

## **EXECUTIVE SUMMARY**



## **EXECUTIVE SUMMARY**

The Santa Monica Bay Restoration Project (SMBRP) was initiated in 1989 to restore and protect and its resources. The SMBRP's Management Conference has worked since then to answer four fundamental questions:

- How safe is it to swim in Santa Monica Bay?
- How safe is it to eat Bay seafood?
- Are fisheries and other living resources in the Bay adequately protected?
- Is the health of the Bay adequately protected?

The Bay Restoration Plan (BRP) examines in depth the issues associated with these difficult questions. It explains the origins and current status of key problems, and recommends practical, feasible actions to address them. It proposes timelines for each action within the five-year performance period of the BRP, with some "priority actions" already underway.

This Executive Summary comprises the Section Summaries of the BRP including Goals, Priority Actions, and Background. The reader will also find Chapter Summaries and Strategies. The Executive Summary is meant to give an overview of the contents of the Plan. The reader should refer to Sections and Chapters for more specific and detailed information.

### **SECTION A: PREVENTING POLLUTION AT THE SOURCE**

#### **Section Summary**

Section A addresses pollutant loading -- the most significant contributor to impairment of the Bay's beneficial uses (e.g., fishing, swimming, wildlife, and other). Actions described in the various chapters of this section focus on 19 pollutants of concern that the SMBRP has identified as the most problematic to the Bay. Specific recommendations are included in various chapters on how the pollutants of concern should be managed.

#### **Goals**

Reduce pollutant loadings to the Bay from point and nonpoint sources in order to prevent degradation of the marine ecosystem, protect beaches and minimize risks to human health.

Manage and control various pollutant sources in an integrated and comprehensive manner, taking into consideration impacts to all environmental media--water, air and land.



## Approach

The Bay water pollution management approach is to:

- Emphasize prevention, recognizing that preventing pollution today is much more cost-effective than cleaning it up in the future.
- Focus on the most troublesome pollutants affecting Santa Monica Bay. The BRP identifies a group of 19 "pollutants of concern" as the priorities for action in Santa Monica Bay during the five-year Plan period.
- Target pollutant sources in accordance with their relative impacts on the marine environment and on human health. The BRP targets pollutant reduction measures on an area-specific (sub-watershed or watershed) basis, addressing those pollutants that impair beneficial uses in receiving waters.
- Address pollutants of concern associated with historic contamination of sediments separately from those associated with new sources.
- Manage pollutants of concern that accumulate in the marine environment differently from those that dissipate. The BRP establishes a mass emissions approach for those pollutants that accumulate in the marine environment and for which there are currently detectable inputs to the Bay.
- Support the development of effective public education and involvement programs that emphasize pollution prevention and source control.
- Comprehensively monitor pollutant sources and the health of the marine environment in order to assess the effectiveness of management actions and revise actions based on monitoring and research results.

## Priority Actions

The following 33 Priority Actions have been identified by the SMBRP Management Committee to address pollutant loading in the Bay.

Note: Priority Actions are designated in the text by a **P**.

Action	Description	Est. Cost (000)
PM-1.2	Revise current NPDES permits, incorporate appropriated management approach. Develop new, effective enforcement mechanisms where necessary.	WER
PM-2.1	Coordinate all components of NPDES with other regulatory functions on a watershed basis.	\$400
PM-3.1	Oversee development/implementation of mass emissions approach.	\$200
PM-3.2a	Establish initial mass loading discharge performance goals for a set of pollutants of concern	\$200



Action	Description	Est. Cost (000)
PP-1.1	Coordinate and expand public education programs that focus on reducing generation of household toxics.	included in UR-3
PP-1.2	Expand programs for recycling and collection of household hazardous wastes.	\$300
PP-1.3	Encourage creation of markets for use of recycled hazardous materials.	WER
PP-2.1	Implement programs that educated and assist small businesses to undertake pollution prevention activities.	\$3,500
PP-5.2	Continue support of annual Coastal Cleanup Day and Adopt-a-Beach.	\$135
PP-6.2	Implement measures that prevent discharges of pollutants into marina waters.	\$275
PP-6.3	Ensure that sufficient pumpout facilities are available, maintained, and used at existing moorage facilities.	\$40
UR-1.1	Revise and incorporate new program elements into the storm water NPDES.	WER
UR-1.3a	Increase staffing available to the LARWQCB, CCC, and local entities for NPDES compliance activities.	\$400
UR-1.3b	Ensure adequate staffing and training in local municipalities and agencies for implementation of storm water/urban runoff management.	\$8,935
UR-1.4	Evaluate and develop effective mechanisms to address small discharges of nonstorm or contaminated storm runoff within the SMB watershed.	WER
UR-1.5a	Support the cooperative efforts led by EPA and participated in by the State Storm Water Task Force and environmental groups on investigating the necessity for and feasibility of developing effluent limits for storm water runoff.	WER
UR-1.5b	Locally create a working group under the Storm Water/Urban Runoff Implementation Committee to investigate necessity for and feasibility of developing effluent limits for storm water runoff.	WER
UR-2.1d	Develop and adopt policies which require all California CEQA compliance documents and site drainage designs to address potential impacts.	WER
UR-2.1e	Develop and adopt policies to redo the impacts of transportation activities on pollutant loading in storm water/urban runoff.	WER
UR-2.2a	Adopt land use (storm water/urban runoff) ordinances.	WER
UR-2.2b	Enforce land use ordinances.	\$8,916



Action	Description	Est. Cost (000)
UR-3.1	Develop a 5-year urban runoff education strategy.	\$50
UR-3.2	Implement 5-year public education strategy.	\$6,220
UR-3.3	Develop and promote specific public involvement programs related to storm water/urban runoff issues.	\$2,230
UR-4.1a	Implement Menu A BMPs.	\$4,335
UR-4.1b	Implement general good housekeeping practices by commercial and industrial facilities and construction activities.	\$3,250
UR-4.1c	Select and conduct pilot demonstration projects for medium- and long-term implementation.	\$7,740
UR-6.1a	Conduct and assess the results of dry- and wet-weather toxicity studies of storm drain constituents. Recommend necessary changes to monitoring.	WER
MI-2.1	Complete construction of full secondary facilities at Hyperion and remedy storm-related sewage overflow problems.	WER
MI-2.2	Install full secondary treatment facilities at JWPCP.	WER
MI-3.4	Continue to develop markets and opportunities for use of reclaimed water.	included in MI-3.1
MI-5.2	Explore alternative mechanisms/strategies to ensure adequate staff and resources, legal support for NPDES and pretreatment permit activities.	\$50
SP-2.4	Sign a MOU between LAC-DPW and the City of Los Angeles authorizing cross-jurisdictional entry into storm drains to investigate spill incidents.	WER
<b>SECTION A PRIORITY ACTIONS SUBTOTAL</b>		<b>\$47,176</b>

### Key Agencies

The task of reducing pollution at the source is carried out primarily by three types of agencies: water quality regulatory agencies, local governments, and special districts.

Agency	Responsibility
<b>LOCAL</b>	
LARWQCB	Regulated water quality through issuance and enforcement of NPDES permits. Also responsible for development of the Basin Plan for the entire watershed.
CDSLAC, LA-BuSan, LVMWD	Local Agencies responsible for point source pollution control.



Agency	Responsibility
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**LOCAL (Continued)**

LAC-DWP, 20 Municipalities with Santa Monica Bay Watershed, LAC-DBH, SQAQMD	Local agencies responsible for nonpoint source pollution control.
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**STATE**

SWRCB	Under the mandate of the Porter-Cologne Water Quality Control Act, develops the Ocean Plan which is the primary regulation that Regional Boards administer to ensure the protection of water quality in Santa Monica Bay.
LARWQCB	Primary agency responsible for implementing the Federal Clean water Act (CWA) and the State's Porter-Cologne Water Quality Act.
CCC	Plays an important role in protecting water quality by guiding existing and future land use development in the Coastal Zone.
CalTrans	An important implementor of control measures for nonpoint source pollution that originate from roadways.

**FEDERAL**

EPA	Lead regulatory agency for water quality protection under the mandate of the CWA; including the National Pollutant Discharge Elimination System, the national pretreatment program, permits for municipal and industrial storm water discharge, nonpoint source management plans, and area-wide waste treatment management plans. another federal mandate is the Coastal Nonpoint Pollution Control Program (CNPCP) established under Section 6217 of the Coastal Zone Management Act (CZMA as amended by the Coastal Zone Act Reauthorization Amendments of 1990.
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**CHAPTER 1: INTEGRATED POLLUTION MANAGEMENT**

**Chapter Summary**

Recognizing the need to integrate pollutant management of various point and nonpoint sources, actions in Chapter 1 are aimed at modifying the existing regulatory framework in order to carry out Bay water pollution management on a watershed basis. Specifically, the need to apply a new mass emissions approach as the means to comprehensively manage pollutant inputs is emphasized. Actions are described that should be taken to implement the mass emissions approach for pollutants of concern that accumulate in the marine environment (12 of the 19 pollutants of concern), including development of mass loading discharge performance goals.



### **Chapter Strategy**

- Ensure that the Bay water pollution management approach is incorporated into the current water quality management framework.
- Coordinate various pollution management programs on a watershed basis. Develop new coordination mechanisms, if necessary.
- Phase in implementation of the mass emissions approach through collaboration between lead regulatory agencies and other implementing agencies/organizations.
- Develop and implement a comprehensive monitoring program and research plan. As part of that program, periodically reassess the pollutants of concern list and their associated management alternatives, and institute changes, as necessary, based on new information.

## **CHAPTER 2: POLLUTION PREVENTION AND SOURCE REDUCTION**

### **Chapter Summary**

Chapter 2 addresses the many diffuse but potentially significant sources of pollution to the Bay -- the millions of people, cars, homes, boats, and businesses that are part of the Santa Monica Bay watershed and watershed. These sources contribute a wide variety of pollutants to the Bay, indirectly through sewer and storm drain systems or directly into the marine environment. Toxic pesticides and chemicals, metals, waste oils, plastics and debris are among the many types of pollutants released into the environment from these sources. The actions proposed promote the simple notion that it is more effective to reduce or eliminate pollutants at their sources before they are created.

Many of the programs included here have already been initiated by local, state and federal entities and community organizations in response to needs such as eliminating household toxics from landfills, reducing pollutant loads to sewage treatment plants and educating the public about the impacts of marine debris and litter on the ocean environment. All are part of a comprehensive strategy to prevent and reduce pollutant releases into the environment.

### **Chapter Strategy**

The pollution prevention and source reduction strategy is to:

- Reduce (or eliminate where possible) the use and generation of polluting substances at their sources.
- Reuse and recycle wastes that cannot be prevented at the source.
- Encourage development and implementation of non-regulatory approaches that assist both public and private sectors to achieve pollution reduction goals.



- Develop and support effective education and involvement programs that emphasize pollution prevention and source control for the general public, businesses and industries.

### **CHAPTER 3: STORM WATER/URBAN RUNOFF**

#### **Chapter Summary**

Storm water and urban runoff are the most significant source of nonpoint pollution to Santa Monica Bay. Storm water/urban runoff is known to contribute significantly to the pollutants of concern (12 of the 19 pollutants of concern, including trash and debris, pathogens, 5 heavy metals, PAHs, TSS, nutrients, and oil and grease). A comprehensive program which promotes many innovative approaches to address distinct problems associated with storm water/urban runoff pollution is presented in this chapter.

#### **Chapter Strategy**

- Implement most control measures under the framework of the storm water NPDES permits and enhance function, resources, and coordination within this existing structure.
- Develop a general, widely-applicable program and control measures for pollutants of concern that impair beneficial uses in the Bay. Develop focused programs/control measures for specific problem areas and for pollutants of concern that affect them.
- Address problems in the context of land use and watershed characteristics; promote changes in conjunction with land use planning.
- Address problems primarily through non-structural control measures, especially through public education and involvement.

### **CHAPTER 4: MUNICIPAL AND INDUSTRIAL DISCHARGES**

#### **Chapter Summary**

This chapter encompasses a range of actions that are directed toward reducing discharges and improving management of pollutants associated with municipal and industrial wastewater sources. The primary components of the Municipal and Industrial Discharges program are: to promote programs that prevent and reduce pollutants at their sources; to ensure that all municipal wastewaters discharged to the Bay receive at least secondary treatment; to support efforts to maximize water reuse in the region; and to improve, where necessary, the existing regulatory framework for management of point source discharges.



### **Chapter Strategy**

- Promote programs that emphasize pollution prevention and source control.
- Improve the existing management and control of municipal and industrial discharges to the Bay, where necessary.
- Maximize reuse of reclaimed water.
- Beneficially use biosolids (sludge).
- Emphasize incentives rather than "command and control" approaches wherever possible.
- Implement a comprehensive and integrated monitoring program to assess and report on the condition of Santa Monica Bay to the public and to policy-makers.

## **CHAPTER 5: OIL AND HAZARDOUS MATERIALS SPILLS**

### **Chapter Summary**

Chapter 5 addresses issues relating to oil and hazardous materials spill incidents. Large spills can cause severe ecological damage in a very short time, and may have less obvious long-term effects. Land spills may also impact Bay waters through the storm drain system. Even minor spills may have a significant cumulative impact on the Bay.

Strategies and management measures are focused on spill prevention, effective response, and restoration of resources to their pre-spill condition. This chapter outlines how these measures are addressed, the existing response structure, and the on-going efforts to improve them. Additionally, methods are proposed which would aid the development of a database to more accurately assess and document ecological damage for restoration efforts. Means of increasing public involvement in spill response preparation are also proposed.

### **Chapter Strategy**

- Emphasize spill prevention strategies. Support effective regulations, inspections and enforcement policies governing the handling of all hazardous materials to reduce the risks of spills.
- Enhance response capability in Santa Monica Bay and its tributaries, and ensure that contingency plans of federal, state, local, and private entities are coordinated.
- Support appropriate damage assessment policies and procedures to fully restore all natural resources in a timely manner and otherwise provide compensation to offset the impacts of a spill. Support field data collecting programs to ensure that adequate baseline data for natural resources exist to document ecological impacts of spills.



- Increase of the general public awareness regarding spill prevention and response and promote programs that encourage their participation.

## **CHAPTER 6: CONTAMINATED SEDIMENTS**

### **Chapter Summary**

Chapter 6 addresses contaminated sediments, particularly toxic hot spots. Sediments are a reservoir of many pollutants that contaminate animal life within the Bay's ecosystem. Sediments are also the source of contaminants that, once introduced into the food web, can pose human health risks from contaminated seafood consumption. Specific remediation requirements and actions are described that would lead to managing historical deposits of DDTs, PCBs, and TBT; would minimize adverse contaminant effects; and would restore and protect biological resources.

### **Chapter Strategy**

- Identify and target the most contaminated toxic hot spots for cleanup and remediation.
- Develop sediment quality objectives and site-specific cleanup criteria for contaminated sites.
- Develop remediation options and disposal plans for contaminant deposits and recommend the most effective and feasible alternatives.
- Minimize input of contaminants from point and nonpoint sources.
- Understand the linkages between discharge quality and sediment quality, as well as sediment quality with contaminated seafood and ecological damage.

## **SECTION B: PROTECT THE PUBLIC FROM POTENTIAL HEALTH RISKS**

### **Section Summary**

Santa Monica Bay provides many opportunities for recreational activities including swimming and surfing, sportfishing, boating, scuba diving, tidepooling, and simple aesthetic enjoyment of the Bay's scenery. The millions of tourists and local residents who are attracted to the Bay's 22 public beaches and who take a million sport fishing trips each year provide great benefit to the local economy. The protection of the valuable recreational uses of the Bay is a high priority for public agencies and local community.

This section addresses seafood consumption and swimming -- the two major recreational beneficial uses of the Bay. The question of potential health risks associated with these activities has been a major public concern due to reports that



local sport fish are contaminated and accounts of swimmers experiencing illnesses as a result of contact with the water.

### Goals

- Inform and protect the public from potential health risks associated with consuming seafood from Santa Monica Bay.
- Reduce any human health risk that may be associated with water contact during activities in swimming surfzone (from the surfline up to 200 yards off shore plus popular recreation areas) of Santa Monica Bay to minimal levels.

### Approach

- Identify and eliminate the sources of contamination. Prevent the contaminated substances from impacting human health.
- Accurately assess potential human health risks and effectively inform the public of these potential risks.
- Improve the regulatory/management framework as needed.
- Assure effectiveness of actions through monitoring.

### Priority Actions

The following eleven priority actions have been identified by the SMBRP Management Committee for restoration, protection, and management of Bay habitats and resources.

Action	Description	Est. Cost (000)
SC-3.2	Update seafood consumption health communication on a regular basis.	\$300
SW-1.1a	Develop a methodology for a sanitary survey.	WER
SW-1.1b	Conduct sanitary survey on a needed basis.	\$150
SW 1.2a	Conduct on-site inspections and correct malfunctioning septic tanks.	\$180
SW-1.2b	Develop inspection system, conduct focused inspection of illegal and illicit sewage connections to storm drains, as required under NPDES.	\$1,060
SW-1.2c	Inspect and correct leaks from sewer lines and sewage treatment plants, as required under NPDES.	\$800



Action	Description	Est. Cost (000)
SW-2.2a	Divert dry-weather flow for treatment.	\$2,000
SW2.2b	Continuously evaluate the feasibility of an on-site stormwater treatment facility for dry-weather flow of Pico-Kenter drain. Construct facility.	WER
SW-3.1	Conduct an assessment of health risk of recreational exposure to storm drain runoff in the Santa Monica Bay.	\$650
SW-3.2	Develop better indicatory systems and revise public health standards and water quality objectives accordingly.	\$1,800
SW-4.1	Develop and effective risk communication program	\$99
<b>SECTION B PRIORITY ACTIONS SUBTOTAL</b>		<b>\$7,039</b>

Note: Priority Actions are designated in the text by a **P**.

### Key Agencies

An array of regulatory agencies plays an important role in the business of public health protection. They are either directly responsible for protecting people from health risk, or responsible for reducing the sources of contamination which often

Agency	Responsibility
<b>LOCAL</b>	
Los Angeles County Department of Health Services	Monitoring and inspections. Issues warnings and advisories. Prohibits public use of Bay when contaminant levels pose a human health risk.
POTWs Los Angeles County Department of Public Works Watershed Municipalities	Prevent contaminants from reaching levels that pose human health risk.
Los Angeles Regional Water Quality Control Board	Regulate water quality to ensure contaminants do not reach levels that pose human health risk.
<b>STATE</b>	
Office of Environmental Health Hazard Assessment	Lead role in protecting public from exposure to contaminated seafood.
Department of Health Services	Lead role in protecting public from exposure to contaminated water during swimming.
State Water Resources Control Board	Prepares the Ocean Plan which local agencies (LARWQCB) administer to ensure that contaminant discharge does not exceed levels that pose human health risk



Agency	Responsibility
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**FEDERAL**

U.S. Environmental Protection Agency	Establishes ambient marine water quality criteria under the Clean Water Act and regulates the disposal of contaminated waste under the Toxic Substances Control Act.
U.S. Food and Drug Administration	Sets and enforces allowable levels of toxic substances in food or food products under the Food, Drug, and Cosmetic Act.

are the causes of human health risk. Agencies responsible for resource management and habitat protection may also play a role. The following table summarizes key agencies and their responsibilities.

## **CHAPTER 7: SEAFOOD CONSUMPTION**

### **Chapter Summary**

Sportfishing is one of the most popular uses of the Bay, as well as a major economic and recreational resource. In recent years, the general public has been concerned about potential health risks associated with the consumption of contaminated seafood from Santa Monica Bay. Eating contaminated seafood is the primary pathway for human exposure to toxic chemicals and metals found in the marine environment. While recent studies have shown that health risks are limited to consumption of certain seafood species from certain locations, the public perception remains that all seafood in the Bay is contaminated.

The specific actions proposed in Chapter 7 will aid in addressing the question, "How safe is it to eat Bay seafood?" They include maintaining a risk assessment program and developing a seafood monitoring program. These actions will assure that a more structured risk communication program will be in place to inform the public of pertinent information in a timely fashion.

### **Chapter Strategy**

- Prevent contaminant inputs and remediate the impact of contaminated sediments.
- Assess potential health risks associated with consuming contaminated seafood.
- Effectively inform the public of risks and benefits of seafood consumption.
- Ensure that there is a regulatory framework in place that safeguards the public from risks associated with consuming contaminated seafood.
- Ensure effectiveness of actions through monitoring.



## **CHAPTER 8: SWIMMING**

### **Chapter Summary**

Swimming is one of the important beneficial uses of the Bay. Santa Monica Bay is famous for its sunny beaches which attract millions of local residents and tourists each year. However, there is wide public perception and some scientific evidence that there may be risks associated with swimming in surfzone areas near storm drain outlets due to pollutant discharge. Ensuring safe swimming in the Bay has been a high priority for the public, both for health protection and economic vitality.

The actions proposed in Chapter 8 are intended to prevent pollution, assess potential risk, and effectively communicate risk to the public. In addition, there are recommendations for improving the regulatory framework and encouraging a cooperative working relationship between the involved agencies and interested parties.

### **Chapter Strategy**

- Find and remove sources of pathogens from the storm drain system which impact the swimming surfzone.
- Until sources of pathogens are eliminated, protect swimmers by actions which remove pathogens from the swimming surfzone.
- Accurately assess potential health risks associated with swimming and revise water quality standards to more effectively protect public health.
- Accurately inform the public where it may be safe to swim and where it may be not, and why.
- Assure effectiveness of actions through monitoring.

## **SECTION C: RESTORING, PROTECTING AND MANAGING BAY HABITATS AND RESOURCES**

### **Section Summary**

Section C discusses the goals, approaches, and actions developed to address restoration, protection and management of Bay habitats and resources. The Bay's aquatic ecosystem is made up of **Marine Habitats and Ecosystems, Wetlands, and Beaches and Intertidal Zones**. This section is divided into three chapters that address each of these habitat elements.

Goals for habitat restoration, protection, and management respond to the need for a healthy ecosystem while recognizing the need for human use of resources. The



approach emphasizes long-term, comprehensive management and protection of habitats and resources. Actions are recommended that restore priority habitat areas, increase enforcement of natural resource regulations, and promote stewardship of the Bay's environment. Some of these actions have been designated as Priority Actions and are highlighted within Chapter 9, Marine Ecosystem; Chapter 10, Wetlands; and Chapter 11, Beaches and Intertidal Zones.

### **Goals**

- Restore, rehabilitate, and protect the marine ecosystem, living resources, and biodiversity of the Bay and its watershed.
- Improve wetland quality, increase wetland quantity, and ensure long-term, comprehensive management and protection.
- Ensure a healthy environment for the native plants and wildlife that are dependent upon these habitats; as well as for the people who use these areas for recreation and education.

### **Approach**

- The approach to restoring, protecting, and managing habitat includes:
  - Reduce inputs of pollutants into the ecosystem.
  - Restore and increase the quantity and quality of fish and wildlife habitats.
  - Reverse declines in native species.
  - Improve the regulatory framework.
  - Apply a coordinated and comprehensive watershed planning approach.
  - Ensure the survival and recovery of listed and candidate threatened and endangered species as well as special status species.
  - Educate and involve the public.
  - Implement a comprehensive monitoring program.



### Priority Actions

The following ten Priority Actions have been identified by the SMBRP Management Committee for restoration, protection, and management of Bay habitats and resources.

Note: Priority Actions are designated in the text by a **P**.

Action	Description	Est. Cost (000)
MEC-2.1	Identify cost-effective methods to rebuild declining populations of "key species."	\$30
MEC-2.2	Identify and map Santa Monica Bay's unique and sensitive habitats.	\$60
MEC-3.1	Increase the number of wildlife protection officers along Santa Monica Bay.	\$1,592
MEC-5.2	Encourage citizen monitoring and reporting.	\$160
W-1.1a	Determine habitat values and mitigation credits (Ballona Wetlands).	WER
W-1.1b	Determine "best" restoration plan/design (Ballona Wetlands).	WER
W-1.1c	Develop a funding package for restoration of Ballona Wetlands.	WER
W-1.1d	Restore Ballona Wetlands and provide for long-term management and monitoring.	\$5,075
W-2.3	Develop a SAMP for wetlands and provide for long-term management and monitoring.	WER
BIZ-1.2	Augment on-going restoration of El Segundo Dunes and create El Segundo Dunes Habitat Preserve.	\$500
<b>SECTION C PRIORITY ACTION SUBTOTAL</b>		<b>\$7,417</b>

### SECTION C. PRIORITY ACTION SUBTOTAL

**\$7,41**



**SECTION D WATERSHED PLANNING**

Section Summary . . . . . D-1

Chapter 12. Planning and Management for Sub-Watersheds . . . . . 12-1

Chapter 13. Malibu Creek Pilot Plan . . . . . 13-1



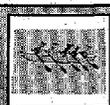
**SECTION E CROSS-CUTTING ISSUES**

Section Summary . . . . . E-1

Chapter 14. Public Education and Involvement Program . . . . . 14-1

Chapter 15. Comprehensive Monitoring Program . . . . . 15-1

Chapter 16. Research Needs . . . . . 16-1



**SECTION F MAKING THE PLAN WORK**

Section Summary . . . . . F-1

Chapter 17. Oversight and Management of Plan Implementation . . . . . 17-1

Chapter 18. Finance Summary . . . . . 18-1

**Glossary**

**List of Acronyms**

**Appendices**

- Appendix A Steps and Guidance for Management of Pathogens, Chlorine Oxygen Demands, and Oil and Grease
- Appendix B Application of Mass Emissions Approach to Management of Lead (Hypothetical)
- Appendix C Menu "B" and "C" Candidate Best Management Practices
- Appendix D Implementing Entities
- Appendix E Coastal Nonpoint Source Pollution State Program Guidance (separately bound)



## Key Agencies

The present array of regulatory agencies, with their various missions and overlapping authorities, has produced a fragmented and cumbersome system for habitat protection and restoration. This chapter offers some recommendations for actions that would improve this system, as applied to the Santa Monica Bay watershed.

Agency	Responsibility
<b>LOCAL</b>	
Coastal Cities	Several coastal cities have developed Local Coastal Plans (LCPs) under the Coastal Zone Management Act (CZMA).
Municipal Jurisdictions	At the local level, municipal jurisdictions have varying degrees of control over land use through ordinances and zoning laws.
<b>STATE</b>	
CDFG, CCC, SWRCB, CSCC	Each agency has broad authority and mandate to ensure protection of wildlife and their habitats
<b>FEDERAL</b>	
FWS, NOAA, EPA, COE, USCG	Each agency has a significant role in protecting the Bay's natural resources.

## CHAPTER 9: MARINE ECOSYSTEM

### Chapter Summary

Chapter 9 discusses restoration, protection, and management of the habitats and resources that form the Bay's marine ecosystem. It reviews the effects of historic and current activities on the resources of the Bay, and considers the impact of both natural phenomena (e.g., El Niño) and those actions resulting from human activity (e.g., development) on various Bay habitats and associated species.

This chapter also identifies specific actions that will address priority issues. Some of the concerns that are emphasized include: rebuilding declining populations of key species; providing greater protection for unique and sensitive habitats; enhancing marine resources within the Bay; increasing enforcement of laws and regulations that would benefit the Bay's marine ecosystem; and emphasizing the importance of public awareness in the effort to restore, protect, and manage the marine ecosystem.

### Chapter Strategy

- Reduce pollutant loadings to Santa Monica Bay.
- Restore and enhance populations of important commercial and recreational marine species and the habitats that support those species.



- Implement and enforce laws and regulations to ensure protection of marine resources.
- Conduct monitoring activities that assess the detrimental and beneficial impacts of human activities and measure the health of the marine ecosystem.
- Increase public awareness of the value of the marine ecosystem and how it is impacted by human activities.

## **CHAPTER 10: WETLANDS**

### **Chapter Summary**

The loss of nearly 95% of the historic wetlands acreage of the Santa Monica Bay makes the remaining wetlands, which are such an integral part of the Bay's ecosystem, that much more valuable. Chapter 10 focuses on restoration, protection, and management of remaining wetlands. It also suggests creation of new wetlands. In this chapter, innovative actions are described that would acquire privately-held wetland acreage, establish wetland land use ordinances, and develop special area management plans.

### **Chapter Strategy**

- Restore and enhance ecological diversity and productivity of degraded wetlands (function and value).
- Protect existing wetlands through improved local regulations and policies.
- Enhance inter-agency coordination.
- Acquire privately-owned wetlands.
- Ensure long-term management and monitoring for wetlands.
- Develop and implement a long-term education program focusing on wetlands.
- Create new wetlands, where feasible.

## **CHAPTER 11: BEACHES AND INTERTIDAL ZONES**

### **Chapter Summary**

Chapter 11 focuses on restoring, protecting and managing the beaches and intertidal zones -- and their resources -- of Santa Monica Bay. It discusses human impacts on these transition zones between land and water and suggests actions for restoring and protecting threatened and endangered species and habitats. This chapter also describes actions to improve the cleanup of Bay beaches, emphasizing education and public involvement.



### **Chapter Strategy**

- Restoration and protection of habitat values, ecological diversity and productivity.
- Improvements to beach cleanup practices.
- Minimization of the detrimental impacts of human activity.
- Education and involvement of the public.
- Monitoring and research.

### **SECTION D: WATERSHED PLANNING**

#### **Section Summary**

Section D focuses on the need for the *process* of conducting watershed planning and management. It recognizes that the process must employ strategies that are both cost-effective and that integrate management goals among the various jurisdictions.

Chapter 12 discusses actions related to general watershed planning and management at the sub-watershed level. Chapter 13 uses the planning and management process currently being developed for the Malibu Creek sub-watershed as a specific example of preventive and integrated actions that can be taken to protect a natural stream and riparian system and, at the same time, maintain or restore valuable natural and recreational resources.

#### **Goal**

- To protect the beneficial uses of the Bay by applying a coordinated and comprehensive watershed planning and management approach.

#### **Approach**

- Increase integration of water quality, natural resource, and public health management programs on a sub-watershed basis.
- Establish effective mechanisms for cost and information sharing on a sub-watershed basis.
- Develop management plans for priority sub-watersheds.

#### **Priority Actions**

The following 13 actions have been identified as priorities by the SMBRP Management Committee for watershed planning and management.

Note: Priority Actions are designated in the text by a **P**.



Action	Description	Est. Cost (000)
WSP-1.1	Explore feasibility of JPAs, Watershed Commissions, special districts, or other cooperative integration efforts for planning and/or implementation...	WER
MCW-1.1	Establish means of regulating water levels in Malibu Lagoon and improve the breaching/management protocol.	WER
MCW-1.4c	Conduct inspections of on-site wastewater treatment systems and improve septic tank surveillance.	in SW-1.2a
MCW-1.4d	Identify ownership of storm drains throughout the sub-watershed.	in SW-1.2b
MCW-1.9	Investigate relationships between groundwater movement and role of septic systems in contributing pollutants to creek, lagoon, surfzone.	\$50
MCW-1.11	Develop a plan to minimize and mitigate water quality and quantity impacts on Malibu Lagoon resulting from the surface discharge of groundwater pollution abatement program.	WER
MCW-1.12	Pursue increased capacity for the LVMWD's seasonal storage of reclaimed water and other effluent disposal options.	WER
MCW-2.3	Evaluate and establish priorities for erosion control and remediation projects and implement priority projects.	WER
MCW-3	Develop specific BMPs for hillside development.	WER
MCW-4.3	Create buffer zones adjacent to sensitive habitats. Evaluate adequacy of current standards.	WER
MCW-4.5	Develop and implement a plan to enhance and restore lower portions of Malibu Creek.	\$80
MCW-4.6	Develop and implement lagoon restoration plan based on water quality, salinity, habitat, and biodiversity objectives.	\$2,000
MCW-5	Use applicable elements of the Malibu Creek watershed comprehensive plan to develop management plans for other priority sub-watersheds.	included in IM-1.2
<b>SECTION D PRIORITY ACTIONS SUBTOTAL</b>		<b>\$2,130</b>

**SECTION D. PRIORITY ACTIONS SUBTOTAL**  
**\$2,130**

**Key Agencies**

Of the more than 50 federal, state, and local agencies or jurisdictions whose management decisions directly or indirectly affect water quality, natural



resources, and recreational activities in the Santa Monica Bay watershed and the near-coastal area, the following agencies have relatively broad missions that cover

Agency	Responsibility
<b>LOCAL</b>	
Resource Conservation Districts	Participate in watershed planning and management.
<b>STATE</b>	
CCC, LARWQCB	Each agency has broad authority and mandate to participate in watershed planning and management and to deal with water quality, natural resource protection and conservation, and public health issues.
<b>FEDERAL</b>	
NOAA, EPA, SCS	Each agency has broad authority and mandate to participate in watershed planning and management and to deal with water quality, natural resource protection and conservation, and public health issues.

at least some key components of watershed management.

## **CHAPTER 12: PLANNING AND MANAGEMENT FOR SUB-WATERSHEDS**

### **Chapter Summary**

Chapter 12 approaches planning and management of the Santa Monica Bay watershed from the level of its sub-watersheds. It discusses how the natural and recreational resources of the Bay as a whole are affected by pollutant inputs, stream flow alterations, and loss of sensitive habitat within each sub-watershed. It describes how land use, resource management, and water quality protection decisions must be integrated among many jurisdictions, in order to effect watershed-wide planning and management goals.

### **Chapter Strategy**

- Establish a formal mechanism for coordinating and integrating environmental management on a watershed basis.
- Determine linkages between land use practices, pollutant loads, beneficial uses, and various permitting and monitoring programs.
- Develop management plans for priority sub-watersheds.
- Provide effective means to enforce pollutant reduction programs and to monitor their effectiveness.



- Promote effective public education and participation in watershed management.
- Monitor the effectiveness of environmental and management improvement steps.

## **CHAPTER 13: MALIBU CREEK PILOT PLAN**

### **Chapter Summary**

Chapter 13 presents a process described in the form of a case study that can be used in other sub-watersheds and within the Santa Monica Bay watershed as a whole. It describes the development and implementation of the pilot management plan for the Malibu Creek sub-watershed.

The chapter discusses how the natural and recreational resources of Malibu Creek, Malibu Lagoon and their immediate offshore areas are affected by pollutant inputs, stream flow modifications, and alteration of sensitive habitats. It also describes how planning for and managing the sub-watershed will be integrated among jurisdictions and special interest groups. There is a discussion of the facilitated mediation process being employed to arrive at a management approach acceptable to all parties concerned with the Malibu Creek sub-watershed.

### **Chapter Strategy**

- Develop and implement early actions.
- Develop a specific erosion and sedimentation control strategy.
- Develop specific BMPs for hillside development.
- Develop a native biodiversity restoration and protection plan.
- Use applicable elements of the Malibu Creek Watershed Comprehensive Plan to develop management plans for other priority sub-watersheds.
- Expand public awareness.
- Monitor success of environmental management and improvement steps.

## **SECTION E: CROSS-CUTTING ISSUES**

### **Section Summary**

Section E introduces the "cross cutting" programs of the BRP. Each of the previous chapters has included specific recommendations concerning public education, monitoring, and research efforts important to accomplishing key goals. In this Section, all of these recommendations are summarized so that frameworks for cooperatively and systematically undertaking them can be developed and implemented.



Each chapter within this section recommends formation of an entity which will be charged with facilitating and overseeing activities recommended by the BRP. These entities will work under the guidance of the Implementation Committees, whose purpose is to provide feedback and progress reports to the Bay Watershed Council -- the group charged with directing the entire restoration effort as outlined in the BRP (see Chapter 17).

### **Goals**

- **Public Education and Involvement Program:** Coordinate, create, and implement public education and outreach programs that are vital, public-friendly, and relevant to many different target audiences.
- **Comprehensive Monitoring Program:** Coordinate, develop, and implement comprehensive Bay and watershed monitoring programs.
- **Research Needs:** Coordinate, develop, and share scientific knowledge and state-of-the-art technology in pollution prevention, contamination remediation, and water quality monitoring.

### **Approach**

- **Public Education and Involvement Program:** Create an institutional framework to support and encourage existing efforts while enlisting continued involvement and support to develop tailored outreach programs for Los Angeles' many communities.
- **Comprehensive Monitoring Program:** Create an institutional framework within which existing integrated monitoring programs are supported, new programs are developed and implemented, and information is managed to maximize data transfer.
- **Research Needs:** Create an institutional framework within which research programs related to the Bay and the watershed can be conducted, reviewed, and coordinated.



### Priority Actions

The SMBRP Management Committee has determined that the following four actions are Priority Actions.

Note: Priority Actions are designated in text by a **P**.

Action	Description	Est. Cost (000)
PO-2	Implement Public Involvement and Education (PIE) Program	\$1,000
M-1.1	Participate in a "re-tooled" Santa Monica Bay Monitoring Program	WER
M-6.1	Design a "user-friendly" SMB data management system with a centralized index, but decentralized database system.	WER
M-6.2	Actively maintain the index and documentation and coordinate the efforts of the various sources and users.	\$217
<b>SECTION E PRIORITY ACTIONS SUBTOTAL</b>		<b>\$1,217</b>

## CHAPTER 14: PUBLIC EDUCATION AND INVOLVEMENT AND INVOLVEMENT PROGRAM

### Chapter Summary

The Public Education and Involvement Program of the Action Plan recommends delivering a number of critical outreach messages to a wide variety of audiences in the watershed. In order to focus the effort on achieving goals and coordinating outreach activities, the Action Plan recommends the creation of the Bay Information and Education Council (BIEC).

### Chapter Strategy

- Support and encourage coalitional efforts of environmental organizations, government agencies, schools and other entities to inform and educate the public about Bay-related issues;
- Enlist private sector involvement and support in implementing the Public Outreach recommendations proposed in the BRP;
- Tailor outreach to L.A.'s many diverse communities to educate residents and enlist support for and involvement in Bay restoration and protection activities.



## **CHAPTER 15: COMPREHENSIVE MONITORING PROGRAM**

### **Chapter Summary**

Information is the critical link between understanding a problem and finding a solution. Environmental monitoring is one of the primary methods of collecting information on the Bay in order to evaluate trends over time. At least \$2 million per year is spent on environmental monitoring in Santa Monica Bay alone. However, due to lack of coordination and standardization, as well as inconsistent data management, little of this monitoring results in answers to the public's basic questions.

In this chapter, the necessary steps for developing a comprehensive integrated monitoring program are presented. Also, presented are the actions needed to complete the development of a monitoring data management system. This data management system will organize critical information and make it usable for decision-makers and the interested public.

### **Chapter Strategy**

- Phase in monitoring changes wherever possible and appropriate, using the Comprehensive Monitoring Framework as guidance.
- Develop specific protocols, standardized sampling procedures, and analytical techniques for identified environmental indicators.
- Determine indicators which can be used by environmental decision-makers for adjusting policy decisions and determining the success of management actions.
- Improve existing management and financing structures to implement comprehensive monitoring program.
- Coordinate decisions made for Santa Monica Bay monitoring right-wide to facilitate ultimate regional applicability.
- Develop and implement an information management system to support integrated monitoring and information transfer. Institutionalize feedback mechanisms between data collection through monitoring and special research projects, data analysis and interpretation, and management decisions based on information generated.
- Institutionalize feedback mechanisms between data collection through monitoring and special research projects, data analysis and interpretation, and management decisions based on information generated. Establish mechanisms for outside peer review.
- Develop appropriate protocols or adopt existing ones for citizens' involvement in monitoring activities, such as tracking restoration and recovery projects or assisting in a variety of sampling programs.



## **CHAPTER 16: RESEARCH NEEDS**

### **Chapter Summary**

Fulfilling research needs is an important function of the BRP. Scientific research is essential for understanding the problems associated with Santa Monica Bay and its watershed. Knowledge and information provided by scientific research are the basis for development of management strategies and management actions.

### **Chapter Strategy**

- Identify an "umbrella" entity to oversee, coordinate, and review research projects relating to the Bay.
- Focus research efforts to assist management in making meaningful management decisions.
- Ensure that Santa Monica Bay research projects are coordinated with and applicable to the Southern California Bight. Closely link scientific research efforts in the Bay to national and international environmental protection efforts.
- Coordinate research efforts to optimize use of the data generated by the monitoring program. Develop more reliable and effective monitoring methods.

## **SECTION F: MAKING THE PLAN WORK**

### **Section Summary**

This section addresses management and financial considerations of Plan implementation. Chapter 17 recommends an oversight and management structure to "make the BRP work." It proposes that a voluntary Santa Monica Bay Watershed Council succeed the Santa Monica Bay Restoration Project Management Conference to oversee the implementation of the BRP. Specific membership and committee structures are also proposed. Chapter 18, the Finance Summary, describes the funding requirements and financial strategies for implementing the Plan's **priority** actions.

### **Goals**

- Assure implementation of the BRP by establishing an effective implementation strategy and oversight committee structure.
- Assure funding for the BRP by putting forth a sound financing strategy.



### Approach

- Promote public/private partnership for implementing the BRP.
- Establish an effective and practical funding program which integrates on-going, current expenditures with new financing mechanisms.
- Promote efficient decision making based on cooperation and collaboration of all involved parties for BRP implementation.

### Priority Actions

The SMBRP Management Committee has determined that the following two actions are priority actions.

Note: Priority Actions are designated in text by a **P**.

Action	Description	Est. Cost (000)
IM-1.1	Carry out the following activities: pursue financing strategy, monitor Plan progress, prepare State of the Bay reports and convene and staff meetings, staff SMBRP.	\$400
IM-1.2	Carry out public education and involvement program, comprehensive bay monitoring program, coordination of research needs, coordinate wetlands restoration efforts and watershed planning efforts as assigned to the post-SMBRP.	WER
<b>SECTION F PRIORITY ACTIONS SUBTOTAL</b>		<b>\$400</b>

## CHAPTER 17: OVERSIGHT AND MANAGEMENT OF PLAN IMPLEMENTATION

### Chapter Summary

The success of the BRP is largely dependent on the establishment of an effective oversight and management strategy for assuring its implementation. Without such a strategy, the BRP is destined to be just another "plan on the shelf." The actions described below should be carried out to secure implementation of the remainder of the BRP. This chapter also presents a structure for the "post-SMBRP Organization" called the Bay Watershed Council as well as specific roles the oversight organization should perform in order to secure successful implementation of the BRP.



The goal of these actions is to assure implementation of the BRP by establishing an effective implementation strategy and oversight committee structure.

## **CHAPTER 18: FINANCE SUMMARY**

### **Chapter Summary**

This chapter discusses the fiscal requirements of the BRP Priority Actions, as well as potential funding sources for implementation. There are 73 Priority Actions, as determined by the SMBRP Management Committee in January 1994. Of these actions, 33 are considered to be implementable "within existing resources." The remaining 40 have an estimated cost of \$67 million. The Finance Strategy focuses on funding options for these 40 actions.

It is important to note that many organizations and government agencies have vigorously responded to the challenges confronting the Bay and have either already initiated efforts to improve its condition, or will begin work shortly. In either scenario, funds for these efforts have already been earmarked, or can be readily secured by shifting internal resources.

In the near term, the strategy is to finance the Plan's currently unfunded priority actions by targeting existing grant and loan sources, and through private sector fund-raising by the non-profit SMBRF. A Blue Ribbon Finance Committee is being formed to provide guidance on additional innovative funding opportunities.