



Monterey Bay National Marine Sanctuary



Sanctuary Office Report

Volume 18, Number 4

A REPORT FOR THE SANCTUARY ADVISORY COUNCIL MEMBERS REPORTING PERIOD: AUGUST 2 – SEPTEMBER 20, 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

New State of the Climate Report is published

A new [State of the Climate](#) report confirmed that 2020 was among the three warmest years in records dating to the mid-1800s, even with a cooling La Niña influence in the second half of the year. New high temperature records were set across the globe. The report found that the major indicators of climate change continued to reflect trends consistent with a warming planet. Several markers such as sea level, ocean heat content, and permafrost once again broke records set just one year prior. Notably, carbon dioxide (CO₂) levels in the atmosphere also reached record highs in 2020, even with an estimated 6%–7% reduction of CO₂ emissions due to the economic slowdown from the global pandemic. These key findings and others are available from the *State of the Climate in 2020* report released by the American Meteorological Society (AMS).

Study Shows NOAA Reserves Contribute Millions to Local Economies

A [study on the economic contribution of four National Estuarine Research Reserves](#) found the reserves contributed more than \$165 million in revenue annually to their local areas, including \$56.4 million in wages paid for 1,762 jobs. The reserves — Rookery Bay, Guana Tolomato Matanzas, and Apalachicola in Florida and South Slough in Oregon — contribute to their local economies through operations and maintenance, educational programs, and tourism. The report has garnered significant press interest in Florida and Oregon, with stories from over 80 media outlets. The study was funded by NOAA and The Pew Charitable Trusts.

New One-Stop Website for Marine Navigation Resources

[A new website](#) from NOAA's Precision Marine Navigation program will improve the use and accessibility of NOAA's marine navigation products and services. The website includes links to and short descriptions of NOAA's various navigation resources, providing a one-stop shop that mariners can visit to get the data they need. Designed for shipping professionals and recreational boaters alike, the website will become a valuable tool to support all mariners in their navigation planning and decision-making processes. NOAA provides a variety of data products, observations, and forecasts, and this new website will act as a central hub for all marine navigation resources, directing users to the most relevant data source or tool based on their need.

NATIONAL MARINE SANCTUARY NEWS

New Vessel Added to ONMS Small Boat Fleet

A custom built, 52-foot research catamaran, the *R/V Storm Petrel*, joined the ONMS small boat fleet. The vessel will serve as a valuable asset to support NOAA's and ONMS's on-water mission efforts. It replaces the *R/V Tatoosh* as [Olympic Coast National Marine Sanctuary's](#) only scientific research vessel dedicated to the outer coast of Washington. The vessel has an 18-person capacity and includes a large working space on the aft deck, a wet laboratory for examining specimens, and a dry laboratory for processing data. The main deck features a 5,000-pound A-frame for launching scientific equipment. This new platform will aid research on climate change, ocean acidification, seafloor mapping, and habitat characterization, as well as health monitoring for ocean resources and marine wildlife. In addition to research, *R/V Storm Petrel* can support a range of at-sea activities including technology testing, derelict gear recovery, and marine education and outreach.

Lionfish Manuscript Published

A new manuscript highlighting FGBNMS lionfish data entitled "Multiple drivers of invasive lionfish culling efficiency in marine protected areas" was published in *Conservation Science and Practice* this week. Authors, including Dr. Michelle Johnston from Flower Garden Banks National Marine Sanctuary (FGBNMS), coordinated regional efforts by divers to cull invasive lionfish (*Pterois* spp.) on 33 U.S. Atlantic, Gulf of Mexico, and Caribbean protected coral reefs from 2013 to 2019 and estimated removal efficiency and efficacy as a function of environmental and habitat conditions, invasion status, and personnel expertise. Results show that highly experienced individuals culling during crepuscular periods (<2 hr. from sunrise/sunset) are three times more efficient (in terms of minutes) than novice divers during midday, suggesting: (a) retention of experienced individuals is key for efficient programs, and (b) planning culls with personnel and time of day in mind increases the number of sites covered with the same effort. Lionfish behavior and habitat characteristics had little effect on removal efficiency and efficacy, but divers had higher capture success at reefs with higher lionfish densities. Results suggest reefs with persistently <20 fish ha⁻¹ as low priority, given that impacts to native fauna are unlikely and culling effectiveness declines to <50% below this level. The published article can be accessed via this link: <http://doi.org/10.1111/csp2.541>.

NOAA scientists featured on Science Channel and Discovery+ new series *Abandoned: Expedition Shipwreck*

Science Channel and discovery+ new series [Abandoned: Expedition Shipwreck episode](#) "Collision Course" aired on September 23rd, featuring the shipwreck SS *City of Chester* sunk in a collision with the RMS *Oceanic* in 1888 off the Golden Gate. Robert Schwemmer, ONMS West Coast Regional Maritime Coordinator, along with Stephen Haller, Historian, and Peter Gavette, Archaeologist, both with the National Park Service were featured in the episode. The first archaeological multibeam sonar survey of the SS *City of Chester* was completed in collaboration with the Office of Coast Survey Navigation Response Team 6 in 2013. In 2014, Schwemmer served as NOAA's chief scientist for the first archaeological survey using three-dimensional technology to record the SS *City of Chester* in partnership with Bay Marine LLC and Hibbard Inshore LCC. For this mission, Hibbard's Saab Hybrid remotely operated vehicle was equipped with a Coda Octopus Echoscope sonar producing real-time three-dimensional imaging of both shipwreck sites. The episode also includes NOAA scientists working off the NOAA ship *Ferdinand R. Hassler* surveying the shipwreck SS *Oregon* lost in collision with an unidentified schooner off New York in 1886, and the HMS *Curacoa* lost in a collision with the RMS *Queen Mary* off the coast of Ireland in 1942. The episode airs again on Sept. 30th and is also available on discovery+ and Amazon without the commercials and advertisements.



MONTEREY BAY NATIONAL MARINE SANCTUARY NEWS AND PROGRAM UPDATES



MANAGEMENT

Road Map to Working with Indigenous Communities presented to MBNMS staff

MBNMS members of the recently formed ONMS Indigenous Communities Engagement Team presented the “ONMS Road Map to Working with Indigenous Communities” at MBNMS staff meeting. Topics included Road Map development, purpose, goals, MBNMS FY22 priorities, and highlights of the recent Udall Foundation Tribal Training. MBNMS staff were very interested in these ONMS efforts, and are looking forward to engagement and capacity building. NOAA’s Office of National Marine Sanctuaries is committed to meaningful engagement and collaboration with Indigenous Communities and to support Indigenous-led conservation and restoration priorities related to national marine sanctuaries and monuments. As a place-based program that works closely with communities, NOAA’s ONMS has an important responsibility and opportunity to work with Indigenous communities to better understand and recognize their rights, responsibilities, knowledge, values, and other connections to places and resources that are a part of national marine sanctuaries and monuments managed by ONMS.

RESEARCH AND MONITORING

MBNMS Research Activity Panel Holds Virtual Meeting

On September 10th, Monterey Bay National Marine Sanctuary Research Activity Panel will meet virtually. Agenda items and presentations include: CeNCOOS - Information solutions to power healthy and prosperous oceanic, coastal and estuarine communities; summary of August MBNMS Advisory Council meeting; introduction to new Executive Director of the California Marine Sanctuary Foundation; agriculture plastic and MBNMS; Ed Ricketts Award and Lecture update; west coast region species inventory; and 2021 Sanctuary Sea Star Awards. The MBNMS RAP is a working group of the MBNMS Advisory Council and meets five times per year, and advises AC and sanctuary staff on basic and conservation science issues.

RESOURCE PROTECTION

MBNMS Conducts Site Damage Assessment of a Boat Grounding in Big Sur

On August 18, 2021, the M/Y *Fish Magnet* ran aground on the beach in Andrew Molera State Park along the Big Sur coast. Over the following week, most of the boat had broken up and strewn a debris field more than a mile long. The responsible party did take responsibility and major salvage efforts removed most of the debris during the following week. MBNMS staff visited on August 20 and photographed the site. A more thorough damage assessment took place on August 27 and documented the remaining debris and looked for any damage to the surrounding environment, including potential black abalone habitat. Fortunately, this grounding took place in a sandy beach environment and there was no evidence of damage to black abalone critical habitat. A helicopter has been taking debris away to a staging area, and to date, there is still some of the bow section that remains stuck in the beach. Two marine engines will be removed soon. It is important for MBNMS to visit groundings such as this, multiple times to assess previously undetected and/or new damage to threatened or endangered species, critical habitat, and natural resources and to monitor ongoing salvage efforts.

Water Quality Webinar to discuss 2020 First Flush and Snapshot Day 2021 results

On the evening of September 30th, Lisa Emanuelson CMSF staff and NOAA Affiliate will present the Monterey Regional Storm Water Management Program’s 2020 First Flush results during the Water Quality Webinar. Also, during the webinar Lisa will present MBNMS’ 2021 Snapshot Day results.

Endangered Short-Tailed Albatross in MBNMS

A juvenile short-tailed albatross has been sighted in MBNMS, most recently seen in Moss Landing on September 17, 2021. This banded albatross has a brown body with a distinctive blue and bubblegum pink bill. It most likely fledged from a colony on Torishima Island, in Japan. It's a federally listed endangered species, protected and managed by USFWS. MBNMS staff attempted to document the status of the bird this week, as observers have noted this bird has apparent damage to its flight feathers, suggesting it may have experienced some sort of line entanglement in its recent past. Per USFWS and local bird experts, the bird exhibits what appears to be normal behavior for a young albatross (2-3 years of age) and is going through a molting cycle; it is able to conduct a straight and balanced flight, is exhibiting normal preening behavior, and can find the typical food items it needs to stay healthy. Thus, species experts and managers agree that the best thing for this bird is to give it plenty of space to be a wild, young albatross, and not attempt to capture for rehabilitation. MBNMS sent a social media blast on what to do if the bird is sighted, which entails giving it plenty of space and not approaching or disturbing it. Many in the community have been involved in tracking and monitoring this special bird. This seabird species almost reached extinction in the 1950's due to demand for its feathers, dipping as low as 12 individuals. With endangered species status, its population has rebounded to 4,000 plus. This is an important success story to share with the public, as well as provide guidance on ways to carefully view and protect the seabird while in a national marine sanctuary.

EDUCATION, VOLUNTEER AND OUTREACH PROGRAMS

Monterey Bay National Marine Sanctuary's 2021's Get into Your Sanctuary (GIYS) "Let's go Fishing" Webinar

One of the activities for 2021 MBNMS GIYS was a webinar on recreational fishing produced by Lisa Uttal and Hollings Prep intern Celia Patterson. Sanctuary Advisory Council (SAC) recreational fishing members Jose Montes and Adam Helm were the guest speakers. The program was videotaped in advance by interviewing Jose, Adam and Vince Schweitzer on the water. The questions for the speakers were designed to elicit some of the primary messages about MBNMS and recreational fishing. In addition to stories about sanctuaries, the speakers were able to speak about responsible recreational fishing - getting a license, knowing your species and ocean conditions before going out and how you can be a steward for the sanctuary by picking up trash and not getting too close to marine mammals. An interesting conversation amongst sanctuary staff around MPAs resulted from the video production, which helped to better communicate the MPA message to the public and to additionally emphasize the fact that the sanctuary is an MPA and you can fish in sanctuaries. The guest speakers really communicated their passion for fishing during the Q&A. There were 68 participants in the webinar and over 135 registrants. The webinar recording will be sent to the registrants at a later date so they can view the program at their leisure. One goal of GIYS this year was to showcase MBNMS and recreational fishing to emphasize there are compatible uses in the sanctuary. While the sanctuary is an MPA, some people think the sanctuary regulates fishing and fishing isn't allowed.

MBNMS Education Staff Host Get into Your Sanctuary Scavenger Hunt!

From August 2nd-8th, MBNMS Education staff hosted two scavenger hunts on the Santa Cruz Wharf and San Simeon Cove in support of Get Into Your Sanctuary week. Over the course of the week, over 150 people participated in the virtual scavenger hunts. Although the Sanctuary Exploration Center and Coastal Discovery Center are closed to the public, the activity started at the entrance to the visitor centers and led participants to different destinations along the sanctuary with QR codes on poster displays. While on the scavenger hunt, participants scanned codes for access to interpretive content, a question, and a clue to the next destination. Content included MBNMS awareness, responsible wildlife viewing, possible recreational activities, recreational fishing opportunities, and ways they can protect their sanctuary. From requested feedback, 33% of participants said they were not familiar with MBNMS before they started the hunt. The event was promoted further by partners on social media, including the City of Santa Cruz. The goal of GIYS is to showcase the various recreational and wildlife viewing opportunities in MBNMS. Although our visitor centers remain closed, the scavenger hunts were a great way for people to have a hands-on learning experience and Get into the Sanctuary!

MBNMS Hosts ONMS Webinar Series “Tracking White Sharks”

On August 11th, MBNMS staff hosted an ONMS webinar series “Tracking White Sharks: An Update on Population Changes of the West Coast of North America” with Marine Ecologist Dr. Salvador Jorgensen. The presentation aimed to detail the latest developments in a long-term study of the northeast Pacific great white sharks. A combination of management practices and climate change have led to range shifting and population fluxes among juvenile and adult white sharks. This virtual webinar was part of the National Marine Sanctuaries Webinar Series, and was well-attended with 944 registrations, 459 attendees (including logins with multiple attendees), representing 32 states of the U.S. and 12 other countries. Of those who completed the post-seminar survey; 93% 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 99% 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 Exploration Center Weekly Update:

Virtual Plankton Presentation at San Simeon Pier

The Coastal Discovery Center at San Simeon Bay provided a virtual “pier oceanography” program to students enrolled in Camp Ocean Pine’s California Naturalist Program. The 15 students from throughout California were able to watch a live plankton tow from San Simeon pier and observe plankton under the microscope. Michele Roest, NOAA affiliate, provided a lecture and interpretation of the important role of plankton in the marine food web, and the role of sanctuaries in protecting plankton populations. Despite challenges associated with COVID closures, MBNMS Education staff continue to provide high quality education programming in virtual format that enhances understanding of sanctuary resources.

MBNMS Education Staff Host “Update on BeachCOMBERS” Docent Enrichment Program

Since the COVID-19 pandemic led to suspension of in-person volunteer training in March 2020, the Sanctuary Exploration Center, Coastal Discovery Center, BayNet, and Team OCEAN program coordinators have hosted a virtual Docent Enrichment Series” to keep volunteers engaged and educated about sanctuary objectives. Twenty-two enrichments have been offered with a range of topics including deep sea research, marine mammal biology, maritime heritage, ocean acidification, marine biotoxins and white sharks. The most recent presentation on August 18 was an update on the BeachCOMBERS Program (Coastal Ocean Mammal & Bird Education & Research Surveys). BeachCOMBERS began in 1997 at Moss Landing Marine Labs, with support from MBNMS. The program is a citizen/community science project using volunteers to collect information about beached birds and marine mammals. The database is available to researchers and the public via the CenCOOS data portal as a resource for assessment of coastal health. In late 2019, responsibility for BeachCOMBERS was transferred to the US Fish and Wildlife Service, Ventura Office. David Sherer, USFWS biologist, is now coordinating the program. David gave examples of how BeachCOMBERS data has been used, and continues to be used, for scientific research. Erica Burton provided important historic information for David’s slide presentation. The importance of partnerships is evident in volunteer-powered programs such as BeachCOMBERS. The partnership between MBNMS, MLML, and USFWS is an example of how the preservation of a long-term database can be transferred among cooperative agencies for the benefit of enduring scientific use.

NEWS COVERAGE

<https://patch.com/california/scottsville/amp/cal/20210816/1153989/senior-life-online-monterey-bay-marine-sanctuary>

Senior Life Online - "Monterey Bay Marine Sanctuary" Dan Haifley, marine and environmental activist and Monterey Bay Sanctuary Foundation Secretary of the Board, will be our featured speaker discussing "The Monterey Bay National Marine Sanctuary."

[Monterey Bay, and a stretch of Big Sur's coastline, is now designated as a critical habitat for the ...](#)

Monterey County Weekly

The designation of the Monterey Bay as a national marine sanctuary in the 1990s was a major victory for one side in that struggle. And just last month, ...

[State advises that leatherbacks along Central Coast be listed as endangered - Monterey Herald](#)

Monterey Herald

A crew working with NOAA Fisheries provide a health check of a leatherback sea turtle in the Monterey Bay National Marine Sanctuary. (Courtesy ...

<https://www.motherjones.com/environment/2021/09/purple-urchin-zombies-red-kelp-forests-sea-stars/>

These purple-urchin slayers are trying to save Pacific kelp forests

<https://goodtimes.sc/calendar/things-to-do-in-santa-cruz-sept-15-21/>

Annual Coastal Cleanup Day-make a positive impact on our beautiful Monterey Bay National Marine Sanctuary

<https://www.surfertoday.com/surfing/steamer-lane-the-heart-and-soul-of-santa-cruz-surfing>

Steamer Lane: the heart and soul of Santa Cruz surfing

[Taking lessons from a sea slug, study points to better hardware for artificial intelligence ...](#)

Purdue News Service

... intelligence how to use those strategies. Pictured: *Aplysia californica*. (NOAA Monterey Bay National Marine Sanctuary photo/Chad King).

[City of Santa Cruz: 280 Clean Ocean Businesses Honored During Pollution Prevention Week - Patch](#)

Patch.com

The efforts of these local businesses have protected the San Lorenzo River, the Monterey Bay National Marine Sanctuary and local creeks through practices ...

[Photo | Water project goes underground on Soquel Avenue - Santa Cruz Sentinel](#)

Santa Cruz Sentinel

... Pure Water Soquel will take treated wastewater that otherwise would be pumped out into the Monterey Bay National Marine Sanctuary and instead pump it to ...

[The Moss Landing Marine Labs Quilt Guild keeps on quilting, through two decades and one ...](#)

Monterey County Weekly

... the wife of an alumnus (Andrew DeVogelaere, now a program manager for the Monterey Bay National Marine Sanctuary) joined at the very beginning.

[Central Coast travel program encourages "caring tourism" - KSBY](#)

KSBY San Luis Obispo News

"The Sea Star award that was given to the program this past weekend from the Monterey Bay National Marine Sanctuary really shines the light on a new trend ...

CA News

https://www.washingtonpost.com/nation/interactive/2021/california-disappearing-salmon/?no_nav=true

Washington Post: California's Disappearing Salmon

ONMS Web story:

<https://sanctuaries.noaa.gov/news/aug21/back-to-school.html>

#BackToSchool and Into Your Sanctuaries

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 \(https://www.facebook.com/MBNMS\)](https://www.facebook.com/MBNMS), [Instagram \(@mbnms\)](https://www.instagram.com/mbnms) and [Twitter \(https://twitter.com/mbnms\)](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.catlinseaviewsurvey.com>

SIMON

<https://www.sanctuariesimon.org>

Thank You Ocean

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

NOAA Ocean Explorer

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

Encyclopedia of the Sanctuaries

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

MBNMS STAFF

Dawn Hayes – Incoming Acting Superintendent
Lisa Wooninck – Outgoing Acting Superintendent

Research

Andrew DeVogelaere – Research Coordinator
Jennifer Brown – SIMoN Ecosystem Scientist
Erica Burton – Research Ecologist
Chad King – Research Ecologist
Steve Lonhart – Research Ecologist

Education

Amity Wood – Education and Outreach Coordinator
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
Jazmine Mejia-Muños – Resource Protection Specialist
Pamela Krone – Agriculture Water Quality Coordinator

Program Operations

Raymond Chisolm – Program 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: <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 -

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