

SUPERINTENDENT'S QUARTERLY REPORT

1ST QUARTER FY2016
OCTOBER THROUGH DECEMBER, 2015

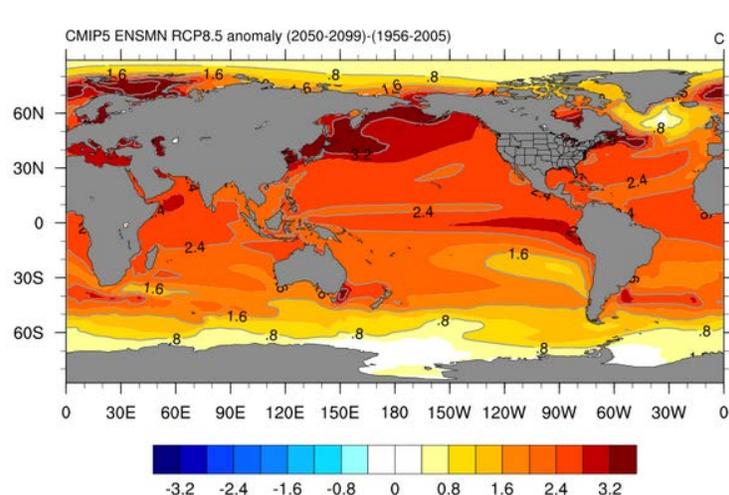
GFNMS Climate-Smart Adaptation project makes waves globally

The GFNMS Climate Program's Climate-Smart Adaptation project is one of six U.S. case studies that was forwarded by the US Department of State to the United Nations Framework Convention on Climate Change (UNFCCC) to include in a publication that showcases climate change adaptation efforts among member countries. In addition, in April 2015 the project's work to date was presented at an international workshop on climate and marine protected areas organized by the International Union for Conservation of Nature and the French Marine Protected Area Center.

Held in preparation for the United Nations Conference on Climate Change in Paris in December 2015, the objective of the MPA-Climate workshop was to prepare a set of recommendations on actions to increase the role of MPAs in climate change adaptation and mitigation.

Weblink for UNFCCC publication:

http://unfccc.int/documentation/documents/advanced_search/items/6911.php?preref=600008772



CONSERVATION SCIENCE / RESEARCH

Monitoring To Understand Long-Term Trends

Greater Farallones Sanctuary Co-sponsors Biennial Marine Mammal Conference

From December 13-18, 2015 Farallones assisted with coordination of the Society for Marine Mammalogy's 21st Biennial Conference on the Biology of Marine Mammals in San Francisco. The conference, drawing 2,400 registrants from 23 countries, was the largest ever of its kind. The sanctuary also hosted a pre-conference International Whaling Commission committee meeting at its headquarters. Sanctuary staff collaborated on four oral presentations and a poster presentation. Due to GFNMS' contributions in planning, organizing, running and publicizing this international conference, the Office of National Marine Sanctuaries was recognized as one of its top-level donors. Sanctuary staff contributed to several workshops and discussions geared to reduce ship strikes, enhance ecotourism and stewardship of the sanctuaries, and better define the impacts from climate change on marine mammals.

The sanctuary's involvement spotlighted the sanctuary as a sentinel site for marine mammals and ecosystem assessment, and fostered collaborations on marine mammal research. Communications staff headed the Conference Media Team and coordinated global coverage. This conference focused strongly on science communications with workshops and panel discussions to help scientists and managers reach out effectively with media, the public, and with policy makers.



Top scientists and journalists on SMM conference communications panel. Credit: Frances Gulland/TMMC

Sanctuaries, Fisheries and Stanford University Listen for Killer Whale, White Shark, Ocean Sounds

During the week of October 12 the national marine sanctuaries' *R/V Fulmar* crew and partners deployed and recovered acoustic moorings in support of three projects in Cordell Bank and Greater Farallones marine sanctuaries. A NOAA Fisheries hydrophone was recovered off Sea Ranch in the northern expansion area of the Greater Farallones NMS, part of an array of autonomous passive acoustic recorders that records nearshore occurrence of endangered killer whales off Washington, Oregon and Northern California.

The *R/V Fulmar* crew and Stanford University scientists deployed real-time acoustic moorings off Tomales Point and the Farallon Islands, two white shark "hot spots" in the sanctuary. These moorings provide real-time data from tagged white sharks. The project tracks the real-time movements, residency and behaviors of white sharks throughout central California.

These acoustic networks provide valuable information on the distribution, movements, residency and behaviors of top marine predators, and on how ambient soundscapes may impact sanctuary resources. These findings will inform future management and consideration of critical habitats for white shark and endangered whales.

RESOURCE PROTECTION

Protecting Habitats

Farallones Co-hosts Tomales Bay Moorings Workshop

On October 19th Greater Farallones National Marine Sanctuary, with the California State Lands Commission and Inverness Yacht Club, co-hosted a public workshop for Tomales Bay mooring owners and boaters to learn more about the Tomales Bay Mooring Program. They covered the lease application process, and helped identify appropriate places to site new moorings on Tomales Bay outside of environmentally sensitive areas. The workshop was attended by over two dozen people, including local businesses, realtors, shore-side property owners and other interested community members.

The Tomales Bay Mooring Program protects eelgrass and other sensitive habitats such as harbor seal haulouts, and removes marine debris by moving or removing current poorly sited and designed moorings, thus better

protecting habitat, water quality and wildlife, while allowing for the long-standing tradition of recreational boating in appropriate places.

Sanctuary Staff Helps Restore Estuary Habitat

The Farallones sanctuary and agency partners are continuing progress on the North End Restoration Project at Bolinas Lagoon. The project seeks to reestablish natural processes in the Lagoon's northern region through road removal/realignment, wetland and riparian habitat restoration, and repair of upland floodplain functions. Ecosystem benefits resulting from reconnecting creek flows into the lagoon will strengthen habitat function, and sediment and water transport within the lagoon, while infrastructural enhancements will improve driver safety and reduce flooding. Moreover, important climate change adaptation elements will create accommodation space for Lagoon expansion in the event of sea level rise and increased storm surges, and establish transitional habitat for migrating plant, marine, and wildlife species. A site conditions report of the study area is complete and, with the incorporation of community feedback, project partners are currently developing design concepts. Once selected, project components will be presented for public comment and inform final project designs.



Plant removal helps restore unique habitat and function in the internationally recognized Bolinas Lagoon estuary. Staff involvement in sanctuary programs provides important internal support and knowledge exchange, and strengthens partnerships with co-managing agencies and project partners. (See Calendar for Volunteer Dates).

Minimizing Risk from Oil Spills and Vessels

Sanctuary Assists with Capsized Vessel Incident

A 20-foot long *Grady White* fishing vessel overturned near Middle Farallon Island on Saturday October 10, 2015. Due to heavy fog conditions the US Coast Guard (USCG) was not able to mount a helicopter rescue, but

the whale watching boat *Kitty Kat* was able to save two people from the overturned boat; unfortunately, a third person perished. As the vessel began to drift extremely close to Southeast Farallon Island, the Farallones sanctuary was able to work with the West Coast Region and the NOAA's research vessel, R/V *Fulmar* to secure the overturned boat and tow it back to San Francisco where it was transferred to USCG and U.S. Army Corps of Engineers personnel.

The vessel was comprised of chemical-laden plastic and the sanctuary's efforts to recover the boat prevented it from sinking, grounding in Farallones Wildlife Refuge, or continuing to drift as marine debris thereby preventing impacts to sanctuary resources and removing a navigation hazard.

Developing Solutions to Respond to Climate Change

Climate-Smart Adaptation Working Group Prioritizes, Finalizes Management Strategies

In December, 2015, the Climate-Smart Adaptation Working Group of the Greater Farallones National Marine Sanctuary Advisory Council met to finish the development of potential management strategies for marine resource managers to take in response to climate vulnerability. Eleven representatives of federal, state and local government agencies, as well as academic and NGO organizations, finalized the details of nearly 100 management strategies to reduce the vulnerability of beach/dune, cliff, outer coast estuarine, and rocky intertidal habitats along the North-Central California coast. The strategies were prioritized within each habitat based on criteria that included feasibility, efficacy, and climate-smart characteristics. These strategies will be presented to the Sanctuary Advisory Council in March 2016 for their consideration.

The diverse and collaborative nature of this working group enabled a stakeholder-led process to define climate-smart adaptation strategies for the region's resource managers to take to reduce climate vulnerability of species, habitats, and ecosystem services.

Farallones Climate Program Presented to Southwest Climate Summit

On November 3 Greater Farallones National Marine Sanctuary gave a presentation on its Climate Program at the Southwest Climate Summit in Sacramento, California. Sanctuary staff described its unique model for engaging

stakeholders and partners in the development of its climate program. The presentation detailed the role of the Sanctuary Advisory Council and the important work done by working groups of the council to advance climate action through a green operations plan, a climate change impacts report, a monitoring plan, and a current adaptation planning effort. The two-day conference was organized by the California Landscape Conservation Cooperative and the Southwest Climate Science Center. For more information, visit <http://www.swcsc.arizona.edu/content/2015-southwest-climate-summit>

The sanctuary program employs a unique model of stakeholder engagement, and this conference presented the opportunity to describe how this model has effectively advanced the sanctuary's climate program. Over 250 natural resource managers, scientists, public agency, tribal, and non-governmental organization representatives attended.

EDUCATION

Increasing Awareness of the Sanctuary

Protecting Biologically Rich Ocean Places

On October 11 in Woodside, CA, as part of the Folger Speakers' Series, Farallones Education staff outlined to 200 members of the Huddart-Wunderlich Park Group why one of the world's most productive ocean ecosystems occurs off the San Mateo county coast, and why it is so rich with marine life like white sharks, sea turtles and giant whales. Stunning underwater video, photos and graphics illustrate how oceanic processes, and changing seasons of the sea, as well as wildlife ranging from majestic to miniscule, combine to create a food web of global significance. Two north-central national marine sanctuaries, Cordell Bank and Farallones, have expanded to further protect this ecosystem. The event included marine life printing and marine life artifacts.

Farallones Presents on Humpback Whales for Film Institute "Science On Screen"

Farallones communications staff presented a program on humpback whales at the California Film Institute screening of *Star Trek IV: the Voyage Home*. "Science on Screen" is a nationwide program supported by the Sloan Foundation. The program matches feature films that include elements of science, with lectures by scientists and specialists in the disciplines featured. In *Star Trek IV*, to save Earth from an alien space probe run amok,

Admiral Kirk and his crew time travel back to 20th century Earth to retrieve the only beings who can communicate with the probe: endangered humpback whales (George and Gracie). Sanctuary staff delivered a presentation on humpback conservation status, communication, behavior, the local Farallones feeding population, and other relevant topics. The unusual blend of Trekkies and "blubber-lovers" in the audience made for a motivated and lively Question and Answer session. Film, including science-fiction, is an effective way in which to convey environmental messages to broader audiences, reaching out to those whom the appeal of technology, action-adventure, and drama may pique their interest in the environment.

West Coast Educators Develop Deep Coral Communities Curriculum

Educators from Olympic Coast, Greater Farallones, Cordell Bank, Monterey Bay and Channel Islands national marine sanctuaries collaborated with scientists from NOAA National Centers for Coastal Ocean Science to develop *Deep Coral Communities: Sentinels of a Changing Ocean* educational materials including a video, poster and a lesson plan targeted for high school teachers and students. Using footage from remotely operated vehicles, students utilize real scientific methods to explore deep-sea coral communities and compare species abundance and diversity in underwater transects from each of the five national marine sanctuaries on the West Coast. Deep-sea coral ecosystems are home to many diverse species. This lesson takes students into these important habitats to identify the soft corals, hard corals, invertebrates and fish found in these communities and to investigate the unique biology of deep-sea corals, the threats these animals face, and what we can do help protect them. The lesson can be downloaded at [National Marine Sanctuaries Education web page](#). This curriculum was presented as part of the NOAA National Marine Sanctuaries and Ocean Acidification Program [Sharing Ocean Acidification Resources for Communicators and Educators \(SOARCE\)](#) webinar series on October 22nd, 2015. To learn more, email noaa.oceanacidification@noaa.gov. One hundred sixty-five educators took part in the webinar.

Deep-sea coral ecosystems support a diverse array of marine species, including commercially important ones, and serve as hotspots of biological diversity. By educating students and teachers about the value of deep-sea coral ecosystems in national marine sanctuaries we will increase interest in science and ocean related careers and enhance support for protecting these vital

ecosystems.

<http://sanctuaries.noaa.gov/education/teachers/deep-coral-communities/>

Exhibits

Content Developed for New Sanctuary Exhibit in San Francisco

Greater Farallones National Marine Sanctuary and Randall Museum education staff met for a day-long workshop to further develop exhibit content for the new Ocean Exhibit slated to open in 2017. The exhibit will highlight the diversity of life and ecosystems found in Greater Farallones National Marine Sanctuary.

The new exhibit will bring to life an underwater world not seen by most San Francisco residents that is in their front yard. The goal of the exhibit is to increase literacy and inspire an ocean conservation ethic. The Randall Museum has over 100,000 visitors a year.

Events - Public Programs

Farallones SharktoberFest Draws Enthusiastic Crowds to Celebrate White Sharks' Return

A record 750 people descended on Farallones sanctuary headquarters in the San Francisco Presidio Saturday, October 17th for SharktoberFest 2015, an annual celebration of the return of white sharks to their fall feeding grounds. Cosponsored with the Greater Farallones Association and Shark Stewards, it featured shark experts, a Shark Science Station, a talk by a shark survivor, live sharks, films, shark-savvy quizzes, and hands-on activities like Sharkitecture 101. NOAA Fisheries, the California Academy of Sciences, Randall Museum and other brought their special assets and activities to the event. SharktoberFest, originally a program of the sanctuary's annual OceanFest, is now in its ninth independent year.



SharktoberFest provides the community with an educational and entertaining way to learn about an ecologically important ocean predator without the “hype” of popular media depictions. It responsibly presents information and provides opportunities for involvement in shark conservation, all in a fun and informative context.

Sanctuary Soirée Series

Dr. Barbara Block Presents on White Sharks, Bluefin Tuna at Sanctuary Soiree

Greater Farallones National Marine Sanctuary Education Team and Stanford Club of San Francisco joined forces to deliver an innovative, integrated evening of science and art to celebrate bluefin tuna and white sharks. Stanford University Expert Barbara Block, Ph. D., presented cutting-edge research and conservation ideas in her talk, “Sushi & Satellites: Saving Our Blue Serengeti by Tracking Giant Tunas and White Sharks.” By outfitting sharks and tunas with tracking tags, Dr. Block has collected unprecedented amounts of data about these predators and their extraordinary migrations. Dr. Block is a TED speaker and recipient of a MacArthur Foundation “Genius” Award. The evening invited hands-on participation in multiple art forms such as printing, viewing film, fine art and photography exhibits. Using the enormous allure of White Sharks and Bluefin Tunas, a large diverse group of 225 adults was invited to get involved and increase their efforts to protect special ocean places.

Sanctuary Explorations Series

This program provides the public with a deep experiential visit to the natural and maritime treasures within the Gulf of the Farallones National Marine Sanctuary. These expert-led programs increase sanctuary awareness and increase ocean literacy while cultivating a broader constituency for the sanctuary program.

Tidepool Adventure & Etiquette at Duxbury Reef

Greater Farallones National Marine Sanctuary education staff and docents provided an afternoon tidepool adventure for 24 Sanctuary Explorers. Participants explored the amazing intertidal habitat at the edge of the sea while learning how the animals and algae survive under ever-changing conditions. They also learned proper tidepool etiquette to explore and study tidepool life in a respectful, safe manner. Participants found chitons, anemones, a juvenile monkey face prickle back fish,

several species of nudibranchs, and many species of algae.

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

Explorations' Beach "Playa" Painting Workshop

In November Greater Farallones National Marine Sanctuary education staff joined artist Andres Amador to lead an exciting beach art public workshop for seven participants. The workshop began with a talk about crop circles, geometry, fractals, chaos and how these influence Andres and his work. After a demonstration of techniques, Sanctuary Exploration participants experimented with the rakes and participate in practical group exercises. After deciding on a design for the day, Sanctuary Explorers got to work making their own amazing group playa painting. Bringing art and science together during this fun experience, Sanctuary Exploration participants were able to enjoy their national marine sanctuary in a creative and unique way.

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Families Study Marine Life During Hands-on Workshops

Greater Farallones National Marine Sanctuary hosted a total of 72 participants during three 90-minute family workshops featuring crabs, plankton and squid. Participants learned crab anatomy during a crab dress-up activity, studied a diversity of live crabs in the sanctuary visitor center and searched for crabs in the field in several different nearby habitats. The family workshop series is targeted toward 4 to 8 year olds and their families, and is part of the sanctuary's public programs initiative.

Sanctuary family workshops give budding marine scientists an opportunity to share their enthusiasm and increase their ocean literacy at the sanctuary visitor center and pier classroom. These workshops have a regular following and provide new participants recruited from school programs an exciting, hands-on opportunity

to stay connected to sanctuary education programs throughout the year.

GFNMS Visitor Center

Visitor Center: The Farallones sanctuary Visitor Center educates diverse audiences of the general public along an environmental literacy continuum including developing awareness, building a knowledge base, changing behavior, and building a stewardship ethic. Drop-in visitors come from the Bay Area and all over the world. School programs include plankton netting for view under the microscope, searching for shore crabs and activities in the Visitor Center to learn about animal adaptations. Students take part in indoor as well as outdoor activities on Crissy Field Beach in the Golden Gate National Recreation Area. Visitor Center field trips served 430 students this quarter.

Farallones sanctuary Visitor Center field trip programs promote ocean literacy and provide standards-based interactive programs inside the center and in the field for kindergarten through high school. Total Visitor Center attendance for this quarter numbered 4,303.

Oceans After School: Using the endless appeal of our local marine wildlife and habitats, the Sanctuary Education Team offers 16 hours of fun, hands-on, lively marine science programs for after-school programs on topics such as sharks, salmon, seabirds, whales, squid, and plankton. These enrichment programs are dynamic, interactive, and integrated into state standards. Our marine science educators deliver the programs during an 8-week window and primarily serve low-income under-served students. This program overlaps the first and second quarters, so attendance will be reported in the Superintendent's Second Quarterly Report.

At-Your-School (AYS) Programs

The At Your School (AYS) programs served schools throughout the San Francisco Bay area, primarily during the school term. The AYS program has reached tens of thousands of Bay Area students with programs such as the Crab Cab, Seabird Shuttle and Sharkmobile. AYS is an outreach program of the Gulf of the Farallones National Marine Sanctuary designed to promote environmental literacy and increase students' awareness and knowledge of coastal and marine life. It includes standards-based interactive classroom programs for kindergarten through twelfth grade.

During the quarter, students and their teachers from several Bay Area schools participated in At Your School Programs. AYS staff travel throughout the area to bring ocean education to schools in Alameda, Contra Costa, San Mateo, Marin, Santa Clara and San Francisco counties. Programs include the Sharkmobile, Crab Cab, Seabird Shuttle, and Ocean Acidification. In total, the programs served 1,148 students, and teachers.

Fisherman in the Classroom

Fishermen, Educators Team-Teach Students

Greater Farallones National Marine Sanctuary education staff teamed up with local fishermen to deliver programs to 40 students at Washington High School in San Francisco. Through hands on activities including showing a salmon specimen from a hatchery, an industrial crab trap, and fishing lures and hooks students learn about the challenges, economics and rewards of fishing for salmon and Dungeness crab in Central California waters, and the relationship between the fisherman and sanctuary conservation policies.

Connecting our youth with their local commercial fishing community and sanctuary staff provides a unique first-hand experience for the students to hear multiple perspectives on marine protected areas and the importance of buying and eating fresh, locally caught seafood. In all, this quarter, Fisherman in the Classroom served 74 students. For a video on the program, see https://drive.google.com/a/noaa.gov/file/d/0By2_n5o-yws4MG5TeE9rRnFGbUE/view?usp=sharing_eid&ts=56b53ee0

LiMPETS – Long-term Monitoring Program & Experiential Training for Students

The Long-term Monitoring Program and Experiential Training for Students – LiMPETS – is a statewide national marine sanctuary program that trains teachers and students to get involved in real scientific investigations and become ocean stewards. Teacher workshops expand teacher knowledge and ultimately increase the number of student citizen scientists doing science along our shores. It also introduces new teachers from a diversity of communities to the national marine sanctuary program. In all this quarter, four hundred students took part in LiMPETS programs.

LiMPETS Students Present at American Geophysical Union Conference

In December LiMPETS students presented their research among 24,000 scientists at the American Geophysical Union Conference in San Francisco. High school students from the Branson School displayed a poster on the correlation between El Niño and decline in abundance of certain rocky intertidal organisms. Also using LiMPETS data, high school interns from the California Academy of Sciences explained the relationship of sex and gravidity on the prevalence of parasites in Pacific mole crabs.

LiMPETS (Long-term Monitoring Program and Experiential Training for Students) is a citizen science program for youth in California - the next generation of scientists, decision makers, and policy makers. By presenting at this scientific conference, LiMPETS students were further empowered by their experience and gained scientific communication skills in a real-world setting.

MARITIME HERITAGE

Maritime Heritage Team Identified Three New Shipwrecks in Farallones Sanctuary

During an 8-day expedition on board the R/V *Fulmar* in Greater Farallones National Marine Sanctuary, three new shipwrecks were discovered. The major discovery was the steam trawler *Ituna* lost 95 years ago. At 170 feet in length, it was the largest steam trawler fishing out of San Francisco and one of the first to utilize the Otter trawl system in the Pacific. On March 13, 1920 the 34-year old trawler *Ituna* was en route from San Francisco to Reedsport, Oregon when a gale hit and split its seams. While 12 crewmen escaped, two went down with the vessel when it sank in a matter of minutes. The shipwreck was found sitting upright on the seafloor and was easily identified by its iron clipper bow and ecliptic stern rising off the seafloor.

Two additional discoveries included a 167-foot fuel barge and a commercial fishing trawler, both lost in more recent years.

Archaeological Site Characterization Begun for Maritime Heritage Cultural Landscape Initiative

In October 2015 the science team conducted Phase II, remotely operated vehicle (ROV) and autonomous underwater vehicle (AUV) surveys on shipwrecks discovered during the Phase I expedition in September 2014. The objective was archaeological site

characterization of maritime heritage (MH) resources, including ship and aircraft wrecks in the Greater Farallones sanctuary. MH Program archaeologists were co-principal investigators, working with Farallones and Cordell Bank sanctuary staff, the West Coast Regional Office, federal and state partners, volunteers, and industry. The team collected high definition video and still images and sidescan sonar data for analysis. The mission supports the Maritime Heritage Program's Maritime Cultural Landscape Initiative through targeted research on West Coast sites, in particular, Greater Farallones National Marine Sanctuary.

NOAA's Office of National Marine Sanctuaries collaborates with federal and state agencies, and the private sector for this mission to document resources to create opportunities to locate and record submerged archaeological resources. Information on the *Ituna* wreck is at <http://sanctuaries.noaa.gov/news/oct15/ituna.html> and <http://sanctuaries.noaa.gov/shipwrecks/ituna/>

Future Events ~ 2016 Calendar

MARCH

- 2 Sanctuary Advisory Council meeting, Bodega Bay, CA
- 4 Kent Island Restoration Volunteer Project, contact Kate.bimrose@farallones.org
- 6 Sanctuary Explorations Series: Tidepooling at Half Moon Bay. Contact sara.heintzelman@noaa.gov or [\(415\) 561-6622 x306](tel:(415)561-6622)
- 10 San Francisco International Ocean Film Festival Opening Night Gala (co-sponsored by GFNMS), Officers Club, San Francisco Presidio. www.oceanfilmfest.org
- 10-13 San Francisco Int'l Ocean Film Festival, Fort Mason Center, Cowell Theater, San Francisco. www.oceanfilmfest.org
- 19 Kent Island Restoration Volunteer Project, contact Kate.bimrose@farallones.org

APRIL

- 1 Kent Island Restoration Volunteer Project, contact Kate.bimrose@farallones.org
- 2 Sea Otter Soiree, San Francisco Zoo Great Hall. Contact Sara Heintzelman at sara.heintzelman@noaa.gov, (415) 561-6622 x306
- 9 Arena Theater Ocean Film Festival, Point Arena, CA. Contact: www.brownpapertickets.com or Rachel.rhodes@farallones.org
- 10 Sanctuary "Wildflowers and Whales" Coastal Walk, Salt Point State Park. Contact Sara.heintzelman@noaa.gov, 415/ 561-6622 x306
- 16 Kent Island Restoration Volunteer Project, contact Kate.bimrose@farallones.org

MAY

- 6 & 21 Kent Island Restoration Volunteer Project, contact Kate.bimrose@farallones.org
- 17-18 Greater Farallones Marine Sanctuary Climate Change Summit, General's Residence, Presidio of San Francisco. Details TBA.

JUNE

- 3 & 18 Kent Island Restoration Volunteer Project, contact Kate.bimrose@farallones.org

JULY

- 8 & 16 Kent Island Restoration Volunteer Project, contact Kate.bimrose@farallones.org

AUGUST

- 5 & 20 Kent Island Restoration Volunteer Project, contact Kate.bimrose@farallones.org

SEPTEMBER

- 2 & 17 Kent Island Restoration Volunteer Project, contact Kate.bimrose@farallones.org

OCTOBER

- 7 & 15 Kent Island Restoration Volunteer Project, contact Kate.bimrose@farallones.org
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Farallones Marine Sanctuary Association (non-profit)
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San Francisco CA 94129
www.Farallones.org
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GET INVOLVED – AND STAY INFORMED!

Visit the Farallones Marine Sanctuary Association website for updates, details and registration: www.farallones.org, as well as FMSA's Facebook page. The Farallones sanctuary Facebook is also now up and running at [Facebook.com/the Farallones sanctuary](https://www.facebook.com/theFarallonesSanctuary).

To learn how you can become involved in the sanctuary visit: <http://Farallones.noaa.gov>; or to subscribe to Upwelling, the Farallones Marine Sanctuary Association newsletter: visit <http://www.Farallones.org>. To learn more about the Sanctuary Advisory Council visit: [http://Farallones.noaa.gov/manage/SanctuaryAdvisory Council.htm](http://Farallones.noaa.gov/manage/SanctuaryAdvisoryCouncil.htm)

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