

SUPERINTENDENT'S QUARTERLY REPORT

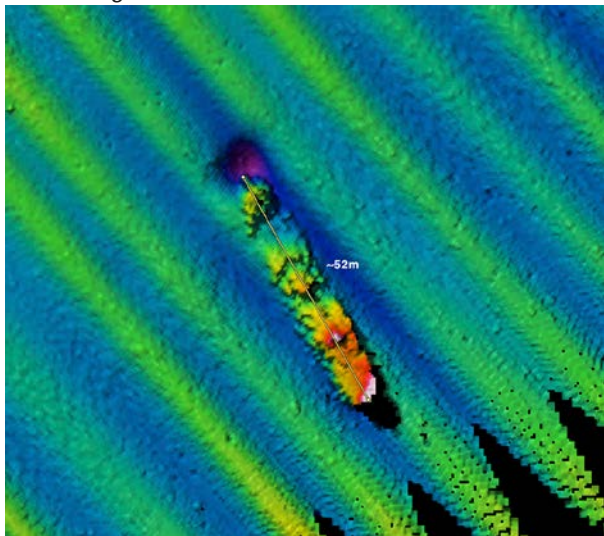
2ND QUARTER FY2016
JANUARY THROUGH MARCH, 2016

[Featured This Quarter](#)

MARITIME HERITAGE

Identity of Navy Tugboat Wreck Announced

On March 23, NOAA and the U.S. Navy announced the discovery of the wreck of the fleet tug USS *Conestoga* (AT 54) in the waters of Greater Farallones NMS. *Conestoga* went missing after departing San Francisco Bay on March 25, 1921, occasioning the largest air-sea search by the Navy until the disappearance of Amelia Earhart over the Pacific 15 years later. *Conestoga* was never found, and with its crew of 56 men was declared lost on June 30, 1921. The wreck was initially



relocated as a sonar target by a contracted Coast Survey cruise in 2009, and confirmed as a wreck on a Maritime Heritage Cruise in September 2014. Maritime Heritage scientists identified the wreck as *Conestoga*, resolving a nearly century question of what had happened to the tug and where it lay, a question that had become one of the greatest 20th century maritime mysteries. Later, coordinating with the U.S. Navy, an October 2015 return mission further documented the wreck. Detailed genealogical research followed to locate families of the 56 lost crew. The March 23 event included senior NOAA and Navy leadership and families. Extensive international media coverage resulted. More importantly, the families found a measure of closure, and have commented on the comfort of knowing their loved ones are at rest within the waters of a national marine sanctuary.

USS Conestoga, NOAA

Discoveries like that of the USS *Conestoga* connect the public to NOAA's missions of survey, exploration, science and stewardship, and to the importance of sanctuaries and what they protect. This discovery also highlighted interagency cooperation, cooperation between the Departments of the Navy and Commerce, and that service and sacrifice for this country are not forgotten.

MANAGEMENT

Farallones Volunteers Donate 12,587 Hours/Year

From advising management, to carrying out research and education programs, the Farallones sanctuary relies on volunteer support to build capacity for accomplishing sanctuary objectives. In January the Farallones sanctuary held a Biennial Volunteer Appreciation Event to celebrate the contributions of over 180 volunteers who have served the sanctuary without remuneration, greatly enhancing its efficacy in science, resource management, education, and its emergency response capabilities. In 2015 alone, volunteers contributed 12,587 hours of service, performing at highly skilled levels, monitoring the coastal zone, gathering data on at-sea surveys, staffing the Visitor Center and outreach events, and advising sanctuary management through participation in the Sanctuary Advisory Council and working groups. Twelve reached their 20th anniversary mark for Beach Watch monitoring. Volunteers' expertise, skill and energy exponentially increase the sanctuary staff's efforts to protect our ocean ecosystem.

MPA Center, Greater Farallones, Olympic Coast Participate in North American Workshop

Greater Farallones National Marine Sanctuary hosted a workshop organized by the Commission for Environmental Cooperation (CEC) on North American Pacific Marine Park Partnerships from January 19-21. The workshop kicked off a CEC project that will support collaboration across the three countries to foster resilience to climate impacts and support for marine-related livelihoods. The MPA Center leads U.S. participation on the CEC MPA project steering committee.



Photo: Gray whale, El Vizcaino BS/Mex., NOAA

The workshop included MPA managers and agency staff from the United States, Canada and Mexico, and focused on identifying common

resources, opportunities and threats for MPAs along the Pacific coast. Participants identified three primary tracks for work over the coming 18 months: 1) developing a common tool (based on past work by the U.S., Mexico and others) for a rapid vulnerability assessment for North

American MPAs that can be applied by a pilot MPA group along the Pacific coast; 2) working to identify collaborative actions to conserve shared species important to ecotourism, focusing on whales; and 3) building on the CEC's ongoing work on blue carbon to identify management actions the three countries can take to protect seagrass habitats. MPAs represented at the workshop included Greater Farallones and Olympic Coast NMS; Channel Islands National Park; San Francisco National Wildlife Refuge Complex; Washington State's Aquatic Reserves Program; El Vizcaino Biosphere Reserve and Isla de Guadalupe (Mexico); and Pacific Rim National Park and Reserve and the British Columbia provincial MPA network (Canada).

The CEC project provides an opportunity to build capacity and partnerships focused on management effectiveness, climate resilience and community engagement across North America's Pacific coast.

CONSERVATION SCIENCE, RESEARCH *Monitoring To Understand Long-Term Trends*

Guiding Young Scientists' Research Skills

Conservation Science staff judged middle and high school student's science projects at the 63rd Intel San Francisco Bay Area Science Fair. The science fair allows 7th through 12th grade students from eight Bay Area counties to present their science projects at this regional competition. This event is the third and final step towards the Intel International Science Fair. Grand Prize winners in biology, physics and engineering represent the San Francisco Bay Area at the Intel International Science Fair, to be held in Phoenix, Arizona, in May 2016.

Coastal Monitoring – Beach Watch

2015 Beach Watch Data Reveal Anomalies Correlated with El Niño, Warm Water "Blob"

In March, Conservation Science staff provided the 2015 annual summary of Beach Watch findings to our shoreline surveyors and staff. Highlights of our findings were correlated with the persistent warm water anomaly (aka warm water "blob"), which first appeared to the north of our region in late 2014 and a secondary blob, which impacted our portion of the coast in 2015. Rare species from warmer habitats were observed, such as striped dolphin, Olive Ridley sea turtles, and bottlenose dolphins as far north as southern Mendocino County. We

anticipate observing impacts from the current El Niño event off our coast later this year. Beach Watch is a sentinel site monitoring program, which uses seabirds and marine mammals as indicators of the health of the sanctuary and provides data on climate change, range expansions, and other data that improves our understanding of unusual warm water events and their long-term impacts.

Rare Gull Found on Beach Watch Survey is First Sighting of So. Hemisphere Gull in State

While conducting a Beach Watch survey at Año Nuevo, a citizen-scientist documented a species of gull never before seen in California, a Kelp Gull (*Larus dominicanus*). This gull is typically seen only in the southern hemisphere. The species identification was reconfirmed by several local seabird experts who reviewed the photos and also observed that it most likely was the same adult male gull seen at Pilarcitos Creek in Half Moon Bay, and later on the Farallon Islands. The California Bird Records Committee confirmed that this is a new record for California. This is also a new addition to the species inventory for Greater Farallones and Monterey Bay sanctuaries. GFNMS's citizen-science monitoring program, Beach Watch, continues to provide data on climate change, range expansions, enhancing partnerships and sharing data that improves our understanding of unusual warm water events and their long-term impacts.

Sanctuary Ecosystem Assessment Surveys (SEAS, ACCESS Surveys)

Using ACCESS Data to Reduce Whale Entanglement

The Applied California Current Ecosystem Studies project (ACCESS) provided data on the location of lost fishing gear that was collected as part of the annual sanctuary monitoring cruises. Over 500 crab pots have been removed to date from waters off the coast of California in a collaborative project between U.C. Davis' Sea Doc Society and the commercial crab fishing community. ACCESS, a joint project of Cordell Bank National Marine Sanctuary (CBNMS), Greater Farallones National Marine Sanctuary (GFNMS), and Point Blue Conservation Science, collects information on marine debris encountered in the sanctuaries, as well as the distribution and abundance of seabirds and marine mammals, prey availability, and oceanographic measurements. As a result of high domoic acid levels which closed the Dungeness crab season for several months, resulting in heavy economic loss, this project

represents a positive step for the crab fishing industry while reducing the risk of entanglement to marine mammals. ACCESS, a sentinel site monitoring project, provides valuable information to sanctuaries and partners on a variety of management issues, including marine debris and protection of large whales.

RESOURCE PROTECTION

Reducing Wildlife Disturbance to Whales and Other Marine Mammals

Sanctuary Helps Prevent "Pup-Napping" Newborn Seals From Bay Area Beaches

Each spring, healthy harbor seal pups become needlessly orphaned by well-intentioned beachgoers who mistake them for abandoned. Harbor seal mothers sometimes leave pups unattended on shore to forage at sea, and then return to nurse them. The presence of a person or dog near her pup could prevent a wary mother from reuniting with her young one. Harbor seal pups are small - only 20 lbs. on average; and lack natural escape instincts. Seals are federally protected under the Marine Mammal Protection Act, and to interfere with one could result in legal penalties.



Photo: Harbor seal mother and pup. - Cr: WA F&WS

Consequently, the sanctuary reminds beachgoers against interacting with, or even approaching seal pups. It also provides guidance on proper "share the shore" seal etiquette and contact information for local NOAA-authorized rescue agencies who can respond to a seal in distress. The sanctuary protects wildlife through research and public outreach. With the Bay Area's population of nearly 8 million people, it's well situated to educate them in proper wildlife viewing practices, and encourage stewardship and a healthy ocean ethic.

Sanctuary: "Boaters Be Aware" of Whales in Bays

The Farallones sanctuary issued its annual press release to alert recreational boaters and other vessel operators about the annual springtime gray whale "detours" into San Francisco Bay and Tomales Bay during their northward migration to Arctic feeding grounds. Grays are the most coastal of the "great whale" species that ply these waters, and sometimes surprise boaters - and even surfers - by surfacing in very nearshore outer coast and estuarine waters. Boaters were apprised of the whales' protected status, their challenges to survival, appropriate actions to take if a whale is encountered, and the sanctuary's role in protecting them. Staff gave interviews to the San Francisco Chronicle and to Bay Cities News Service, and stories appeared in the San Francisco Examiner and other media outlets.

These annual alerts serve to remind people that they share these waters with some remarkable and fascinating species, but that there are risks inherent to human-wildlife interactions. Collisions between small boats and whales can significantly endanger both - and with larger vessels, can injure or even kill whales.

Minimizing Risk from Oil Spills and Vessels

Vessel Grounding near Bodega, Sonoma County

A 32-foot fiberglass Bertram recreational vessel ran out of gas and beached within a small cove between Bodega Rock and the outer breakwater of Bodega Harbor on February 8, 2016. The Coast Guard airlifted two people to safety before the vessel was washed onto the beach and suffered extensive damage to the hull. GFMNS staff was able to work with California State Parks personnel to clean up a significant amount of debris. Because the owner was uninsured, NOAA took possession of the vessel and contracted with Parker Diving to remove the vessel and debris using a small helicopter. The vessel was comprised of chemical-laden wood and fiberglass and the removal of the boat prevented it from further breaking up and causing marine debris and damage to sanctuary resources.



EDUCATION

Increasing Awareness of the Sanctuary

Events - Public Programs

San Francisco International Ocean Film Festival Draws Over Forty-two Hundred

Greater Farallones National Marine Sanctuary, a founding partner of the San Francisco International Ocean Film Festival, co-sponsored and helped shape the course and content of the March 10-13 festival, it's 13th Annual event. Farallones communications staff served on the screening committee and represented the sanctuary at the event. The festival drew 4,250 people, and included panel discussions on topics such as sustainable seafood. Forty-eight films from 12 countries were screened in separate programs, some with dedicated themes: sharks, surfing, marine life issues. Other sessions simply celebrated the majesty, beauty and power of the sea. The Cordell Bank sanctuary sponsored a student film competition for middle and high schoolers. Approximately 800 students attended special, no-cost education programs, an ongoing festival feature.

Film festivals are excellent media for communicating, verbally and non-verbally, messages about the ocean and its issues. They also bring together filmmakers and other people who are interested in diverse aspects of the ocean. They depict issues, stimulate discussions and debates, and often present solutions that can serve as models elsewhere.

Sanctuary Explorations Series

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.

Tropical Dolphins Surprise Whale Watchers

In January, Greater Farallones National Marine Sanctuary education staff partnered with the Oceanic Society to provide a Sanctuary Exploration to watch the gray whale migration. While no gray whales were spotted, forty-one participants encountered a herd of 200+ "tropical" common dolphins that were happily feeding and playing near the boat. Common dolphins are rare here, except during El Niño events. They have been seen with

increasing frequency in these northerly waters, even before the El Niño “officially” set in. Many seabirds were spotted, including Brown Pelicans and Surf Scoters along with playful sea lions “porpoising” among the dolphins.

Participants not only learned about the natural history of gray whales and the conservation efforts to protect this amazing species, but they also learned about good wildlife watching practices and etiquette.

SuperSeal Saturday, Antidote to Superbowl Sunday, Awes Explorers

Greater Farallones educators partnered with a California State Parks interpretive guide in February to provide a guided tour through the Natural Preserve at Año Nuevo State Park to observe one of the largest mainland breeding colonies of northern elephant seals in the world! Every year up to 10,000 elephant seals visit to breed, give birth, and molt in this amazing park. Thirty-eight Sanctuary Explorations participants watched, enthralled, as bulls battled for prime beach real estate and the right to mate, while females were birthing and suckling their newborn pups. Participants learned about the fascinating natural history, behavior and ecology of northern elephant seals, while observing them first hand during this fun and dynamic afternoon walk.

Tidepool Adventure & Etiquette at Pillar Point, Mavericks Reef

In March, Greater Farallones National Marine Sanctuary education staff and docents provided an afternoon tidepool adventure for Sanctuary Explorations participants at Mavericks Reef, near Pillar Point Harbor, Half Moon Bay. Twenty-four 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 view tidepool life in a respectful, safe manner. Participants found chitons (including gumboot chitons), anemones, several species of nudibranchs, leather stars, ochre stars, and many species of algae.

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 3,616 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 4,072.

Weekend Family Workshops

Weekend family workshops are held twice a month at GFNMS facilities at Crissy Field, Presidio. These programs foster connections within the sanctuary community and provide ocean education to children of all ages.

Learning about Crabs, Salmon in Family Workshops

This February, the Farallones Marine Sanctuary Association held two weekend family workshops. On February 20th, the Salmon Dissection Workshop hosted 36 attendees. Participants learned about salmon anatomy through a naturalist-led chinook salmon dissection and created their own fish print artwork. On February 28th, the Fish for Crabs workshop hosted 42 attendees. Participants fished for crab specimens off the GFNMS pier, learned about crab anatomy through an interactive dress up, and held and examined different species of crabs.



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 Greater

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. Typical programs include the students and teachers in Sharkmobile, Crab Cab, Seabird Shuttle, and Ocean Acidification. In total, the programs served 1,084 students and teachers this quarter.

Fisherman in the Classroom

The Fisherman in the Classroom (FIC) program brings together sanctuary educators and working fishermen to classrooms, to team-teach students at middle and high school levels. Students learn the challenges, economics and rewards of salmon and Dungeness crab fishing in sanctuary and adjacent waters, and the relationship between the fisherman and sanctuary conservation policies. Sustainable fishing and the importance of healthy watersheds were also discussed. The fishing industry and community is an important partner for Greater Farallones National Marine Sanctuary and National Marine Fisheries Service. Working with schools and fisherman continues to help develop connections between youth, marine sanctuaries and the fishing community. The teaching team typically employs fishing-related props like an industrial crab trap, fishing lures and hooks, and delivers a presentation on commercial fishing in Central California. In many cases they are able to perform dissections on a hatchery Chinook salmon.

Fisherman in the Classroom is partially funded this year with a grant from Aquarium of The Bay to serve elementary and middle school students who are enrolled in the California Department of Fish and Game program "Trout in The Classroom". This program was featured in the ONMS Earth is Blue video: [FINE CUT Fisherman in the Classroom.mp4](#)

A total of 135 students took part in FIC programs this past quarter.

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. This quarter, 475 students took part in LiMPETS programs.

Sixteen teachers took part in a LiMPETS Teachers Workshop on sandy beach monitoring this quarter.

Science Club Praised for Coastal Monitoring

The LiMPETS' Science Education and Technology Specialist spoke to Branson High School at a school-wide assembly about the important work their Sustainable Seas Club has done for the sanctuary. For over 10 years, the student-run marine science club has monitored Duxbury Reef with the Greater Farallones LiMPETS program. Students have also presented at numerous conferences, fairs, and online forums, increasing ocean awareness as well as youth involvement in marine science. The sanctuary recognized and celebrated the Sustainable Seas Club's contribution to the LiMPETS dataset and their positive impact to the sanctuary.

2016 Events Calendar

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

25 "Get Into Your Sanctuary Day" with three great Events June 25 and 26:

Sanctuary Explorations, GIYS/ Seabirds of Alcatraz: Join Sanctuary staff and a Park Service Alcatraz Seabird docent for a thought-provoking walk through the nesting seabirds to learn about their ecology and current population status. Space is limited; registration required: Register [here](#).

Public "Ridealong" Beach Survey at Rodeo Beach, GIYS: Be a citizen scientist for a day with our *Beach Watch* team in the Marin Headlands, GGNRA, and take part in a special in-depth beach survey. Sanctuary biologists help you explore what marine wildlife is "out and about" and investigate what the last high tide has brought onto shore! Space is limited; registration is required. Contact: TBA.

- 26 *Family Workshop in the Presidio, GIYS:* Catch a live crab and get to know it! Morning and afternoon programs to learn about crab anatomy and examine different crab species. "Get crabby" at the GFNMS Pier Classroom, Crissy Field, GGNRA. Space is limited, registration required: Contact Courtney.buel@noaa.gov.

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
- 25 Joint Advisory Council Meeting, Greater Farallones and Cordell Bank. Red Barn Classroom, Pt. Reyes Station, Pt. Reyes National Seashore

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

NOTE: Each month the Visitor Center offers Weekend Family Workshops with themes such as squid, salmon and plankton. Contact Justin.Holl@noaa.gov for various weekend's themes and for registration.

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GET INVOLVED – AND STAY INFORMED!

Visit the Greater Farallones 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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