



WATER QUALITY PROTECTION IMPLEMENTATION

Action Plan Summary

MONTEREY BAY NATIONAL MARINE SANCTUARY

THE ISSUE:

The Monterey Bay National Marine Sanctuary (MBNMS) is susceptible to impacts from urban, rural and agricultural sources of pollution. Runoff from forests, cities, towns, neighborhoods and agricultural land can wash pollutants including oils, heavy metals, sediment, pesticides, and bacteria into over 50 rivers, creeks, and estuaries that drain into the sanctuary.

OUR GOAL

The sanctuary's goal is to reduce contamination from non-point source pollution in the MBNMS and its watersheds while improving monitoring that will provide critical feedback on program effectiveness.

BACKGROUND INFORMATION

Water quality is important to all organisms living within or passing through the sanctuary as well as to humans, who enjoy the sanctuary for recreational or economic purposes. The health of these waters depend directly upon what is happening on land, and is the responsibility of all citizens both near and far from the ocean.

The MBNMS is adjacent to approximately 300 miles of California's coastline and receives water that drains from approximately seven thousand square miles of land in eleven major coastal **watershed** areas. When the watersheds of San Francisco Bay are included, an additional 25,000 square miles of California drains into the MBNMS through the Golden Gate. The term watershed describes an area of land that drains downhill to the lowest point in that area. The water moves through a network of drainage pathways, both underground and on the surface, which converges into streams and rivers, becoming progressively larger as the water moves downstream, eventually reaching the ocean. Locally, most rain falling on the west side of the Santa Cruz or the Santa Lucia mountains will travel through one of the eleven major watersheds and into a stream, creek, or river that flows into the MBNMS.

As water moves through watersheds, it can pick up pollutants like trash, oil, metals, sediment, pesticides, and bacteria and carry them to the ocean. The pollutants enter the landscape from a variety of actions, such as the improper use of pesticides, overuse of fertilizers, at-home car washing, or failure to pick up pet wastes.

In the more urbanized areas of our region, these pollutants are carried into the storm drain system,

which is designed to prevent flooding by carrying excess rainwater away from streets; it is not designed to be a waste disposal system. Unlike the sewer system, which carries water from indoor drains to wastewater treatment plants, the storm drain system releases untreated water into channels, rivers, and ultimately the ocean. Any water traveling into a storm drain within a sanctuary watershed eventually finds its way into the MBNMS without treatment. Whether it be from a storm drain or a river, pollution entering our waterways and ocean environments that is not from a single, identifiable source (i.e. a factory), is called **nonpoint source pollution**. Nonpoint source pollution is the primary source of pollution to the MBNMS. Because we are all part of the problem, anyone living in or traveling through a sanctuary watershed plays a role in reducing nonpoint source pollution into the MBNMS.

Monitoring has shown that while offshore areas of the MBNMS are in relatively good condition, nearshore coastal areas, harbors, lagoons, estuaries, and tributaries suffer from a number of problems including elevated levels of nutrients, sediments, pesticides, metals, bacteria, pathogens, detergents, oils, and trash. These pollutants can have a variety of impacts including toxicity to marine organisms such as sea otters and sea lions, destruction of habitat for salmon and steelhead fish, harmful algal blooms that can affect marine mammals, and beach closures, which can greatly impact our local economy due to loss of tourism and health impacts.

For many years, the sanctuary has worked collaboratively with numerous partners to develop the primary Action Plans described below. These plans provide a framework for reducing non-point source pollution in the sanctuary.

Action Plan I: Implementing Solutions to Urban Runoff

Implementing Solutions to Urban Runoff, developed in 1996, was the Water Quality Protection Program's (WQPP) first action plan. It was developed in collaboration with the WQPP committee, many of the region's public works representatives and other stakeholders. It describes seven priority strategies for addressing the problems associated with urban runoff in the region including education and outreach, technical training, planning tools, treatment options, and storm drain inspections.

Action Plan II: Regional Monitoring, Data Access, and Interagency Coordination

The second WQPP plan, developed in 1996, addresses the need for a continuous and coordinated strategy for regional monitoring of water quality and compilation of water quality data on a regional level. It also addresses the need for access to this data and a regional framework for coordinating efforts addressing water quality.

Action Plan III: Marinas and Boating

This action plan, developed in 1997, describes strategies designed to reduce water pollution from certain activities associated with marinas and boating within the MBNMS. This plan took the approach that much of this pollution can be reduced through education and training programs and the application of new technologies. Strategies include education, technical training, bilge water disposal and waste oil recovery, hazardous and toxic materials management, vessel maintenance, and pollution reduction.

Action Plan IV: Agriculture and Rural Lands Plan

The *Agriculture and Rural Lands Plan* was developed in 1999 to address agricultural runoff in the form of sediments, nutrients and persistent pesticides. The plan outlines twenty-four strategies intended to protect and enhance the quality of water draining into the MBNMS while sustaining the economic viability of agriculture. The strategies include organizing agricultural watershed groups to implement on-the-ground management measures, increasing technical assistance and education, funding and economic incentives for conservation measures, permit coordination for conservation practices, and improving maintenance practices for rural roadways and public lands.

Action Plan V: Beach Closure and Microbial Contamination

This action plan, developed in 2003, addresses the issue of microbial contamination in ocean waters and the number of beach closures and warnings issued each year to sanctuary beaches. The goal of the Beach Closure and Microbial Contamination Action Plan is to reduce microbial contamination in MBNMS waters and to better identify sources of contamination in order to effectively allocate resources and evaluate health risks. Several strategies have been identified including source control, technical training, education, monitoring, research, and emergency response, among others.

Action Plan VI: Wetlands and Riparian Corridors

Because of wetlands role in improving water quality, the need for a sixth action plan addressing wetlands and riparian management has been identified by the WQPP partners. This future action plan is expected to contain strategies to evaluate the extent, health, impacts and restoration opportunities in wetlands and riparian corridors adjacent to the Sanctuary. As a part of the management plan review, the WQPP Committee, a group that directs program implementation, updated the WQPP plans described above by evaluating the effectiveness of the past plans and creating a list of priority next steps for the implementation.



Foamy detergents washing to sanctuary waters. MBNMS

THE SANCTUARY'S ACTION PLAN

The sanctuary's "Water Quality Protection Implementation Action Plan" was developed jointly with a variety of stakeholders and partners and includes the following four overarching initiatives:

Implementing Solutions to Urban Runoff; Regional Monitoring, Data Access, and Interagency Coordination; Marinas and Boating; and Agriculture and Rural Lands.

These include, but are not limited to the following components:

- Providing understandable, meaningful, and useful information about water quality conservation to ranchers and growers
- Increasing the utility and use of pumpout stations which encourage recycling of oil amongst harbor users
- Developing of a framework for combining water quality information from many different sources into a database (or other format) accessible to the public and other water quality data consumers
- Developing and providing training for city, county, and private industry representatives to learn about Best Management Practices (BMP's), and hardware that can be used for capturing water contaminants such as trash, sediment, paint, and oily bilge water.
- Implementing a public education campaign on water quality issues stemming from urban runoff, boats and marinas, agriculture, and construction.
- Initiating or continued facilitation of regional groups that address water quality concerns such as: sedimentation, agricultural runoff, and urban runoff
- Continuing and expanding water quality monitoring programs
- Promoting guidelines developed to reduce the amount and/or type of contaminants entering the sanctuary from vessel maintenance and dry dock operations.

For a complete listing of the sanctuary's "Water Quality Protection Implementation Action Plan" strategies please visit http://sanctuaries.nos.noaa.gov/jointplan/m_reptoad.html and scroll down the page.

Some Simple Things You Can Do to Reduce Non-Point Source Pollution

In your home or community

Recycle used motor oil by taking it to an auto parts store, hazardous waste collection site, or using curbside recycling pickup.

Recycle your car's antifreeze.

Wash your cars on unpaved surfaces or at a commercial car wash. Leftover soapy water should be poured down a household sink or toilet.

Take unwanted chemicals like paint and pesticides to your local hazardous waste collection site.

Use non-toxic alternatives to pesticides and organic gardening techniques when possible.

Use herbicides, pesticides, and fertilizers sparingly and follow label instructions carefully. Do not apply products if rain is in the forecast.

Pick up animal wastes regularly and dispose of in the toilet or trashcan.

Maintain your home's septic system. Understand how your system functions and what may cause it to malfunction.

Don't pour anything (except clean water) on the street or down a storm drain.

On your boat

Keep your engine well tuned to prevent oil and fuel leaks.

Use an absorbent pad or pillow under your engine where drips may occur and dispose of them as hazardous waste at a marine or local hazardous collection center.

If possible, save boat maintenance projects for the boatyard.

Use a nontoxic antifouling paint.

Dispose of batteries, paints, antifreeze, oil, cleaning products, oil filters and other hazardous wastes at a hazardous waste collection facility.

Manage sewage wastes properly by maintaining marine sanitation devices and using harbor pumpout stations and shore-side facilities.

Use phosphate-free biodegradable soap to minimize the impacts of greywater on the marine environment; minimize discharge by doing dishes and showers on shore whenever possible.

The Joint Management Plan Review (JMPR)

“Water Quality Protection Program Implementation” is one of the action plans in the MBNMS Draft Management Plan. The MBNMS Draft Management Plan includes twenty-eight plans that, once finalized, will guide sanctuary management for the next five years. The plan is a revision of the original management plan, adopted with sanctuary designation in 1992, and is focused on how to best understand and protect the sanctuary’s resources.

The National Marine Sanctuary Program (NMSP) is updating the management plans for the Cordell Bank, Gulf of the Farallones, and Monterey Bay National Marine Sanctuaries a process known as the Joint Management Plan Review (JMPR).



GLOSSARY

Nonpoint source pollution:

Pollution not originating from one specific location.

Watershed:

An area of land draining downhill to the lowest point



Where does it come from?

MBNMS

How You Can Get Involved in the MBNMS Management Plan Process

The MBNMS welcomes your ideas about important resource management issues in the sanctuary. A Draft Management Plan and Draft Environmental Impact Statement are scheduled for release to the public in 2006. Following their release, hearings will be held in several locations throughout the region to gather public comment.

Written comments will be accepted as well. To find out about public hearings, or how to submit written comments, please visit our website at <http://www.sanctuaries.nos.noaa.gov/jointplan>

Resources

California State Water Resources Control Board <http://www.swrcb.ca.gov>

Citizen Watershed Monitoring Network <http://www.mbnms.nos.noaa.gov/monitoringnetwork/welcome.html>

Coastal Watershed Council <http://www.coastal-watershed.org>

Heal The Bay <http://www.healthebay.org/>

Monterey Bay National Marine Sanctuary <http://montereybay.noaa.gov>

Monterey Bay National Marine Sanctuary Water Quality Program

<http://www.montereybay.noaa.gov/resourcepro/water-pro.html>

Natural Resources Defense Council <http://www.nrdc.org>

Sanctuary Integrated Monitoring Network (SIMoN)

<http://www.mbnms-simon.org/sections/waterQuality/overview.php?sec=wq>

US Environmental Protection Agency <http://www.epa.gov>

Additional information, activities and ways to get involved:

Coastal Watershed Council <http://www.coastal-watershed.org>

Ocean Conservancy <http://www.oceanconservancy.org>

Santa Cruz Surfrider Chapter <http://www.surfridersantacruz.org>

Surfrider International <http://www.surfrider.org>

Watershed Monitoring Network Volunteer Information

<http://www.mbnms.nos.noaa.gov/monitoringnetwork/welcome.html>

THE MONTEREY BAY NATIONAL MARINE SANCTUARY

Stretching from Marin to Cambria, the Monterey Bay National Marine Sanctuary encompasses 276 miles of shoreline and 5,322 square miles (4,625 nautical miles) of ocean, extending an average distance of thirty miles from shore. At its deepest point, the sanctuary reaches down 10,663 feet (more than two miles). The sanctuary was established for the purposes of resource protection, research, education, and public use. Its natural resources include one of our nation's largest kelp forests and one of North America's largest underwater canyons. It is home to one of the most diverse marine ecosystems in the world, including 33 marine mammal species, 94 seabird species, 345 fish species, and numerous invertebrates and plants. This remarkably productive marine environment is fringed by spectacular coastal scenery, including sandy beaches, rocky cliffs, rolling hills, and steep mountains.

