



Monterey Bay National Marine Sanctuary

Sanctuary Office Report



Volume 11, Number 2

A REPORT FOR THE SANCTUARY ADVISORY COUNCIL MEMBERS

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ABOUT THE SANCTUARY

Designated in 1992, 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, 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. 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

Sanctuary Research Coordinator Honored

On March 29, Emma Hickerson, research coordinator for NOAA's Flower Garden Banks National Marine Sanctuary, became one of six new members inducted into the Women Divers Hall of Fame (WDHOF). Hickerson began working with the sanctuary as a volunteer in 1996 and has logged more than 1,200 scuba dives and 150 scientific expeditions during her 17 years as the site's research coordinator. The WDHOF is an international nonprofit professional honor society whose member contributions span a wide variety of disciplines including science and exploration. The class of 2014 was inducted at the Beneath the Sea Awards Banquet on Saturday in Secaucus, N.J.

Registration OPEN for Capitol Hill Ocean Week 2014

CHOW 2014 will be June 10th-12th at the Newseum. John Podesta is confirmed as the opening keynote speaker. As always, CHOW is free to attend, but this year NMSF is offering premier registration for \$45, which comes with several extra benefits including lunch all three days. There will be *no lunch* provided for standard registrants. Registration and a draft agenda are available at www.capitolhilloceanweek.com.

MPA Center Represents NOAA at World Parks Congress Planning Meeting

Conservation leaders from around the world met March 23-25 in Cuernavaca, Mexico to plan the World Parks Congress meeting to be held in Sydney November 12-19, 2014. The Congress is held every ten years, and will be a landmark event setting the conservation agenda for the decades ahead. The MPA Center and ONMS are co-leading the Marine Theme of the Congress, together with IUCN-WPCA, the Great Barrier Reef Marine Parks Authority, and Parks Australia. The Congress will address a broad array of key challenges and opportunities facing the world's protected areas, including meeting conservation goals, climate change, supporting human life, sustaining human health and well-being, reconciling development challenges, engaging tribal and indigenous peoples and inspiring a new generation. <http://www.worldparkscongress.org/>

New! Sharing Ocean Acidification Resources for Communicators and Educators (SOARCE) Webinar Series co-hosted by NOAA National Marine Sanctuaries and Ocean Acidification Program Office

On March 19th at 3 pm ET (12 pm PT), a new webinar series "Sharing Ocean Acidification Resources for Communicators and Educators" (SOARCE) will be launched by NOAA Ocean Acidification Program and Office and National Marine Sanctuaries. This series provides ocean acidification communication tools to formal and informal educators, and stakeholders across the country. The first webinar "Know your audience: The golden rule of science communication applied to ocean acidification outreach" will be presented by Sarah Cooley, Science Outreach Manager and Julia Roberson, Ocean Acidification Program Director at the Ocean Conservancy. As of Friday March 14th, 148 educators had signed up to participate in the [webinar](#). A link to future SOARCE webinars can be found [here](#). This series was developed by a follow-up networking working group from the 2012 [Effective Practices for Communicating Ocean Acidification Workshop](#) held in Monterey, California in conjunction with the International Ocean in a High CO₂ World Symposium.

West Coast "Whale Trail" Communications

Sarah Marquis, West Coast/Pacific Media Coordinator, and Vernon Smith, ONMS Media Director, worked with Bill Douros, West Coast Regional Director, on communications planning for this summer's "Whale Trail" expansion into California and associated sanctuary events. The "Whale Trail" is a series of sites around the Northwest where the public may view orcas, other whales and marine mammals from shore. It is expanding into California with signage and a series of lectures/events.

National Marine Sanctuary News

Olympic Coast NMS

The NCCOS Hollings Marine Laboratory has received funding support to conduct a research project to assess social values and perceptions of attributes in Olympic Coast National Marine Sanctuary. The study will explore the connections between humans and the places they live, work, and play. Specifically, how people use, value, and depend on the ecosystem services of coasts and the coastal ocean. Using established social science methods combined with the latest in geographic information systems research, products will include maps that describe the connections between humans and their environment. By incorporating a better understanding of how and why people value protected places into the decision-making process, managers can avoid potential conflicts between various user groups and plan for sustainable use by constituents. The principle investigator Dr. Susan Lovelace will be presenting details on the proposed study at the March Advisory Council meeting.

Channel Islands NMS

On March 23, 2014 expert divers working with the non-profit organization Ocean Defenders Alliance began work to remove a large lost fishing net, presumed to be a squid net, near West Anacapa Island within waters of the Channel Islands National Marine Sanctuary (CINMS) and Channel Islands National Park. Working from GPS coordinates provided by staff from Channel Islands National Park, 600 pounds of net was safely removed from a depth of 70 feet. However, there is more to be done and continuing operations are scheduled for March 30th. This is the second season that Ocean Defenders Alliance has been conducting marine debris removal activities within the sanctuary, operating with a salvage permit from CINMS. Ocean Defenders Alliance works to clean and protect marine ecosystems through documentation, education, and meaningful action, focusing primarily on the reduction and removal of man-made debris that threatens ocean wildlife and habitats. Together with multiple years of work performed within the sanctuary by the SeaDoc Society's California Lost Fishing Gear Recovery Project, ODA is helping to reduce debris levels within the sanctuary.

Papahānaumokuākea NMS

On March 13-14, PMNM's Navigating Change Program hosted 60 Hau'ula Elementary School students and teachers at Camp Mokule'ia on the North Shore of O'ahu for a place-based learning experience. Activities included coastal dune ecosystem restoration, marine debris removal, Laysan Albatross bolus examination, and traditional celestial observation. Throughout this school year, Navigating Change and Camp Mokule'ia staff have been piloting new activities designed to inspire and support students and teachers in reducing the carbon footprint on their school campus. In an effort to mitigate climate change and perform sustainability, Camp Mokule'ia is plotting a course toward existing "off the grid" by 2020. Toward this goal, the camp has installed a photovoltaic cell array, water catchment systems on all buildings, and full-scale farm. Navigating Change is contributing by building STEM curriculum activities for the camp, including an introduction to composting, strategies for water conservation and re-use, photovoltaic electricity production, and raised-bed farming. Piloting these activities at the camp inspires student teams to design projects for their school based on what they have learned.

Monitor NMS

Operation Military Kids (OMK) is a collaborative effort between the U.S. Army and communities to support children and youth impacted by deployment. In support of that mission, OMK operates a Mobile Tech Lab that also connects kids to STEM and STEM careers. Shannon Ricles held a conference call with Sharon Lone, South Carolina OMK Coordinator and CIS Saluda Executive Director, to learn more about the program and how to connect to sister programs in North Carolina and Virginia. In return, Ms. Lone was interested in learning more about maritime heritage careers and will feature maritime archaeologists in an upcoming career day in April by using videos from Battle of the Atlantic expeditions.

Florida Keys NMS

On March 22nd, FKNMS education and outreach team member LTjg Carmen (Mica) Alex coordinated a shoreline cleanup with volunteers from the sanctuary's Team O.C.E.A.N. (Ocean Conservation Education Action Network) program. The cleanup was preceded by a brief presentation on plastic marine debris and information about recycling options in Monroe County for regular and hazardous materials. More than 200 pounds of marine debris, enough to fill 16 large garbage bags, and several hundred feet of rope were removed from a sensitive mangrove habitat at the old Planter's settlement in Key Largo, FL. The mangrove shoreline of old Planter's was heavily littered with debris consisting mostly of plastic caps, rope, and bottles.



MONTEREY BAY NATIONAL MARINE SANCTUARY NEWS AND PROGRAM UPDATES



MANAGEMENT

Annual Accomplishments Report Released for 2013

We are pleased to share Monterey Bay National Marine Sanctuary's Annual Accomplishments Report for 2013. In the report, you can learn about:

- Our expanding knowledge of Davidson Seamount.
- Fifteen offshore areas that are ecologically significant for their rich coral and sponge habitats, and a year-long process involving fishing and environmental groups to give them greater protection.
- Exactly how many species of fish occur in the sanctuary.
- How to keep abreast of unusual wildlife sightings. (Did you see grunion, boobies or humpbacks last year?)
- Innovative ways of protecting water quality.
- And much more!

View the report at <http://montereybay.noaa.gov/educate/pdf/140227annualreport.pdf>

Motorized Personal Watercraft Advisory Council Subcommittee meeting

Monterey Bay National Marine Sanctuary's MPWC AC Subcommittee met at the Santa Cruz Exploration Center on Feb 13 to continue looking at options to help address increased surfer safety at Maverick's. The group has met three times to discuss this issue and has developed two viable options for the AC to consider at the upcoming Feb 21 SAC meeting. Monterey Bay and Gulf of the Farallones staff are coordinating on this subcommittee discussion.

Resource Protection issues presented at MBNMS SAC meeting

At the Feb 21st SAC meeting, the MBNMS Resource Protection Team provided coordination and presentations to Council members on a variety of topics. Dr. Geoff Shester and Dr. Simona Bartl presented on the Leatherback Sea Turtle Summit that occurred in October and included a party of 12 Indonesian officials who are currently working with the Sanctuary, NMFS and CA to sign an MOA. Dr. Leila Hatch presented "Understanding and Reducing the Impacts of Underwater Noise," with the goal of informing SAC members about the nature and implications of sound and acoustic habitats in the Sanctuary. Gary Pezzi, the Chair of the Motorized Personal Watercraft subcommittee briefed the Council on the past three meetings and proposed two options for further exploration that could enhance surfer safety at Mavericks surf break. MBNMS RP team member Sophie De Beukelaer presented the MBNMS Vessel Traffic Analysis Report (now posted on website) that looks back at the past four years to see if cargo vessels and oil tankers are following the voluntary recommended tracks that were designated by the IMO in 2000.

RESEARCH AND MONITORING

SIMoN staff continues invasive species study in Monterey Harbor

On February 14 and March 28, NOAA divers (Chad King, Steve Lonhart and Scott Kathey) gathered monthly photo quadrat data from cement pier pilings in Monterey Harbor. These pilings are infested with multiple invasive species, including the invasive bryozoan *Watersipora subtorquata*. Digital images from the same locations provide insight on the community dynamics of both invasive and native species, as both algae and invertebrates compete for limited space. On the February dive, recent rains had apparently diminished water quality in the harbor, but none of the divers noticed anything odd or suffered any ill effects. On the March dive, a sea otter followed the divers, foraging just in front of them.

SIMoN staff provides input to CalOST on MPA monitoring metrics

On February 18, Sanctuary Integrated Monitoring Network (SIMoN) staff participated in an hour-long call with Dr. Benet Duncan of the California Ocean Science Trust (CalOST), a nonprofit 501(c)(3) public benefit corporation established pursuant to the California Ocean Resources Stewardship Act (CORSA) of 2000. CalOST's mission is to advance a constructive role for science in decision-making by promoting collaboration and mutual understanding among scientists, citizens, managers, and policymakers working toward sustained, healthy, and productive coastal and ocean ecosystems. Dr. Duncan and CalOST staff are reviewing and revising Central Coast MPA monitoring metrics. The first step in this effort is to update the existing Central Coast MPA monitoring plan, which was

written by California Department of Fish and Wildlife in 2008. The plan needs to be updated to reflect the results of the Central Coast MPA baseline monitoring program, incorporate the MPA monitoring framework, and ensure consistency with the existing monitoring plans for North Central and South Coast MPAs. Dr. Lonhart provided his expertise to improve the current selection of monitoring metrics for Central Coast MPAs, which will be included in the updated monitoring plan.

SIMoN staff participates in climate vulnerability workshop hosted by GFNMS

On February 11, staff attended and participated in a workshop hosted by the Gulf of the Farallones National Marine Sanctuary and several project partners (e.g., Bay Area Ecosystems Climate Change Consortium, California Landscape Conservation Cooperative, EcoAdapt, Farallones Marine Sanctuary Association, Golden Gate National Recreation Area, National Park Service Pacific West Region, Point Blue Conservation Science, and Point Reyes National Seashore). This was the first of a 2-part workshop series to develop climate change vulnerability assessments for North-central California coast and ocean species, habitats, and ecosystem services. This is the first phase of the North-central California Coast and Ocean Climate-Smart Adaptation Project, a collaborative effort to develop adaptive management actions for the sanctuary, and other natural resource management agencies, to take in response to, and in preparation for, climate change impacts.

SIMoN staff interviewed by Al Jazeera America

On February 19, Dr. Steve Lonhart of the Sanctuary Integrated Monitoring Network (SIMoN) was interviewed by Al Jazeera America for their English language news channel. Producer Mariam Ahmadi Simpson was interviewing Dr. Pete Raimondi of UC Santa Cruz about the recent sea star die off, which has decimated certain sea star populations from Alaska to Mexico. The TV news crew was interested in b-roll of the dives that UCSC divers had been conducting with MBNMS science divers while aboard the R/V 4107. Raimondi called Lonhart, who captured GoPro footage of dives during the previous week, when the water was very clear, and Lonhart walked down the road to the UCSC lab to share video with the camera crew. During the course of explaining the video and sharing UW images of wasting sea stars, several of which are on the SIMoN photo library, Mariam asked to interview Lonhart. It is not known exactly when the news story will air, but Mariam will provide details on the story, which will run repeatedly for 24 hr on the Al Jazeera network, reaching 300 million viewers according to the producer.

Kelp forest lecture a hit in Morro Bay

On February 24th Sanctuary Integrated Monitoring Network (SIMoN) scientist Dr. Steve Lonhart provided an overview of kelp forest ecology and monitoring within MBNMS. Lonhart was invited to give a lecture by Clare Strohman, a docent at the Morro Bay State Park Museum of Natural History. As part of the “Mind Walk” series, these lectures are held every Monday morning, from January through March. Speakers focus on a wide variety of topics relevant to natural history and both docents and state park volunteers participate. The Veteran’s Hall was full, with nearly 120 people in attendance.

First samples of kelp collected for Kelp Watch 2014

On February 24th Sanctuary Integrated Monitoring Network (SIMoN) staff received kelp samples from two University of California Natural Reserves (Rancho Marino in Cambria and Big Creek in Big Sur) within MBNMS. These kelp samples will be tested for radioactive isotopes of Cesium, which is one of several radionuclides released from the tsunami-damaged nuclear reactor in Fukushima, Japan. 6.5 kg of giant kelp and bull kelp were taken from both sites, dropped off at Moss Landing Marine Lab, and is now being dried prior to milling. The powder will soon be sent to Lawrence Berkeley National Laboratory for testing. Additional samples of kelp have been collected by partners from Santa Cruz and Carmel Bay.

Kelp Watch 2014 in MBNMS: http://sanctuarysimon.org/projects/project_info.php?projectID=100400&site=true

Kelp Watch 2014 main site: <http://kelpwatch.berkeley.edu>

Sea Star Wasting Disease Subtidal Surveys Continue

On February 21 and 26, Monterey Bay National Marine Sanctuary and UC Santa Cruz research divers conducted subtidal surveys at three sites (Weston, Pescadero Point and Monastery) from the R/V 4107 to help document the effects, and potentially help determine the cause of a wasting disease that has virtually wiped out all individuals of several species of sea stars that are common in diving depths. ‘Sea star wasting disease’ is a term used to refer to a set of symptoms found in sea stars. Typically, lesions appear in the ectoderm followed by decay of tissue surrounding the lesions, which leads to eventual fragmentation of the body and death. It appears that the star is ‘dissolving’ and individuals may have a deflated appearance prior to other morphological signs of the disease. A definitive cause for this disease has yet to be determined. In all, three survey days and five sites have been completed, with several sites along the Big Sur coast waiting to be completed over two remaining days on the R/V 4107.



The next survey date is March 4. So far, no adult sunflower stars (*Pycnopodia helianthoides*) have been observed, suggesting that adults have been wiped out along the central coast of California. Several bat stars (*Patiria miniata*) and giant sea stars (*Pisaster giganteus*) are still exhibiting symptoms of the wasting disease (see photo).

Photos from 2/26/14 survey: <https://www.facebook.com/media/set/?set=a.10152244056464916.1073741839.99323009915&type=1>
SIMoN News Article: <http://sanctuarysimon.org/news/index.php/2013/10/sea-stars-may-be-impacted-by-wasting-disease/>

SIMoN staff reviews class of 2014 Hollings Undergraduate Scholarship applications

Staff reviewed 9 applications on March 7, 2014. Undergraduates applied to the Ernest F. Hollings Undergraduate Scholarship, which is in turn reviewed by NOAA staff. The purposes of the program include: (1) increase undergraduate training in oceanic and atmospheric science, research, technology, and education and foster multidisciplinary training opportunities; (2) increase public understanding and support for stewardship of the ocean and atmosphere and improve environmental literacy; (3) recruit and prepare students for public service careers with the National Oceanic and Atmospheric Administration and other natural resource and science agencies at the federal, state and local levels of government; and (4) recruit and prepare students for careers as teachers and educators in oceanic and atmospheric science and to improve scientific and environmental education in the United States. The program provides selected undergraduate applicants with awards that include academic assistance; housing assistance; a 10-week, full-time internship position during the summer at a NOAA or partner facility. The internship occurs between their junior and senior year and provides “hands-on” multidisciplinary educational training experience involving the scholars in NOAA-related scientific, research, technological, policy, management, and education activities.

Staff participates in Tidal Wetland Planning workshop at ESNERR

On March 10, Drs. Andrew DeVogelaere and Steve Lonhart attended a combined Science Panel & Strategic Planning Team meeting hosted by staff from the Tidal Wetlands Project at Elkhorn Slough National Estuarine Research Reserve. TWP staff have been hard at work on the Tidal Marsh Restoration Project and developing an action plan for the next few years. As part of a 5 year plan, TWP staff developed a framework to focus efforts toward stakeholder approved objectives and to identify gaps in information. The meeting included several brainstorming sessions around a few of the more open-ended items (e.g., eutrophication and potentially setting habitat goals).

MBNMS Research Activity Panel Meets at Monterey Bay Aquarium Research Institute

On March 14th, the MBNMS Research Activity Panel (RAP) met at Monterey Bay Aquarium Research Institute (MBARI) in Moss Landing, CA. Agenda items included: MBARI Research Highlights, Sea Star Wasting Syndrome, Sanctuary Advisory Council Update, Updating the MBNMS Condition Report, Integrated Ecosystem Assessment and Developing Indicators for MBNMS, West Coast Research Coordination Update, and Sanctuary Currents Symposium Program.

Deep-sea sponge observed at Davidson Seamount new to science

A deep-sea, carnivorous sponge observed and collected at Davidson Seamount during the 2006 Monterey Bay National Marine Sanctuary (MBNMS) research expedition has been taxonomically described and assigned a new species name, *Asbestopluma monticola*. Scientists from the Monterey Bay Aquarium Research Institute, Royal British Columbia Museum, and Khoyatan Marine Laboratory assigned the Latin name *monticola* meaning ‘mountain dweller’ which is descriptive of the type locality where dense stands of this beautiful sponge thrive. The taxonomic description can be found in the April 2014 issue of *Zootaxa*. The sponge was first observed while MBNMS conducted ROV dives at Davidson Seamount in 2002. Since initial collection, hundreds of additional observations of this species have been made, including in Monterey Canyon and off central Oregon (1000 km range). The Davidson Seamount was added to Monterey Bay National Marine Sanctuary in 2009 for its special national significance relative to ocean conservation, ecological, scientific, educational, aesthetic, and historical qualities.



RESOURCE PROTECTION

MBNMS Conservation Working Group meets at Moss Landing Harbor Office

On February 12, a dozen CWG members met in Moss Landing at the Harbor Office to discuss a number of Sanctuary related topics, including acoustic issues, Pacific leatherback sea turtle updates, and other ecosystem related topics. Sophie De Beukelaer provided a presentation on the MBNMS Vessel Traffic Analysis 2009-2012 Report, which will also be provided to SAC members at the upcoming meeting. The CWG adopted a schedule for 2014, which will be posted shortly, and discussed potential topics for next meetings.

Irrigation and Nutrient Management Annual Meeting

Monterey Bay National Marine Sanctuary's Agricultural Water Quality Coordinator invited over 100 stakeholders to attend the University of California Cooperative Extension annual Irrigation and Nutrient Management Meeting in Salinas, California. The meeting provided research results and proven strategies for assessing the amount of fertilizer and water addition required to produce healthy crop yields. New strategies for fertilizer addition include developing nitrogen budgets that consider nitrogen contained in the soil, previous crop residue, irrigation water, and plant uptake needs. New irrigation management tools utilize evapo-transpiration information from satellites and weather stations to project the amount of water to apply. By publicizing this event and meeting with stakeholders at the event, we strengthened alliances between conservation professionals.

MBNMS and WCRO meet with Indonesian Delegation

Due to attendance at the Half Moon Bay Ocean Summit, delegates from Indonesia travelled down to Monterey to meet with and discuss a draft MOA which includes establishing a "sister sanctuary" between MBNMS and the Abun MPA in the TAMBRAW region of Indonesia. The leatherback sea turtle is a shared protected species that nests in the TAMBRAW region of Indonesia and forages on jellies in Monterey Bay, CA. The species population has been steadily decreasing at 6% annually, and international collaboration on protection strategies are needed to improve the outlook for this large, majestic animal.

MBNMS staff attends Pacific Fishery Management Council Meeting in Sacramento

On March 7 and 8, the MBNMS Resource Protection Coordinator attended the PFMC committee meetings and the Council's agenda item on Groundfish EFH. Meetings included the Groundfish Advisory Panel (GAP), the Scientific and Statistical Committee and the Habitat Committee, of which the West Coast Regional Policy Coordinator Lisa Wooninck is a member. At the GAP, there was an offer by NGOs to provide presentations on the coast wide proposal to the GAP at the June meeting, and MBNMS staff was asked to participate in this information sharing session. The meeting will be a good opportunity to present and discuss the proposal with a number of fishing stakeholder groups at one time. Lisa provided comments to the Council from the Region, which included general comments, a brief summary of each proposal, and then an offer to provide support and assistance in further evaluation of the proposals. Now that the Council is officially in Phase 3, they requested some specific analyses for all of the proposed spatial modifications to be in order to prepare them for further discussions at the September meeting. Council actions from the March meeting will be posted soon.

Central Coast Conservation Action Tracker (CCAT) Hands On Training Session

The Agricultural Water Quality Coordinator for the Monterey Bay National Marine Sanctuary hosted a hands-on training at Moss Landing Marine Lab regarding how to enter conservation projects into CCAT. Attendees brought their computers and project language with them and were coached in how to upload these projects during the session. Five different projects from four attending organizations were entered, bringing the total Project Actions on the newly launched CCAT website to thirty located on California's Central Coast from San Mateo to San Luis Obispo.

Coordination meeting with CA NOAA Marine Debris Program Coordinator

Sherry Lippiatt, the CA Regional Coordinator for the NOAA Marine Debris Program met with staff to share information on the plethora of marine debris activities in the area, which in turn will help guide the program's priorities. We discussed a variety of MBNMS programs such as the lost fishing gear removal effort, volunteer tracking of debris, plastic bag bans at local cities, etc. Sherry discussed the funding support provided for OC and GF for shoreline monitoring projects. She also mentioned the quarterly NOAA marine debris collaborative conference calls as a forum for information / project sharing, funding opportunities, and presentations. Lastly, we discussed their new searchable clearinghouse of all MDP funded projects: <https://clearinghouse.marinedebris.noaa.gov/>. The site is regularly updated with new projects and they are in the process of building a library of resources.

MBNMS EFH Stakeholder group meets to discuss Voluntary Management Areas (VMAs)

On 3/19, trawl fishermen, NGOs and MB staff met to discuss next steps with the collaborative EFH proposal. At their March mtg, the Pacific Fishery Management Council moved all proposals forward and requested that the Fisheries Science Centers investigate the question of essential fish habitat effectiveness, accuracy, and completeness over the next five months to be reported on at the September meeting. The MB group also discussed next steps for designing and implementing the three VMAs in MBNMS using a separate non-regulatory process. The group has identified the TNC's eCatch program as a model to use for monitoring compliance on avoiding the three pilot areas in the MBNMS, as the program has been tested and accepted by fishing members of the California Risk Pool. There are some specific hardware and software needs to improve the program which includes the purchase of an iPad for each trawl fishermen, and some software programming to improve tracking and reporting.

USEPA Region 9 Visits Salinas Valley

On March 25th, Jared Blumenfeld, USEPA Region 9 Administrator, with four other EPA Staff, Central Coast Regional Water Quality Control Board (CCRWQCB) Executive Officer, CCRWQCB Agriculture Environmental Scientist, Monterey County Ag Commissioner, and MBNMS WQPP Director and Ag Water Quality Coordinator met with a local grower in the Salinas Valley to tour three different farming operations. The goal of the field tour was to familiarize EPA officials with local efforts to improve water quality. The grower representative was enthusiastic and optimistic about conservation and sustainability efforts related to agriculture practices. MBNMS staff highlighted our coordination of the Agriculture Water Quality Alliance and Farm Food Safety Conservation Network in addition to the long time partnership with the USEPA as a member of the Water Quality Protection Program.

MBNMS Participates in Ag Industry Round Table on Sustainability

On March 28th, MBNMS Ag Water Quality Coordinator participated in an Ag Industry Sustainability workshop funded from a DWR grant for Integrated Regional Water Management administered by MBSF. One goal was to increase the collective understanding of business opportunities and challenges for key sustainability tools and initiatives. Over 25 individuals participated from local, national, and international agriculture corporations.

MBNMS Exhibits at Salinas Valley Ag Technology Summit

The MBNMS Agricultural Quality Coordinator represented the MBNMS collaborative approach to improving water quality through working with growers, resource conservation professionals and researchers on efforts to reduce agricultural pollution to the Sanctuary. Summit attendees included growers, high school students, college staff, industry representatives and agricultural professionals. Panels and exhibits represented exciting innovations that can improve agricultural productivity while reducing chemical use through advances such as genetic cross-breeding, pesticide coatings on seeds, computerized thinning technologies, and moisture sensor systems. Plans for the Steinbeck Innovation Center to promote connections between major producers and Silicon Valley were announced.

Kick off meetings for Coastal Regional Sediment Management Plan

On March 27th, MBNMS and the U.S. Army Corps of Engineers, kicked off the first set of two Stakeholder Advisory Group (SAG) meetings and public workshops for the *Coastal Regional Sediment Management Plan for the Santa Cruz Littoral Cell* for the State Coastal Sediment Management Workgroup, a task force co-chaired by the USACE and the California Natural Resources Agency. The Santa Cruz Littoral Cell encompasses the 75-mile coastline from Moss Landing to Pillar Point. A draft Plan is expected to be available for public review in the fall of 2014. The CRSMP is a consensus-driven guidance and policy document for a stretch of the California coast that seeks to present ways to: restore and maintain coastal beaches and other critical areas of sediment deficit; reduce the proliferation of protective shoreline structures; sustain recreation and tourism; enhance public safety and access; and restore coastal sandy habitats.

Submittal of a chapter describing GIS support for a stakeholder proposal to the book, “Ocean Solutions, Earth Solutions”

MBNMS was asked to submit a chapter to a new peer reviewed Esri Press book, “Ocean Solutions, Earth Solutions,” based on a presentation delivered at the Esri Ocean GIS Forum in November 2013. The book will focus on use-inspired ocean science and realistic solutions for the oceans. The submitted chapter titled “Using GIS Tools to Develop a Collaborative Essential Fish Habitat (EFH) Proposal” describes how GIS provided a common language between stakeholders representing human use and conservation sectors and how GIS helped lead to a collaborative proposal. An accompanying [ArcGIS Online story map](#) was also submitted.

ENFORCEMENT

Inspection of Cruise Ship AZAMARA QUEST

MBNMS resource protection staff and US Coast Guard inspectors conducted an unannounced environmental inspection of the AZAMARA QUEST, the first ship of its line, Azamara Club Cruises, to visit Monterey. The inspection centered on the various waste streams and waste management protocols aboard the ship. No violations were detected. MBNMS staff coordinate with the Coast Guard to conduct these random, unscheduled inspections of cruise ships visiting Monterey to emphasize the higher water quality standards enforced within the sanctuary.

Recovery of Deserted Vessel from Ano Nuevo Bay

On February 5 and 6, MBNMS coordinated with the San Mateo Harbor District to recover a 32-foot sailboat that had been minimally anchored (single point) on a remote and exposed stretch of sensitive shoreline, during dangerous sea conditions for small craft, with no crew aboard and no means of quickly boarding the vessel had it begun to drag anchor or parted from its anchor line. This was a high-risk situation with a very strong potential for grounding within the MBNMS, the Ano Nuevo State Marine Reserve, and the Ano Nuevo Area of Special Biological Significance. The Pillar Point Harbor Patrol provided preventive assistance by removing it to the safety of

the harbor. Anchoring and desertion of vessels unattended in exposed coastal areas of the sanctuary is a growing concern to the MBNMS and partner agencies.

Panga Abandonments Continue in MBNMS at Garrapata State Park and San Simeon

The first known panga landings in MBNMS occurred in 2012. Since then, the intentional grounding of these 30 ft - 45 ft drug smuggling vessels has increased in number on remote beaches throughout the 276 miles of coastline within the sanctuary. Each grounding typically includes abandonment of hundreds of gallons of fuel in plastic drums and containers - sometimes still aboard the boat and sometimes found drifting or ruptured in the sea. U.S. Immigration & Customs Enforcement has typically taken the lead in removing the hull and anything within it, but the agency's salvage contracts preclude removal of debris or fuel found outside of the vessel and are not structured for spill response. On February 15, an abandoned panga with over 100 gallons of gasoline and 2 bales of marijuana was discovered on the beach at Garrapata State Park in Big Sur. US Department of Homeland Security (DHS) has taken the lead in salvage of the vessel and fuel. On the morning of February 23, an abandoned panga was discovered on the shoreline at San Simeon Campground in the southern reach of MBNMS.



NOAA and Coast Guard Track Drifting Sailboat CHELSEA

On February 18, MBNMS received a report that Coast Guard was airlifting 3 persons from the 36-ft S/V CHELSEA off Point Sur after the vessel's motor failed in heavy seas. The vessel was left adrift with 80 gallons of fuel aboard. At MBNMS request, NOAA Office of Restoration and Response provided very accurate drift trajectory analyses that enabled a Coast Guard C-130 aircraft to relocate the vessel 24 hours later. The aerial sighting confirmed that the vessel was still afloat and had departed MBNMS boundaries. Coordination of assets and information between NOAA and the Coast Guard was excellent. The Coast Guard took extra measures to determine the disposition of the drifting vessel due, in part, to its position within MBNMS. Unfortunately, the owner failed to retrieve the vessel, and on Saturday, March 1, it ran aground near Kirk Creek in the southern reach of MBNMS after drifting at sea for 10 days. The sea completely dismantled the boat at the base of a 200-ft bluff within 12 hours. NOAA OLE is investigating the incident with US Forest Service, the local land owner.

Sailboat salvaged from Seabright State Beach

On February 14, a 22-ft sailboat was salvaged from Seabright State Beach in Santa Cruz through a joint effort by MBNMS and the California Department of Parks and Recreation. The vessel grounded on the beach on February 8 after parting its anchor. The owner could not be reached. State Parks made arrangements for salvage and MBNMS funded the effort since State Parks had been proactive in pulling the vessel shoreward out of the surf zone to prevent its destruction by the sea. This is a good example of prompt, efficient, and cost-effective teamwork between MBNMS and the State of California in preventing damage to marine resources and qualities within MBNMS.



Enhanced Collaboration with Coast Guard Auxiliary Air Squadron

On February 22, MBNMS staff delivered a presentation summarizing 2013 aerial support to MBNMS by Coast Guard Auxiliary Air Squadron 11N at the squadron's annual dinner in Dublin, CA, attended by 30 individuals. In 2013, the Auxiliary Air squadron submitted over 30 aerial patrol reports to MBNMS at no cost to NOAA, providing valuable observations on activities in the sanctuary.

MBNMS Law Enforcement Technical Advisory Committee Meets in San Simeon

On Thursday, March 6, seventeen members of the MBNMS Law Enforcement Technical Advisory Committee (LETAC) met at the MBNMS Coastal Discovery Center in San Simeon to discuss common marine enforcement concerns within the sanctuary. Participants included law enforcement officers from federal, state, and local agencies, and discussion topics ranged from drug boat abandonment to wildlife impacts from the growing use of miniature aerial drones in the littoral zone.

Aerial Drones Flushing Wildlife in a Sanctuary Near You

During the last year, MBNMS staff have seen the introduction and growth of recreational aerial drone operations within sanctuary boundaries. These remotely controlled miniature aircraft are easily obtainable, relatively inexpensive, and capable of carrying small payloads, such as video cameras. Industrial drones can carry much more. They can fly almost anywhere and thus have the capability to access remote and sensitive wildlife habitat, such as cliffside and offshore rock seabird nesting sites. MBNMS received a recent report of two drone operators simultaneously flushing an entire colony of pregnant harbor seals into the water from the seals' protected haulout at a state marine reserve within the sanctuary.

EDUCATION, VOLUNTEER AND OUTREACH

Sanctuary Exploration Center Volunteers Visit Año Nuevo State Park

On Monday Feb 10th and Tuesday Feb 11th, groups of Sanctuary Exploration Center volunteers participated in private tours of Año Nuevo state park led by Año Nuevo docents. Volunteers were able to see nursing mothers and babies, newly weaned juveniles, and males battling for territory! This excursion was part of the monthly volunteer enrichment series, which includes a quarterly field trip to explore a new habitat within the sanctuary. Gaining first hand experiences within the sanctuary helps volunteers communicate and connect with visitors at the Exploration Center.

Docents Visit Coastal Discovery Center

Monterey Bay National Marine Sanctuary docent exchange program Bay Net docents from Monterey visited the Coastal Discovery Center and the elephant seals at Piedras Blancas this week to learn about the life history of the seals and to discuss how policy and practice to protect the seals has evolved in the San Simeon area.

Hearst Theater shows *The Living Sea*

At least 800 visitors from around the world are estimated to view McGillivray Freeman's *The Living Sea* at Hearst Theater in San Simeon this month. The film is being shown every Saturday evening in March as part of a promotional campaign to highlight the Stewardship Traveler program in San Luis Obispo County. All 14 National Marine Sanctuary banners are also on display in the theater lobby throughout February. Lobby visitorship ranges from 3,000 – 6,000 people per week. For more information on Coastal Discovery Month, visit <http://winecoastcountry.com>



Second Annual Beneath the Waves Film Festival at the Sanctuary Exploration Center

The Beneath the Waves Film Festival includes a variety of short (2-10 minute) films, produced by students, amateurs and professionals from around the world on marine science and ocean conservation. The film festival last year was such a great success that Monterey Bay National Marine Sanctuary is once again co-sponsoring a day of activities and educational films at the Sanctuary Exploration Center on June 7, 2014.



MBNMS staff lead MERITO field trip to tidepools

On March 12, 22 4th/5th grade students from Highland Elementary School in Seaside joined MBNMS staff for an exploration of the rocky coast at Point Pinos. The students used guides to ID animals, learning their names and adaptations to living in this challenging coastal habitat. Many students had not had the opportunity to visit tidepools and so were very excited explorers. Highland is a Title One school and has a high student diversity. This school is one of a dozen remaining schools that are supported by the MBNMS MERITO Academy program.

Ocean Careers Day at the Coastal Discovery Center

The Coastal Discovery Center hosted students from Cambria's Coast Union High School this week to discuss careers in marine science. Hosted by Carolyn Skinder from MBNMS, students used the Center's exhibits to extract careers related to watersheds, underwater exploration, marine bird and mammal life histories and maritime history which were further grouped under the headings of resource protection, education and research. Discussion about ocean careers was followed with a very helpful website, OceanCareers.com. The site included the amount of school required and the earning potential for specific jobs in marine science - a real "eye opener" to the attending students!

Sanctuary Exploration Center 2014 Docent Training Class Has Begun!

On Wednesday March 19th 25 participants were introduced to Monterey Bay National Marine Sanctuary and the sanctuary Exploration Center as their first class of the 2014 docent training program. The class will continue for six weeks, totaling 40 hours of instruction. Speakers from MBNMS and other science organizations will present on watersheds, MBNMS regulations, current sanctuary research, biodiversity, MPAs, fisheries, climate change, ocean observing, and seasons within the sanctuary. Additionally, they will learn effective interpretation tools and techniques and practice interpreting our exhibits to the public. After training volunteer docents will interpret exhibits to the public, conduct guided tours, assist in daily operations, and participate in events and programs.

Sparking Interest in Marine Science at Diablo View Middle School Career Day

On March 19th Jennifer Brown, Ecosystem Scientist for Monterey Bay National Marine Sanctuary, traveled to Diablo View Middle School for a Career Day presentation. The presentation, which was attended by over 300 8th grade students, used photos and videos to spark interest in careers in marine science. In addition to showing the exciting educational opportunities available to students in marine

sciences (e.g., internships, field study quarters/semesters), the presentation introduced students to the national marine sanctuary program and highlighted the various tools that scientists use to explore and study sanctuaries (e.g., SCUBA, ROVs, satellite tags, smart phone apps, web-based tools).

SEC docents learn about kelp forest and rocky intertidal organisms

On March 29th, Sanctuary Integrated Monitoring Network (SIMoN) staff lectured for four hours on kelp forest and rocky intertidal organisms that are on display at the Sanctuary Exploration Center (SEC). This third cohort of docents (about 25) took notes about interesting facts and anecdotes regarding the numerous fishes, invertebrates, and algae on display at the SEC. Docents interact with visitors, interpreting the many displays and modeled habitats. Docents asked several questions and many of the volunteers had already been using the SIMoN web site to bolster their knowledge of marine organisms and their natural history.

Sanctuary Exploration Center docents learn about USS *Macon* and Davidson Seamount

On the evening of April 2nd, MBNMS staff provided two seminars to 23 new docents of the Sanctuary Exploration Center in Santa Cruz. The first seminar, "USS *Macon* Expedition," included the history of the U.S. Navy's lighter-than-air program, history and crash of the USS *Macon*, her discovery, and recent expeditions to characterize the wreck site off Point Sur, California. The second seminar "Davidson Seamount: A Remarkable Feature In Your Sanctuary," included an introduction to seamounts, exploration and characterization of Davidson Seamount, and recent protections of the seamount.

MBNMS Volunteers Monitor Late Season Storm for Local Cities

On Monday, March 31st, volunteers conducted stormwater sampling at eight outfalls funded by the Monterey Regional Stormwater Management Program. Several years ago we began to not only sample the first storm of the season (First Flush) but included a late season storm to better understand the pollutant concentrations flowing into the Monterey Bay after multiple rain events. A summary of the 2013 Dry Run and First Flush event is in draft form and will be available online soon.

Annual Sanctuary Currents Symposium to be held April 26th

The annual Monterey Bay National Marine Sanctuary Currents Symposium will be held on Saturday April 26, 2014 at California State University Monterey Bay. The theme is "Marine Debris: How Do You Pitch In?" Discussions will occur around plenary sessions featuring internationally-recognized scientists, a research poster session, and exhibitry throughout the day. Invited speakers will present the many scales of problems and solutions, ranging from the small plastic nurdles to a state-size garbage patch, from the deep sea to the intertidal, from local policies to the international arena. The Symposium program is available at <http://montereybay.noaa.gov/research/currsymp2014/welcome.html>.

NEWS COVERAGE

Photographer Marc Shargel's talk details the interconnection of life in waters off our shores

http://www.santacruzsentinel.com/santacruz/ci_25243679/photographer-marc-shargels-talk-details-interconnection-life-waters

Santa Cruz Sentinel
February 27, 2014

Report shines light on economic impact of oceans

<http://www.ksbw.com/news/central-california/monterey/report-shines-light-on-economic-impact-of-oceans/24908712>

KSBW
March 10, 2014

When sea life clings to lost cargo

<http://www.deccanherald.com/content/392657/when-sea-life-clings-lost.html>

Deccan Herald
March 21, 2014

Santa Cruz Wharf plan offers front row seat to Marine Sanctuary

http://www.santacruzsentinel.com/santacruz/ci_25443833/santa-cruz-wharf-plan-offers-front-row-seat

Santa Cruz Sentinel
March 28, 2014

Kris Beall and Dan Haifley: Leave No Child Inside

http://www.santacruzsentinel.com/opinion/ci_25503415/kris-bell-and-dan-haifley-leave-no-child?source=email

Santa Cruz Sentinel
April 4, 2014

NOAA grant to CSUMB professor could change the face of fishing around the world

http://www.montereycountyweekly.com/archives/2014/0410/noaa-grant-to-csumb-professor-could-change-the-face-of/article_6da3d2b8-c022-11e3-ac5b-0017a43b2370.html

Monterey Herald
April 10, 2014

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

Recent Updates

Monterey Bay National Marine Sanctuary is pleased to announce the release of our new website, designed with a fresh new look and easy navigation. The homepage features upcoming events & news, and quick links to get you where you want to go with one click. The new website contains the latest information about our programs as well as new content, like “Things to Do” featuring fun ways to experience your sanctuary, from tide pooling and fishing to whale watching. We hope you enjoy browsing our new site!

Follow MBNMS on Facebook and Twitter!

*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.*

FUN, OCEAN RELATED WEB SITES

Seasons in the Sea

<http://www.seasonsintthesea.com>

Thank You Ocean

<http://www.thankyouocean.org/>

NOAA Online Media Library

<http://sanctuaries.noaa.gov/photos>

SIMON

<http://www.sanctuariesimon.org>

Oceans Live

<http://oceanslive.gso.uri.edu/>

Office of National Marine Sanctuaries

<http://www.sanctuaries.nos.noaa.gov/>

NOAA Ocean Explorer

<http://oceanexplorer.noaa.gov/>

Encyclopedia of the Sanctuaries

<http://www.ocean.com/Library/Encyclopedia/>

National Data Buoy Center

<http://www.ndbc.noaa.gov/rmd.shtml>

National Ocean Service

<http://www.nos.noaa.gov/>

National Oceanic & Atmospheric Administration

<http://www.noaa.gov/>

MBNMS Staff

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Dawn Hayes – Deputy Superintendent

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Jennifer Brown – SIMoN Ecosystem Scientist
Steve Lonhart – SIMoN Senior Scientist
Chad King – SIMoN Data Analyst

Education

Liz Love – Acting Education Coordinator
Lisa Uttal – Interim Exploration Center Director
Carolyn Skinder – Southern Region Program Coordinator
Chelsea Prindle – Education Specialist
Sarah Stegner – Exploration Center Gift and Bookstore Manager
Brittany Cooper – Coastal Discovery Center Docent Coordinator

Resource Protection

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Scott Kathey – Regulatory/Emergency Response Coordinator
Deirdre Whalen – Government and Community Relations Coordinator
Sophie De Beukelaer – GIS Analyst/Permit Coordinator
Pamela Krone-Davis – Agriculture Water Quality Coordinator
Bridget Hoover – Water Quality Protection Program Director
Lisa Emanuelson – Citizen Watershed Monitoring Network Coordinator

Program Operations

Raymond Chisolm – Program Specialist
Sara Hutto – Advisory Council Coordinator
Andrew White – Network Manager and Webmaster



Learn More About Your Sanctuary

The Sanctuary Office Report is produced bi-monthly by Monterey Bay National Marine Sanctuary staff 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 encompassing 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/getinvolved/welcome.html>

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

- Contact Information -

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