



Monterey Bay National Marine Sanctuary



Sanctuary Office Report

Volume 20, 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 3 - APRIL 28, 2023

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

Increasing Access To Outdoor Recreation with FICOR

To increase equitable access to outdoor recreation as outlined in the America the Beautiful Initiative, staff from the Office of National Marine Sanctuaries represented NOAA at a recent meeting of the Federal Interagency Council on Outdoor Recreation (FICOR), where an inaugural [work plan](#) was approved. The council was created to coordinate interagency efforts to provide safe, affordable, and equitable opportunities for people to get outdoors, and the workplan prioritizes improving recreation policies, investing in a trained DEIA workforce, enhancing sustainable recreation partnerships, and engaging youth. Coordination of FICOR agencies can strengthen resilience and economic vitality of communities and ecosystems by pursuing locally-led and collaborative stewardship and community-based tourism efforts.

Climate Assessment and Adaptation Focus of IMPAC5 presentations

During the 5th International Marine Protected Areas Congress (IMPAC5), the Office of National Marine Sanctuaries launched a number of products that highlight the leadership role of the National Marine Sanctuary System in the climate-informed management of MPAs through climate assessment and adaptation. Leveraging nearly a decade of experience conducting climate vulnerability assessments within national marine sanctuaries, the [Marine Protected Area Climate Vulnerability Assessment Guide](#) provides comprehensive recommendations on conducting these assessments, from design through implementation, in a manner that is tailored to the unique challenges of place-based management. In addition to assessments, national marine sanctuaries are engaged in a wide variety of climate adaptation actions that enhance the ability of the nation's critical marine resources and special ocean places to continue to thrive in a changing ocean, while broadly supporting adaptation throughout their communities, as showcased in the Climate Change Adaptation in National Marine Sanctuaries story map and associated infobrief.

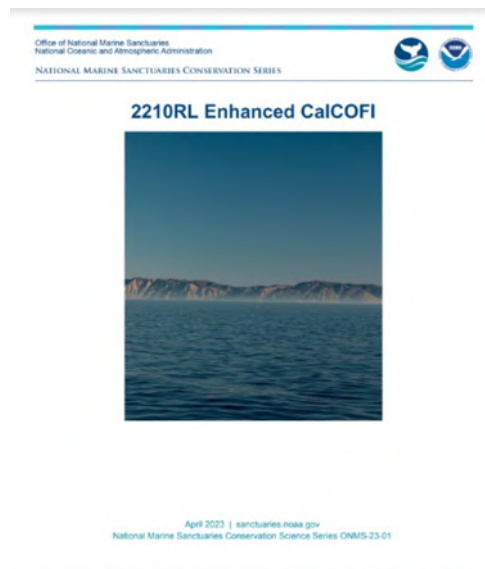
High-Impact and Large Marine Debris Removal throughout the National Marine Sanctuary System

NOAA announced approximately \$562 million in recommended funding to support the Climate-Ready Coasts initiative funded by the [Bipartisan Infrastructure Law \(BIL\)](#) and bolstered by the Inflation Reduction Act (IRA), which included multiple projects that support key objectives. One such project allocates \$14.9 million funded by the National Marine Sanctuary Foundation. This [Marine Debris Removal Competition](#) project will remove large marine debris from five national marine sanctuaries and two Tribal ancestral waters located off the coasts of Washington, California, Texas and Louisiana including the Channel Islands National Marine Sanctuary and Channel Islands National Park, Greater Farallones National Marine Sanctuary, and Monterey Bay National Marine Sanctuary in partnership with California State Parks.

NATIONAL MARINE SANCTUARY NEWS

Collaborative Mission Report published in Conservation Series

In Fall 2022, the Office of National Marine Sanctuaries joined Scripps Institution of Oceanography and California Dept. of Fish and Wildlife to complete the California Cooperative Oceanic Fisheries Investigations (CalCOFI) research mission. Data and samples, including of environmental DNA, were collected from throughout the Channel Islands, Monterey Bay, and the proposed Chumash Heritage national marine sanctuaries, as well as the Morro Bay Wind Energy Area, and was recently published in the National Marine Sanctuaries Conservation Series. New technologies and methodologies were tested, including a variety of environmental DNA protocols, which will enhance NOAA's ability to monitor the health of these areas and will better inform policy and decision-making. Gathering this information will help form a better understanding of the physical environment as well as the kinds and amount of marine life present in these locations.



Interagency Coordination for Sanctuary Resource Protection

On April 7, staff of Monterey Bay National Marine Sanctuary were notified of a container vessel loitering off Pacific Grove. Coordinating with U.S. Coast Guard Sector San Francisco, staff were able to contact the vessel's captain to inform them of the [International Maritime Organization's \(IMO\) recommended tracks for large vessels](#). These tracks were established in order to reduce the risk of a spill or collision within the national marine sanctuary. The vessel responded immediately and moved back towards the IMO recommended tracks and away from the coastline and sensitive species and habitat. Since establishment of the recommended tracks in 2000, NOAA has found that a majority of the vessels that transit through the sanctuary are complying with the IMO recommended tracks.

Commercially Scalable End-Of-Life Solutions for Agriculture Field Plastic Films Used in Watersheds Draining to National Marine Sanctuaries

California Sea Grant has allocated \$2.7 million towards the [Marine Debris Challenge Competition](#). California Sea Grant will collaborate with a talented cross-sector team from agriculture, engineering, recycling and marine conservation to develop technologies and best management practices that will maximize the removal of polyethylene mulch film from agricultural fields and make it an attractive feedstock for manufacturing new plastics. The project involves historically excluded communities in California in creating innovative solutions to address plastic pollution and marine debris resulting in a collaborative effort to transform growing techniques and processes that work with industry to prevent marine debris from entering the Monterey Bay National Marine Sanctuary, Channel Islands National Marine Sanctuary, and the proposed Chumash Heritage National Marine Sanctuary.

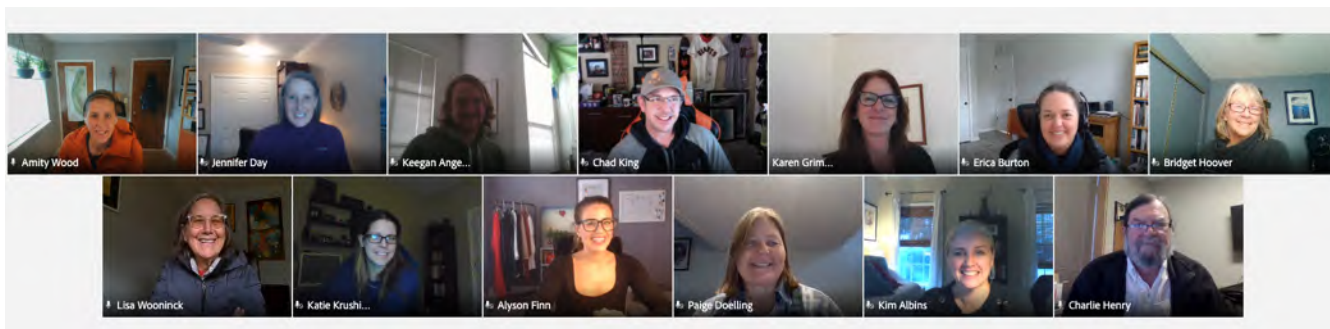


**MONTEREY BAY NATIONAL MARINE SANCTUARY NEWS
AND PROGRAM UPDATES**

SANCTUARY MANAGEMENT

Staff receive NOAA Incident Command System training

Seven MBNMS staff participated in a NOAA Incident Command System (ICS 300) virtual training course from Jan 30-Feb 2 to better understand NOAA’s approach to incident management following the National Incident Management System (NIMS) and where applicable, implementing the Incident Command System (ICS). Through daily presentations and scenario activities, the course covered a typical ICS organization, staffing structure, reporting and working relationships, information flow, transfer of command, unified command functions in a multi-jurisdictional or multi-agency incident, ICS forms, resource management, and interagency mission planning and procurement. This NOAA-centric ICS 300 Level Training Course also included key information as to NOAA’s authorities and responsibilities relative to preparedness, emergency response, resilience, and recovery activities for major man made incidents and natural disasters within the NOAA Concept of Operations (CONOPS Plan) and incident coordination by NOAA’s Homeland Security Program Office (HSPO). NOAA course instructors Kimberly Albins, Charlie Henry, Paige Doelling, Katherine Krushinski, and Alyson Finn were exceptional in delivering a comprehensive overview of NIMS/ICS and identifying NOAA’s support role in incident management. Increasing the number of ONMS trained personnel with knowledge of the NIMS/ICS approach, structure, and processes will allow us to best provide a support role and operate efficiently with other federal, state, and local authorities during a major incident or natural disaster event that may occur within the NMSS.



MPA Decadal Management Forum

On March 15, 2023, California Fish and Wildlife Department celebrated the California State MPAs with a MPA Decadal Management Forum at the Monterey Fairgrounds. The event was an opportunity for CDFW, tribes, partner organizations, and the public to highlight their collaborative work over the last 10 years that informed the first comprehensive review of California’s MPA Network and Management Program. It also provided an opportunity for two-way conversations about the key findings and recommendations within the context of the MPA Management Program’s four pillars. Karen Grimmer was invited to speak on the Policy and Permitting panel and offered some supportive comments on the MPA network, the Statewide Leadership team approach, and insights on the kelp/urchin project in Monterey. Jess Morten was invited to join the Enforcement and Compliance panel and offered comments on expanding the use of eFINS and the Marine Monitoring (M2) technologies. Many tribes attended the event, and were vocal about their desires to co-manage and be more involved in the policy discussions. Karen made contact with the Tribal Marine Collaborative, who is interested in following up on prior discussions with the Yurok tribe and designating a NMS at the Klamath River region. WCRO is coordinating a follow up meeting. We supported a table for public outreach and a shout out to Grace Kumaishi, Paul Hobi and Paul Michel for assisting on the tabling event! The Marine Life Protection Act established the CA Central Coast State MPAs in 2008, and since that time California sanctuaries have been key partners in research and monitoring, education and outreach, policy and permitting and enforcement and compliance. As a member of the Statewide Leadership team, we will continue to be active partners and work closely with CDFW on any adaptive management measures that may come into play as part of the

Decadal review process.

MBNMS Staff Retreat Held April 4

Staff from Monterey Bay National Marine Sanctuary held their staff retreat on April 4, 2023 at the Elkhorn Slough Estuarine Research Reserve.

The purpose of the meeting was twofold; to strengthen staff participation in and commitment to the sanctuary's priorities for FY23-FY27, and to improve office culture by appreciating office mates at a deeper level. The day started with a Mindful NOAA meditation followed by robust discussions on the priorities by five breakout groups. Priorities discussed at the retreat included whale conservation, climate change, iconic kelp, marine debris, and community connections. Breakout



groups brainstormed ideas for addressing the priorities before enjoying an outdoor lunch, hike, and fun team building activity. The day ended with summaries from each breakout group to the entire team that included ideas for addressing the priorities and how each member may contribute to addressing the priorities. The ideas and commitments to the priorities are recorded for reference and to be built upon in the near future. After the long isolation of COVID and winter storms, staff appreciated the in-person aspect of the retreat and getting to know new team members and revisiting known colleagues. Encouraging a culture of collaboration, inclusion and respect is key to a productive and committed workforce able to achieve our mission and strategies.



RESEARCH AND MONITORING

New Report to Congress Highlights Accomplishments of West Coast Deep-Sea Coral Initiative

NOAA's Deep-Sea Coral Research and Technology Program supported and concluded a 4-year West Coast Deep-Sea Coral Initiative, which is highlighted in the [2022 Report to Congress](#). Research expeditions occurred within central California's Marine Protected Areas, Essential Fish Habitat Conservation Areas, and Sanctuary Ecologically Significant Areas of Monterey Bay National Marine Sanctuary (MBNMS). Survey locations included Cabrillo Canyon, Soquel Canyon, West of Carmel Canyon, Point Lobos, Sur Canyon slot canyons, La Cruz Canyon, and Davidson Seamount. Remotely operated vehicles and video landers were deployed from the following vessels: NOAA Ship *Bell M. Shimada* (2018, 2020), NOAA Ship *Reuben Lasker* (2019), Ocean Exploration Trust E/V *Nautilus* (2019), and R/V *Fulmar* (2021). These research cruises are a result of multi-institution planning as part of EXPRESS (Expanding Pacific Research and Exploration of Submerged Systems) and Deep-sea Coral Research and Technology Program's West Coast Deep-Sea Coral Initiative efforts.

Participating Institutions included (not limited to): NOAA NMFS (Southwest Fisheries Science Center and Northwest Fisheries Science Center); NOAA NOS (Channel Islands, Cordell Bank, Monterey Bay and Greater Farallones national marine sanctuaries); US Geological Survey (Pacific Coastal & Marine Science Center, Wetland and Aquatic Research Center); Bureau of Ocean Energy Management (Pacific Region); California State University Monterey Bay; and Moss Landing Marine Laboratories. Data gathered during the Initiative will improve our understanding of deep-sea coral communities and support management decisions off the west coast. The Deep-Sea Coral Research and Technology Program (DSCRTP) funds multi-year regionally lead research initiatives to collect scientific information to better protect and conserve deep-sea coral and sponge (DSCS) ecosystems. By conducting deep-sea coral research within sanctuary boundaries, within federal and state marine reserves, and within Essential Fish Habitat, scientists will be able to demonstrate how additional protections may benefit DSCS habitats. As outlined in the MBNMS Management Plan, staff shall improve our understanding of deep-water habitats and organisms within Sanctuary Ecologically Significant Areas.

Monterey Bay National Marine Sanctuary (MBNMS) Staff Participate in Midwater Research Cruise Aboard the R/V *Fulmar*

MBNMS staff Lisa Uttal accompanied Dr. Karen Osborne (Smithsonian Institute) and two National Geographic scientists aboard the R/V *Fulmar* to do midwater trawls. This project was focused on collecting midwater organisms with a special emphasis on the taxonomy and evolution of hyperiid amphipods visual system and neurobiology. This research and photographs by David Liittschwager (National Geographic) of living midwater organisms in the laboratory will be used for education and outreach projects at MBARI, the Smithsonian and National Geographic. The R/V *Fulmar* is a great research and education platform for getting out into the Sanctuary.



MBNMS Research Activity Panel Holds Virtual Meeting

On March 10th, Monterey Bay National Marine Sanctuary (MBNMS) Research Activity Panel (RAP) met virtually. Agenda items and presentations included: West Coast offshore energy - marine mammal and sea turtle vulnerability risk assessment; fish chorusing in Monterey Bay, including relevance to condition reports, marine heat waves, and climate change; 2023 Ricketts Award nominations discussion; proposed designation of Chumash Heritage national marine sanctuary; 2023 RAP Meeting schedule; and summary of February Sanctuary Advisory Council meeting, including: iconic kelp in MBNMS, and Advisory Council request: RAP engagement in MBNMS Climate Vulnerability Assessment. 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

Monterey Bay National Marine Sanctuary Staff Present at Annual Ecological Farming Conference

Through the Agriculture Water Quality Alliance (AWQA), staff from the Water Quality Protection Program presented at the annual Eco-Farm Conference in Asilomar, California. The presentations engaged both Spanish and English speaking agricultural stakeholders through promotion of multi-beneficial practices. Jenny Pensky, Agriculture water Quality Coordinator moderated a talk on Rangeland Ecosystem Services, that focused on keeping rangelands open and creating an ecosystem service market in ranches. Jazmine Mejia-Muñoz, Water Quality Program Coordinator, presented on the impacts of Plasticulture in the Monterey Bay National Marine Sanctuary and relevant end-of-life management options. Ms. Mejia-Munoz also hosted a talk on the importance of maintaining adequate soil health for carbon sequestration and nutrient management. Many of the attendees expressed interest in implementing practices and were intrigued by the topics presented, even expressing interest in follow up field days. Through the noble Agriculture Water Quality Alliance, the Monterey Bay National Sanctuary and the California Marine Sanctuary



Foundation partners agricultural stakeholders to help protect and enhance water and resources within the Monterey Bay National and the adjacent watersheds while sustaining a world class production agriculture region through voluntary collaboration with managers of agricultural and rural lands. Our participation in agricultural venues, such as EcoFarm, allows for our staff to embrace and identify collaborations that embrace AWQA's mission.

The Next 50 Years – Imagining the Future of Clean Water at MBNMS

The water quality of the Monterey Bay and its surrounding watersheds was one of the major highlights during the annual California Water Environment Association's Pretreatment, Pollution, Prevention, and Stormwater Conference in Seaside, California. This year's theme focused on imagining the future of clean water for the next fifty years. During the general session Water Quality Program Coordinator, Jazmine Mejia-Muñoz presented on recent work from the Water Quality Protection Program and collaborators. Highlights included: (1.) a 20 year report from CCLEAN, that demonstrated that Rivers have consistently discharged greater loads of pollutants to Monterey Bay than have wastewater discharges, results, (2) A 20 year report from the annual First Flush event hosted by MBNMS, that found 20 downward trends of 7 pollutants-signaling improved water quality, (3) Programs from the Agriculture Water Quality Alliance that have focused on plasticulture and carbon sequestration. Looking into the next fifty years, Ms. Mejia-Muñoz discussed a future where sustainable agriculture enhances a water draining out to the sanctuary, where wastewater treatment plants help tackle microplastics, and communities across the state unite for an annual Snapshot Day water quality monitoring event. The

water quality improvements we observe at Monterey Bay National Marine Sanctuary and its surrounding watersheds are a result of multi-stakeholders efforts, including permit requirements, continued monitoring, community engagement, etc. Support for expanded and continued monitoring is paramount for understanding and sharing with stakeholders the impacts of practices/permits implemented across MBNMS and its surrounding watersheds.



MBNMS Staff Participates in a Site Visit to Help Implement Beneficial Reuse of Dredged Materials

MBNMS staff conducted a site visit with the U.S. Army Corps of Engineers (USACE), California State Parks, Elkhorn Slough National Estuarine Research Reserve (ESNERR), and Moss Landing Harbor staff to initiate discussions on beneficial reuse of suitable dredged materials from the federal channel and Moss Landing Harbor in Elkhorn Slough restoration projects. USACE will also be repairing the jetties (see image of the north Jetty below). USACE has dredged the federal channel in Moss Landing harbor for years and often disposed of materials at offshore sites. Reusing the materials would be beneficial to the MBNMS ecosystem. This requires an immense amount of collaboration so it's essential to meet in person to ensure better communication throughout the project.

30' Sailboat Grounded During High Wind Event in Monterey

Early in the morning on February 14th, a 30' sailboat dragged its anchor and grounded on Del Monte beach in Monterey due to wind gusts exceeding 40 MPH. MBNMS and NOAA OLE staff responded and coordinated with USCG IMD and the City harbormaster's office. A single mariner was able to jump off the vessel in the surf zone at approximately 3:30am. Fire responded and transported the vessel owner to hospital. Due to the owner's lack of boat insurance and resources, US Coast Guard federalized the incident and hired a salvor to remove the fuel onboard. City of Monterey then contracted with the same salvor to remove the vessel from the beach. The tide cycle was optimal and allowed for daytime removal which entailed two heavy duty back hoes that lifted/pushed and pulled the sailboat along the beach and up above mean high water. This gave the salvor time to demo the boat and dispose of it without any significant impact to MBNMS. It is critical to act quickly with partnering agencies to identify solutions when a vessel grounds to minimize the pollution threat and negative impacts to the sanctuary.



Cover Crop Meeting with Agricultural Community

A meeting to discuss the environmental benefits of cover crops and how to successfully incorporate them into field practices was held at the Braga Barn in Soledad on February 16, 2023. This meeting was co-organized by Monterey Bay National Marine Sanctuary, the Farm Bureau, Sustainable Conservation and Braga Fresh. Cover crops have multiple environmental benefits: reducing erosion, increasing soil health, sequestering carbon dioxide, increasing infiltration and increasing drought resilience. They also have agronomic benefits for the farmer including reducing the amount of fertilizer needed, increasing access to the field following rain, and increasing the ease of accomplishing agricultural regulatory requirements. If more acreage is put into cover crops, the environmental benefits are multiplied. Educating the agricultural community regarding these benefits is key to wider adoption.



MBNMS Oil Spill Response Staff Review Area Contingency Plan

In anticipation of Safety Week, MBNMS staff involved in oil spill response held a review of the California Central Coast Area Contingency Plan (ACP) developed by the US Coast Guard and CA Department of Fish and Wildlife. The primary objective of an Area Committee and this ACP is to provide for effective oil spill response planning and preparedness. There is also a wealth of knowledge in the Geographic Response Areas (GRAs) that can be used for other than just oil spills. Recently hired staff indicated that the GRAs are a valuable resource for someone new to the area because it provides a large-scale map of environmentally important areas, species, and events in a sanctuary. While we hope to never have to use it, Area Contingency Plans are an important tool in an oil spill. Having it accessible and knowing it is available as a reference document is extremely valuable in emergency situations and may result in more expedient protection of critical resources.

AWQA Leads Webinar to Help Promote Non-Crop Vegetation Practices

Over \$150,000,000 have been lost by the leafy green agriculture industry in Monterey Bay due to the Impatiens Necrotic Spot Virus (INSV), spread widely by thrips. In a perceived effort to manage thrips, stakeholders have been discouraged from implementing non-crop vegetation practices. This is bad news for the Sanctuary! Non-crop vegetation practices - such as vegetative ditches- are key to meeting water quality regulations imposed by the Regional Water Board (Ag Order 4.0) and goals of the Sanctuary. Non-Crop vegetation practices are known to help sequester carbon, improve water filtration, and reduce ag run-off and erosion. Even during the past recent storms, vegetative practices have shown to improve water quality draining out from ag fields. Thus, this week AWQA hosted a webinar that promoted the implementation of non-crop vegetation around agriculture fields and agricultural ditches, while balancing the management of thrips. The webinar was attended by 41 agricultural stakeholders across the region. Jazmine Mejia-Muñoz (MBNMS Water Quality Program) hosted the webinar, Pam Krone (MBNMS Water Quality Program) spoke about MBNMS and the benefits of non-crop vegetation practices to the sanctuary, other agricultural speakers were also present. The Agriculture Water Quality Alliance seeks to improve water quality draining out from surrounding ag lands, while supporting a world class agriculture system. With this vision in mind MBNMS staff work collaboratively with stakeholders to balance environmental needs, with agricultural challenges. This collaboration is a unique approach that distinguishes MBNMS from all other national Marine Sanctuaries.

Use of Mini ROV to Survey Snagged MPWC Buoy

On March 10, 2023, MBNMS resource protection staff, with the aid of WCRO staff and crew aboard the R4107, used the Seabotix ROV to survey the mooring chain of the ML4 Motorized Personal Watercraft boundary buoy. The buoy had previously been moved off station by large winter storms and is now partially submerged. The purpose of this operation was to gather information about what was snagging the buoy to help inform plans for recovery of the buoy. With the ROV, RP staff were able to complete two surveys, collecting video of the buoy's mooring chain from the surface down to the

seafloor at about 55 feet. Visibility was poor, yet the video revealed a large boulder or concrete block with lots of invertebrate growth within a few feet of where the chain was buried in the sediment. It is likely that that boulder is the obstruction which is holding the buoy down in the water column. A salvor is being contracted to detach and remove the buoy in the next two weeks. There are a number of expenses to MPWC buoy maintenance (e.i., staff time, vessel time, equipment, contractors), thus staff are looking into more efficient means of digital demarcation for MPWC boundary marking for use in the near future. The increasing intensity of winter storms in Central CA is also contributing to their maintenance needs and costs.



Debris Surveying at Salinas River Beach

On March 23, 2023, the MBNMS Resource Protection Team went out to the Salinas River Beach to assess the damage and debris present after the recent atmospheric rivers that moved through Central California. The large area of the Salinas River watershed has brought high levels of debris and the dried up invasive grass called *Arundo* to the Salinas River beach. To survey the debris along the beach, the Resource Protection Team used an app called Clean Swell to record the number of trash items observed and removed. A total of 402 pieces of debris were collected over the course of an hour and a half by the five staff members. The most prevalent type of debris was plastic bottles, such as soda and water bottles, and smaller pieces of plastic and styrofoam. Agricultural drip tape was also present in large quantities and the drip tape found was able to be recycled through ReGen. A large, empty metal tank was found on the beach as well and is thought to be from an agricultural area. Oily tar balls and patties were other interesting finds. Rivers are thought to contribute up to 80% of marine debris to our oceans. In larger watersheds, like the Salinas River watershed, there are plenty of opportunities for debris to be washed into the river from urban and agricultural areas. With the increased winter storms to the area, it is important to keep track of the levels of debris that could contribute to debris in our oceans. Using apps such as the Clean Swell app to document how much debris is collected or observed is useful for keeping track of debris levels.



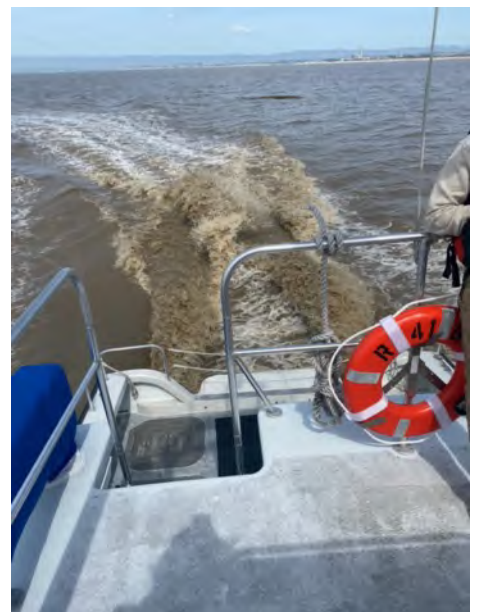
Surfactant Monitoring on the Monterey Peninsula

On March 21, 2023, Lindsay Brown with the MBNMS Resource Protection Team, Eric Baugher with the Santa Cruz County Environmental Lab, and Jeff Condit with the Monterey Regional Stormwater Management Program went out to ten different sites on the Monterey Peninsula to monitor for surfactants. Bubbles and foam have been observed during wet weather conditions at storm drain outfalls and in more natural areas in the Monterey area. Surfactants have historically been monitored during wet weather water quality monitoring, but the types of surfactants that have been monitored do not give an indication of an anthropogenic or natural source. To assist in this distinction, Lindsay is working with Eric Baugher and Dr. Audrey Levine with the Santa Cruz County Environmental Lab to develop their exploratory testing for specific kinds of surfactants. Certain trees, such as eucalyptus and pine, can actually produce surfactants which can cause bubbles or foam on a water surface. However, foam can also be caused by sewage or wash water. By collecting samples from five separate storm drain outfalls with historically higher surfactant levels, and five samples from natural areas with higher tree cover, we are hoping to see a difference in these surfactant properties through this analysis. Historically, water quality samples analyzed for detergents have been analyzed for Methylene Blue Active Substances. This analysis does not distinguish between natural and anthropogenic sources. To assist in this distinction, ELISA analysis is being performed by the Santa Cruz County Environmental Lab to determine specific surfactants. If this exploratory testing proves successful, this test could be used in the future to focus on higher concentrations of detergents from anthropogenic sources rather than natural.



Sediment Plume Sampling from the Salinas and Pajaro Rivers

On 03/16/23, Resource Protection staff conducted a mission on the R4107 to monitor sediment plumes originating from the Salinas and Pajaro rivers after a major rain event with widespread flooding. The water was turbid two miles offshore of both the Salinas and Pajaro rivers and the plume continued to extend beyond what the eye could see. The team also identified agricultural macroplastics from within the plumes, including celery packaging, polyethylene mulch, and suspected hoop house film. In collaboration with California Polytechnic University researchers, water samples were collected inside the plumes for each outflow. These samples will later be tested for nutrients and sediment concentrations, providing information on inputs to the Monterey Bay after unusually large rain events. Water samples from within the plumes will help determine the influx of sediment and nutrients into MBNMS after large rain events. Additionally, the identification of ag plastic, serves as anecdotal evidence that agricultural plastic can escape agricultural fields and enter marine systems as marine debris.

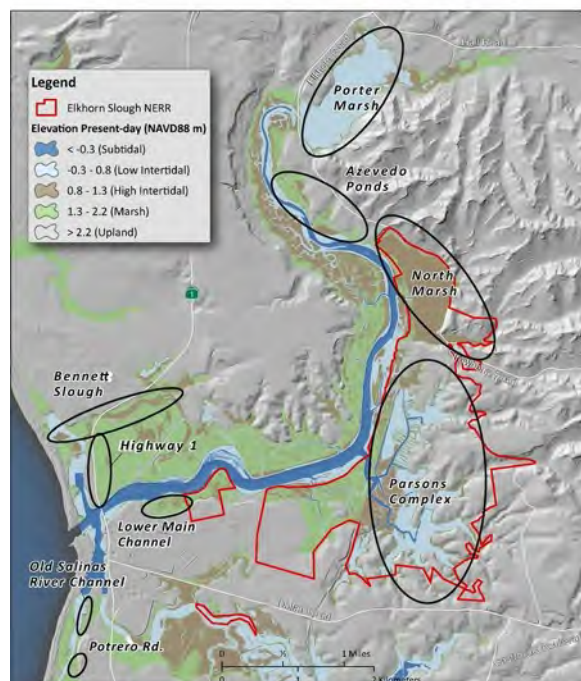


MBNMS Law Enforcement Technical Advisory Committee (LETAC) Holds Hybrid Meeting

On April 6, 2023, the MBNMS Enforcement Coordinator facilitated a meeting of the LETAC, in hybrid mode. Eighteen law enforcement officials participated including NOAA OLE (2 staff), NOAA General Council (1 staff), US Coast Guard Station Monterey (2 staff), CDFW North Coast District, CA State Parks (Monterey, Santa Cruz & San Simeon Counties), Santa Cruz Harbor, Monterey Harbor, WCR Office and BLM (3 staff). The group discussed a variety of law enforcement issues in the Sanctuary including illegal removal of cultural artifacts, black abalone poaching, whale stranding and towing, use of harbor pump outs, regulatory signs at the Great Tidepool, eFINS, and vessel response protocols. The group also discussed potential LE assets such as staff and vessels that can be deployed during the upcoming busy summer season. Coordinating and collaborating with other federal, state and local law enforcement agencies increases enforcement cases and outcomes for MBNMS, as there are limited trained NOAA OLE officers in the region at this time.

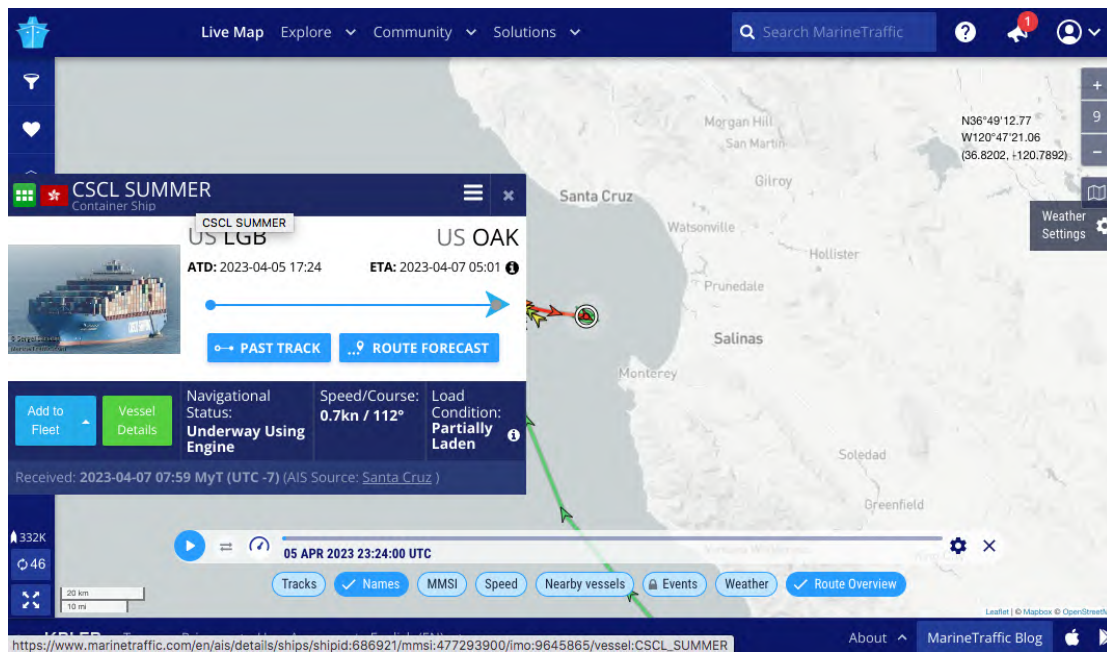
MBNMS Staff Facilitates an Interagency Meeting and Presents the Beneficial Reuse Guidelines

MBNMS staff facilitated an interagency virtual meeting with the U.S. Army Corps of Engineers (USACE), California State Parks, Elkhorn Slough National Estuarine Research Reserve (ESNERR) Foundation, and California Coastal Commission staff to continue discussing the beneficial reuse of suitable dredged materials from the federal channel and Moss Landing Harbor in Elkhorn Slough restoration projects and are honing in on several locations proposed by ESNERR Foundation and California State Parks. MBNMS staff rolled out the beneficial use permitting guidelines to agency staff to inform other agencies of our requirements for restoration projects using suitable dredged materials within MBNMS. USACE has dredged the federal channel in Moss Landing harbor for years and disposed of those materials at offshore sites. Reusing the materials would benefit the MBNMS ecosystem. This requires an immense amount of early collaboration so it's essential to continue to communicate so beneficial use sites are identified and permitted prior to dredging which is planned for June 2024.



Agency Coordination with USCG and Monterey Harbor on Loitering Container Vessel

On April 7, Monterey Harbor notified MBNMS about a partially laden container vessel loitering off Point Pinos, Pacific Grove. Both agencies 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 near to shore. The vessel was awaiting anchorage in the port of Oakland. Sector SF forwarded the MBNMS email to request the ship move offshore, sent the Marine Safety/Security Information Bulletin that we jointly developed, and the vessel skipper responded immediately and moved back towards 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. MBNMS continues to track and monitor vessel traffic to ensure vessels are using the recommended tracks.



Presentation of the 21 Year Stormwater Quality Trend Report to the Beautification and Natural Resources Committee of the City of Pacific Grove

Lindsay Brown, Water Quality Program Coordinator, and Jeff Condit with the Monterey Regional Stormwater Management Program (MRSWMP) presented the 21 year stormwater quality trend report to the Beautification and Natural Resources Committee (BNRC) of the City of Pacific Grove on April 18, 2023. First Flush is a community science program that takes place once a year on the first major rain event of the season. This program has been active since 2000 and provides valuable information about the types of pollutants that accumulate during the dry season and enter MBNMS after the first major rain event. The trend report found that from 2000 - 2021, runoff water quality has generally improved over the past 21 years, particularly during wet weather events. Concentrations of nitrate, copper, lead, and zinc have decreased significantly, and no analyte concentrations have increased significantly. This presentation was very well received by BNRC and the committee would like to have us present on other topics in the near future. Many volunteers have participated in the annual First Flush water quality volunteer program since its start in 2000. Community scientists provide valuable data and this 21 year, long-term trend analysis of run-off water quality data would not be possible without their continuous support. This data is shared with partners, collaborators, and local and regional government agencies to drive decision-making efforts toward the improvement of water quality.

EDUCATION, VOLUNTEER AND OUTREACH PROGRAMS

BeachCOMBERS Monitoring Program Procedures Temporarily Modified due to Highly Pathogenic Strain of Avian Influenza

As part of the January and February survey notifications, BeachCOMBERS volunteers have been instructed to omit typical procedures of handling and marking bird carcasses due to the ongoing highly pathogenic strain of avian influenza (HPAI H5N1). It is migration season and HPAI H5N1 numbers are increasing in both wild and domestic birds in California. A map of confirmed cases is curated by the [USGS National Wildlife Health Center](#). Other resources include the USDA (observations in [wild birds](#) and [domestic birds](#)), and the [Centers for Disease Control](#). Currently, the risk to humans remains low. Volunteer coordinators will continue to monitor the distribution of confirmed cases and further modify the BeachCOMBERS protocol to protect health as needed. BeachCOMBERS 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://mlml.sjsu.edu/beachcombers/>.

Sanctuary Exploration Center Hosts First Friday with Marc Shargel

Sanctuary Exploration Center hosted marine photographer and conservationist Marc Shargel for the monthly First Friday event. Shargel's photography will be on display throughout the month of February, and during the First Friday event, Marc gave a presentation about his 45 years of diving in local kelp forests and around the world, work with MPAs, and the Giant Kelp Restoration Project going on now at Tanker Reef. The event welcomed 41 visitors to the Exploration Center. Community events not only attract new visitors to the Exploration Center, but also attract people to come back and learn more about Monterey Bay National Marine Sanctuary. Additionally, merging art and science allows people to learn and be inspired in new and creative ways, ultimately reaching a broader audience of future ocean stewards.



Monterey Bay National Marine Sanctuary Staff Host SC MPA Collaborative Meeting and Special Presentation on Whales and Sound at the Sanctuary Exploration Center

The Santa Cruz Marine Protected Area (MPA) Collaborative held their first meeting of 2023 at the Monterey Bay National Marine Sanctuary Exploration Center (SEC). The meeting discussed the activities of the collaboratives and included an update from California Department of Fish and Wildlife. A new member to the group included a middle school teacher who has a rec fishing club at the school. Also, in attendance included Save Our Shores, MBNMS, Point Blue, Cabrillo College, Marine Mammal Center and other Santa Cruz community members. Upcoming on March 14 is the Statewide Forum in Monterey, CA March 14th, with a statewide signage evaluation discussion and on March 15th, the CDFW 10-year MPA Decadal review. In addition to the regular meeting, Dr. John Ryan from MBARI did a hybrid (in person and virtual) presentation for the collaborative members and SEC Volunteers on “Foraging Strategies of Oceanic Giants, as Seen from Outer Space & Heard from Inner Space”. Monterey Bay National Marine Sanctuary has a variety of State Marine Protected Areas within or near its boundaries. Collaboration in our local communities and in partnership with the MPA Collaborative Network is important and informative to our work in education and outreach of the sanctuary.



Coastal Discovery Center Weekly Report: Friday January 27th through Wednesday February 1st

From Friday through Sunday, the Coastal Discovery Center greeted 164 guests, totalling at 498 visitors for the month of January. The visitor center was supported by 4 docents and 1 docent-in-training completing a shadow shift. On Sunday, Sophia and Michele co-hosted an in-person training for all volunteers to cover new building safety procedures and Leave No Trace Principles. Additionally, on Wednesday February 1st, Sophia gave Monterey Bay National Marine Sanctuary 101 lecture and Coastal Discovery Center tour to a group of Americorps volunteers doing trail maintenance at Piedras Blancas Lighthouse. The Coastal Discovery Center’s goals are to: encourage protection of the Sanctuary’s resources through education and outreach, to increase public awareness and appreciation of our coastal environment, to allow visitors to learn about and understand the unique characteristics of the Monterey Bay National Marine Sanctuary, to create a sense of personal stewardship for California’s coastal ecosystems, and to contribute knowledge and information shared among regional marine education research and resource protection.

Sanctuary Exploration Center Hosts First Friday



The event featured Amelia Nommensen, a UCSC Marine Biology graduate with a Dance minor, Amelia combines her passion for the ocean and dance to create ocean-inspired performances. Her scores are created using music from the MBARI hydrophones and are meant to inspire ocean-mindedness. The event is Friday, March 3, 4pm-7pm with live performances throughout the night. Community events not only attract new visitors to the Exploration Center, but also attract people to come back and learn more about Monterey Bay National Marine Sanctuary. Additionally, merging art and science allows people to learn and be inspired in new and creative ways, ultimately reaching a broader audience of future ocean stewards.

Sanctuary Exploration Center Hosts First Friday

The Sanctuary Exploration Center hosted artist Amelia Nommensen for our March First Friday event. Amelia Nommensen is a choreographer, dance filmmaker, and performer with a degree in Marine Biology and a minor in Dance from UCSC. During First Friday she premiered a portion of her upcoming Upwelling show, which included live dance performances throughout the night. The Exploration Center had 85 visitors for this First Friday event. Photography and videos are on display throughout the month. Community events not only attract new visitors to the Exploration Center, but also attract people to come back and learn more about Monterey Bay National Marine Sanctuary. Additionally, merging art and science allows people to learn and be inspired in new and creative ways, ultimately reaching a broader audience of future ocean stewards.



National Marine Sanctuary Foundation Board Visits Sanctuary Exploration Center

The National Marine Sanctuary Foundation Board visited the Sanctuary Exploration Center on Sunday, March 6, 2023 for a tour of the visitor center of Monterey Bay National Marine Sanctuary. The board was welcomed by superintendent Lisa Woonick, guided through the exhibits by Ariana Acosta, bilingual school program specialist, and gathered in the theater to watch presentations on Foundation-supported programs. Amity Wood, outreach/education coordinator, delivered information on the Sanctuary Exploration Center’s history and statistics since opening in 2012, Ariana Acosta presented school program updates on the California Department of Parks and Recreation Outdoor Equity Program, and Greg Wells, Foundation gear shared information on whale entanglement mitigation tactics in Monterey Bay. The group was also led onto the Santa Cruz Wharf to view MBNMS signage. The National Marine Sanctuary Foundation raises money and provides funding for many programs and projects within MBNMS. As a nonprofit partner, the Foundation works to advocate for the sanctuary and their funds and involvement help sustain and support programs and exhibits.

MBNMS Staff and Volunteers Participate in Monterey Whalefest 2023

The 13th annual Whalefest was held March 18-19, organized by the Monterey Fisherman's Wharf Association and volunteers to celebrate Monterey Bay National Marine Sanctuary and the diversity of whales migrating through the sanctuary. This year’s festival attracted thousands of people and featured a science symposium of marine researchers and sanctuary experts, 30 partner exhibitors, local musicians and performers, family activities, kid’s art, a life-sized inflatable whale, and research vessel tours. Superintendent Lisa Woonick gave a presentation during the symposium on “*Whale Conservation and Climate Change in National Marine Sanctuaries*” on Saturday, and research ecologist Andrew DeVogelaere presented “*Discoveries in the Deep*” on Sunday. Jazmine Mejia-Muñoz, MBNMS Agriculture Water Quality Program Coordinator, served as MC for the 2 day symposium. The WCR R/V *Fulmar* hosted public tours from the dock, with Karen Grimmer, Andrew DeVogelaere, and Sophie De Beukelaer from the MBNMS team providing information on research and whale conservation efforts. In addition, staff and volunteers hosted a booth during the event with over 400 visitors stopping by to learn more about the sanctuary. Whales are a charismatic megafauna and an effective public engagement interest to promote national marine sanctuary support. As the NMSS grows, sharing NOAA efforts and

collaborations is important to demonstrate the balance between unique place-based management and benefits from being part of a system of marine protected resources. Furthermore, public engagement is a hallmark of sanctuary outreach to increase awareness and gain support for the NMSS.



Monterey Bay National Marine Sanctuary Staff Host an All Volunteer Programs Informational Session

On March 22nd, MBNMS staff hosted a MBNMS Volunteer Programs recruitment Webinar with 84 registrants and 52 participants. A brief introduction to the sanctuary system and MBNMS was followed by presentations from the individual volunteer program coordinators for visitor centers, Water Quality Monitoring, Bay Net and Team OCEAN. In addition to the staff presentations, on hand were 3 volunteers who spoke on behalf of their individual experiences with some of the programs. This is the first time MBNMS swept volunteer recruitment for multiple programs into one program. Because MBNMS volunteer opportunities are place based and volunteers are located in different locations, volunteers in one program may not have been aware of other volunteer opportunities or have known about the incredible depth and breadth of these MBNMS opportunities. Learn more about the programs [here](#). This webinar was an effort to bring together all MBNMS volunteer programs under one umbrella so that the coordinators can be in concert with each other to provide all MBNMS volunteers consistent messaging, programming, enrichments, email announcements and volunteer recognition.

Coastal Discovery Center Sign Installed at William R. Hearst Memorial Beach

This week, the Coastal Discovery Center received a new sign, located on the gateway entrance to William R. Hearst Memorial Beach in San Simeon. The sign is visible from Highway 1 and will make it much easier for visitors to find the Coastal Discovery Center. The partnership between MBNMS and State Parks has been essential for the success of the southern region office in San Simeon and the Coastal Discovery Center. The sign was designed and funded by MBNMS, and installed by State Parks staff at no cost on an existing State Parks structure. Signage is a key component of the Education and Outreach Plan.



Sanctuary Exploration Center Docent Enrichment Field Trip

Sanctuary Exploration Center Docents visited Greater Farallones NMS visitor center, where they were welcomed by Justin Holl and given a tour of both the visitor center and the pier to learn more about GFNMS programs. After GFNMS, they received a tour at The Marine Mammal Center in Sausalito to learn more about the work being done there and were able to view some onsite animals including juvenile elephant seals. Sanctuary Exploration Center Docents communicate, interpret, and inspire visitors through our exhibits and their knowledge and experiences. Enrichments allow volunteers to continue their marine education and share those with visitors.



MBNMS Completed Phase 2 of New Coastal Signage Plan

Along with land and resource protection partners the City of Monterey, California Department of Fish and Wildlife, and Harbor Districts, MBNMS completed 13 new coastal signs, replacing old panels that were originally installed in 2007. The new signage utilized new best practice graphics, logos, maps, and met accessibility standards. The interpretive messaging focused on resource protection and incorporated ONMS wildlife viewing guidelines, reporting phone numbers for wildlife disturbance, sick wildlife, and there were 5 new regulatory signs focused on designated Motorized Personal Watercraft (MPWC) zones. Phase 2 the second of the three-phased project that will result in a total of 40 new signs in MBNMS. Most visitors to MBNMS explore coastal access areas, including beaches and walking paths along the shoreline. Here, visitors interact with sensitive wildlife and coastal habitats, and presents an opportunity to educate about protection and the responsible enjoyment of those natural resources.



Earth Day Outreach at Ales for Whales Event

Team members from the Sanctuary Exploration Center hosted an outreach table at the California Ocean Alliance’s Ales for Whales event on Saturday, April 22, 2023. Attendees sought additional information to support local environmental organizations and marine conservation efforts. Many college students expressed interest in volunteering or interning at the Sanctuary Exploration Center to support their studies and explore career pathways within marine conservation. Families also came to learn more about their local visitors center and the public programs offered at the SEC. Ales for Whales is an outreach event sponsored by California Ocean Alliance to help raise money for high school students interested in careers in marine biology and ocean conservation. Funding from this event also supports scholarships for fellowship programs to allow students with financial needs to participate in marine biology programs. The Sanctuary Exploration Center also provides opportunities for young adults to volunteer and intern in marine-related positions and encourages pathways to pursue careers in marine research and protection.



Monterey Bay National Marine Sanctuary Kickstarts training for their Bay Net and Team OCEAN Volunteer

Programs

MBNMS volunteer programs for visitor centers, water quality programs, Bay Net and Team OCEAN are all in full gear with training. After 3 years, the sanctuary's Shoreline Naturalist Bay Net and on-the-water Kayak Team OCEAN Programs held their first 4 training sessions on April 20th, 22nd, 27th and 29th. Volunteers were introduced to Monterey Bay National Marine Sanctuary, a Seasons in the Sanctuary, harbor seal and sea otter presentations. Weekend field trainings included a basic skills kayak course for Team OCEAN volunteers and a Monterey Bay cultural history walk on the Monterey waterfront. Bay Net volunteers will be stationed along the sanctuary's coast interpreting the sanctuary and conducting citizen science harbor seal observations. Team OCEAN volunteers will primarily be on the water in Elkhorn Slough and along Cannery Row in Monterey interpreting responsible wildlife viewing and documenting disturbances. Monterey Bay National Marine Sanctuary's volunteer programs are foundational and critical to sanctuaries carrying out the resource protection mission. They are the eyes and ears and interpreters at our visitor centers, out in the sanctuary and critical assistance for events throughout the year.

Coastal Discovery Center Report: February 3rd through April 28th

From February 3rd through April 28th, the Coastal Discovery Center hosted 2,139 visitors with the assistance of many docents and docents-in-training. Sophia Barwegan facilitated ten virtual "Dive Into MBNMS" programs for schools that are part of One Cool Earth, which is a non-profit organization in San Luis Obispo County that unites schools to teach environmental literacy. Additionally, Sophia led four virtual education programs for schools based out of Santa Clara County and San Jose during this time period. On February 26th, Sophia Barwegan hosted the third in-person docent training which covered planning for the upcoming docent appreciation event (whale watching in Morro Bay) and the history of Northern Elephant Seals. During the afternoon of Friday March 17th, the Coastal Discovery Center hosted a 55 student field trip where middle school students from Kings Christian School in Lemoore completed a visitor center tour, beach exploration, and pier oceanography. On Friday March 24th, the Coastal Discovery Center volunteer docents had the opportunity to go whale watching out of Morro Bay as an appreciation event for their dedication and service. Ten of the docents embarked on the trip and saw plenty of by-the-wind sailors (*Velella velella*) and two gray whales. On April 21st, Sophia Barwegan hosted 17 participants in Cuesta College's U.C. California Naturalist course in a presentation on the national marine sanctuary system, pier oceanography, and a tour of the visitor center. The Coastal Discovery Center's goals are to: encourage protection of the Sanctuary's resources through education and outreach, to increase public awareness and appreciation of our coastal environment, to allow visitors to learn about and understand the unique characteristics of the Monterey Bay National Marine Sanctuary, to create a sense of personal stewardship for California's coastal ecosystems, and to contribute knowledge and information shared among regional marine education research and resource protection.



Sanctuary Exploration Center Report: February 3rd through April 28th

From February 3rd through April 28th, the Sanctuary Exploration Center hosted 5,381 visitors. The Sanctuary Exploration Center facilities were rented on 12 occasions, including for a meeting with the Indonesian Consulate. The Center was also visited by 19 schools for field trips, including a field trip for the Castilleja School in Palo Alto and Kelp Forest Investigators Field Trips for second graders from Westlake Elementary and Spreckles. On April 11th, the Exploration Center began training a new round of 14 docents. Jazmine Mejia-Munoz from MBNMS Water Quality Team and Chad King from MBNMS Research Team assisted with the training. Training will continue on Tuesday evenings until May 23, which will

be an all-volunteer potluck to welcome our new team. The Sanctuary Exploration Center's goals are: to educate visitors about the sanctuary's unique and fascinating coastal and marine environment, to foster a more personal connection with the sanctuary and the ocean's relevance in people's daily lives and to encourage stewardship of the sanctuary and a better understanding of how to responsibly enjoy and protect the ocean.

NEWS COVERAGE

[Monterey cruise tourism may come to an end - KSBW](#)

KSBW According to the Monterey Bay National Marine Sanctuary, the main pollutant generated by cruises are habitat disruption, sewage, solid waste, ...

[How undersea cables may affect marine life - BBC Future](#)

BBC-Almost two decades ago, researchers at the Monterey Bay National Marine Sanctuary, in collaboration with the National Oceanic and Atmospheric ...

<https://www.washingtonpost.com/politics/2023/03/07/will-senate-ratify-landmark-treaty-protect-ocean-life/>

Washington Post: Will the Senate ratify a landmark treaty to protect ocean life?

[President Biden's Fiscal Year 2024 Budget Would Bolster Key Commerce Department Initiatives](#)

U.S. Department of Commerce-It also provides \$87 million to support National Marine Sanctuaries and Marine Protected Areas. Outside of NOAA, and \$97.5 million for NIST's ...

<https://www.montereyherald.com/2023/04/01/finding-sanctuary-volunteers-looking-out-for-harbor-seals/>

Finding sanctuary- volunteers looking out for harbor seals (Lisa Wooninck)

[Local leaders promote new Santa Cruz METRO program](#)

Santa Cruz Sentinel-The event, organized Wednesday at the Monterey Bay National Marine Sanctuary Exploration Center off Pacific Avenue in Santa Cruz, celebrated the ...

<https://www.msn.com/en-us/travel/news/harassment-of-coastal-wildlife-rising-on-the-central-coast-experts-say/ar-AA19euNz>

Harassment of coastal wildlife rising on the central coast, experts say

<https://www.kcbx.org/environment-and-energy/2023-04-10/proposed-chumash-heritage-national-marine-sanctuary-approaches-final-steps-of-designation-process>

Proposed Chumash Heritage NMS approaches final steps of designation process

<https://www.santacruzsentinel.com/2023/04/07/watsonville-earth-day-festival-to-focus-on-combating-climate-change/>

Watsonville Earth Day festival to focus on combating climate change

[23 shipping companies support Blue Whales and ...](#)

Safety4Sea-<https://safety4sea.com> > 23-shipping-companies-suppo...

7 hours ago — 23 shipping companies support Blue Whales and Blue Skies program ... Twenty three shipping companies participated in Protecting Blue Whales & Blue Skies vessel ..

[Santa Cruz METRO offers free rides on Earth Day - MSN](#)

MSN-A Santa Cruz Metro bus wrapped with a photo of humpback whales in the Monterey Bay National Marine Sanctuary by world-renowned nature photographer

[Long-awaited harbor dredge delayed another year - Half Moon Bay Review](#)

Half Moon Bay ReviewThe permitting process is compounded because the project is located in a national marine sanctuary,

and the district is still getting an “unending ...

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
Ariana Acosta – Bilingual Education Specialist
Ariel Hunter – SEC Manager
Lisa Uttal – Education Specialist
Michele Roest – Program Coordinator & Community Liaison
Rebecca Gustafson – Volunteer Coordinator (SEC)
Richard Stanley – Maintenance Specialist (SEC)
Sophia Barwegen – Program Specialist (CDC)
Christina Funck – SEC Gift & Bookstore Manager

Resource Protection

Karen Grimmer – Resource Protection Coordinator
Sophie De Beukelaer – GIS Analyst & Permit Coordinator
Bridget Hoover – Water Quality Protection Program Coordinator
Jazmine Mejia-Muños – Ag. Water Quality Coord
Pamela Krone – Water Quality Monitoring Coordinator
Keegan Angerer - Resource Protection Specialist

Program Operations

Andrew White – Network Manager and Webmaster
Haven Parker – Program Support Specialist
Raymond Chisolm – Program Specialist

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>

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.*

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

- Contact Information -

Monterey Bay National Marine Sanctuary

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