



SECTION 7

MERCURY POLLUTION PREVENTION ACTIVITIES

7. MERCURY POLLUTION PREVENTION ACTIVITIES

INTRODUCTION

The Program's reissued NPDES permit states that municipal stormwater discharges may be causing or contributing to exceedances of water quality standards for mercury. Mercury has been found in sediments in South San Francisco Bay and the Guadalupe River Watershed. Some types of fish caught in the Bay contain mercury and other pollutants at concentrations that may threaten the health of humans consuming those fish. In response, the California Office of Environmental Health and Hazard Assessment issued an interim fish consumption advisory. The U.S. Environmental Protection Agency (EPA) has listed the Bay and the Guadalupe River Watershed (including the Guadalupe River, Alamos Creek, Guadalupe Creek, Calero Reservoir, and Guadalupe Reservoir) as impaired by mercury under Section 303(d) of the Clean Water Act. In accordance with Section 303(d), the Regional Board is required to establish a Total Maximum Daily Load (TMDL) for mercury in the South San Francisco Bay and the Guadalupe River Watershed.

Permit Provision C.9.c. requires the Program to address the impairment by developing and implementing a mercury pollution prevention plan. The Program developed a Mercury Pollution Prevention Plan (Mercury Plan) consistent with this Provision. The Mercury Plan was submitted to the Regional Board on March 1, 2002 as part of the Program's FY 02-03 Work Plan. This section describes and evaluates Mercury Plan tasks completed during FY 03-04.

MERCURY POLLUTION PREVENTION PLAN

The Mercury Plan is based on the premise that a Bay area-wide approach (and coordination) in addressing mercury pollution prevention will be most successful. For this reason, many of the actions identified in the Mercury Plan are for Program-level participation in regional efforts. These efforts are supplemented by countywide and local efforts.

The Mercury Pollution Prevention Plan addresses five general goals:

- I. **Municipal Use of Mercury-Containing Products** – Eliminate all unnecessary municipal use of mercury-containing products and establish proper disposal methods for products that cannot be eliminated.
- II. **Household Hazardous Waste Collection** – Provide mercury-containing product disposal services through household hazardous waste (HHW) collection programs for residents and small businesses, and encourage use of these programs.
- III. **Monitoring and Science** – Participate in coordinated monitoring efforts to support mercury TMDL development and implementation, including assessment of air pollution sources of mercury and concentrations of mercury in sediment.
- IV. **Regional, State, and Federal Coordination** – Actively participate in regional, state and federal coordination efforts to achieve a reduction in the amount of mercury in urban runoff and air emissions.
- V. **Public Education and Outreach** – Increase awareness of proper disposal of mercury-containing products and available non-mercury containing alternatives.

The Mercury Plan identifies actions that will be implemented at the Program level, municipality level, or both; and provides the schedule for initiation and/or completion of Program-level actions. The details of municipality actions and schedules are included in the individual Co-permittee work plans and/or annual reports, as appropriate.

FY 03-04 MERCURY POLLUTION PREVENTION ACTIVITIES

The status of the Program's FY 03-04 Mercury Plan tasks is summarized in Table 7-1. Highlights of Program accomplishments, as developed and/or implemented by the Mercury P2 Plan AHTG, PIP AHTG, Program staff and municipalities are provided below.

Guidelines for Reduction and Management of Mercury-Containing Products

During FY 02-03, the Mercury P2 Plan AHTG and Program staff developed guidelines for the reduction and management of mercury-containing products identified for virtual elimination. The *Guidelines for Mercury-Containing Products Reduction and Management* satisfies Permit Provision C.9.c; and Mercury Plan Actions I.E. and II.C. The Management Committee approved the Guidelines in April 2003. A copy of the Guidelines was included in the FY 02-03 Annual Report.

The goals of the *Guidelines for Mercury-Containing Products Reduction and Management* are to work towards the virtual elimination of mercury from controllable sources that may affect urban runoff due to agency operations; and establish proper recycling and disposal methods for products that cannot be eliminated due to technological, safety or economic factors. Co-permittees began implementing the *Guidelines for Mercury-Containing Products Reduction and Management* in FY03-04.

Mercury Virtual Elimination Policy

In January 2002, Mercury P2 Plan AHTG and Program staff began developing a model mercury virtual elimination policy to fulfill Permit Provision C.9.c. and Mercury Plan Action I.C. The model policy, which requires the virtual elimination of mercury from controllable sources in urban runoff, was submitted to the Management Committee in March 2003 and approved in April 2003. A copy of the model policy was included within the FY 02-03 Annual Report. The model policy serves only as suggested language. It was recommended that Co-permittees review the EPA document entitled *Developing a Virtual Elimination Strategy for Mercury* (October 1999) for additional language regarding virtual elimination.

In accordance with the Mercury Plan, the next task for Co-permittees is to adopt a Mercury Virtual Elimination policy, procedure or ordinance consistent with municipal requirements. Co-Permittees began implementing this task during FY 03-04.

Mercury Pollution Prevention Outreach Workgroup

In December 2002, Program staff established a new Work Group called the Mercury Pollution Prevention Outreach Work Group. This Work Group implements the Public Education and Outreach elements of the Mercury Plan by organizing a public education, outreach and participation program designed to reach residential and commercial users of mercury-containing products. The Mercury Plan identifies the development of a fluorescent light tube (FLT) recycling public outreach and education plan as a priority and recommends conducting outreach in two phases. The main objective of both phases is to show the negative health and

environmental impacts of mercury and the methods available to the public for properly disposing fluorescent light tubes.

Phase I of the Public Education and Outreach plan focused on residential FLT disposal and was completed in FY 02-03. Implementation of Phase II, which targets small businesses, and Conditionally Exempt Small Quantity Generators (CESQGs) was completed in FY 03-04. Outreach to these groups will continue in FY 04-05.

The Program worked closely with the Santa Clara County Household Hazardous Waste Program in developing the business outreach plan. Outreach activities implemented during FY 03-04 include the following:

- Developed and subsequently posted on the Watershed Watch website, a fact sheet educating businesses on proper disposal fluorescent lamps;
- Developed a newsletter article informing CESQGs on proper disposal of fluorescent lamps. The Program coordinated with the San Jose/Silicon Valley Chamber of Commerce, the Building Owners and Managers Association (BOMA) and the International Facility Management Association (IFMA) to organize the publication of this article in the newsletters and newspapers of these agencies. The article was published in the February issue of the BOMA newsletter and the March issues of IFMA and the San Jose Chamber of Commerce newsletters.
- Continued running the Watershed Watch ‘Got Paint’ ad to educate people on proper disposal of hazardous wastes including fluorescent lamps. This print and radio ad was used in both the summer and spring media flights.

Both the fact sheet and newsletter article explain, in simple language, what recent environmental legislation exists for proper disposal and recycling of mercury-containing wastes; which businesses are affected by this legislation; what options are available to small businesses for directing their used FLTs (or other hazardous wastes) to hazardous waste drop-off programs; and information on the negative health and environmental impacts of mercury.

County HHW Program’s Mercury Grant Implementation

In FY 02-03, the County Household Hazardous Waste Program (CoHHW) applied for grant funding from the California Integrated Waste Management Board (CIWMB). The CoHHW Program submitted a Mercury Reduction Grant to the CIWMB on May 23, 2003. The grant proposed to: 1) develop an aggressive mercury reduction public education and outreach program targeted for residents, heating, ventilation and air conditioning (HVAC) contractors and remodeling contractors in partnership with local planning and permitting agencies; 2) expand collection opportunities for mercury containing wastes including thermostats, button batteries and fluorescent lamps by increasing services at HHW collection events, retail stores, and community sites; and 3) conduct three Earth Day Thermometer Exchanges through a residential campaign entitled “Catch the Fever”. In FY 03-04, the CoHHW Program was notified that their submittal was awarded grant funding for \$300,000. The grant was approved by the CIWMB at their September 16, 2003 meeting.

The grant will be implemented over a three-year period. CoHHW Program staff has requested assistance from SCVURPPP in implementing the outreach requirements of the grant, specifically the store partnership program for collecting spent fluorescent lamps. SCVURPPP’s Mercury Pollution Prevention Outreach Work Group will assist in identifying appropriate businesses and associations for realizing potential store-partnership outreach relations and help develop shelf talkers, flyers or other outreach material.

Evaluation of Effectiveness

During FY 03-04, the County HHW Program collected 12,163 pounds of fluorescent lamps compared to 5,636 pounds in FY 02-03.

Program and County HHW Program staff contacted BOMA and IFMA for scheduling outreach presentations at their monthly meetings. However, the presentation at BOMA could not be scheduled as meeting agendas are finalized over a year in advance. Program staff has requested the BOMA representative to inform the Program if any openings in the agenda become available. The IFMA representative indicated that their meetings are not well attended. Representatives from both organizations recommended that the Program continue its outreach to the business community through newsletter articles.

Monitoring and Science

The Santa Clara Basin Watershed Management Initiative (SCBWMI) is serving as the stakeholder forum for the development of the Guadalupe River TMDL Report for Mercury. The Guadalupe River Watershed encompasses parts of San Jose, Los Gatos, Campbell, Monte Sereno and Santa Clara. The Program is a stakeholder in the Guadalupe River TMDL process. The Santa Clara Valley Water District (SCVWD) is taking the lead role in the TMDL development process by solely funding the \$900,000 study and as Co-Chair of the TMDL Work Group and Stakeholder Group. Program staff is also participating in the TMDL process.

The SCVWD entered into a Memorandum of Understanding with the Regional Board and gave the Notice to Proceed to the Guadalupe River Watershed Mercury TMDL Phase I project consultant in March 2003. The consultant's scope of work includes producing a Problem Statement, Sampling Plans and Data Analysis Reports. The Work Group is a technical body that reviews and assists in directing technical work to develop the information upon which the Guadalupe River Watershed TMDL will be based. The larger stakeholder group is the decision-making body and forum for discussion and integration of technical and non-technical issues and will reach consensus on the TMDL and Implementation Plan.

In FY 03-04, Program staff, along with other Co-permittee staff, attended meetings and reviewed draft technical memoranda developed by the consultant. During July and August 2003, a synoptic survey and preliminary field sampling effort was conducted. The results of the synoptic survey were incorporated into the *Draft Conceptual Model Report* (Tetra Tech, October 2, 2003). Based on the information collected for the conceptual model, a *Data Collection Plan* (Tetra Tech, February 20, 2004) was developed. Sampling in the Guadalupe River watershed, which began in February 2004, included an element to compare total and methyl mercury in creeks (Ross, Canoas and Los Gatos Creeks) draining the urban watershed unaffected by mining to those (Alamitos, Guadalupe, Arroyo Calero, Canoas, Randol Creeks and Guadalupe River) urban creeks affected by mining. Results will be reported in the *Data Collection Report* due in late 2004. Program and Co-permittee staff will continue to participate in the development of the Guadalupe River Watershed TMDL for Mercury by attending meetings and reviewing technical results and reports.

The Program continued to provide financial support to the Regional Monitoring Program (RMP), including the Mercury Deposition Network Pilot Study. In addition, Program and Co-permittee staff actively participates in RMP Technical Review Committee (TRC) and Steering Committee (SC) meetings and provides meeting summaries to the Management Committee. Staff reviewed available reports, including the *Draft Concentrations and Loads of PCBs, OC Pesticides, and Mercury Associated with Suspended Particles in the Lower Guadalupe River, San Jose, California* (SFEI, January 2004).

A Memorandum of Understanding (MOU) regarding development of a Water Quality Attainment Strategy for San Francisco Bay-Delta and Tributaries was entered into by the Regional Board, Bay Area Clean Water Agencies (BACWA), and Bay Area Stormwater Management Agencies Association (BASMAA) on August 6, 2001, and includes the development of TMDLs for 303(d) pollutants including mercury. This group is referred to as the Clean Estuary Partnership (CEP). As a member agency of BASMAA, the Program is involved in the development and funding of potential projects for the mercury TMDL. Program staff has been participating in the CEP technical committee meetings and CEP Board meetings. In addition, a City of San Jose staff member is serving as chair of the CEP technical committee.

In addition, the Program's *Multi-Year Receiving Waters Monitoring Plan* includes collecting and analyzing samples for mercury. Refer to Section 4 Monitoring Activities for additional details regarding mercury monitoring.

U.S. Department of Energy (DOE) Office of Building Technology's Vision 2020 Lighting Technology Roadmap

Since the Mercury Plan's first year of implementation, Program staff has been tracking the progress made by the U.S. Department of Energy (DOE) office of Building Technology's Vision 2020 Lighting Technology Roadmap in accordance with Mercury Plan Action IV.F.

DOE's Building Technologies Program continues to move forward on their Vision 2020 Roadmap. Progress includes seven strategies to address the challenges of transforming the lighting marketplace and developing new technologies that enhance lighting quality, efficiency and cost effectiveness.

In November 2003, the DOE Building Technologies Program hosted a two-day workshop on solid-state lighting (SSL). This interactive workshop provided technology leaders from industries, trade associations, universities, research institutions and national laboratories the opportunity to review and rank more than forty research topics. As a result, research activities will focus on Light Emitting Diodes (LED) and Organic Light Emitting Diodes (OLED) since they have the potential to reduce energy used for lighting up to fifty percent. In addition, lamps using this technology are mercury-free and can last up to ten years. Additional details are provided in Appendix F-1.

EVALUATION OF PROGRAM EFFECTIVENESS AND NEXT STEPS FOR MERCURY PLAN

During FY 03-04, there was considerable progress made on tasks outlined in the Mercury Plan, specifically related to implementation by individual municipalities, public outreach; and progress of regional partnerships. Significant outcomes from the FY 03-04 Work Plan and the prominent mercury pollution prevention activities planned for FY 04-05 include:

- **Guidelines for Reduction and Management of Mercury-Containing Products:** In FY 03-04, Co-permittees began strategizing on how to implement the Program's Guidelines for reducing and managing mercury-containing products identified for virtual elimination. Implementation will continue in FY 04-05.
- **Mercury Virtual Elimination Policy:** In FY 03-04, Co-permittees reviewed and used the Program's model policy to develop and adopt a mercury virtual elimination policy or ordinance, as appropriate. The municipalities' first full fiscal year of implementing their newly adopted policy or ordinance will occur in FY 04-05.

- **Mercury Pollution Prevention Outreach:** The Mercury Pollution Prevention Outreach Work Group successfully completed the implementation of a two-year, two-phase fluorescent light tube recycling campaign. As municipal budgets/resources permit, outreach on the negative health and environmental impacts of mercury and the methods available for properly disposing of FLT's to residents and small businesses will continue. The three Co-permittees with industrial wastewater inspection programs (San Jose, Sunnyvale and Palo Alto) are integrating, into their existing routine pretreatment, source control, and/or hazardous materials inspection processes, mercury outreach for industrial businesses. In addition, the Program will assist the CoHHW Program with the outreach requirements of their mercury pollution prevention grant.
- **Coordination Efforts with Regional Organizations:** Environmental monitoring beginning for the Guadalupe Hg TMDL Phase I work by the project consultant, SCBWM's Guadalupe Hg Work Group meetings and Program staff review of several draft products are recent highlights of the Program's coordination efforts with local and regional organizations. Program Staff will continue to attend CEP (Clean Estuary Partnership) TMDL meetings, Regional Monitoring Program (RMP) Steering Committee and Technical Review Committee meetings.

**Table 7-1
Status of FY 03-04 Mercury Pollution Prevention Tasks**

<u>Task</u>	<u>Status</u>
<u>I. Municipal Use of Mercury-Containing Products</u>	
I.A. Develop a process to survey the types of mercury-containing products used by municipal departments. Identify appropriate municipal personnel to conduct survey. For those products with a potential to enter stormwater runoff, identify possible alternatives or proper disposal procedures.	Completed - The Management Committee approved the survey on October 17, 2002. Surveys were distributed to Co-permittees on November 5, 2002. The surveys were completed and returned to the Program by February 2003.
I.B. Complete and report results of survey of mercury-containing products used by municipal departments.	Completed - All surveys were submitted by February 2003 (original deadline December 2002); and survey results were included in FY 02-03 Annual Report, Appendix F-1.
I.C. Develop guidelines for a mercury policy or ordinance requiring the virtual elimination of mercury from controllable sources in urban runoff from agency operations. (The word "virtual" acknowledges that total elimination of mercury-containing products may be impossible due to technological or economic factors.)	Completed - A final draft of the model policy was submitted to the Management Committee in March 2003. The Management Committee approved the model policy in April 2003. The model policy was included in FY02-03 Annual Report, Appendix F-3.
I.D. Adopt a mercury policy or ordinance requiring the virtual elimination of mercury from controllable sources in urban runoff from agency operations.	Completed - Co-permittees began implementation in FY 03-04.
I.E. Develop guidelines for mercury-containing products reduction and management. These guidelines will include a schedule for the timely phase-out of mercury-containing products identified for virtual elimination as well as reporting requirements, possibly to track recycling, replacement, and reduction in use of mercury-containing products.	Completed - A final draft of the guidelines was submitted to the Management Committee in March 2003. The Management Committee approved the Guidelines in April 2003. The guidelines were included in the FY02-03 Annual Report, Appendix F-2.
I.F. Implement guidelines developed under Action I.E.	On-going - Co-permittees began implementation in FY 03-04.
<u>II. Household Hazardous Waste Collection</u>	

**Table 7-1
Status of FY 03-04 Mercury Pollution Prevention Tasks**

<u>Task</u>	<u>Status</u>
II.A. Assist HHW collection agencies with preparation of a technical memorandum summarizing infrastructure and budgetary concerns regarding the anticipated increase in fluorescent bulbs and other mercury-containing products to be recycled.	Completed --The technical memorandum was completed by HHW in June 2002 and distributed (as an informational item) at the July 18, 2002 Management Committee meeting. The memorandum describes the existing capabilities of the Santa Clara County HHW Program and discusses the potential financial impacts on the HHW Program due to SCVURPPPP outreach efforts. The memorandum is provided within Appendix F of the <i>FY 01-02 Annual Report</i> .
II.B. Provide mercury-containing products disposal services for residents and small businesses.	On-going – Disposal services are provided by the County HHW Program, Palo Alto Regional Water Pollution Control Plant and the Sunnyvale Materials Recovery and Transfer (SMaRT®) Station.
II.C. Develop guidelines for documenting and reporting quantities of mercury-containing products disposed of by city. ¹	Completed - A final draft of the guidelines was submitted to the Management Committee in March 2003. The Management Committee approved the Guidelines in April 2003. A copy of the guidelines was included in the FY02-03 Annual Report, Appendix F-3.
II.D. Implement guidelines developed under Action II.C.	On-going - Co-permittees began implementation in FY 03-04.
II.E. Assist HHW collection agencies in developing a Prop 13 Program grant proposal for a HHW fluorescent light recycling program (Action II.F).	<p>Completed -- CoHHW submitted a Mercury Reduction Grant to CIWMB on April 5, 2002. The Program submitted a concept proposal to the SWRCB on February 1, 2002. Both submittals were not selected to receive grant funding.</p> <p>On-going - CoHHW applied for a grant from CIWMB on May 23, 2003. The grant was approved in September 2003. The Program and Mercury Pollution Prevention Outreach Work Group will assist with implementation as needed.</p>
II.F. Work with HHW collection agencies to develop and help publicize fluorescent light recycling program. ²	Completed/Ongoing – Began effort in FY 02-03. The Mercury Pollution Prevention Outreach Workgroup collaborated with the Santa Clara CoHHW Program on a two-year, two-phase fluorescent light

¹ Guidelines for documenting and reporting quantities of mercury-containing products disposed of by municipalities will be developed, taking into consideration, the possibility of separating mercury from other waste streams and tracking mercury-containing products disposed by the municipality.

**Table 7-1
Status of FY 03-04 Mercury Pollution Prevention Tasks**

<u>Task</u>	<u>Status</u>
	Clara CoHHW Program on a two-year, two-phase fluorescent light tube (FLT) recycling campaign. The first phase of the campaign, which was developed in FY 02-03, targeted residents. The second phase, which began in FY 03-04, targets small businesses. The main objective of both phases is to show the negative health and environmental impacts of mercury and the methods available to the public for the proper disposal of FLTs. As funding allows, outreach to residents and business will continue.
III. Monitoring and Science	
III.A. Continue financial support of the Regional Monitoring Program (RMP), including the Mercury Deposition Network Pilot Study and the Clean Estuary Partnership (CEP). Continue to actively participate in the RMP Steering Committee (SC) and Technical Review Committee (TRC).	<p>On-going – Program and Co-permittee staffs actively participated in RMP TRC and SC meetings and provided meeting summaries to Management Committee. Staff reviewed available reports and provided comments. Draft reports included <i>Pulse of the Estuary and Concentrations and Loads of PCBs, OC Pesticides, and Mercury Associated with Suspended Particles in the Lower Guadalupe River, San Jose, California.</i></p> <p>Both Program and Co-permittees' staffs are actively involved with the CEP technical and management committees; and review of proposed Work Plans and study scopes. Program and Co-permittee staffs also participate in the CEP Mercury Work Group. In addition, the City of San Jose continues to chair the CEP technical committee.</p>
<ul style="list-style-type: none"> Supported completion of the San Francisco Bay Atmospheric Deposition Pilot Study Part 1: Mercury 	Completed -- Report submitted August 2001
<ul style="list-style-type: none"> The City of San Jose will continue to provide in-kind services for the maintenance of the Mercury Deposition Network site near San Jose. 	On-going through 2004

² Action II.F. is being conducted in conjunction with Public Education and Outreach Actions.

**Table 7-1
Status of FY 03-04 Mercury Pollution Prevention Tasks**

<u>Task</u>	<u>Status</u>
III.B. Provide financial and staff support for a coordinated regional plan to collect data for the mercury TMDL, as defined in the CEP MOU.	On-going — The Program continued to participate in the CEP (see Section 4, Monitoring for a discussion of the CEP (formerly TMDL MOU) activities and accomplishments to date).
III.C. Continue financial and staff support for the Joint Stormwater Agency Project to Study Urban Sources of Mercury, PCBs and Organochlorine Pesticides to assess sediment mercury concentrations and percentage of fine material.	Completed – See Section 4 of the FY 02-03 Annual Report for additional information.
<ul style="list-style-type: none"> • Completed the Work Plan Joint Stormwater Agency Project – Year Two Investigation of Urban Sources of Mercury, PCBs and Organochlorine Pesticides 	Completed -- Report submitted on June 1, 2001
<ul style="list-style-type: none"> • Prepared the Joint Stormwater Agency Project to Study Urban Sources of Mercury, PCBs and Organochlorine Pesticides - Year Two Report. 	Completed -- Report submitted on April 15, 2002
III.D. Develop and implement a five-year program of monitoring efforts.	Completed – The Program’s Multi-Year Receiving Waters Monitoring Plan was completed and submitted in March 2002; implementation began in July 2002. See Section 4 of this Annual Report for additional information.
<u>IV. Regional, State, and Federal Coordination</u>	
IV.A. Participate in the activities of the Bay Area Stormwater Management Agencies Association, the California Storm Water Quality Task Force, and the San Francisco Estuary Institute and communicate Program efforts.	On-going – Program staff continue to attend BASMAA, CASQA and SFEI RMP meetings (See Internal and External Meetings FY 03-04 attached to the <i>Review of FY 03-04 Program Management Services</i> within Appendix A-2).
IV.B. Collaborate in technical studies to support TMDL development and implementation including the Santa Clara Basin WMI Guadalupe River Mercury TMDL Workgroup.	On-going – Program and Co-permittee staffs actively participate in the Guadalupe Mercury TMDL Watershed Work Group and Stakeholder group. Staff reviewed available reports including <i>Draft</i>

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Status of FY 03-04 Mercury Pollution Prevention Tasks**

<u>Task</u>	<u>Status</u>
Guadalupe River Mercury TMDL Workgroup.	<i>Conceptual Model Report and Data Collection Plan.</i> Environmental monitoring for mercury in the Guadalupe watershed began in FY03-04.
IV.C. Support and participate in development of the WMI Watershed Action Plan.	Completed -- The final Watershed Action Plan, Volume III of the Watershed Management Plan, was approved in August 2003 by the Santa Clara Basin Watershed Management Initiative (SCBWMI) Core Group. Volume III intends to prioritize alternative actions in watershed planning and suggest programmatic changes to policies and regulations. Co-permittees funded the consultants' time. Program staff provided review and comments to the consultant through the appropriate WMI channels (between the subgroups and the SCBWMI Core Group).
IV.D. Submit the SCVURPPP draft Mercury Pollution Prevention Plan to the WMI to ensure that efforts are coordinated.	Completed – The Mercury Pollution Prevention Plan was submitted to WMI Guadalupe Mercury TMDL Work Group in July 2002.
IV.E. Support, participate in, and advocate increased regional collaboration with the RWQCB and the Bay Area Air Quality Management District (BAAQMD).	Ongoing – The Program will support the RWQCB in collaborating with the BAAQMD but will not directly work with the BAAQMD. The Program supports the RWQCB through participation in the CEP. Mercury air deposition is being addressed regionally.
IV.F. Support and track the progress of the U.S. Department of Energy (DOE) Office of Building Technology's Vision 2020 Lighting Technology Roadmap. ³	In Progress – DOE's Building Technologies Program continues to move forward on their Vision 2020 Roadmap. Progress includes seven strategies to address the challenges of transforming the lighting marketplace and developing new technologies that enhance lighting quality, efficiency and cost effectiveness. In November 2003, the DOE Building Technologies Program hosted a

³ DOE's Vision 2020 Lighting Technology Roadmap includes this goal for the year 2020, "Highly efficient, reduced-mercury fluorescent sources will come to market." Sustainable Conservation's September 27, 2000 report entitled *Reducing Mercury Releases From Fluorescent Lamps: Analysis of Voluntary Approaches*, concluded that "we do not believe that starting a new collaborative approach with manufacturers to create mercury-free fluorescent lamps is the most effective use of resources at this time." Sustainable Conservation recommends focusing on voluntary recycling of mercury-containing lamps as an alternative approach.

**Table 7-1
Status of FY 03-04 Mercury Pollution Prevention Tasks**

<u>Task</u>	<u>Status</u>
	two-day workshop on solid-state lighting (SSL). This interactive workshop provided technology leaders from industries, trade associations, universities, research institutions, and national laboratories the opportunity to review and rank more than forty research topics. As a result, research activities will focus on Light Emitting Diodes (LED) and Organic Light Emitting Diodes (OLED) since they have the potential to reduce energy used for lighting up to fifty percent. In addition, lamps using this technology are mercury-free and can last up to ten years. (See Appendix F-1 for additional details).
<u>V. Public Education and Outreach</u>	
V.A. Develop various outreach programs to educate target audiences about proper disposal of mercury-containing products and alternative non-mercury containing products. Outreach programs will include, but may not be limited to, the following:	Completed/Ongoing⁴ – In FY 03-04, the Mercury Pollution Prevention Outreach Work Group completed implementing a two-year outreach effort which focused on the recycling of fluorescent lamps from target audiences (e.g., residential communities and small business). Refer to Task II.F.
<ul style="list-style-type: none"> Develop and begin to implement a fluorescent light recycling outreach program to educate residential users and encourage proper disposal of fluorescent lights. 	Completed/Ongoing⁴ – In FY 02-03, the Work Group formed and developed a Work Plan. Phase I of the two-year, two-phase Work Plan, focused on residential outreach. Phase I outreach began in Spring 2003 and will continue as appropriate. (See Section 7 of this Annual Report for additional details).
<ul style="list-style-type: none"> Develop and begin to implement a fluorescent light recycling outreach program to educate small businesses and conditionally exempt small quantity generators and encourage proper disposal of fluorescent lights. (For example, the small business outreach program might 	Completed/Ongoing⁴ – In FY 03-04, the Work Group implemented Phase II of the two-year, two-phase Work Plan. Phase II outreach efforts were focused on small businesses and CESQGs. This outreach will continue as appropriate. Inclusion of the Program's outreach article in agency newsletters, including the San Jose/Silicon

⁴ These tasks were marked as Completed and Ongoing since the specific public education and outreach task was completed but outreach is ongoing. Articles will continue to be posted and updated, as appropriate. The Program will continue to assist the CoHHW with public outreach activities as resources allow.

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Status of FY 03-04 Mercury Pollution Prevention Tasks**

<u>Task</u>	<u>Status</u>
include coordination with local chapters of the Building Owners and Managers Association [BOMA] or the National Association of Industrial and Office Properties [NAIOP].)	Valley Chamber of Commerce, Building Owners and Managers Association (BOMA), and the International Facility Management Association (IFMA) occurred in FY03-04. Additional annual coordination will continue, as appropriate. (See Section 7 for additional details).
<ul style="list-style-type: none"> Coordinate with municipal inspectors to integrate mercury outreach to industrial businesses into their existing routine pretreatment, source control, and/or hazardous materials inspection processes 	In Progress – Co-permittees began coordination efforts in FY03-04.
<ul style="list-style-type: none"> Develop and distribute “tailgate safety meeting cards” about mercury to inspectors and other municipal employees. 	Completed – “Tailgate safety meeting cards” were developed by the Fairfield-Suisin Sewer District and reviewed by the Bay Area Pollution Prevention Group (BAPPG) and Program prior to distribution (as an informational item) to the Management Committee on April 23, 2003.
V.B. Develop or adapt existing mercury outreach materials, as needed, for outreach programs.	Completed/Ongoing⁴ – As part of the Outreach Work Plan for Action V.A, development of materials began in FY 02-03. To date, four outreach pieces have been developed by the Outreach Work Group – two articles for the worldwide web and two public announcement pieces (one video and one text) for broadcast on local city cable channels and publication in local newsletters. All outreach pieces aim to show the negative health and environmental impacts of mercury and the methods available to the public for the proper disposal of FLTs. (See also Action II.F.). The Program’s Watershed Watch Campaign also ran print and radio ads educating people on proper disposal of mercury and other household hazardous wastes.
V.C. Attend community events and distribute outreach materials.	Completed/Ongoing⁴ – As part of the Outreach Work Plan for Action V.A, distribution of outreach materials continued during FY 03-04.