



# Monterey Bay National Marine Sanctuary

## Sanctuary Office Report



Volume 19, Number 2

### 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.

*A REPORT FOR THE SANCTUARY ADVISORY COUNCIL MEMBERS*  
REPORTING PERIOD: FEBRUARY 5 – APRIL 1, 2022

**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) AND OFFICE OF NATIONAL MARINE SANCTUARIES (ONMS) NEWS**

### Success of the 2021 Mission to Clean up Marine Debris

Scientists and divers from NOAA's Pacific Islands Fisheries Science Center and local nonprofit [Papahānaumokuākea Marine Debris Project](#) (PMDP) returned to Honolulu on September 22, 2021, from a [30-day mission](#). The team removed marine debris from the shallow reefs and shorelines of the [Papahānaumokuākea Marine National Monument](#). These remote islands and atolls are centered among Pacific currents that carry lost and abandoned fishing nets and gear from all over the Pacific Ocean. [The debris entangles wildlife and damages corals](#). Even during this mission, the team disentangled a 5-year-old female Hawaiian monk seal from derelict fishing rope.

The project staff collect valuable data during these missions:

- Assessing the abundance and distribution of marine debris across Papahānaumokuākea
- Evaluating rates of marine debris accumulation
- Measuring habitat damage and the negative impacts of marine debris on coral reefs
- Gauging recovery of coral reefs after marine debris removal
- Increasing public awareness of marine debris issues through communication and outreach

The highlight of the mission was the successful disentanglement of a 5-year-old adult female Hawaiian monk seal, identified as "VH26." She gave birth to a pup earlier in the summer. The entangled seal was first spotted just days prior to the marine debris team's arrival on September 6.



## NATIONAL MARINE SANCTUARY NEWS

### **Hawaiian Islands Humpback Whale National Marine Sanctuary Documents Tenth Confirmed Whale-Vessel Contact of Season with Interesting Observations**

On Sunday, March 27, the Hawaiian Islands Humpback Whale National Marine Sanctuary received a call regarding an injured humpback calf in sanctuary waters. The sanctuary responded and found injuries to the calf's tail indicative of a recent collision with a vessel. In addition, the mother, who was missing part of her fluke and a flipper, had also been a victim of ship strike some time in the past. Mother and calf's wounds illustrate the threat of collision within sanctuary waters and beyond. While the sanctuary helps free whales from life-threatening entanglements, there is not much that can be directly done to help ship-struck animals once the contact has occurred. However, like with entanglement threat, the sanctuary garners valuable information (i.e., the mother and calf were thoroughly documented) as part of their Health and Risk Assessment Monitoring program to better understand the threat and its impacts, as to reduce these threats, like this, in the future. Interestingly, the very next day (only 15 hours later) on a sanctuary Health and Risk Assessment Monitoring cruise, the crew observed the same mother, now without her calf, as the nuclear animal of a competition group (the focal animal of a group of males), indicating that she had either lost or abandoned the calf, and was immediately pursuing, or being pursued, towards replacing the lost calf. Such observations are rare and increase our understanding of how the animals address risk factors. The observation, along with similar observations, will be shared in a peer-reviewed journal article being pursued. The sanctuary has documented on average 5.5 cases of non-incident contact between vessels and whales each season (since 2001). Thus far during the 2021-2022 season, the sanctuary has documented ten confirmed cases of contact between whales and vessels. The cases will be assessed as part of "Serious Injury Determinations" in collaboration with NOAA Fisheries Pacific Islands Fisheries Science Center and will inform stock assessment reports, and the management and conservation of humpback whales in sanctuary waters and beyond. While the Hawaiian Islands Humpback Whale National Marine Sanctuary, working under NOAA's Marine Mammal Health and Stranding Response Program, and alongside its partners, endeavors to free large whales from life threatening entanglements, the primary goal is garnering information to better understand threats and concerns to protect and conserve humpback whales and their habitat in sanctuary waters and beyond.

### **Submerged NC: Valor in the Atlantic Telepresence Expedition**

Join NOAA and partners as they discuss the upcoming Valor in the Atlantic telepresence expedition due to launch in May of 2022. Learn how NOAA's Monitor National Marine Sanctuary and the National Center for Coastal Ocean Science, along with partners from the Global Foundation for Ocean Exploration (GFOE) and the North Carolina Office of State Archaeology will use cutting edge technology to bring North Carolina's oceanic wonders to all. Using GFOE's Remotely Operated Vehicles (ROVs) and satellite capability, the Valor in the Atlantic telepresence expedition will explore USS *Monitor*, natural reefs, and the maritime cultural landscape surrounding Monitor National Marine Sanctuary. The NOAA ship *Nancy Foster* will act as the project's research platform streaming ROV video live, while narrated by national experts to showcase these nationally significant sites and their biological communities to the public. The mission will investigate natural reefs and historic shipwrecks from the U.S. Civil War, World War I, and World War II's Battle of the Atlantic. These sites serve as a uniquely accessible underwater museum and a memorial to generations of mariners who lived, worked, and fought off our shores.

Join us as we discuss how these weapons of war transformed into islands of life and learn how to join in the expedition by visiting a museum or from the comfort of your home, school, or office.



**MONTEREY BAY NATIONAL MARINE SANCTUARY NEWS  
AND PROGRAM UPDATES**



**RESEARCH AND MONITORING**

**MBNMS Research Staff Complete Research Expedition to Davidson Seamount and Sur Ridge**

From March 2-8, MBNMS Research staff joined Monterey Bay Aquarium Research Institute's (MBARI) expedition to Davidson Seamount and Sur Ridge. The team completed four dives with the remotely operated vehicle Doc Ricketts. Two dives occurred at the "Octopus Garden" at a depth of 3200 meters to set out a time-lapse camera and experimental respiration chambers for octopus eggs. One dive explored a potential new octopus brooding site (did not find evidence of), and one dive at Sur Ridge conducted visual observations and specimen collection. The BBC was also aboard to acquire additional footage to be incorporated into a segment about the octopus garden in an upcoming project. Since the discovery of the "Octopus Garden" in 2018, MBNMS research staff have been able to revisit the site multiple times with the Alvin submersible, E/V Nautilus, and every year since with MBARI. MBARI has dedicated some of its research mission to this unique site and will continue to visit and explore the area for years to come. There is much yet to learn about this new ecosystem of octopus exploiting warm water seeping from the seafloor in order to expedite their brooding period, perhaps from as many as 10 years down to less than two. Sur Ridge is also in MBARI's research plans, continuing research on coral translocation, growth and resilience. MBNMS research staff will continue to be intimately involved in this critical research. The future project by BBC will ensure that this place continues to receive national attention.

**MBNMS Research Activity Panel Holds Virtual Meeting**

On March 11th, the Monterey Bay National Marine Sanctuary (MBNMS) Research Activity Panel (RAP) met virtually. Agenda items and presentations included: February Sanctuary Advisory Council meeting; 2022 Ricketts Award update; RAP feedback on need for sanctuary research symposium; kelp restoration and urchin abatement at Tankers Reef; water quality enhancement projects in the watershed and capacity to reduce harmful algal blooms; and update on research activities related to closing of the Marina sand mining plant. 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.

**RESOURCE PROTECTION**

**MBNMS responds to vessel grounding in Santa Cruz**

On the evening of 3/27/22, the owner of a 26' sailing vessel alerted authorities that his boat was grounding on the beach in front of the Santa Cruz Beach Boardwalk. After breaking loose from its mooring, it floundered under the wharf and finally landed on the beach. The next day the owner removed all hazardous materials and gear to prepare for a recovery and removal operation. Fortunately, there was no engine and no fuel on board. Sand was noticed filling the boat due to suspected hull damage, ruling out a possible tow off the beach by boat. After additional inspection, it was determined that hiring a tractor/excavator and recovery crew was the best alternative for removal. On 3/29/22, a crew with a tractor/excavator arrived on scene and by day's end, the boat and all debris were removed from the beach without further incident.

**MBNMS Agriculture Water Quality Co-Hosts Webinar on the Global Soil Biodegradable Mulch**

On March 1<sup>st</sup>, Jazmine Mejia-Munoz, Research Education and Outreach Associate for the MBNMS Agriculture Water Quality Program, co-hosted a webinar on the international use of soil biodegradable mulch (BDM). BDM is a relatively new agriculture (ag) technology that can serve as an alternative to the traditional polyethylene mulch used in agriculture practices – mulch is the plastic used to cover strawberry rows. During the webinar, researchers from the Washington State University and California Polytechnic State University (Cal Poly) discussed BDM technology, what growers can expect during growing seasons, the impacts of BDM on environmental systems, and the economics of BDM. The webinar concluded with a panel section composed of local and international growers that have used BDM in their farming practices. This webinar served as an educational tool that informed the local ag community of a plastic alternative that can help them reduce plastic waste. MBNMS is surrounded by agricultural fields that use over 10,000 tons of ag field plastics per year, plastic mulch accounts for over 40% of the ag plastics used. Once in the field ag plastics are exposed to sun, wind, water, mechanical forces, and other factors that create a plastic pollution risk for watersheds that drain to the sanctuary. The MBNMS Water Quality Program has been working with the local agricultural community to reduce plastic waste, improve ag plastic waste management, and find ag plastic alternatives (such as BDM) to minimize the risk of ag sourced plastics from entering local watersheds and MBNMS.

### **Healthy Soils Project at JSM Organics Outcomes from Three Years**

MBNMS Agriculture Water Quality Coordinator completed three years of soil health practices and monitoring made possible by a grant from the California Dept of Food and Agriculture to sequester carbon dioxide from the air and store it as soil carbon. Through the practices of cover cropping and compost addition on two separate fields at JSM Organics, we observed an increase in soil organic matter ranging from 1.5% to 2.6%, representing carbon storage of 9 to 15 tonnes/acre. For more information contact [pam.krone@noaa.gov](mailto:pam.krone@noaa.gov).

Significance: Building soil organic matter has agronomic benefits for farm production including increased water holding capacity, drought resilience, reduced erosion, lower chemical use and disease resistance. The benefits to water quality are lower pollution from fertilizers, pesticides, and turbidity. If farmers across the United States implement soil health practices, there can be a draw down of carbon into soil resulting in improved ocean health.

### **Whale Entanglement Response for two humpback whales in Monterey Bay**

On March 22, 2022, MBNMS staff participated in a NMFS approved whale entanglement response with Marine Life Studies, The Marine Mammal Center and other Network volunteers. The West Coast Regional Office was on standby with a back-up support vessel. During the past two weeks, three entangled humpback whales have been reported; one off the San Mateo coast and two in Monterey Bay. See MLS entanglement poster for more information. CA Dungeness crab gear was identified on two of the entangled whales. The team was able to re-sight one of the two Monterey Bay humpback whales on the 22nd, and it appeared to have thrown the fishing gear off. In response to the two entanglements involving commercial Dungeness crab gear, CDFW implemented fishery closures of fishing zones 3, 4, 5 and 6 (Sonoma/Mendocino county line to the U.S./Mexico border) effective on April 9, 2022. Whale entanglements are identified by the West Coast Region as a part of the whale conservation priority as the issue represents one of the major threats to large whales, including humpback and blue whales. MBNMS, WCR and other sanctuary sites participate in the West Coast whale entanglement response team.

### **MBNMS Motorized Personal Watercraft (MPWC) buoys serviced**

Wayward MPWC buoys recovered over the past few months from Santa Cruz, Moss Landing, and Monterey were being stored in the U.S. Coast Guard Buoy Bay space shared with MBNMS at Coast Guard Station Monterey. The five remaining MPWC buoys (SC3, SC4, MY5, MY7, and ML6) were recovered from their stations in the bay by contractor Monterey Canyon Research Vessels, Inc. The buoy team convened to plan and inventory gear for this first round of the servicing phase of the project. Tons of new hardware and other miscellaneous gear were inventoried, sorted, loaded, and transported to Santa Cruz Harbor. Once at the harbor, all gear and two additional buoys from storage, were off-loaded and staged for assembly. Each new buoy

combination was assembled and prepared for redeployment. The buoys were then redeployed with complete new hardware assemblies to their new coordinates as per the Final Rule/Appendix E. In coming weeks, the buoy team will return for the second and final round of assembly and redeployment. Once all buoys are successfully redeployed, plans will be made for subsequent white shark/VR2 receiver deployments in coordination with the West Coast Regional Office. MBNMS MPWC buoys were past servicing dates and regularly detaching due to gear failure and new gear assemblies ensure years of useful service. Additionally, the MPWC Buoys have been redeployed at their newly designated coordinates per the Final Rule/Appendix E. MBNMS has restricted the use of MPWC within the sanctuary since 1992 because their high speed and maneuverability pose a unique and significant threat of disturbance to sanctuary habitats and wildlife through persistent and repetitive operation within sensitive nearshore environments that are usually safe from such intensive mechanized activity.

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

### **MBNMS partners with local chapter of National Marine Sanctuary at Beach Cleanup**

On March 17th, the Monterey Bay National Marine Sanctuary Foundation co-hosted a beach cleanup with the Santa Cruz Warriors basketball organization. Approximately 85 participants, including the entire roster of the local Santa Cruz SeaDub basketball players, joined together to clear more than 50 pounds of trash from Santa Cruz's Main and Cowell's Beaches in just two hours. Items cleared included hundreds of cigarette butts and plastics bottle caps, as well as food wrappers, masks, fishing line, hair ties, dead birds, a Sterno can, large blanket, single flip flop, acrylic finger nail, and a banana. Santa Cruz Warrior's player (shooting guard) Elijah Pemberton, said, "I'm so glad to have done this. I'm inspired and want to get involved going forward." Local foundation board members and superintendent Lisa Wooninck joined in the clean up. Local clean up efforts with partners such as the local chapter of the NMSF and the Santa Cruz Warriors highlight the importance of local action to make a difference to the health of the sanctuary.

### **MBNMS Staff host session during the Santa Cruz STEAM Teacher Conference**

UCSC's Monterey Bay Area Math Project & Monterey Bay Science Project Presented the 15th Annual STEAM Conference on March 12th, 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.

### **BBC comes to the MBNMS Sanctuary Exploration Center**

On March 2nd, Bridget Hoover was interviewed by the BBC who is doing a story on the Pure Water Soquel water supply project (one of 12 projects being highlighted in the nation). The BBC was interested in how this project will benefit the sanctuary. The project will treat waste water and inject the highly treated water into a groundwater aquifer for later drinking water extraction. The benefit to the sanctuary is a reduction in treated waste water being discharged to the sanctuary. The interview included much information about MBNMS. The BBC reaches audiences all over the world and this was an opportunity to both highlight the sanctuary program as well as inform the public about new advancements in developing sustainable and diverse water supply projects.

### **Monterey Bay Sanctuary Staff Kick-Off the Spring 2022 Distance Learning Program Season**

Through an ONMS 50th anniversary mini-grant and support from the Monterey Bay National Marine Sanctuary

Foundation, the Monterey Bay Sanctuary Education Team is able to offer scholarships for ten selected teachers to complete all five distance learning program modules with their class this spring (50 programs total). This mini-grant will also support three UC Santa Cruz work-study students who will work as interns to assist with the live distance learning programs for 4th and 5th grade students. Live distance learning programs have been scheduled from March-April 2022. In all, at least 300 students across Santa Cruz and Monterey Counties will be able to “dive in” to Monterey Bay Sanctuary through engaging virtual presentations on watersheds, plankton, kelp forests, deep sea, and soundscapes! 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.

### **Monterey Sanctuary Staff Celebrate 30th/ONMS 50th at Whalefest**

The Monterey Fishermen’s Association and partners celebrate annually the Monterey Bay National Marine Sanctuary and the diversity of whales that migrate to the sanctuary. This year’s festivities were in person, including a symposium of marine researchers and sanctuary experts, and family friendly booths surrounding Fishermen’s Wharf. The 2022 theme was the 30th anniversary of MBNMS and 50th of ONMS. Superintendent Lisa Wooninck gave a presentation on the ONMS 50th celebration and 30 years of whale conversation across the system. Staff from sites with a focus on whale conservation generously contributed slides to the presentation (see the shoutouts) and helped create a Powerpoint that demonstrates the history, creativity, and breadth of whale conservation across our sites. Importantly it shows how staff across sites have learned lessons from each other and built on each other’s success for the benefit of diverse whale populations across the globe. Whales are a charismatic megafauna and an effective introduction and focus for public engagement to promote national marine sanctuary awareness and support (our logo afterall is a whaletail). As the NMSS grows, sharing with the public our internal coordination and collaboration will become more important to demonstrate the balance between unique place-based management and benefits from being part of a system of experts and lessons learned.

## NEWS COVERAGE

### [Name dropping | Laurie Egan to lead Coastal Watershed Council - Santa Cruz Sentinel](#)

Santa Cruz Sentinel Monterey Bay National Marine Sanctuary Foundation co-hosted a beach cleanup on March 17 with the Santa Cruz Warriors basketball organization.

### [Hot Picks 03.17.21 | Art, Theater & Culture | montereycountyweekly.com](#)

Monterey County Weekly

We're talking Lisa Wooninck, who oversees the entire Monterey Bay National Marine Sanctuary, and Matt Savoca of Stanford University's Hopkins ...

### [Whalefest Monterey wraps up two-day symposium - KION546](#)

KION546

... of the local Monterey Bay National Marine Sanctuary. The two-day symposium was held just steps away from the wharf at Heritage Harbor.

### [Marine sanctuary to be celebrated at Whalefest Monterey](#)

Monterey Herald

The area, since known as the Monterey Bay National Marine Sanctuary, is now celebrating 30 years of ocean preservation – an anniversary slated to ...

### [Hang Ten: Learn to Surf \(at Last\) at 5 California Surfing Schools - 7x7 Bay Area](#)

7x7 Bay Area

... lessons year-round at ideal beginner surf spots along the Monterey Bay National Marine Sanctuary, stretching from Santa Cruz south to Big Sur.

### [Coast Line | Main Beach, Cowell Beach cleanups slated for March 17 - Santa Cruz Sentinel](#)

Santa Cruz Sentinel

The Monterey Bay National Marine Sanctuary Foundation is partnering with the Santa Cruz Warriors and the Dream Inn Santa Cruz to host a beach ...

### [The Dirt on Agricultural Plastic Pollution of the Soil in the U.S. and China - New Security Beat](#)

New Security Beat

In an effort to identify land-based sources of plastic pollution in the ocean, Jazmine Mejia-Munóz of the Monterey Bay National Marine Sanctuary .

### [Learn all the latest whale intel at Whalefest Monterey - Inhabitat](#)

Inhabitat

To make this year extra special, the event also celebrates NOAA's Office of National Marine Sanctuaries' 50th anniversary of ocean protection.

### [Barack Obama narrates Netflix series on national parks | Newsday](#)

Newsday

Filmed on five continents, the series includes California's Monterey Bay National Marine Sanctuary, Kenya's Tsavo National Park, the rainforests ...

### [Barack Obama Narrates Our Great National Parks Trailer: Watch](#)

consequence.net

Our Great National Parks explores the likes of the Monterey Bay National Marine Sanctuary in California, the Tsavo National Park in Kenya, ..

[Monterey Bay - WorldAtlas](#)

World Atlas

Monterey Bay National Marine Sanctuary A humpback whale's front half is out of the water while surrounded by brown pelicans and western gulls in ...

[Learn all the latest whale intel at Whalefest Monterey - Inhabitat](#)

Symposium speakers this year include voices from academia, NOAA, the Monterey Bay National Marine Sanctuary and even a vineyard.

[Whalefest Monterey Will Fête the Ocean Icons - NBC Los Angeles](#)

NBC Los Angeles

... its 50<sup>th</sup> anniversary of ocean protection and the 30<sup>th</sup> anniversary of the local Monterey Bay National Marine Sanctuary," share organizers, ...

[Sound provides new insight into the lives of blue whales - Phys.org](#)

Phys.org

Using sound recordings from the heart of Monterey Bay National Marine Sanctuary, MBARI researchers and their collaborators have discovered new ...

[With two Santa Cruz Starbucks locations unionizing and more on the way, why are we an ...](#)

Lookout Santa Cruz

Bay Federal raises nearly \$11,000 for Monterey Bay National Marine Sanctuary Foundation. Presented by Bay Federal Credit Union.

**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 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](mailto: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/facts/oceanfacts-oceanlife.php>

**SIMON**

<https://sanctuarysimon.org/>



## **MBNMS STAFF**

**Lisa Wooninck** – Superintendent  
**Dawn Hayes** – Deputy 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 & Outreach Coordinator  
**Chelsea Prindle** – SEC Manager  
**Michele Roest** – Program Coordinator & Community Liaison  
**Lisa Uttal** – Education Specialist  
**Nick Ingram** – Exhibits/Facility Specialist (SEC)  
**Sophia Barwegen** - Volunteer Coordinator (SEC)

### **Resource Protection**

**Karen Grimmer** – Resource Protection Coordinator  
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**Bridget Hoover** – Water Quality Protection Program Director  
**Jazmine Mejia-Muños** – Resource Protection Specialist  
**Pamela Krone** – Agriculture Water Quality Coordinator  
**Paul Chetirkin** – Resource Protection Specialist

### **Program Operations**

**Raymond Chisolm** – Program Specialist  
**Andrew White** – Network Manager and Webmaster

## **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>

## **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/>

## **- Contact Information -**

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