



Monterey Bay National Marine Sanctuary

Sanctuary Office Report



Volume 18, Number 2

A REPORT FOR THE SANCTUARY ADVISORY COUNCIL MEMBERS

REPORTING PERIOD: JANUARY 31, 2021 – MARCH 23, 2021

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

'E.T. sponge' just listed among top-10 new marine species

The so-called "E.T. sponge," will soon join the ranks of the branch-armed nostril copepod, feisty Elvis worm, tree-of-life tardigrade and other discoveries that made a list of [top-10 remarkable new marine species of 2020, chosen by the World Register of Marine Species offsite link \(WoRMS\)](#). Last year, in honor of its resemblance to the space alien from the beloved 1982 Steven Spielberg movie "E.T. The Extra-Terrestrial," scientists studying the new sponge named it *Advhena magnifica*, Latin for "magnificent alien." For more information: <https://www.noaa.gov/news/et-sponge-just-listed-among-top-10-new-marine-species>

'A buoy of hope': How NOAA helped aquariums come together to stay afloat during the pandemic

In the early days of the COVID-19 pandemic, a video of Shedd Aquarium penguins waddling through a beluga whale exhibit spread across the internet — a welcome reprieve from the barrage of bad news. Like many businesses, aquariums across the continent temporarily shut their doors to visitors in the spring of 2020 as the pandemic started to take hold. While these closures allowed for fun penguin field trips to watch from the safety of our homes, aquarium employees were putting in serious work behind the scenes to revamp everything from visitor flow through their buildings to summer camp programming. Their challenge: continue to meet the aquariums' education and conservation missions while keeping visitors safe. For more information: <https://www.noaa.gov/education/stories/buoy-of-hope-how-noaa-helped-aquariums-come-together-to-stay-afloat-during>

Researchers stop tissue loss disease in rescued pillar coral

Scientists from NOAA's National Centers for Coastal Ocean Science (NCCOS) have successfully treated and rehabilitated diseased pillar coral rescued from the Florida Reef Tract. First detected near Miami in 2014, stony coral tissue loss disease (SCTLD) has since spread throughout the Florida Keys and much of the Caribbean. The disease is infecting and killing roughly half of the region's hard coral species, including pillar coral (*Dendrogyra cylindrus*) — a species listed as threatened under the Endangered Species Act. Florida's wild pillar coral population is now less than six percent of its known population in 2014. Woodley and her team at NCCOS are working to save pillar coral from the disease. Multi-institutional rescue missions have been collecting various hard coral species for safekeeping at onshore and offshore nursery facilities. Diseased pillar corals have been going to Dr. Woodley's lab for treatment. Seven rescue events from 2016 to 2019, along with acquisitions transferred from two other institutions, provided the lab in Charleston, South Carolina, with pillar coral fragments for experimental treatment and rehabilitation. For more information: <https://coastalscience.noaa.gov/news/researchers-stop-tissue-loss-disease-in-rescued-pillar-coral-video/>

NATIONAL MARINE SANCTUARY NEWS

Special Issue Celebrates 10 years of NOAA's Integrated Ecosystem Assessment Program

NOAA is celebrating 10 years of implementing Integrated Ecosystem Assessments (IEA) with the publication of a special issue of the *Coastal Management Journal*, titled "[Ten years of NOAA Integrated Ecosystem Assessment](#)." The strong collaboration that has developed between the Office of National Marine Sanctuaries and the IEA program is highlighted in three of the seven articles in the special issue. "[Using Integrated Ecosystem Assessments to Build Resilient Ecosystems, Communities, and Economies](#)" describes ways that the IEA approach has been adapted to support and improve ONMS condition report and management plan development for sanctuaries in multiple regions. "[Place-Based Ecosystem Management: Adapting Integrated Ecosystem Assessment Processes for Developing Scientifically and Socially Relevant Indicator Portfolios](#)" reviews how indicators (i.e., measures of key components of the ecosystem) were identified in seven case studies, including one focused on the strong collaboration between the California Current IEA (CCIEA) team and Monterey Bay and Channel Islands sanctuaries. This collaboration focused on the development of habitat-specific suites of indicators and conceptual models that were vetted with regional experts for relevance in tracking and reporting on sanctuary conditions. "[Improving the IEA Approach Using Principles of Open Data Science](#)" highlights steps IEA partners and practitioners, including CINMS and MBNMS, are taking to improve public access to scientific data, methods, and products. For further information about the special issue, see this [web story](#).

Living Shipwrecks 3D Website Accepted into Esri Federal Map Gallery

The Living Shipwrecks 3D website, a collaboration between the Monitor NMS and the National Centers for Coastal Ocean Science was recently inducted into the 2021 Esri Federal GIS Conference Map Gallery and is currently in the running for People's Choice Award. This four year project, led by Tane Casserly, Monitor NMS and NCCOS researchers, Dr. Avery Paxton and Dr. Chris Southerly documented the shipwrecks from the Civil War to World War II's Battle of the Atlantic. The goal of the project was to look at how these vessels that once defended our nation's shores can now support the region's coastal health and ecology while also helping us remember and learn of the struggles from our past. This project utilizes many exciting new technologies, including acoustic surveys aboard the NOAA ship Nancy Foster, to document the shipwrecks and create acoustic fish visualizations of the surrounding marine life. This showcases the continuously fruitful partnership between NCCOS and NMS and this entry into a competition alongside many other quality examples will provide more promotion for the Monitor NMS and our upcoming Valor of the Atlantic Cruise even if there is a different winner. This is also a great exemplar to showcase the diverse research that occurs at the Monitor NMS. To learn more about the Living Shipwreck 3D website click here: <https://3d-shipwreck-data-viewer-noaa.hub.arcgis.com/>.

Shipping Containers Lost from a Fourth Container Vessel

On February 17, the M/V *MAERSK EINDHOVEN* lost power resulting in the loss of maneuvering in rough seas near Japan that led to severe rolling and the loss of containers while en route from China to Los Angeles. Maersk's 2M Alliance partner, MSC, which had chartered cargo on the ship, stated on its site that "several hundred" containers may have been lost overboard, which Maersk updated to 260 containers by Friday, February 19. As the largest cargo owners listed were IKEA, Amazon, Adidas, Williams-Sonoma, Grainger, Wolverine World Wide, Puma, and Hasbro, most goods carried on the ship are likely furniture, apparel, electronics, cookware, and toys. This event comes less than three months after the *MSC Aries*, *MAERSK ESSEN* and the *ONE Apus* lost a combined 2,589 containers in the Central Pacific Ocean near PMNM. Sources: [Freightwaves.com](#) & USCG. For the fourth time in less than 3 months, a maritime shipping accident losses shipping containers in the Pacific bringing the estimated total to 2,849 containers lost at sea with potential impacts to PMNM from marine debris and grounded containers on the reefs and shoals.



MONTEREY BAY NATIONAL MARINE SANCTUARY NEWS AND PROGRAM UPDATES



MANAGEMENT

Monterey Bay National Marine Sanctuary Holds Virtual Advisory Council Meeting

On February 19, MBNMS held its first Advisory Council (AC) meeting (virtually) of the year. The AC received presentations regarding the Advisory Council's 2021 Work Plan and MBNMS's Draft Management Plan. Three seats (Commercial Fishing, California Resources Agency and Education) presented their "SAC Challenge" update, which is an opportunity to share how they reach their constituency and promote MBNMS. The AC also voted to approve the Charter Revision Sub-Committees recommendations for the MBNMS AC Charter. The next meeting will be held virtually on April 16. 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 Management Plan Review Presentations

On March 10 and March 12, Acting Superintendent Dawn Hayes presented information about comments received on the sanctuary's draft management plan documents to the Association of Monterey Bay Area Governments and the Research Activity Panel. The majority of comments revolved around the need for wildlife and habitat protection, reducing marine debris, opposition to offshore wind energy projects, support for education programs, increasing research and monitoring, research at Davidson Seamount, addressing climate change and improving water quality. There was support for the proposed regulatory changes related to the beneficial use of suitable harbor sediment for beach nourishment and proposed changes to MPWC zones and wave height restriction easing at Mavericks. Presentations like this help inform sanctuary partners, stakeholders and constituents of the review process, the breadth of topics the sanctuary staff deal with regularly and how we intend to address concerns raised along the way.

RESEARCH AND MONITORING

Beach COMBERS represented at annual California Seabird Coordination Meeting

The annual California Seabird Coordination Meeting was held virtually this year on February 4th, hosted by Greater Farallones Association and Greater Farallones National Marine Sanctuary. The meeting included a full-day of brief updates from seabird scientists describing the status and progress of their research and monitoring activities. The Beach COMBERS program was represented by two updates, including: 1) an announcement that management of Beach COMBERS program transferred from Moss Landing Marine Laboratories to U.S. Fish and Wildlife Service (Ventura office); and 2) a demonstration of the CeNCOOS data portal using Beach COMBERS data. Since 1997, trained volunteers have surveyed beached marine birds and mammals monthly at selected sections of beaches throughout the Monterey Bay area, with the specific goal of using deposition of beach cast carcasses as an index of the health of the sanctuary. On average, BeachCOMBERS detect 2.5 events per year, where baseline numbers of dead organisms are significantly surpassed. These could be natural events (e.g., a low productivity year for food) or human caused (e.g., an oil spill). BeachCOMBERS accomplishments and information can be found on the web site <https://www.mlml.calstate.edu/beachcombers/>. CeNCOOS data portal: (<https://data.cencoos.org/>)

Endangered black abalone rescue missions continue along the Big Sur coastline

The combination of the Dolan Fire and the January atmospheric river (AR) event generated multiple destructive debris flows in Big Sur. Unlike a landslide, a debris flow moves sediment and vegetation from a watershed down to the coastline during heavy rain events, such as the AR that dropped up to 15 inches of rain in 72 hours. This

was the second visit to sites after the AR event, and the debris flow fans were dynamic, as expected, spreading further along the shore, expanding the initial footprint of damage, and newly burying additional black abalone. This ongoing threat is being monitored by researchers from the Multi-Agency Rocky Intertidal Network (MARINe), with partners from NMFS, CA Dept of Fish and Wildlife, UC Santa Cruz, and MBNMS. Significant financial support facilitated by the National Marine Sanctuary Foundation has been critical to supporting Wendy Bragg, the point person for all of these field efforts and a doctoral student at UCSC. Active rescue efforts aimed at protecting a small population of remaining black abalone on CA's central coast after a natural disaster, highlight the importance of public/private partnerships in marine conservation efforts.

Special Issue Celebrates 10 years of NOAA's Integrated Ecosystem Assessment Program

NOAA is celebrating 10 years of implementing Integrated Ecosystem Assessments (IEA) with the publication of a special issue of the *Coastal Management Journal*, titled "[Ten years of NOAA Integrated Ecosystem Assessment.](#)" The strong collaboration that has developed between the Office of National Marine Sanctuaries and the IEA program is highlighted in three of the seven articles in the special issue. "[Using Integrated Ecosystem Assessments to Build Resilient Ecosystems, Communities, and Economies](#)" describes ways that the IEA approach has been adapted to support and improve ONMS condition report and management plan development for sanctuaries in multiple regions. "[Place-Based Ecosystem Management: Adapting Integrated Ecosystem Assessment Processes for Developing Scientifically and Socially Relevant Indicator Portfolios](#)" reviews how indicators (i.e., measures of key components of the ecosystem) were identified in seven case studies, including one focused on the strong collaboration between the California Current IEA (CCIEA) team and Monterey Bay and Channel Islands sanctuaries. This collaboration focused on the development of habitat-specific suites of indicators and conceptual models that were vetted with regional experts for relevance in tracking and reporting on sanctuary conditions. "[Improving the IEA Approach Using Principles of Open Data Science](#)" highlights steps IEA partners and practitioners, including CINMS and MBNMS, are taking to improve public access to scientific data, methods, and products. For further information about the special issue, see this [web story](#). National marine sanctuaries are an ideal setting to apply NOAA's 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.

MBNMS Microplastics Paper Published

MBNMS Research Specialist Chad King is a co-author for the paper entitled, "Microplastics and microfibers in surface waters of Monterey Bay National Marine Sanctuary, California" to be published in the April 2021 issue of "Marine Pollution Bulletin." Both Chad and Andrew DeVogelaere (MBNMS Research Coordinator) conducted all of the field research in 2018 and 2019 by skimming the ocean surface with a large manta trawl at four locations in Monterey Bay, Sur Ridge and Davidson Seamount. Analysis of samples were performed by the main author and other co-authors. This was the first extensive sampling of MBNMS surface water for microplastics and microfibers. Results showed that nearshore Santa Cruz had highest concentrations (3.21 particles/m³), while offshore Davidson Seamount had lowest (0.26 particles/m³), and there was a higher proportion of microfibers at offshore sites compared to nearshore sites. Polypropylene and polyethylene were the most common polymers identified. Overall, concentrations (1.32 particles/m³) were similar to other studies of surface seawater both regionally and globally. You can view the article directly at <https://www.sciencedirect.com/science/article/abs/pii/S0025326X2100182X?dgcid=author>. This was the first extensive sampling of MBNMS surface water for microplastics and microfibers. It is crucial to determine the distribution and density of microplastics and microfibers in our local sanctuary waters and understand the impact to the environment and human health.

MBNMS Research Activity Panel Holds Virtual Meeting

On March 12, Monterey Bay National Marine Sanctuary (MBNMS) Research Activity Panel (RAP) met virtually. Agenda items included: Processes Driving Bar-built Estuary Morphodynamics; summary of February 2021 MBNMS Advisory Council meeting; updating the document “Major Marine Sciences Facilities in the Monterey Bay Crescent”; updating MBNMS science needs; maritime heritage update; management plan update; and 2021 Ed Ricketts Award and Lecture. The MBNMS Research Activity Panel (RAP) is a working group of the MBNMS Advisory Council (AC). The RAP meets five times per year, and advises AC and sanctuary staff on basic and conservation science issues.

Beach COMBERS monitoring program resumes monthly surveys in April

Since March 2020, the Beach COMBERS monthly monitoring volunteer program has been on hold intermittently due to COVID-19, following county and state COVID restrictions. Most recently, the program has been on hold since January 6th 2021. Volunteers were notified mid-March that monthly surveys would resume in April, following standard COVID-19 prevention measures (e.g., PPE and social distancing). Volunteers will only survey beaches if they feel comfortable doing so, with the appropriate prevention protocols. In addition, the surveys have been modernized. Paper datasheets are no longer the primary method for data collection; the smart-phone app Survey123 is now used to record data. Volunteers are managed by US Fish and Wildlife Service (Ventura, CA). Since 1997, trained volunteers have surveyed beached marine birds and mammals monthly at selected sections of beaches throughout the Monterey Bay area, with the specific goal of using deposition of beach cast carcasses as an index of the health of the sanctuary. On average, BeachCOMBERS detect 2.5 events per year, where baseline numbers of dead organisms are significantly surpassed. These could be natural events (e.g., a low productivity year for food) or human caused (e.g., an oil spill). BeachCOMBERS accomplishments and information can be found on the web site <https://www.mlml.calstate.edu/beachcombers/>

RESOURCE PROTECTION

S/V Bobbie Ann goes aground in extreme weather

On Jan. 25 the 39’ motorsailer Bobbie Ann broke free from a mooring ball in Monterey Harbor due to high winds and seas. The vessel traveled approximately one mile and grounded on Del Monte beach with a reported 150 gallons of diesel fuel on board. The owner took responsibility immediately and hired salvage contractors to take quick action to prevent any environmental harm. Because of the extreme weather they were not able to tow the boat back out to sea or remove the fuel because of the timing of the tide cycle. The boat was anchored in place for the night. On Jan. 26 after a night of battering, the boat was still intact and no fuel was thought to have discharged. A towing company was hired to remove the vessel via land. With the weather and tide window getting shorter we (MBNMS, USCG, and OSPR) agreed to give up on the fuel removal and begin moving the boat down the beach. The one mile tow began at 1350 and was complete at 1630. The only environmental impact was a little bottom paint being scraped off the hull as it was drug down the beach. There was no debris at all left behind. Once the vessel was out of the surf zone they were able to remove 100 gallons of diesel fuel which they believe was all the vessel had on board. Quick action and conscientious boat owners can significantly reduce the potential for serious environmental damage. Contractors were hired and resource agencies worked swiftly and in close coordination to ensure the best possible outcome.

Bioreactors for Nutrient Management

The Agricultural Water Quality Coordinator for the Monterey Bay National Marine Sanctuary presented information on how Bioreactors can be used to remove nitrate from agricultural runoff and tile drain water at the 2021 UCCE Annual Nutrient Management Meeting on 2/23/2021. This meeting attended by sixty people from the agricultural community provided information about the effectiveness and efficiency of three different bioreactor systems and how they can remove medium to high levels of nitrate-N (30-200 mg/L) in order to

achieve Water Quality Objectives for Nitrate-N (1.2 – 10 mg/L). Excessive nitrate concentrations can alter conditions in streams and the ocean, potentially leading to hypoxic conditions such as those observed in Elkhorn Slough, an important rockfish nursery. By removing nitrate from agricultural runoff we can return these ecosystems to more healthy environments.

MBNMS coordinates with USCG to move laden oil tanker off coastline

MBNMS Resource Protection staff monitor large vessels that deviate from recommended tracks on a daily basis, and identified a laden crude oil tanker loitering approximately 5 miles offshore of Ano Nuevo, which supports a thriving elephant seal rookery. MBNMS contacted USCG Sector SF, Waterways Management Division, and they in turn contacted the skipper of the vessel, and requested information on why they were so close to shore. The vessel was awaiting anchorage in the port of San Francisco and a work slowdown in the port was causing a backup of arriving vessels. Sector SF requested that the ship move offshore, and they responded immediately and moved beyond the IMO recommended tracks and away from the coastline and sensitive species and habitat. The International Maritime Organization worked with NOAA, USCG and others to establish the MBNMS recommended tracks in order to reduce the risk of a spill or collision in a national marine sanctuary. This action formed an agreement for oil tankers to stay 50 miles offshore and use the western TSS when entering or leaving SF. MBNMS continues to track and monitor vessel traffic to ensure vessels are using the recommended tracks.

Cover Crop Webinars

The Agricultural Water Quality Coordinator for the Monterey Bay National Marine Sanctuary coordinated two workshops on cover crops for local agricultural interests. A total of 100 people attended the workshops to learn about how cover crops can prevent soil erosion, improve soil health and cycle nitrogen. Cover crops are non-crop plants that are planted in the off season on farm fields. By storing nitrogen in the plant body of the cover crop and later tilling it into the soil, nitrogen is delivered to plants in the spring and prevented from being released to surface and ground water in the winter. Excessive nitrate concentrations can alter conditions in streams and the ocean, potentially leading to hypoxic conditions. Cover crops can help prevent nitrate release to water by taking up this nitrate and cycling it back. Carbon sequestration into the soil helps reduce the rate of ocean climate change.

EDUCATION, VOLUNTEER AND OUTREACH PROGRAMS

11th Annual Whalefest Monterey Highlights MBNMS

This annual two day event went virtual for 2021, and expanded to four nights of programming from January 26-29 at 6:30-8:30 PM each night. This event, presented in partnership with Fisherman's Wharf Association, City of Monterey, Monterey Bay National Marine Sanctuary, and numerous community sponsors, celebrates gray whale migration and biodiversity in the sanctuary. This year's virtual program was broadcast on Whalefest Monterey's Facebook and YouTube page, as well as available on local AMP-Channel 24 for the public to watch.

Programming included presentations from scientists studying Minke whales, dolphins and porpoises, leatherback turtles, and intertidal gastropods. Chad King contributed a talk on deep-sea discoveries of the octopus garden and a whale fall in Davidson Seamount, and Kevin Grant gave a sanctuary update presentation on 2020 activities, highlighting draft management plan, whale entanglement solutions, acoustic monitoring, and new distance learning programs. As part of our mission to educate about the significance and importance of national marine sanctuaries, MBNMS participates in community events to share messages of ocean awareness, inspiration, and conservation of important sanctuary resources to the public.

MBNMS Exploration Center Update

During the week of January 18-22, Sanctuary Exploration Center staff completed two Live Distance Learning Programs with 53 students. This week's programs included two "Dive into Kelp Forest" virtual field trips.

During the week of January 30-Feb 5, Sanctuary Exploration Center staff completed two Live Distance Learning Programs with 53 students. This week's programs included two "Deep Sea Discovery" virtual field trips. Additionally, SEC staff led a "Plankton Exploration" program for MBNMS volunteers, which was attended by 12 people.

During the week of Feb 6-12, Sanctuary Exploration Center staff completed two Live Distance Learning Programs with 53 students. This week's programs included two "Sounds in the Sanctuary" virtual field trips. This concluded our five-week long session with two 4th grade classes from Watsonville Charter School of the arts.

During the week of Feb 20-26, Sanctuary Exploration Center staff completed three Live Distance Learning Programs with 71 students. This week's programs included three "Plankton Exploration" virtual field trips with teachers who participated in the SCCOE "Teacher Leadership Institute" who have integrated this program into their curriculum, supporting Next Generation Science Standards.

During the week of March 6-12, Sanctuary Exploration Center staff completed four Live Distance Learning Programs with 95 students. This week's programs included three "Plankton Exploration" and one Deep Sea Discovery virtual field trips.

While the Exploration Center is closed to the general public, it is important to still engage our regular audiences including school groups, volunteers, and the public. Since schools are mostly closed, live virtual environmental education is in demand. Distance learning programs such as these are the only sort of "field trip" students will have this year. Additionally, MBNMS is able to reach a wider audience and from broader demographics than with traditional in-person programs.

MBNMS Shipwreck Profiles Highlighted in New Web Story

On January 21, ONMS published a web story that draws attention to six new shipwreck profiles added to the MBNMS maritime heritage shipwrecks database. Specifically, it highlights the wreck of the 162-foot clipper ship *Carrier Pigeon* in 1853, for which Pigeon Point, 40 miles south of San Francisco, is named. The story link is here: [Lost But Not Forgotten: New Profiles added to Monterey Bay National Marine Sanctuary Shipwreck Database.](#)

Learn more: <https://montereybay.noaa.gov/maritime/losses.html>

NOAA's Office of National Marine Sanctuary is committed to preserving historical, cultural and archaeological resources and seeks to increase public awareness of America's maritime heritage by conducting scientific research, monitoring, and exploration and educational programs.

MBNMS Staff host session during the Santa Cruz STEAM Teacher Conference

UCSC's Monterey Bay Area Math Project & Monterey Bay Science Project Presents the 14th Annual STEAM Conference on March 6, virtually. Chelsea Prindle led a session presentation on the MBNMS Distance Learning Programs and an overview of other ONMS Virtual tools for teachers to use with their students. The session was attended by 25 Santa Cruz County teachers. While the Exploration Center is closed to the general public, it is important to still engage our regular audiences including school groups, volunteers, and the public. Since schools are mostly closed, live virtual environmental education is in demand. Distance learning programs such as these

are the only sort of “field trip” students will have this year. Additionally, MBNMS is able to reach a wider audience and from broader demographics than with traditional in-person programs.

MBNMS Hosts ONMS Webinar Series, Dive into a Changing Ecosystem: From Kelp Forests to Urchin Barrens

On March 11, MBNMS staff in partnership with O’Neill Sea Odyssey, hosted an ONMS webinar series title; Dive into a Changing Ecosystem, From Kelp Forests to Urchin Barrens. The webinar featured underwater photographer Kate Vylet, Research Scientist Josh Smith, and MBNMS Resource Protection Coordinator, Karen Grimmer. The event aimed at presenting a current underwater phenomenon from multiple perspectives. This virtual webinar was part of the ONMS Seminar Series, and was well-attended with 933 registrations, 537 attendees (including logins with multiple attendees), representing 37 states of the U.S. and 20 other countries. Of those who completed the post-seminar survey; 94% agreed or strongly agreed that the content of the webinar helped them understand that national marine sanctuaries help protect the ocean and Great Lakes, 99% were likely to attend another ONMS seminar in the future, and 98% said they were likely or very likely to recommend this seminar series to others. While the Exploration Center is closed to the general public, it is important to still engage our regular audiences including school groups, volunteers, and the public. Distance learning programs such as these are able to reach a wider audience and from broader demographics than with traditional in-person programs.

MBNMS featured in California Dreaming: “Why the Golden State's coastline is one of the most unique in the world”


On March 17, ABC7 Eyewitness News aired a segment for their docuseries, *California Dreaming*. MBNMS Southern Region Coordinator and Community Liaison Michele Roest was one of three marine conservation representatives interviewed for the segment. "California's coastlines are unique in part because of the topography and in part because California is such a long state," said Michele Roest, a marine biologist at the Monterey Bay National Marine Sanctuary and a professor at Cal Poly San Luis Obispo. "We take it for granted because we live here, but it is one of the most unique ecosystems in the world," said Roest. "We're recognized as a biodiversity hotspot and people come here to see species that they can only see here."

See the story segment here: <https://abc7.com/society/california-dreaming-one-of-the-worlds-best-coastlines/10426474/>

Televised exposure of ONMS messaging assists in fulfilling our outreach and education mandate. ABC7 News reach covers Los Angeles, Orange County and all of the greater Southern California area. ONMS West Coast Region provided B-roll video and still shots which were used extensively and credited to National Marine Sanctuaries.

MBNMS staff showcase the Sanctuary Exploration Center during NOAA Live! Webinar Open House Series

On March 17, Sanctuary Exploration staff participated in a NOAA Live! Webinar Open House Series. This series showcases NOAA facilities and staff by providing attendees a behind the scenes look at the work done by NOAA across the country. For this event, Sanctuary Exploration Center staff members Chelsea Prindle, Acy Wood, and Nick Ingram provided an in-depth look at some of the Exploration Center’s key exhibits and biodiversity of the sanctuary. Attendees learned about what makes MBNMS so special and how our visitor centers and staff work to educate and inform the public about the amazing resources of the area. Distributed throughout the webinar were rich and engaging interactive Q&A sessions where attendees could ask questions to the presenters about any of the topics covered in their presentations. There were 609 viewers from 35 states and 5 additional countries (Barbados, Hungary, Mexico, Nigeria and Spain) in attendance for the event. Much of the audience consisted of k-12 classrooms but also included other members of the public. While the Exploration Center remains closed to



in-person visitors, it is important to regularly engage with our audiences including school groups, volunteers, and the general public. Live virtual programs such as this allow local and global community members to stay engaged and learn from all that the Exploration Center has to offer. Virtual programming also has the benefit of targeting new and different audiences from wider demographics by eliminating geographic limitations. Furthermore, these programs offer a unique opportunity for people to see parts of the facility and operations that they may not have the opportunity to due to logistical or security concerns associated with in person visitation.

NEWS COVERAGE

[Against climate gloom and doom](https://theyee.ca/Culture/2021/02/02/Against-Climate-Doom-Gloom/)

<https://theyee.ca/Culture/2021/02/02/Against-Climate-Doom-Gloom/>
The Tyee – February 2, 2021

[Wind turbines could be coming to California's coast](https://www.mercurynews.com/2021/02/11/wind-turbines-could-be-coming-to-californias-coast/)

<https://www.mercurynews.com/2021/02/11/wind-turbines-could-be-coming-to-californias-coast/>
The Mercury News – February 11, 2021

[New study reveals large increase in great white shark numbers in Monterey Bay](https://www.sharkophile.com/2021/02/12/new-study-reveals-large-increase-in-great-white-shark-numbers-in-monterey-bay/)

<https://www.sharkophile.com/2021/02/12/new-study-reveals-large-increase-in-great-white-shark-numbers-in-monterey-bay/>
Sharkophile – February 12, 2021

[The unexpected benefits of surfing](https://www.bbc.com/future/article/20210218-the-environmental-benefits-of-surfing)

<https://www.bbc.com/future/article/20210218-the-environmental-benefits-of-surfing>
Future Planet – February 18, 2021

[Innovative fishing gear is being tested to reduce impact on whales and sea turtles](https://www.montereyherald.com/2021/02/21/innovative-fishing-gear-is-being-tested-to-reduce-impact-on-whales-and-sea-turtles-4/)

<https://www.montereyherald.com/2021/02/21/innovative-fishing-gear-is-being-tested-to-reduce-impact-on-whales-and-sea-turtles-4/>
Monterey Herald – February 21, 2021

[Wildfire, landslides threaten California's endangered black abalone](https://www.earthisland.org/journal/index.php/articles/entry/wildfire-landslides-threaten-californias-endangered-black-abalone/)

<https://www.earthisland.org/journal/index.php/articles/entry/wildfire-landslides-threaten-californias-endangered-black-abalone/>
Earth Island Journal – February 22, 2021

[Rachel Kippen, Our Ocean Backyard - Dive into a changing ecosystem: Kelp forests and urchin barrens](https://www.santacruzsentinel.com/2021/03/06/rachel-kippen-our-ocean-backyard-dive-into-a-changing-ecosystem-kelp-forests-and-urchin-barrens/)

<https://www.santacruzsentinel.com/2021/03/06/rachel-kippen-our-ocean-backyard-dive-into-a-changing-ecosystem-kelp-forests-and-urchin-barrens/>
Santa Cruz Sentinel – March 6, 2021

[New study reveals otters' role in protecting kelp forests](https://goodtimes.sc/santa-cruz-news/study-reveals-otters-role-protecting-kelp-forests/)

<https://goodtimes.sc/santa-cruz-news/study-reveals-otters-role-protecting-kelp-forests/>
Good Times – March 16, 2021

[Magazine named this Big Sur spot one of the "Luckiest Places in the World"](https://sanluisobispo.com/living/travel/article250066919.html)

sanluisobispo.com/living/travel/article250066919.html
San Luis Obispo Tribune – March 20, 2021

[California Dreaming: Why the golden state's coastline is one of the most unique in the world](https://abc7.com/society/california-dreaming-one-of-the-worlds-best-coastlines/10426474/)

<https://abc7.com/society/california-dreaming-one-of-the-worlds-best-coastlines/10426474/>
ABC 7 – March 23, 2021

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

★★ **Check out these MBNMS Advisory Council webpage links!** ★★

Advisory Council Meeting Agendas & Minutes

<https://montereybay.noaa.gov/sac/sacma.html>

Advisory Council Actions and Results

<https://montereybay.noaa.gov/sac/sacact.html>

Advisory Council User Group Newsletters (seats and working groups/sub-committees)

<https://montereybay.noaa.gov/sac/advisory-nwsltr.html>

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.

Follow MBNMS on Facebook (<https://www.facebook.com/MBNMS>), **Instagram** (@mbnms) and **Twitter** (<https://twitter.com/mbnms>)

FUN, OCEAN RELATED WEB SITES

NOS Ocean Facts: Ocean Life

<https://oceanservice.noaa.gov/factspage.php?siteName=oceanfacts&cat=Ocean%20Life>

Caitlin Seaview Survey

<http://www.caitlinseaviewsurvey.com>

SIMON

<https://www.sanctuarysimon.org>

Seasons in the Sea

<http://www.seasonsintthesea.com>

Thank You Ocean

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

Oceans Live

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

NOAA Ocean Explorer

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

Encyclopedia of the Sanctuaries

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

MBNMS STAFF

Dawn Hayes – Acting Superintendent
George Galasso – Acting Deputy Superintendent

Research

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

Education

Amity Wood – Education and Outreach Coordinator
Acy Wood – Volunteer Coordinator (SEC)
Nick Ingram – Exhibits/Facility Specialist (SEC)
Chelsea Prindle – SEC Manager
Michele Roest – Program Coordinator & Community Liaison
Lisa Uttal – Education Specialist

Resource Protection

Karen Grimmer – Resource Protection Coordinator
Sophie De Beukelaer – GIS Analyst & Permit Coordinator
Lisa Emanuelson – Volunteer Monitoring Coordinator
Bridget Hoover – Water Quality Protection Program Director
Pamela Krone – Agriculture Water Quality Coordinator

Program Operations

Raymond Chisolm – Program Specialist
Nichole Rodriguez – Advisory Council Coordinator
Andrew White – Network Manager and Webmaster



Learn More About Your Sanctuary

The Sanctuary Office Report is produced bi-monthly by Monterey Bay National Marine Sanctuary staff in conjunction with Sanctuary Advisory Council meetings. To learn more about the Sanctuary please visit our web site at: <https://www.montereybay.noaa.gov>.

To learn more about the Sanctuary Advisory Council please visit:
<https://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:
<https://www.sanctuaries.nos.noaa.gov/>

Get involved and stay informed!

To learn how to get involved in the Sanctuary visit:
<https://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:
<https://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