different.

The average concentration of dissolved nickel in the Bay

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(4.0 µg/l) is considerably (2 to 3 times) lower than the proposed site-specific objectives limit (11.6 µg/l): and therefore, the likelihood of triggering impairment due to major increases in dissolved nickel concentrations is small. For this reason, there is less emphasis in the Nickel Action Plan on describing specific actions that would be taken to reduce nickel releases to the Bay.

The Copper and Nickel Action Plans were forwarded the WMI Work Group for refinement, and for incorporation into future permits. The primary task is the refinement of the control actions that are identified in the reports, and that would be implemented if the values of selected monitoring parameters exceed specified criterion values (referred to as trigger levels).

The WMI was also asked to produce a *road map* describing how the Copper Action Plan will be further developed. Specifically, the road map includes how the

Copper Action Plan relates, both in timing and in action, to various upcoming regulatory issues. Some of these issues include 303(d) updates plus delistings, stormwater and Publicly Owned Treatment Works permits, and Site-Specific Objective decisions including Basin Plan Amendments.

The WMI is charged with incorporating the Work Group's decisions, and Copper and Nickel Action plans in the Treatment Plant permit amendment. Draft permit language is currently being developed and reviewed by the work group members. A draft Tentative Order* was recently released for public review and will be brought to the Regional Board for action at the November 2000 meeting.

The Copper and Nickel Action Plans will be made available on the Internet at: http://www.ci.san-jose.ca.us/esd/pub_res.htm

* For a copy of the draft Tentative Order, contact the Regional Board at (510) 622-2327.

Industrial User Academy

Register now for the Pretreatment Program for Permitted Industrial Users training.

Date: October 5-6, 2000

Time: 8:00 AM - 3:30 PM

Lunch: Included with course on both days.

Cost: FREE! Class limited to 20 participants.

Call Cheryl Dayley at (408) 945-3030 to register for the course or to ask questions.



WATER EFFICIENT TECHNOLOGIES New Name — Same Great Benefits

Water Efficient Technologies (WET) now offers rebates of up to \$50,000 per project for process and equipment changes that reduce your wastewater flows to the sanitary sewer.

WET was formerly known as the Financial Incentives Program, we changed the name to reflect what the program is really about, and to recognize participating companies more effectively. Special thanks go out to these companies for their recent successes.

Aasha Sachdev and Mike Sooter recently helped *Hadco* in Santa Clara upgrade one of their DES (Develop, Etch, Strip) lines with a new system that integrates water reuse. The system uses pumps instead of high water volumes to provide the necessary spray fan. The result:

more than 27,000 gallons per day in flow reduction and a WET rebate of \$50,000. Hadco has opted to retrofit their remaining lines with similar features.

Craig Loll and Walter Crofton assisted *MMC Technology* in San Jose to save more than 56,000 gallons of water per day. They retooled the media texture and substrate washers to

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reuse water back into the same equipment. With 16 washers, the savings really add up. MMC received a rebate of \$34,000 for their flow-saving project. MMC optimized their fume scrubber operations, and saved an additional 15,000 gpd.

You can start saving too. Big projects, small projects — saving water means saving money and that makes good business sense.

Get WET and get up to \$50,000 in nice, dry bills. For more information and to get your project application started today, call us at (408) 945-3700 or visit www.slowtheflow.com



IT'S TRADE SHOW TIME!

The two-day *Northern California Plant Engineering & Maintenance Show and Conference* will be held at the Santa Clara Convention Center on September 20 & 21, 2000. Show hours are 10 AM to 4 PM.

The show offers an opportunity to stay current with industry trends and develop-

ments, discuss your challenges with industry professionals, find new products and services, reach new suppliers, and see live demonstrations.

For additional information or to register call (510) 354-3131 or visit their website at: www.proshows.com

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