

MONTEREY BAY NATIONAL MARINE SANCTUARY

2008 Accomplishments Report



ACCOMPLISHMENTS



Welcome

At times life's often-predictable journey presents moments so unique and powerful they leave lasting inspirational imprints on one's soul and psyche. Motoring on the NOAA Research Vessel *Fulmar* one misty, cool morning, my senses were treated to a cacophony of sights, smells, sounds and the touch of a steady, calm breeze. Pelicans, cormorants and gulls filled the air with wild sounds. Sea otters and harbor seals floated lazily by, seemingly unconcerned. As we headed to sea, white-sided dolphins escorted us. We were then treated to "blows" all around, with humpback whales popping up everywhere. All day I marveled at the seabirds, marine mammals, jellies, molas and even the steady, queasy swells. I often recall that day as I bounce from meeting to meeting, or struggle with budgets and complicated issues. We all need experiences and memories like these to give us purpose, hope and drive.

I continue to be impressed and motivated by the staff and partners who work so hard on a variety of valuable projects. We have much to celebrate, in spite of tough budget times. The Monterey Bay National Marine Sanctuary (MBNMS) continues to be a leader in marine conservation with a variety of agencies, organizations and partners working with us and helping to guide us along the way.

Our biggest accomplishment of 2008 is completing the new management plan! After seven years of planning, writing, reviews and rewrites, the plan is final. We are well into implementation and will use it to guide our activities for years to come. One of the greatest achievements is the nationally celebrated addition of the Davidson Seamount Management Zone. This rare underwater mountain area adds 775 square statute miles to the sanctuary and protects fragile corals, sponges and other sea life.

This year saw significant progress on the issue of marine protected areas (MPAs). After announcing the move forward with MPA planning in federal waters, we have been working to develop a roadmap, coordinating and consulting with agency partners and the Sanctuary Advisory Council (SAC) to form the groups needed to advise the process.

I am very proud of our "at-sea operations," with the *Fulmar* crew and dive team. Captain David Minard won a national sanctuary award in recognition of his excellent service captaining the *Fulmar*. The dive team and our partners logged over 460 dives, contributing greatly to nearshore monitoring, resource protection and buoy maintenance – all with an excellent safety record.

Finally, I am so pleased with the continued recognition the MBNMS receives nationally and internationally. Our Education and Outreach Team received the prestigious DeWitt Award for partnerships from California State Parks, as well as a Department of Commerce Silver Award for the MERITO program. The MBNMS was recognized for its creativity and leadership in expanding the SIMoN program to Cordell Bank and Gulf of the Farallones sanctuaries, and for hosting a week-long education-oriented live broadcast (Immersion Presents!) from Monterey. Hats off to the staff who responded so professionally to the Cosco Busan oil spill in San Francisco Bay.

So much to be thankful for and so many to thank! I send my most sincere gratitude to all of you who support and participate in our sanctuary projects and activities. Keep it up!

Paul Michel
Superintendent

MANAGING SANCTUARY RESOURCES



Our mission – to understand and protect the coastal ecosystem and cultural resources of the Monterey Bay National Marine Sanctuary – is carried out through resource protection, education and outreach, research and monitoring and programs operations. Following is a summary of our 2008 accomplishments.

Joint Management Plan Completed

In November three management plans, a final rule including regulations and an Environmental Impact Statement were published in the Federal Register. A joint process with Gulf of the Farallones and Cordell Bank national marine sanctuaries, the plans provide an updated framework to expand research, education and resource protection programs, enhance partnerships, implement vital water quality programs and provide stronger wildlife protections. Additional priorities for the MBNMS include expanding ocean literacy and multicultural outreach, working collaboratively on coastal armoring and desalination issues, furthering research in the new

Davidson Seamount Management Zone, completing a new Sanctuary Exploration Center in Santa Cruz, expanding the SIMoN program and evaluating the plan's success.

Sanctuary Advisory Council Implements Work Plan

In 2008 the Sanctuary Advisory Council appointed three new members and welcomed back five members to the council. They implemented an annual work plan to help guide the development of meeting agendas of importance to council members.



Moving Forward with Marine Protected Area Planning

On February 15, 2008, we announced a decision to move forward with a marine protected area (MPA) planning process to address unmet needs related to ecosystem protection and management in the sanctuary's federal waters. These needs are to: 1) preserve unique and rare places in their natural state for the benefit of future generations; 2) preserve areas where natural ecosystem components are maintained and/or restored; and 3) designate research areas to differentiate between natural variation versus human impacts to ecological systems. Staff is working to design a MPA planning process with strong scientific focus on ecosystem-based approaches to management that includes natural and social science disciplines, interagency collaboration, robust involvement by the SAC and multiple opportunities for public participation.

Food Safety and Water Quality Protection

Along with our partners in the Agriculture Water Quality Alliance, we have taken a leadership role in using science to inform food safety and water quality co-management including:

- Facilitating the Farm, Food Safety & Conservation Network— a regional agricultural working group supporting efforts to minimize food safety risks utilizing methods that avoid impacts to water quality, wildlife and habitat.
- Developing and launching an online tool to improve coordination and communication of regional efforts to resolve conflicts between food safety and water quality protection efforts. (<http://awqa.org/networkwiki>)
- Coordinating a meeting for agricultural, environmental and academic leaders to discuss food safety requirements and conservation practices as well as recommend actions to reconcile conflicts.



Big Sur Landslide Debris Disposal Decision Support Tool and Response Protocols

In preparation for the winter rainy season, we began using a GIS-based decision support tool to inform landslide debris disposal options along the Big Sur coast. Working closely with the California Department of Transportation, California Coastal Commission and Monterey County, response protocols were established for emergency notification, along with procedures for coordinated and expedited permitting. Concern for having these protocols in place was heightened because of the possibility of severe debris flows during winter rains following the Indians and Basin Complex Fires, which burned approximately 240,000 acres in June/July 2008.

Regulatory Revisions Improve Sanctuary Protections

Revised MBNMS regulations, the result of intensive study and public input, will help implement important aspects of the sanctuary's new management plan. Highlights include:

- Expanding the MBNMS by 775 square miles to include the Davidson Seamount, one of the largest under water mountains in U.S. coastal waters
- Protecting MBNMS ecosystems from the introduction of non-native species
- Revising the definition of motorized personal watercraft and adding a conditional wintertime zone for tow-in surfing at the famous "Maverick's" surf break
- Protecting water quality by prohibiting harmful discharges from cruise ships
- Expanding protections for white sharks

For more complete information, visit <http://montereybay.noaa.gov/intro/mp/regs.html#mbnms>



UNDERSTANDING & PROTECTING SANC



Characterizing Unexplored Habitats and Marine Protected Areas

Throughout the year, sanctuary scientists and researchers from UC Santa Cruz's Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO) surveyed subtidal areas along the Big Sur coastline with SCUBA. These sites include the state's recently established marine protected areas (MPAs) and adjacent reference areas, as well as sites impacted by coastal development projects. Further offshore, the R/V *Fulmar* towed a camera sled to characterize seafloor habitats and associated macro-invertebrates and fishes in MPAs and unexplored areas. These characterizations support sanctuary management and will address changes that occur in the new state MPAs. In collaboration with CSU Monterey Bay, we are developing ways to view the sanctuary virtually with a spatial database of images.

Settlement Provides Nearly \$3 Million for Habitat Restoration Work

The MBNMS received an enforcement case settlement from a group of shipping interests for a discharge of 15 shipping containers and their cargoes into the sanctuary from the M/V *Med Taipei*. We finalized a habitat restoration plan to utilize settlement funds for several projects that will restore and enhance damaged habitat resulting from the deposition. Projects include: scientific monitoring and assessment of a 4,000-foot deep shipping container site; removal of grounded and sunken vessels; restoration of damaged offshore habitat areas; maintenance and restoration of erosional beach habitats; removal of nearshore marine debris; and removal of lost and hazardous fishing gear.



R/V *Fulmar* Has a Busy and Successful Year

After a rocky start with a blown engine, 2008 turned out to be a very busy and successful year for the R/V *Fulmar*. The 67-foot vessel operated for 174 days at sea conducting 61 different projects in the Monterey Bay, Gulf of the Farallones and Cordell Banks sanctuaries. Fieldwork in the sanctuaries relies heavily upon partnerships with a variety of research institutions, and the R/V *Fulmar* has proven to be an excellent platform for our partners. Research highlights include: studying groundfish trawling impacts to soft sediment communities; conducting 222 dives to survey kelp forest ecosystems;

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gathering videographic survey data to characterize the continental shelf; camera sled groundtruthing of sea-floor maps within and adjacent to marine protected areas (MPAs); and reconnaissance and characterization of unmapped areas to provide information for potential federal MPAs. The vessel also supported educational cruises for 445 participants who were introduced to the three sanctuaries through a variety of outreach programs.

National Registry Project

We are providing leadership and staff for the IOOS Observatory Registry technical advisory committee. The IOOS (Integrated Ocean Observing System) committee, comprised of federal and non-federal data managers from across the US, makes information available on the nation's ocean observatory assets. A goal of IOOS is to be able to predict changes in the ocean like we do for weather. A critical first step is knowing where all the observatory assets are, what data they are collecting and having access to data through additional web links. View the Registry at <http://obsregistry.org/map.php>.



Central Coast Water Quality Synthesis, Assessment and Management (SAM)

The SAM project facilitates coordination of water quality monitoring data management and analysis to address fundamental issues surrounding the sources, status and trends of non-point source pollution in the region. Through SAM, water quality and other spatial data sets have been collated into a database/GIS system, serving as a model for ongoing data integration and access. This tool will help improve our knowledge of pollution problems and mitigation effectiveness. MBNMS staff and collaborators recently completed a SAM strategic plan, outlining a framework to develop an infrastructure for ongoing water quality data synthesis. Key goals include improving the regional water quality monitoring network and access to shared data and information for managing watersheds and the nearshore environment.



COMMUNICATING ABOUT SANCTUARY



SIMoN Web Expansion

The Sanctuary Integrated Monitoring Network (SIMoN) website was re-launched as a multi-sanctuary tool, now supporting three sanctuaries – Monterey Bay, Gulf of the Farallones and Cordell Bank. The website hosts information on the sanctuaries' resources and relevant monitoring projects. The website also supports the R/V *Fulmar's* Vessel Project Manager, an important planning tool for this regional research platform. In addition, an enhanced photo library, a comprehensive new species database and easy to access information are all at a user's fingertips. Visit this valuable web resource at www.sanctuariesimon.org. Over 100 partner institutions have contributed information to SIMoN project pages.

Partnership Award – California State Park's DeWitt Award

Our Education & Outreach Team was awarded the California State Parks Director's Award for outstanding partnership. The State Parks' Dewitt Award was presented to us for the numerous collaborative education and outreach projects and programs we have implemented with State Parks over the past ten years. We work closely and on a regular basis with the Santa Cruz, Monterey and San Luis Obispo Coast Districts. This long-term partnership has enabled both agencies to do much more with shared resources than either could do individually. Two interpretive facilities, numerous signage projects, joint programming and co-location of staff are just some of the partnership highlights. This award is a quite an honor, as nominees are submitted by districts all across the state.



Eventful Year for MERITO Program

Our Multicultural Education for Resource Issues Threatening Oceans (MERITO) program participated in international staff exchanges and marine protected area development workshops in Chile and Ecuador, produced a five-year accomplishments report, trained 28 teachers, delivered nine months of field-based after school programming for 571 students, participated in a live international broadcast, delivered Capitol Hill briefings and hosted a college intern. In recognition of successfully engaging the Central Coast's Latino community, the MERITO team was awarded a prestigious Department of Commerce Silver Award.

MBNMS Exploration Center Shaping Up

Great strides have been made in the development of the MBNMS Exploration Center, slated to be the largest of the MBNMS' visitor centers. In partnership with the City of Santa Cruz, the process to design the building and develop exhibits is almost complete. The National

Marine Sanctuary Foundation has initiated a \$3 million campaign to raise the needed funds for fabrication and installation of the educational exhibits designed to connect visitors and their daily actions to the marine sanctuary, as well as direct them to other quality marine experiences in the area.

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Immersion Presents: Monterey Bay

In partnership with the Mystic Aquarium and Institute for Exploration, we developed Monterey Bay specific lesson plans, hosted teacher training and implemented a series of 33 experiential live broadcasts for internet viewers in the US and Mexico, sharing kelp forest ecology, deep sea biology and exploration themes. These live underwater and ROV broadcasts utilized microwave technologies to beam the broadcasts aboard the R/V *Fulmar* to the internet through OceansLive.org, and directly to over 100 pin sites, hosting 30 - 300 people for each episode. We also piloted a Spanish language broadcast. Twenty-two media interviews, valued at over \$3 million, amplified awareness of the broadcasts, importance of marine protection and wonders of the sanctuary.



Sanctuary Currents Symposium: Oceans of Change, Our Climate, Our Sanctuary, Our Future

Central Coast scientists gathered at our annual symposium to discuss and inform the public about what is happening to our climate and oceans, the causes and effects of these changes and how we can respond to climate change. Dr. James Barry from the Monterey Bay Aquarium Research Institute gave the annual Ed Ricketts Award lecture, presenting "Changing the World One Breath at a Time: Humans, Climate, and Ocean Ecosystems." In addition, more than 20 organizations provided exhibits and over 50 research posters were displayed by scientists and students.

New Fisheries Education Programs

A first draft of the Voices of the Bay fisheries curriculum was developed and the Fishermen in the Classroom Program was refined with guidance from area fishermen who participate in this program by visiting local schools. Staff worked with individual fishermen to edit video clips and program elements for use in classroom presentations and oversaw the completion of three curriculum modules for grades 6-12, aligned to California state and national science, language arts and social science standards. The curriculum is currently being piloted in five schools across three counties and should be available in 2009.

New Interpretive Signs for the Monterey Peninsula

A total of 17 new interpretive signs were produced for the Monterey Peninsula shoreline. Eight signs along the Pacific Grove shoreline address the state's new marine protected areas and include Spanish translation. Nine signs at the Monterey harbor waterfront along the popular recreation trail address topics such as responsible wildlife watching, water quality, threatened and endangered species, seabirds, marine mammals and marine research.



SANCTUARY AWARDS

Annual Sanctuary Awards

The Sanctuary Reflections Awards are presented annually in partnership with the Association of Monterey Bay Area Governments (AMBAG) to individuals and organizations that have contributed significantly to the mission and goals of the sanctuary. The Volunteer of the Year Award recognizes the dedicated efforts of community members who give their time in support of the sanctuary's mission and programs. On April 4, 2008 we held a special reception to celebrate community stewardship of the sanctuary. The following groups and individuals were honored for their contributions.



Brian Baird of the California Resources Agency was recognized for his leadership in helping manage and protect California's ocean resources, including the Monterey Bay National Marine Sanctuary.



Nick Papadakis, former Executive Director of AMBAG, received a special award for his committed work on sanctuary resource issues including water quality, desalination and coastal armoring, as well as research and education programs like the Sanctuary Currents symposium.



Volunteer of the Year

Phil Adams was selected as the MBNMS Volunteer of the year for his outstanding dedication and service to a variety of sanctuary programs including Beach-COMBERS, Snapshot Day, Team OCEAN and the Coastal Discovery Center.



Sanctuary Reflections Awards

Ruth Vreeland Public Official:

Ross Clark, California Coastal Commission

Conservation:

Reverend Deborah Streeter, Director of Upwellings: A Ministry of Environmental Stewardship

Organization:

Resource Conservation Districts: Counties of Monterey, San Mateo, Santa Cruz, San Benito, Upper Salinas-Las Tablas and Loma Prieta

Education:

Jim Covell, Monterey Bay Aquarium

Research: Dr. Jeff Paduan, Naval Postgraduate School

Citizen: Anjanette Adams, Monterey Bay Kayaks

Special Recognition:

Brian E. Baird, California Resources Agency
Nick Papadakis, Association of Monterey Bay Area Governments

All photos and graphics courtesy of NOAA/MBNMS except the following:

Front cover, *Big Sur*, Edward H. Pien; Top of pages 2 & 3, *Giant kelp*, Steve Lonhart; Page 2, *Rockfish*, Jill Ehring, *Half Moon Bay, CA*; Page 5, *Big Sur*, Lance V. Nix; Top of back cover, *Widow rockfish*, T. Laidig, *IMPACT Submersible Survey* and *Black rockfish*, Steve Lonhart