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## Monterey Bay National Marine Sanctuary Advisory Council Diver Newsletter

**Diver**  
December 2017

### In This Issue

[Join Our Mailing List!](#)

[North Coast Baseline Report](#)

[NorCal Kelp Forest Collapse](#)

[17-Ft Boat Capsizes](#)

[Ozone Hole smallest in 29 years](#)

[JPSS Heads to Orbit](#)

[Get Involved](#)



[North Coast Kelp Forest Collapse](#)

[Seal Bombs](#)

[Blue Whales](#)

[Reef Check 2017 Survey Season](#)

In an unprecedented environmental collapse, Northern California's iconic kelp forests have almost entirely disappeared. Starting between three and four years ago, the region's population of purple sea urchins - which eat marine vegetation - exploded after a disease wiped out their main predators, sea stars. The spiny bulb-shaped urchins have since mowed down virtually all the bull kelp between San Francisco and the Oregon border and, with few predators afoot, taken over the sea floor.

[Sea Below the Surface](#)

"There are patches of remaining kelp, but they're tiny," said Cynthia Catton, an environmental scientist with the California Department of Fish and Wildlife who has been closely studying the crisis. "You can count the number of individual kelp plants."

[Hyperbaric Chamber Funding](#)

[Read more](#)

**Dear MBNMS,**

Fellow divers,

Happy winter diving! The ocean conditions in the winter are usually clearer with better visibility than in the summer. The summer marine fog pattern gives way to clear skies and sensibly warmer conditions. It is great to get out between storms and take some wide angle shots.

Through December we still were encountering sea nettle swarms. They have been in the southern part of Monterey Bay for an unusually long time this year, about 4 months. Their density varies and can change in the course of an hour long dive. They can be entertaining at a safety stop as they approach in all directions and you dodge and push them away. Be sure to keep a bottle of white vinegar on hand in case you get stung between the mask and regulator.

We continue to see schools of bait fish indicated by the flocks of cormorants and pelicans between The Monterey Harbor and Point Pinos.

We would like to propose to all dive clubs and dive centers that both of us are committed to outreach and education of sanctuary information. Please drop us an email and we

**California Fishermen Are Throwing Explosives at Sea Lions And it is, surprisingly, legal.**

would be honored to attend and provide a 30 minute presentation along with a QA session regarding Monterey Bay National Marine Sanctuary.

Please keep up with the current Sanctuary Advisory Council agendas and if you see something of interest that you would like us to comment on, please send us an email.

Warm Regards & Dive Safe,

Brian and Keith

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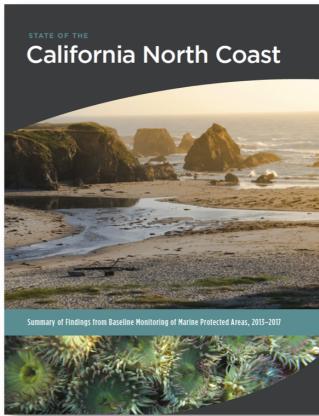


The sound carries for kilometers underwater and the passing blast waves feel like a punch to the chest. To dodge the painful noise, scuba divers in Monterey, California avoid the water when the anchovy and squid fleets are out. "We just look off the beach, and if we see the boats we go somewhere else," says Keith Rootsart, a recreational scuba diver.

Rootsart is among a small but vocal group of conservationists and researchers raising concerns about commercial fishermen's use of "seal bombs." These explosives-comparable to small sticks of dynamite-scare off seals and sea lions that might otherwise raid fishing nets. They also annoy divers and potentially harm other species, particularly whales. "I would think it's a violation of the Marine Mammal Protection Act," Rootsart says. "You're not supposed to approach seals and sea lions, and here you have guys throwing dynamite at them."

But the practice is lawful. The Marine Mammal Protection Act specifically allows fishermen to use non-lethal measures "to deter a marine mammal from damaging the gear or catch." Philip Sammet, a professional diver and boat captain, says he's heard seal bombs roughly a dozen times while underwater. "They are loud-it's an explosive, painful sound," he says. "You can feel the pressure waves hit you in the chest. And it doesn't matter if it explodes next to your head or a mile away-it sounds the same." [MORE INFORMATION](#)

## North Coast Baseline Report



The North Coast of California is beyond the boundary of Monterey Bay National Marine Sanctuary but our oceans are interconnected and the health of areas adjacent to the sanctuary are extremely relevant to the health and socio-economic well-being of MBNMS.

This State of the Region report provides a synopsis of the ecological, biological, oceanographic, and socioeconomic

conditions in the North Coast near the time of marine protected area (MPA) implementation in December 2012. The key findings presented here are from North Coast MPA baseline monitoring projects, and other assessments in the region from 2013 to 2017. Each baseline project included two to three years of data collection.

Learn about the biological, ecological, oceanographic, and socioeconomic conditions around the time of marine protected area (MPA) implementation on the North Coast. The North Coast region includes more than 1,000 square miles of state water from Point Arena to the California-Oregon border, and this report establishes a benchmark of conditions against which future changes can be compared.

Many years of data may be needed to see MPA effects and understand regional trends. However, data from areas with pre-existing, long-established MPAs in the region can provide a glimpse of possible expected changes:

Biomass and abundance of targeted fish species in kelp and shallow rock ecosystems in Point Cabrillo State Marine Reserve (initially established as a state marine conservation area in 1975) is almost double that of surrounding areas.

[Read the report](#)

## 17-foot Fishing Vessel salvaged at Pacific Grove Marine Gardens State SMCA.

On Friday, October 13th, a 17ft Glastron fiberglass vessel capsized close to the Pt Pinos buoy marker in the evening

## Farallones Wildlife Cruise Encounters "Oceanful" of Blue Whales

Greater Farallones National Marine Sanctuary education staff partnered with the Oceanic Society to provide an opportunity to see the Farallon Islands and look for wildlife on October 21st, 2017. Thirty-nine participants from the Sanctuary Explorations program encountered an abundance of wildlife, with sightings of 35 blue whales and another 30 humpback whales! Many seabirds, including common murres, cormorants, brown pelicans, and two black-footed albatross were spotted.

Participants learned about the natural history of whales, pinnipeds and seabirds along with the conservation efforts to protect these amazing species. In addition, they learned about good whale watching practices and etiquette.

The Sanctuary Exploration Series provides monthly opportunities for the public to connect with, and experience, our national marine sanctuaries. Building a strong public sanctuary constituency as well as inspiring ocean literacy,

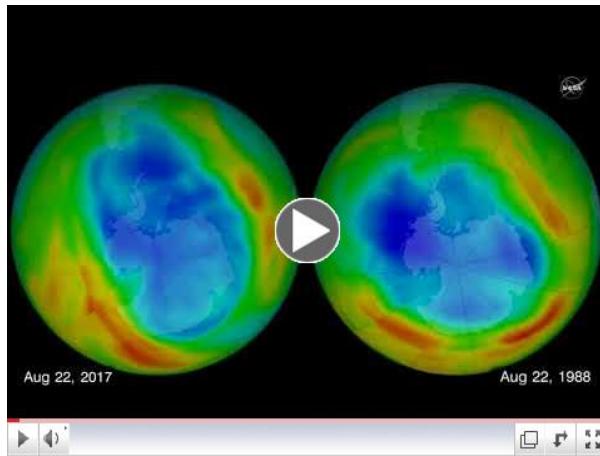
hours. US Coast Guard and a good Samaritan responded and rescued 3 passengers and a dog. After the rescue, the vessel was left adrift.

The next morning the vessel was reported grounded at Pacific Grove Marine Gardens State SMCA and the vessel owner was informed by MBNMS about his responsibility to remove the wreck, for which he cooperated to the best of his ability. This SMCA is a sensitive nesting and resting area for seabirds, yet luckily this was not the breeding season. The hull being intact and high on the rocks required a land based response. A local salvor was able to provide an estimate for the salvage to the owner who was able to cover most of the costs.

The salvage was conducted on October 15, and fortuitously, the wreck had moved into a closer nearshore position, which provided easier access for rigging the hull and pulling it gently off the rocks and to the sand beach. The hull was first flipped over, and the engine and wiring were still connected and the battery and reserve oil container were both intact. The salvor filled the hull with additional vessel debris from the rocky intertidal area and then slowly winched the vessel across about 100 foot of rocky intertidal to beach. Some fiberglass residue was visible on the rocks, yet damage appeared minimal to intertidal resources. All debris on site including the vessel hull, outboard motor and battery were removed intact.

MBNMS kept Pacific Grove police, USCG and BLM informed about the response. Vessel groundings they have the capability to damage sanctuary resources and cost the government tax dollars. Resource protection measures include managing a salvage operation to ensure a swift response that follows best practices.

## Warm Air helped keep 2017 Antarctic ozone hole smallest in 29 years



Warmth in the Antarctic stratosphere helped limit the size of the ozone hole in 2017 to the smallest observed since 1988, NOAA and NASA scientists say. Measurements from NASA satellites showed the hole in the Earth's ozone layer that forms over Antarctica each September grew to only 7.6 million square miles in extent (coverage) before starting to recover this year. The average peak area observed since 1991 has been roughly 10 million square miles. The ozone hole reached its peak extent on Sept. 11, covering an area about two and a half times the size of the United States, and then declined through the remainder of September and into October. NOAA's ground- and balloon-based measurements also found the least amount of ozone depletion since 1988.

conservation ethics and wildlife etiquette through experiential learning are the goals for the series.

## Reef Check California - Survey Season Draws to a Close



We support citizen science and Reef Check California continues to provide a path for concerned divers to help monitor the health of California's rocky reefs and Marine Protected Areas. This data informs CDFW in management of the fisheries and required adaptive management of the MPAs.

On December 4th the last survey of the 2017 season was completed at Stillwater Cove. We struggled to find a weekend weather window to get around Point Pinos to do the surveys in Carmel this year so we did second surveys for the year at the more accessible sites of Lovers Cove and Aquarium Reef.



Reef Check Carmel Survey Crew

We managed to do a second annual survey at Spanish Cove in the Asilomar MPA this year and were pleased to find brown algae is still in abundance there.

We were successful in adding new survey sites this year at Flat Rock in the Montara SMR and at Half Moon Reef for a reference site outside the MPA just north of Pillar Point Harbor in Half Moon Bay. There is a kelp canopy there and we enjoyed diving at these sites. These sites are very exposed to the typical NW swell so we were fortunate to find a window of opportunity there in October after rough conditions in September made most everyone seasick and we could only complete half of a site.

The Central Coast is now 100% complete for this year. We did 40 surveys this year, seven more than last year and twice as many as we did in 2014. Whew! Time to take a little break.

Keith Rootsart,  
Diving Alternate

## Monterey Bay National Marine

The two agencies have monitored the ozone hole for the past 25 years. For [more information](#):

## Lift off! JPSS-1 heads to orbit

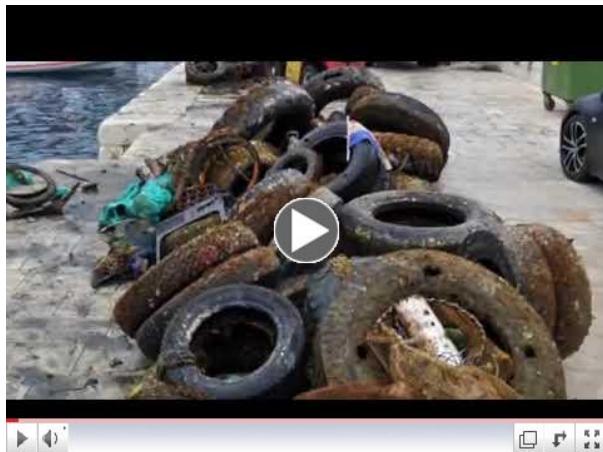


The Joint Polar Satellite System-1, the first in a new series of four highly advanced NOAA polar-orbiting satellites, lifted off from Vandenberg Air Force Base, California, at 1:47 a.m. PST this morning.

The satellite's next-generation technology will help improve the timeliness and accuracy of U.S. weather forecasts three to seven days out. "The value of the new JPSS satellite cannot be understated after this tragic hurricane season," said Secretary of Commerce Wilbur Ross. "JPSS offers an unparalleled perspective on our planet's weather, granting NOAA advanced insights which will be used to guard American lives and communities."

JPSS-1 will be renamed NOAA-20 when it reaches its final orbit. Scientists and forecasters will be able to use the satellite's data officially after its five advanced instruments, all significantly upgraded from those on NOAA's previous polar-orbiting satellites, complete three months of tests. The satellite is designed to operate for seven years, with the potential for several more years. For [more information](#):

## How to Get Involved



One seminar years ago gave us a catch phrase that has stuck with me for many years. "Successful people simply have the ability to get things done". This was a business class but it applies to so much in life. It is easy to set back, point fingers, and ridicule those that are working to move the needle on a vision. But the reality is they are and the hecklers are not.

## Sanctuary 25th Anniversary "Sea Below the Surface" Speaker Series



Monterey Bay National Marine Sanctuary concluded its 25th anniversary speaker series of public presentations on the state of sanctuary resources, while reflecting on 25 years in ocean protection.

The "Sea Below the Surface" series features talks by local marine researchers that discuss the status and trends of sanctuary conditions, including key habitat and species status, from each of four different environments found within the sanctuary: estuarine, nearshore, offshore and seamount environments.

The final presentation in the series focused on seamount environments of Monterey Bay National Marine Sanctuary with a presentation given by Dr. Andrew DeVogelaere, Research Coordinator for MBNMS on Thursday, November 16th at the Pacific Grove Museum of Natural History in Pacific Grove, CA. Sixty-five guests attended the presentation entitled "Mysteries of Davidson Seamount and Sur Ridge Revealed".

A goal of MBNMS education and outreach programs is to inform and educate the public on the health of sanctuary ecosystems and to inspire conservation practices. A special recognition for this year's outreach efforts focuses on celebrating the MBNMS 25th Anniversary in ocean protection.

## Pacific Grove Hyperbaric Chamber

Monterey Bay National Marine Sanctuary has become a premier diving destination, offering some of the most beautiful and pristine diving areas in the country. The City of Pacific Grove, on the Monterey Peninsula, has provided medical treatment to injured divers with its hyperbaric chamber since 1963.

While the City of Pacific Grove provides for many of the chamber's operation needs, diver donations support operations and offset needed repairs that occur from time to time. Please consider a donation to help this much needed, important resource for the dive community that enjoy the sanctuary.

Volunteerism is no different, big accomplishments come from a series of small steps. What have each of us done to educate our fellow divers on being good stewards of our habitats.

Our Dive Centers and Professional Instructors offer many programs and opportunities to help educate ourselves and others in promoting conservation through action. We hope you agree and take a step this next year that can add up to positive changes in our ocean environment.



### Quick Links

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[Monterey Bay National Marine Sanctuary](#)

[Advisory Council Web Page](#)

[Marine Mammal Center - Moss Landing](#)

[Council Meeting Agendas](#)

[Council Meeting Minutes](#)

[Advisory Council Members](#)

[Donate to the Pacific Grove Hyperbaric Chamber Fund](#)



[Donate Now!](#)

Donations for the chamber can be made online using a credit card or a PayPal account. The credit card transaction will be securely handled by PayPal and you do not need a PayPal account to make a credit card donation. At the end of the credit card transaction you will be presented with an option to print out a receipt for your donation.

Your tax-deductible donation to the Pacific Grove Hyperbaric Chamber Fund will go directly towards the facility and its operations.

Payment can also be made by check mailed to:

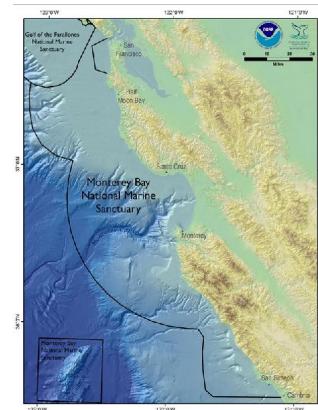
Monterey Bay Sanctuary Foundation  
99 Pacific Street, Suite 455 E  
Monterey, CA 93940

If you have any questions, please email [info@mbnmsf.org](mailto:info@mbnmsf.org)

Prepared by Brian and Keith, Sanctuary Advisory Council Diving Representatives

### Know your Sanctuary

## Monterey Bay National Marine Sanctuary



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Monterey Bay National Marine Sanctuary (MBNMS) is a federally protected marine area offshore of California's central coast. Stretching from Marin to Cambria, MBNMS encompasses a shoreline **length of 276 miles and 6,094 square miles of ocean.**

It is home to one of the world's most diverse marine ecosystems, including numerous mammals, seabirds, fishes, invertebrates and plants in a remarkably productive coastal environment.

MBNMS was designated in 1992 for the purpose of resource protection, research, education, and public use of this national treasure. MBNMS is part of a system of 13 National Marine Sanctuaries and two marine national monuments, administered by the National Oceanic and Atmospheric Administration

## 2017 SAC Meeting Schedule

**December 15, 2017** - Monterey

For more information:  
[2017 Sanctuary Advisory Council Meeting dates and Information](#)

Monterey Bay NMS Advisory Council, 99 Pacific Street, Suite 455a, Monterey, CA 93940

3/15/2018

Sanctuary Diver - December 2017

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