Santa Clara
Valley Urban
Runoff Pollution
Prevention Program

1997 URBAN RUNOFF MANAGEMENT PLAN

Cupertino
Los Altos
Los Altos Hills
Milpitas
Mountain View
Palo Alto
San Jose
Santa Clara
Sunnyvale
Campbell
Los Gatos
Monte Sereno
Saratoga
Santa Clara County
Santa Clara Valley Water District

CHAPTERS 1 - 4

PROGRAM ACTIVITIES AND FRAMEWORK

September 1, 1997
(Updated October 2000)

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CHAPTERS 1 - 4

PROGRAM ACTIVITIES AND FRAMEWORK

EOA, Inc. in association with
Woodward-Clyde Consultants

Executive Summary

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Set between the Santa Cruz mountains and the Diablo Range, the broad Santa Clara Valley drains northward to South San Francisco Bay. The valley is home to 1.4 million and is a center for the electronics, aerospace and semiconductor industries. Within the valley, thirteen cities and towns, and Santa Clara County, own and operate storm drain inlets, storm drain lines, pump stations, and detention basins. Natural drainages and flood control channels are maintained by the Santa Clara Valley Water District (District).

USEPA lists South San Francisco Bay (south of Dumbarton Bridge) among impaired water bodies because it does not meet its narrative receiving water objective for toxicity. In 1989, the California Regional Water Quality Control Board for the San Francisco Bay Region (Regional Board) pointed to dissolved metals from storm drains, as well as from three wastewater treatment plants, as potential causes of toxicity. A 1997 Metals Control Measures Plan identified copper, nickel, mercury, silver and selenium as "pollutant metals of concern," and copper as a metal with significant urban sources.

In 1995, the Regional Board reissued a National Pollutant Discharge Elimination System (NPDES) permit to Santa Clara County, the 13 cities and towns, and the District. The reissued permit requires that the Santa Clara Valley Urban Runoff Pollution Prevention Program* (SCVURPPP, or Program) prepare an Urban Runoff Management Plan† (URMP) containing individual co-permittee URMPs as well as the area-wide plan. The URMP details what the 15 co-permittees will do, (acting individually, and collectively as the Program) to reduce urban runoff pollution.

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* 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 URMP complies with NPDES (Order No. 95-180) Permit Provisions C1-C9. In addition, the URMP includes the Metals Control Plan action items consistent with Provision C-6 of the NPDES Permit.

The reissued permit also requires that the Program "adopt and incorporate Performance Standards developed by the Dischargers. Performance Standards are defined as the level of implementation necessary to demonstrate the control of pollutants in storm water to the maximum extent practicable."[‡]

During 1996, the Program prepared model Performance Standards for Illicit Connection and Illegal Dumping Elimination Activities; Industrial/Commercial Discharger Control Program; Public Streets, Roads and Highways Operation and Maintenance; Storm Drain System Operation and Maintenance; Water Utilities Operation and Maintenance; Planning Procedures, and Construction Inspection.

In addition, the Program prepared a 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 Program believes that the Performance Standards it has developed, including the PIP Strategy, address all control measures and best management practices identified in the URMP for which Performance Standards are currently appropriate. However, the Program strives for continuous improvement. As the Co-permittees implement Performance Standards, the Program's Management Committee will evaluate effectiveness and consider new information. Based on Co-permittee experience, the Management Committee will decide if additional model Performance Standards are needed (e.g., for maintenance of public facilities).

The URMP has been designed to help the Co-permittees comply with the permit, while providing sufficient flexibility and maximizing effectiveness in preventing urban runoff pollution. The Plan's main features are:

[‡] Permit Provision C.2.b. Performance Standards are not present in, or required by, the Clean Water Act or its implementing regulations.

- Cooperation between co-permittees to jointly implement some required tasks — such as monitoring urban surface water — 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.

- Model Performance Standards that define the result, or level of effort, for each major pollution-prevention task.

- Co-permittee Urban Runoff Managment Plans that incorporate Performance Standards that, where necessary, refine the model Performance Standard to suit local conditions.

Each Co-permittee's URMP explains that agency's specific strategy for urban runoff control. The Co-permittee URMPs also contain tailored Performance Standards, workplans to implement Performance Standards, and Best Management Practices (BMPs). Co-Permittee Standard Operating Procedures (SOPs) detail how control measures will be carried out day-to-day.

The *Metals Control Measures Plan* concluded that 42% of the watershed load of copper comes from brake pads, and 33% of mercury loading comes from vehicle exhaust. Industrial facilities and construction sites may be minor, but controllable, sources of nickel. Specific control measures are incorporated in this URMP.

The Program encourages reduction of <u>all</u> 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 plan to reduce sources in the first category to the maximum extent practicable.

For sources in the second category, the Program, as appropriate, participates in, and contributes to, joint efforts with other entities. 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 example, the Program supports Common Ground for the Environment's work to establish a Brake Pad Partnership.

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

The Regional Board has specified the Santa Clara Basin as one of two watersheds initially targeted for a "watershed management approach" — "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." As it develops, the SCBWMI should advise the Program by identifying watershed impacts within the urban area and by proposing appropriate urban source control priorities.

Regional Board Order 95-180 requires that the URMP include a "summary or checklist of all actions, activities, and tasks and time schedules pertinent to implementation of control measures and best management practices, including performance standards for their implementation, which shall be presented in a concise format suitable for incorporation or attachment to this permit."

Appendix C summarizes the activities described in the URMP. Activities that the Co-permittees will accomplish collectively (as the Program) are summarized in Table C1-C4. The status of each co-permittee's URMP, including BMPs and SOPs are summarized in Tables C5 - C16. The Co-permittee URMPs comprise Chapters 5-16 (bound separately).

ACKNOWLEDGEMENTS

The Santa Clara Valley Urban Runoff Program's (Program) Draft Urban Runoff Management Plan (URMP) was planned and developed over a year's time by the Co-permittees of the Santa Clara Valley Urban Runoff Program. Management Committee representatives attended the many Study Sessions and provided valuable input necessary for the completion of the URMP. In addition, task groups worked diligently to complete the Performance Standards that are the basis of the URMP. The consulting firm of Eisenberg, Olivieri, and Associates, in association with Woodward-Clyde Consultants, worked closely with the Management Committee and with Program staff.

MANAGEMENT COMMITTEE

Frank Maitski (Chair) Santa Clara Valley Water District	Rick Mauck (Vice Chair) Santa Clara
Lavenia Millar, Cupertino	Helen Farnham, Sunnyvale*
Landy Darrow, Los Altos	Kelly Carroll, West Valley Cities*
Ed Taylor, Los Altos Hills	Bill Helms, Campbell
Darryl Wong, Milpitas	Scott Baker, Los Gatos
Gary Leinweber, Mountain View	Robert Shook, Monte Sereno
Joe Teresi, Palo Alto	Larry Perlin, Saratoga
Debra Caldon and Mary Ellen Dick, San Jose*	Muriel Fulford, Santa Clara County

*Ad-Hoc URMP Task Group

ACRONYMS

ABAG	Association of Bay Area Governments
AHTG	Ad Hoc Task Group
BAAQMD	Bay Area Air Quality Management District
BASMAA	Bay Area Storm Water Management Agencies Association
BMP	Best Management Practice
CCMP	Comprehensive Conservation and Management Plan
CCRS	Coyote Creek Riparian Station
CDO	Cease and Desist Order
CEQA	California Environmental Quality Act
CMA	Congestion Management Agency
CZARA	Coastal Zone Act Reauthorization Amendments
EIR	Environmental Impact Report
EOA	Eisenberg, Olivieri, & Associates
EPA	Environmental Protection Agency
ICID	Illicit Connection/Illegal Dumping
ICS	Individual Control Strategy
IND	Industrial and Commercial Discharge
MCMP	Metals Control Measures Plan
MEP	Maximum Extent Practicable
MOA	Memorandum of Agreement
MTC	Metropolitan Transportation Commission
NDC	New Development and Construction Controls
NEPA	National Environmental Protection Act
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent

NPDES	National Pollutant Discharge Elimination System
O&M	Operation & Maintenance
PAA	Public Agency Activities
PIP	Public Information and Participation
POTW	Publicly Owned Treatment Works
PS	Performance Standard
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
SOP	Standard Operating Procedure
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TMDL	Total Maximum Daily Load
URMP	Urban Runoff Management Plan
USEPA	United States Environmental Protection Agency
WCC	Woodward-Clyde Consultants
WLA	Waste Load Allocation
WMI	Watershed Management Initiative (same as SCBWMI, above)
WUPPP	Water Utility Pollution Prevention Plan

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Overview

Overview

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.

Chapter 2 concludes by explaining how the various action items identified in the Program's Metals Control Measures Plan have been addressed in the URMP.

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[1] The URMP complies with NPDES Permit CAS029718 (Order No. 95-180), Provisions C.1 through C.8. In addition, the URMP includes the Metals Control Plan action items consistent with Provision 9 of the NPDES Permit.

[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 every aspect of the Program and in 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 Development and Construction Controls (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

About the Santa Clara Valley Urban Runoff Pollution Prevention Program

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. The Program's National Pollutant Discharge Elimination System (NPDES) Permit identifies 11 subwatersheds within this basin (Figure 2). These subbasins, or watersheds, 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).

[Figure 1 is not available]

[Figure 2 is not available]

Population and Job Growth. In 1990, the County ranked third in the state in terms of population and employment. According to the County Department of Finance 1996 estimates, the population of the county is about 1.6 million. Of this total, about 1.4 million or 89 percent are residents of the 13 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 1996*, the population in the county will grow to about 1.9 million by 2015.

San Jose, with about 849,400 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. Although the early 1990s saw a drop in the number of high-tech jobs in the valley, employment has been growing in recent years. As of 1995, the county accounted for 28 percent of all jobs in the nine Bay Area counties. Between 1995 and 2015, the county is expected to add 215,500 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, agricultural lands have been replaced by housing development, business and industrial parks, shopping centers, and freeways. 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 the 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. The industrial economy of the valley is dominated by high technology firms engaged in the electronics, aerospace and semiconductor industries. 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.

TABLE 1
EXISTING LAND USE IN SANTA CLARA VALLEY COMMUNITIES

Community	Land Area (sq. mi.)	Population (1996)[2]	Estimated % of Land Area									% Built Out
			Single Family Res.	Multi-Family Res.	Commercial	Light Industrial	Heavy Industrial	Public/ Institutional	Parks/Open Space	Vacant/Raw/ Agricultural Land	Roadways	
Cupertino	10.4	43,650	39	2	8	4	–	7	15	8	17	92
Los Altos	6.6	27,000	64	7	3	–	–	6	1	2	17	99
Los Altos Hills	8.4	7,800	70	–	–	–	–	10	15	[8]	5	95
Milpitas	13.5	59,700	31	5	6	7	10	1	2	26	5	74
Mountain View	12.3	71,300	22	22	11	15	4	9[4]	12	5	18	98
Palo Alto	26	58,500	19	3	2	7	0	26	37	1	5	99
San Jose[7]	173.6	849,400	–	59[6]	4	–	9[5]	9	5	13	–	83
Santa Clara	19.3	98,000	29	7	7	15	6	8	6	4	18	
Sunnyvale	25	126,100	29	15	7	–	18[5]	9	18	3	2	96
Campbell	6	38,250	34	15	9	9	–	13	[3]	<1	21	>99
Los Gatos	10	28,950	47	6	6	1	–	3	27	<3	10	97
Monte Sereno	1.5	3,280	96	–	–	–	–	–	3	–	5	>95
Saratoga	11.9	29,600	64	<1	<1	–	–	6	2	20	6	90
Unincorp. County	961	108,500	2	<1	<1	<1	–	<1	19	73	2	Unk.

Source: [1] Santa Clara Valley Stormwater Management Plan 1995-2000
[2] Department of Finance Population Estimates for California Cities and Counties. January 1, 1996 (Report 96 E-1).
[3] Included in "Public/Institutional."
[4] Public/Institutional is public and private schools, federal government lands, and city/county/state facilities.
[5] Combined industrial
[6] Combined residential
[7] Percentages for San Jose are of total parcels. Of total area, 24 percent is roadways, and 14 percent is creeks, railroads, and other uses.
[8] Included in "Parks/Open Space"

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. Within each of the valley's 11 subbasins (Figure 2), multiple agencies have jurisdiction and responsibility for management and maintenance of drainage facilities. In addition, upland portions of some of these subwatersheds have nonurban land uses (agricultural, ranching, and open space) and are outside the Program Area. Runoff from these nonurban 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 nonpoint 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]

[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).

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) 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 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

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

[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)).

(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 also required that the Program develop watershed-based measures.

1997 Storm Water Management Plan Revision The 1995 Permit required 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 are to be incorporated in a revised plan to be submitted to the Regional Board on September 1, 1997. The Regional Board will consider amending the Permit subsequent to submittal of the revised plan. The Permit also calls for Annual Reports, which may include recommendations for improvements or revisions to the plan, to be submitted on September 1 of each year.

Reorganization and Renaming of the Program and Plan. In response to five years of operating experience, and the requirements of the 1995 Permit, the Program's Management Committee held a series of work sessions to revisit the Program's mission, goals and objectives. These are described in Chapter 3. The Management Committee subsequently decided to reorganize the Program by eliminating all subcommittees. In place of the subcommittees, ad-hoc task groups, which may include Program and Co-permittee staff and consultants, carry out specific tasks.

The Co-permittees are in the process of revising their Memorandum of Agreement (MOA) and the Management Committee's Bylaws. Co-permittees are individually responsible for implementing the permit within their respective

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

jurisdictions. The Co-permittees make use of the Management Committee 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.

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.[9]

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.

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

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

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 Managment 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, workplans 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 will continue 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 June 1995 Proposed Storm Water Management Plan 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 has committed $150,000 to assist the SCBWMI with:

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

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

The SCVURPPP's Program Manager will participate 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 of the SCBWMI, the Co-permittees have effectively implemented most of the watershed tasks in the 1995 SWMP. 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 will be coordinated through participation in the SCBWMI.As it develops, the SCBWMI should become a principal driver for the SCVURPPP, by identifying watershed impacts within the urban area. The SCVURPPP will continue to focus on preventing pollution from urban sources by pursuing activities within the purview of the Co-permittees. (See Figure 3 on page 35.)

The Management Committee will assign a task group to facilitate integration of watershed management objectives into Program and Co-Permittee activities. As part of the annual evaluation and continuous improvement cycle, the task group will review the resources that the Program and Co-permittees contribute to the SCBWMI and recommend actions (including budget) to assist the SCBWMI in the coming year. This will begin with identification of specific Program and Co-permittee actions to assist preparation of the SCBWMI's forthcoming *State of the Watershed Report.*

Sections 4D, 4F, and 4G describe some specific ways that SCBWMI stakeholders will help define future Program efforts.

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.

SF Bay Regional Monitoring Program (RMP). This monitoring program is funded by point and urban runoff dischargers, including the SCVURPPP. 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 four committees:

- Monitoring
- New Development and Construction
- Operational Permits
- Public Education

The BASMAA Stormwater Monitoring Committee is currently developing a regional monitoring strategy and implementation plan that BASMAA members can use, as appropriate, to better focus and coordinate their monitoring efforts and to measure the effectiveness of their efforts to reduce stormwater pollution. 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*[10], a site planning/design guidance manual, and provided coordination with Regional Board staff. The Public Information/Participation Committee focused on regional advertising. BASMAA has also sponsored or conducted other projects, including an effort to certify the training of mobile cleaners in pollution-prevention techniques.

South Bay TMDL Program. The SWRCB has classified the lower South Bay as a water quality limited segment and so must conduct a Total Maximum Daily Load (TMDL)[11] evaluation. This evaluation is intended to characterize constituent loads from all major point and nonpoint sources to the lower South Bay and, with the aid of computer modelling, allocate loads to meet water quality objectives. The load allocation will apply to urban and non urban nonpoint sources as well as POTW discharges. This state program is coordinated closely with SCBWMI's Monitoring and Modelling subgroup.

Common Ground for the Environment. This partnership of Stanford University and Sustainable Development is working with the San Francisco Estuary Project to plan progress toward a voluntary cooperative solution to the problem of copper pollution from automotive brake pads. Common Ground for the Environment intends to create a Brake Pad Partnership — a staged effort to bring together regulatory, industry, and environmental interests on a collaborative basis. The initial phase of partnership-building included a June 1996 national Stakeholder Forum and work group meetings. The goal is to develop a framework for a partnership agreement by the end of 1997. The Program has provided financial support, and will continue to work with Common Ground to further this work. The City of Palo Alto has

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[10] 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.

[11] A phased approach to developing a TMDL is being developed since estimates will initially be based on limited information. The proposed SCBWMI schedule anticipates that future TMDL phases will involve updating basic data through a monitoring program and continual updating and review of modeling results. EPA defines a phased TMDL approach as one that includes monitoring requirements and a schedule for re-assessing TMDL allocations to ensure attainment of water quality standards. Thus the phased TMDL approach is consistent with EPA guidance.

promoted the Partnership and has developed public informational materials for educating citizens regarding this issue.

POTW Pretreatment Programs. The three POTWs in the Santa Clara Basin inspect many facilities that discharge to sanitary sewers. The 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, 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 adminstrative requirements, permits, inspection, enforcement and fees for state-mandated regulation of:

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

2F
THE URMP INCORPORATES THE METALS CONTROL MEASURES PLAN

The Program's 1997 *Metals Control Measures Plan* (MCMP)[12] reviewed the significance of cadmium, chromium, copper, lead, mercury, nickel, selenium, silver and zinc in South San Francisco Bay. After reviewing existing data, a peer review panel grouped copper, nickel, mercury, silver and selenium as "pollutant metals of concern," and cadmium, lead and zinc as "pollutants requiring further investigation." Chromium was classified as a "pollutant not of concern."

The MCMP estimated the relative annual contribution to South San Francisco Bay of the five pollutant metals of concern. (As discussed in Section 4G, the

[12] The MCMP was prepared by the Program to comply with Provision 6 of NPDES Order No. 95-180.

Program continues to participate, through the RMP, in efforts to refine these estimates, and to investigate sources of cadmium, lead and zinc.)

According to the MCMP, an estimated 42% of the watershed load of copper comes from brake pads. Vehicle exhaust accounts for an estimated 33% of mercury loading. Addressing both sources will depend on cooperation with other entities. By contrast, 6% of the watershed load of nickel may come from runoff from industrial sites (data are inconclusive) and 2% from construction sites. Both of these sources can be addressed by municipalities' efforts.

The MCMP also reviewed previous studies of the effectiveness of some BMPs in removing metal pollutants. The MCMP concluded:

> The proportion of total copper loading that is currently addressed by illegal dumping controls, public agency activities and other existing control measures is limited because (1) the sources addressed are a small proportion of the total loading, and (2) there are inherent limitations to controlling fine particulate metals once they have been released to the environment. Despite a large expenditure of resources, the Program is currently able to control a relatively small proportion of copper loading.

Consistent with its overall approach, the Program identified specific actions it will take to further investigate the source loading estimates, and where appropriate, reduce pollutants in runoff from industrial sites and from construction sites. The Program also identified specific actions it will take, in cooperation with other entities, to help control pollutants from brake pads and vehicle exhaust. The Program will continue to participate in SCBWMI stakeholder decisions regarding pollutant metals of concern.

Table 2 describes the specific actions contained in the MCMP and identifies how they have been incorporated into Chapter 4 of this URMP.

TABLE 2
SUMMARY OF METALS CONTROL MEASURES PLAN ACTIONS
AND INCORPORATION INTO URMP

Metals Control Measures Plan Action	Task Description	Incorporated in URMP Section
AUTO-1	Assist efforts to create a Brake Pad Partnership to promote reformulation of friction materials in brake pads.	Sections 2E, 4H - Cooperation with Related Programs (Brake Pad Partnership)
AUTO-2	Participate in educating the stormwater community (agency staff, regulatory staff, elected officials, consultants) about the significance of metals loading from brake pads.	Sections 2E, 4H - Cooperation with Related Programs (Brake Pad Partnership, BASMAA, Watershed Management Initiative), and 4D- PIP (Targeted Outreach)
AUTO-3	Participate in educating the public about the significance of metals loading from brake pads.	Section 4H - Cooperation with Related Programs and Section 4D - PIP (General Outreach)
AUTO-4	Monitor, and respond to, research reports that could lead to an effective methodology for prioritizing cleaning of "hot spot" catch basins.	Section 2E - Related Programs (BASMAA, Storm Water Quality Task Force, others)
INDUSTRIAL-1	Assist industry, on a pilot program basis, to develop stormwater sampling and analysis protocols and conduct independent spot-checking to verify SWRCB industrial data.	Section 4C - Industrial/ Commercial Controls
INDUSTRIAL-2	If relatively high concentrations of metals in runoff from targeted industrial categories are confirmed, collaborate with industry to investigate potential pathways and develop appropriate BMPs.	Section 4C - Industrial/ Commercial Controls
AIR-1	Work with BAAQMD to reduce metals emissions from diesel-powered vehicles.	Sections 2E, 4H - Cooperation with Related Programs (BAAQMD)
EROSION-1	Implement Performance Standards for Construction Inspection.	Section 4F - New Development and Construction Controls
EROSION-2	Participate in development of a region-wide training and certification program for construction site inspectors.	Section 4F - New Development and Construction Controls
AIR-2	Support BAAQMD implementation of Toxic Air Contaminant Reduction Plan	Sections 2E, 4H - Cooperation with Related Programs (BAAQMD)

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

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

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 Plan period begins in September, 1997, and continues until the Management Committee directs preparation of a new Plan.

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 workplans for implementing control measures. As shown on Figure 3 on page 35, 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."

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

The Mission Statement:

- Targets pollutant reduction measures that are needed to help protect beneficial uses

- Focuses on urban pollutant sources (as opposed to non-point 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.

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 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. 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.

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.

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 will clarify the Program's decision-making process and enhance the ability of the Program to assist each Co-permittee to comply with the provisions of the NPDES permit.

The Agreement formally renames the Program (from the Santa Clara Valley Nonpoint Source Pollution Control Program to the Santa Clara Valley Urban Runoff Pollution Prevention Program) and reconstitutes a Management

Committee to be the official decision-making body for the Program.[13] 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.

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.

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

- 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. During 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

In addition, the Program prepared a 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.

The 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 which 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 process of evaluation and continuous improvement (see following Section 3G). Accordingly, the reports will focus on the Co-permittees' progress in developing their local programs and in implementing the individual Co-permittees' URMPs. The reports will document routine implementation of control measures, but in brief, summary form.

The Program's annual report will also summarize 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.)

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 not covered by Performance Standards (e.g. participation in school-based watershed education) will also be documented in the annual reports. Annual reports will 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. Finally, the Program's annual reports will project a coherent vision of the coming year's work.

3G
EVALUATION AND CONTINUOUS IMPROVEMENT

The SCVURPPP's approach to implementing Performance Standards explicitly acknowledges that "Maximum Extent Practicable" (MEP) is 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. Chapter 4 details how the Program will pursue continuous improvement in each Program area. These changes will be documented in the annual report.

The SCVURPPP's concept for continuous improvement is illustrated in Figure 3 on page 35.

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 4A through 4F) 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).

Regional Board staff and Co-permittees will be asked to participate in an annual review of the Program's work and the setting of priorities for the coming year. (This review will also be an opportunity to check progress on activities required under the Program's permit and on previous Program commitments, such as those in the 1995 SWMP.)

The Program's annual report will review and evaluate joint activities in the context of Program goals and objectives. However, many Program objectives are long-term. It will be difficult to assess incremental progress toward these objectives.

To continually improve implementation of Performance Standards, Co-permittees conduct and document peer review and evaluation of each element of each local program. Beyond a mechanical "check off the tasks" verification that local Performance Standards are met, the peer review generates positive suggestions for improvement. These may come from sharing details of standard operating procedures and work plans among Co-permittees, or from staff working together to interpret and use new data or results of studies. The Program facilitates peer review by sponsoring meetings and workshops associated with each Program element (See Sections 4B through 4F).

To supplement and support peer review, the SCVURPPP recommends local-program reviews, modelled roughly on the Pretreatment Compliance Inspections that are part of industrial discharger control programs at wastewater treatment plants. The frequency for each Co-permittee's review will be at least every other year, or as determined in discussions with Regional Board staff. Local program reviews will include the option of on-site visits by Regional Board staff. This will facilitate in-depth review of specific activities and documentation, and help familiarize Regional Board staff with the issues and challenges faced by local urban runoff program coordinators. The reviews will also provide an opportunity for local staff to comment on the Program's work and identify additional ways that the Program could assist local pollution-prevention efforts. A letter or brief report will follow-up each local program review, identifying the Co-permittee's accomplishments and setting forth priorities for the coming period.

A typical schedule for the annual continuous improvement cycle is shown in Table 3. This interactive, cooperative process, which incorporates technical assistance from the Program and from Regional Board staff, obviates the need for Co-permittee annual workplans.

As discussed in Section 2D, the Program is evolving toward a watershed approach. Most future Program initiatives will 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.

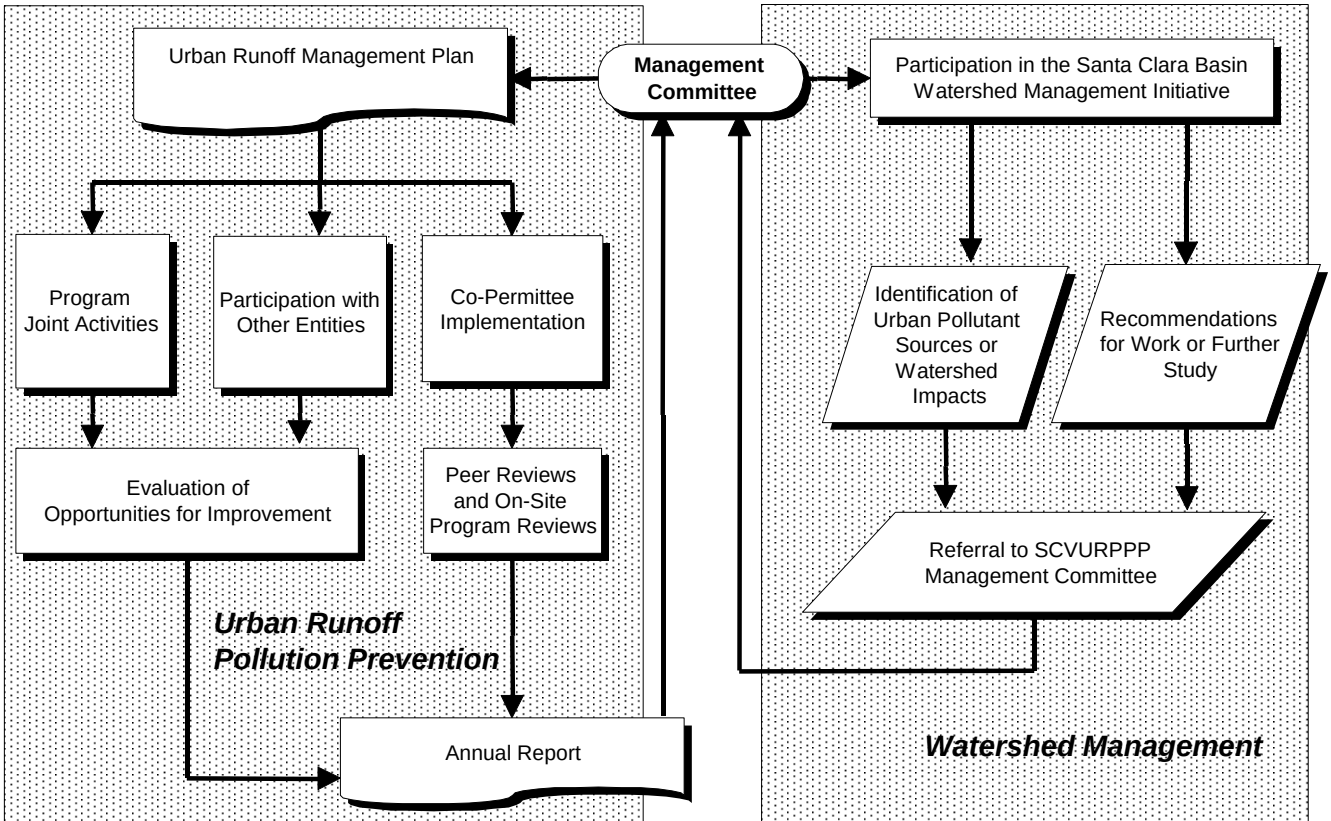
2. The SCBWMI may identify special studies, or institutional needs, that the Program (among SCBWMI stakeholders) is best suited to implement.

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

Table 3
Typical Annual Cycle for Continuous Improvement

July/August	• **Document previous year Program activities.**
Sept. 1	• **Submit annual report, including Program and Co-permittee objectives for current fiscal year.**
October	• **Review one existing Performance Standard or Program element, or create one new Performance Standard, to be implemented in the next fiscal year.** • **Review commitments to the SCBWMI, BASMAA, Projects of Regionwide Benefit, RMP, Brake Pad Partnership, BAAQMD, other entities for next fiscal year.** • **Prepare draft Program budget.**
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, and revise schedule to insure commitments are met.** • **Meet with Regional Board staff and interested parties to review Program activities and discuss Program objectives for the next fiscal year.**
March	• **Participate in on-site program reviews with Co-permittees.**
April	• **Document and summarize on-site reviews and Co-permittee objectives for the next fiscal year.**
May/June	• **Review Program objectives, schedule and budget for the next fiscal year. Select Performance Standard or Program element for detailed review in next fiscal year.**

Figure 3
Continuous Improvement



Santa Clara Valley Urban Runoff Pollution Prevention Program's Summary of Activities

Santa Clara Valley Urban Runoff Pollution Prevention Program Summary of Activities

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 4G 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 Development and Construction
- Monitoring

Table 4 shows how these Program elements are designed to fulfill the Program's goals and objectives.

Sections 4B through 4G 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

These sections also describe how applicable tasks from the Metals Control Measures Plan are incorporated into plans to implement each Program element.

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 4: 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 Development and Construction).
• Comply with permit submittal requirements	Section 3F (Reporting)
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 3G (Continuous Improvement)
• Utilize what we learn to plan the next steps	Section 3G (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 workshops on the URMP. As the Program develops its watershed orientation, public input will be facilitated 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 3G (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	Section 2C (The Program's Approach to Pollution

urban runoff program	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. Table 3 on page 63 contains a summary of how each Co-permittee will be implementing each Performance Standard. 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 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:

- 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.

The Program Pursues Joint Activities that Assist the Co-permittees to Effectively Eliminate ICID. The Management Committee will continue to sponsor 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
- 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. Co-permittees will report this information in the format described in the Performance Standards.

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, but significant load of copper and other metals to South San Francisco Bay. The estimate is 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 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.

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, 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 that have 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.

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-permittees will conduct initial inspections of all 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 will conduct follow-up inspections as they find necessary.

The Co-permittees will also inspect 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 will receive a prompt response, followed by a full inspection within one year.

All industrial and commercial inspections will 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 will use the Program's facility inspection checklist or their own checklist that contains the same information.

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 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 may attend these meetings, which

allow opportunity to share perspectives and ideas that can lead to better integration and coordination of the Program.

The Management Committee will also continue to:

- Input data, from the SWRCB and from Co-permittees, to the Program's database of NOI filers and distribute this 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
- Distribute and update Industrial Stormwater Pollution Control Compliance handbooks
- 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
- Monitor the progress of the ABAG Green Business Pilot Program and consider its applicability to Santa Clara municipalities.

The URMP Incorporates the Metals Control Measures Plan Tasks to Reduce Metals from Industrial Sources. The Program's Metals Control Measures Plan contains two tasks that will help control industrial sources of copper, nickel and mercury:

INDUSTRIAL-1	Assist industry, on a pilot program basis, to develop stormwater sampling and analysis protocols and conduct independent spot-

	checking to verify SWRCB industrial data.
INDUSTRIAL-2	If relatively high concentrations of metals in runoff from targeted industrial categories are confirmed, collaborate with industry to investigate potential pathways and develop appropriate BMPs.

The Management Committee will solicit one Co-permittee to assist its local industries, on a pilot program basis, to create a systematic, well-documented sampling program, designed to verify (or disprove) apparent elevated copper and nickel concentrations in runoff from electroplating, metal finishing and semiconductor manufacturing facilities. Concentration data should be compared with that from other industrial and commercial sites (e.g. parking lots). The sampling program will include enough discrete samples from enough different facilities to demonstrate significant differences in average runoff concentrations, should these exist. Detection limits will be sufficiently low to avoid non-detect data. Analyses will be backed up by appropriate Quality Assurance/Quality Control documentation. The Program will analyze the data and determine if specific industrial classifications do, indeed, have substantially higher average runoff concentrations.

In particular, the Co-permittee will work with industry to develop sampling and analysis protocols and will conduct independent sampling and analyses (spot-checking through duplicate or split samples) to verify data.

If specific industries are “hot spots” for concentrations of copper and nickel in runoff, and there is no apparent link to housekeeping and materials storage and handling, the Management Committee will encourage Co-permittees to work with industry to investigate other potential pathways to urban runoff, such as aerial deposition of metals dust emanating from ventilation systems or from materials handling areas.

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 in the co-permitees' programs will be pursued through:

- Regular participation, by Program and Co-permittee staff, in regional and statewide pollution-prevention forums, conferences and other information-sharing events

- Ongoing Program-wide information-sharing meetings where local industrial/commercial inspection programs are discussed

The Metals Control Measures Plan provides an example of how the Program responds to new information or ideas about potential industrial/commercial sources of stormwater pollutants. That document suggested that specific industries may still have elevated concentrations of metals in runoff. If the Program's investigation bears this out, the Program and Co-permittees will participate in efforts to investigate potential sources and pathways not considered in the current inspection checklist.

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. Co-permittees will report this information in the format described in the Performance Standards.

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

The Program will provide an annual progress report on the metals control measures for commercial/industrial sources. Specifically, the Program will describe progress by the Program and industry (and Co-permittees' contributions) toward improving sampling and analysis of runoff from selected industries.

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 1995, the Program's PIP subcommittee developed a Public Information and Participation Strategy. The PIP Strategy contains a series of objectives intended to organize development of tasks:

- Identify public behaviors and/or specific pollutants that are causing adverse impacts on the water quality of streams and the Bay, and prioritize them for PIP focus
- Determine baseline levels of understanding and appreciation of creeks and the Bay, and of issues and behaviors related to urban runoff pollution
- Develop systematic procedures for the development of PIP activities
- Insure that PIP activities are *strategic*; i.e. that they fully utilize existing materials and research in order to have the greatest possible potential to accomplish PIP goals
- Insure that PIP outreach projects are effective
- Measure effectiveness and relevance of PIP activities
- Achieve smooth and well-defined working relations between PIP members and other stakeholders to ensure that PIP activities move quickly to completion and are developed in a professional manner

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 PIP strategy.

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

- General Outreach
- Targeted Outreach
- Education
- Citizen Participation

The Management Committee has identified General Outreach as a Program Activity. Targeted Outreach, Education and Citizen Participation are activities that most, but not all, of the Co-permittees wish to have performed through the Program.

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.

Public Information and Participation Survey. In April 1996, the Program conducted a telephone survey of 1,200 people regarding their awareness of various issues related to urban runoff.[14] Fifty-one percent of respondents considered pollution of the environment a "very serious" problem. This may not be as high as is needed to motivate behavioral change. Therefore, communications should inform the public about the consequences of pollution. Sixty-four percent of respondents said that industry is the leading cause of

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

water pollution. Outreach materials should emphasize that individuals can cause urban runoff pollution, which is the leading source of pollutants to the Bay.

Respondents ranked the following messages as most effective in leading to behavior change:

- "Storm drain pollution destroys the environment for our children and future generations" (72%)
- "Storm drain pollution makes fish and seafood unhealthy for humans to eat" (69%)
- "Storm drain pollution ruins our local creeks so fish, birds and wildlife can't live there" (65%)

Sixty-five percent of respondents were aware that storm drains lead to the Bay. Approximately 11% could specifically recall seeing storm drain stencils. However, only 27% knew that the storm drain system and the sanitary sewer system are separate.

The survey resulted in recommendations that the Program conduct a year-round public outreach and education effort emphasizing:

- Individuals as a cause of storm drain pollution
- Effects on children and future generations
- Benefits of clean water and environment on quality of life
- Benefits of current good behaviors (while promoting behavior change)
- A call to action
- Ways to obtain additional information from the SCVURPPP

General Outreach. This is a joint activity, carried out through the Program, which assists the Co-permittees to achieve maximum effectiveness in educating the public about the need to reduce urban runoff pollutants.

An area-wide public outreach/information campaign will be conducted each year. The campaign will be structured as a 5-year campaign, with the messages and information building from year to year. The audience, key messages and communication tools will be determined each year and discussed in the annual report. 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

These key messages will be refined as described in the PIP Strategy and the appropriate communication tools selected based on the target audience. Vehicles may 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

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 PIP strategy
- Feedback from co-permitttees and other audiences
- Number or nature of calls generated to the Program's "800" number
- 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.

Targeted Outreach. This includes activities carried out by the Program at the request of one or more Co-permittees, 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 5.

Table 5
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…	Distribute and Update Industrial Stormwater Pollution Control Compliance handbooks … distribute materials 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 BMP information to contractors … developers receive information and guidance on site design and pollution-prevention BMPs early in the application process	Compile lists of BMPs and sponsor information-sharing workshops.

Annual evaluation of targeted outreach may be based on:

- Comparison to communication goals in the PIP Strategy
- 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 changing values) 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
- 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 reached
- Student 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
- Support for existing clean-up events and programs (e.g. Adopt-a-Creek)
- Funding community groups and other organizations for citizen participation projects
- Partnering with related organizations
- Targeting key audiences such as creekside residents

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 will be asked to participate in an annual evaluation of the Program's PIP work and to assist in setting priorities for the next fiscal year.

4E
PUBLIC AGENCY ACTIVITIES.

As is described in the Metals Control Measures Plan, 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.

The EPA Stormwater Regulations and the Basin Plan mandate street sweeping and catch basin cleaning as control measures.

However, results from street sweeping studies[15] 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 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.

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

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 calls 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 will implement BMPs for maintenance of sidewalks, plazas, bridges and structures, in addition to streets, roads and highways. The Co-permittees will 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, or is preparing, 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.

Co-permittees have changed their operating procedures for managing algae in ponds and fountains to eliminate the use of copper algicides.

The Program will evaluate implementation of BMPs for operation and maintenance of public facilities (including public water bodies and parks and recreation facilities). Based on this evaluation, the Program may use, or modify, existing Performance Standards or develop a new Performance Standard for Public Facilities. This process will be completed by June, 1998.

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 Joint Activities Which Assist Co-permittees to Perform Public Agency Activities To Maximize Their Effectiveness in Removing Pollutants. The Management Committee will continue to sponsor meetings where the Co-permittees' municipal maintenance staff can exchange information and ideas about making their operations and maintenance work more efficient and effective. These meetings also provide opportunities to coordinate with the Program's Illicit Connection and Illegal Discharge Elimination element and to share information with those involved in other aspects of the Program.

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

- Provide Co-permittee staff with technical advice and the results of recent research
- Organize training workshops, focused on BMP implementation, for municipal staff
- Coordinate, review and compile Co-permittee data for inclusion in the annual report
- Conduct research and technical studies to evaluate and develop improvements to BMPs and operation and maintenance techniques
- Coordinate ad-hoc-task groups
- Act as liaison with the Regional Board, BASMAA, other regional and statewide groups, Co-permittees, and the public

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 Program's annual report will document the Co-permittees' implementation of each specific item in the Performance Standards. Co-permittees will report this information in the format described in the Performance Standards.

In addition, each Co-permittee will update their associated Performance Standard, as needed, within their URMP.

4F
NEW DEVELOPMENT AND CONSTRUCTION

The Program's Metals Control Measures Plan concluded that erosion from construction sites contributes small, but appreciable, amounts of nickel to the Bay. Construction erosion causes site-specific, transient peaks in turbidity and total suspended solids, which can affect some aquatic species. Also, construction erosion contributes to siltation, which can have a critical impact on aquatic habitat and flood control.

The quantity and distribution of paved landscape affects the fate and transport of copper-laden brake-pad dust, but to an unknown degree. Paved areas allow ready transport of air-deposited dusts to storm drains with the next rain. In addition, ongoing land development continues to exacerbate changes in the basin's hydrology, reducing infiltration to groundwater and increasing peak flows and total runoff.

The Comprehensive Coastal Management Plan[16] (CCMP) identifies objectives and specific actions for land-use planning. The plan recommends that local governments:

- Incorporate watershed management and stormwater management plans into local General Plans.
- Adopt policies and plans to promote compact, contiguous development.
- Develop and implement guidelines for site planning and BMPs.
- Create market-based incentives to promote private-sector participation in efforts to protect and restore the San Francisco Bay Estuary.

Control of the water quality impacts of construction and new development is mandated by EPA's stormwater regulations, by CZARA,[17] and by the Basin

[16] San Francisco Estuary Project (1993). *Comprehensive Conservation and Management Plan.*

[17] Section 6217 of the Coastal Zone Act Reauthorization Amendments.

Plan.[18] The Basin Plan also requires municipalities to use their powers under CEQA to reduce the long-term impacts of development on stormwater quality. In 1994, Regional Board staff distributed *Recommendations for New and Redevelopment Controls for Stormwater Programs* to assist municipal plan reviewers to select construction and post-construction BMPs consistent with EPA guidance, CZARA, and the Basin Plan.

The Program's New Development Subcommittee previously produced and distributed *Planning Procedures for Private Projects.* This document included sample language that could be used in municipal general plans, in ordinances and standards, in permitting requirements in the pre-submittal and plan check phases, and in environmental assessment and conditions of approval. The Subcommittee also compiled a list of required and recommended BMPs.

The Program's New Development and Construction Model Performance Standards Are Designed to Reduce, to MEP, Construction and Post-Construction Impacts on Urban Runoff. In November 1996, an ad-hoc task group completed two model Performance Standards for New Development: a Performance Standard and Supporting Documents for Planning Procedures and a Performance Standard and Supporting Documents for Construction Inspection.

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

[18] State of California (1995*). Water Quality Control Plan for the San Francisco Bay Region*, pp. 4-28 through 4-31. See also Regional Water Quality Board Resolution 80-5.

- The frequency of inspections is appropriate to the size of the project and its potential impacts
- All sites requiring erosion and sediment control plans are inspected prior to the beginning of the annual wet season
- These sites are inspected following major storms
- Construction inspection staff receives training at least annually
- The local agency provides BMP information to contractors

Each Co-permittee has prepared a strategy to implement this model Performance Standard. 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.

Long-Term 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 are required to mitigate significant storm water quality impacts through site planning, design or incorporation of permanent measures
- 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
- 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 URMP, including appropriate BMPs and control measures, for implementing this Performance Standard.

The URMP Incorporates the Erosion Control Measures Described in the Metals Control Measures Plan. The Metals Control Measures Plan identified the following specific activities to reduce 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.

The Co-permittees' plans to implement Performance Standards for construction inspection are described in their respective URMPs. The Program will continue to work with the Regional Board, through BASMAA, to implement use of a field handbook for erosion control, to conduct training workshops for construction site inspectors, and to eventually certify inspectors' expertise in erosion control techniques.

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 on other regional program and groups, such as the San Francisco Estuary Project's Comprehensive Conservation and Management Plan, the San Francisquito Creek Coordinated Resources Management Plan, the Pollution Prevention Task Group, and the Congestion Management Agency's Technical Advisory Committee Land Use Subcommittee. Some of these liaisons may be best facilitated through the watershed management planning process.

Additional land use planning initiatives will likely arise from participation in the Santa Clara Basin Watershed Management Initiative. The Management Committee, where appropriate, will assist Co-permittees to review these developments and to incorporate changes in annual Program reports.

The Management Committee will establish a task group which will work with appropriate SCBWMI subgroups to translate SCBWMI goals and objectives into model local-jurisdiction policies and procedures for development review. Projects may include:

- Compiling data, analyses and projections of future development.
- Preparing recommended language to be included in General Plan updates.
- Preparing sample zoning ordinances (or other mechanisms) that reference design guidance (e.g. *Start at the Source*).
- Preparing sample standard specifications and details for site design features and for structural BMPs to reduce runoff pollution (such as landscape features that can infiltrate or treat runoff).

- Coordinating with Santa Clara Valley Water District staff regarding the effect of site planning and landscape features on flood control planning and facilities.

- Analyzing the results of any SCBWMI pilot watershed management plans from the perspective of municipal planning and public works departments.

Recommendations and sample documents will be submitted to the Management Committee for review and action (as illustrated on Figure 3 on page __.

The Management Committee will also continue to compile lists of BMPs and to sponsor information-sharing workshops for Co-permittee staff on specific topics related to erosion control, site planning, and structural controls.

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.

Site planning and design will advance with BASMAA's publication of the design handbook, *Start at the Source*. Program and Co-permittee staff will participate in associated Regional Board-sponsored workshops. The Program will consider setting up an ad-hoc task group to explore ways to assist municipalities to overcome the institutional obstacles to using these design techniques.

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

4G
MONITORING

The Program has thoroughly reoriented its approach to monitoring. Two things made this change necessary:

1. Regional Board staff has actively worked with the Co-permittees in BASMAA and in the SCBWMI, and has encouraged the Co-permittees to redirect their energies to assist these two groups.

2. In response to Regional Board requirements, the Program has reviewed the past ten years' studies and reassessed what is known, and what needs to be known, about the sources of pollutants in stormwater and the potential for controlling these sources.

Background. The Program has, since 1988, collected samples from three watershed stations and from one station that receives runoff from an industrial area. Samples were tested for metal pollutants of concern, and in recent years, for toxicity. Program annual reports evaluate the results as compared to water quality objectives. Toxicity Identification and Evaluation procedures identified the organophosphate Diazinon as the source of acute toxicity in three samples collected at two of the watershed stations. As described in Section 2E, the Program participates in the Regional Monitoring Program managed by the San Francisco Estuary Institute. Appendix D contains a summary of the Program's 1990-1997 accomplishments in monitoring.

Monitoring Program Reorientation. In August 1996[19] the Program received a request from the Regional Board to suspend its fixed-station, wet-weather monitoring and redirect resources to watershed monitoring. Specific studies requested included characterization of drainage areas, watershed monitoring proposals, and consideration of physical, biological and chemical indicators to assess drainage areas. The Regional Board specifically encouraged the Program to support volunteer monitoring. In addition, the Regional Board stated that the Program should make use of special or pilot studies. The

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

Regional Board requested that the Program develop a monitoring strategy that incorporates these concepts and a plan for implementation.

The Program advised Regional Board staff that it had suspended fixed-station wet-weather monitoring and was participating in BASMAA's development of a regional monitoring strategy.[20] The Program requested an extension of time to submit its own monitoring strategy until two months after completion of BASMAA's work. BASMAA now estimates that the regional monitoring strategy will be complete in September 1997.

Concurrent with the BASMAA effort, the Co-permittees have worked with the SCBWMI's Watershed Assessment Subgroup and its Lower South Bay Monitoring and Modeling Subgroup.

The Watershed Assessment Subgroup has developed a Draft Work Plan for Preparing a State of the Santa Clara Basin Watershed Report. The Draft Work Plan calls for preparation of an initial inventory of watershed characteristics, identification of critical data gaps, and an assessment of the condition of the watershed using existing data. In particular, the Draft Work Plan proposes to determine if beneficial uses are being protected, and to evaluate and prioritize impediments to achieving beneficial uses.

The Lower South Bay Monitoring and Modeling Subgroup has developed a request for proposals to construct an updated computer model which can simulate pollutant fate and transport. This effort is designed to assist in preparation of estimates of the total maximum daily load (TMDL) of pollutants that can be discharged to the Lower South Bay without causing an exceedance of water quality criteria.

Justification of the Need to Revise the Program's Monitoring Strategy. As stated by the Regional Board, the Program's monitoring strategy should support the development and implementation, and assess the effectiveness, of the Urban Runoff Management Plan.

[20] Jason Christie, Program Manager. December 18, 1996 letter to Loretta K. Barsamian.

As is documented in Sections 4B through 4F, Appendix A, and Appendix C, the Co-permittees are routinely implementing mandated control measures and BMPs. However, as discussed in Section 2F, the Program's Metals Control Measures Plan found that these BMPs can control only a limited proportion of total metals loading to South San Francisco Bay.

The Program believes that further progress in protecting the beneficial uses of South San Francisco Bay, and its tributary creeks, will be achieved through new approaches to controlling pollutant sources (such as those defined in the Program's Metals Control Measures Plan) and by stakeholder-based watershed management strategies. Accordingly, the Program's monitoring strategy has been completely revised. This revision is justified by Regional Board staff requests, development of regional strategies, an evolution from pollution prevention to watershed management, acceptance and routine implementation of control measures, and technical evidence of a need to move beyond those control measures.

Revised Monitoring Strategy

The Program's monitoring strategy comprises the following elements:

1. **Continue participation in the Regional Monitoring Program.** This includes ongoing financial support, participation in technical review and decision-making, and coordination of Program monitoring activities with RMP activities.

2. **Continue participation in the SCBWMI Watershed Assessment Subgroup and Lower South Bay Monitoring and Modeling Subgroup.** The preparation of a State of the Santa Clara Basin Watershed Report will include compilation of existing data, preliminary assessment of watershed characteristics, and collection of additional data, including field work. The Lower South Bay Monitoring and Modeling Subgroup will identify additional data needed to accurately project water quality effects.

3. **Pursue a basin-wide watershed monitoring strategy that is consistent with the BASMAA regional strategy.** Through BASMAA, the Program will coordinate monitoring, assessments and special studies with other Bay

area stormwater programs. This will avoid duplication and enhance the ability to fund needed studies.

The Program seeks a strategy which ties monitoring tasks to clearly stated management and environmental objectives. This may include further efforts (as described in the Metals Control Measures Plan) to determine the contribution of urban runoff stormwater pollutants relative to other watershed sources.

The Program will seek to integrate the SCBWMI's monitoring objectives with the regional strategy. This may include information and analyses to assess how the effects of pollutants relate to other impairments to beneficial uses.

4. **Use innovative new measures to assess the effectiveness of the urban runoff program.** As appropriate and available, this may include the use of water quality indicators, physical and hydrological indicators, social indicators, and programmatic indicators[21].

5. **Assist citizen monitoring.** This may include continuation of Program-level support for citizen monitoring on creeks. Where opportunities exist, the Co-permittees will provide in-kind assistance to encourage volunteer monitoring efforts at the local level.

6. **Support and encourage efforts to develop new control measures and to determine their potential effectiveness.** In particular, the Program will continue to support regional efforts to investigate control measures that have the potential to reduce the quantity of fine particulate metals released to the environment, or site design and landscape features that reduce the total quantity of runoff.

7. **In the Program's annual report, summarize the results of the previous years' monitoring activities and specify tasks for the current year.**

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[21] Claytor, Richard A. and Whitney E. Brown (1996). *Environmental Indicators to Assess Stormwater Control Programs and Practices.* Center for Watershed Protection.

4H
COOPERATION WITH RELATED PROGRAMS

In addition to cooperation with other entities directly related to the Program and Co-permittee's implementation of ICID, IND, PIP, PAA and NDC tasks (as described above), the Management Committee and Co-permittees will contribute at least the following to related programs.

Common Ground for the Environment. The Management Committee will continue to participate in the Common Ground for the Environment's collaboration with stakeholders to achieve voluntary reductions in copper from brake pads. The Management Committee firmly believes that this problem should be addressed at the national level and will designate one Co-permittee to maintain this liaison. The Management Committee will evaluate its funding commitment to this effort annually, as part of the budget cycle. In addition, the Management Committee will continue to participate in appropriate special studies to further the technical and scientific understanding associated with pollutants of concern in the lower South San Francisco Bay. For example, several Co-permittees are actively participating (direct funding and staff time) with the Bay Area Dischargers' Association to better understand air deposition as a source of metals loading. This information will be useful in the watershed initiative's TMDL work.

Bay Area Air Quality Management District. The Management Committee will continue to follow the BAAQMD's policy and program development as it might be related to the source control of pollutants of concern. The Management Committee will designate a Co-permittee to follow BAAQMD's programs and report back to the Management Committee on relevant items and areas where the Program should express its opinion. Further, the Management Committee will, where appropriate, look into legislative mechanisms to support the Program's efforts.

ABAG/RWQCB Erosion Control Field Handbook Training Program for Construction Inspectors. The Management Committee encourages efforts, coordinated through BASMAA, to develop training and resources at a regional level. The Program also endorses the concept of a regional program to certify the expertise of erosion control inspectors. The Management

Committee will continue to support these ideas and efforts through its participation in BASMAA and will encourage Co-permittees to actively participate in RWQCB-sponsored workshops for construction inspectors.

4I
SUMMARY

The Program's NPDES Permit (Regional Board Order 95-180) requires that the URMP include a "summary or checklist of all actions, activities, and tasks and time schedules pertinent to implementation of control measures and best management practices, including Performance Standards for their implementation, which shall be presented in a concise format suitable for incorporation or attachment to this permit."

Table C1-C4, in Appendix C, summarizes tasks to be completed under the direction of the Program's Management Committee. In addition, Tables C5 through C16, also in Appendix C, summarize the status of each Co-permittee's URMP, including BMPs and SOPs.

Further details on Co-permittee programs are in Chapters 5-16 (bound separately).