



Monterey Bay National Marine Sanctuary

Sanctuary Office Report



Volume 14, Number 2

A REPORT FOR THE SANCTUARY ADVISORY COUNCIL MEMBERS

REPORTING PERIOD: JANUARY 31 – MARCH 27, 2017

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

NOAA research ship returns to Charleston home port after worldwide deployment

On Saturday, March 25th, NOAA's largest oceanographic research vessel, NOAA Ship Ronald H. Brown, returned to its Charleston, S.C., home port after a 1,347-day deployment – the longest of any NOAA ship ever. During its multiyear voyage, the ship traveled nearly 130,000 miles as it conducted scientific research and serviced buoys that collect a wide variety of environmental data.

For full story:

<http://www.noaa.gov/media-release/noaa-research-ship-returns-to-charleston-home-port-after-worldwide-deployment>

Sea Urchins Help Combat Invasive Algae on Corals - Hawaii project aims to clean up reefs in Kaneohe Bay on the island of Oahu

Can tiny sea urchins save a Hawaiian coral reef? In Oahu's

Kaneohe Bay, with a little help from scientists, it appears they can. Kaneohe Bay has been plagued for decades by two species of invasive algae that blanket the native coral reefs, blocking the sun. NOAA and partners developed two methods to destroy the invaders, vacuuming them up, and releasing hungry native sea urchins to munch them away. Since the urchin program started in 2011, hundreds of thousands of baby Hawaiian collector sea urchins (*Tripneustes gratilla*) have been released into targeted areas of the bay to gorge on the algae invaders. Although native to the bay, the collector sea urchin population was too low to battle the invasive algae. Using funds from a ship grounding a decade earlier, officials developed a sea urchin hatchery. For full story:

<http://oceanservice.noaa.gov/news/mar17/sea-urchins-hawaii.html>

NOAA Releases 2017 Hydrographic Survey Season Plans - Annual surveys keep the nation's suite of nautical charts up to date.

Coast Survey maintains over a thousand charts and publications covering 95,000 miles of shoreline and 3.4 million square nautical miles of water. Measuring depths and determining new dangers to navigation along U.S. coasts and the Great Lakes is a monumental job because the seafloor is constantly changing due to factors such as storms, erosion, and development. One of Coast Survey's biggest tasks during the winter months is to plan hydrographic survey projects for the coming field season. Survey planners consider requests from stakeholders such as marine pilots, port authorities, the Coast Guard, and the boating community, and also consider other hydrographic priorities in determining where to survey and when. This year, Coast Survey has compiled a "living" [story map](#) outlining these plans. The story map will be updated as progress is made with each survey project. For full story: <http://oceanservice.noaa.gov/news/feb17/survey-season.html>

NATIONAL MARINE SANCTUARY NEWS

Hypoxia Monitoring Moorings Deployed at Cordell Bank

Two moorings outfitted with oceanographic instruments are positioned at Cordell Bank National Marine Sanctuary (CBNMS) for the fourth year in a row after CBNMS staff worked with Bodega Marine Lab (BML) scientists to re-deploy the moorings on March 16, 2017 for the spring upwelling through fall seasons. Cordell Marine Sanctuary Foundation again provided funding to CBNMS for the project this year and Danielle Lipski, CBNMS Research Coordinator, and BML scientists built and deployed the moorings. Low oxygen water naturally occurs in the deep ocean but shallow intrusions of hypoxic (meaning “low oxygen”) water has been found in more shallow waters along the US west coast in recent years. Low dissolved oxygen levels had been recorded along the north central California coast for the first time in 2013 by BML, which led CBNMS and BML to work together to place sensors at Cordell Bank to learn if low oxygen water was present at the bank. Results from 2014-2016 show variability within and between years with hypoxic events occasionally present for short durations. Further analysis is underway with a summary and publication planned. The bank is inhabited by a vibrant invertebrate and rockfish community which could be vulnerable to hypoxic conditions.

San Francisco International Ocean Film Festival draws nearly 3,900 participants

From March 9 through 12, 2017 the 14th Annual San Francisco International Ocean Film Festival, co-founded by the Farallones sanctuary and sponsored in part by NOAA and the National Marine Sanctuary Foundation, was a standout success, drawing 3,865 participants in all. The main festival featured independent films, four panel discussions, and a film competition, bringing together 3,280 members of the public, scientists and ocean communicators. An additional 585 students attended the free student festival. Farallones staff took part in panel discussions, handled Q&A on the USS *Conestoga* shipwreck portrayed in the film, “Three Miles from Safety.” Sylvia Earle spoke on marine protected areas - Hope Spots, and women in research. The films covered ocean exploration, sports, climate change issues, and sustainability.

Sanctuary Ocean Counts Continue for 2017

NOAA’s Hawaiian Islands Humpback Whale National Marine Sanctuary continued its 2017 Sanctuary Ocean Count on February 25, 2017. From 8:00 a.m. until 12:15 p.m. volunteers counted humpback whale sightings and documented the animals’ surface behaviors. More than 590 volunteers gathered data from 50 sites across the shores of O’ahu, Kaua’i, and Hawai’i Island. There was a lot of whale activity throughout the Ocean Count event. The 2017 Ocean Count is scheduled to continue on March 25th. For more information on Sanctuary Ocean Counts please visit our websites at hawaiihumpbackwhale.noaa.gov or sanctuaryoceancount.org.

Two new sponge species from sunken ship now being described

Conservation Science staff are working with staff from California Academy of Sciences, in San Francisco and the Royal British Columbia Museum (RBCM) in Victoria to complete the taxonomy describing two new species of sponges (a yellow Picasso sponge, *Staurocalyptus* n. sp. and a white vase sponge, *Hyalascus* n. sp.), which were discovered in 2016 living on the USS *Independence*. A third species of sponge, *Farrea aculeata* (Schulze), also found on the USS *Independence*, was only previously known to occur north of California. Dr. Henry Rieswig from (RBCM) is currently performing the measurements and imaging to describe the two new sponge species, and report the range extension and update the taxonomy of *Farrea aculeata*, since it was only described once, in 1899.



MONTEREY BAY NATIONAL MARINE SANCTUARY NEWS AND PROGRAM UPDATES



MANAGEMENT

Monterey Bay National Marine Sanctuary Holds Advisory Council Meeting

On February 17th, the MBNMS Advisory Council met and received a series of presentations and updates on the MBNMS Advisory Council member recruitment, desalination update, Management Plan Review Council Workshop on marine debris, and Management Plan Review Working Group recommendations. Actions taken included: the approval of recommendations as presented from the Conservation Working Group's marine debris workshop, Motorized Personal Watercraft subcommittee, Overflight Working Group (GFNMS), and Wildlife Disturbance - Approach Issues working group. The next Advisory Council meeting will be on April 21st in Santa Cruz. 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 Research Activity Panel Meets at U.S. Geological Survey

On March 10th, the Monterey Bay National Marine Sanctuary (MBNMS) Research Activity Panel (RAP) will meet at U.S. Geological Survey in Santa Cruz, CA. Agenda items included: current USGS research efforts in MBNMS; summary of February Sanctuary Advisory Council meeting; RAP work session to comment on proposed Monterey Peninsula Water Supply Project (CalAm): Draft EIR/EIS; and summary of Ed Ricketts Memorial Award and Lecture. The MBNMS Research Activity Panel 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. <http://montereybay.noaa.gov/sac/rap/rapma.html>

New information about dive program added to MBNMS web site

Unit Diving Supervisor Dr. Steve Lonhart recently conducted semi-annual training for NOAA divers. Lonhart supervises several divers from various sanctuary operating units, as well as those of local National Marine Fisheries Groups. In total, 10 divers are part of Lonhart's dive unit, most of whom are based in Monterey, CA. Divers completed annual training elements required by the NOAA Dive Program, including classroom instruction for an entire day and practicing open water skills at the Breakwater in Monterey on a second day. Divers conducted 186 on-duty dives in CY 2016. This represents the lowest number of annual dives in the last 10 years, despite an increase in the overall number of divers. Ongoing interest by university students and prospective volunteer divers spurred the development of a flow chart (<http://montereybay.noaa.gov/marineops/research/welcome.html>) that answers the question "How do I become a NOAA diver?" This chart serves as a decision tree to determine if an existing diver can become a NOAA diver, and how best to achieve that goal. Major diving projects for CY2017 include MPA monitoring, SVX 360 image captures, and working dives focused on ship husbandry. Maintaining an active dive unit requires annual training on safe diving practices, thereby making our NOAA divers safer and more effective while carrying out their duties.

Ed Ricketts Memorial Award and Lecture

On February 10th, Dr. Andrew DeVogelaere presented the 2017 Ed Ricketts Memorial Award to Dr. Fiorenza Micheli at the Monterey Bay National Marine Sanctuary Exploration Center in Santa Cruz. Dr. Micheli followed the award presentation with a talk about the vulnerability and resilience of coastal systems of the California current. Approximately 40 people attended, including three former Ricketts Award winners. Recipients are

selected by the Monterey Bay National Marine Sanctuary Research Activity Panel. For more information about the Ricketts award visit: <http://montereybay.noaa.gov/research/ricketts.html>. This annual award was established in 1986 and is given to people who have exhibited exemplary work throughout their career and advanced the status of knowledge in the field of marine science.

RESOURCE PROTECTION

Bay Net and Team OCEAN Volunteer Informational Meeting

An informational meeting was held the evening of March 8th to inform interested volunteers about the Team OCEAN Kayaker Outreach and Bay Net Shoreline Naturalist Programs. Thirty interested community members attended the meeting. The evening's presentation covered Monterey Bay National Marine Sanctuary requirements of both volunteer programs, training schedule and field trip dates. Veteran volunteers offered their insight into the programs, what it means to volunteer with MBNMS and what it means to be part of a volunteer team. The informational meeting is integral to getting new volunteers oriented to the programs and the community of volunteers that donate their time. In the field volunteers interact with over 47,000 Monterey Bay National Marine Sanctuary visitors annually. By providing field-based volunteer programs we expand the reach of Monterey Bay National Marine Sanctuary's mission by communicating our understanding and protection of the cultural resources and coastal ecosystem found in Central California.

Agriculture Water Quality Alliance Meeting Helps Growers with Monitoring

The MBNMS agricultural water quality coordinator organized a meeting held in King City on 3/3/17 to help growers in the Salinas Valley understand pending changes in water quality regulations through the Irrigated Lands Regulatory Program. This workshop also provided growers with information on how to do on-farm monitoring required by these regulations including computations for total nitrogen applied, soil nitrate testing, management practices reporting, and other helpful tools. By helping growers understand and adopt the practices needed to comply with water quality regulations, we can reduce the stress of mandated changes and increase the chance of meaningful adoption of practices that can help reduce nutrient and water inputs. These efforts should help improve the water quality in runoff and eventually entering MBNMS.

MBNMS to Attend AgKnowledge Program

The MBNMS agricultural water quality coordinator received a scholarship to attend the AgKnowledge program conducted by the Grower-Shipper Association and their partners. AgKnowledge educates participants about the heritage, diversity, stewardship and complexity of Monterey County agriculture and the interdependencies of agriculture, local government and the community. By increasing our understanding of the infrastructure and values of the agriculture industry on the Central Coast of California, we can develop better strategies and plans for encouraging the adoption of practices and technologies for reducing chemical inputs and supporting sustainable agriculture. These efforts should help improve the water quality entering MBNMS.

MBNMS and California Public Utilities Commission hold 3 public meetings for draft Environmental Impact Report/Environmental Impact Statement and extend comment period

The week of February 13th, MBNMS and CPUC held 3 public meetings regarding the release of the draft Environmental Impact Report/Environmental Impact Statement for the Monterey Peninsula Water Supply Project (MPWSP) proposed by California American Water Co (CalAm). Two open houses were held on Feb 16th in Marina and Seaside, and a public hearing was held on the 17th in Carmel. The DEIR/EIS was published on January 13, 2017, and the agencies originally provided a 45-day period for the public to review and comment on the DEIR/DEIS. Based on requests to extend, the deadline has been extended 30 days to March 29, 2017, providing a 75-day total review for this extensive joint California Environmental Quality Act/National

Environmental Policy Act document. The federal register notice for the extension was published on February 24th. 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.

Resource Protection presentations for MBNMS Advisory Council meeting

On February 17th, MBNMS Resource Protection Coordinator presented a [Desalination Update](#) to the Advisory Council on all desalination related items. The presentation included the release of the DEIR/EIS for the proposed CalAm project, the DeepWater desal DEIR/EIS, People’s desal project status and the new Special Use Permit categories for desal facilities. In addition, the Conservation Working Group with RP staff support provided a workshop on [Marine Debris Management Recommendations](#) in the Sanctuary and presented four draft recommendations to the Council for approaches to consider in the revised Management Plan including policy, data aggregation, education and outreach and research and monitoring. A number of Council members commented this issue should be brought to the national Advisory Council and the recommendations were approved unanimously. Lastly, the [SAC Whale Disturbance Working Group](#) provided a summary of their work which was supported by RP staff and presented a number of recommendations on how to reduce whale disturbance and harassment including formalizing whale approach guidelines in MBNMS. A number of whale watch operators provided testimony in support, and the recommendations were approved by the Council. 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.

Final Report for Proposition 84 Grant for Irrigation and Nutrient Management

The MBNMS agricultural water quality coordinator wrote and submitted the Final Report for the \$1.25 million Proposition 84 project to improve irrigation and nutrient management in the Lower Salinas Valley on 2/28/17. The final report came after a wrap-up meeting that occurred on 2/6/17. The report provided results on the performance of structural projects installed through the grant money including an 18 acre treatment wetland, two bioreactors, a CIMIS weather station and a vegetated ditch. The grant also reported on the results for technical assistance to growers in adopting best management practices for irrigation water and nutrient application. We estimate that through this grant project nitrate-N load to the lower Salinas watershed was reduced by approximately 50,000 kg/year. Reducing non-point source nutrients entering local streams and rivers from farm runoff will improve the water quality entering MBNMS. By demonstrating successful projects, we can showcase examples for consideration by others in the growing community.

Outreach efforts continue on the Draft EIR/EIS for CalAm’s proposed desal project

MBNMS staff continued outreach efforts on the release of the CalAm Draft EIR/EIS and met with City of Marina staff to discuss the document in more detail. The City of Marina is the location for the proposed project and the community has concerns regarding water rights issues, and if the slant wells may draw groundwater from their aquifers. In addition, staff invited the US Army to participate in a presentation on the main topics covered in the Environmental Impact Statement, as some of the water transmission lines cross US Army property along the Monterey Peninsula. Staff and consultants offered insights on how impacts were determined and answered a myriad of questions about how to find information in the over 4,500 page document, including appendices. Public meetings were conducted on February 15 and 16, as well as a SAC presentation on February 17. For more information visit, <http://montereybay.noaa.gov/resourcepro/resmanissues/desal-projects.html> CalAm is under court order (cease and desist) to reduce removal of water from the Carmel River and its watersheds in order to restore the steelhead habitat and associated watersheds. As federal lead agency under NEPA, MBNMS has the authority and responsibility to ensure the project does not harm or have negative

environmental impacts to sanctuary resources and is consistent with the MBNMS Desalination Guidelines, which were produced in coordination with NOAA Fisheries.

Advisory Council Whale Disturbance Working Group Recommendations

As part of the Management Plan update, a 6-member MBNMS Advisory Council Working Group has been developing recommendations for how to reduce disturbance of whales in Monterey Bay through exploring the core question - is there a need for any regulatory or non-regulatory strategies to address whale disturbance or harassment in the Sanctuary? From July 2016 through January 2017, the Working Group met with subject matter experts (California Department of Fish and Wildlife enforcement, National Marine Fisheries Service Office of Protected Resources, Moss Landing Marine Laboratories director), whale watching and kayak company operators, and Sanctuary staff to collect information. The whale watch and kayak operators have been actively participating in the meetings in order to provide their expertise and advice regarding this issue. The group recommended a number of items to the full Advisory Council including the need to formalize wildlife viewing guidelines in MBNMS, provide the necessary education and outreach on the guidelines to the public, and assess the effectiveness of the guidelines and outreach efforts. Furthermore, if the assessment shows significant non-compliance with the whale viewing guidelines, the reasons for non-compliance will be assessed and potentially, the Sanctuary would be advised to move forward with the process for adopting a minimum approach regulation for vessels operating. The full recommendations were forwarded to the SAC to review on February 3rd, and can be viewed here: <http://montereybay.noaa.gov/sac/sacma.html> MBNMS addresses wildlife disturbance through a mix of educational outreach, regulations and enforcement. In recent years, numbers of some whale species have increased in the Bay, as have the number of disturbance events. Many of the disturbance events can be traced to lack of knowledge and education about wildlife etiquette by private boaters and the visiting public, therefore additional efforts are needed to reduce impacts.

WCR Office and MBNMS team up for outreach to Whale Watch Community

On February 3rd, WCR Operations staff and MBNMS staff met with whale watch operators to share ideas on how to work collaboratively together on outreach efforts to the public. A number of operators joined the discussion, including Fast Raft, Monterey Bay Whale Watch, Princess of Monterey, and Sanctuary Cruises. The group discussed some of the recommendations coming from the Advisory Council Whale Disturbance Working Group, as well as the MBNMS socioeconomic survey to wildlife operators. Operators expressed support for the plan of developing more formal guidelines for Monterey Bay and assisting in their implementation to customers. Future work sessions will be scheduled soon. Developing a collaborative relationship between MBNMS and the whale watch community will be mutually beneficial and ultimately benefit the living marine resources.

Research equipment removed from Pacific Grove rocky intertidal

MBNMS Bay Net volunteers reported some metal equipment washing up along the shore south of Hopkins Marine Station. MBNMS RP staff responded at low tide to recover some sections of the equipment due to concerns about impacts to the intertidal. Local residents informed staff that the equipment belonged to UCSC's PISCO program. The large, metal cages are permitted by the Sanctuary and part of the group's research on sea otter foraging. Due to the large winter storms and waves, a number of the 24 cages were pulled from anchor and/or destroyed, and PISCO staff were in the process of removing the remaining equipment. Emergency response sometimes includes small localized activities such as the removal of marine debris along the shoreline.

EDUCATION, VOLUNTEER AND OUTREACH PROGRAMS

Plankton Science Monitoring Program piloted plankton observation with students at the Sanctuary Exploration Center

Middle School students from a local Santa Cruz school came to the Sanctuary Exploration Center for a self-guided tour and to be introduced to Monterey Bay National Marine Sanctuary. As a follow-up activity, students returned to the Exploration Center to learn about plankton. MBNMS staff Lisa Uttal, UC Santa Cruz Dr. Mary Silver, Professor Emeritus and teacher Dr. Alison Gee collected night and day plankton samples and made them available to students to make observations under both compound and dissecting microscopes. The Sanctuary Exploration Center classroom was set up with microscopes and samples were projected on a screen for discussion with the students about plankton, what it is and the importance of plankton to them and to our sanctuary ecosystem. The Plankton Science Monitoring Program is a collaboration between UC-Santa Cruz, California State University Monterey Bay, O'Neill Sea Odyssey, Cabrillo College, Elkhorn Slough, NOAA's Phytoplankton Monitoring Network and California Department of Health Services to monitor plankton along the sanctuaries' coast and to implement educational programs based on the scientific data collected. Plankton as a citizen science educational activity is engaging and informative. Phytoplankton creates more than 50% of the oxygen we breathe and is a catalyst for having discussions about ocean acidification and biodiversity.

MBNMS Staff Present to Sunrise Rotary Club, Santa Cruz, CA

Sunrise Rotary- Santa Cruz, a longtime partner with the sanctuary hosted MBNMS staff in a presentation about Monterey Bay National Marine Sanctuary and Plankton Science Monitoring Program. Lisa Uttal presented to a group of 45 Rotarians the importance of plankton, not only to humans and the oxygen we breathe, but also plankton as the base of the food web and important contribution to the rich bio-diverse ecosystem in Monterey Bay. Plankton is an engaging topic and an important one for initiating discussions about Ocean Acidification and the impacts to the sanctuary. Rotary Clubs in Santa Cruz are important partners to reaching out to our sanctuary communities and an important target audience to spread the sanctuary messages. This particular Rotary was a very supportive partner in sponsoring an educational classroom at the Sanctuary Exploration Center.

The Santa Cruz MPA Collaborative kicked off 2017 with a meeting of partners from Santa Cruz County to discuss future activities

On March 2nd, MBNMS and California Marine Sanctuary Foundation staff coordinated and held a Santa Cruz MPA Collaborative meeting at the NOAA Fisheries laboratory at Long Marine Lab. Along with Calla Allison, Director of the Statewide MPA Collaborative Network and 17 community members, the group learned about the network and the State's 2017 strategic planning effort. Members at this meeting had a meaningful discussion about each of their current projects. Overlap between programs included the need for MPA docent training, social media, marketing and advertising, formal education materials and programs and event collaboration. The Collaborative members discussed where there was overlap and how different organizations could coordinate their activities. Members in attendance included NOAA, California State Parks, SC County Education offices, Cabrillo College, Fish and Wildlife, California Marine Sanctuary Foundation, Save Our Shores, local teachers and local volunteers. Co-chairs will be convening in Sacramento at the end of March to discuss strategic planning for the Statewide Network. A network of State MPAs are nested within the Federal MPAs along the California coast. The Santa Cruz MPA Collaborative Network fosters productive partnerships between local community members, state and federal MPA organizations.

Monterey Bay National Sanctuary Staff participate in Polar-ICE Symposium with Middle and High Schoolers

Middle and high school science students presented their results from polar research they conducted this year as part of the NSF Polar Interdisciplinary Coordinated Education (Polar-ICE) program. The Symposium was attended by various scientists, students and educators, and allows students to learn about and engage in the process of becoming a scientist. With funding from the National Science Foundation, the Polar-ICE program provided data from the Palmer Research Station on Anvers Island in Antarctica to students in the Monterey Bay

area. Teachers from the Central Coast area, including Seaside High School, Monterey's Walter Colton Middle School, Pacific Grove Middle School, Chalone Peaks Middle School of King City, San Antonio Elementary School of San Jose and Seaside Middle School attended a four-day workshop training at Rutgers University in New Jersey last June. In the fall, the students were asked to write proposals for the research they wanted to do. The students spent the next couple of months analyzing data and drawing conclusions. That work was displayed on the posters they exhibited Friday at CSUMB. Education staff Amity Wood and Lisa Uttal participated in a panel of scientist and educators from Hopkins, CSUMB, Center for Ocean Solutions sharing their own science and education stories with almost 200 students and teachers. These meaningful science and research experiences for middle and high school students are directly aligned with the Next Generation Science Standards training students to be scientists and to raise awareness about the changing Antarctic ecosystem.

MBNMS participates in Sustainable Hospitality Development Symposium

On February 23, MBNMS Superintendent Paul Michel served as a panel moderator for the inaugural one-day symposium that brought together environmental leaders from Monterey County, Santa Cruz County, and San Benito County tourism industry as well as the Government of California and Costa Rica to discuss opportunities for sustainable practices within the two regions. Hospitality, tourism, educational and political stakeholders, and decision makers shared local and regional approaches to balancing a sustainable culture and fostering opportunities for sustainable economic development. Highlights of the event included a keynote address from former Costa Rican president, José María Figueres Olsen, detailing the successful sustainability initiatives from his country. The event was co-sponsored by MBNMS, and served as a model to support public-private partnerships between local developers and government for attracting sustainable investment in the Monterey Bay Region. Through continued business and tourism community relations, the MBNMS seeks to cultivate ocean literacy and stewardship, increase and promote awareness of the inherent socioeconomic value of National Marine Sanctuary System, and to create a larger coalition of support for sanctuaries and their programs.

MBNMS promoted during AT&T Pebble Beach ProAm Golf Tournament

On Thursday, February 9, Superintendent Paul Michel was invited to speak about the MBNMS during a live broadcast of the Golf Channel's "Morning Drive" talk show. The show premiered before the annual AT&T Pebble Beach ProAm Golf Tournament, at 8am PST. During the four minute segment, Paul highlighted how the national marine sanctuary contributes to the beauty of Pebble Beach through programs that help keep the beaches clean, reduce pollution, and though wildlife protection. Paul talked about the challenges of promoting recreation and tourism and balancing human coastal uses (such as shoreline golf courses) versus ocean protection by educating the public about interacting safely with wildlife while promoting coastal stewardship. Through MBNMS b-roll footage, different types of wildlife were shown that golf spectators might be able to see along the coast, from shorebirds, seals, dolphins, whales, to sea otters. Paul promoted the MBNMS visitor centers, SEC and CDC, as ways for the public to learn more, as well as gave the website to direct interested volunteers in our programs and joining the SAC. "Morning Drive" segment featuring Paul Michel can be viewed here: <http://fw.to/6ZCd00J> As part of our public relations outreach activities, MBNMS staff participate in media opportunities to promote awareness of MBNMS and our mission of ecosystem management through research and education with the primary goal of resource protection.

Preschool Adventures at the Monterey Bay National Marine Sanctuary Exploration Center

The Monterey Bay National Marine Sanctuary Exploration Center continues to host its successful weekly preschool program for families with children ages 0-5 years old. The hour-long program, called Preschool Adventures, has already engaged over 70 participants since its inception in October 2016. Preschool Adventures includes story time, show-and-tell, sing-alongs, and crafts to engage and connect toddlers and their families with Monterey Bay National Marine Sanctuary. The program begins with singing familiar songs, such as the Alphabet



Song, but with a marine-themed twist. Then, after reading a few short stories about the ocean and its inhabitants, the children play with puppets, look at seashells, and draw and stamp marine animals onto a seascape. This is a unique way to engage young children and spark curiosity about ocean life at such an early stage. Implementing and designing new programs targeted at younger audiences is a unique way to engage young children about ocean life at such an early stage while simultaneously allowing docents to better their interpretation skills with children.

Monterey Bay National Marine Sanctuary Exploration Center Hosts First Friday: An Art and Science Event

On February 3, 2017 the MBNMS Exploration Center hosted a First Friday science and art event highlighting the sea and shore birds of Monterey Bay National Marine Sanctuary. The event featured local artist, science illustrator, and professional bird observer, Sophie Webb's pop-up art gallery. Over 120 First Friday attendees enjoyed Sophie's tips for seabird sketching, identification, and observations. The event also included partnerships with the Seabird Protection Network and Oikonos Ecosystem Knowledge who hosted seabird education activities and demonstrations. The community was able to celebrate the ninety-four seabird species known to occur within the sanctuary, including the thirty species of dominant residents and the many seasonal visitors that undertake long, annual migrations to reach Monterey Bay's rich feeding grounds. Community events such as First Fridays are a perfect opportunity to bring art, activities and science together as an innovative education tool to promote and inspire visitors to protect and conserve the health of Sanctuary ecosystems.

NEWS COVERAGE

Gray Whales Are Migrating Now: See Them Close-Up In Monterey ...

<https://www.forbes.com/sites/lealane/2017/01/26/gray-whales-are-migrating-now-see-them-close-up-in-monterey-california/#5c467e455ef3>

Forbes-Jan 26, 2017

Ball Retrievers: Meet the two environmentally conscious teens who ...

<http://www.golf.com/knockdown/2017/01/27/ball-retrievers-meet-two-environmentally-conscious-teens-who-have-collected-thousands-golf-balls>

Golf.com-Jan 27, 2017

Frustrated Mavericks surfers long for simpler times

<http://www.sfchronicle.com/sports/jenkins/article/Frustrated-Mavericks-surfers-long-for-simpler-10900825.php>

San Francisco Chronicle-Feb 1, 2017

Surfriders Monitor CEMEX Sand Mine While Negotiations Continue

<http://kazu.org/post/surfriders-monitor-cemex-sand-mine-while-negotiations-continue#stream/0>

90.3 KAZU-Feb 2, 2017

Marine sanctuary seeks representatives for advisory council

<http://www.sanluisobispo.com/news/local/community/cambrian/article131684399.html>

The San Luis Obispo Tribune-Feb 9, 2017

Octopus vs. Crab Showdown Ends with a Twist in Startling Video

<http://www.livescience.com/58003-octopus-vs-crab-showdown-video.html>

Live Science-Feb 24, 2017

Latest Cal Am desal project delay impact uncertain, sanctuary ...

<http://www.montereyherald.com/article/NF/20170227/NEWS/170229782>

Monterey County Herald-Feb 27, 2017

Weekly Roundup: Island no more, Cemex, a landmark land deal and ...

http://www.montereycountyweekly.com/blogs/news_blog/weekly-roundup-island-no-more-cemex-a-landmark-land-deal/article_d069f5f4-0696-11e7-a715-f7d6bb91f6d4.html

Monterey County Weekly (blog)-Mar 11, 2017

Mystery surrounds frequent return of the red crabs to Monterey Bay

<http://www.mercurynews.com/2017/03/12/mystery-surrounds-frequent-return-of-the-red-crabs-to-monterey-bay/>

The Mercury News-Mar 12, 2017

Waves & Wildlife Photo Contest

<http://www.tpgonlinedaily.com/waves-wildlife-photo-contest/>

Aptos Times-Mar 17, 2017

People causing problems in Pacific Grove during seal pupping season

<http://www.ksbw.com/article/harbor-seal-pupping-season-is-off-to-a-rough-start-in-pacific-grove/9170904>

KSBW The Central Coast-Mar 24, 2017

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.*

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

Paul Michel – Superintendent
Dawn Hayes – Deputy Superintendent

Research

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

Education

Amity Wood – Education and Outreach Coordinator
Jennifer Cormier – Program Assistant (SEC)
Michelle Berryessa – SEC Gift and Bookstore Manager
Tess Bohey – Program Assistant (CDC)
Catherine Drake – Program Assistant (SEC)
Nick Ingram – Program Assistant (SEC)
Chelsea Prindle – SEC Manager
Carolyn Skinder – Southern Region Program Coordinator
Lisa Uttal – Education Specialist

Resource Protection

Karen Grimmer – Resource Protection Coordinator
Sophie De Beukelaer – GIS Analyst & Research Permit Coordinator
Lisa Emanuelson – Citizen Watershed Monitoring Network Coordinator
Bridget Hoover – Water Quality Protection Program Director
Scott Kathey – Regulatory/Emergency Response Coordinator
Pamela Krone-Davis – Agriculture Water Quality Coordinator

Program Operations

Raymond Chisolm – Program Specialist
Kristen Hart – Program Specialist
Nichole Rodriguez – Advisory Council Coordinator
Richard Stanley – SEC Maintenance Specialist
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://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 -

Monterey Bay National Marine Sanctuary

99 Pacific Street, 455A
Monterey, CA 93940
Phone (831) 647-4201
Fax (831) 647-4250