



Monterey Bay National Marine Sanctuary

Sanctuary Office Report



Volume 14, Number 4

A REPORT FOR THE SANCTUARY ADVISORY COUNCIL MEMBERS

REPORTING PERIOD: MAY 20, 2017 – JULY 21, 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

After 2000-era plateau, global methane levels hitting new highs

When it comes to global warming, carbon dioxide is the 800-pound gorilla: it's the most abundant of the long-lived greenhouse gases that human activities generate. But ounce for ounce, methane (CH₄) traps more heat, and it accounts for about 20% of the greenhouse gases produced by human activities. Strangely, though, global methane levels "flat lined" from 1999 to 2006. The plateau didn't last, however, and in recent years, global methane levels have been hitting new highs. Figuring out what's going on with methane is a high priority for carbon cycle experts at NOAA and other institutions around the world. Possibly the most important clue: air samples collected at different latitudes around the world show that the amount of methane carrying carbon-13—a rare, heavy isotope of carbon—has dropped significantly since 2007. For full story: [https://www.climate.gov/news-features/understanding-climate/after-2000-era-plateau-global-](https://www.climate.gov/news-features/understanding-climate/after-2000-era-plateau-global-methane-levels-hitting-new-highs)

[methane-levels-hitting-new-highs](https://www.climate.gov/news-features/understanding-climate/after-2000-era-plateau-global-methane-levels-hitting-new-highs)

Rebuilding success continues for West Coast groundfish

Seven of the 10 West Coast groundfish species found to be overfished since about 2000 are now rebuilt, with NOAA Fisheries declaring bocaccio and darkblotched rockfish rebuilt ahead of schedule earlier this month. Scientists, managers and industry collaboratively developed rebuilding strategies for the overfished species through the Pacific Fishery Management Council. The nation's primary fishing law, the Magnuson-Stevens Fishery and Conservation Management Act (MSA), requires NOAA Fisheries to manage fish species (or "stocks") for long-term sustainability. If a stock's abundance falls to the point that it is overfished, then the MSA requires a plan to rebuild the stock in as short a time as possible, while balancing this need with the needs of fishing communities. "The combination of sound science and well-designed management policies were very effective in turning things around, but it also involved many challenging years for the fishing fleet in adapting to lower harvest levels," said Barry Thom, Regional Administrator of NOAA Fisheries' West Coast Region. For full story: http://www.westcoast.fisheries.noaa.gov/stories/2017/19_06192017_.html

Students for Zero Waste Week: A Student-led, Multi-Faceted Approach to Sustainable Practices

This past spring, ninety-seven schools from across the nation chose to 'Go Green and Think Blue' by participating in the 5th annual Students for Zero Waste Week campaign. From March 20th through April 21st, students actively worked towards reducing waste on campus, in their community, and at home by engaging in zero waste activities such as replacing single-use plastic items with reusable options, hosting assemblies, presenting to community members, holding student competitions, setting up a school composting system, creating Zero Waste artwork and so much more! By gaining insight into their individual and collective impact on marine ecosystems, students became more aware of the discernible connection between land and sea.

NATIONAL MARINE SANCTUARY NEWS

Olympic Coast National Marine Sanctuary assists with detection of Harmful Algal Blooms

Monitoring oceanographic conditions off the Washington coast has been identified as a key scientific priority for Olympic Coast National Marine Sanctuary. Information collected is invaluable to local and national resource managers interested in oceanographic phenomenon, that can impact commercial fisheries and human health, such as harmful algal blooms and marine heatwaves (a.k.a. the Blob). Sanctuary staff utilize a variety of options to collect critical information such their 17th annual summertime data collection through an oceanographic mooring program and collaborating with IOOS and the University of Washington to deploy an Environmental Sample Processor (ESP). The ESP detects and measures concentrations of the toxin domoic acid, and harmful algal species in near real time. The realtime information from the ESP combined with the annually scheduled monitoring allows for more precise information on harmful algal blooms off the Washington coast, which may prevent adverse health impacts on coastal community members. Proactive monitoring of potential oceanographic phenomenon may prevent adverse impact on commercial activities and human health. Shellfish contamination from harmful algal blooms (HABs) is both costly and a significant health risk to coastal communities.

<http://sanctuaries.noaa.gov/science/sentinel-site-program/olympic-coast/human-health.html>

Florida Keys and Stellwagen Bank National Marine Sanctuaries Collaborate to Document a Historic Shipwreck while Promoting Protection of Historical Resources

From June 2 – 11, nineteen maritime archaeology advocates from Diving With a Purpose visited FKNMS to carry out a shipwreck documentation project. Diving With a Purpose (DWP) is a community focused non-profit organization dedicated to education, conservation and protection of our underwater heritage. The 2017 project is a continuation of research on the shipwreck *Acorn* lost off Key Largo in 1885. The history of the ship, built in 1881 on the River Clyde in Scotland, was discovered by ONMS archaeologist Matthew Lawrence who serves as the project's principal investigator supported by FKNMS Maritime Heritage Coordinator Brenda Altmeier has collaborated with DWP 2010 on projects in support of NOAA's maritime heritage program objectives. For the past two years NOAA Corps officers serving in an FKNMS billet have participated in DWP training as part of their leadership and development opportunity. NOAA Corps Officer John Katchenago attended the 2017 class and participated in documenting the shipwreck while observing volunteer engagement in the Florida Keys sanctuary.

Blue whale shipstrike fatality occurred during spring whale migration

An endangered 79 foot adult female blue whale was found dead, north of San Francisco, California. Due to extensive blunt force trauma and broken ribs, the necropsy team cited shipstrike as the preliminary cause of death. This shipstrike occurred during the period of typical spring whale migration northward as they follow their food sources northward up the Pacific coast. Prior to the onset of migration activities the Greater Farallones and Cordell Bank national marine sanctuaries asked the operators of large ships to slow their speeds roughly in half to 10 knots -- about 11 mph -- as they enter the shipping lanes toward the Golden Gate Bridge. Other pro-active efforts by sanctuary staff include: broadcast and published local notice to mariners, Whale Alert 2.0 - a smartphone application, an email listerv, broadcasts over NOAA Weather Radio, and education/outreach posters developed in collaboration with the Pacific Merchant Shipping Association. Rapid, effective outreach is necessary when emergency situations arise, to alert parties and minimize the threat, and to promote the sanctuary's active conservation efforts.



MONTEREY BAY NATIONAL MARINE SANCTUARY NEWS AND PROGRAM UPDATES



MANAGEMENT

Monterey Bay National Marine Sanctuary Holds Advisory Council Meeting

On June 16th, the MBNMS Advisory Council met and received a series of presentations and updates on wildlife disturbance outreach, Management Plan Review working group recommendations from the Wildlife Disturbance – Ocean Noise Working Group and a re-cap on the Recreational Fishing Summit. 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.

Monterey Bay National Marine Sanctuary Holds Emergency Advisory Council Meeting

On July 10th, the MBNMS Advisory Council met to address two items with short comment periods, both of which were prior to the next scheduled MBNMS Advisory Council Meeting: 1) a letter in support of the attached proposed California Coastal Commission settlement agreement with CEMEX; and 2) public comment to Regulations.gov on the President's Executive Order on national marine sanctuaries. The support letter regarding CEMEX received a majority vote and was submitted to California Coastal Commission. A motion was made to have a subgroup work on the letter commenting on the President's Executive Order after multiple members requested revisions. A second meeting would be scheduled to vote on the revised letter. 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.

Monterey Bay National Marine Sanctuary Holds Second Emergency Advisory Council Meeting

On July 19th, the MBNMS Advisory Council met to review the revised letter commenting on the President's Executive Order on national marine sanctuaries. The letter received a majority vote and was submitted to Regulations.gov as public comment. 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

Sanctuaries MBON Team Recognized for Excellence

Monterey Bay and Florida Keys sanctuaries are sentinel sites for characterizing and tracking changes in biodiversity as part of the Sanctuaries Marine Biodiversity Observation Network (MBON) demonstration project which began in late 2014. The Sanctuaries MBON team is integrating data from a variety of long-term observing programs, and developing new observing methods, to improve our understanding of changes in and connections between marine biodiversity and ecosystem functions. On May 26th, the National Oceanographic Partnership Program (NOPP) 2016 Excellence in Partnering Award was presented to the many team members involved in the Sanctuaries MBON project, including sanctuary staff from MBNMS, FKNMS, and ONMS. The project was found to best exemplify NOPP's partnership objectives including diversity in partners, level of effort of partners, and impact on ocean research and education. The Sanctuaries MBON demonstration project is linking federal and non-federal partners to 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.

Acquired multibeam data from Ocean Exploration Trust's E/V Nautilus

On May 17, 2017, Ocean Exploration Trust's E/V Nautilus acquired multibeam data in an area adjacent and to the southeast of the Davidson Seamount. It was an area of interest to MBNMS because lower resolution data suggested some high relief areas, and therefore may be suitable habitat for deep sea corals. Data have since been processed and shared with MBNMS (see map below). These higher resolution data will provide MBNMS with higher confidence in choosing targets for future ROV dives. These dives could confirm the presence of deep sea corals in a new area, which would expand their known range within the Davidson Seamount Management Zone.

Sanctuaries program participates in annual meeting of NOAA's Integrated Ecosystem Assessment Program

Jennifer Brown (MBNMS & CINMS), Chris Caldow (CINMS) and Mitchell Tartt (CSD) attended the National Integrated Ecosystem Assessment (IEA) Face-2-Face meeting in Boulder, CO, June 20-22 (group photo below). Involvement of sanctuary staff in meeting planning and active engagement throughout the meeting helped to achieve a key goal of the meeting which was 'bridging the gap between science and management through enhanced communication, fostering of partnerships, and management partner-driven product development'. Sanctuary staff highlighted recent progress in partnership with the California Current IEA to develop key indicators of ecosystem status and trend and create more dynamic, web-based ecosystem conceptual models. These models are a key element within the IEA approach and they could be developed in other regions to support Sanctuary management needs through enhanced condition reports. Potential next steps include risk assessment and management strategy evaluations to support key science and management needs of sanctuaries. NOAA's IEA program supports ecosystem-based management by providing a process and tool to help transfer scientific knowledge to management. National marine sanctuaries are an ideal setting to apply IEA processes and tools because sanctuaries encompass a wide range of marine environments with a high density of research and monitoring efforts, as well as nearby coastal communities that depend on the ocean for business and recreation.

RESOURCE PROTECTION

MBNMS and US Coast Guard Inspect Visiting Cruise Ship

On May 19th, MBNMS and Coast Guard personnel boarded the Celebrity cruise ship INFINITY during the vessel's first port call of the season to Monterey Harbor in order to assure that the ship is operating in compliance with sanctuary cruise ship discharge regulations and Coast Guard regulations under the International Convention for the Prevention of Pollution from Ships (commonly referred to as MARPOL). The inspection team reviewed ship's logs and records regarding fuel transfer, waste discharges, and waste management and physically inspected work and engineering spaces below decks. No non-compliance items were detected. Eleven cruise ship visits are scheduled for Monterey during CY 2017. Cruise ship inspections within the sanctuary are unannounced and additional to annual cruise ship inspections by the Coast Guard. Random inspections within the sanctuary help to ensure that cruise operators are acutely aware of the higher water quality standards and special no-discharge regulations within MBNMS. They also reflect the effective partnership between MBNMS and the Coast Guard in safeguarding marine sanctuary resources.

MBNMS Participates in Dungeness Crab Fishing Gear Working Group

On May 16, 2017, MBNMS Resource Protection Coordinator participated in a working group meeting hosted by CDFW, the Ocean Protection Council and NOAA Fisheries. The purpose of the group is to provide guidance and recommendations to the California Dungeness crab fishing industry, about how to avoid/minimize whale entanglements and identify measures or experiments that can be developed or implemented by the fishing community to address the entanglement issue. A number of collaborative projects have been implemented, including a [Best Fishing Practices Guide](#) to provide guidance to commercial and recreational fishermen on limiting the amount of surface gear. This May, the working group coordinated with Point Blue Conservation

Science, Greater Farallones and Monterey Bay National Marine Sanctuaries to implement a five day ACCESS cruise in Monterey Bay to gather information on the distribution of whales and crab pots with the goal of better understanding areas of co-occurrence. Based on the NOAA Fisheries 2016 West Coast Entanglement Summary the Monterey Bay region has had the highest number of entanglements along the west coast over the last three years. MBNMS and Point Blue staff presented the preliminary findings from the May 8-12 ACCESS surveys to the working group for their consideration. 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 in the effort to better understand and reduce this threat.

MBNMS and NMFS collaborate on Autonomous Underwater Vehicle (AUV) project to image and collect biogenic habitat data

Voluntary Management Areas (VMAs) are a new concept that evolved from discussions between stakeholders including trawl fishermen and NGOs to modify groundfish Essential Fish Habitat (EFH) boundaries. VMAs are identified as non-regulatory areas to be avoided by trawl fishermen as the benthic habitat contains hard substrate with sensitive, biogenic habitat. They are described in more detail in the Collaborative Groundfish EFH Proposal, which was submitted in July 2013 for review by the Pacific Fishery Management Council and is now undergoing analysis as part of the NEPA process. Funded through M/V Albion Restoration Plan, the research cruise will take place in MBNMS from July 7 to the 19th, and will collect fine scale imagery and data from 8 selected sites including Ascension Canyon, Año Nuevo Canyon, and Point Sur platform.

EDUCATION, VOLUNTEER AND OUTREACH PROGRAMS

18th Annual Snapshot Day- Success!

The 18th Annual Snapshot Day water quality monitoring event took place on Saturday, May 6th. On May 6th, 172 volunteers collected water samples from 134 sites in creeks draining to MBNMS from Half Moon Bay to Morro Bay. This event requires weeks of planning, 5 training events, and considerable coordination among many partners, most notably the Coastal Watershed Council and RCD of San Mateo County. Even staff from Greater Farallones NMS and the West Coast Regional office participated in the event. Overall, an event of this magnitude is not possible without the volunteers. With each year, the results become more valuable in showing long-term status and trends of many waterbodies flowing into the sanctuary, some of which are only monitored on this one day each year. Each year this event provides valuable water quality results for the majority of creeks flowing to MBNMS. It is also an opportunity to promote the sanctuary program and raise awareness of the importance of our local creeks, clean water, and the connection of land and sea.

Monterey Bay National Marine Sanctuary 25th Anniversary “Sea Below the Surface” Speaker Series

Monterey Bay National Marine Sanctuary continued its 25th anniversary speaker series of public presentations on the state of sanctuary resources, while reflecting on 25 years in ocean protection. The “Sea Below the Surface” series features talks by local marine researchers that discuss the status and trends of sanctuary conditions, including water quality, habitat status, biological and/or cultural resources, while highlighting a few key species from each of four different environments found within the sanctuary: estuarine, nearshore, offshore and seamount environments. This month’s series focused on nearshore environments of Monterey Bay National Marine Sanctuary, with presentations given by Dr. Marr Carr, Professor, Institute of Marine Science, UC Santa Cruz on Wednesday, May 17th at the Sanctuary Exploration Center in Santa Cruz, and was followed by another presentation on Thursday, May 25th by Professor of Oceanography, Naval Postgraduate School at the Pacific Grove Museum of Natural History in Pacific Grove. A total of 75 guest, including both volunteer docents and community members, attended May’s speaker series presentations. A goal of MBNMS education and outreach programs is to inform and educate the public on the health of sanctuary ecosystems and to inspire conservation

practices. A special recognition for this year's outreach efforts focuses on celebrating the MBNMS 25th Anniversary in ocean protection.

Team OCEAN Hits the Water for 2017

Memorial Day weekend marks the start of another year on the water for Team OCEAN staff and volunteers, 2017 marks Team OCEAN's 17th year on the water utilizing volunteers to engage kayakers and ocean users to discuss wildlife disturbances and how to avoid disturbing our most sensitive marine mammal species: harbor seals and sea otters. Team OCEAN staff and volunteers ply the waters in Elkhorn Slough and off Cannery Row in Monterey and have talked with over 93,000 people over the past 17 years. Team OCEAN utilizes the power of person to person contact to help educate kayakers and other ocean users about the issues surrounding approaching sensitive marine wildlife species. Monterey Bay National Marine Sanctuary's Team OCEAN is a unique program in Monterey Bay and is recognized in the region as one of the most useful ways to reduce marine mammal disturbance.

Monterey Bay National Marine Sanctuary Exploration Center Hosts "Bounty in the Bay" Public Art and Science Event

On June 2, 2017 the MBNMS Exploration Center hosted a science and art event highlighting the commercial and recreational fisheries that are essential to the local economies supported by Monterey Bay National Marine Sanctuary. The event featured local artist Amadeo Bachar, who has studied marine biology and graduated from the UCSC Science Illustration Program. More than 170 First Friday attendees enjoyed do-it-yourself fish printing, a fishing game from the National Marine Fisheries Service and seafood from local community supported fishery Ocean2Table. By speaking to the center's docents, the artist and the local CSF founders, guests gained vital information about the importance of local fisheries and the collaboration between fishermen, Monterey Bay National Marine Sanctuary and other state and federal agencies. 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.

Sanctuary Exploration Center Celebrates World Oceans Day with Plankton Viewing

On June 8, 2017, the MBNMS Exploration Center celebrated World Oceans Day with a plankton-viewing microscope exhibit. Additionally, visitors could create individualized buttons to wear for World Oceans Day and wrote pledges on their buttons to protect the ocean. More than 150 guests learned about plankton, water quality, and the importance of protecting oceans. By showcasing plankton from within Monterey Bay, Center visitors realized the connectivity of the ocean and their role in keeping ocean water clean. World Oceans Day is an opportunity to bring awareness to important ocean issues that may differ from what is normally seen at the Monterey Bay National Marine Sanctuary Exploration Center on a daily basis.

Monterey Bay National Marine Sanctuary Exploration Center Co-hosts "Waves and Wildlife" Photo Exhibit with Save Our Shores

On July 7, 2017 the MBNMS Exploration Center hosted a science and art event highlighting photographs taken in Marine Protected Areas (MPAs) by talented local amateur and professional photographers. The event featured interpretational information regarding eight local MPAs within MBNMS. More than 140 First Friday attendees enjoyed speaking with the photographers, learning about the importance of MPAs, and ate sustainable seafood from local Community Supported Fishery Ocean2Table. By collaborating with Save Our Shores and displaying the winners of the photo contest, the Sanctuary Exploration Center can simultaneously promote MPA messaging and build relationships with potential partners. 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

[Dan Haifley, Our Ocean Backyard: More than just its namesake bay](http://www.santacruzsentinel.com/article/NE/20170520/NEWS/170529996)

<http://www.santacruzsentinel.com/article/NE/20170520/NEWS/170529996>
Santa Cruz Sentinel-May 20, 2017

[More than 1 million tons of rock and dirt have to be moved off Highway 1. But how?](http://www.latimes.com/local/california/la-me-highway-one-landslide-20170526-htmllstory.html)

<http://www.latimes.com/local/california/la-me-highway-one-landslide-20170526-htmllstory.html>
Los Angeles Times-May 26, 2017

[Seaside: Marijuana business tax, half-cent sales tax on June 6 ballot](http://www.montereyherald.com/government-and-politics/20170531/seaside-marijuana-business-tax-half-cent-sales-tax-on-june-6-ballot)

<http://www.montereyherald.com/government-and-politics/20170531/seaside-marijuana-business-tax-half-cent-sales-tax-on-june-6-ballot>
Monterey Herald-May 31, 2017

[Jack O'Neill, surfer who made the wetsuit famous, dies at 94](https://www.nytimes.com/2017/06/05/business/jack-oneill-dead-popularized-the-wet-suit.html)

<https://www.nytimes.com/2017/06/05/business/jack-oneill-dead-popularized-the-wet-suit.html>
New York Times-June 5, 2017

[Genetic clues cast light on deep-water environments](http://famagusta-gazette.com/genetic-clues-cast-light-on-deepwater-environments-p40816-69.htm)

<http://famagusta-gazette.com/genetic-clues-cast-light-on-deepwater-environments-p40816-69.htm>
Famagusta Gazette-June 19, 2017

[Winners of the Big Picture Natural World Photography Competition](https://www.theatlantic.com/photo/2017/06/winners-of-the-bigpicture-natural-world-photography-competition/531825/)

<https://www.theatlantic.com/photo/2017/06/winners-of-the-bigpicture-natural-world-photography-competition/531825/>
The Atlantic-June 29, 2017

[Opinion: Speak up to stop Trump plan to drill off California's coast](http://www.mercurynews.com/2017/07/03/opinion-speak-up-to-stop-trump-plan-to-drill-off-californias-coast/)

<http://www.mercurynews.com/2017/07/03/opinion-speak-up-to-stop-trump-plan-to-drill-off-californias-coast/>
The Mercury News-July 3, 2017

[Proposed wind farm off the coast could generate 1000 megawatts](http://www.sanluisobispo.com/news/local/article159627114.html)

<http://www.sanluisobispo.com/news/local/article159627114.html>
San Luis Obispo Tribune-July 4, 2017

[Coastal Commission unanimously approves order to shut down Cemex mine](http://www.montereycountyweekly.com/blogs/news_blog/coastal-commission-unanimously-approves-order-to-shut-down-cemex-mine/article_d0804c9c-681a-11e7-8771-9be14d2ac02e.html)

http://www.montereycountyweekly.com/blogs/news_blog/coastal-commission-unanimously-approves-order-to-shut-down-cemex-mine/article_d0804c9c-681a-11e7-8771-9be14d2ac02e.html
Monterey County Weekly-July 13, 2017

[Highway 1 opens at Paul's Slide in Big Sur, Mud Creek still being assessed](http://www.montereyherald.com/article/NF/20170718/NEWS/170719852)

<http://www.montereyherald.com/article/NF/20170718/NEWS/170719852>
Monterey Herald-July 18, 2017

[Comment period ends July 26 for Trump order that could weaken marine protections](http://www.montereycountyweekly.com/blogs/news_blog/comment-period-ends-july-for-trump-order-that-could-weaken/article_d87524f6-6cdc-11e7-be3-df2be35916a5.html)

http://www.montereycountyweekly.com/blogs/news_blog/comment-period-ends-july-for-trump-order-that-could-weaken/article_d87524f6-6cdc-11e7-be3-df2be35916a5.html
Monterey County Weekly-July 19, 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/>

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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>

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