ACKNOWLEDGEMENTS

The Santa Clara Valley Urban Runoff Program's (Program) Urban Runoff Management Plan (URMP) was developed by the Program Manager under the direction of the Management Committee.

MANAGEMENT COMMITTEE

Dave Chesterman (Chair)	Randolph Shipes (Vice Chair)
Santa Clara Valley Water District	San Jose
Lavenia Millar, Cupertino	Lorrie Gervin, Budget & Executive Committee Chair, Sunnyvale
Larry Lind, Los Altos	Cheri Donnelly, West Valley Cities
Richard Chen, Los Altos Hills	Lynn Penoyer, Campbell
Darryl Wong, Milpitas	John Curtis, Los Gatos
Eric Anderson, Mountain View	Brian Loventhal, Monte Sereno
Joe Teresi, Palo Alto	John Cherbone, Saratoga
Rick Mauck, Santa Clara	Steve Homan, Santa Clara County

Note: The 2004 Urban Runoff Management Plan was revised on February 24, 2005 to only reflect changes to the Industrial/Commercial Discharger Control Program and Illicit Connection/Illegal Dumping Elimination Activities Performance Standards provided within Appendix A: Model Performance Standards.

ACRONYMS

ABAG	Association of Bay Area Governments
AHTG	Ad Hoc Task Group
BAAQMD	Bay Area Air Quality Management District
BACWA	Bay Area Clean Water Agencies
BASMAA	Bay Area Storm Water Management Agencies Association
BMM	Bay Monitoring and Modeling
BMP	Best Management Practice
BPP	Brake Pad Partnership
CAP	Copper Action Plan
CEP	Clean Estuary Partnership
CCMP	Comprehensive Conservation and Management Plan
CEQA	California Environmental Quality Act
CMA	Congestion Management Agency
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
CZARA	Coastal Zone Act Reauthorization Amendments
EOA	Eisenberg, Olivieri, & Associates
EPA	Environmental Protection Agency
HMP	Hydromodification Management Plan
ICID	Illicit Connection/Illegal Dumping

IND	Industrial and Commercial Discharge
IPM	Integrated Pest Management
KLI	Kinetic Laboratories Incorporated
MCMP	Metals Control Measures Plan
MEP	Maximum Extent Practicable
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MTC	Metropolitan Transportation Commission
NAP	Nickel Action Plan
NDC	New Development and Construction
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
O&M	Operation & Maintenance
PAA	Public Agency Activities
PCB	Polychlorinated Biphenyls
PCDF	Polychlorinated dibenzofurans
PCDD	Polychlorinated dibenzo-p-dioxins
PIP	Public Information and Participation
POC	Pollutant of Concern
POTW	Publicly Owned Treatment Works

QA/QC	Quality Assurance/Quality Control
RMAS	Regional Monitoring and Assessment Strategy
RMP	Regional Monitoring Program
RWQCB	Regional Water Quality Control Board
SCBWMI	Santa Clara Basin Watershed Management Initiative
SCVURPPP	Santa Clara Valley Urban Runoff Pollution Prevention Program
SCVWD	Santa Clara Valley Water District
SFEI	San Francisco Estuary Institute
SIC	Standard Industrial Classification
SOP	Standard Operating Procedure
SWAMP	Surface Water Ambient Monitoring Program
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TATG	Trash Ad Hoc Task Group
TMDL	Total Maximum Daily Load
URMP	Urban Runoff Management Plan
USEPA	United States Environmental Protection Agency
WEO	Watershed Education and Outreach
WLA	Waste Load Allocation
WMI	Watershed Management Initiative (same as SCBWMI, above)

WUPPP Water Utility Pollution Prevention Plan

WWC Watershed Watch Campaign

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES TO THIS VOLUME

ACCOMPANYING VOLUMES

Overview Chapter One

This Urban Runoff Management Plan (URMP)[1] details what the Santa Clara Valley Urban Runoff Pollution Prevention Program[2] (SCVURPPP or Program) is doing to reduce urban runoff pollution in the Santa Clara Valley watershed.

Fifteen agencies — *Co-permittees* under a stormwater discharge permit issued by the Regional Water Quality Control Board — comprise the Program. Each agency implements urban runoff pollution controls within its own jurisdiction. A *Management Committee* coordinates joint efforts among the Co-permittees. By pursuing agency-specific activities, and contributing to joint activities, each Co-permittee endeavors to protect water quality in local creeks and South San Francisco Bay, and complies with a myriad of regulatory requirements that govern urban runoff pollution control programs.

Chapter 2 provides the geographical and regulatory context for Program activities. It begins with a description of the characteristics of the Santa Clara Valley drainage basin, followed by a brief history of the Program. Chapter 2 continues with a discussion of the Program's overall approach to controlling pollutant sources and the Program's relationship to other pollution-prevention efforts. The Program's participation in Santa Clara Basin Watershed Management Initiative (SCBWMI) is described in some detail, followed by more brief notes on the Program's work with other public agencies and with private entities.

[1] The URMP complies with NPDES Permit CAS029718 (Order No. 01-024 as amended by Order 01-119).

[2] As stated in the Bylaws, the co-permittees — when collectively implementing area-wide activities that benefit all co-permittees — are referred to as the "Program".

Chapter 3 describes the fundamental ideas around which the Program is organized, and which drive the relationship between the Program and its participating agencies. These ideas are embodied in the Program's Mission Statement, Goals and Objectives. This is followed by a summary of the roles played by the Co-permittees, Management Committee and Program staff in implementing the Program. Chapter 3 also describes how the Program applies Performance Standards to achieve consistency, accountability and continuous improvement in the Program and every jurisdiction within the Santa Clara Valley Basin.

Chapter 4 summarizes the common features of each Co-permittees' local urban runoff pollution prevention program, as represented in the Program-wide model Performance Standards. The Performance Standards apply to each element of the Program: Illicit Discharge and Illegal Dumping Elimination (ICID), Industrial and Commercial Discharge Controls (IND), Public Information and Participation (PIP), Public Agency Activities (PAA), and New & Redevelopment and Construction (NDC).

Chapter 4 also describes activities, coordinated through the Management Committee that the Co-permittees pursue jointly. These include specific things the Program and Co-permittees are doing to support other entities' efforts to reduce, to the maximum extent practicable (MEP), urban runoff pollution — and protect and enhance beneficial uses.

Chapters 5 through 16 consist of individual Urban Runoff Management Plans for Cupertino, Los Altos, Los Altos Hills, Milpitas, Mountain View, Palo Alto, San Jose, Santa Clara, and Sunnyvale; the West Valley communities of Campbell, Los Gatos, Monte Sereno and Saratoga (combined in Chapter 14); Santa Clara County, and the Santa Clara Valley Water District.

Each of these Co-permittees may choose to adopt any or all of the model Performance Standards, or adapt them to suit local conditions. The adaptations accommodate differing local conditions and are documented in Chapters 5-16. The local plans also describe how each Co-permittee organizes and carries out its local program.

About the Santa Clara Valley Urban Runoff Pollution Prevention Program

Chapter Two

2A THE SANTA CLARA BASIN AND ITS COMMUNITIES

Physical Setting. Santa Clara County encompasses more than 1,300 square miles in the southern portion of the San Francisco Bay Area, making it the second largest of the nine Bay Area counties. The County is geomorphologically diverse and includes the Santa Clara Valley, the Santa Cruz Mountains, the mountains of the Diablo Range, and the Baylands.

The northern portion of the county is occupied by a broad, northward draining valley located between the Santa Cruz Mountains, to the west, and the Diablo Range to the east. This basin, the Santa Clara Valley, is highly urbanized and contains 13 of the county's 15 cities and towns (Figure 1). This portion of the County constitutes the area covered by the Santa Clara Valley Urban Runoff Pollution Prevention Program. The Santa Clara Basin has warm, dry summers and receives 15 to 20 inches average rainfall between October and April each year.

Creeks and streams that originate in the Santa Cruz Mountains and the Diablo Range drain through the Santa Clara Basin into South San Francisco Bay. Thirteen major watersheds are within the Program's jurisdictional areas (Figure 1). They include the Coyote Creek watershed on the east side of the

valley, the Guadalupe River watershed, which drains the south-central portion of the valley, and a series of small, relatively urbanized watersheds that drain the west side of the valley. Surface runoff generated from various land uses in all the hydrologic subbasins discharges into watercourses, which in turn flow into South San Francisco Bay (below the Dumbarton Bridge).

Population and Job Growth. In 2000, Santa Clara County ranked fourth in the state in terms of population and employment. According to the California Department of Finance 2000 Census Report, the population of the county is about 1.68 million. Of this total, about 1.51 million or 90 percent are residents of the thirteen communities in the Program Area. Most of the population in the unincorporated county is concentrated in areas around these urban communities. Therefore an estimated 95 to 96 percent of the county's total population is within the Program Area. According to the Association of Bay Area Governments' (ABAG's) *Projections 2002*, the population in the county will grow to about 2.06 million by 2025.

San Jose, with approximately 894,950 residents, is by far the most populous city. San Jose has 53 percent of the total county population, followed by Sunnyvale, with about 8 percent of the total county population, and Santa Clara, with 6 percent of total county population. San Jose is expected to retain a similar share of the county population in 2015. The smallest communities in the valley are the City of Monte Sereno and the Town of Los Altos Hills.

The Santa Clara County economy is dynamic. Up until the mid 1950s, the county was predominantly rural with an agricultural-based economy. Since then, the valley has been transformed into a vast metropolitan area with an economy dominated by high technology firms. Through these decades, the valley has continued to attract fast-growth industries, which have led to both job and population growth within the county and in adjacent counties. The end of the 1990s saw tremendous growth in Santa Clara County as the Silicon Valley became the embodiment of a "New Economy" driven by efficiencies from computers, communications and the use of the internet. During the 1990s, the county added 201,400 jobs. Job growth continues in some sectors throughout 2000, even as the news media reported the demise of dot-com

companies. In many ways, companies that provided the services and materials for internet companies eventually accounted for most of the job losses. Currently, companies that make equipment and provide business services, not the pure internet companies, are causing a shift in the county's economic fortunes.

Santa Clara County will see limited job growth in the first ten years of the forecast period (2000-2025). Service jobs will account for approximately 38 percent of new jobs in the county during the next ten years. Between 2000 and 2025, the county is expected to add 303,500 new jobs.

Land Use. The Santa Clara Valley is characterized by flat fertile lands and was once an important agricultural area. Since the mid 1950s however, housing developments, businesses, industrial parks, shopping centers, and freeways have replaced agricultural lands. This development was triggered by the emergence of the electronics industry. Stanford University in Palo Alto spawned the earliest firms engaged in electronics and further supported the growth by building the Stanford Industrial Park. As available land in Palo Alto became scarce, the electronics and semiconductor industry moved south into Mountain View and Sunnyvale, then into Santa Clara and Cupertino. By the 1970s, industries were concentrated in the northern portion of the valley, with housing extending into the southern part of the county. Very-low-density, affluent residential areas developed in the western foothill communities.

Table 1 presents estimated percentages of land within the Program communities devoted to different land uses. As this table shows, some communities, such as Los Altos, Los Gatos, Saratoga, and Monte Sereno, are almost entirely residential with little or no industrial areas and very limited commercial areas. Other communities are more diverse. The cities of Mountain View, Santa Clara, and Milpitas have 15 to 20 percent of their land in industrial use.

Most communities are built out, and the availability of land for development is limited. With the exception of San Jose, Milpitas, and unincorporated County, valley communities generally have less than 8 percent of their land vacant or under agricultural use that could be converted to urban uses. Land

prices and scarcity of vacant land will likely spur intensification of existing land uses, such as increased residential density through infill and redevelopment. ABAG notes that Santa Clara County has a large inventory of commercial and industrial sites that will not be fully absorbed over the next 20 years and could be made available for housing.

Industrial Base. High technology firms, engaged in the electronics, aerospace, and semi-conductor industries, dominate the industrial economy of the valley. Other major industries include printing and publishing, industrial machinery and equipment, auto repair, trucking, and warehousing. Most of the electronics industry is concentrated in the cities of Santa Clara, Sunnyvale, Mountain View, Palo Alto, and Milpitas. The City of San Jose has a more diverse industrial base.

Jurisdiction over Drainage Systems. Within the valley, drainage systems are of diverse physical types, and have diverse ownership and maintenance responsibility. Drainage facilities consist of gutters, swales, ditches, culverts, storm drain inlets, catch basins, storm drain lines, pump stations, and detention basins. In most cases, these facilities are owned and maintained by the municipality in which the facility is located. The natural drainages and flood control channels, some detention basins, and groundwater recharge basins are maintained and operated by the Santa Clara Valley Water District. Multiple agencies have jurisdiction and responsibility for management and maintenance of drainage facilities within the Program's thirteen major watershed areas. In addition, upland portions of some of these subwatersheds have non-urban land uses (agricultural, ranching, and open space) and are outside the Program Area. Runoff from these non-urban areas drains through the urban portion of the valley on its way to South San Francisco Bay.

2B HISTORY OF THE SCVURPPP

1986 Basin Plan and Initial Memorandum of Understanding. The Program was originally organized in response to the 1986 Regional Water Quality Control Plan for the San Francisco Bay Region (Basin Plan).[3] The 15 agencies prepared a plan[4] to characterize urban non-point sources and to identify and evaluate existing and additional controls. The 15 agencies then signed a Memorandum of Understanding to jointly contribute to a series of monitoring and BMP studies leading to a control plan.[5]

1990 Stormwater Permit and Storm Water Management Plan (SWMP). These materials became the basis for an NPDES permit application. In June 1990 the Program received an early NPDES municipal stormwater permit.[6] Permit provisions recognized that the Program had already accomplished significant work, which the California Regional Water Quality Control Board for the San Francisco Bay Region (Regional Board or RWQCB) considered equivalent to specific municipal stormwater permitting requirements promulgated by EPA in October of that year.

1990 Memorandum of Agreement. The Program is organized, coordinated, and implemented based upon a mutual Memorandum of Agreement (MOA) signed by the 15 participating public agencies in 1990. The MOA defines roles and responsibilities of all Co-permittees, a cost-sharing formula for joint expenditures and the role of the SCVWD as managing agency of the Program. The Management Committee, which includes representatives from the 15 Co-permittees, provides overall direction to the Program. The SCVWD chairs the Management Committee and employs a Program Manager and staff to implement, manage, and coordinate joint activities. The Program's Management Committee established subcommittees, composed of

---

[3] California Regional Water Quality Control Board for the San Francisco Bay Region (1986). *Water Quality Control Plan for the San Francisco Bay Region.* (Basin Plan). The reference in this section is to the 1986 version of the Basin Plan. The Regional Board approved the most recent Basin Plan on June 21, 1995.

[4] CH2MHill and EOA, Inc. (1987). *Nonpoint Source Evaluation Action Plan.*

[5] Woodward-Clyde Consultants (1990). *Loads Assessment Results and Implementation Program,* (3 volumes).

[6] Permit No. CA 0029718, Order No. 90-094

Program and Co-permittee staff, to assist in coordination of Co-permittee implementation efforts, including annual reporting and evaluation.

1993 Copper Waste Load Allocation[7] (WLA) and Copper Reduction Dialogue. In June 1993 the Regional Board adopted a WLA, which included an annual reduction of 950 pounds of copper to be accomplished jointly by the three South Bay wastewater dischargers (Publicly Owned Treatment Works, or POTWs) and the Program. In response, the Program and POTWs included regulatory, environmental, and commercial interest groups in a Copper Reduction Dialogue. In March 1994, the four entities signed a Memorandum of Agreement specifying actions to be completed. The actions are reviewed in the Program's 1997 Metals Control Measures Plan, and appropriate items incorporated into the URMP. The State Water Resources Control Board (SWRCB) has since remanded the WLA back to the Regional Board for review.

1995 Permit Reissuance. As part of the 5-year NPDES permit cycle, the Program developed and submitted a second SWMP to the Regional Board on June 30, 1995. The Regional Board approved the SWMP and issued the second NPDES storm water permit[8] on August 23, 1995. The SWMP included metals control measures. The permit called for the Program to develop watershed-based measures.

1997 Storm Water Management Plan Revision. The 1995 Permit called for the Program to develop a set of Performance Standards during 1995-1996. The permit defined Performance Standards as "the level of implementation necessary to demonstrate the control of pollutants in storm water to the maximum extent practicable." The Performance Standards were incorporated in the revised plan and submitted to the Regional Board on September 1, 1997. The Regional Board approved the URMP and performance standards in two separate letters (July 10, 1998 and December 14, 1998). In addition, an updated URMP, including updates to several Performance Standards only,

[7] A Waste Load Allocation is the portion of a receiving waters' assimilative capacity that is allocated to one of its existing or future point sources of pollution (40 CFR 130.2(g)).

[8] NPDES Permit No. CAS029718, Order 95-180.

was submitted to the Regional Board as part of the permit renewal application in December 1999. The Permit also calls for the submittal of an Annual Work Plan and Annual Monitoring Plan[9] on March 1 of each year and an Annual Fiscal Year Report, which may include recommendations for improvements or revisions to the plan, to be submitted on September 15 of each year.

In September 1997, the Management Committee (consistent with the SCVURPPP MOA/Bylaws) retained EOA, Inc. to provide Program management services. The SCVWD is the Program's fiscal agent and contracts with the Program Manager.

Memorandum of Understanding (MOA) and SCVURPPP Bylaws. The Co-permittees submitted an updated Memorandum of Agreement (MOA) and SCVURPPP Bylaws as part of the December 21, 1999 permit re-application package. Co-permittees are individually responsible for implementing the permit within their respective jurisdictions. The Co-permittees make use of the Program to pool resources and complete joint activities.

The Management Committee renamed the Santa Clara Valley Nonpoint Source Pollution Control Program to the Santa Clara Valley Urban Runoff Pollution Prevention Program. The new name is more descriptive of the Program's purpose, and better defines the Program's focus. Consistent with this renaming, this plan is titled an Urban Runoff Management Plan (URMP) instead of a Storm Water Management Plan.

2001 Permit Reissuance.

On February 21, 2001, the Regional Board adopted the Program's third NPDES permit (NPDES Permit No. CAS029718, Order No. 01-024 as amended by Order No. 01-119). The permit required the Co-permittees to

[9] Consistent with Provision C.7.b and C.9 of its Permit, the Program developed and submitted to the RWQCB (on March 1, 2002), a Multi-Year Receiving Waters Monitoring Plan (Multi-Year Plan) that identifies Program monitoring activities in Santa Clara Basin Watersheds over an eight-year period. The Program received a request from Regional Board staff on June 5, 2002 to revise the March 1, 2002 Multi-Year Plan. On August 5, 2002, the Program submitted an updated Multi-Year Plan. Each year (March 1), the Program submits an Annual Monitoring Plan that is consistent with the Multi-year Plan.

continue to implement existing performance standards and contained a number of new requirements including: addressing the post-construction and some construction phase impacts of new and redevelopment; hydromodification management plan; enhanced reporting requirements for industrial/commercial discharger control and illicit connection and illegal dumping elimination activities; a Multi-Year monitoring program; and control programs for pollutants of concern that have the reasonable potential to cause or contribute to exceedances of water quality standards/receiving water limitations. Specific control programs cover the following pollutants of concern: copper, nickel, mercury, legacy pesticides, PCBs, dioxin-like compounds and sediments. The Program was also required to continue to implement the 2000 Copper and Nickel Action Plans.

2C THE PROGRAM'S APPROACH TO POLLUTION PREVENTION AND REGULATORY COMPLIANCE

Santa Clara Valley municipalities were among the first in California, and nationally, to begin implementing control measures for urban runoff pollution prevention. The technical knowledge, regulatory mechanisms, and institutional division of responsibility needed to control urban runoff pollution are still maturing.

The Co-permittees' pollution control strategies have been developed in the context of Federal regulations, state regulations, regional management plans, regulatory staff guidance, and the requirements of the Program's NPDES permit.[10]

Ultimately, each "non-point" pollutant source is related to some specific natural condition or human activity. The general solution to "nonpoint" pollution is to find each of a multitude of small "point" sources — and then to reduce them to the maximum extent practicable.

[10] A brief summary of these regulatory and management programs is contained in Appendix B.

The Program encourages reduction of all sources of pollutants that may enter storm drains. These sources may be divided into three categories:

1. Urban sources that are within the authority and ability of municipal government to address

2. Urban sources that are beyond the regulatory authority of municipal government or that municipal government does not have the ability to address

3. Non-urban sources, which are beyond the regulatory authority of municipal government

Each Co-permittee has developed a comprehensive URMP to reduce sources in the first category to the maximum extent practicable. The Co-permittee Urban Runoff Management Plans incorporate Performance Standards that, where necessary, refine the model Performance Standard to suit local conditions. The Co-permittee URMPs contain local strategies for urban runoff control; including tailored Performance Standards, work plans to implement Performance Standards, and Best Management Practices and Standard Operating Procedures that detail how control measures will be carried out day-to-day. The Co-permittee URMPs comprise Chapters 5-16. The common features of the Co-permittee URMPs are detailed in Chapter 4.

For sources in the second category, the Program participates in, and contributes to, joint efforts with other entities, including regulatory agencies, public benefit corporations, universities, and citizens' groups. These entities take the lead on addressing particular sources because they are regional, statewide or national in scope, because they have different skills or expertise, or because they have appropriate regulatory authority.

For the third category, non-urban sources, the Program continues to build, and actively participate in, the Santa Clara Basin Watershed Management Initiative (SCBWMI).

2D POLLUTION PREVENTION AND WATERSHED MANAGEMENT

Watershed Management — managing activities and natural processes of a watershed in a practical manner that maximizes the benefits and minimizes the adverse impacts on the environment for the benefit of the community and recognizes the quality of life and diversity — defines a new approach to the Regional Board's watershed and Bay protection efforts. The Regional Board has specified the Santa Clara Basin as one of two watersheds initially targeted for this approach.

The first Storm Water Management Plan (June 1995) contained five Watershed Management Measures, beginning with institutional arrangements and leading, after some years of planned effort, to area-wide watershed management. Since that time the Program has helped forge a new approach that brings in stakeholders at the beginning of the planning process.

The Santa Clara Basin Watershed Management Initiative (SCBWMI) is organized into three distinct phases: (1) Initiating Phase, (2) Planning Phase, and (3) Operating or Implementing Phase. In April 1996, Regional Board staff commenced the Initiating Phase. The Board staff, with the assistance of several Co-permittees, gathered together various interested parties (stakeholders) in the watershed to determine their interest in watershed management and their vision of how to begin planning watershed use and protection. In June 1996, an ad hoc committee composed of representatives from various stakeholder groups met to discuss these issues. This group later came to be called the Core Group and now meets monthly. The Core Group developed a mission statement, and a Process subgroup formalized the planning structure, planning process, and a timeline. In November 1996, the SCBWMI moved into an 18- to 24-month planning phase.

Coincident with this planning phase, the Program committed specific resources, in addition to resources committed by individual Co-permittees, to assist the SCBWMI with:

- Modeling loading, fate and transport of pollutants, to support development of a copper and nickel Total Maximum Daily Load (TMDL) in the Lower South Bay.

- Assessments of impairment of beneficial uses in the sloughs and tributary creeks of the Lower South Bay.

SCVURPPP's Program Manager participates in the SCBWMI's Core Group. Co-permittee staff, and Program staff and consultants, will continue to participate in various SCBWMI workgroups. By helping to create the SCBWMI, the Co-permittees have effectively implemented the watershed tasks in the 1995 SWMP, the 1997 URMP, and the 2001 Watershed and Urban Runoff Integration report.[11] The Program believes that a viable watershed management plan for the Santa Clara basin will require stakeholder involvement and area-wide planning. Accordingly, the Program's ongoing watershed planning is coordinated through participation in the SCBWMI. As the SCBWMI has developed, it has begun to lay the groundwork for adaptive management within the Santa Clara Basin watersheds. The SCVURPPP will continue to focus on preventing pollution from urban sources by pursuing activities within the purview of the Co-permittees. (See Figure 2)

The Management Committee, as part of the annual evaluation and continuous improvement cycle, reviews the resources that the Program and Co-permittees contribute to the SCBWMI and recommends actions (including budget) to assist the SCBWMI in the coming year.

2E DESCRIPTION OF RELATED PROGRAMS

In addition to participating in the SCBWMI, the Program works with other entities — including regulatory agencies, trade associations and nonprofit groups — to pursue urban runoff pollution prevention. Some examples follow.

[11] Consistent with Provision C.10 of the NPDES permit, SCVURPPP developed a report entitled "Watershed Management and Urban Runoff Management Integration Report, June 29, 2001." The report contains an analysis of how watershed management and urban runoff are currently integrated along with recommendations on the prioritization of watersheds for future investigations/assessments. .

SF Bay Regional Monitoring Program (RMP). Point and urban runoff dischargers including the SCVURPPP fund this monitoring program. The program is administered by the San Francisco Estuary Institute and includes water column, sediment, and biological monitoring at stations throughout the San Francisco Bay, including the lower South Bay. The program conducts special studies such as a pilot watershed-monitoring element in Coyote Creek. The SCVURPPP may supplement RMP funds, from time to time, to encourage special studies that are of interest to the Program.

Bay Area Stormwater Management Agencies Association (BASMAA). BASMAA is a consortium of San Francisco Bay region municipal stormwater programs. Representatives of the seven contributing programs comprise the association's Board, which oversees the work of three committees:

- Monitoring
- New Development
- Operational Permits

BASMAA's New Development Committee has focused on providing tools municipalities can use to incorporate measures to mitigate the urban runoff impacts of new development and construction. The New Development Committee has also overseen preparation of *Start at the Source*[12][13], a site planning/design guidance manual and other products, and provided coordination with Regional Board staff. Regional public outreach and advertising is also conducted through BASMAA. In addition, BASMAA continues to successfully develop a single voice for Bay Area urban runoff programs. The SCVURPPP Program Manager has (for the past five years) and continues to serve as Vice Chair of BASMAA.

POTW Pretreatment Programs. The three POTWs in the Santa Clara Basin inspect many facilities that discharge to sanitary sewers. The

[12] Tom Richman & Associates (1997). *Start at the Source: Residential Site Planning and Design Guidance Manual for Stormwater Quality Protection.* Bay Area Stormwater Management Agencies Association.

[13] Tom Richman & Associates (1999). *Start at the Source: Design Guidance Manual for Stormwater Quality Protection.* Bay Area Stormwater Management Agencies Association.

inspections insure compliance with the industry's discharge permit and Federal pretreatment regulations. These inspection programs are closely coordinated with the control of industrial sources of urban runoff pollutants. All facilities that are inspected for compliance with sanitary sewer discharge regulations are also inspected for compliance with requirements to implement urban runoff pollution prevention Best Management Practices (BMPs).

Vehicle Emissions and Congestion Management Programs. The Santa Clara Transportation Authority is responsible for developing and implementing a Congestion Management Program that is intended to reduce traffic congestion through various measures, including public education, provision of high-occupancy-vehicle lanes, employer carpooling incentives, and encouraging use of public transit. Similarly, the Bay Area Clean Air Plan, jointly developed by the Bay Area Air Quality Management District (BAAQMD), the Metropolitan Transportation Commission (MTC), and ABAG, aims to improve air quality through controls on emissions from stationary sources and motor vehicles, and through transportation system improvement measures. The emission reduction programs benefit urban runoff quality because particulate metals and other pollutants emitted by automobiles settle on urban surfaces and are later washed into urban runoff.

Hazardous Waste Recycling and Disposal Programs. Most cities in Santa Clara County participate in the Countywide Household Hazardous Waste Collection Program, which is administered by the County Health Department. A guidebook describing these activities was developed jointly by the County Hazardous Waste Program and the SCVURPPP in 1991. The elements of the program differ from jurisdiction to jurisdiction, but typically include household hazardous waste drop-off locations, curbside pickup, and community recycling centers. These programs recycle batteries, fluorescent lamps, automotive fluids, household cleaners, paints, and garden chemicals generated by households and some small businesses.

Certified Unified Program Agency (CUPA) Program. Senate Bill 1082 of 1993 (Health and Safety Code Chapter 6.11) requires California EPA to establish a "unified hazardous waste and hazardous materials management" regulatory program (Unified Program) by January 1, 1996. The Unified

Program is intended to consolidate, coordinate and make consistent the administrative requirements, permits, inspection, enforcement and fees for state-mandated regulation of:

- Hazardous waste generators and onsite treatment of hazardous wastes
- Spill prevention control and countermeasure plans for above-ground storage tanks
- Underground storage tanks
- Hazardous material release response plans and inventory
- Risk management and prevention

Clean Estuary Partnership. The Clean Estuary Partnership (CEP) is a cooperative partnership (voluntary) that facilitates efforts to improve water quality in San Francisco Bay by providing financial and staff support for technical analysis and stakeholder outreach activities. The official CEP partners are:

1. San Francisco Bay Regional Water Quality Control Board (RWQCB);
2. Bay Area Stormwater Management Agencies Association (BASMAA); and
3. Bay Area Clean Water Agencies (BACWA).

The recent trend toward lengthy and costly legal challenges of regulatory decisions convinced stakeholders to pursue a more collaborative approach. In September 2001, the Regional Board, BACWA and BASMAA signed a memorandum of understanding (MOU) to establish the CEP. The intention was to provide a forum and process for industry, the environmental community and various research and planning initiatives to work together to:

4. Summarize the existing scientific evidence for pollutant impacts;
5. Develop conceptual models that explain the source of the problems and are consistent with available scientific data and theory;

6. Coordinate peer review of key scientific/technical documents; and

7. Identify feasible long-term strategies for addressing pollution problems.

The effort is designed to result in greater consensus regarding the technical foundation for regulatory action, and reduce the likelihood of controversy and litigation when the regulations are adopted in the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan). SCVURPPP has been actively involved from the inception of the CEP and annually contributes resources (both funding and staff in-kind support) to the effort. While SCVURPPP supports the overall goals and mission of the CEP, there is a need to been refine the operational relationship between the RMP and the CEP to more efficiently and cost-effectively utilize the limited public agency resources that support these two programs.

Water Resources Protection Collaborative. The Water Resources Protection Collaborative (Collaborative) includes representatives from the SCVWD, the County of Santa Clara, each municipality within the County, the Regional Water Quality Control Board, and representatives of property owners, the environmental community and business/development interests. It was initiated in December, 2002 in order to address land use issues near streams in response to SCVWD's proposal to modify Ordinance 83-2. The Collaborative's Mission is to review and assess the current state of water resources protection measures in Santa Clara County; and to propose appropriate management strategies and institutional arrangements to implement these strategies.

The Co-permittees, typically higher level staff from Planning and Public Works Departments, have participated in the Collaborative meetings since December 2002. The Program itself is not a member, but participates as needed in technical work groups and reviews products for consistency with Program goals and objectives and permit requirements. The Collaborative's goal to better implement watershed management strategies within the County supports the mission of the Program to assist in protecting beneficial uses of

streams by reducing pollutants of concern from adjacent land uses to the maximum extent practicable.

Santa Clara Valley Urban Runoff Pollution Prevention Program's Goals and Organization

Chapter Three

3A DURATION OF THE URBAN RUNOFF MANAGEMENT PLAN

More than just a list of control measures, this Urban Runoff Management Plan is intended to guide continuous improvement and ongoing development of the Program. The original Plan period began in September 1997. The Management Committee, consistent with Provision C.2.b of the 2001 NPDES permit, developed the revised Plan that became effective starting on September 1, 2004.

The Co-permittee URMPs (Chapters 5-16) contain the local strategy for urban runoff control, including tailored Performance Standards, Best Management Practices (BMPs) and Standard Operating Procedures (SOPs). The Co-permittee URMPs represent the local work plans for implementing control measures. As shown within Figure 2, the Program's annual reports will document continuous improvements to the Co-permittees' URMPs, BMPs and SOPs.

3B MISSION STATEMENT

During four study sessions in mid-1996, the Program's Management Committee developed a Program Mission Statement and Program Goals and Objectives. This process brought about a general consensus among the Co-permittees on the Program's approach to compliance with water-quality regulations.

Mission Statement

"To assist in the protection of beneficial uses of receiving waters by preventing pollutants generated from activities in urban service areas from entering runoff to the maximum extent practicable."

The Mission Statement:

- Targets pollutant reduction measures that are needed to help protect beneficial uses
- Focuses on urban pollutant sources (as opposed to nonpoint sources generally)
- Sets a specific benchmark for implementation (as opposed to doing "anything and everything" related to pollutant sources)

This focused approach is consistent with the Program's idea of working with other parties or institutions that are better equipped to carry out specific pollution control strategies. The Program concentrates its own efforts on identifying pollution sources, and implementing pollution prevention measures, that are clearly within the authority and ability of the Co-permittees.

Goals and Objectives

GOAL 1: Comply with Permit

- Effectively prohibit non-stormwater discharges (unless exempt or managed according to approved conditions)
- Reduce, to the maximum extent practicable, pollutants in stormwater runoff
- Comply with permit submittal requirements

GOAL 2: Determine Success

- Periodically evaluate the attainment of beneficial uses in selected waterways
- Evaluate changes in public awareness and behavior
- Evaluate effectiveness of specific control measures at pollution reduction.

GOAL 3: Adjust Activities to Meet Changes

- Define what constitutes success (how much is enough?) as it relates to programmatic and technical MEP
- Utilize what we learn to plan the next steps

GOAL 4: Achieve Acceptance of Urban Runoff Management Activities

- Effectively facilitate public input into Program planning process
- Integrate urban runoff goals at various intra-agency levels
- Develop and maintain a proactive interrelationship with regulatory authorities
- Publicize the efforts of the Co-permittees (Program)

GOAL 5: Integrate Urban Runoff Program Elements into other Programs

- Promulgate an understanding of the role of the urban runoff program
- Encourage other agencies to become involved in urban runoff issues
- Encourage action by the appropriate agencies

3C GOALS AND OBJECTIVES

The Program's goals and objectives also stress this practical, focused approach.

Goal 1 is to achieve regulatory compliance by implementing all permit requirements. That overall purpose can be summed in two key objectives: (1) effectively preventing non-stormwater discharges and (2) implementing best management practices that can reduce the concentration of pollutants in urban runoff. A third objective is to insure that the Co-permittees comply with the letter, as well as the spirit, of the regulations, by fulfilling each formal requirement of the permit.

Goal 2 is to measure Program successes. Many Program activities are essentially mandated by Federal and state regulations or are strongly encouraged by Regional Board staff. The effectiveness of many of these mandated activities has not been established—or may be near impossible to measure. However, in its strategy for complying with regulatory mandates, the Program continually seeks to measure the results of its efforts to make the

Performance Standards

Performance Standards establish a level of effort for best management practices or control measures that can be implemented throughout the urban watershed according to the characteristics of individual Co-permittee jurisdictions.

Program more efficient, and seeks new opportunities to control urban runoff pollutants. In particular, the Program is committed to a periodic evaluation of beneficial uses in some of the Santa Clara watershed's waterways. At present, the Program is pursuing this by participating in the Santa Clara Basin Watershed Management Initiative and implementation of the Program's Multi-Year Receiving Water Monitoring Plan. Some other Program activities are amenable to measurement of intermediate objectives. For example, changes in the general public's knowledge, attitudes, and pollution-causing behavior can be measured through surveys.

Goal 3 spurs SCVURPPP to continuously re-evaluate the meaning of "Maximum Extent Practicable." As the knowledge and philosophy within this new and fast-changing field evolve, the Program seeks new opportunities to prevent urban runoff pollution and to protect beneficial uses of the region's water bodies. Urban Runoff Management Plans and Performance Standards are designed to be flexible.

Goal 4 embodies the perspective that to be effective, the Co-permittees must integrate the work of each department of their own agency and work to influence the work of other agencies. For example, municipal urban runoff pollution prevention programs typically coordinate with their local fire marshal or fire prevention bureau, planning and building department, attorney's office, and public information officer, as well as public works.

Goal 5 reflects the Program's commitment to involving agencies, (e.g. BAAQMD and CMA), in solutions which reduce urban runoff pollutants at their source. Where no suitable agency exists — as for controlling copper-laden dust from brake pads, or for implementing a watershed perspective the Program works with others to foster development of appropriate entities, such as the Brake Pad Partnership and the SCBWMI.

3D HOW THE PROGRAM IS ORGANIZED

During 1996 and early 1997, the Program's Management Committee worked on a new Agreement for Implementation of the Santa Clara Valley Urban Runoff Pollution Prevention Program, and new Bylaws governing the operation of the committee. The new Agreement and Bylaws clarified the Program's decision-making process and enhanced the ability of the Program to assist each Co-permittee to comply with the provisions of the NPDES permit.

The Agreement formally renamed the Program (from the Santa Clara Valley Nonpoint Source Pollution Control Program to the Santa Clara Valley Urban Runoff Pollution Prevention Program) and reconstituted a Management Committee to be the official decision-making body for the Program.[14] The Management Committee consists of one designated voting representative from each of the listed Co-permittees. Voting is not weighted by community size or by the Co-permittees financial contribution to the Program. However, the Bylaws provide that "the affirmative vote of at least eight voting members which collectively contribute at least fifty percent of the Program costs is necessary to approve any measure…." This scheme provides that action by the Management Committee requires the support of a majority of the Co-permittees, including the support of either the City of San Jose or the Santa Clara Valley Water District.

[14] Management Committee meetings are publicly noticed and provide opportunity for public input as part of the decision-making process.

Co-permittees are those entities named in the NPDES permit issued by the Regional Board. As stated in the Bylaws, the Co-permittees, when collectively implementing area-wide activities that benefit all Co-permittees, are referred to as the "Program."

The Co-permittees share the costs of implementing the Program. The Management Committee designates a public entity to act as its fiscal agent. Through the fiscal agent, the Management Committee retains a Program Manager.

The Program Manager:

- Administers the Program.
- Supports the Management Committee and its ad-hoc Task Groups.
- Prepares budgets and tracks and reports expenditures.
- Coordinates with the Program's legal consultant.
- Prepares and submits annual reports and other documentation to the Regional Board.
- Provides liaison between the Program and Co-permittees.
- Represents the Program to, and facilitates cooperation with, the SCBWMI, Regional Board, BAAQMD, BASMAA, environmental groups, other organizations and interested parties.

The Program Manager also directs consultants to implement area-wide activities that require specialized expertise. These activities include public information, public opinion polling, development of new BMPs and control measures, and monitoring of sources, fate and effects of urban runoff pollutants.

The individual Co-permittees implement most BMPs and control measures. As is documented in Chapters 5-16, each Co-permittee has organized its own

urban runoff pollution prevention program, including assignments for implementing control measures and a structure for coordinating local efforts.

3E PERFORMANCE STANDARDS

Consistent with its emphasis on effectiveness, accountability, and continuous improvement, the Management Committee has developed mechanisms for facilitating consistent countywide implementation of Program elements, while preserving flexibility and allowing Co-permittees to tailor elements to fit their local conditions. (One size does not fit all) These mechanisms also provide for systematic documentation of local efforts.

Model Performance Standards. Most Co-permittee activities — and the level of implementation for those activities — are defined in Performance Standards. Performance Standards describe a specific result, or level of effort, that constitutes the "maximum extent practicable" based on current technical knowledge, available resources and local conditions. First developed in 1996, the Program adopted model Performance Standards for:

- Illicit Connection and Illegal Dumping Elimination Activities
- Industrial/Commercial Discharger Control Programs
- Public Streets, Roads and Highways Operation and Maintenance
- Storm Drain System Operation and Maintenance
- Water Utility Operation and Maintenance
- Planning Procedures
- Construction Inspection

Since 1997, the Management Committee has updated the following performance standards:

- Illicit Connection and Illegal Dumping Elimination Activities (March 1999)
- Industrial/Commercial Discharger Control Programs (March 1999)
- Storm Drain System Operation and Maintenance (March 1999)
- Construction Inspection (January 2002)
- Planning Procedures for New Development and Redevelopment (January 2004)

Since 2001, the Management Committee has developed and finalized the following new performance standards:

- Pest Management (February 2002). Accepted by the Regional Board on June 19, 2002.
- Rural Public Works Maintenance and Support (December 2002). Accepted by the Regional Board on February 18, 2003.

In addition, the Program prepared Public Information and Participation (PIP) framework that the Co-permittees have used to develop their individual PIP programs and the Management Committee has used to develop a joint PIP program.

The model Performance Standards were developed by Ad-Hoc Task Groups (AHTGs), composed of Co-permittee staff, Program staff and consultants. They are included in Appendix A.

Model Performance Standards assist Co-permittees to develop their local programs. Co-permittees have the option of adopting the model Performance Standards without changes. Each Co-permittee can, if it so chooses, begin implementation of a thorough, well-thought-out plan that has had the benefit of extensive peer review. Alternatively, Co-permittees may develop their own Performance Standard by adapting the model Performance Standard to suit their local conditions. In developing their own Performance Standards,

Co-permittees cite their specific characteristics to justify a different degree of implementation.

3F REPORTING

The principal purpose of the Program's Annual Reports is to facilitate and document the Program's activities and process of evaluation and continuous improvement (see following Section 3G). Accordingly, the reports focus on the Co-permittees' progress in developing their local programs and in implementing the individual Co-permittees' URMPs. The reports document routine implementation of control measures, but in brief, summary form.

The Program's annual report also summarizes Program joint activities (e.g. Public Information/Participation, Monitoring, assisting Co-permittees to implement Performance Standards, and participation with other entities, including the Santa Clara Basin Watershed Management Initiative). (The Management Committee, Regional Board staff and interested parties receive monthly reports on these activities at monthly Management Committee meetings.)[15]

Performance Standards are a key component of each Co-permittee's URMP. Each Performance Standard consists of a series of explicit or implicit questions: Was the specific action accomplished, at or above the level specified? What documentation is available? Answering these questions, along with a discussion of overall implementation status of the Performance Standards, provides for systematic documentation of activities and point-by-point evaluation of whether the Performance Standards are being met. Activities that are identified in the individual Co-permittee URMPs, but are

[15] To ensure public access to all reports, work products, guidance documents and environmental data, the Program has placed the vast majority of the 258 major reports and work products produced by SCVURPPP since September 1997 on its website (www.scvurppp.org). When viewing the website, the majority of reports and work products are linked to downloadable documents. Reports and work products not available through the website may be obtained by submitting a request form. The website is continually updated to include the latest reports and work products, data inventory sets and other pertinent Program information.

not covered by Performance Standards (e.g. participation in school-based watershed education) are also documented in the annual reports. Annual reports also describe and synthesize the Co-permittees' local experience and joint efforts to produce a comprehensive view of the past year's progress in pollution prevention and urban watershed protection.

3G WORK PLANS

By March 1 of each year, the Program submits to the Regional Board a draft Work Plan (both Program and Co-permittee specific) for implementation of the Program's URMP for the coming fiscal year, in accordance with NPDES Permit Provision C.6.b. The Work Plan includes clearly defined tasks, responsibilities and schedules to be implemented by the Program and Co-permittees. It also includes development of new, or modification of existing performance standards (Provision C.2.b), provides the Work Plan for implementing Provision C.3., describes planned monitoring activities (Provision C.7), describes pollutant-specific requirements (Provision C.9) and defines the Program's role relative to Watershed Management efforts (Provision C.10).

The Work Plan builds on the baseline efforts conducted by the Program and Co-permittees through a "continuous improvement" process, in which the Program seeks new opportunities to control storm water pollution. The Program's concept for continuous improvement is illustrated within Figure 2. The Work Plan includes a discussion of continuous improvement tasks that were identified, in part, during individual Co-permittee performance reviews, effectiveness evaluations in previous annual reports, and cooperative efforts between the Program and groups which include the Bay Area Stormwater Management Agencies Association (BASMAA), SCBWMI, Regional Monitoring Program (RMP) and Clean Estuary Partnership (CEP).

3H EVALUATION AND CONTINUOUS IMPROVEMENT

SCVURPPP's approach to implementing Performance Standards explicitly acknowledges that "Maximum Extent Practicable" (MEP) is an evolving and flexible concept. Knowledge about controlling urban runoff pollution continues to advance, and available resources vary with changes to each municipality's staffing and budget.

What's more, defining MEP is subjective. It requires judgment to balance resources applied against results gained.

Given that MEP is subjective, evolving, and flexible, it makes sense to ask, "What opportunities are available for improving Program effectiveness?" rather than "Has the Co-permittee done everything possible to control urban runoff pollution?"

Therefore, the SCVURPPP is dedicated to a process of continuous review and improvement, which includes seeking new opportunities to control stormwater pollution and to protect beneficial uses. When such opportunities arise, the Program will revise, update and add to its activities, control measures, BMPs and Performance Standards.[16] Chapter 4 details how the Program will pursue continuous improvement in each Program area. These changes will be documented in the Annual Report. A typical schedule for the annual continuous improvement cycle is shown in Table 2.

Under direction of the Management Committee, the Program implements joint activities. Joint activities include the area-wide Public Information/ Participation and Monitoring program elements, assistance to Co-permittees to implement other program elements (as detailed in Sections 4) and participation with other entities to reduce sources of pollutants that are beyond municipalities' authority or ability to address (as described in Sections 2C, 2D, 2E, and 4H).

[16] Among other things this applies to pollutants of concern that have been identified as causing or contributing to exceedances of water quality standards/receiving water limitations (See Appendix D, Attachment D-1)

Co-permittees will perform an annual review of the Program's work and set priorities for the coming year. This review is also an opportunity to check progress on activities required under the Program's permit.

The Program's annual report reviews and evaluates joint activities in the context of Program goals and objectives. However, since many Program objectives are long-term, it is difficult to assess incremental progress toward these objectives.

As discussed in Section 2D, the Program is evolving toward a watershed approach. Future Program initiatives may originate in discussions among stakeholders in the SCBWMI. Figure 3 shows two categories of these Program initiatives:

1. SCBWMI monitoring and investigations may identify sources of pollutants or watershed impacts that are clearly within the jurisdiction of the Co-permittees to abate.

2. The SCBWMI may identify special studies, or institutional needs, that the Program (among SCBWMI stakeholders) is best suited to implement.

SCBWMI recommendations will be forwarded to the Management Committee for action. Actions will be documented in the Program's annual reports.

Table 2
Typical Annual Cycle for Continuous Improvement

July/August	• **Document previous year Program activities (Prepare Annual Report).**
Sept. 15	• **Submit Annual Report, including Program and Co-permittee objectives for current fiscal year.**
October	• **Initiate review of one existing Performance Standard or Program element, or create one new Performance Standard.** • **Review commitments to the SCBWMI, BASMAA, CEP, Projects of Regionwide Benefit, RMP, Brake Pad Partnership, BAAQMD, and other entities for next fiscal year.** • **Prepare draft Program budget and final Annual Budget Compilation Report for previous fiscal year.**
December	• **Review permit administration and Program administration. Prepare final Program budget.**
January	• **Summarize contemplated Program improvements and potential effects on Co-permittee programs and budgets.**
February	• **Review Program activities and commitments for the current fiscal year, revise schedule to insure commitments are met and approve draft Work Plan.**
March	• **Submit draft Work Plan, including Program and Co-permittee objectives for upcoming fiscal year.**
May	• **Prepare draft *Review of Program Management Services* memorandum for current fiscal year.** • **Review of draft *Review of Program Management Services* memorandum by Management Committee.**
June/July	• **Review Program objectives and priorities, schedule and budget for the next fiscal year.**

3I EXEMPTED AND CONDITIONALLY EXEMPTED DISCHARGES

The Program's NPDES permit (Permit Provision C.8) identifies the approach for addressing exempted and conditionally exempted discharges[17], as well as reporting procedures. Co-permittees will continue to follow the NPDES permit approach and may, from time to time, request modification to the categories as allowed for within the Permit Provision.

[17] The Program's report entitled *Conditionally Exempted Discharges – Classification and Control Measures, June 15, 2000* (see Appendix D, Attachment D-2) contains control measures for the twelve (12) non-storm water discharges. Although they are rarely, if ever, pollution sources; each of the discharges may warrant some type of control measure. The report includes a discussion of control measures to reduce pollutants in these discharges to appropriate levels, procedures and Performance Standards for the implementation of these control measures, procedures for notifying the Regional Board of these discharges, and procedures for monitoring and record management. The report was developed by a specially formed AHTG consisting of qualified Co-permittee staff members. The evaluations and recommendations for these Conditionally Exempted Discharges are based on the AHTG's thirty (30) years of combined water quality inspection experience. This report also includes responses to Regional Board staff comments.

Santa Clara Valley Urban Runoff Pollution Prevention Program Summary of Activities

Chapter Four

4A PROGRAM FEATURES

The SCVURPPP has been designed to help the Co-permittees secure regulatory compliance and maximize their effectiveness in preventing urban runoff pollution. The Program's main features are:

- Model Performance Standards (included in Appendix A) which define the result, or level of effort, for each major pollution-prevention task
- Cooperation between Co-permittees to jointly implement some required tasks — such as watershed monitoring — that can be done most effectively on a watershed or regional scale
- Participation in related programs and efforts that take the lead to address specific pollutant sources (e.g. BAAQMD's regulation of vehicle exhaust) or to pursue preservation of beneficial uses (e.g. the SCBWMI)
- Co-permittee URMPs that incorporate Performance Standards that (where necessary) refine the model Performance Standard to suit local conditions. Each Co-permittee URMP contains a local strategy for urban runoff

control, including tailored Performance Standards, specific description of steps needed to implement Performance Standards, and Best Management Practices and Standard Operating Procedures that detail how control measures will be carried out day-to-day. The Co-permittee URMPs are contained in Chapter 5-16.

The following sections 4B through 4H summarize how the Co-permittees (acting individually and collectively as the Program) are implementing each Program element. The Program elements are:

- Illicit Connection and Illegal Dumping Elimination
- Industrial/Commercial Discharger Control
- Public Information and Participation
- Public Agency Activities
- New & Redevelopment and Construction
- Monitoring

Table 3 shows how these Program elements are designed to fulfill the Program's goals and objectives.

Sections 4B through 4H describe, for each Program element:

- Contents of model Performance Standards
- Joint activities, to be carried out under the direction of the Management Committee
- Strategies for continuous evaluation and improvement
- Provisions for annual reporting

Section 4H summarizes how the Program cooperates with other programs to reduce pollutants from non-urban sources and other sources that are beyond

the regulatory authority of municipal government, or that municipal government does not have the ability to address.

Table 3: Program Goals, Objectives and Elements

Program Goals and Objectives Stated in Section 3C	Sections of This Document That Discuss Specific, Corresponding Actions
GOAL 1: Comply with Permit	
• Effectively prohibit non-stormwater discharges (unless exempt or managed according to approved conditions)	Section 4B (Illicit Discharge and Illegal Dumping Elimination) and Section 4C (Industrial/Commercial Discharger Control)
• Reduce, to the maximum extent practicable, pollutants in stormwater runoff	Section 4C (Industrial/Commercial Discharger Control) Section 4D (Public Information/Participation) Section 4E (Public Agency Activities) Section 4F (New &Redevelopment and Construction).
• Comply with permit submittal requirements	Section 3F (Reporting), Section #G (Work Plan)
GOAL 2: Determine Success	
• Periodically evaluate the attainment of beneficial uses in selected waterways	Section 2D (Pollution Prevention and Watershed Management) and Section 4G (Monitoring)
• Evaluate changes in public awareness and behavior	Section 4D (Public Information and Participation)
• Evaluate effectiveness of specific control measures at pollution reduction	Section 2D (Pollution Prevention and Watershed Management) and Section 4G (Monitoring)
GOAL 3: Adjust Activities to Meet Changes	
• Define what constitutes success (how much is enough?) as it relates to programmatic and technical MEP	Section 3H (Continuous Improvement)
• Utilize what we learn to plan the next steps	Section 3H (Continuous Improvement)
GOAL 4: Achieve Acceptance of Urban Runoff Management Activities	
• Effectively facilitate public input into Program planning process	This has been accomplished through public discussions on key elements of the Program. As the Program develops its watershed orientation, public input is also solicited through the SCBWMI stakeholder process.
• Integrate urban runoff goals at various intra-agency levels	Each Co-permittee URMP discusses organization within their agency.
• Develop and maintain a proactive interrelationship with regulatory authorities	Section 3H (Continuous Improvement), particularly the discussion of on-site program reviews.
• Publicize the efforts of the Co-permittees (Program)	Section 4D (Public Information and Participation)
GOAL 5: Integrate Urban Runoff Program Elements into other Programs	
• Promulgate an understanding of the role of the urban runoff program	Section 2C (The Program's Approach to Pollution Prevention and Regulatory Compliance)

• Encourage other agencies to become involved in urban runoff issues	Section 2D (Pollution Prevention and Watershed Management, Section 2E (Description of Related Programs) and Section 4H (Cooperation with Related Programs)
• Encourage action by the appropriate agencies	Section 4H (Cooperation with Related Programs)

Chapters 5-16 contain individual URMPs for each Co-permittee. In Chapter 14, the four West Valley communities have combined their strategies into a single URMP. Appendix C contains additional tables, prepared by each Co-permittee, describing the status of Co-permittee work plans, BMPs and SOPs associated with each Performance Standard.

4B ILLICIT CONNECTION AND ILLEGAL DUMPING ELIMINATION

The Program's Metals Control Measures Plan[18] found that illegal dumping contributes an insignificant amount of the total load of metal pollutants that reaches South San Francisco Bay. However, illicit connections and illegal dumping can cause transient toxicity and localized problems that significantly affect beneficial uses in Santa Clara Valley creeks and wetlands.

EPA regulations and the Basin Plan require that operators of municipal storm drainage systems actively seek to eliminate non-stormwater discharges that can contain significant amounts of pollutants.

The Program has Developed a Model Performance Standard Designed to Effectively Eliminate Illicit Connections and Illegal Dumping (ICID). The Program's December 19, 1996 model Performance Standard for Illicit Connection and Illegal Dumping Elimination Activities contains actions that each Co-permittee has tailored to suit local conditions to effectively eliminate ICID to their storm drainage systems.

The Model Performance Standard and supporting documents call for:

[18] SCVURPPP, *Metals Control Measures Plan (Vol1) and Evaluation of None metals of Concern (vol2*), 1997, prepared by Woodward Clyde Consultants and EOA, Inc., February 1997.

- Assignment of personnel and resources for enforcing prohibitions on ICID
- A training program for ICID inspectors
- A list of materials that will be used to educate and inform individuals who are engaged in activities associated with prioritized discharges, including door hangers or other literature distributed in areas where illegal discharges have been found
- Plans to inspect the storm drainage system for evidence of non-storm-water flows, with an emphasis on finding and preventing prioritized types or locations of discharges
- A plan for responding to illicit discharge incidents
- A system for responding to referrals from other agencies or departments
- A protocol for contacting, educating, and assisting individuals or businesses responsible for ICID and taking enforcement action, where appropriate
- A tracking system to document and report field inspections and incidents
- Criteria for an annual evaluation of the effectiveness of this element
- A schedule for implementing field investigations

The Co-permittee URMPs Contain Agency-Specific Strategies for Effectively Eliminating ICID. Each Co-permittee has developed a URMP that describes its agency-specific local strategy and includes tailored Performance Standards, BMPs and SOPs. The individual Co-permittee URMPs are contained in Chapters 5-16 and are summarized in Appendix C. Where Co-permittees are not currently implementing all aspects of this element of their URMP, they have provided a schedule for doing so in their work plans.

The Program Pursues Joint Activities that Assist the Co-permittees to Effectively Eliminate ICID. The Management Committee will continue to sponsor periodic meetings where the Co-permittees' field inspectors can share information, experiences and ideas for improving local ICID programs. These meetings also provide a forum for coordinating ICID elimination with other pollution prevention activities, including public outreach and education.

As directed by the Management Committee, Program staff will also continue to:

- Supply storm-drain stencils, with a "no dumping" message, to Co-permittees
- Distribute literature and other materials describing BMPs to avoid non-stormwater discharges and eliminate ICID
- Answer questions, over a toll-free telephone hotline, about proper disposal methods and ways to control non-stormwater discharges
- Provide professional advice and guidance to Co-permittee staff, consultants and interested parties
- Coordinate ad-hoc task groups on ICID issues as needed
- In correspondence with Regional Board staff, periodically identify and describe categories of discharges to storm drains that need not be prohibited if properly managed.

The Program Pursues Continuous Evaluation and Improvement of ICID Elimination. The Co-permittees' incident tracking systems will be designed to help their staff identify and prioritize specific areas for additional investigation. As part of their annual reporting process, Co-permittees will review documentation of ICID to their storm drainage systems during the previous year. In particular, Co-permittees will consider how the number and type of incidents reported may have been affected by changes in field investigations, increased public awareness, or other factors. Co-permittees will identify any changes to their URMPs that result from this review.

Meetings of ICID inspectors and others involved in ICID elimination will facilitate discussion of inspection techniques and of the Program's strategy for outreach and education to prevent ICID. Where there is consensus that new outreach materials or strategies could be effective in reducing specific categories of discharge, the Management Committee will coordinate ad-hoc task groups to create and implement them.

ICID Elimination Activities Are Documented in Annual Reports. The Program's annual report will document the Co-permittees' implementation of each specific item in the Performance Standards. Since October 2001[19], the Program Manager has assisted each Co-Permittee (on an individual basis) with implementation of an enhanced reporting strategy. The effort has been very successful in demonstrating the full extent of the Co-permittees efforts in a consistent Program-wide manner. This allows for clear prioritization of related future work including enforcement, where necessary.

The Co-permittees will annually review their Performance Standards, update their URMPs as needed, and report their progress and accomplishments. This will include summaries of training programs and distribution of educational materials. The annual report will, as appropriate, highlight changes in inspection schedules or in priorities for controlling potential discharges.

4C INDUSTRIAL/COMMERCIAL DISCHARGER CONTROL

The Program's Metals Control Measures Plan concluded that runoff from industrial sites in the Santa Clara Valley may contribute a small load of copper and other metals to South San Francisco Bay. The estimates were based on concentration data reported by industries to the SWRCB. The data indicate that runoff from electroplating, metal finishing and semiconductor manufacturing may have higher-than-average metals concentrations. Actual

[19]The SCVURPPP permit Provision C.6i and ii required enhanced reporting. Consistent with the permit requirements, SCVURPPP developed a Program-wide strategy to comply with the enhanced reporting requirements (September 7, 2001). The overall goal of the strategy has been to demonstrate consistency on a Program-wide basis and compliance with the permit. SCVURPPP intends to incorporate the strategy into updated performance standards.

loading is uncertain because most sampling and analysis was not subjected to quality assurance/quality control procedures. In many cases, analytical limits were too high to detect actual concentrations. Subsequent investigations[20] indicated that there were not significant differences between the concentrations of copper and nickel at either semiconductor manufacturing or metal finishing facilities compared to control sites (commercial/industrial parking lots), and that printed circuit board manufacturers showed elevated levels compared to control sites. Based on these investigations, SCVURPPP and the City of San Jose initiated a pilot outreach campaign designed to increase the level of knowledge among targeted industrial dischargers. The results of the City of San Jose's pilot efforts (e.g., production and distribution of roof vent BMP information for Circuit board and metal finishing facilities) have been distributed to other Co-permittees and have been reported in Annual reports.[21]

Some of the smaller Santa Clara Valley communities have no industry. Some have few or no commercial sites either. Other Santa Clara Valley cities, such as San Jose, Sunnyvale, Palo Alto and Santa Clara, have extensive commercial areas and a diverse mix of industry. EPA regulations and the Basin Plan require these cities to pursue a program to reduce, to the maximum extent practicable, pollutant discharges from businesses and industries.

The Program's Model Performance Standard is Designed to Reduce Industrial/Commercial Discharges to MEP. The Program's December 19, 1996 Performance Standard for Industrial/Commercial Discharger Control (IND) Programs is a detailed, comprehensive description of where and how Co-permittees will conduct inspections of local businesses and industry. The local inspection programs include outreach, assistance and enforcement,

---

[20] *City of Sunnyvale Industrial Stormwater Monitoring Pilot Project, Volume I (IND-1*), prepared by Sunnyvale and EOA, Inc., May 1998.

City of San Jose Industrial Stormwater Monitoring Pilot Program (IND-1), prepared by ESD, June 1998

SCVURPPP *Industrial Stormwater Monitoring Pilot project – PhaseII (IND-II), prepared by Sunnyvale and EOA, Inc, September 2000.*

[21] All work was done consistent with the direction contained in the 1997 URMP and fulfilled the goals of the SCVURPPP. All future work on this item is being conducted consistent with the SCVURPPP permit conditions associated with fulfilling the Copper and Nickel Action Plans (CAP and NAP). The status of the CAP and NAP actions is reported in SCVURPPP Annual Work Plans and Annual Fiscal Year Reports.

where necessary. The local programs have been developed consistent with the model to insure that Santa Clara Valley industries are minimizing the potential for pollutants to enter site runoff.

The model Performance Standard and supporting documents provide for:

- Inspections of industries which have filed a Notice of Intent (NOI) to be covered under the SWRCB statewide NPDES permit for stormwater discharges associated with industrial activities
- Investigation of other facilities that are identified within selected Standard Industrial Classification (SIC) codes
- Inspections of selected commercial facilities
- Distribution of information on industrial/commercial Best Management Practices
- Action, under local authority, on all violations of local municipal ordinances
- Referral to the Regional Board of any significant problems which cannot be addressed promptly and fully under local authority

Co-permittees with commercial or industrial facilities have prepared URMPs that include a local strategy to implement the model Performance Standard, or their own equivalent Performance Standard that includes the same elements.

The Co-permittees have conducted initial inspections of automobile dismantlers (SIC 5015), other recycling industries (SIC 5093), stone, clay and concrete product manufacturers (SIC 3200 series) and trucking facilities that repair, maintain or wash vehicles (SIC 4100 and 4200 series). The Co-permittees conduct follow-up inspections as necessary and as defined in their URMPs and work plans.

The Co-permittees have also inspected all commercial facilities that could potentially discharge significant quantities of pollutants to runoff. This includes vehicle service and food service facilities, other commercial

facilities that are permitted to discharge to municipal sewers, and those with "zero-discharge" sewer permits. Any complaints or referrals regarding potential discharges from commercial facilities receive a prompt response and follow-up inspection.

All industrial and commercial inspections include a thorough review of indoor activities (e.g. disposal of wash water, control of residues, spills and leaks), outdoor activities (e.g. maintenance, repair and cleaning of vehicles and equipment; storage, handling and disposal of wastes; power washing of buildings and pavements) and management of equipment and processes (e.g. sumps, air scrubbers, filter backwash, dumpsters, and cooling towers). The Co-permittees use the Program's facility inspection checklist or their own checklist that contains the same information.

Industries that have filed an NOI will be inspected at least once every three years. Those industries that municipal inspectors determine to be potentially significant contributors to urban runoff pollution will be inspected annually.

The Co-permittee URMPs Contain Agency-Specific Strategies for Controlling Industrial/Commercial Discharges. Each Co-permittee has developed a URMP that describes its agency-specific local strategy and includes tailored Performance Standards, BMPs and SOPs. The individual Co-permittee URMPs are contained in Chapters 5-16 and are summarized in Appendix C.

The Program Pursues Joint Activities that Assist the Co-permittees to Reduce Pollutants from Industrial and Commercial Sources to MEP. The Management Committee will continue to sponsor periodic meetings where the Co-permittees' industrial inspectors can exchange information and ideas about inspections, outreach to dischargers, and enforcement. Staff responsible for public information and participation also attends these meetings, which allow opportunity to share perspectives and ideas that can lead to better integration and coordination of the Program.

The Program will also continue to:

- Obtain data on NOI filers from the SWRCB and distribute it to the Co-permittees
- Supply storm drain stencils to Co-permittees, who then provide them to businesses to stencil storm drain inlets on their premises
- Answer industry's questions about BMPs and other stormwater issues through the Program's toll-free telephone hotline
- Distribute materials and make presentations to educate industries and other interested parties
- Facilitate Co-permittee ad-hoc task groups to work on projects related to this Program element
- Coordinate dissemination of information and technical advice from regional, statewide and national sources

The Program Pursues Continuous Improvement of Efforts to Reduce Stormwater Pollutants from Industrial/Commercial Sources. One measure of the success of the Co-permittees' IND efforts is the high level of compliance found during routine inspections. Many, if not most, Santa Clara Valley industries and businesses are aware of the need to minimize the potential for pollutants to enter runoff from their facilities, and have implemented best management practices accordingly.

Continuous improvement of Co-permittee programs will be pursued through:

- Annual local program evaluation by each Co-permittee;
- Regular participation, by Program and Co-permittee staff, in regional and statewide pollution-prevention forums, conferences and other information-sharing events; and
- Ongoing Program-wide information-sharing meetings where local industrial/commercial inspection programs are discussed.

IND Activities are Documented in Annual Reports. The Program's annual report will document the Co-permittees' implementation of each specific item in the Performance Standards. Since October 2001[22], the Program Manager has assisted each Co-Permittee (on an individual basis) with implementation of an enhanced reporting strategy. The effort has been very successful in demonstrating the full extent of the Co-permittees' efforts in a consistent Program-wide manner. This allows for clear prioritization of related future work including enforcement, where necessary.

The Co-permittees will annually review and update their URMP, as needed. This will include changes to methods, protocols, and policies that apply to inspection and enforcement at commercial/industrial facilities.

4D PUBLIC INFORMATION AND PARTICIPATION

The goals of the Program's Public Information and Participation (PIP) element are to:

- Change specific behaviors which adversely affect water quality
- Increase the understanding and appreciation of streams and the Bay, leading to a change in values

In FY 1999-2000, the Program developed a Watershed Education and Outreach (WEO) Strategy for directing future outreach. In FY 2000-2001, using the goals and objectives described in the 1999 WEO Strategy, the Program began implementing the Watershed Watch Campaign. An evaluation of the Watershed Watch Campaign (WWC) was conducted in September 2003[23]. The Program's WEO/PIP AHTG used the

[22]The SCVURPPP permit Provision C.6i and ii required enhanced reporting. Consistent with the permit requirements, SCVURPPP developed a Program-wide strategy to comply with the enhanced reporting requirements (September 7, 2001). The overall goal of the strategy has been to demonstrate consistency on a Program-wide basis and compliance with the permit. SCVURPPP intends to incorporate the strategy into updated performance standards.

[23] Watershed Watch Campaign Evaluation, Evans/McDonough Company, November 2003

recommendations of this evaluation to revise the 1999 WEO Strategy and developed the *SCVURPPP Watershed Education and Outreach Strategy, June 2004*. The WEO Strategy, June 2004 contains a series of outreach goals and measurable objectives that will be used to direct future outreach conducted through the WWC. Meeting Strategy objectives will depend on available outreach resources each year. Depending on available outreach resources, the goals and objectives of the Strategy may be modified.

The outreach goals described in the June 2004 Strategy are:

Short-term Goals

- Change behaviors that negatively impact the watershed
- Encourage behaviors that protect, preserve, and restore the watershed
- Inform audiences that indoor and outdoor daily activities impact our watershed
- Deliver messages to students designed to encourage personal responsibility and actions that benefit the watershed.

Long-term Goals

- Build resident awareness of watershed issues and support for sound watershed decision-making.
- Build business support of sound watershed management, principals and approaches and encourage behaviors that protect, preserve and restore the watershed.
- In ten years, high school students will graduate with the understanding that personal choices affect the watershed.
- In ten years, high school students will make educated choices about behaviors that benefit the watershed.
- Build community leader and decision-makers awareness of watershed issues.

In addition, the Program will continue its involvement in the BASMAA PIP Subcommittee. At the direction of the Program's Management Committee, BASMAA PIP ideas and projects will be integrated into the Program's outreach.

The Program's PIP activities are generally divided into four general categories:

- General Outreach
- Targeted Outreach
- Education
- Citizen Participation

The Program conducts outreach efforts on behalf of the Co-Permittees that are considered to be more cost-effective to conduct at the countywide level. In addition to activities performed through the Program, each Co-permittee implements PIP activities in their own jurisdiction. In their local PIP activities, the Co-permittees make use of information, strategies and materials developed by the Program. Implementation of Co-permittee PIP activities is discussed in Chapters 5-16. The Program's outreach activities do not duplicate Co-permittee activities, but aim to complement and enhance their outreach efforts.

Public Information and Participation Surveys. The Program conducts public opinion surveys to track the effectiveness of its PIP Program. In April 1996, the Program conducted a telephone survey of Santa Clara County residents regarding their awareness of various issues related to urban runoff.[24] The recommendations from this survey were used to identify key messages and direct the Program's PIP efforts. In 1999, the Program conducted a follow-up telephone survey to track the effectiveness of outreach. As

[24] Fairbank, Maslin, Maullin and Associates (1996). *Santa Clara Valley Nonpoint Pollution Control Program Public Opinion Survey*.

described earlier, the recommendations of this survey[25] were used to develop the 1999 Watershed Education and Outreach Strategy and the Watershed Watch Campaign.

To evaluate the effectiveness of the Watershed Watch Campaign, the Program conducted an evaluation in September 2003. This evaluation included a telephone survey of Santa Clara Valley residents, two focus groups and feedback interviews with Watershed Watch partners.

The key findings of the three surveys are:

- Compared to 1999, awareness of the term "watershed" has increased significantly, with 46 percent of respondents having ever seen or heard about watersheds. This is an increase of 19 points from the 1999 results. Of those who have heard something about watersheds, 74 percent (34 percent of total) can mention something specific.

- 73 percent of Basin residents attempt to define a watershed, although few are able to accurately describe it in their own words

- Nearly half (44 percent) mention oil/grease put into the storm drain as the main pollutants affecting Bay water quality, and nearly everyone can name some type of pollutant.

- Awareness of the storm drain issue has not increased. On testing storm drain knowledge more people fall in the "knowledgeable" category in 2003 (54 percent) as compared to 1999 (35 percent) or 1996 (44 percent). However, the percentage of people who "definitely" or "probably" think that substances flowing through the storm drain system are treated has increased (56 percent in 2003 compared to 41 percent in 1999).

- The awareness that it is private residents and not businesses that contribute to storm water pollution has increased.

[25] SCVURPPP 1999 Public Opinion Survey, September 1999

- There has been a decrease in the percentage of residents taking selected water pollution prevention actions.

The main recommendations from the evaluation are:

- The Campaign should continue with its current media advertising with a greater focus on specific pollution prevention actions that residents can take.

- More efforts should be made to build awareness of existing water quality problems of our creeks and the Bay

- Target groups should be divided into short-term and long-term audiences. The key difference between these audiences is their level of awareness of watershed and pollution prevention issues. Short-term audiences have a higher awareness of the watershed concept and take some preventive actions to preserve the watershed. Long-term audiences have very low awareness and messages for them should include building awareness of water quality problems, education about watersheds and specific actions they can take to prevent pollution.

General Outreach. This is a joint activity, carried out through the Watershed Watch Campaign. Changes to Campaign messages and strategies will be made based on the WEO Strategy, June 2004. Each year, messages will be evaluated and may be added to or modified as necessary. Efforts will be made to ensure that these messages are consistent with regional messages on the same subjects and cover TMDL pollutant outreach requirements where possible.

The audience, key messages and communication tools will be determined each year and discussed in the annual work plan. Criteria for determining the campaign message and audience may include:

- Results of area-wide opinion and awareness surveys

- Co-permittee feedback and rankings

- Specific pollutant or behavior problems
- Related campaigns taking place regionally or area-wide
- Results of previous year's campaign
- Input from SCBWMI stakeholders

Outreach mechanisms can include:

- Television, radio, print or outdoor advertising
- Media relations
- Direct mail
- Community events
- Brochures or other printed materials
- In-store or point-of-sale materials
- Joint campaigns with related organizations
- Partnerships with community and business organizations

The effectiveness of the general outreach campaign will be evaluated in each annual report. Following are some criteria for judging effectiveness

- Comparison to goals established in WEO strategy
- Feedback from co-permitttees and other audiences
- Number or nature of calls generated to the Program's "800" number and the Watershed Watch hotline.
- Visits on the Watershed Watch web site
- Responses from focus groups

- Media coverage and media inquiries
- Area-wide public opinion surveys

The Program will continue to participate in cost-effective regional General Outreach efforts, such as the BASMAA Regional Advertising Campaign, when these efforts support the Program's goals and objectives.

Targeted Outreach. This includes activities carried out by the Program at the request of the WEO/PIP Ad Hoc Task Group, as well as agency-specific efforts. The approach taken by each Co-permittee is described in Chapters 5-16.

Targeted outreach delivers specific pollution-prevention messages to those who may be in a position to control specific sources of pollution and those who might not be reached by general outreach efforts. Specific needs are usually identified through work on the Program's IND, ICID, NDC and PAA elements, and aim to change specific behaviors that can adversely affect water quality. Typical methods include:

- BMP and guidance manuals, brochures, posters and other print materials
- Support for employee training
- Informational videos or slide shows
- Joint campaigns or projects with related organizations

Some targeted outreach methods described within other sections of this URMP are cross-referenced in Table 4.

Table 4
Targeted Outreach Incorporated in Other Program Elements

Section		Co-permittee commitments	Program commitments
4B	Illicit Connection and Illegal Dumping Elimination	A list of materials that will be used to educate and inform individuals who are engaged in activities… A protocol for contacting, educating and assisting individuals and businesses …	Supply storm drain stencils …distribute literature … answer questions over a toll-free telephone hotline …
4C	Industrial/ Commercial Discharger Control	Distribution of information on industrial/commercial Best Management Practices…	Develop and provide materials to Co-Permittees and make presentations to educate industries … Coordinate dissemination of information and technical advice …
4E	Public Agency Activities	Annual staff training	Organize training workshops focused on BMP implementation
4F	New Development and Construction	Provide construction BMP information to contractors … developers receive information and guidance on site design, source control, and treatment BMPs early in the application process	Provide information on BMPs (e.g., the Program's C.3. Stormwater Handbook), provide fact sheets for Co-permittee use, and sponsor information-sharing workshops.

The Program also conducts outreach on control of specific pollutants, such as pesticides, mercury, copper, and sediments to comply with certain permit provisions and TMDL requirements. Past and continuing activities and products are described in Table 5.

Table 5 – Outreach activities related to control of specific pollutants

Pollutant of Concern[1]	Past and Continuing Activities	Existing Program PI/P Materials and Programs
Diazinon and pesticides in general	Watershed Education & Outreach Campaign (one of four focus topics), IPM Store Partnership Program (regional and local), Pesticide User Outreach Activities, Annual Workshop potential topic, Distribution of restaurant brochure "Don't Set a Table for Pests" through County Health Inspectors.	"Backyard Bugs", "Pests Bugging You", "Grow It Guide", "When Ants Invade" Self-Mailer, "Landscaping, Gardening and Pool Maintenance" tri-fold, "Don't Set a Table for Pests", IPM Store Partnership Program Fact Sheets, "Control It", HHW programs, BASMAA Media Relations Campaign topic
Sediment	BASMAA Media Relations Campaign (potential topic), Outreach to developers via RWQCB Construction Site Management Workshops.	Construction BMP Tri-folds in English, Spanish and Vietnamese, "Blueprint for a Clean Bay" (revised 1-04), Construction Site Management workshops, Dewatering Brochure
Mercury	Watershed Education and Outreach Campaign (one of four focus topics), BASMAA Media Relations Campaign topic, Mercury P2 Outreach (Residential and business fluorescent light recycling)	"Spare the Air and Water Too" campaign press release and public service announcements, bill stuffers, Program and local co-permittee fact sheets (e.g., Palo Alto and Sunnyvale)
Nickel	See sediment and mercury projects	See sediment and mercury projects
Trash	BASMAA media relations campaign topic, BASMAA regional Ad Campaign topic, Watershed Education and Outreach Campaign (one of four focus topics)	"The Bay Begins at Your Front Door" brochure, Watershed Watch magnets, Watershed Watch Kit brochure, Watershed Watch web site.

Annual evaluation of targeted outreach may be based on:

- Comparison to communication goals in the WEO Strategy and pollutant-specific outreach plans
- Focus groups
- Feedback from the target audience
- Feedback from Co-permittees, inspectors, and other staff involved in delivering the message
- Observed changes in behavior
- Trends in observed pollution problems
- Feedback from related organizations

Education. The Program works to increase understanding and awareness (with the long-term goal of increasing watershed awareness) by delivering watershed stewardship messages through educational institutions.

The Program will focus on providing support and materials directly to teachers or existing education programs. Tasks may involve:

- Creating or purchasing materials such as curriculum, in-class models, activities, field trip programs or others
- Distributing materials directly to educational institutions or through Co-permittees and other institutions with in-school programs
- Participating in education fairs
- Partnering with related organizations
- Funding educational assemblies at schools
- Contract or grants programs for area teachers

Education programs will be evaluated and selected annually, based on:

- Analysis of previous year's results
- Input from Co-permittees and teachers
- Priorities set by the Management Committee
- Educators' assessments
- Estimates of the number of teachers or students reached
- Student or teacher feedback
- Feedback from related programs

Citizen Participation. Citizen participation programs are intended to encourage the active involvement of the public in preventing urban runoff pollution, and increase appreciation of streams and the Bay.

Area-wide citizen participation programs may include:

- Volunteer creek/shoreline clean-up events such as Coastal Clean-up Day
- Funding community groups and other organizations for citizen participation projects
- Partnering with related organizations

Citizen participation activities may be evaluated and refined based on:

- Number of participants
- Feedback from participants
- Amount of trash removed, miles of creek cleaned, etc.
- Media coverage generated
- Feedback from co-sponsoring organizations

The Program will sponsor meetings (at least annually) to coordinate local PIP activities and to help those Co-permittees with less-active PIP programs adopt materials and techniques used by other Co-permittees. Regional Board staff and interested parties often participate in these meetings and assist in setting priorities for the next fiscal year.

4E PUBLIC AGENCY ACTIVITIES

As is described in the Metals Control Measures Plan[26], a large portion of the copper load in runoff originates from brake pads containing copper. Significant amounts of nickel and mercury are discharged with vehicle exhaust and from stationary air pollution sources. Once these pollutants are discharged to the urban environment, there is little that can be done to prevent them from being dissolved in runoff from roadways and roofs, or attached to minute suspended particles transported into creeks, wetlands and the Bay.

However, results from street sweeping studies[27] suggest that removal of copper-laden dust from roadways and other paved surfaces is intermittent. Prevailing winds and vehicle wakes move dust from place to place; dust settles in quiescent areas only to get blown about again. Dirt accumulates rapidly on the street surface immediately following a rain or sweeping, but the rate of accumulation decreases over time. If this concept is correct, the proportion of total fine particulates removed by street sweeping is highly

[25] In response to the earlier SCVURPPP MCMP study, outreach efforts to manufacturers of brake pad friction materials led to a unique partnership effort among industry representatives, regulators, storm water management agencies and environmental groups called the Brake Pad Partnership (BPP). Since 1996, the BPP has developed a consensus process through annual stakeholder meetings and a working Steering Committee, supported in part by BASMAA contributions. To understand the potential water quality impacts that may arise from brake pad wear debris, the BPP has developed a controlled method of producing wear debris and sponsored studies to characterize the copper released during the wear process. The BPP is also tracking trends in the copper content of brakes used on domestically produced passenger cars. In 2001, the BPP developed an Action Plan to link these initial projects with environmental monitoring and fate and transport modeling to assess the effects of copper (from brake pads) on San Francisco Bay. Through its own efforts and BASMAA has supported a stormwater representative on the BPP Steering Committee and provides comment on stormwater-related issues raised during BPP meetings and conference calls.

[27] Alameda County Clean Water Program (1994). *Street Sweeping and Storm Inlet Modification Literature Review*. Woodward-Clyde Consultants.

variable and difficult to control. Therefore, the Program will emphasize efforts to control sources of metals (as described in the MCMP), and will continue to review and evaluate street sweeping activities.

Street sweeping and storm drain cleaning intercept an unquantified proportion of brake pad dust and other metal-laden particles before they reach the storm drain system. Other Public Agency Activities, including litter control, erosion control, leaf collection, waste recycling, and cleaning of storm water detention basins, also intercept some urban pollutants.

The Public Agency Activities Model Performance Standards Are Designed to Achieve MEP.

Maintenance of Streets, Roads and Highways. The Co-permittees, together, own and operate a large proportion of the total public right-of-way within the watershed. However, most highways are maintained by Caltrans. The Santa Clara Valley Transportation Authority maintains bus stops, light rail stations and park-and-ride lots. Co-permittees will coordinate with these agencies to implement appropriate controls, to the maximum extent practicable, for all facilities.

The Management Committee has prepared a model Performance Standard for Public Streets, Roads and Highways that call for each municipal agency (and its contractors, if any) to implement appropriate BMPs for these activities.

The model Performance Standard for Public Streets, Roads and Highways, and its supporting documents, cover the following operation and maintenance activities:

- Street/Road/Highway Sweeping and Cleaning (timing, frequency, equipment, disposal of debris)
- Street/Road/Highway Operation and Maintenance (asphalt/concrete removal; patching, resurfacing and surface sealing; signing and striping, concrete work, equipment cleaning, maintenance and storage)
- Sidewalk/Plaza Maintenance

- Bridge and Structure Maintenance (painting and paint removal; graffiti removal)
- Median and Road Embankment Maintenance (erosion controls, slide and embankment repair; irrigation practices and vegetation controls)
- Litter Control
- Spill Control

The model Performance Standard includes provisions for Co-permittee:

- Preparation of a Work Plan describing implementation of street/road/ highway operation and maintenance BMPs
- Ensuring that contractors also implement the municipality's BMPs as appropriate
- Training staff on the use of BMPs, as needed
- Informing other parties involved in similar activities that they are expected to implement BMPs, as well as eliminate illicit discharges
- Review and evaluation of BMP effectiveness

The Program has prepared an extensive set of model BMPs for Co-permittees to use in implementing their Performance Standards. Co-permittees may modify these BMPs to suit local conditions. The Co-permittee URMPs describe the applicability of each model BMP to local conditions. Where model BMPs have been tailored to local conditions, the Co-permittee has justified why the modifications are necessary and effective.

Storm Drain System Operation and Maintenance. Supporting documents for the Program's model Storm Drain System Operation and Maintenance Performance Standard contain a 2-tiered standard for cleaning frequency. Co-permittees may select one or the other tier, based on local conditions. Storm Drain System O&M Tier 1 requires that Co-permittees inspect, and clean as needed:

- All inlets/catch basins at least every other year
- All inlets/catch basins in known problem areas at least once a year
- All storm drain lines in known problem areas at least once a year
- Sumps, pump station debris racks, detention basins, drainage ditches and debris basins throughout the year

In addition, Co-permittees target known problem areas prior to the rainy season and clean areas affected by emergency response (i.e. dumping or spills) as needed.

Storm Drain System O&M Tier 2 requires slightly higher cleaning frequencies.

The model Performance Standard states general best management practices for dewatering and storing accumulated debris from cleaning activities. The Performance Standard also provides for:

- Devising a referral process for when illegal discharges are found
- Annual staff training
- Inclusion of storm water pollution prevention in contracts for storm drain operation and maintenance

Water Utilities. Co-permittees that operate and maintain municipal water systems have completed development of the Performance Standard for Water Utility Operation and Maintenance. The Performance Standard components include an inventory of discharges, development and implementation of Water Utility Pollution Prevention Plans (WUPPPs), evaluation process for activities, and staff training.

Each Co-permittee that operates a water utility has prepared a strategy contained in their respective URMPs for implementing the model Performance Standard.

Public Facilities. As described in the Program's model Performance Standard for Public Streets, Roads and Highways Operation and Maintenance, each Co-permittee implements BMPs for maintenance of sidewalks, plazas, bridges and structures, in addition to streets, roads and highways. The Co-permittees also require their contractors, and encourage other public agencies, to implement the same BMPs.

Each Co-permittee that operates a municipal corporation yard has prepared a Storm Water Pollution Prevention Plan (SWPPP) for that facility. The Co-permittees will continue to implement the SWPPPs and update them with additional control measures to improve effectiveness.

As suits local conditions, the Co-permittees have also developed BMPs and standard operating procedures for managing stormwater runoff from golf courses, hospitals and other public facilities. The Co-permittees will continue to implement current BMPs and operating procedures. As new information is available, or as additional potential sources within public facilities are identified, the Program and Co-permittees will respond by creating new operating procedures to reduce pollutant discharges to the maximum extent practicable. For example, Co-permittees have changed their operating procedures for managing algae in ponds and fountains to eliminate the use of copper algicides.

Rural Public Works Maintenance and Support. During FY 01-02, the Program formed an AHTG and worked with Regional Board staff to develop a new performance standard for rural public works activities. The goal of the Rural Public Works Maintenance and Support Performance Standard is to minimize the water quality impacts resulting from public works maintenance and support activities in rural areas. This performance standard helps Co-permittees whose jurisdictions include rural areas to ensure that required control measures are implemented while performing maintenance activities adjacent to streams to prevent the degradation of stream functions. The Performance Standard was approved by the Management Committee on December 20, 2002 and accepted by the Regional Board on February 18, 2003.

The Co-permittee URMPs Contain Agency-Specific Strategies for Pursuing Public Agency Activities to Control Pollutants to MEP. Each Co-permittee has developed a URMP that describes its agency-specific local strategy and includes tailored Performance Standards, BMPs and SOPs. The individual Co-permittee URMPs are contained in Chapters 5-16 and are summarized in Appendix C.

The Program Pursues Continuous Improvement in Techniques and Procedures for Public Agency Activities. As noted at the beginning of this section, treatment controls (e.g. street sweeping and storm drain cleaning) can remove only a limited portion of copper-laden brake-pad dust and other fine materials that are discharged to streets and drains.

However, the Co-permittees seek to maximize the proportion removed by optimizing, within the constraints of budget and personnel, the frequency, techniques and equipment used. This optimization will continue through periodic review of results and updating of BMPs and SOPs. Improvements will be documented in the annual report.

Public Agency Activities are Documented in Annual Reports. The Co-permittees' annual reports will document their implementation of each specific item in the Performance Standards. In addition, each Co-permittee will update their associated Performance Standard, as needed, within their URMP.

Mobile Surface Cleaner Certification Program.

In 1998, BASMAA initiated a certification program for mobile surface cleaning businesses. This program included training mobile cleaners on appropriate BMPs to protect water quality when conducting outdoor cleaning activities. BASMAA developed an educational brochure containing descriptions of the BMPs and began to maintain a list of certified mobile cleaners (those who had completed the training). The certifications are good for two years.

In spring of 2000, BASMAA developed additional training materials (including a training video). Six training workshops were conducted in June

and July 2000, with one hosted by the Program. A total of 86 Bay Area surface cleaners were trained. Around this same time, the BASMAA Board determined that providing mobile surface cleaning training should be shifted to the individual stormwater programs or municipalities. In addition, BASMAA conducted "train the trainer" workshops and provided training materials for trainers designated by the stormwater programs. Within the Program's jurisdiction, the three POTW cities—San Jose, Sunnyvale and Palo Alto—assumed the task of providing surface cleaner training on an as needed basis.

Prior to shifting the training to the stormwater programs, BASMAA certified and/or recertified 117 Bay Area surface cleaners in the Spring of 2002. As the 2002 training certificates were coming due, the Program sponsored three standardized Mobile Surface Cleaner Training and Certification workshops on December 17, 2003, February 11, 2004 and March 24, 2004. The workshops were hosted by one of the three POTW cities (San Jose, Sunnyvale and Palo Alto). The three workshops attracted a total of 137 participants, of which 84 were mobile surface cleaners. The list of 84 mobile surface cleaners was distributed to the Management Committee and BASMAA Executive Director (by electronic mail) on March 31, 2004

Currently, BASMAA is considering the development of a web-based training certification Program for Mobile Surface Cleaners. BASMAA's approach will be coordinated with the Program's approach and may eliminate the need for the Program's standardized training approach. In addition, training will be provided by designated staff from each of the three POTW cities on an as-needed basis. Any modifications to the overall training approach, as well as the number of cleaners trained per year will be provided within the Program's Annual Report submitted each September 15.

4F NEW & RE-DEVELOPMENT AND CONSTRUCTION

On October 17, 2001, the Regional Board adopted Order No. 01-119 which amended SCVURPPP's Permit Provision C.3 (New and Redevelopment Requirements) to contain significant new requirements. These requirements include:

- Numeric design standards for sizing stormwater treatment controls;
- Limits on increases in peak stormwater discharge rates and/or durations from new or redevelopment sites that may result in increased potential for erosion or other adverse impacts in creeks;
- Requirements for operation and maintenance of stormwater controls;
- Requirements for site design and source control measures;
- Definition of a minimum project size, based on amount of impervious surface created, for which the design standards, control measures, peak flow limitations, and maintenance requirements apply;
- Requirements for changes to General Plans and environmental review processes to provide authority to implement the requirements;
- Reporting requirements; and
- Schedule for implementation.

On October 15, 2003, Co-permittees were required to begin implementing the C.3 requirements for Group 1 projects, i.e., those projects that included creation or replacement of one acre or more of impervious surface.

Permit Provision C.3 also required the Program and Co-permittees to submit specific work plans for: 1) modifications to the development project review process (C.3.b.); 2) implementation of Group 1 requirements (C.3.c.); and 3) site design standards review and revision (C.3.j.). In response, the Program and Co-permittees submitted work plans for implementing all C.3

requirements to the Regional Board on March 1, 2002 (as part of the Program's FY 02-03 Work Plan, Volume II).

Since the October 17, 2001 adoption by the Regional Board of Order 01-119, there have been several changes to the requirements of Provision C.3. The first change, authorized by the Regional Board Executive Officer, was an extension of three of the permit deadlines, as shown below, in order to be somewhat more consistent with other Bay Area storm water permits adopted subsequent to SCVURPPP Order 01-119[28]. This decision extended the completion dates for corresponding tasks in the C3 Work Plan Guidance.

Provision	Activity	Original Deadline	New Deadline
C.3.c.i.	Require stormwater treatment BMPs at Group 1 Projects	July 15, 2003	October 15, 2003
C.3.c.ii.	Require stormwater treatment BMPs at Group 2 Projects in addition to Group 1 Projects	October 15, 2004	April 15, 2005
C.3.f.	Submit HMP for Regional Board approval	October 15, 2003	January 15, 2004

The second change relates to the definition of Group 2 projects. The Program requested Regional Board approval of an Alternative Group 2 Project Definition, as allowed under Provision C.3.c.iii. of the Program's NPDES Permit (Order No. 01-119). In a letter dated September 22, 2003 (Attachment 7-1), the Program proposed an Alternative Group 2 Project Definition that would make its Provision C.3 project size requirements more consistent with the other Bay Area stormwater permit requirements. At the Regional Board's October 15, 2003, meeting, the Board authorized the Executive Officer to approve the Program's proposal. Approval of the proposal did not change the implementation dates for Provision C.3 beyond the changes described in the table above.

The Program's Planning Procedures and Construction Inspection Model Performance Standards Are Designed to Reduce, to MEP, Construction

[28] Letter to Beau Goldie, SCVURPPP Management Committee Chair, from Loretta Barsamian, Executive Officer, San Francisco Bay Regional Water Quality Control Board, re: Extension of Specified Deadlines in Order 01-119, May 12, 2003.

and Post-Construction Impacts on Urban Runoff. The Program's 1995 NPDES permit (Order No. 95-180) required the Program to develop and implement performance standards for Construction Inspection and for Planning Procedures. The model performance standards are provided in Appendix A. The Construction Inspection Performance Standard was updated in February 2001 and January 2002 to respond to Regional Board staff comments as part of a continuous improvement process. The Planning Procedures Performance Standard was revised in June 2003 and December 2003 to reflect the 2001 NPDES permit requirements.

Construction-Phase Controls. The model Performance Standard for Construction Inspection, and its supporting documents, provide that construction-site inspection programs should ensure that:

- Contractors properly store, use and dispose of construction materials, chemicals and wastes and prevent illicit discharges to storm drains and watercourses;
- Erosion and sediment control measures, where needed, are implemented and maintained;
- The frequency of inspections is appropriate to the size of the project and its potential impacts on water quality;
- All sites requiring erosion and sediment control plans are inspected prior to the beginning of the annual wet season;
- Construction sites with inadequate erosion and sediment control measures are given verbal or written notice, followed by agency enforcement procedures if necessary;
- Construction inspection staff receives training at least annually;
- The local agency provides construction BMP and General Permit information to contractors.

Each Co-permittee has been implementing this model Performance Standard since 1997. The individual Co-permittee URMPs document the Co-

permittee's legal authority to implement the Performance Standard and include specific BMPs and control measures, and a description of the local inspection and enforcement program.

Post-Construction Controls. The Program's model Performance Standard for Planning Procedures provides that:

- Co-permittees have adequate legal authority to implement new development control measures as part of development plan review and approval;
- Developers receive information and guidance on site design and pollution-prevention BMPs early in the application process;
- CEQA documentation addresses urban runoff impacts over the life of the project, including cumulative impacts;
- Developers of all discretionary projects are encouraged to incorporate source control and site design measures that minimize stormwater pollutant discharges;
- Developers of projects above a certain size are required to mitigate storm water quality impacts through site design, source control, and stormwater treatment measures, and in some cases, flow duration and volume controls;
- Where applicable, developers demonstrate coverage under the statewide construction storm water permit;
- Municipalities require effective erosion/sediment control plans where project conditions warrant;
- Developers provide for operation and maintenance of structural controls, where such controls are required, and municipalities have a program to verify that this is done;
- Municipalities insure that their own capital improvement projects include measures to minimize pollutant discharges during and after construction;

- Municipalities provide staff training, at least annually.

Each municipality has prepared a plan in its URMP, including appropriate BMPs and standard operating procedures, for meeting this Performance Standard, and has been implementing the procedures since 1997.

The Program's Role is to Provide Up-to-Date Guidance on Implementation of the C.3. (New and Redevelopment) Requirements. Over the last three years, the Program has developed numerous guidance documents on various aspects of the C.3. requirements, including changes to development project review processes; CEQA guidelines; model conditions of approval; approach for selecting site design, source controls and treatment controls; treatment control sizing criteria and procedures; operation and maintenance of storm water controls; and data management and reporting. This guidance was recently compiled into a concise but comprehensive manual called the *C.3. Stormwater Handbook*. To date, three comprehensive workshops have been held on C.3 implementation and more are planned. In addition, the Program recently completed a manual called *Developments Protecting Water Quality – A Guidebook of Site Design Examples* (2004) providing numerous examples of developments located throughout Santa Clara Valley that have incorporated water-quality friendly designs.

The URMP Incorporates the Erosion Control Measures Described in the Copper/Nickel Action Plans. The Program's Copper and Nickel Action Plans (CAP/NAP) include tasks for erosion and sediment control[29] as a way to control sources of these metals to South San Francisco Bay.

The Co-permittees' plans to implement the Construction Inspection Performance Standards are described in their respective URMPs. The

[29] The actions contained in the CAP/NAP were derived from the following two activities contained in the SCVURPPP Metals Control Measures Plan regarding the reducing construction site erosion to the maximum extent practicable.

EROSION-1	Implement Performance Standards for Construction Inspection.
EROSION-2	Participate in development of a region-wide training and certification program for construction site inspectors.

Program will continue to work with the Regional Board, through the San Francisco Estuary Program, to implement use of a field handbook for erosion control, to conduct training workshops for construction site inspectors, and to assist municipalities in documenting inspection efforts.

The Co-permittee URMPs Contain Agency-Specific Strategies to Reduce, to MEP, Construction and Post-Construction Impacts on Urban Runoff. Each Co-permittee has developed a URMP that describes its agency-specific local strategy and includes tailored Performance Standards, BMPs and SOPs. The individual Co-permittee URMPs are contained in Chapters 5-16 and are summarized in Appendix C.

The Program Pursues Joint Activities That Assist the Co-permittees to Implement Construction and New Development Controls. Program staff will continue to contribute to regional policy development through the BASMAA New Development Committee, as well as with other regional programs and groups. Additional land use planning related tasks have been undertaken through participation in the Santa Clara Basin Watershed Management Initiative (SCBWMI) Land Use Subgroup. The Management Committee, where appropriate, will assist Co-permittees to review any future developments and to incorporate changes in annual Program work plans.

Site planning and design have advanced with BASMAA's publication of the design handbook, *Start at the Source (1999)*, and the companion document *Using Site Design Techniques to Meet Development Standards for Stormwater Quality (2003)*. Through its participation in BASMAA, the Program helped fund these publications and the production of training videos on these topics.

The Program, in conjunction with the SCBWMI Land Use Subgroup, has completed two projects related to land use and development policy. During FY 02-03, Program staff completed the *Santa Clara Basin Municipal Development Policies Comparison Project* (April 2003), an effort to assist Co-permittees to review and improve their development policies (as they relate to Program goals and objectives and desirable watershed protection policies). Program staff developed a methodology, with assistance of the SCBWMI Land Use Subgroup, and completed assessments of municipal

policy, code, ordinance, and guidance documents for each Co-permittee. Through these reviews, Program staff has helped Co-permittees begin the process of identifying additional steps or development policies, ordinances, or other tools that could be improved to meet the C.3. provisions.

Also with the Land Use Subgroup, the Program hosted four dialogues during October through December 2003 to better understand the underlying issues that may lead to potential conflicts when incorporating better site designs. The objective was to assist Co-permittees in addressing these issues and conflicts as they work to meet the requirements of their stormwater NPDES permit provision C.3.j. The dialogues addressed street, building, parking, and landscape designs. In addition to providing a panel of experts, the dialogues stimulated avid participation from an audience consisting of municipal staff, developers, regulatory personnel and other stakeholders.

The site design dialogue series culminated in a workshop on January 29, 2004 titled "Overcoming Hurdles to Using Better Site Designs - Real World Experience Towards Resolving Conflicts", which focused on example development projects where better site designs have been successfully implemented and hurdles have been overcome.

The Program Pursues Continuous Improvement of Methods for Controlling Runoff Pollution Associated with Construction and New Development. The Program and Co-permittees intend that implementation of the Performance Standard for Construction Inspection, together with a regional training program, will substantially improve municipalities' ability to enforce implementation of temporary erosion control measures, and insure timely completion of permanent erosion control measures. As experience is gained with the implementation of the C.3 requirements, the Program will continuously improve its guidance to municipalities and provide opportunities for sharing of experience and issues through its C.3. Provision Oversight Ad Hoc Task Group.

The Program's Annual Reports Document Efforts to Reduce Storm Water Pollution from Construction and New Development. The Program's annual reports document the Co-permittees' implementation of each specific item in the Performance Standards. Co-permittees will report

this information annually in the format described in the Performance Standards.

4G HYDROMODIFICATION MANAGEMENT PLAN

As the total area of impervious surfaces increases in previously undeveloped areas, infiltration of rainfall decreases, causing more water to run off the surface as overland flow at a faster rate. The increase in the volume of runoff, the magnitude of peak flows, and the length of time that erosive flows occur ultimately intensify sediment transport, causing changes in sediment transport characteristics and the hydraulic geometry (width, depth, slope) of channels. The larger peak flows and volumes and the intensified erosion of streams impair the beneficial uses of the stream channels.

The Regional Water Quality Control Board, San Francisco Bay Region, as part of the Bay Area National Pollutant Discharge Elimination System (NPDES) storm water permits, is requiring water programs to develop and implement hydromodification management plans (HMPs) and to implement associated management measures.

Provision C.3.f of the NPDES permit, *Limitation on Increase of Peak Stormwater Runoff Discharge Rates* describes the HMP requirements. Under Provision C.3.f, the Co-permittees are required to develop an HMP to describe how they plan to manage increases in peak runoff flow and increased runoff volume in urban runoff from certain new development and significant redevelopment projects in order to protect streams from increased potential for erosion or other adverse impacts.

When required and where feasible, runoff controls[30] must be designed so that "post-project runoff shall not exceed estimated pre-project rates and/or durations" from the development site (Provision C.3.f.i). Runoff controls are

[30] The term runoff controls or flow controls refers to Best Management Practices (BMPs) that reduce impacts of runoff volume, rate, and duration. Runoff controls that remove pollutants from storm water will be referred to as treatment controls.

not required for projects that discharge storm water runoff where the potential for erosion, or other impacts to beneficial uses, is minimal. Such situations may include: discharges into creeks that are concrete-lined or significantly hardened (e.g., with rip-rap, sack concrete, etc.) downstream to their outfall in San Francisco Bay; underground storm drains discharging to the Bay; and construction of infill projects in highly developed watersheds, where the potential for single-project and/or cumulative impacts is minimal (Provision C.3.f.ii).

Provisions C.3.f.vi.5 and C.3.f.vii of the permit allow hydromodification impacts to be addressed by using strategies other than on-site runoff controls, or in combination with on-site controls. These strategies may allow increases in peak flow and/or durations from a development site, subject to the implementation of specified best management practices (BMPs) and land use planning practices that will accommodate expected stream changes without harming beneficial uses (e.g., increases in the cross-sectional area of a stream channel). BMPs may also be regional projects that mitigate the impacts of more than one new development or redevelopment project.

Goals and Objectives. The goal of the SCVURPPP Hydromodification Management Plan is to protect the physical, chemical, and biological functions of stream systems in urbanizing areas. In order to meet this goal and the NPDES Permit requirements, the following project objectives have been defined:

1. Develop a watershed-based approach to address the impacts of hydromodification on the beneficial uses of streams.

2. Develop, test, and apply an assessment method to evaluate potential hydrograph changes and impacts to stream channels from proposed projects, and identify where such changes can cause increased erosion of creek beds and banks, silt pollutant generation, or other impacts to beneficial uses.

3. Develop design criteria, control measures, and guidance on management strategies to address hydromodification and identified impacts.

4. Develop guidance for Co-permittees to manage the impacts of hydromodification on streams through the implementation of an HMP.

5. Develop an approach for measuring the effectiveness of the runoff controls and management strategies, and continuously improving the HMP as needed.

Proposed Hydromodification Control Standard, Performance Criteria and Implementation Guidance. Hydromodification control standards will be used by local agencies to manage hydromodification impacts of development projects. The proposed hydromodification control standard, management objective, and performance criteria for new development and redevelopment projects covered by the HMP requirements of Permit Provision C.3.f are contained in SCVURPPP's public review draft entitled *Hydromodification Management Plan Report*, June 2004. Guidelines are provided that Co-permittees can use to identify project types and/or areas within the Santa Clara Basin that may be exempt from hydromodification controls under Permit Provision C.3.f.ii.

In addition, the HMP report includes guidelines to Co-permittees and the development community for implementing the SCVURPPP Hydromodification Management Plan in compliance with Permit Provision C.3.f. The guidelines cover:

- Implementation Options
- Land Use Planning Measures
- Incorporating HMP Requirements into Local Approval Processes
- Process for Evaluating Hydromodification Impacts and Requirements for Development Projects
- Opportunities for Watershed Master Planning for Hydromodification, Water Quality, and Flood Management
- Inspection and Maintenance Requirements

- Monitoring and Reporting Requirements
- Program Evaluation and Continuous Improvement

The proposed HMP is currently under review by the Regional Board staff, the public and several independent peer reviewers. It is anticipated that if comments are received in a timely basis, the public review document will be finalized in late October 2004.

4H MONITORING

From its inception in 1990 through 1995, SCVURPPP's monitoring activities focused on establishing baseline information through sampling and analysis of runoff from various land uses and ambient waters. A summary of the products produced as part of SCVURPPP's previous monitoring efforts is contained in the 1997 URMP. In addition to gathering baseline information, the Program's annual monitoring plans have also included assessments intended to enhance understanding of the sources and extent of urban runoff pollution, its effects, and methods for its control.

In August 1996[31] the Regional Water Quality Control Board (RWQCB) requested that the SCVURPPP redirect its monitoring resources and develop a new approach:

> *Specific monitoring activities that should be considered within the strategy include characterization of drainage areas (watershed monitoring) including land use characteristics (general, such as open, residential, commercial, or industrial areas, or specific sources) and consideration of physical and biological, as well as chemical indicators to assess the drainage areas. We strongly encourage you to use community-based (volunteer) monitoring as an inexpensive and effective means to conduct this type of monitoring. The strategy*

[31] Loretta K. Barsamian, Executive Officer. August 30, 1996 letter to Frank Maitski.

> *should also establish a mechanism or process for effective use of special or pilot studies by your program or those conducted by other programs.*

Since 1997, the Program's emphasis has been on integrating urban runoff and watershed management. This emphasis continues to be a major condition of the urban runoff permit. The results of this integration effort include the Program's and individual Co-permittee assistance on: managing various subgroups of the WMI, preparing the abridged and unabridged Watershed Characteristics Report, conducting various projects related to the review of development policies, and the completion of the national Stormwater Environmental Indicators Demonstration Project. A more detailed discussion of these efforts is contained the Program's Annual Reports (i.e., see FY 97-98, 98-99, 99-00, 00-01, 01-02 and 02-03).

Multi-Year Receiving Waters Monitoring Plan. On March 1, 2002, the SCVURPPP submitted a Multi-Year Receiving Waters Monitoring Plan (Multi-Year Plan) that was prepared in compliance with monitoring requirements of the permit. The Multi-Year Plan presented the entire spectrum of SCVURPPP monitoring activities, both programmatic and environmental, outlined the SCVURPPP approach to monitoring, and presented the proposed surface water monitoring program for an eight-year period starting with Fiscal Year 02-03. In addition, the Multi-Year Plan described SCVURPPP's linkage to, and support for the Santa Clara Basin Watershed Management Initiative (WMI).

Since its approval, the SCVURPPP has fully implemented the Multi-Year Plan and conducted a variety of special studies. In particular, screening level/baseline water quality monitoring was conducted in receiving water bodies in FY 02-03 and 03-04, and the *Assessment of Watershed Assessment Methods Technical Memorandum*, dated July 31, 2003, recommended improvements to SCVURPPP's monitoring and assessment program. Lessons learned from data collected during the first two years of implementing the Multi-Year Plan along with an external evaluation of SCVURPPP's monitoring program in December 2003 by an EPA contractor

on behalf of the Regional Board led to development of a revised[32] Multi-Year Plan (2004 Multi-Year Plan, Appendix D, Attachment D-3) which was submitted to the Regional Board on March 1, 2004. Table 3.0 of the 2004 Multi-Year Plan illustrates SCVURPPP's proposed surface water monitoring program for eight years starting with FY 02-03 through FY 09-10. Table 3.0 contains the following information: watershed/stream monitoring location (prioritized based on WMI and SCVURPPP assessment priorities), monitoring type (chemical, biological, and physical data type) sampling frequency, monitoring rationale and lead agency. The information on data type utilizes a tiered monitoring approach discussed in Section 2.0 of the 2004 Multi-Year Plan, and includes the following monitoring categories: screening level, investigative, status and trends. The 2004 Multi-Year Plan was finalized on July 1, 2004.

The Multi-Year Plan is intended to be a "living" document, evolving along side other regional and State monitoring and assessment plans and strategies, including: the Regional Monitoring and Assessment Strategy (RMAS), Regional Monitoring Program (RMP) and Surface Water Ambient Monitoring Program (SWAMP). The Revised Multi-Year-Plan helps reach the goals and objectives that were set by the Program's Management Committee in 1996. These goals and objectives were incorporated into SCVURPPP's 1997 Urban Runoff Management Plan (URMP) and remain intact within the 2004 URMP. In particular, the monitoring program aids in reaching Goals 2 and 3.

To aid the SCVURPPP in reaching its primary goals, the following objectives, specific to SCVURPPP's monitoring program were developed:

- Develop a better understanding of the chemical, biological, and physical characteristics of water bodies and watersheds relevant to the Program, which will help

[32] The revisions presented in this Revised Multi-Year Receiving Waters Plan (Revised Multi-Year Plan) are minor and intended to: 1) more fully integrate the monitoring activities identified in the Multi-Year Plan with watershed assessments, and 2) allow for additional follow-up monitoring activities in order to better identify sources of pollutants or causes of impairment to Beneficial Uses. Additionally, the Revised Multi-Year Plan attempts to provide the SCVURPPP a framework for conducting watershed characterization, screening-level monitoring, watershed assessment, and investigative monitoring and management action implementation.

inform decisions about future management actions and help clarify and resolve storm water related issues within watersheds;

- Assess baseline water quality conditions in representative watersheds within Program boundaries to evaluate storm water impacts and help solve creek drainage basin-specific water quality problems;

- Assess whether specific pollutants of concern are found in storm water discharges and impact water quality in local water bodies and the San Francisco Bay;

- Evaluate the effectiveness of existing storm water pollution prevention and control Best Management Practices (BMPs) and recommend improvements; and,

- Evaluate overall Program effectiveness over time.

The above SCVURPPP specific objectives were designed to achieve the objectives contained in the Program's NPDES Permit. Further, the Multi-Year Plan has been developed to address the guidance contained in several RWQCB letters written to both the Program and members of the BASMAA Monitoring Committee.[33]

The Multi-Year Plan is intended to help the SCVURPPP: 1) plan and prioritize its watershed assessment and monitoring activities over the next six years, and 2) coordinate with other watershed assessment programs in the Bay area, including the WMI. SCVURPPP's watershed assessment and monitoring approach emphasizes characterizing watersheds and collecting

[33] RWQCB letter from Tom Mumley to BASMAA Monitoring Committee entitled *"Urban Runoff Monitoring Needs/Recommendations"* dated February 2, 2001.

RWQCB letter from Loretta Barsamian to Adam Olivieri entitled *"FY2002-2003 Stormwater Municipal NPDES Program Priorities"* dated December 7, 2001.

The water quality monitoring comments in the RWQCB from Bruce Wolfe to Beau Goldie entitled *"Pesticide-Related Components of 2000/01 Annual Report"* postmarked December 28, 2001.

RWQCB letter from Loretta Barsamian to Beau Goldie entitled *"Request for revision of the Program's long-term receiving waters monitoring plan"* dated June 5, 2002.

data when and where appropriate, which will enable watershed assessments and focused studies to be conducted that will yield information necessary to implement effective and feasible management actions designed to reduce the impacts of urban runoff on beneficial uses.

The Multi-Year Plan is organized to describe both environmental and programmatic monitoring designed to meet previously stated goals and objectives as follows:

- Monitoring and Assessment Approach – presents SCVURPPP's approach to monitoring and assessment, including: a description of monitoring categories, monitoring and assessment process, annual project funding process, priorities for assisting the WMI, SCVURPPP monitoring priorities, and regional and SCVURPPP monitoring activities accomplished to-date.

- Watershed Monitoring and Assessment Activities - description of planned watershed monitoring and assessment activities, including: screening-level monitoring and watershed assessments.

- Pollutant of Concern Monitoring and Characterization Activities – provides a description of planned pollutant of concern monitoring and characterization, including local and regionally based activities.

- BMP and Performance Standard Monitoring – describes monitoring activities associated with measuring the effectiveness of implementing performance standards and control programs for POCs.

- Reporting and Quality Control Procedures - provides a description of the quality control and assurance (QA/QC) procedures and the reporting process the Program will develop and implement.

- Environmental Monitoring and Assessment Measures Summary Matrix- illustrates Environmental Monitoring and Assessment Measures (EMMs) that

are currently being implemented or are planned. EMMs are used to gauge the effects of urban runoff on the environment[34].

- Programmatic Monitoring Indicators Summary Matrix – illustrates Programmatic Monitoring Indicators (PMIs) that are currently being implemented or are planned. PMIs are used to gauge how well Performance Standards are being met and control measures are being implemented.

SCVURPPP's Monitoring and Assessment Approach. The SCVURPPP continues to embrace the watershed approach to direct its monitoring and assessment activities, and meet its goals and objectives. The watershed approach is a coordinating framework for environmental management that focuses efforts to address the highest priority problems within hydrologically defined geographic areas. The SCVURPPP will continue to define and address high priority issues through the implementation of activities that fall into two monitoring categories: programmatic monitoring and environmental monitoring and assessment.

The requirement to investigate, consider, and implement watershed management measures first appeared in the Program's 1995 NPDES permit and is also a requirement of the Program's current NPDES permit. As part of its application for the current permit, the Program developed a "Watersheds 2000 Vision" (December 1999) that outlines the principles and approaches that the Program and its Co-permittees will use to support better management of the Santa Clara Basin through the implementation of urban runoff control measures. The vision statement also defines the relationship between and the roles of the Program and the SCBWMI in this context.

The Program's approach for supporting watershed management and the SCBWMI is based on the following principles:

[34] Because there are a variety of types of environmental monitoring that are available, it is useful to classify parameters that may be measured into two tiers; screening-level monitoring and assessments (i.e. Tier I) and investigative monitoring (i.e., Tier II). Screening level monitoring and assessments include more general measurements made at various sampling locations, providing an initial characterization of the physical, chemical, and biological integrity of a particular watershed/waterbody. Investigative monitoring or studies include more detailed measurements typically taken in a more defined area (e.g., stream reach).

- The goal of the Program and its Co-permittees is to maintain water quality and protect the beneficial uses of the waterbodies in the Santa Clara Basin through the implementation of control measures to the maximum extent practicable.

- Successful watershed management must be a community-wide, stakeholder-driven effort that includes regulatory agencies, the business community, environmental advocates, and local government.

- The Co-permittees recognize it can be difficult to separate many urban runoff "issues" from the general impacts of urbanization resulting from the cumulative effects of land development.

- The Co-permittees understand that municipal agency activities have the potential to impact water quality and beneficial uses; conversely such activities can create opportunities to improve water quality and enhance aquatic resources.

- The Program's activities pursuant to the NPDES permit assist Co-permittees and other local agencies to incorporate appropriate watershed management recommendations into their decision-making and specific watershed protection approaches into their day-to-day operations.

- The SCBWMI, as a stakeholder process, provides the tools to identify community goals and issues, and facilitates the development of common ground between stakeholders to recommend to policy-makers the actions needed to better manage watershed resources.

The Program seeks to create an avenue which the SCBWMI's broad stakeholder can incorporate goals and objectives into the daily operations of the Co-permittees. The Co-permittees apply their resources and powers to preserve and enhance the watershed. To do this most effectively, the Program and Co-permittees need to translate SCBWMI stakeholder recommendations into specific actions that are reasonable, practical, and that can be incorporated into their missions and services. In addition, the Program will work with Regional Board staff to apply a regulatory strategy that allows

Co-permittees to find ways to coordinate with other agencies within a specific watershed to protect and enhance beneficial uses.

Effectively Integrating Monitoring into Watershed Assessment. In the absence of a robust data set that can be used to characterize water quality and the physical, chemical and biological integrity of most water bodies in the Santa Clara Valley basin, initial characterization (i.e., screening-level monitoring/assessments) is needed. To provide this necessary information, the SCUVRPPP will conduct screening level monitoring in watersheds within the Santa Clara Valley basin using screening-level indicators. Data collected from these efforts is intended to provide information that will aid the Program in conducting watershed assessments. To the extent possible, these assessments will be conducted in coordination and collaboration with other efforts current underway in the basin (e.g., SCVWD Stream Stewardship Plans).

A Monitoring and Assessment Process Flow Chart. (see Figure 1.0 of 2004 Multi-Year Plan) was developed to illustrate the Program's "tiered" monitoring approach to environmental monitoring and the nexus between environmental monitoring and watershed assessment. This process is intended to provide the Program with a formalized structure for conducting monitoring and assessments. The decision-making process utilizes the best available water quality and watershed-related information throughout each step, with the goal of collecting additional data needed to characterize, assess and protect/restore beneficial uses in receiving water bodies.

Integrating with Regional Monitoring Activities. The Program has contributed to the Regional Monitoring Program for Trace Substances (RMP) since 1993 has contributed approximately $150,000 per year. In addition, the three South Bay municipal wastewater treatment plants (i.e., City of Palo Alto, City of Sunnyvale, and the San Jose-Santa Clara facility) annually contribute between $200,000 and $250,000 a year to the RMP. Thus, local communities (which are urban runoff Co-permittees) contribute approximately $350,000 to $400,000 a year to a regional monitoring program (consistent with Permit Provision C.7b). The results of the RMP's research and investigations have been published by the San Francisco Estuary Institute

(SFEI). Consistent with the objectives of the RMP, the Program's goal is to coordinate and integrate, where practicable, the various monitoring programs. This statement applies to the relationship between the Program and the CEP as well.

Pollutants of Concern Monitoring Activities. Several Multi-Year Plan elements address local and regional needs for technical imformation to address POCs in water bodies in or adjacent to the Santa Clara Valley basin. The goal of POCs monitoring is to collect scientifically valid information on the sources, status, trends, fate, and transport of POCs and their effects, so that feasible, cost effective management actions can occur to the maximum extent practible to reduce the impacts on the beneficial uses. POCs monitoring typically include studies that involve field sampling or environmental monitoring, which should not be confused with monitoring the effectiveness of BMPs implemented to control POCs in urban runoff.

Pollutants of Concern (POC) Monitoring Elements. To achieve SCVURPPP's monitoring objectives for pollutants of concern (POC), the Program will conduct and participate in monitoring-related activities under the following three POC Monitoring Elements during implementation of the multi-year plan:

- Impacts of POCs on the San Francisco Bay Estuary - element entails participation in, and support of regional efforts such as the Regional Monitoring Program for Trace Substances (RMP);

- Impacts of POCs on Local Water Bodies and Source Characterization - element entails investigating the impacts to, and sources of POCs present in Program-relevant local creeks and water bodies; and,

- Additional Regional POC Activities – element entails participation in, and support for regional programs (e.g., RMP, Clean Estuary Partnership) designed to develop studies supporting the development of scientifically based total maximum daily loads (TMDLs) and/or site specific water quality objectives for specific POCs.

Brief descriptions of each control program associated with the POC monitoring element are presented below:

Pollution Prevention Control Programs for POCs. SCVURPPP's current NPDES permit has greatly expanded the requirements for developing and implementing copper, mercury, pesticides, PCBs, dioxins and sediment control tasks/measures/plans/programs. Since the permit was reissued, SCVURPPP has focused on the creation, revision and implementation of numerous activities associated with developing control programs for POCs. The following paragraphs provide brief summaries of these activities.

Copper and Nickel Action Plans. The Metals Control Measures Plan, was first created in FY 00-01 to assist implementation of baseline activities contained in the Lower South San Francisco Bay Copper and Nickel Action Plans, to track and report activities, and to continue to work with the SCBWMI Bay Monitoring and Modeling (BMM) and Regulatory Subgroups regarding BMM Work Plan Updates. Descriptions of copper control program activities and nickel control program activities are included in the Copper and Nickel Action Plans approved by the SCBWMI and transmitted to the RWQCB as part of the Copper and Nickel TMDL Project for the South Bay. In addition, those baseline activities that are specifically related to the stormwater program are listed in Appendix B of the NPDES permit.

To date, most of the CAP/NAP baseline activities have been implemented at the Program level (except for those assigned to specific Co-permittees). SCVURPPP, working with Regional Board staff, met in FY 02-03 and FY 03-04 to discuss proposed changes to the CAP/NAP reporting approach and format and agreed upon a revised approach. Relative to developing the annual Work Plan, the revised reporting format includes the following basic information for each baseline action: description of baseline action, regional applicability, linkage to copper reduction, and identification of the performance measure. For each baseline activity the following information is included in the reporting table: an identification of the lead party (if the lead party is the Co-permittee then the Co-permittee includes the action within their individual work plans), a description of the proposed Work Plan actions,

a description of how effectiveness will be evaluated, and a summary of the possible future actions.

In addition, the Work Plan tables also provide a summary of actions accomplished in the prior (i.e., FY 02-03) for each CAP/NAP activity assigned to the Program and certain Co-permittees (San Jose, Sunnyvale and Palo Alto). The CAP/NAP contains 21 copper baseline actions and 7 nickel actions. These tasks will be tracked and reported by the Program in Annual Reports. To the extent possible, the Program will evaluate the effectiveness of implementing the tasks during its annual reporting process.

Mercury Pollution Prevention Activities. The Program's 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 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, Alamitos 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.

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. The Plan identifies the goals of each work plan element, actions,

monitoring mechanisms, and schedules. The Plan also identifies whether actions will be implemented at the Program level, municipality level, or both.

The Mercury Pollution Prevention Plan addresses five general goals:

- 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.

- 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.

- 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.

- 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.

- Public Education and Outreach –Increase awareness of proper disposal of mercury-containing products and available non-mercury containing alternatives.

Consistent with the above goals, the Management Committee approved the *Guidelines for Mercury-Containing Products Reduction and Management* in April 2003. 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. To assist with the development of the guidelines Co-permittees completed a mercury-containing product survey to assess the municipal mercury-containing products being used, their locations, and waste disposal and

purchasing routes; and identify the level of awareness of product alternatives and proper disposal methods.

In December 2002, Program staff established 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.

In April 2003, the Management Committee approved a model mercury virtual elimination policy, which requires the virtual elimination of mercury from controllable sources in urban runoff. A copy of the model policy was included within the FY 02-03 Annual Report. The model policy serves only as suggested language. Each Co-permittee is to adopt a Mercury Virtual Elimination policy, procedure or ordinance consistent with municipal requirements.

The Program's Annual Reports will provide information on the progress of tasks in the Mercury Pollution Prevention Plan. The Program's annual reports will document the Co-permittees' implementation of each specific task in the Plan.

Pesticide Control Program. Diazinon has been identified in recent studies as causing toxicity in local creeks. In May 1999, the U.S. Environmental Protection Agency (USEPA) listed San Francisco Bay and 35 Bay Area urban creeks as impaired by Diazinon under Section 303(d) of the Clean Water Act (CWA). The 303 (d) listing triggered the need for USEPA and the State to develop Total Maximum Daily Loads (TMDLs) for the impaired water bodies.

NPDES Permit Provision C.9.d. includes specific requirements for a pesticide control program. The Program and Co-permittees must develop and implement a pesticide control plan that addresses municipal uses of pesticides, including diazinon and other lower priority banned pesticides such as chlordane, dieldrin, and DDT, and the use of these pesticides by others within municipal jurisdictions. The permit provision also requests that the Program continue to work with the Urban Pesticide Committee, BASMAA,

and the California Stormwater Quality Association Pesticide Committee to assess impacts of pesticide use and encourage actions by other state and federal agencies.

As required by NPDES Permit Provision C.9.d., the Program developed a Pesticide Management Work Plan (Pesticide Plan) and submitted it to the Regional Board on June 26, 2001. A Pest Management Performance Standard was finalized in February 2002, and Co-Permittees have incorporated it into their URMPs and begun implementation.

The purpose of the Pesticide Plan is to control pesticide-related toxicity in urban runoff, by minimizing pesticide use and reducing the amount of pesticides in storm water and landscape runoff to the maximum extent practicable. The Plan identifies the goals of each work plan element, actions, monitoring mechanisms, and schedules. The Plan also identifies whether actions will be implemented at the Program level, municipality level, or both.

The goals of the Pest Management Performance Standard and control measures are to minimize pesticide use to the MEP, particularly organophosphate pesticides; and reduce the amount of pesticides in storm water and landscape runoff. These control measures apply to pest management on municipally owned property performed by municipal employees and by commercial applicators that contract with the municipality. The control measures also include outreach to other users within the municipality's jurisdiction about less toxic pest control methods and proper disposal of pesticides.

Each year, the Program's Annual Report provides information on the progress of tasks in the Pesticide Plan. Outreach activities that are conducted to meet the requirements in the Pesticide Plan include media advertising, Integrated Pest Management (IPM) outreach at community events and workshops, participation in the Regional IPM Store Partnership program and IPM outreach to local businesses. In addition, through its annual reporting process, SCVURPPP will provide an assessment of the effectiveness of mercury reduction measures following their implementation.

Polychlorinated Biphenyls (PCBs) and Dioxin Compounds Control Program. The 1998 and 2002 Clean Water Act Section 303(d) lists designate all segments of San Francisco Bay as impaired by PCBs and certain dioxin compounds. The listings were in response to an interim advisory on the consumption of fish from the Bay issued by the California Office of Environmental Health Hazard Assessment (OEHHA). OEHHA issued the advisory after PCBs, dioxins and other pollutants (e.g., mercury) were found in Bay fish tissue at levels thought to potentially pose a health risk to people consuming fish caught in the Bay. The Regional Board opposed the 1998 listing of dioxins, but was overruled by the USEPA.

Provision C.9.e. of the SCVURPPP municipal storm water NPDES permit requires development of a control program to eliminate or reduce controllable sources of PCBs and dioxin compounds in urban runoff. The following sections briefly summarize the Program's accomplishments to-date in addressing these pollutants and describe the Program's future strategy.

PCBs - The SCVURPPP has provided leadership to Bay Area storm water agencies in their efforts to develop data needed for the Bay PCBs TMDL. Initially, the Program coordinated a regional study that characterized the distribution of PCBs concentrations in storm water conveyance sediments in Bay Area watersheds (KLI 2001 and 2002). The Program subsequently performed PCBs case studies in selected areas with relatively elevated concentrations of PCBs (City of San Jose and EOA, Inc. 2002 and 2003) and coordinated similar case studies by other Bay Area storm water agencies (SCVURPPP 2002d). The case studies were aimed at beginning to identify PCBs sources and controls. To facilitate regional coordination, the Program led a work group of representatives from BASMAA and Regional Board staff and continues to provide a staff to represent BASMAA on the Clean Estuary Partnership PCBs work group. The Program also prepared work plans for the above regional and local field studies (SCVURPPP 2000, 2001, 2002b, 2002c). The work plans included a preliminary list of known sites where PCBs were used, stored and/or released in Santa Clara County. Most recently, the Program completed a study that summarizes the current status of efforts to address PCBs in Bay Area urban runoff (SCVURPPP 2004b). The study describes 1) past, current and planned efforts to identify PCBs control

options in the Bay Area, 2) management practices currently implemented by Bay Area storm water management agencies that may help control PCBs in urban runoff, and 3) potential additional PCBs storm water control options and some of their advantages, limitations and cost factors. The Program has also collected and analyzed sediment samples from selected Santa Clara County watersheds for PCBs and other pollutants of concern as part of its receiving waters monitoring and assessment program.

Dioxins - The Program's initial work plan to address dioxin compounds[35] (SCVURPPP 2002a) specified reviewing readily available data on methods used to characterize dioxin compounds in storm water runoff and surface waters and concentrations typically found in the Bay Area and other areas. SCVURPPP (2002e) documents the results of the review. The SCVURPPP's second work plan addressing dioxin compounds (SCVURPPP 2003) describes the SCVURPPP's collaboration with other Bay area storm water management agencies to develop a "synthesis" document on dioxin-like compounds. This document was recently completed and summarizes the current state of knowledge regarding dioxin-like compounds in relation to storm water runoff. The emphasis is on issues related to urban runoff in the Bay area, including regulatory context, public health impacts, sources, pathways, environmental fate, review of relevant Bay Area, national and international studies, and qualitative review of potential storm water controls (BASMAA 2004). The Program recently completed a new work plan that summarizes past accomplishments and describes activities planned for FY 2004-05 (SCVURPPP 2004a).

The SCVURPPP plans to continue collaborating with the regulatory and discharger community and other stakeholders to develop technically and economically feasible strategies to address controllable sources of PCBs, dioxins and other pollutants of concern[36]. The overarching principle is to

[35] The chemical compounds referred to as dioxin compounds are generally members of three closely related families: the polychlorinated dibenzo-p-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs) and certain polychlorinated biphenyl (PCB) congeners with dioxin-like potency that are often referred to as dioxin-like PCBs. The Program is addressing PCBs, including dioxin-like PCBs, as part of the separate program described above).

[36] Examples of organizations that currently facilitate such collaboration include BASMAA, the Clean Estuary Partnership and the Regional Monitoring Program. The SCVURPPP is currently providing funding to these

develop cost-effective strategies with realistic potential to protect public health. Factors other than strict cost-effectiveness may be important, such as the likelihood of identifying responsible parties or obtaining state or federal funding to identify and cleanup on-land PCBs sites. The SCVURPPP will also consider the potential benefit of implementing strategies that concurrently address multiple sediment-bound pollutants. Furthermore, the SCVURPPP will continue emphasizing the need to prioritize actions in light of the limited public resources available to address pollutants of concern[37]. As appropriate, the SCVURPPP will incorporate high priority actions into its annual work plans.

Trash Management Activities. On November 14, 2001, the Regional Board released the document entitled Proposed Revisions to Section 303(d) List of Priorities for Development of Total Maximum Daily Loads for the San Francisco Bay Region Report. This report proposed that all urban creeks, lakes and shorelines be placed on the 2002 303(d) "monitoring list" due to the threat of trash impairment to water quality. On February 4, 2003, the State Water Resources Control Board (SWRCB) adopted the 2002 Clean Water Act section 303(d) list of water quality segments, which included this recommendation.

In a proactive response to the November 14, 2001 Staff Report, the Management Committee formed a Trash AHTG (TATG) on February 21, 2002. Since the formation of the TATG, the Program has completed the following work products:

Trash Management Practices Survey (November 2002) - The survey documents existing trash management practices and policies.

Trash Work Plan - To fulfill a Program FY01-02 Continuous Improvement item and actions identified within the Program's Multi-year Receiving Waters

organizations, participating in selected stakeholder meetings, committees and work groups, and, as appropriate, reviewing and commenting on relevant documents prepared by these groups.

[37] For example, dioxins appear to be of relatively low priority, since the Regional Board does not plan to perform a TMDL for dioxins in the Bay. The USEPA has stated that, since PCBs are the most significant contributor to dioxin-like toxicity in Bay fish, the Bay PCBs TMDL is high priority (http://www.epa.gov/region09/water/dioxin/sfbay.html).

Monitoring Plan, the TATG prepared a Trash Work Plan that identifies a strategy for addressing trash problem areas that occur in urban streams and waterways. The Trash Work Plan, which was submitted within the Program's *FY 03-04 Draft Work Plan* on March 1, 2003, details tasks to be conducted during FY 03-04 and FY 04-05. The tasks conducted during FY 03-04 focused on: preparing a summary of existing Co-permittee trash management practices survey; identifying and documenting known trash problem areas; identifying and documenting trash management practices implemented by others (e.g., Los Angeles River watershed trash TMDL); refining protocols for trash evaluations and training municipal staff; and developing standardized documentation procedures for data collection and reporting.

The tasks identified for FY 04-05 focus on the implementation of trash evaluations in or/ near watersheds; implementation or refinement of trash control measures, as appropriate to address trash problem areas within high priority areas; and review of existing performance standards relevant to trash management and identify potential revisions to these standards, if necessary. The TATG will continue to meet in support of developing Work Plan products. Recommendations from the TATG will be reviewed and approved by the Management Committee.

Interaction with Santa Clara Valley Water Resources Protection Collaborative- During FY 03-04, the TATG agreed to focus on trash issues which are part of the Trash Work Plan and keep the Water Resources Protection Collaborative informed about trash issues within the Program's jurisdiction.

Trash Goals Statement - In May 2004, at the direction of the Management Committee, the TATG completed the development of a Trash Goals Statement for SCVURPPP. SCVURPPP's goals statement for the next five years is to develop a countywide collaborative trash awareness, monitoring, outreach, removal and abatement program that is specifically directed at enhancing the beneficial uses of urban streams and waterways in Santa Clara County. To achieve this goal, the Program has identified the following objectives:

- Identify and prioritize trash problem areas in urban streams and waterways and other potential sources that may contribute trash to those areas;
- Enhance existing trash management practices or implement new practices to address high priority trash problem areas;
- Evaluate trash condition of urban streams and waterways over time using a field monitoring program;
- Use outreach and community involvement programs to increase public awareness of the impact of urban activities on streams and waterways and to foster a sense of stewardship;
- Evaluate effectiveness of trash management and education practices; and
- Develop and implement a standardized documentation and reporting mechanism for Annual Reports.

During the implementation of the revised Multi-Year Plan, the Program will provide an assessment of the effectiveness of trash management measures through its annual reporting process.

Sediment Analysis. In response to a listing of impairment by sediment under section 303(d) of the Clean Water Act and a need to provide information for a TMDL assessment, two separate (but coordinated) projects have been developed. These projects are the San Francisquito Creek Sediment Reduction Plan, administered by the San Francisquito Creek Joint Powers Authority (JPA); and the Aquatic Habitat Assessment and Limiting Factors Analysis, managed by the Santa Clara Valley Water District (SCVWD).

The primary issues driving the TMDL are flooding and degradation of steelhead trout, other threatened aquatic species and their habitats. The approach adopted by the JPA and SCVWD in these projects is to assess factors limiting the threatened aquatic species, including but not confined to those related to excessive sedimentation caused by human land use activities. Project products are intended to produce information that will assist the Regional Board to confirm or reject the validity of the sediment impairment

listing and help identify other causes of impairment to aquatic species and their habitats in San Francisquito Creek.

Additional Watershed Analyses and Sediment Practice Assessments - In accordance with Permit Provision C.9.f.iii, the Program submitted the Sediment Impairment Report (Other Creeks) to the Regional Board on March 1, 2002. On August 30, 2002, the Program developed a work plan entitled Work Plan for Conducting Watershed Analysis and Management Practice Assessment in Other Creeks Potentially Impaired by Sediment from Anthropogenic Activities (Watershed Analysis Work Plan). The Work Plan describes the phased approach that SCVURPPP intends to follow in addressing the permit condition. As appropriate, lessons learned from the San Francisquito Creek TMDL project will be used to update the Watershed Analysis Work Plan.

4I SUMMARY

Tables C-1 through C-12 within Appendix C, summarize the status of each Co-permittee's URMP, including BMPs and SOPs. In addition, Table C-13 summarizes individual Co-Permittee urban runoff pollution prevention program organization. Further details on Co-permittee programs are in Chapters 5-16 (bound separately).