



Monterey Bay National Marine Sanctuary

Sanctuary Office Report



Volume 6, Number 4

A REPORT FOR THE SANCTUARY ADVISORY COUNCIL MEMBERS

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ABOUT THE SANCTUARY

Designated in 1992, the Monterey Bay National Marine Sanctuary (MBNMS or Sanctuary) is a federally protected marine area offshore of California's central coast. Stretching from Marin to Cambria, the MBNMS encompasses a shoreline of 276 miles and 6,094 square statute miles of ocean.

Supporting one of the world's most diverse marine ecosystems, it is home to numerous mammals, seabirds, fishes, invertebrates and plants in a remarkably productive coastal environment. The MBNMS was established for the purpose of resource protection, research, education and public use of this national treasure.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) AND OFFICE OF NATIONAL MARINE SANCTUARIES (ONMS) NEWS

Ocean for Life Program Fosters International Connection through Exploration of Marine Ecosystems

The inaugural "Ocean for Life" program, which brought together 60 high school students from Greater Middle Eastern and Western countries for a shared ocean education experience, concluded last week. From July 15 through Aug. 9, Ocean for Life participants explored national marine sanctuaries in the Florida Keys and California, documenting and reflecting on their experiences through multimedia projects created using their own photography and video work. The program was a great success, especially given that it was pilot year. Through Ocean for Life, the students gained a better understanding of cultural relationships and a new appreciation for our global connection to the ocean. The students are already starting their work together and in their home towns and countries to continue their ocean stewardship and cultural engagement efforts. The continuing education portion of the program will be launched soon to support the participants in their outreach and supplemental learning.

NOAA Awards Grants to Educate Students and Teachers About Marine Resources and Impacts The NOAA Office of National Marine Sanctuaries California Bay Watershed Education and Training (B-WET) Program announced almost \$2,000,000 in funds to educate students and teachers about marine debris, restoration, climate change, fisheries and marine protected areas, and water quality, to name just a few of the topics. More than 3,500 students and 1,000 teachers will be impacted by these grants. The California B-WET program works with underserved students and underrepresented communities.

Unveiling Secrets of a Mystery Island

Imagine spending nearly three weeks on a remote, rugged and wind-swept island in the middle of the Pacific Ocean. That's exactly what a Honolulu-based researcher and an archaeologist from the U.S. Fish and Wildlife Service did on the most recent NOAA research mission to Papahānaumokuākea Marine National Monument. University of Hawaii anthropology doctoral student, Kekuewa Kikiloi and U.S. Fish and Wildlife Service Regional Archaeologist, Anan Raymond completed the longest archaeological research project ever held on Mokumanamana (or Necker Island). Their survey and documentation of cultural resources is the most extensive in more than 85 years. In 1923 and 1924 two Bishop Museum archaeologists recorded the architectural components and details of 34 heiau (sacred Hawaiian worship) sites that were built across the 46-acre island. This expedition uncovered variations between the 1920s research and their own.

Mokumanamana is categorized as a mystery island, because when the first Europeans rediscovered it, it had no inhabitants but did have evidence of prior human occupation. Part of Kikiloi's and Raymond's work is to uncover the mysteries of who lived on the island, when, and for how long. The researchers also noted the impacts of modern day humans. They report half of the archaeological sites were impacted by bombing to varying degrees at some point. They located more than 30 bomb craters and fragments of shrapnel adjacent to heiau sites.

The results of this latest research will be added to an already large body of knowledge about the cultural features of Mokumanamana and will help to create a 20 year-long preservation plan for cultural sites on Mokumanamana.

National Marine Sanctuary News

Gulf of the Farallones NMS

This summer in California, the Farallones Marine Sanctuary Association hosted a total of 92 inner-city children ages 8-13 over six weeks of Sanctuary Explorers Camp. The program educates culturally diverse urban youth about the sanctuary through a unique and long-standing partnership with the San Francisco Recreation and Parks Department. Many of the campers had never been to the ocean, despite San Francisco's proximity to beaches, wetlands, and tide pool habitats, and were unsure as to what to expect from a week by the ocean. At the end of each week, campers made a promise and a pledge to the ocean that gave them a feeling of ownership and instilled in them a sense of stewardship.

Florida Keys NMS

The annual FKNMS Coral Disease and Condition Cruise aboard the NOAA Ship Nancy Foster embarked September 11 on an eight-day research expedition to monitor coral reef health and gather data on disease prevalence. Since 1997, scientists aboard the Coral Disease and Condition Cruise have been monitoring coral health along almost 200 miles of the Florida Reef Tract. During each annual mission, researchers perform more than 120 dives in order to survey 42 fixed stations at 13 reef sites within the sanctuary, extending from Carysfort Reef off Key Largo westward through the Tortugas Ecological Reserve. FKNMS researchers will host scientists from NOAA, Mote Marine Laboratory, Harbor Branch Oceanographic Institute at Florida Atlantic University, Smithsonian Institute, George Mason University, Auburn University, Florida Department of Environmental Protection, and the City of Marathon (Florida). In addition to coral disease surveys, the NOAA ship Nancy Foster will be mapping areas throughout the sanctuary using multibeam sonar. Clare Wagstaff, a middle school science teacher from Buffalo, NY, will be joining the crew as a Teacher At Sea.

Flower Garden Banks NMS

Flower Garden Banks NMS research team heads out this week to study and document the annual mass coral spawning event. The team is joined by Sarah Davies, a PhD candidate at University of Texas. Sarah is studying the uptake of symbiotic algae by coral larvae. Courtney Horne from Texas A&M University at Galveston will also be onboard to take water samples. Courtney is comparing the plankton in the water during coral spawning, and during non-spawning times. John Brooks and Paul Hillman from NOS' Ocean Media Center will be collecting HD footage of the Flower Garden Banks NMS, as well as the spawning events. FGBNMS is one of the most prolific spawning reefs in the Caribbean, due to the large size of the coral colonies, as well as the high coral cover. Other species predicted to spawn are brittle stars, fish, Christmas tree worms, and sponges, to name a few.

Olympic Coast NMS

Olympic Coast National Marine Sanctuary has joined a rapid mobilization by the Olympic Region Harmful Algal Bloom partnership ([ORHAB](#)) and other partners to collect water samples along the outer coast of Washington where a dense, visible bloom of algae has been sighted. The Quileute Tribe, Quinault Nation, and ORHAB staff will sample from shore. The sanctuary will sample offshore and conduct water column profiles with multiple sensors. The sanctuary will also work with CG Air Station Port Angeles to document the extent of the bloom by aerial reconnaissance. Recreational fishers have reported a visible bloom that extends up to 25 miles offshore. The Coastal Observation and Seabird Survey Team ([COASST](#)) also has been mobilized to survey beaches for dead or sick seabirds, particularly surf scoters and white-winged scoters, following reports of high mortalities on the central portions of the outer coast. Animals have been collected and are being sent to the USGS National Wildlife Health Center in Madison, Wisconsin. This incident has been picked up by local and regional media http://seattletimes.nwsources.com/html/outdoors/2009860574_seabirds14m.html

Monitor NMS

The *Monitor* National Marine Sanctuary coordinated a two-phase scientific research expedition to the site of the remains of both WWII Allied and Axis vessels located off the coast of North Carolina. Phase one of the expedition was conducted aboard the NOAA Ship *Nancy Foster*. Using advanced remote sensing technologies, researchers attempted to locate several previously undiscovered WWII shipwrecks. During the second phase, NOAA divers and partners surveyed and photographed visible sections of a British armed trawler, HMT *Bedfordshire*, using non-invasive methods.

Thunder Bay NMS

Thunder Bay National Marine Sanctuary's education and outreach staff hosted over 2,000 visitors last week at NOAA's Great Lakes Maritime Heritage Center, which serves as the sanctuary's visitor center in Alpena, Mich. Large groups included four guided tours of the "Shipwreck Century" exhibit for visiting motor coach groups of 30-50 passengers each. Outreach staff and volunteers continue to work with local and regional motor coach tour operators to schedule special guided tours of the exhibits and create seasonal focus-tours about the shipwrecks of Thunder Bay for their groups.



MONTEREY BAY NATIONAL MARINE SANCTUARY NEWS AND PROGRAM UPDATES



MANAGEMENT

On Oct 1, MBNMS staff hosted a Saudi Delegation arranged through the State Department's International Visitor Leadership Program and the Institute of International Education based in San Francisco. The delegation members are nominated by American embassies in their home countries and invited to participate in a two-three week program in the United States. The group included 2 head park rangers and 4 environmental specialists and they are visiting DC, Monterey, Yosemite, San Francisco and San Diego to learn more about wilderness protection, marine conservation and the role of law enforcement in MPA protection. The delegation had many questions related to Sanctuaries during the 2-hour meeting, especially around our strategies for developing partnerships and collaborations. Through excellent interpreters, we were also able to learn a little about their work in protecting desert ecosystems and ocean MPAs in Saudi Arabia. For more information on the State Department's IVLP Program visit:
<http://exchanges.state.gov/ivlp/ivlp.html>.

RESEARCH AND MONITORING

From August 3-6, SIMoN staff and research divers from UC Santa Cruz's Partnership for Interdisciplinary Studies of Coastal Oceans (UCSC-PISCO) sampled 8 sites along the Big Sur coastline. To determine the effectiveness of the MPAs established in 2007, divers count a subset of mobile invertebrates and stipitate kelps, as well as percent cover of sessile invertebrates and turf algae. Three sites were also sampled for adult and young-of-the-year (YOY) fishes. Sixty dives were completed without incident. The YOY rockfishes in 2009 have been extremely abundant in both the kelp canopy and along the rocky bottom.

The Central Coast Water Quality Data Synthesis Assessment and Management (SAM) Project is providing data management support to California State University, Monterey Bay (CSUMB) scientists in pursuit of Sanctuary regional water quality monitoring coordination goals. On Friday, August 14, SIMoN staff met with CSUMB faculty and students to set up a new data storage system designed to facilitate regional data sharing and analysis. The monitoring programs operated by Environmental Science and Policy Professor Marc Los Huertos and his graduate students is one of the most comprehensive in the region and provides some of the best information available for assessing water quality conditions and trends in the coastal watersheds that drain to the Sanctuary. The new system will allow water quality data to move more easily between CSUMB scientists, the Sanctuary, and State agencies.

The Central Coast Water Quality Data Synthesis, Assessment, and Management (SAM) Project has advanced some of our regional goals over the past few months including monitoring coordination work with partners at California State University, Monterey Bay (CSUMB) and the Central Coast Wetlands Group (CCWG); and a Big Sur fire water quality analysis. These tasks were prioritized in the recently completed SAM Strategic Plan which outlines activities to optimize monitoring networks, synthesize information, and improve communication between key groups so that changing environmental conditions can be better understood in Central Coast watersheds and the Sanctuary. To view the SAM Strategic Plan or updates on the project, visit the SAM wiki (http://www.ccamp.net/sam/index.php/Main_Page).

On August 17 and 18, MBNMS and West Coast Regional staff attended the Collaborative Geospatial Information and Tools for California Coastal and Ocean Managers workshop at Stanford University. This workshop brought together more than 60 resource managers and technical experts from coastal and marine organizations from around the nation to discuss current gaps in the ability to share and exchange spatial information within the state community.

A new visualization product, combining animation and actual camera sled footage has been completed in collaboration with California State University Monterey Bay. See the Monterey Bay Sanctuary characterization project and camera sled views of the seafloor at <http://ecoviz.csUMB.edu/home/>. These types of products assist public working groups and resource managers to understand data collection methods and view deep-water areas that they are managing.

On August 21, Dr. Stephen Thorsett, Dean of Physical and Biological Science at UCSC, informed SIMoN staff member Dr. Steve Lonhart that he was given an extension on his appointment as a Research Associate within the Institute of Marine Sciences at the University of California, Santa Cruz. The title of Research Associate was established by the Regents of the University of California to give appropriate official recognition to scholars working at a UC campus who are not primarily employed by the University.

On September 21, research divers used the new RV *4107* for the first time in the MBNMS. Divers took the opportunity to test the current configuration for dive operations, with three divers and all of their gear working off the aft deck. Divers made several suggestions to improve the current design and configuration, and dive operations were safe and successful.

On September 23, SIMoN staff attended a Joint Science Panel and Strategic Planning Team of the Elkhorn Slough Tidal Wetland Project. This meeting focused on the proposed Parsons Slough Project, which entails placing a sill at the lone entrance of Parsons Slough. The purpose of the meeting was to 1) Provide a progress report on the project; 2) Present predictions for how Parsons Slough and Elkhorn Slough would change after the project; 3) Discuss the uncertainty associated with those predictions and why an adaptive management approach makes sense; 4) Discuss the trade-offs between species and habitats; 5) Identify which species and habitats should be prioritized in the design and management process; and 6) Describe how staff can participate in Working Groups to make the project better.

On September 26, Beach COMBERS volunteers were celebrated for their long-term efforts surveying beaches of the Monterey Bay National Marine Sanctuary. Superintendent Paul Michel thanked the volunteers for their dedication and continued participation in the 10-year monitoring program. Volunteers received backpacks and t-shirts, provided by Save The Earth Foundation, a non-profit public benefit corporation dedicated to the expansion of environmental awareness. Beach COMBERS (Coastal Ocean Mammal/Bird Education and Research Surveys), is a collaborative effort between the Monterey Bay National Marine Sanctuary, the Moss Landing Marine Laboratories, the California Department of Fish and Game Marine Wildlife Veterinary Care and Research Center, and other state and research institutions, with the specific goal of using deposition of beach cast carcasses as an index of the health of the sanctuary.

From September 23 to October 1st, 2009, Monterey Bay National Marine Sanctuary staff, along with scientists from The Nature Conservancy (TNC), California State University, engineers from the Marine Applied Research and Exploration, and central coast fishermen recently completed the first in a series of research cruises off Morro Bay, California. Semi-annual cruises are planned over the next five years to assess trawl impacts and recovery rate to marine benthic ecosystems off Central California, in Morro Bay, California. The TNC remotely operated vehicle (ROV) BEAGLE was launched from the FULMAR to conduct video survey of seafloor and sediment grabs were collected from the RITA G, a local commercial fishing vessel. This study will improve our understanding of the impact of bottom trawling on the seafloor and how quickly trawled areas recover off Central California.

On October 1, the Monterey Bay National Marine Sanctuary released its first Condition Report. Condition Reports are one in a series of publications by NOAA's Office of National Marine Sanctuaries to inform the public about the general condition of each sanctuary every five years. This report rates the current condition of three marine environments: offshore, nearshore and estuarine. The status and trends for four resource categories were determined for each of those environments: water quality, habitat, living resources and maritime archaeological resources. The report indicates that the overall condition of the sanctuary's nearshore and offshore marine life and habitats ranges from "good" (highest rating) to "fair" (moderate rating), but identifies several threats to sanctuary resources, such as pollution from growing coastal population centers, agriculture and urban runoff, vessel traffic and marine debris. The report reflects a "fair" (moderate) to "poor" (lowest) rating for water quality, habitat and living resources in Elkhorn Slough, the only large estuarine environment in the sanctuary. The report notes that many management and regulatory programs aimed at protecting and restoring resources are already in place to improve conditions in the sanctuary. The condition report can be downloaded at <http://sanctuaries.noaa.gov/science/condition>.

On October 1, Chad King (SIMoN Research Specialist) and Scott Chapman (SIMoN Web Developer) helped unveil the new "Nature of America: Kelp Forest" USPS stamp series at the Monterey Bay Aquarium. Chad and Scott, both also Aquarium volunteer SCUBA divers, descended into the kelp forest tank upon cue, then revealed and affixed a large format mural of the stamp series panel to the inside of the exhibit windows. While underwater, Chad and Scott had an opportunity to talk to the audience and answer questions about kelp forests and the Monterey Bay National Marine Sanctuary. Dr. Steve Lonhart (SIMoN Senior Scientist) was contacted in June 2007 and served as the scientific editor. His involvement led to the USPS focusing on central California kelp forests and on the MBNMS in particular. The USPS also used the SIMoN photo library (<http://www.sanctuarysimon.org/photos>) as source material for artist John Dawson. One of Chad's photographs, a Pacific rock crab, is now immortalized as a stamp. Steve's efforts were recognized during the "first-day-of-issue" ceremony, which was attended by hundreds of people, including other MBNMS staff. A short video of a local news station covering the event can be found at

<http://www.ksbw.com/video/21177061/index.html>. For more information about this stamp series, please visit http://www.usps.com/communications/newsroom/2009/pr09_081.htm.

RESOURCE PROTECTION

Deirdre Whalen, Government and Community Relations Coordinator, attended the August 12th evening meeting of the Association of Monterey Bay Area Governments (AMBAG). Recently the Alliance For Communities For Sustainable Fishing (Alliance) commissioned two public opinion polls. One of which was purely focused on the management of the MBNMS. The City of Monterey Harbormaster, representing the Alliance, gave a presentation to the board, which focused on the following areas: SAC issues, At-large seat accountability, fisherman input, the "NOAA agreement", and trust. Deirdre Whalen spoke briefly after the presentation and suggested that the board read the poll, as there is much good data that clearly shows strong support for ocean protections. Some statistics of note are: 68% support MPAs; 95% support for protecting ocean waters; 64% support for sanctuary managers making rules to prohibit human use; and 60% support for new commercial fishing regs. AMBAG Board members requested that a future agenda item discuss AMBAG accountability as part of the SAC seat.

On August 13, 2009 the WQPP Director attended an after incident review of the response to a hazardous materials release on Dayton Avenue in Salinas, CA. A warehouse fire resulted in over six million gallons of unknown green liquid being discharged into the Reclamation Ditch that flows through the City of Salinas, ultimately discharging into the MBNMS at Moss Landing. The discharge killed approximately 1600 carp, one duck, 22 tadpoles, and thousands of invertebrates. The City of Salinas and Monterey County jointly took control of the ICS and response. They acted quickly and with great commitment to protecting the environment and downstream resources. Their main goal was to prevent the material from reaching the sanctuary at all costs. The material was contained and treated over a period of 25 days. Approximately 10 million gallons of treated water was released back into the Reclamation Ditch downstream of the contained material.

As of August 24, five new boat operators have successfully completed the personnel qualification standards for operating the P/B *SHARK CAT*. The MBNMS performed the training to increase marine operations capability and to more fully utilize its 30-ft utility vessel. With the recent acquisition of a new mini-ROV, the expanded small boat operational capability offers greater ROV deployment options. The training of additional small boat operators also provides greater depth to the small boat program at MBNMS.

On August 27th, WQPP staff participated in a workshop for restaurant owners and managers to inform them of best management practices and new city ordinances related to reducing pollutants in urban runoff. The workshop was hosted by the Monterey Regional Storm Water Management group and attended by approximately 25 restaurant managers and cleaning companies.

Staff from both the MBNMS and WC Regional office attended a forum known as the Mayors' Ocean Summit. This event was hosted by West Marine, Oceana, the MB Aquarium, Save Our Shores, and Surfrider. The focus of the discussions and presentations centered around protecting the ocean and building economic growth while managing California's environmental challenges. A dozen mayors ranging from Santa Monica to Marin County, and Congressman Sam Farr attended. The keynote speaker was the Co-president and CEO of Whole Foods, Walter Robb, a powerful speaker who conveyed a strong message of stewardship and personal accountability for businesses. The invite-only Summit was well attended and quite successful in that it was able to bring legislators, municipalities, businesses, and environmentalists together to discuss solutions to problems plaguing the oceans.

The Monterey City Council met on September 1, 2009 to discuss whether they should endorse sending a letter to the Pacific Fishery Management Council highlighting concerns with the Monterey Bay National Marine Sanctuary's Marine Protected Area Process, and in support of Monterey's fishermen. The Monterey Harbormaster, speaking in his dual role of City staff and Director to The Alliance of Communities for Sustainable Fisheries, gave a presentation to the Council outlining his perspective of the MBNMS MPA need decision and planning approach. Paul Michel, Superintendent, responded during the public comment session highlighting the encouraging way forward. Public comment continued with several fishermen making emotionally-charged assertions regarding the sanctuary.

MBNMS staff participated in a conference call with state and federal agency regulatory partners to evaluate the monitoring plan as part of a proposal by the Harbor to place approximately 10,000 cubic yards of fine-grained material in the nearshore. The regulatory agencies, including the MBNMS, US Army Corps of Engineers, US Environmental Protection Agency, CA Coastal Commission, and the Regional Water Quality Control Board, collectively agreed that additional information was needed as part of the monitoring plan to better discern possible unacceptable adverse impacts to the beach and benthic environments, and have requested that the Santa Cruz Harbor District provide a more robust description of how they intend to evaluate offshore deposition, turbidity, visual monitoring, possible clay balls, and beach surveys.

On September 10th, while conducting a storm drain outfall survey, WQPP staff observed a company pressure washing a large parking garage in Monterey, Ca. While they were vacuuming up the water (required by city ordinance), the water treatment system on their trailer was overflowing onto the street and down the storm drain one block from the ocean. Staff questioned the person in charge who quickly shut down the operation to fix the problem. It was apparent they did not have adequate equipment to handle the job properly. The City of Monterey Public Works department was notified and is following up with the owner of the company.

The MBNMS Government and Community Relations Coordinator attended the Ocean Policy Task Force meeting in San Francisco on September 17, 2009. The OPTF, led by White House Council on Environmental Quality Chair Nancy Sutley and officials from various federal agencies is charged with developing a recommendation for a national policy that ensures protection, maintenance, and restoration of our oceans and great lakes. Approximately five hundred people attended this public meeting. Deirdre, in concert with GFNMS staff, recorded comment from the public. Overall, there was broad support for stronger ocean protections. Comments ranged from requests for: stronger regulations, a reduction in plastic pollution, encouragement of marine spatial planning, ecosystem-based management, and calls for improved water quality and ocean health.

On September 14th and 16th the Regional Water Management Group for the Greater Monterey County Integrated Regional Water Management Program (IRWMP) held the first of three public workshops in Big Sur and Soledad, CA. The workshops were well attended by water companies, watershed groups, individuals, public works departments and local officials. The first workshop introduced the purpose and concept of integrated water management, described the process and how the public can be involved. IRWMP will bring millions of dollars through Proposition 84 to the Central Coast region for implementation of many strategies identified in the Water Quality Protection Program's six action plans.

On September 18, the MBNMS Agriculture Water Quality Coordinator presented on "Co-managing for Food Safety and the Environment" at AgKnowledge in Castroville. Organized by the Grower-Shipper Foundation, AgKnowledge is an executive seminar program that provides policy makers, educators, media, and other community leaders the opportunity to see Monterey County through the eyes of those involved in the many facets of agriculture. This is the second year that the MBNMS has presented to AgKnowledge. The presentation highlighted the many ways in which the MBNMS has collaborated with central coast growers and ranchers to protect water quality, and our efforts to reconcile perceived conflicts between food safety and environmental conservation.

On September 25th, a comment letter was sent to the CA Dept. of Food and Agriculture (CDFA) regarding the Programmatic Environmental Impact Report for the eradication of the Light Brown Apple Moth. The letter commended CDFA for exploring alternatives to the aerial application of the pheromone and reminded them of the presence of three NMS along the coast that require special protection. The largest populations of LBAMs have been detected in San Francisco and Santa Cruz counties.

The MBNMS has approved a research permit for the City of Santa Cruz to conduct investigations related to the bathymetry and sediment type offshore Santa Cruz. The City will be using side-scan sonar and conducting sediment coring in certain locations from Point Santa Cruz to the Harbor during the month of October. NMFS has also approved the project and is requiring marine mammal monitors to be aboard the research vessel. This study will allow the City to acquire a better understanding of the offshore area and will aid in future site location selections and determinations for a larger project.

On October 3, forty-one partners of the Agriculture Water Quality Alliance and MBNMS staff celebrated 10 years of collaboration with a Sanctuary cruise aboard the R/V Fulmar. For most of the partners, this was their first experience of the Sanctuary from the sea. Sunny skies and exceptionally large swell made it an unforgettable experience! Participants included Resource Conservation District staff and board members, researchers from CSUMB, UCCE, UC Davis, and Granite Canyon Labs, local growers, Natural Resources Conservation Service Staff, and members of agricultural non-profit organizations.

EDUCATION, VOLUNTEER AND OUTREACH PROGRAMS

MBNMS education staff Sabrina Beyer and Lisa Uttal hosted the first Voices of the Bay (VoB) fisheries educator's workshop July 29-31st. Twenty middle and high school and community college teachers were trained to implement the newly developed VoB fisheries curriculum. Over three-days, teachers increased their background knowledge of Monterey Bay fisheries through presentations, hands-on activities and field trips involving commercial fishermen, processing plant owners, fisheries scientists, restaurant/market owners and maritime historians. The workshop concluded with teachers joining scientists and fishermen aboard the R/V Fulmar for Humboldt squid research. Teachers will implement the curriculum in their classrooms during the 2009-2010 school year.

Because of regular detections of detergent and orthophosphate during this season's Urban Watch program, several areas have been surveyed with staff from the cities of Pacific Grove and Monterey to uncover possible sources. In one drainage, several sources were

detected which resulted in one fine, a warning letter and reconstruction of a manhole to prohibit illegal dumping. This collaborative effort between the sanctuary's volunteer monitoring program and local cities is improving water quality in urban runoff flowing to the ocean.

Exhibits about the Davidson Seamount and the Monterey Bay National Marine Sanctuary were on display at the Monterey County Fair for five days beginning Wednesday August 12 through Sunday August 16. The display was part of a special "Maritime Hall" that was set up to help celebrate this year's fair theme, "Reel in the Fun." Typically 80,000 visitors attend the fair each year. Staff created the Davidson display especially for the Maritime exhibit hall.

On Aug 13th MBNMS-MERITO staff hosted a full-day bilingual educational field trip to the Elkhorn Slough Estuarine and Research Reserve (ESNERR) for a group of 54 Latino high school students from San Jose. This field trip was organized in response to a request from the Extreme Science Program at the National Hispanic University in San Jose. The Extreme Science Program is a charter High School focusing on inspiring students towards scientific discovery through hands-on activities and interactive projects.

On Aug 17th MERITO staff from MBNMS and CINMS had a conference call to explore a potential partnership with the Thank You Ocean campaign (TYO) and Pacific Gas & Electric Company (PG&E) to increase support for bilingual ocean literacy outreach efforts serving Hispanic communities in central and southern California. As a result of the call MERITO and TYO submitted a joint proposal to PG&E seeking funding for a collaborative youth-media campaign and on-the-ground outreach and education programming.

On Aug 18th MBNMS-MERITO staff facilitated a focus group with eight 10-12 year old members of the Boys and Girls Club in Seaside, as part of a front-end assessment to design a pilot youth media program called *Multicultural Voices for Ocean Literacy*. This project is a multi-partner effort integrating digital storytelling and self-directed learning of ocean sciences among underserved and STEM underrepresented communities in the central and southern California coasts. The project has undergone two rounds of external evaluation at the National Science Foundation – Informal Science Education Program, receiving increasingly higher ratings but no funding yet. The proposed pilot will serve to test and adjust the program's design, making a stronger proposal to be re-submitted in November 2009.

The Monterey Bay National Marine Sanctuary's Multicultural Education for Resource Issues Threatening Oceans (MERITO) program hosted its 6th annual MERITO Academy leader training on August 28-29, 2009 at the Elkhorn Slough National Estuarine Research Reserve. The training prepared 22 teachers and extended learning program leaders from 18 sites in the cities of Freedom, Marina, Monterey, Pajaro, Salinas, Santa Cruz, Seaside, and Watsonville to deliver the 40-week MERITO Academy after school program to an estimated 450 historically underserved audiences in the Monterey Bay Area. MERITO Academy leaders received copies of the new MERITO Academy Activity Guide, an introduction to the MBNMS, a watershed model demonstration, and the resources, supplies, and knowledge to conduct hands-on activities from the guide. This sanctuary and NOAA's Bay Watershed Education and Training Program (BWET) funded training provides hands-on, inquiry based watershed and ocean science experiences for teachers and extended learning leaders to lead MERITO Academy programs for 5th to 8th grade students who are predominately English language learners.

On Saturday August 29th WQPP staff Lisa Emanuelson and Whitney Regan (WQPP Intern) conducted Backyard to Bay at the Monterey Bay Aquarium from 10 am -1pm. Aquarium visitors stopped by to learn about urban runoff and how to decrease pollutants that flow into the MMBNMS especially during the First Flush (first rainstorm of the year) with an emphasis that everyone can improve ocean health. The 100 visitors to the Backyard to Bay booth were from near and far- Pacific Grove to Fresno and southern California.

MBNMS-MERITO has been awarded a ~\$30k grant to implement a pilot vocational adult education program in the city of Salinas, starting on Sep 1st 2009. The Vocational Adult Watershed Education project is a pilot program serving adult ESL students in the city of Salinas, offering them opportunities to integrate watershed and ocean literacy with career development and job opportunities. This is a collaborative effort between MBNMS-MERITO, CSUMB's Watershed Institute, and the Salinas Adult School.

MBNMS-MERITO staff conducted interviews and selected a candidate among six internship applicants from the Monterey Institute of International Studies (MIIS). The new MERITO intern will assist Sonya Padrón with a variety of activities related to the MERITO Academy 5th-8th grade school/after school program. This internship position is generously sponsored by the Bureau of Land Management and the Monterey Institute of International Studies.

Three First Flush trainings were conducted in San Mateo, Santa Cruz and Monterey to teach volunteers about the Sanctuary, urban runoff pollutants and how to monitor those pollutants during the first major storm of the season at 40 outfalls draining to the sanctuary. Approximately 100 volunteers then turned out for the Dry Run on Saturday and Sunday to practice what they learned and monitor their outfalls prior to the first rain in order to compare pollutant concentrations in the dry weather flow versus wet weather. Analyses

measured include nitrate, orthophosphate, urea, copper, zinc, lead, *E.coli*, enterococcus, total suspended solids and hardness. Additional samples are also being collected at outfalls around the Monterey Bay for MBARI research.

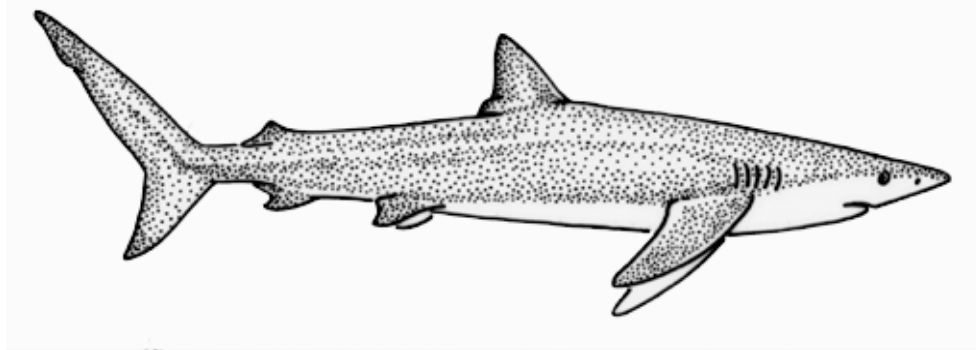
On Sep 16th, MBNMS-MERITO staff conducted a focus group with English as Second Language (ESL) teachers from the Salinas Adult School, to establish guidelines for implementation of its recently funded pilot program: *Vocational Adult Watershed Education in the City of Salinas*. This project will offer opportunities to integrate watershed and ocean literacy with career development and job opportunities to adult ESL students in the city of Salinas, and it is a collaborative effort between MBNMS-MERITO, CSUMB's Watershed Institute, and the Salinas Adult School.

On Sep 21st, MBNMS-MERITO staff started a 10-week pilot program titled *Multicultural Voices for Ocean Literacy*, in partnership with the Boys & Girls Club of Monterey County and the Monterey Institute of International Studies – Digital Media Commons center. This pilot is part of a long-term multi-partner effort integrating digital storytelling and self-directed learning of ocean sciences among underserved and STEM underrepresented communities in the central and southern California coasts. Funding for this project is being requested to the National Science Foundation – Informal Science Education Program.

Fifty volunteers swept Hearst State Beach clean as part of a state-wide Coastal Clean Up Day, led by beach captain Carolyn Skinder from MBNMS. Participants who came from Paso Robles High School and Cambria collected 120 lbs of trash and recyclables. State-wide, the September 19th effort had over 66,550 volunteers who collected over a million pounds of trash. Data from the clean up is used to revise national maritime disposal policies, as well as to advance environment-protecting legislation.

On Sep 21st, the MBNMS-MERITO team met with staff from the San Mateo Resource Conservation District (RCD) and community-serving center *Puente de la Costa Sur*, in Pescadero, CA. The purpose of the meeting was to explore ways to collaborate in offering watershed education opportunities and support to historically underserved communities in the Pescadero area. As a result of this new partnership the MERITO program will potentially be able to expand its services to communities living in the northern portion of the MBNMS.

On Sep 26th, MBNMS-MERITO staff hosted a table and provided a hands-on demonstration of non-point source pollution affecting the ocean, using a watershed model, during a community outreach event in the vicinity of the Santa Rita Creek watershed in Salinas. The event was a volunteer-driven effort from local residents to raise awareness about watersheds and water quality issues particularly affecting the Santa Rita Creek in northern Salinas. Over a hundred neighbors stopped by and enjoyed a variety of spanish-english bilingual hands-on activities and information about watershed stewardship.



SIGNIFICANT NEWS COVERAGE

- 8/3 – PR Newswire, “Nature Conservancy Seeks Your Help to Name New Underwater Robot”
- 8/8 – Salinas Californian, “Central Coast ag may apply for assistance”
- 8/10 – The Packer, “USDA makes water quality funds available to California growers”
- 8/12 – Santa Cruz Sentinel, “Partial remains of ancient toothed whale discovered on California beach”
- 8/17 – Salinas Californian, “Musicians to clean up waterways surrounding Monterey Bay on Tuesday”
- 8/18 – All About Jazz, “Earthecho International and the Vans Warped Tour”
- 8/19 – Monterey County Herald, “CLEANING MACHINE: Vans Warped aids waterway restoration”
- 8/20 – San Jose Mercury News, “Visitors center for Monterey Bay National Marine Sanctuary nears groundbreaking”
- 8/21 – San Jose Mercury News, “Groundbreaking nears for Monterey Bay Marine Sanctuary visitor's center”
- 8/23 – Monterey County Herald, “Volunteer beach monitors to be cut”
- 8/24 – Register Pajaronian, “Birding from shore to slough”
- 8/25 – Today Show, “Graham Hawkes Superfalcon in Monterey Bay National Marine Sanctuary”
- 8/27 – Santa Cruz Sentinel, “Coast Lines Aug. 27, 2009”
- 8/30 – Santa Cruz Sentinel, “David J. Terrazas: Drowning in a sea of plastic”
- 9/3 – Emediawire, “Welcome 'Home for the Holidays' in Monterey County”
- 9/5 - San Jose Mercury News, "Dan Haifley, Our Ocean Backyard: Mean streets, ocean blues"
- 9/9 - Contra Costa Times, "Marine sanctuary seeks volunteers"
- 9/13 - Monterey County Herald, "Council to consider plan for spraying"
- 9/18 - Reuters, "Conservation Bonds Helping Clean California Beaches & Ocean Water"
- 9/18 - Jaunted, "Where to Whale Watch Up And Down The California Coast"
- 9/21 - San Luis Obispo Tribune, "Study on trawling in San Luis Obispo County is set to begin"
- 9/25 – Salinas Californian, “Peggy Tharpe helps educate public about marine life”
- 9/30 – Contra Costa Times, “Monterey Bay kelp forest goes on a US Postal Service stamp”
- 10/2 – Monterey County Herald, “Marine sanctuary earns good review”
- 10/3 – 7thspace Interactive, “NOAA Reports Health of Monterey Bay National Marine Sanctuary”
- 10/4 – San Luis Obispo Tribune, “Sea floor off the coast of San Luis Obispo County yields its secrets”
- 10/5 – CBS5.com, “Regional: Reports find that Monterey Bay marine life is generally healthy but threats exist”

WEB SITE (<http://montereybay.noaa.gov/>)

Recent Updates

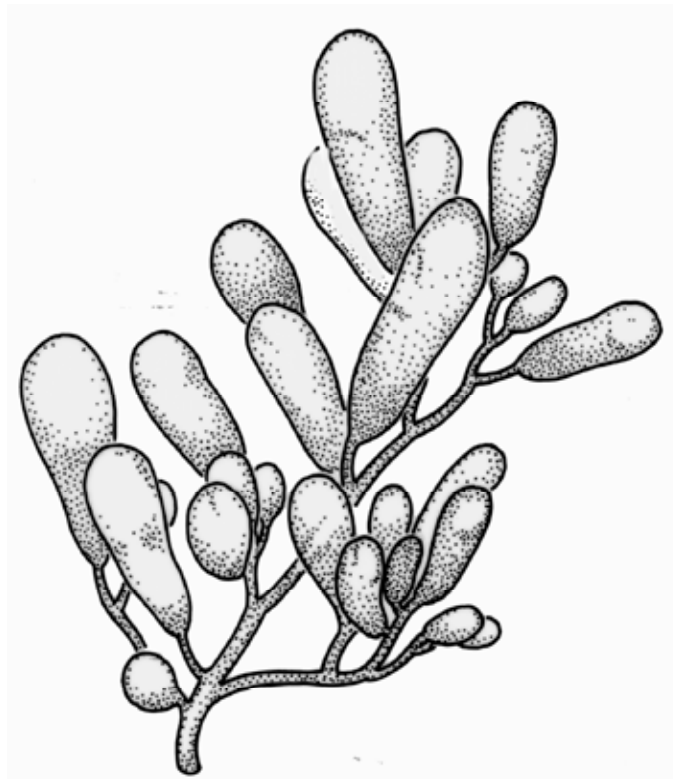
Visit the web pages listed below to see recently updated sections of the MBNMS web site.

- Lost Fishing Gear Project
<http://montereybay.noaa.gov/resourcepro/resmanissues/lostgear.html>
- MBNMS Condition Report
<http://sanctuaries.noaa.gov/science/condition/mbnms/>

*Please take a few moments to peruse the site. Your feedback is greatly appreciated.
Comments and suggestions can be sent to andrew.white@noaa.gov.*

CALENDAR OF EVENTS

13-Nov	Research Activity Panel Meeting, MBARI, Moss Landing. Contact Andrew DeVogelaere at (831) 647-4213.
19-Nov	Sanctuary Education Panel Meeting, 3:30-5:30. Contact Dawn Hayes at (831) 647-4256.
10-Dec	Sanctuary Advisory Council Meeting, Monterey. Contact Nicole Capps at (831) 647-4206.



Learn More About Your Sanctuary

The Sanctuary Office Report is produced bi-monthly by the Monterey Bay National Marine Sanctuary in conjunction with Sanctuary Advisory Council meetings. To learn more about the Sanctuary please visit our web site at: <http://www.montereybay.noaa.gov>.

To learn more about the Sanctuary Advisory Council please visit:
<http://www.montereybay.noaa.gov/intro/advisory.html>

The Office of National Marine Sanctuaries

The Monterey Bay National Marine Sanctuary is one of 14 marine protected areas in the National Marine Sanctuary System that encompass more than 150,000 square miles of marine and Great Lakes waters from Washington State to the Florida Keys, and from Lake Huron to American Samoa. The system includes 13 national marine sanctuaries and the Papahānaumokuākea Marine National Monument. Visit the ONMS web site at: <http://www.sanctuaries.nos.noaa.gov/>

Get involved and stay informed!

To learn how to get involved in the Sanctuary visit:
<http://montereybay.noaa.gov/educate/internship.html>

Sign up for the MBNMS listserv to receive email notices about upcoming Sanctuary events, and public meetings of the Sanctuary Advisory Council and its Working Groups:
<http://montereybay.noaa.gov/discussiongroups/disgroups.html>.



MBNMS Staff

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Erica Burton – Research Assistant
Jennifer Brown – Research Associate
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Jean de Marignac – Field Scientist
Chad King – SIMoN Data Analyst
Gary Conley – SIMoN Water Quality Analyst
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Lisa de Marignac – Environmental Policy Specialist
Lisa Wooninck – Resource Protection Specialist
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Hans Burning – R/V Fulmar Mate
Erik Larson – R/V Fulmar Operator

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