



# Monterey Bay National Marine Sanctuary

## Sanctuary Office Report



Volume 13, Number 5

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

#### **Warming ocean waters in Pacific Ocean turn coral gardens into a graveyard**

New findings show that approximately 95 percent of the coral colonies at Jarvis Island in the Pacific Remote Islands Marine National Monument have died following a massive coral bleaching event. Intense El Niño causes waters to become extremely warm, resulting in coral bleaching. A survey conducted by scientists from NOAA's Pacific Islands Fisheries Science Center and partners shows that coral colonies that looked healthy and vibrant a year ago are now dead and dying, due to long periods of being bathed in warmer than normal waters. Scientists found a bit of good news—they sighted for the first time ever a colony of coral species (*Acropora retusa*) at Jarvis Island that is listed as threatened under the Endangered Species Act. Also, a few of the more resilient corals also survived the El Niño event. Scientists in this joint effort between NOAA Fisheries, Woods Hole Oceanographic Institution and Rutgers University are hopeful that some of the living corals will recover

due to the remote location, gradually cooling waters and the biological richness of the area. <http://www.noaa.gov/warming-ocean-waters-pacific-ocean-turn-coral-gardens-graveyard-0>

#### **National monument in Hawaii becomes world's largest marine protected area**

In the middle of the Pacific Ocean lies Papahānaumokuākea Marine National Monument. Part of the most remote island archipelago on Earth, the monument is home to more than 7,000 marine species, including coral, fish, seals, turtles, whales, and several shipwrecks, and serves as the final resting place for more than 3,000 sailors and soldiers who served during World War II.

Today, President Obama expanded the monument by 442,781 square miles, bringing the total protected area to 582,578 square miles and making it the world's largest marine protected area. With this designation, this cultural, historical and ecologically significant marine protected area will be protected and preserved for future generations. <http://www.noaa.gov/news/national-monument-in-hawaii-becomes-worlds-largest-marine-protected-area>

#### **NOAA awards \$2.5 million in environmental literacy grants to build community resilience**

NOAA's Office of Education awarded \$2.5 million in Environmental Literacy Grants to support five projects focused on helping communities build the environmental literacy necessary for resilience to extreme weather events and other environmental hazards.

The five selected projects will build the foundation for a resilient community through education in Chicago, Illinois; Brooklyn, New York; Norfolk, Virginia; Tucson and Phoenix, Arizona; and Fairfield County, Connecticut. Five institutions received awards for projects that will build on local resilience plans and create new partnerships between K-12 and informal education institutions and government and non-profit organizations working on resilience planning and implementation: Brooklyn College/City University of New York, Brooklyn, New York, Elizabeth River Project, Norfolk, Virginia, Maritime Aquarium at Norwalk, Norwalk, Connecticut, Museum of Science and Industry, Chicago, Illinois, Watershed Management Group, Tucson, Arizona.

<http://www.noaa.gov/news/noaa-awards-25-million-in-environmental-literacy-grants-to-build-community-resilience>

## NATIONAL MARINE SANCTUARY NEWS

### Mass Mortality Event Response

FGBNMS and partners have been responding to a mysterious mass mortality event on East Flower Garden Bank. While conducting long-term monitoring dive operations at East Flower Garden Bank during July 25–28, 2016, the FGBNMS research team received reports from divers on the recreational dive vessel MV FLING regarding dead corals and invertebrates near buoy #4 at EFGB. The FGBNMS team responded quickly to the reports, and were able to conduct several benthic and surveys, and collect some samples in the area before heading back to shore (7/28). They documented what looks could be a localized sponge die-off, that may have then triggered a localized toxic environment killing other invertebrates, including corals. An immediate request for input from the scientific community, primarily through the online NOAA Coral-List, resulted in an overwhelming number of responses of concern, suggestions, data gathering, advice, and offers of help. Satellite imagery distilled by partners from NOAA and Marine Biodiversity Observation Network (MBON) have identified land based water masses moving out and over FGBNMS that could cause increased nutrients and lower oxygen levels. That, coupled with high water temperatures (86F) at EFGB could be what triggered this deadly event. Other possible factors are being considered, such as hypersaline conditions, or some type of hydrocarbon event, however these may be ruled out as information is collected. A response cruise was immediately launched (7/30-8/2) with Texas A&M University to collect water samples and conduct water chemistry sampling, and also to test conditions in preparation to launch a glider for more comprehensive water chemistry sampling. The in situ water samples and chemistry are currently being analyzed. A second response cruise led by FGBNMS with partners from Rice University, UNCW-Chapel Hill and TAMU left the dock 8/4 headed to EFGB to launch the TAMU glider, conduct additional surveys to determine the extent of the event, and collect biological sample to help characterize what is killing the reef and associated organisms.

### Battle of the Atlantic/ WWII Battlefield Documentation Expedition

NOAA's Monitor National Marine Sanctuary, the Bureau of Ocean Energy Management, Project Baseline, UNC Coastal Studies Institute, and partners have been conducting research to document and preserve an important World War II battlefield found off the North Carolina coast near the shipwreck site of the USS *Monitor*. The expedition has utilized cutting-edge technologies, including manned submersibles, 3D laser scans and photogrammetry to create virtual models of the shipwrecks and to virtually “raise them” from the seafloor. During the first week of the expedition, the survey team visited the German U-boat, U-576 and its victim, the freighter SS *Bluefields*. Many more sites are yet to be visited during the remainder of the expedition, including U.S. and British naval vessels, as well as U.S. Merchant Marine ships. This collection of shipwrecks represents the victories and tragedies for both the Allies and Axis powers during World War II and tragically, in many cases serve as the final resting place for hundreds of sailors and merchant seaman. This World War II naval battlefield site is believed to represent one of the most historically significant naval engagements of the Battle of the Atlantic off America’s coast. The battle took place 30-40 miles offshore, and the final resting place of the vessels lost in the engagement was unknown until 2014 when NOAA located them using sonar imaging. This discovery is the only known location in U.S. waters that represents the archaeologically preserved remains of a convoy battle wherein material remains of both sides of the engagement are represented. World War II shipwrecks off North Carolina’s coast represent significant socioeconomic value for the recreational scuba diving community and are recognized as one of the top diving destinations, drawing tourists from all over the world. Supports the Maritime Heritage Program’s mission to properly study and interpret our nation’s rich maritime legacy to help understand and appreciate these resources. The project also fosters partner collaborations with research organizations and other Federal agencies.

### Battle of the Bay Event Provides Venue for Whale Harassment Outreach

Farallones communications staff worked with NOAA Fisheries Outreach staff to prevent whale harassment through targeted outreach at the 6th Annual Battle of the Bay this weekend. This is the premier paddle boarding, kitefoiling and windsurfing championship competition and expo in Northern California, drawing thousands of onlookers. The event is held at Crissy Field, east of the Golden Gate Bridge, where this past spring and summer multiple close-approaches were witnessed, and disturbances likely occurred, as humpbacks entered the bay in unprecedented numbers, and were close-approached by watersportsters. With its proximity to San Francisco’s population of nearly 8 million, wildlife disturbance is a major concern to the Farallones marine sanctuary. This year a significant number of humpbacks chased anchovy shoals into San Francisco Bay, where they were approached, and may have been struck by onlookers eager for a close encounter. One kiteboarder repeatedly closed in on and jumped a whale. Similar behavior also occurred off the San Francisco and San Mateo county coasts, in sanctuary waters. Targeted outreach is essential to prevent future such occurrences.



## MONTEREY BAY NATIONAL MARINE SANCTUARY NEWS AND PROGRAM UPDATES



### MANAGEMENT

#### **Monterey Bay National Marine Sanctuary Holds Advisory Council Meeting**

On August 19th, the MBNMS Advisory Council met and received a series of presentations and updates on California Current and World Heritage proposal, an offshore wind energy proposal, Management Plan Review update regarding artificial reefs, Management Plan Review Council Workshop on climate change including GFNMS Climate Smart adaptation. Actions taken included: motion to consider letter of support for World Heritage site nomination. The next Advisory Council meeting will be on October 21st in Cambria. Sanctuary Advisory Councils are community-based advisory bodies consisting of representatives from various user groups, government agencies and the public at large. The role of the council is to provide advice to the sanctuary superintendent on the designation and/or operation of a national marine sanctuary.

### RESEARCH AND MONITORING

#### **MBNMS larval fishes collection deposited at NOAA Fisheries, La Jolla, California**

A mesopelagic fishes survey was conducted within Sanctuary Ecologically Significant Areas (SESAs) of Monterey Bay National Marine Sanctuary (MBNMS), including the Davidson Seamount Management Zone (DSMZ), aboard NOAA SHIP *Bell M. Shimada* during May 2015. MBNMS scientist, California Academy of Sciences Ichthyology Research Associate, and NOAA Fisheries scientist recently completed larval fish identifications of the thirteen mid-water trawling stations; and deposited the preserved larval specimens at NOAA Fisheries, Southwest Fisheries Science Center, in La Jolla, California. Two hundred ninety-three larvae, representing forty-five taxa, were deposited. The fishes from Davidson Seamount are a unique collection, as there have been very few fishes collected, preserved, and catalogued from the area. Conducting research within SESAs will increase our understanding of communities and processes in focal areas, and improve our ability to adaptively manage these important resources.

#### **Monterey Bay Marine Biodiversity Observing Network Meets in Moss Landing**

Members of the Monterey Bay Marine Biodiversity Observation Network (MBON) gathered July 25th and 26th at the Monterey Bay Aquarium Research Institute in Moss Landing. The group reviewed progress on environmental DNA methods and integration of existing observations of the open-ocean ecosystem ranging from satellite-based sea surface temperature, to net samples of zooplankton, to ship-board observations of marine mammals. How to make real-time data products available to resource managers, and create education and outreach products was another focus of the meeting. National marine sanctuaries are an ideal setting to develop and evaluate a biodiversity network because these areas encompass a wide range of marine environments with a high density of research and monitoring efforts. The MBON demonstration projects will help us better understand these important marine ecosystems and serve to inform resource managers on the current status of biodiversity and potential threats to biodiversity in sanctuaries.

#### **Monterey Bay National Marine Sanctuary Completes Five-Day Deep-Sea Research Expedition**

Monterey Bay National Marine Sanctuary (MBNMS) has once again partnered up with the Monterey Bay Aquarium Research Institute (MBARI) to conduct deep-sea research in MBNMS. Led by Chief Scientist Dr. Jim Barry (MBARI), Dr. Andrew DeVogelaere (MBNMS Research Coordinator) and MBARI and MBNMS research staff recorded observations and conducted experiments in Monterey Canyon and Sur Ridge, at depths from 200 to over 3,000 meters. Sur Ridge is a Sanctuary Ecologically Significant Area (SESA), and is home to a diverse assemblage of deep-sea corals and sponges, similar to that on Davidson Seamount. Most of the deep-sea corals that transplanted in a previous cruise in June 2016 were thriving. More corals were transplanted on this cruise, and will be re-visited in the future. Other experiments included measuring particle flow in sponges and tunicates, and many specimens were collected for aquaria at MBARI, and more were preserved for identification. You can read a daily summary of the expedition at

<http://sanctuarysimon.org/news/2016/08/research-expedition-blog-rv-western-flyer-august-24-28-2016/>

Basic exploration of the Sanctuary is a mission objective, and the success of transplanted corals breeds hope for developing methods to transplant deep-sea corals should a future crisis arise that necessitates such action. Sur Ridge has only been explored since 2013, exclusively by MBNMS and MBARI, and is home to deep sea corals and sponges that can live for centuries. It is critical to understand where these organisms live for baseline characterization as well as protection.

## **MBNMS Research Activity Panel Meets at Moss Landing Marine Labs**

On September 9th, the MBNMS Research Activity Panel (RAP) met at Moss Landing Marine Laboratories (MLML) in Moss Landing, CA. Agenda items included: recent MLML activities; summary of June and August SAC meetings; RAP action plan on long-term monitoring; sanctuary small boat mission needs and requirements; and RAP member disciplines. The MBNMS Research Activity Panel (RAP) is a working group of the MBNMS Advisory Council. The RAP meets six times per year, and advises SAC and sanctuary staff on basic and conservation science issues.

## **RESOURCE PROTECTION**

### **Irrigated Lands Regulatory Program**

Agricultural runoff into the Monterey Bay National Marine Sanctuary is governed by the Central Coast Regional Water Quality Control Board through the Irrigated Lands Regulatory Program, which is due to be updated in March 2017. At the hearing, the Board expressed an interest in working more closely with MBNMS in the future. The public informational meeting and comment period for this next version of this regulatory program provides stakeholders the opportunity to provide input on the proposed new regulation. On 7/28/16 the Agricultural Water Quality Coordinator participated in the first informational meeting, which included an overview of the process and areas where changes in regulation are likely to occur. Water quality regulations governing agriculture can significantly impact water quality entering the Monterey Bay National Marine Sanctuary as well as influencing the sustainability of agriculture.

### **Soberanes Wildfire Impacts to MBNMS**

MBNMS staff are coordinating with the Incident Command (IC) for the [Soberanes Forest Fire](#) that has thus far burned over 60,000 acres of coastal forest immediately adjacent to the sanctuary's Big Sur coast. MBNMS has identified for the IC Natural Resources Group sensitive seabird colonies in the response area. Coordinating with USFWS and other natural resource trustees, MBNMS has "requested" that the IC establish aerial avoidance zones, where possible, to minimize collateral impacts to sensitive seabird/marine mammal sites from low-altitude aerial operations, such as aerial collection of seawater for firefighting purposes. Other potential fire response impacts to MBNMS include discharge of fire retardant agents and sedimentation resulting from earth moving activities. The IC has been cooperative in considering MBNMS concerns and implemented proactive measures during the early stages of the fire to protect a group of pre-fledged seabird colonies from potential aerial disturbance. 60,000 acre Soberanes Fire has destroyed 57 homes and 11 outbuildings to date and may eventually consume an additional 100,000 acres of coastal forestlands adjacent to MBNMS. As the fire approaches homes along the coast, firefighting efforts intensify, and the need for ready water resources (such as ocean water) can escalate quickly. It is important that MBNMS and other marine resource trustees remain engaged with the Incident Command to ensure that all environmental aspects of the fire and response are considered as response decisions are made that could cause the collateral loss or damage of protected marine resources realizing personal property protection is also critical. Thus, MBNMS is assisting forward planning efforts to determine what marine resources may be at risk as the fire marches south along the Big Sur Coast.

### **MBNMS Facilitates Discussion about PCBs and Harbor Dredge Materials**

On August 3rd, Resource Protection staff hosted a webinar with US EPA Region 9, US Army Corp of Engineers, and Water Board staff to discuss the high levels of PCBs in the water and sediment of Monterey Bay and their possible connection to dredge material from local harbors. Dane Hardin of the Central Coast Long-term Environmental Assessment Network (CCLEAN) gave a presentation of their latest findings both within the sediment and water column in multiple areas of Monterey Bay. PCBs commonly exceed the CA Ocean Plan 30-day average. PCBs are highly correlated to Chlordanes, Dieldrin, and DDTs. The session was highly informative to the regulatory agencies and there was a commitment to identify additional monitoring designs/methods and studies to better understand and quantify the potential link between dredge disposal and contaminants in Monterey Bay. MBNMS has the responsibility to protect sanctuary resources, especially as it relates to ensuring that the issuance of permits and authorizations do not cause harm. MBNMS staff routinely bring together multiple regulatory and resource agency staff to ensure an ecosystem approach to managing our natural resources.

### **Calculating Retention Time in Bioreactor and Nitrate Removal Rate**

Agricultural management practices for pollutant removal of nutrients and pesticides include bioreactors, which remove nitrate through denitrifying bacteria living in anoxic zones on woodchips in the bioreactor. In order to determine a sampling interval and calculate a nitrate removal rate, it is important to understand the hydraulic characteristics of the

bioreactor. A way to figure out bioreactor hydrology is to run a tracer test on an inert substance that travels through the bioreactor. The week of August 15 the MBNMS agricultural water quality coordinator ran a tracer test on a newly constructed bioreactor located in farm fields that drain into the Moro Cojo Slough. Understanding the performance of management practices and bioreactor structures is important to determining their effectiveness in improving water quality and in sizing them for future use to remove agricultural pollutants and improve water quality entering the MBNMS.

### **MBNMS participates in NOAA advanced level entanglement response training**

On August 31, MBNMS RP coordinator and West Coast Region (WCR) vessel operations coordinator participated in Level 2 whale entanglement response training led by the Justin Viezbicke and Jamison Smith of the NOAA west coast entanglement response team. The full day training included presentations and discussions on particular case study rescues that highlighted safe and effective response techniques for both humans and whales. The afternoon training took place on the water in the small boats and the group practiced techniques to deploy the telemetry gear on a whale trailing fishing gear. As first responders, the WCR office manages the sanctuary related boat responses in Monterey Bay. Whale entanglements continue to increase in Monterey Bay and are identified by the MBNMS as a priority issue as it represents one of the major threats to large whales. Sanctuary staff participates with a number of partners (NMFS Stranding Network, California Whale Rescue, USCG) in the effort to better understand and reduce this threat.

### **CA Public Utility Commission holds all day hearing on CalAm desal project**

On September 1, CPUC Commissioner Sandoval held a morning workshop intended for parties to the proposed desal project proceeding before the Commission and the public. They also held an afternoon public participation hearing to provide a forum for comments on the project and anything related to CalAm's proposed project. MBNMS attended the meetings as Federal lead for the desal project. Lawrence Berkeley National Laboratory presented their peer review of prior work done by Geoscience Support Services aimed at predicting the impact of Cal Am's planned desal wells at the CEMEX site in north Marina on the Salinas Valley groundwater basin. The workshop also featured new modeling done by Hydrofocus. The Commissioner stated that the goal is to release the draft EIR/EIS by or before the Dec. 21, 2017. The next morning, staff also participated a field trip to visit the project facilities. MBNMS has a regulatory obligation and regional interest in ensuring the environmental reviews for desalination projects proposed within Monterey Bay comply with NEPA processes including public review.

### **MBNMS joins State led Dungeness Crab Working Group**

One outcome of an August 2015 public meeting was the need to convene an informal Working Group to further discuss and develop short-term strategies and begin exploring long-term options for reducing the risk of whale entanglements in California Dungeness crab fishing gear. The Working Group met twice prior to the start of the 2015-16 fishing season, and included CDFW and NMFS staff, fishermen, and NGOs. They reconvened in August of 2016, and held a meeting on September 21/22 in Santa Rosa. All recommendations developed by the Working Group will be made available to CDFW, NMFS, the Dungeness Crab Task Force, and other interested parties. MBNMS RP Coordinator will be participating in an advisory role in partnership with NMFS OPR, and will report back to the MB Advisory Council on details of the meeting. Monterey Bay is a hot spot for whale entanglements and the MBNMS Advisory Council has requested that staff have an active role in this issue by participating in the Dungeness Crab Working Group.

## **EDUCATION, VOLUNTEER AND OUTREACH PROGRAMS**

### **Camps use Coastal Discovery Center to enhance marine science programs**

In addition to the 52,000 visitors that come to San Simeon State Beach and Park each year, four separate summer camps who have recently begun using the park have also taken advantage of the Coastal Discovery Center's friendly docents and interactive exhibits to help teach over 400 campers about the marine environment and how to become active ocean stewards. Schools and summer camps are now using the Coastal Discovery Center year-round to enhance their curriculum.

### **Coastal Discovery Center volunteer incorporates plankton into summer bible school's "Deep Sea Discovery" program**

A Coastal Discovery Center docent recently incorporated the Center's plankton lab and activities into her church's summer bible school camp. Using a plankton net, food pyramid blocks and live plankton, students learned about how the smallest things in the ocean help to keep even the largest things alive, and that as stewards of the Earth, students need to protect plankton and the ecosystem they nourish. The message, "Even though you can be very small, you can be the strongest

support for everything on Earth” resonated with 32 children, from pre-K to 5<sup>th</sup> grade. Bringing lessons taught at the Coastal Discovery Center to other organizations strengthen ties between the center and the community. In addition, teaching the plankton program helps to fulfill Ocean Literacy Principle #6, “that the ocean and humans are inextricably linked.”

### **Sanctuary Exploration Center Celebrates Four Year Anniversary**

The Monterey Bay National Marine Sanctuary Exploration Center hosted its annual volunteer appreciation party on the Center’s fourth anniversary, Saturday, July 23rd. Over 50 staff and volunteers attended the celebration to honor the commitment and dedication of the Center’s 73 active volunteers that have logged 25,126 total hours of service in the past four years. The volunteers have educated over 261,560 visitors about the sanctuary through events, field trips, private tours, and during normal operating hours. The Center also highlighted 2015-2016 accomplishments such as the introduction of First Friday events, ROV themed field trips, and an increase in marine debris cleanups. Volunteers play a key role as educators to Exploration Center visitors regarding the protection and the greatness of the Monterey Bay Sanctuary. Without volunteers, the Center would not be able to open its doors and reach a large and broad audience. It is important to recognize the efforts of our volunteers to show our appreciation that their commitment is accomplishing a key Sanctuary goal of education and outreach.

### **Monterey Bay National Marine Sanctuary hosts a NOAA California Salmon exhibit workshop in Santa Cruz, CA**

NOAA’s Monterey Bay National Marine Sanctuary (MBNMS) joined renowned artist Ray Troll, NOAA’s National Marine Fisheries Service - Southwest Fisheries Science Center (NMFS), fisherman Jim Moser, Fishwise, UCSC’s Seymour Marine Discovery Center) in a 2-day messaging and exhibit design/development workshop in preparation for a future exhibit entitled “California Salmon: Connecting the Ocean and Land”. Funded in part by the National Marine Sanctuary Foundation Ernest F. Hollings Ocean Awareness Trust, MBNMS is responsible for developing, designing and communicating the California salmon story to the public through an interactive and engaging exhibit. Using messaging created in this workshop and NMFS funded salmon artwork designed by Ray Troll, an exhibit will be developed to communicate about this iconic and remarkable California salmon. Most Californians have no idea that salmon are an important fisheries in California and that they inhabit a very special place --- our sanctuaries. Salmon is identified by NMFS as a “Species in the Spotlight” and it is a very important in terms of NMFS Endangered Species Act (ESA) and Evolutionarily Significant Unit (ESU).

### **Waves and Wildlife: Temporary Exhibit at the Sanctuary Exploration Center**

On September 2, 2016 the Monterey Bay National Marine Sanctuary Exploration Center partnered with Save Our Shores, a Santa Cruz marine conservation non-profit, for a First Friday art and science night. The First Friday event celebrated the 29 Marine Protected Areas (MPAs) found in the Monterey Bay National Marine Sanctuary with the installment of a temporary and interactive photo exhibit pulled from over 300 submissions entered into the 2016 Waves and Wildlife Photo Contest. Over 120 visitors enjoyed the opening of the temporary photo exhibit and a special screening of *A Wave of Change*, a short film about the implementation and importance of MPAs. Visitors were also encouraged to take a conservation pledge picture in a photo booth in hopes of posting it to social media with the hashtag “Sanctuary Pledge” promoting ocean protection. Community events attract new visitors to the Sanctuary Exploration Center thus reaching a broader audience and educating more people about the Monterey Bay National Marine Sanctuary. Additionally, the new temporary photography exhibit is able to inspire visitors to learn more about Marine Protected Areas within Sanctuary borders and their ecological significance.

### **Cruising for a Cause: A Fundraiser Event at West Marine**

On Friday, August 26, 2016 the California Marine Sanctuary Foundation (CMSF) was selected as a charity partner to participate in West Marine’s Cruising for a Cause charity grand opening event. MBNMS Staff and CMSF tabled an outreach booth with an interactive trivia fishing game. The CMSF was able to raise over \$2,245 from ticket sales and private donations will go towards programs at the Sanctuary Exploration Center. Community events such as Cruising for a Cause bring awareness to the existence of the Sanctuary Exploration Center and engage individuals to learn about Monterey Bay National Marine Sanctuary. Additionally, fundraising efforts from the event support the Exploration Center’s education and volunteer programs.

### **MBNMS delivers seabird program alongside Alfred Hitchcock's, "The Birds"**

Fifty Cambrians were introduced to the wonders of seabirds Saturday evening at a fundraiser for a local non-profit. The goal of the presentation was to highlight the positive attributes of seabirds before a showing of the horror film, "The Birds," by Alfred Hitchcock. The film may have been inspired by a mysterious die-off of sooty shearwaters in 1961 when the birds "rained down" on the housetops of Santa Cruz at 3 am. This story was used as a segue to present the amazing life history of sooty shearwaters, as well other common seabirds seen within MBNMS. National Marine Sanctuaries invests large amounts of time and money into the research, education and protection of seabirds. Outreach events such as this present a great opportunity to inspire the public to protect this important resource.

### **Coastal Discovery Center docents examine exhibits from visitor's point of view**

As part of a fall enrichment series, docents recently participated in an interpreter workshop to increase the effectiveness of visitor interactions. Docents focused on paths of travel taken by visitors, zones of interaction, exhibit themes, welcoming words, and take home messages for each exhibit. The workshop was co-led by CA State Park's Interpreter, Cara O'Brien and MBNMS' Carolyn Skinder. National Marine Sanctuary's visitor center exhibits are used to convey important themes and messages about our national marine sanctuaries. Docents require on-going training to efficiently relay these messages, and they learn new techniques that keep them interested in volunteering.

### **Volunteers assist with booth at Salinas Valley Food and Wine Festival**

MBNMS and five water quality and Team OCEAN volunteers staffed a booth at the Salinas Valley Food and Wine Festival on Saturday August 13th. The Festival was attended by about 5,000 people who enjoyed the sights and sounds of the three block long festival in Old Town Salinas. Eager MBNMS volunteers and staff spoke with about 200 festival participants about MBNMS, volunteer opportunities, fishing issues and demonstrated the watershed model while discussing common urban pollutant issues in residential and commercial areas. Many participants signed up for more information about volunteer opportunities with MBNMS and many more festival goers stopped by and personally thanked the volunteers for their efforts to protect our ocean sanctuary. Participating in festivals and other outreach events provide the general public an opportunity to learn about MBNMS and all of the ways in which MBNMS protects ocean resources. Members of the public that stop by are often not people that seek out MBNMS to learn more, events such as these provide an avenue for communication with an untapped audience eager for information and connection.

### **MBNMS Volunteers Prepare for Rainy Season**

During the week of September 5<sup>th</sup>, three trainings took place in Half Moon Bay, Santa Cruz and Monterey to train volunteers to monitor water quality discharging from urban outfalls during the first rain of the season, which typically occurs during October. MBNMS staff, in partnership with the San Mateo Resource Conservation District and the Coastal Watershed Council (and funded by local cities and counties), trained approximately 60 volunteers who are now on call to mobilize as soon as it begins to rain. On Saturday, September 10<sup>th</sup>, the volunteers met at their respective sites to collect water samples prior to the rains to better understand whether contaminants are present in the runoff during dry weather. In total, 32 outfalls were and will be monitored between Half Moon Bay and Carmel Bay. This will be the 17<sup>th</sup> consecutive year of this program. This program is valuable to the sanctuary and to local stormwater managers both to understand and better manage the water quality running off of urban areas as well as engaging the local residents in environmental protection and stewardship. Because this is the 17<sup>th</sup> consecutive year of this event, we have a robust data set of knowledge and stormwater programs are using it to prioritize their efforts to improve water quality.

## NEWS COVERAGE

### [Undersea habitats need protection, legislator says](http://www.sfchronicle.com/science/article/Undersea-habitats-need-protection-legislator-says-8525290.php)

<http://www.sfchronicle.com/science/article/Undersea-habitats-need-protection-legislator-says-8525290.php>  
San Francisco Chronicle-July 28, 2016

### [Desalination plant would go deep to protect marine life](http://newatlas.com/deep-water-desalination/44662/)

<http://newatlas.com/deep-water-desalination/44662/>  
New Atlas-July 31, 2016

### [Rumors wrongly blame sea otters for Soberanes Fire](http://www.ksbw.com/article/rumors-wrongly-blame-sea-otters-for-soberanes-fire/1297764)

<http://www.ksbw.com/article/rumors-wrongly-blame-sea-otters-for-soberanes-fire/1297764>  
KSBW-August 1, 2016

### [West Marine launches new Santa Cruz test store](http://www.santacruzsentinel.com/article/NE/20160815/NEWS/160819825)

<http://www.santacruzsentinel.com/article/NE/20160815/NEWS/160819825>  
Santa Cruz Sentinel-August 15, 2016

### [Summer whale watching in California: Where to see blues, humpbacks and even sharks](http://www.latimes.com/travel/deals/la-tr-california-whale-watching-sharks-20160813-snap-story.html)

<http://www.latimes.com/travel/deals/la-tr-california-whale-watching-sharks-20160813-snap-story.html>  
Los Angeles Times-August 17, 2016

### [Beautify Cambria's Pinedorado fundraiser is for "The Birds"](http://www.sanluisobispo.com/news/local/community/cambrian/cambrian-arts-events/article96166632.html)

<http://www.sanluisobispo.com/news/local/community/cambrian/cambrian-arts-events/article96166632.html>  
The Tribune-August 17, 2016

### [Scientists explore wreck of WWII aircraft carrier](http://www.timesheraldonline.com/article/NH/20160822/SPORTS/160829976)

<http://www.timesheraldonline.com/article/NH/20160822/SPORTS/160829976>  
Vallejo Times-Herald-August 22, 2016

### [Cal Am desal project environmental review now at \\$14.3 million, CPUC to hold local public sessions](http://www.montereyherald.com/article/NF/20160826/NEWS/160829765)

<http://www.montereyherald.com/article/NF/20160826/NEWS/160829765>  
Monterey Herald-August 26, 2016

### [Monterey Bay nominated to be UNESCO World Heritage site](http://www.montereycountyweekly.com/news/local_news/monterey-bay-is-part-of-a-proposal-that-would-make/article_ee0269bc-6fb4-11e6-b03e-57a9c477c4eb.html)

[http://www.montereycountyweekly.com/news/local\\_news/monterey-bay-is-part-of-a-proposal-that-would-make/article\\_ee0269bc-6fb4-11e6-b03e-57a9c477c4eb.html](http://www.montereycountyweekly.com/news/local_news/monterey-bay-is-part-of-a-proposal-that-would-make/article_ee0269bc-6fb4-11e6-b03e-57a9c477c4eb.html)  
Monterey County Weekly-September 1, 2016

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Santa Cruz Sentinel-September 10, 2016

### [Local leaders applaud Obama Administration's visit to Central Coast to consider national monument action](http://patch.com/california/santacruz/local-leaders-applaud-obama-administration-s-visit-central-coast-consider)

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Santa Cruz Patch-September 12, 2016

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### [O'Neill Sea Odyssey, a science class on a sailboat, celebrates 20 years](http://www.santacruzsentinel.com/article/NE/20160914/NEWS/160919808)

<http://www.santacruzsentinel.com/article/NE/20160914/NEWS/160919808>  
Santa Cruz Sentinel-September 14, 2016

### [Volunteers clean up area beaches](http://register-pajaronian.com/v2_news_articles.php?page=72&story_id=21950)

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**Web Site** (<http://montereybay.noaa.gov/>)

**Follow MBNMS on Facebook** (<https://www.facebook.com/MBNMS>) and **Twitter** (<https://twitter.com/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](mailto:andrew.white@noaa.gov).*

## **FUN, OCEAN RELATED WEB SITES**

### **Caitlin Seaview Survey**

<http://www.caitlinseaviewsurvey.com>

### **SIMON**

<http://www.sanctuariesimon.org>

### **Seasons in the Sea**

<http://www.seasonsintthesea.com>

### **Waterlust**

<http://www.waterlust.org/about/>

### **Thank You Ocean**

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

### **NOAA Online Media Library**

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

### **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/>

### **Your Sanctuary TV**

<http://yoursanctuarytv.org/>

## **MBNMS STAFF**

**Paul Michel** – Superintendent  
**Dawn Hayes** – Deputy Superintendent

### Research

**Andrew DeVogelaere** – Research Coordinator  
**Erica Burton** – Research Specialist  
**Jennifer Brown** – SIMoN Ecosystem Scientist  
**Steve Lonhart** – SIMoN Senior Scientist  
**Chad King** – SIMoN Data Analyst

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**Liz Love** – Education Specialist  
**Lisa Uttal** – Exploration Center Director  
**Carolyn Skinder** – Southern Region Program Coordinator  
**Chelsea Prindle** – SEC Manager  
**Michelle Berryessa** – SEC Gift and Bookstore Manager  
**Nick Ingram** – Program Assistant (SEC)  
**Jennifer Cormier** – Program Assistant (SEC)  
**Catherine Drake** – Program Assistant (SEC)  
**Tess Bohey** – Program Assistant (CDC)

### Resource Protection

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**Scott Kathey** – Regulatory/Emergency Response Coordinator  
**Sophie De Beukelaer** – GIS Analyst & Research 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  
**Nichole Rodriguez** – Advisory Council Coordinator  
**Andrew White** – Network Manager and Webmaster  
**Richard Stanley** – SEC Maintenance Specialist



## **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://montereybay.noaa.gov/sac/advisory.html>

## **The Office of National Marine Sanctuaries**

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>

## **- Contact Information -**

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