



# Monterey Bay National Marine Sanctuary

## Sanctuary Office Report



Volume 12, Number 4

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

#### **New NOAA report shows significant economic benefits of recreational fishing in California's national marine sanctuaries**

Anglers spent approximately \$156 million on saltwater recreational fishing in California's four national marine sanctuaries on average, which generated more than \$200 million in annual economic output and supported nearly 1,400 jobs, according to a new NOAA report released today. The peer-reviewed report cited data ranging from 2010-2012, the most recent years for which this data is available, from the California Department of Fish and Wildlife. The findings highlight the positive effects and economic value of recreational fishing in the four California sanctuaries--Channel Islands, Greater Farallones, Cordell Bank and Monterey Bay--which are managed to ensure the health of our most valued ocean places. Approximately 13.4 percent of all saltwater recreational fishing in California from 2010 to 2012 took place in national marine sanctuaries, the report states. During the study period, the Greater Farallones sanctuary was called the Gulf of the Farallones; it

was renamed earlier this month. <http://sanctuaries.noaa.gov/news/press/2015/rec-fishing-california.html>

#### **NOAA awards \$88,000 in grant funding to respond to West Coast harmful algal bloom outbreak**

NOAA announced today that it is committing \$88,000 in grant and event response funding for Washington state to monitor and analyze an unusually large bloom of toxic algae off its coast.

During large blooms such as this, the algae, *Pseudo-nitzschia*, can produce a potent toxin that can be harmful to people, fish, and marine mammals. So far this year, the presence of the toxin in Washington state water's has resulted in fishery closures, which can have tremendous economic and ecological effects. In May, the razor clam fishery closed resulting in an estimated \$9.2 million in lost income. The state's commercial crab fishery, worth roughly \$84 million annually, has also been affected. <http://www.noaanews.noaa.gov/stories2015/072315-noaa-awards-88000-in-grant-funding-to-respond-to-west-coast-harmful-algal-bloom-outbreak.html>

#### **Monitoring seawater reveals ocean acidification risks to Alaskan shellfish hatchery**

New collaborative research between NOAA, University of Alaska and an Alaskan shellfish hatchery shows that ocean acidification may make it difficult for Alaskan coastal waters to support shellfish hatcheries by 2040 unless costly mitigation efforts are installed to modify seawater used in the hatcheries. "Our research shows there could be significant effects from ocean acidification on Alaska's emerging shellfish hatchery industry in a matter of two and half decades," said Jeremy Mathis, Ph.D., an oceanographer at [NOAA's Pacific Marine Environmental Laboratory](http://www.noaa.gov/pacific-marine-environmental-laboratory) and a co-author of the study, "[On the Frontline: Tracking Ocean Acidification in an Alaskan Shellfish Hatchery](http://www.plosone.org/doi/10.1371/journal.pone.0150701)," appearing today in *PLOS ONE*. "We need to continue to partner with industry and other stakeholders to make sure we're providing the environmental intelligence needed by industry to answer key questions and make decisions to meet these challenges."

<http://www.noaanews.noaa.gov/stories2015/20150701-monitoring-seawater-reveals-ocean-acidification-risks-to-alaskan-shellfish-hatchery.html>

## **NATIONAL MARINE SANCTUARY NEWS**

### **National Weather Service visits the Eco-Discovery Center**

On Saturday, June 20, the topic for the monthly Discovery Saturday children's program at the Eco-Discovery Center was Weather, Wind & Water. Special guests were Liz, Brandon and Krizia Negron Hernandez from the National Weather Service Weather Forecast Office in Key West. The children participated in several crafts and activities to help them learn about lightning, weather balloons, hurricanes and storm preparation. Each child also created their own weather 'satellite' to take home. Discovery Saturday, for children in kindergarten through fifth grade, is held at the Florida Keys Eco-Discovery Center on the third Saturday of each month. Educational programs at the Eco-Discovery Center help fulfill the educational mission of the center and also bring the Sanctuary's message of environmental stewardship to the youth of the Florida Keys.

### **Mid-Atlantic Fishery Management Council Meeting Virginia Beach**

Paul Ticco attended a meeting of the Mid-Atlantic Fishery Management Council Meeting in Virginia Beach where the Council approved an amendment to protect deep sea corals from the impacts of bottom-tending fishing gear in fifteen Mid-Atlantic canyons. If approved by the Secretary of Commerce, the amendment will create deep sea coral zones in areas where corals have been observed or where they are likely to occur. Within these zones, fishermen will not be allowed to use any type of bottom-tending fishing gear such as trawls, dredges, bottom longlines, and traps. In total, the areas proposed for deep sea coral zone designation encompass more than 38,000 square miles. Under the Magnuson-Stevens Act, regional fishery management councils have the authority to designate zones where, and periods when, fishing may be restricted in order to protect deep sea corals. This provision has been in place since 2007, but the Mid-Atlantic Council will be the first of the eight councils to exercise this authority. The Council vote to establish these coral protection zones is important to ONMS and the NEGL Region as a possible step to begin working with communities and partners who have shown an interest in creating new sanctuary sites in some of the offshore canyon areas.

### **Helping a fellow sanctuary with lionfish removals**

This week, the National Marine Sanctuary of American Samoa Research Coordinator joined the dive team of Flower Garden Banks NMS on one of their research cruises to remove invasive lionfish. Teams conducted surveys of lionfish and large predators and removed lionfish at East and West Flower Garden Banks and at Stetson Bank. Two years earlier, Flower Garden Banks NMS staff Michelle Johnston was helping to remove invasive crown-of-thorns starfish in American Samoa. Sharing divers between sites allows each site to accomplish more underwater.

### **GRNMS Divers Service Telemetry Array**

Divers boarded the *R/V Sam Gray* on June 30th to recover and replace five acoustic receivers deployed in the sanctuary. The receivers are deployed to listen for fish tagged with acoustic transmitters. In addition to conducting this regular maintenance, the team surveyed for lionfish at four sites. No lionfish were observed during 80 minutes of surveys (20 minutes per site). Lionfish have not been observed during winter months in Gray's Reef (likely the result of cold water temperatures), and are typically seen each summer by May or June. None have been observed in Gray's Reef in 2015. The trip was also an opportunity to conduct a check out dive for Chris Hines, the Executive Director of the Gray's Reef National Marine Sanctuary Foundation who will soon become a Team Ocean NOAA Diver.

### **Hollings Scholar leads Junior Oceanographer Summer Camp for Olympic Coast youth**

Olympic Coast National Marine Sanctuary Hollings Scholar Billie Case developed and led a four-day summer camp program for fourteen children ages ten to twelve in partnership with Feiro Marine Life Center in Port Angeles, WA. Campers used explorative and hands-on activities to learn about regional marine life as well as nautical history and technology. Looking to human history and marine organism adaptations, campers learned about communication, navigation and exploration techniques within the ocean realm.



## MONTEREY BAY NATIONAL MARINE SANCTUARY NEWS AND PROGRAM UPDATES



### MANAGEMENT

#### **Monterey Bay National Marine Sanctuary Advisory Council Meets in Carmel**

On June 19<sup>th</sup>, the MBNMS Advisory Council met and received a series of presentations and updates on harmful algal blooms, an overview of the preliminary findings from the Davidson Seamount research mission, the Sanctuary's spill response plan and an update on the Management Plan Review process schedule. Letise LaFeir, from the Monterey Bay Aquarium, was sworn-in as the new alternate for the Conservation seat. Elizabeth (Tucker) Hirsch, from National Geographic, was sworn-in as the new primary for the Education seat. The next Advisory Council meeting will be with Greater Farallones National Marine Sanctuary Advisory Council on August 19<sup>th</sup> in Half Moon Bay. 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.

#### **MBNMS attends quarterly Big Sur Multi-Agency Advisory Council meeting**

The Big Sur MAAC is a unique entity that is chaired by Congressman Sam Farr and Supervisor Dave Potter, and includes local, state and federal agencies as well as local stakeholders including the Big Sur Chamber, the Coast Property Owners Association and a Big Sur Resident seat. Monterey State Park District presented a report on aquatic fatalities citing 71 over the past 15 year period for various reasons (diving, swimming, suicide, etc), and specific concerns at Monastery Beach. There was a lively discussion on how to fund and install temporary bathrooms along the coast to accommodate the increased tourist visitation. Each of the seats reported out to the community on items of interest, followed by questions from the community members. MBNMS topics included the upcoming management plan review, desalination projects, May's Davidson Seamount/Sur Ridge cruise, and the June Get into Your Sanctuary event. The agencies represented include Caltrans, Coastal Commission, Regional Parks, State Parks, Forest Service, and Assemblymember Monning and Stone's office. This almost 30 year Advisory Council was founded by Leon Panetta and others to increase communication and coordination on issues in the Big Sur community, and continues to be an effective forum for discussing issues, challenges, ideas and solutions.

#### **Recreation and Tourism Subcommittee Met in Monterey**

On July 22<sup>nd</sup>, a core group from the Sanctuary Advisory Council's Recreation and Tourism Subcommittee members met to discuss the latest and upcoming Sanctuary events. MBNMS Staff, Deirdre Whalen, provided an overview of the Get Into Your Sanctuary results. Recreation & Tourism subcommittee members heard about the various activities that occurred over the weekend including: the Elkhorn Slough Safari with children from the Boys and Girls Club of Monterey County; yoga on Del Monte beach in Monterey; and a kayak trip in San Simeon through "Sea for Yourself Outfitters." Next year, efforts should be made to enhance the social media effort by concentrating more on Twitter and Instagram. Those platforms would be easier to use and could reach a younger target group. Additional, tangible advertising materials such as Get Into Your Sanctuary flags or signs would be more valuable for fostering more attention at the booths/activities planned. Members received updates regarding the Big Blue Live BBC/PBS program featuring Monterey Bay. Episodes will air at the end of August and in early September. Subcommittee members shared updates going on in their respective constituencies and their involvement during the Get Into Your Sanctuary weekend. Brian Nelson provided an update on the Business and Tourism Newsletter, highlighting the top sections receiving the most attention from viewers: #1 "Seasons of the Sea" and #2 NOAA Wildlife Calendar. The Recreation and Tourism Subcommittee strives to aid MBNMS in cross promotion opportunities and to partner with local businesses to boost awareness of the Sanctuary.

## RESEARCH AND MONITORING

### MBNMS Research Activity Panel Meets at CSU Monterey Bay

On July 10th, the MBNMS Research Activity Panel (RAP) met at California State University Monterey Bay (CSUMB), in Seaside, CA. Agenda items included: Monterey Bay Aquarium Conservation Science Research Update, CeNCOOS Update, Sanctuary Advisory Council Update, Condition Report Update, Management Plan Update, NOAA Ship *Bell M. Shimada* Cruise Summary, and Collaborative Fisheries Research. 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

### MBNMS responds to Large Scale Sewage Spill in Pacific Grove

On Monday, May 18, Monterey Regional Water Pollution Control Agency (MRWPCA) encountered mechanical problems at their pump station #13 in Pacific Grove yesterday and discharged untreated wastewater (sewage) into the Sanctuary. According to the MRWPCA, approximately 220,000 gallons of wastewater was released into the ocean from Pump Station #13. There were a number of factors that led to the extended release of wastewater to the ocean. Once the pump station was cleared of wastewater and repairs were made, the bypass pumping resumed and wastewater releases to the ocean ceased at 5:22 p.m. No wildlife marine mammals or birds were on the water near the visible brown plume, but cormorants were present on an offshore rock adjacent to the plume.

The following response actions were taken:

- Monterey County Comms issued a reverse 911 alert to PG residents requesting they halt flow from toilets, bathtubs, and sinks
- MRWPCA partially closed valves at upstream stations to slow effluent entering Pump Station #13.
- Three Vac trucks were brought in to pump several thousand gallons out of the lift station so crews could access the failed valve.
- Oceanview Blvd and the Rec Trail were closed to traffic near the spill site.
- Lovers Cove Beach and 1 mile of the shoreline on either side of the spill site were closed to the public and posted by MoCo Health Dept (Environmental Health Specialist Ishmael Chavira, 831-647-7867).
- Monterey County Health Dept and MRWPCA collected water samples at the incident location.
- USCG smallboat initially monitored nearshore waters to keep public away from discharge site
- USCG issued a security broadcast warning the public to avoid contact with the water in the area of the spill.
- MBNMS staff joined a post-spill briefing at MRWPCA to provide input on how to prevent this situation from happening again.

Media were onsite and interviewed Sanctuary staff: <http://www.ksbw.com/news/100000-gallons-of-raw-sewage-spills-into-ocean-at-lovers-point/33088136>. Sanctuary resources can be negatively impacted by sewage spills, and having a quick and coordinated response by all involved parties is of paramount importance.

### National Marine Sanctuary and Monterey Bay Aquarium Meeting

On May 28, 2015, leadership for the MBA, MBNMS and WCRO met to discuss current priorities on resource protection, research, education and outreach. With new MBA staff coming onboard, such as Brendan Kelly, Director for Conservation Research; Chief Scientist, and Letise LaFeir, CA Ocean Policy Coordinator, it's important for us to communicate periodically on issue of interest and overlap. For example, the BBC Big Blue Live broadcast is coming up in August, and both organizations are involved with the planning. Follow up is occurring on a number of fronts. The Aquarium is an important partner, and increasing our coordination, communication and collaboration will support both organizations.

### **Experimental Cleanup of Metal Fragments in Rocky Intertidal Habitat**

On April 29th, May 12th and May 22nd, staff from MBNMS and WCRO conducted manual cleanup operations at the former wreck site of the S/V BLUE MIST, a sailboat that ran aground at Point Piedras Blancas in January 2014. The keel of the vessel was filled with hundreds of thousands of sheet metal punch-out slugs for ballast that spilled into a lush rocky intertidal habitat when the fiberglass keel and hull broke open on the rocks. Subsequent site surveys detected an unexpected persistence of the metal in situ and direct negative impacts upon habitat and intertidal organisms, including mortality of several ESA-listed black abalone. MBNMS has successfully experimented with the use of magnets for removal of loose metal slugs, but concentrations of the ballast material have formed hardened, compacted, steel gravel mats through oxidation that pose a challenge for removal. The steel conglomerates have settled in the crags and crevices of rocky tide pools, presenting a significant challenge for removal without re-suspending loose slugs back into the surf zone, where they act as abrasives against the shells of mollusks and crustaceans. The cleanup effort will provide a better understanding of techniques necessary to address similar risks from future groundings. It is also important to safeguard ESA critical habitat and species located in the state marine reserve where the wreck occurred. Five of eight black abalone present at the impact site have perished, while abalone abundance in 20-year research sites just meters away has remained stable.

### **California National Marine Sanctuaries and Ocean Protection Council Coordination Meeting**

On May 29, 2015, Cat Kuhlman, OPC Director, Bill Douros, WC Regional Director, the four California Superintendents, and Resource Protection staff met for a day at the Exploration Center in Santa Cruz to discuss a myriad of initiatives including: a central coast regional WQ program, desalination, climate adaptation, vessel groundings, whale disentanglement, SAC participation and marine debris. The dual purposes of the meeting were to share information on the above issues so that our partners are better informed, and to identify areas of overlap to improve communication and collaboration. In the period from 2007 to 2015, ONMS contributed an excess of \$8M to assist the state with MPA implementation in the areas of research and monitoring, enforcement and compliance and education and outreach and this information was discussed and provided in a letter to the Secretary. Also, the MPA Collaborative groups coming onboard now provide another venue to enhance communications. Follow up action items were identified, and the group plans to meet annually in the future. Our state partners are important and we share a strong mutual interest in ensuring the successful implementation of the statewide network.

### **Monterey Bay National Marine Sanctuary and Monterey Bay Research Aquarium Institute Research Permit Discussion**

On May 28, 2015, MBNMS staff hosted MBARI's president and CEO for an engaging discussion about a variety of permitted research that MBARI conducts within MBNMS. The discussion ranged from the nearshore to the offshore environment and covered the current massive domoic acid event in Monterey Bay, the roles of MBNMS and MBARI staff working on the Marine Biodiversity Observation Network (MBON) project, the hydrophone on MARS observatory, the coordinated canyon experiment and how MBARI is developing more effective tools for underwater visualization to work on a variety of projects including imaging for rockfish. Sustaining a solid collaboration with an innovative and top notch research center has a significant positive impact on the research that MBNMS staff are able to conduct within the Sanctuary. Further, research results can be applied to managing Sanctuary resources.

### **MBNMS and California State Lands Commission release a joint Notice of Intent**

On June 1, MBNMS released an NOI to prepare an environmental impact statement and hold a scoping meeting regarding a proposed Monterey Bay Regional Water Project Desalination Facility. DeepWater Desal, LLC

submitted a permit application to both agencies to construct and operate a seawater reverse osmosis desalination facility and co-located seawater-cooled 150-megawatt computer data center campus project at Moss Landing, Monterey County, California. CSLC and MBNMS, as CEQA and NEPA lead agencies respectively, will prepare a joint EIR/EIS to identify and assess potential environmental impacts associated with the proposed Project. A public meeting was held on Tuesday, June 16, 2015 at Moss Landing Marine Labs at 2:00pm and 4:00pm. Comments were submitted at: <http://www.regulations.gov/#!docketDetail;D=NOAA-NOS-2015-0069>, and were due by July 1, 2015. Public involvement is an important part of NEPA, and is designed to ensure that the public has the opportunity to comment and contribute to those decisions in an environmentally significant way (NEPA Handbook May 2009 version).

**Monterey Bay NMS's Water Quality Protection Program Participates in Worldwide Ocean Sampling Day**  
MBNMS' Water Quality Protection Program was the Northern CA Hub for the second annual Ocean Sampling Day (OSD) on June 21<sup>st</sup>. This worldwide event is coordinated by the Max Planck Institute for Marine Microbiology in Bremen, Germany with the intent to analyze marine microbe biodiversity and function in our world's oceans. In 2014, over 150 samples were collected from all continents, ranging from subtropical waters in Hawaii to extreme environments such as the Fram Strait in the Arctic Ocean. OSD includes participation by worldwide scientific experts as well as citizen scientists. In Central CA, samples were collected off the Marin Coast (2), Santa Cruz (2), Monterey Wharf, Monterey Bay Aquarium, and Stillwater Cove. This was an exciting opportunity for the sanctuary program to partner with other NOAA line offices to participate in this important worldwide effort. By mapping the current microbial diversity in all of the world's oceans, we are able to establish a baseline of current conditions and will be better informed thanks to improved technological advances that make this effort possible.

#### **MBNMS Hosts Public Scoping for Deepwater Desalination Project**

On June 16<sup>th</sup>, MBNMS, in partnership with California State Lands Commission, hosted two public scoping meetings at Moss Landing Marine Labs to provide opportunity for the public and agencies to voice concerns, support or questions regarding the 25,000 acre foot year (AFY) proposed desalination facility. The project consists of an open ocean intake, desalination facility, data center, and brine discharge outfall to the ocean. A federal register notice for a joint NOP/NOI was posted on June 1<sup>st</sup> (Docket number NOAA-NOS-2015-0069). The public comment period ended on July 3<sup>rd</sup> at 5:00 pm. As federal NEPA lead, MBNMS is responsible to ensure that any issues or concerns regarding possible impacts to MBNMS from a desalination facility are addressed by a thorough and proper process for environmental review.

#### **USDA's NRCS Committed to Supporting the Agriculture Water Quality Alliance (AWQA)**

USDA's Natural Resources Conservation Service (NRCS) approved a two-year contract with the California Marine Sanctuary Foundation to partially fund MBNMS' Agriculture Water Quality Coordinator to ensure the continued facilitation of the nationally recognized Agriculture Water Quality Alliance (AWQA). AWQA was formed in 2000 and its vision statement is Together we will protect and enhance water in the Monterey Bay National Marine Sanctuary and the adjacent watersheds while sustaining a world class production agriculture region through voluntary collaboration with managers of agricultural and rural lands. In order to ensure a healthy productive ocean environment, it is critical to understand and manage the quality of water flowing into MBNMS. This program has established a solid foundation of collaboration and technical expertise to support central coast agriculture in implementing best practices to reduce runoff and pollutant loads associated with agriculture operations.

### **Draft Stormwater 14 year Report completed for MRSWMP**

The Water Quality Protection Program Team completed a draft 14 year report for the Monterey Regional Stormwater Management Program ((MRSWMP) 6 cities and unincorporated Monterey County). The report includes data collected at urban outfalls by volunteers following protocols for the First Flush program since 2000. Data includes both dry and wet weather results. Analysis was performed to compare pre-permit and post-permit pollutant concentrations, 85th percentiles for pollutants measured, trend analysis of pollutant concentrations at outfalls, and instantaneous load at outfalls clustered by city. Pre and post permit results indicate statistically significant decreases in pollutant concentrations for several heavy metals and nitrate in both wet and dry weather conditions at multiple outfalls since the MS4 Phase II permits were issued and implemented. The report is currently being reviewed by MRSWMP participants and will be finalized in late August. MBNMS volunteer water quality monitoring programs provide an opportunity for public participation and outreach while collecting valuable information as to the condition of water quality flowing into MBNMS and the effectiveness of management efforts in local cities to reduce contaminants in the runoff.

### **A third desalination project proponent holds scoping meeting for CEQA**

On July 8<sup>th</sup>, MBNMS staff attended a public scoping meeting for the Peoples Moss Landing desalination project. This project is proposed by the Moss Landing Green Commercial Park, LLC and will include an open ocean intake and outfall, both located within MBNMS, to produce approximately 15 million gallons per day of potable water. This is the third large scale desalination project to be proposed within Monterey Bay. Currently, MBNMS is the federal NEPA lead for the other two desal projects and is communicating with this latest project proponent. California is currently experiencing a historical drought and even before that, the Monterey Peninsula region was working to find an alternative water supply due to a Cease and Desist Order issued by the state to reduce over pumping from the Carmel River watershed. MBNMS has a desal action plan and guidelines and is intent on ensuring minimal impact to Monterey Bay as a result of these potential projects.

### **West Coast Resource Protection Coordinators Meeting**

MBNMS participated in the west coast Resource Protection Coordinators meeting coordinated by the West Coast Regional Office and held in Moss Landing on July 13-15. A number of important resource protection issues affecting multiple west coast sites were discussed, including enforcement, vessel groundings, noise in the ocean, seabird disturbance, and new management review processes. The group identified five key RP priorities to work on over the next few years, and will developing approaches together. The group also intends to expand participation next year by inviting RP folks from other sites and regions. Coordination and information sharing between the 5 west coast sanctuaries from Channel Islands to Olympic Coast helps individual sanctuary staff learn from each other.

### **Whale Entanglement Responses Continue in MBNMS**

On July 6 highly trained volunteer teams with support from the R/V Fulmar and crew successfully disentangled a juvenile humpback whale near Santa Cruz that had become bound by lines from a crab pot that cut into its skin, damaged the jaw and threatened to amputate one flipper. The R/V Fulmar was engaged for 3 days during this rescue operation taking place over the 4th of July weekend. On July 16, a second humpback was identified and while entangled moved in and out of the Bay over a period of days. Telemetry was deployed and the whale started moving down the coast south to Piedras Blancas. On July 20th a third humpback entanglement was reported by the Fast Raft operator. Blue Ocean Whale Watch was able to stand by until Marine Life Studies vessel transited from Monterey to do the initial analysis. Whale entanglements are increasing and are identified by the West Coast Regional Resource Protection Coordinators as a priority over the next 5 years as the issue represents one of the major threats to large whales. Sanctuary staff participates with a number of partners

(NMFS Stranding Network, WET Responders, USCG, and multiple whale watch operators) in the effort to better understand and reduce this threat.

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

### **Areas of Special Biological Significance Summer Mooring Field Testing Kicks Off!**

On Monday May 25th WQPP team member Lisa Emanuelson and a WQPP volunteer, collected water samples from the mooring field in Stillwater Cove, Pebble Beach. Seawater samples are collected and tested for copper, zinc, oil and grease, fecal indicator bacteria, ammonia and residual chlorine as part of the Areas of Special Biological Significance (ASBS) Special Protections. In the summer 2014 and now in 2015 samples are collected monthly from May through September, in the mooring field to determine if any contaminants are entering the ASBS from boats moored in the anchorage. Sampling is conducted on holiday weekends when boat traffic in the cove is expected to be high. Future sampling days are June 21st, July 5th, August 16th and September 7th. Testing of ocean waters in areas of high boat traffic or use is important for general knowledge about the health of the sanctuary. The ASBS program partnership provides a vehicle for the MBNMS to learn more about water quality in the sanctuary. Utilizing volunteers for water quality testing furthers the commitment and connection to the communities that surround the MBNMS.

### **Staff Attend National Education Coordinator's Meeting**

Education staff participated in four full days of meetings and activities at OCNMS, and appreciate the thoughtful and informative agenda covering everything from strategic planning, grants, economic values, ocean and climate change, the Big Eddy and more. Ocean literacy, outreach and education are critical components of the sanctuaries mission.

### **General Brochure Revised**

MBNMS is close to finalizing a revision of its general brochure, one of the most widely used print pieces for educating the public about the sanctuary. Ocean literacy, public outreach and education are critical components of the sanctuaries mission.

### **Sanctuary Exploration Center Volunteers participated in MBARI Guided Tour**

On Tuesday May 13<sup>th</sup>, 20 Sanctuary Exploration Center volunteers participated in a private tour of the Monterey Bay Aquarium Research Institute. Host Kim Fulton Bennett, MBARI Public Information Specialist gave a presentation on MBARI's deep sea research and toured the group through some of the research facilities. The highlight of the trip was being able to see the ROV Ventana up close! Gaining first-hand experience with research activities helps volunteers communicate and connect with visitors at the Exploration Center.

### **Students from Bolsa Knolls Middle School's ROV Club Visited the Sanctuary Exploration Center**

On May 22<sup>nd</sup> students from Bolsa Knolls Middle School's ROV visited the Sanctuary Exploration Center for a guided tour and to test out their ROVs in the Centers deep-sea canyon exhibit. The students not only received a "technology in research" themed tour of the center, but also had the opportunity to demonstrate their custom ROVs. This team had recently participated in a regional ROV competition where their ROVs completed "challenges" similar to regular tasks research ROVs complete in the ocean. The Sanctuary Exploration Center has acquired ROV kits to use with students and public groups at the Center. This visit enabled us to see how students customize these kits and use them in competitions.

### **Sanctuary Exploration Center Hosts Guest Speaker, Dr. Robert Vrijenhoek –Senior Scientist at MBARI**

On Wednesday May 27th, The Sanctuary Exploration Center's monthly volunteer enrichment series featured Dr. Robert Vrijenhoek –Senior Scientist at MBARI. Dr. Vrijenhoek gave an engaging presentation on "The Secret



Lives of Bone Eating Worms: Ocedax”. The Exploration Center’s whale fall exhibit features Ocedax, a species which is often overlooked but has a fascinating life history. Volunteers now have a suite of interesting stories and interpretative tips to engage visitors in this “weird”, unusual topic. Monthly enrichments give Exploration Center volunteers in depth knowledge or experiences to better communicate SEC exhibits to the public. Additionally, they provide an opportunity for socializing and camaraderie, which strengthens the sense of community at the center.

### **Interns from CA Polytechnic State University enhance education programs at Coastal Discovery Center**

Four interns from Cal Poly completed projects to enhance public education programs in the areas of bioacoustics, revision of CA State Park and MBNMS’s Junior Ranger Guide and signage for a shore whaling exhibit at the Coastal Discovery Center in San Simeon. In addition to fulfilling the education missions of California State Parks and the Monterey Bay National Marine Sanctuary, interns also learned career skills that will assist them after graduation. Internships provide students with opportunities to expand their learning beyond the classroom and into real world working situations. This internship program cements the partnership between MBNMS and higher education institutions such as Cal Poly, and will continue into the future.

### **MBNMS links research to the Cambria Community via Discover Your Central Coast lecture series**

In its seventh year, MBNMS’ Discover Your Central Coast lecture series hosted three engaging speakers involved in research close to home in the Cambria and San Simeon areas. The first speaker, Holly Fearnbach from NOAA’s Southwest Fisheries Science Center, spoke about her work on bottlenose dolphin and orca population assessments and how pictures taken by drones help assess cetacean health. As a participant in the annual grey whale count at Piedras Blancas Light Station each spring, Holly showed recently taken pictures of healthy and underweight mother/calf pairs taken from a drone over 100 ft above the whales. The second speaker, Joe Burnett from the Ventana Wildlife Society, spoke on the status of the CA Condor population of Big Sur, with exciting news of the release of seven Condors in the hills above Cambria and San Simeon! The last speaker, Grant Waltz from CA Polytechnic State University spoke about the current state of Pismo clam populations along the central coast of California. The city of Pismo Beach, Cal Poly, and the CA Department of Fish and Game have partnered to begin understanding the factors which led to the demise of this once abundant bivalve. Preliminary studies have identified inconsistent abundance of legal size clams found in the intertidal versus subtidal zones. These results have spawned many additional projects to be completed at Cal Poly, including settlement project, a predator exclusion survey, and subtidal diving studies along the coast. One of the duties of MBNMS educators is to bring current research to the general public. The lecture series held in Cambria over the last seven years has helped to relay the results of relevant research at universities and government agencies to the general public, as well as strengthen overall partnerships.

### **Get Into Your Sanctuary a Great Success**

To celebrate Get into Your Sanctuary weekend, staff held two events in the Monterey area. We hosted 20 students from the Boys & Club for a Slough Safari trip, a two-hour boat excursion of Elkhorn Slough. The kids were thrilled to see sea otters, harbor seals, sea lions and a variety of birds. In addition 13 adults joined us for a relaxing morning of yoga on the beach. These events raise awareness of sanctuaries as iconic destinations for recreation and tourism, and encourage public use of national marine sanctuaries.

### **Coastal Discovery Center Helps Celebrate Summer Solstice!**

MBNMS’ Coastal Discovery Center helped to celebrate an annual tribute to the sun, nature and CA State Parks by joining partners in land and ocean conservation at a Summer Solstice event in Morro Bay. Center displays and activities included creating an Ocean Pledge weave -mural, and matching underwater sounds to pictures as part of an underwater bioacoustics display. Interns from CA Polytechnic State University used DOSITS’ Discovery of Sound in the Sea program to create the display. The Central Coast State Parks Association put on

the June 20th event. Celebrating outreach events with key partners increases communication and the exchange of ideas, and strengthens shared goals. Public events are also a good venue for introducing new activities, such as the underwater bioacoustics game.

### **Kayakers at San Simeon Cove Get Into Their Sanctuary**

The MBNMS office in San Simeon invited volunteers and partners from BLM and CA State Parks to kayak beautiful San Simeon Cove as part of Get Into Your Sanctuary weekend. Kayakers experienced lush kelp forests, seabirds feeding on bait balls, curious harbor seals and discovered a new colony of elephant seals on the other side of the cove! The weekend also included a presentation to the public on marine mammals of the central coast, and activities on the beach, at the pier and in the Coastal Discovery Center. Participants who completed a San Simeon Cove scavenger hunt could enter a drawing for a free tee shirt. These events raise awareness of sanctuaries as iconic destinations for recreation and tourism, and encourage public use of national marine sanctuaries. Inviting partners to join us in activities promotes goodwill and an increased sense of community.

### **Sanctuary Classic Launched**

The annual summer-long Sanctuary Classic event is now underway. Staff have worked hard to advertise this free, fishing photo contest that promotes sustainable recreational fishing in National Marine Sanctuaries. For more information visit [www.sanctuaryclassic.org](http://www.sanctuaryclassic.org). An overarching goal of the NMS System is to facilitate sustainable uses and recreation in national marine sanctuaries.

### **Urban Watch Dry Weather Monitoring Program Begins in Pacific Grove**

The seventeenth consecutive year of Urban Watch began in Pacific Grove, CA this month. The Urban Watch Program is a dry season monitoring program in which sanctuary staff and citizens monitor runoff from 8 storm drain outfalls using various protocols for field kits, meters and laboratory analysis. Trash assessments have also been included the last few years to help the city meet its stormwater permit requirements. Outfalls are monitored twice a month from June through October. This program is another example of a long-term successful partnership between the sanctuary and City of Pacific Grove to characterize urban runoff flowing from Pacific Grove streets. Through funding provided by the City, sanctuary staff are able to educate the public about human impacts to water quality while collecting valuable, reliable data to be used for management decisions by local jurisdictions.

### **Humpback Whale Entertains International Visitors in San Simeon Bay**

For a little over two weeks, four humpback whales, including a small juvenile, have been feeding on anchovy in San Simeon Bay. Summer visitors from all over the world come to see Hearst Castle, the elephant seals and recently, the added bonus of viewing humpback whales feeding and breaching in the bay, and sometimes vocalizing right under the pier! In addition, bottlenose dolphin, harbor seals, sea lion and seabirds such as sooty shearwaters have also been taking advantage of the forage fish. Docents at the Coastal Discovery Center (CDC) are joining visitors at the pier to answer questions on the life history of dolphin, whales and seabirds, the Marine Mammal Protection Act, and the significance of the Monterey Bay National Marine Sanctuary. Interactions of CDC docents with visitors for this month has increased 41 percent compared to our average visitor counts in July over the last eight years. This spike in interactions leads to increased awareness and stewardship behavior of visitors to the MBNMS.

See: <https://www.facebook.com/MBNMS/videos/vb.99323009915/10153544053039916/?type=3&theater>

## NEWS COVERAGE

### [Lovers Point ocean water declared clean enough to swim in after](http://www.ksbw.com/news/lovers-point-ocean-water-deemed-clean-enough-to-swim-in/33155288)

<http://www.ksbw.com/news/lovers-point-ocean-water-deemed-clean-enough-to-swim-in/33155288>  
KSBW The Central Coast-May 21, 2015

### [Dan Haifley, Our Ocean Backyard: Above an undersea mountain](http://www.santacruzsentinel.com/environment-and-nature/20150523/dan-haifley-our-ocean-backyard-above-an-undersea-mountain)

<http://www.santacruzsentinel.com/environment-and-nature/20150523/dan-haifley-our-ocean-backyard-above-an-undersea-mountain>  
Santa Cruz Sentinel-May 23, 2015

### [Toxic algal bloom detected in Monterey Bay](http://www.montereycountyweekly.com/blogs/news_blog/toxic-algal-bloom-detected-in-monterey-bay-don-t-eat/article_d3850e50-055c-11e5-bc1e-4bb36b957375.html)

[http://www.montereycountyweekly.com/blogs/news\\_blog/toxic-algal-bloom-detected-in-monterey-bay-don-t-eat/article\\_d3850e50-055c-11e5-bc1e-4bb36b957375.html](http://www.montereycountyweekly.com/blogs/news_blog/toxic-algal-bloom-detected-in-monterey-bay-don-t-eat/article_d3850e50-055c-11e5-bc1e-4bb36b957375.html)  
Monterey County Weekly (blog)-May 28, 2015

### [Monterey Bay National Marine Sanctuary: Mass die-off could happen from red tide](http://www.ksbw.com/news/monterey-bay-national-marine-sanctuary-mass-dieoff-could-happen/33298396)

<http://www.ksbw.com/news/monterey-bay-national-marine-sanctuary-mass-dieoff-could-happen/33298396>  
KSBW The Central Coast-May 29, 2015

### [Fears Of Toxic 'Red Tide' Cause Shutdown Of US West Coast Fisheries](http://www.techtimes.com/articles/61030/20150616/fears-of-toxic-red-tide-causes-shutdown-of-u-s-west-coast-fisheries.htm)

<http://www.techtimes.com/articles/61030/20150616/fears-of-toxic-red-tide-causes-shutdown-of-u-s-west-coast-fisheries.htm>  
Tech Times-Jun 16, 2015

### [Documentary 'Sand Wars' highlights local, global sand crises](http://www.santacruzsentinel.com/environment-and-nature/20150618/documentary-sand-wars-highlights-local-global-sand-crises)

<http://www.santacruzsentinel.com/environment-and-nature/20150618/documentary-sand-wars-highlights-local-global-sand-crises>  
Santa Cruz Sentinel-Jun 18, 2015

### [Marine Sanctuary explores behemoth undersea volcano](http://www.montereyherald.com/environment-and-nature/20150619/marine-sanctuary-explores-behemoth-undersea-volcano)

<http://www.montereyherald.com/environment-and-nature/20150619/marine-sanctuary-explores-behemoth-undersea-volcano>  
Monterey County Herald-Jun 19, 2015

### [Monterey's Fisherman's Wharf: A more hands-off approach](http://www.montereyherald.com/business/20150627/montereys-fishermans-wharf-a-more-hands-off-approach)

<http://www.montereyherald.com/business/20150627/montereys-fishermans-wharf-a-more-hands-off-approach>  
Monterey County Herald-Jun 27, 2015

### [Harbor District playing key role in Moss Landing desal projects](http://www.montereyherald.com/environment-and-nature/20150625/harbor-district-playing-key-role-in-moss-landing-desal-projects)

<http://www.montereyherald.com/environment-and-nature/20150625/harbor-district-playing-key-role-in-moss-landing-desal-projects>  
Monterey County Herald-Jun 25, 2015

### ['Get Into Your Sanctuary' on Saturday at San Simeon Cove event](http://www.sanluisobispo.com/2015/06/24/3694439/ocean-sanctuary-san-simeon.html)

<http://www.sanluisobispo.com/2015/06/24/3694439/ocean-sanctuary-san-simeon.html>  
The San Luis Obispo Tribune-Jun 24, 2015

### [Entangled humpback freed near Big Sur after 4-day chase](http://www.ksbw.com/news/entangled-humpback-freed-near-big-sur-after-4day-chase/34043902)

<http://www.ksbw.com/news/entangled-humpback-freed-near-big-sur-after-4day-chase/34043902>  
KSBW The Central Coast-Jul 7, 2015

### [Two dolphins die on beach at San Simeon Cove](http://www.sanluisobispo.com/2015/07/08/3713690/dolphins-dead-san-simeon-cove.html)

<http://www.sanluisobispo.com/2015/07/08/3713690/dolphins-dead-san-simeon-cove.html>  
The San Luis Obispo Tribune-Jul 8, 2015

### [Judge extends Cal Am desal EIR comment period, citing potential ...](http://www.montereycountyweekly.com/blogs/news_blog/judge-extends-cal-am-desal-eir-comment-period-citing-potential...)

[http://www.montereycountyweekly.com/blogs/news\\_blog/judge-extends-cal-am-desal-eir-comment-period-citing-potential.../article\\_8e5e9e80-26cd-11e5-a3e6-6fe799280c7d.html](http://www.montereycountyweekly.com/blogs/news_blog/judge-extends-cal-am-desal-eir-comment-period-citing-potential...)  
Monterey County Weekly (blog)-Jul 10, 2015

**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.catlinseaviewsurvey.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**

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**Dawn Hayes** – Deputy Superintendent

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**Bridget Hoover** – Water Quality Protection Program Director  
**Lisa Emanuelson** – Citizen Watershed Monitoring Network Coordinator

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**Erin Ovalle** – Advisory Council Coordinator  
**Andrew White** – Network Manager and Webmaster  
**Vacant** – 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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