



# 2021 Impact Report



**Monterey Bay**  
National Marine  
Sanctuary Foundation

A CHAPTER OF THE NATIONAL MARINE SANCTUARY FOUNDATION

# 2021 IMPACT REPORT

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Monterey Bay National Marine Sanctuary (NMS), known as the Serengeti of the Sea, stretches from California's Marin to San Luis Obispo counties. The sanctuary encompasses more than 6,000 square miles and includes pristine beaches, jewel-like tide pools, lush kelp forests, a two-mile-deep canyon, and an offshore seamount. Teeming with life, the sanctuary is home to 36 species of marine mammals, 180 species of seabirds and shorebirds, and 525 species of fish.

## ABOUT THE NATIONAL MARINE SANCTUARY FOUNDATION

The **National Marine Sanctuary Foundation** is a leading voice for U.S. protected waters, working with communities to conserve and expand these special places for a healthy ocean, coasts, and Great Lakes. Our work extends from the ocean floor to Capitol Hill. We invite people with a stake in the health of the planet to protect their place in it.

The **Monterey Bay National Marine Sanctuary Foundation**, a chapter of the national organization, inspires the communities surrounding the sanctuary to protect it through participation in and support of programs, projects, and partnerships.

Together, the national organization working with its chapters inspires, creating energetic ambassadors for ocean conservation. We connect, working in close partnership with NOAA and the many communities that depend on and care for the sanctuaries. And we educate, showing the world how the sanctuaries can serve as a model for protecting marine ecosystems worldwide.

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# IMPACTS

OUR PROGRAMS CENTER AROUND CONSERVATION AND RESTORATION, CONNECTING PEOPLE AND COMMUNITIES TO SANCTUARIES, AND SCIENCE AND TECHNOLOGY.

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## CONSERVATION AND RESTORATION OF MARINE RESOURCES

### Recovering Black Abalone

The nearshore marine habitat of the U.S. west coast. hosts some of the most biodiverse and productive ecosystems in the world.

The National Marine Sanctuary Foundation and the Monterey Bay chapter answered a call to support the emergency rescue of endangered black abalone on the Big Sur coast in 2021. From January 26-28, 2021, central California experienced an atmospheric river event, which brought heavy rains, inundating areas where four major fires occurred in 2020. In some locations, debris flows deposited thousands of tons of material onto rocky intertidal habitats, home to numerous invertebrates, including the endangered black abalone, burying tens of thousands of endangered black abalone alive.



Laura Anderson (MARINe) and Wendy Bragg work to rescue black abalone after sediment filled in the rocky intertidal habitat and left abalone stranded on sandy stretches far from the water line.



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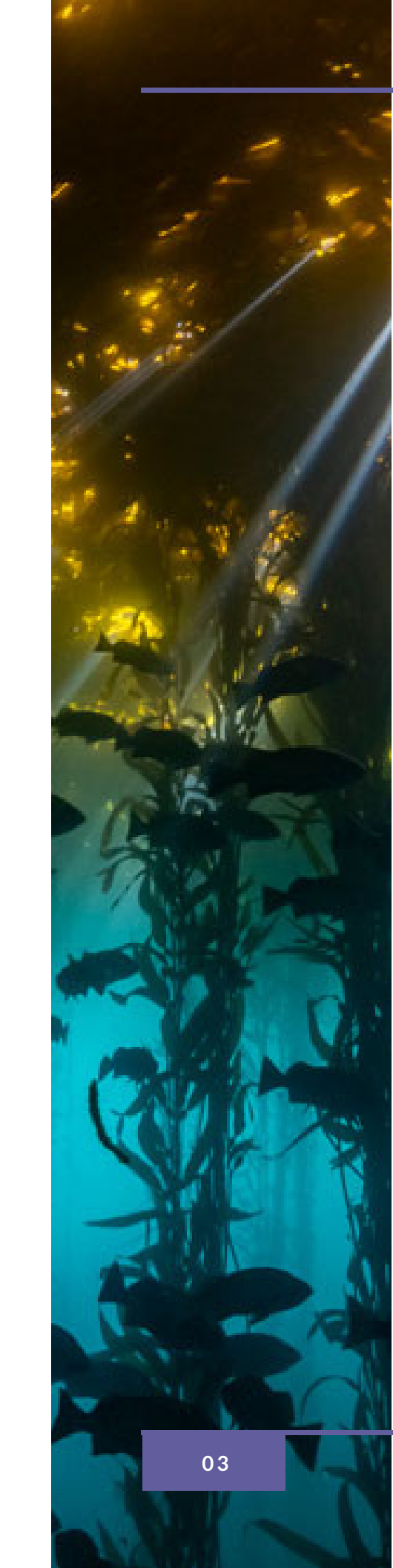
(cont.) Monterey Bay National Marine Sanctuary (NMS), and particularly Monterey County, are among the healthiest abalone populations on the planet. With \$50,000 in support from the National Marine Sanctuary Foundation, scientists and personnel from the University of California Santa Cruz (UCSC), Multi-Agency Rocky Intertidal Network (MARINe), and the Office of National Marine Sanctuaries (ONMS) in Monterey Bay intervened by removing black abalone buried that they found or those in imminent danger. The scientists rescued approximately 200 black abalone and took them to a seawater holding facility to maintain them temporarily for rehabilitation and safe-keeping.

The Foundation is actively fundraising to support the recovery of black abalone. With Foundation funding, scientists will continue to monitor winter rains to determine potential new debris flows where rescue attempts may be necessary and continue to survey as-yet unaffected areas to prepare for future debris flows. There is evidence that soils in burned areas are more prone to runoff (e.g., debris flows and mudslides) for 2-3 years after revegetation has stabilized the areas. Therefore, continued monitoring of these areas will be essential to identify additional sites with healthy black abalone that may require future intervention and rescue efforts. Our goal is to monitor this region of the California coast and the associated black abalone populations for a minimum of two years.

### **Saving Ocean Giants**

Monterey Bay National Marine Sanctuary is home to numerous species of whale. Entanglement from fishing gear and marine debris, ship strikes, noise pollution, and climate change threaten whale species across the globe. National marine sanctuaries are important areas for finding solutions to help prevent entanglements, rescue whales, and reduce mortality from ship strikes.





(cont.) On the U.S. West Coast, there has been a significant increase in the number of confirmed whale entanglements since 2013, with the majority reported from California. The National Marine Sanctuary Foundation, in collaboration with the California Ocean Protection Council (OPC) and California Department of Fish and Wildlife (CDFW), and commercial Dungeness crab fishermen, is testing gear innovations in the commercial Dungeness crab fishery designed to mitigate the risk of whale and marine life entanglements. Funds from the Foundation and chapter are helping to support training sessions bringing together fishermen, managers, and technology companies to learn about the alternative gear and prepare for the fishing season test trials; field testing of different types of gear that reduce the fishing lines in the water that can entangle wildlife; and developing tools and strengthening data collection that can inform managers.

The Foundation collaborates with the National Large Whale Entanglement Response Network and our national marine sanctuaries to support whale disentanglement training. These training sessions help prepare responders by coordinating a response with the community, facilitating access to sanctuary vessels as rescue vehicles, providing specialized equipment and supplies, and tests new approaches and technologies to improve future disentanglement response missions.

## **COMMUNITY ENGAGEMENT**

### **Santa Cruz Exploration Center**

The health of Monterey Bay National Marine Sanctuary relies on the communities surrounding the sanctuary. The Santa Cruz Exploration Center's goal is for visitors to come in the door as ocean-lovers but to leave as ocean stewards, helping to preserve the Monterey Bay and the ocean beyond for future generations.



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(cont.) Bilingual graphic panels and video displays allow visitors to interact with the exhibits in English and Spanish. Many local businesses derive their livelihood from Monterey Bay and have committed to giving back to it through their support of the Exploration Center. A new traveling exhibit, completed in 2020, focused on the California Salmonscape. The exhibit focuses on the life cycle of salmon, why salmon are important to Californians, and the land-sea stewardship connection. The mobile exhibit, created with support from NOAA Fisheries, U.S. Forest Service, Office of National Marine Sanctuaries, National Marine Sanctuary Foundation, and a private donor, is an asset for the Exploration Center and for sharing with partner visitor centers as well.

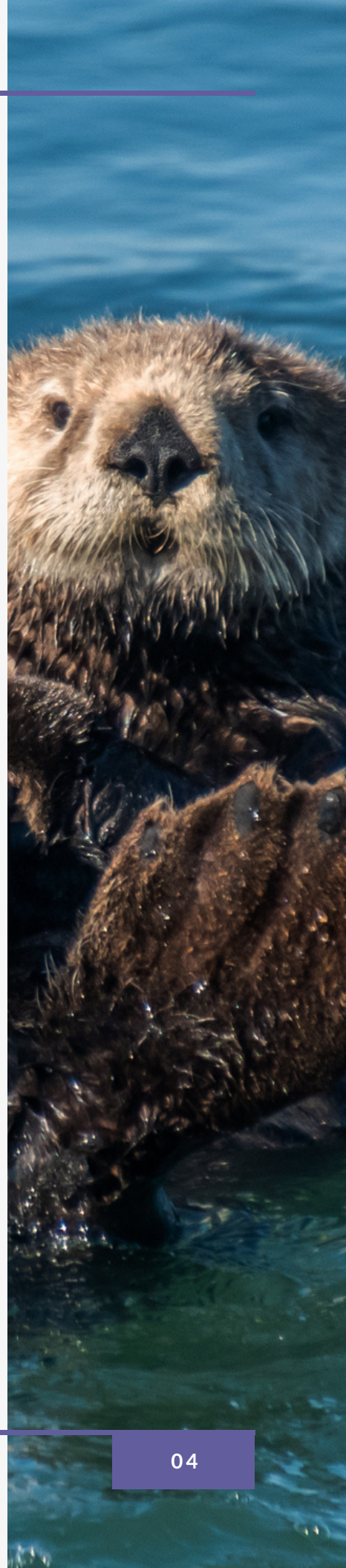
In response to the Covid-19 pandemic, during the 2020-21 school year, the Center's staff created virtual distance learning programs, including pre-recorded and live sessions, to educate youth about sanctuary resources and protection. Live distance learning programs reached 2,836 students from 28 K-12 schools – serving 1,740 students from Title 1 eligible schools. There is an ever-growing need to continue to support teachers and students and expand programs to reach additional underrepresented audiences through virtual platforms.

The Sanctuary Exploration Center is a dynamic facility with evolving exhibits, interpretive programs, and learning opportunities for diverse youth from K-12th grade classes. The Monterey Bay National Marine Sanctuary Foundation plans to support new exhibits, interpretation, and education programs to serve this growing need.

### **Team OCEAN & Bay Net**

Wildlife viewing at Monterey Bay NMS is world-renowned. It is home to harbor seals, sea otters, sea lions, whales, and dozens of species of birds, to name a few. Imagine seeing a smack of jellyfish, sea lions sunbathing, a humpback whale breaching, or a sea otter nuzzling her pup all in one place! Safe wildlife viewing allows the public to observe these animals while preventing behavior that can disturb and harm them.

The Monterey Bay National Marine Sanctuary Foundation, working with the Office of National Marine Sanctuaries, supports Team OCEAN (Ocean Conservation Education Action Network) and Bay Net.





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(cont.) Team OCEAN uses trained, knowledgeable naturalists who volunteer their time to talk with the public about the sanctuary, protect sensitive wildlife, and watch animals safely. Volunteers interact with over 5,000 people per year, and their presence helps keep boaters and kayakers from harming sea otters, harbor seals, sea lions, birds, and other wildlife. In 2021, Team OCEAN tours reached 1,300 students in just five weeks of programming.



Bay Net trains volunteer naturalists stationed along the recreation trails in Monterey and Pacific Grove to educate about 40,000 people per year about the sanctuary and protecting local wildlife. During the spring, volunteers station themselves at harbor seal pupping beaches to ask people to keep a safe distance from harbor seal mothers and pups. Disturbing wildlife can have serious consequences. Seal mothers may abandon their pups, leaving them to die.



## Sanctuary Sup

The Monterey Bay National Marine Sanctuary Foundation serves as a leading voice for the sanctuary, advocating and educating the public about the importance of this unique protected area. Sanctuary messaging is critical to building an ocean stewardship ethic, strengthening the nation's science literacy, and creating a new generation of ocean leaders. We seek to arm the public with the knowledge and skills needed to make informed choices, with a sense of excitement about the marine environment and the recognition of the benefits derived from well-managed ocean resources.

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(cont.) The Sanctuary Sup Series started during the Covid 19 pandemic to stay connected with our Monterey Bay sanctuary community. As a platform for engaging support. The series is an opportunity to "sup" (break bread) together while learning about what is happening in the sanctuary. Past Sup series included talks from our esteemed board and community members, including Secretary Leon Panetta, Hilary Bryant, Dan Haifley, Ted Balestreri, David Stivers, along with vital sanctuary program volunteers. Over 325 attendees joined us for four in total for conversations like our last event, where our speakers recounted how the local community came together to fight offshore oil drilling, and how under their leadership, they all navigated the path to sanctuary designation in 1992.

The Sup series is an engaging opportunity for the sanctuary community to connect, lunch, and learn. We will continue this series of one-hour, virtual, lunchtime speaker's events hosted by the chapter as a way to stay connected to our sanctuary supporters while being educated, informed, and entertained. As our speakers remind us, we must remain stewards of our sanctuary.

### **Ocean Guardians**

The Ocean Guardian School program provides grants for hands-on watershed stewardship projects to schools across the US. The program, coordinated through a partnership between NOAA and the National Marine Sanctuary Foundation, has served more than 51,000 K-12 students at 113 schools. Grants provided to schools lead to large impacts: 146,000 kg of trash collected; 498,000 plastic bottles kept out of landfills; 34,000 square meters of non-native invasive plants removed; 1,400 compost and recycle bins installed, and 28,000 reusable bags distributed to replace single-use plastic bags.





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**Ocean Guardian Schools surrounding Monterey Bay NMS are taking the following actions to sustain this treasured ocean sanctuary.**

- Amesti Elementary students are focusing on improving the health of their campus and, in turn, the health of their local watershed by removing non-native invasive plants and replacing them with native species.
- Aptos High School students spent two years studying the school's waste in the campus's main quad and are now building a sustainable recycling and compost program.
- Calabasas Elementary School's Green Team raises student awareness regarding the impact of plastic trash and litter on local watersheds and our one ocean. The Green Team is working to reduce cafeteria-based plastic trash and has an initiative to ban balloons on campus.
- Los Arboles Middle School students are learning how ocean-friendly gardens help to keep their watershed healthy.
- Monterey Bay Charter School is working to become a zero-waste school. Through various activities and events, students and teachers will work to eliminate single-use plastics in all areas of their school life.
- Morro Bay Montessori Center of Family Partnership Charter School is looking at the connection of native plants to the health of the watershed and ocean. Students will remove non-native invasive plants, gather and propagate native seeds and plant the native plants out in the Swallow Creek habitat.
- Pacific Elementary School students engage in various restoration/garden activities on campus and the greater San Vicente coastal watershed, including bioswales and biofilters on campus and in adjacent county streets.
- Santa Catalina School students are reducing the amount of single-use plastic on campus and at home while educating students, faculty, and parents about the effects of single-use plastics on land and out in marine habitats.
- Scotts Valley High School is expanding its "Land to Sea" landscaping and gardening activities.
- Seaside High School's Ocean Defenders Club leads the school's waste reduction efforts, including installing 3-bin waste receptacles and developing a sustainable composting system.
- Starlight Elementary School students reduce the landfill waste from the cafeteria, single-use plastics on campus, and the amount of micro-trash that washes into the storm drains.

