# GULF OF THE FARALLONES NATIONAL MARINE SANCTUARY

4th Quarter FY2012
July through September, 2012
SUPERINTENDENT'S REPORT



#### Marine Sanctuary Receives Public Input into Protection of Waters off Golden Gate

On August 7<sup>th</sup> the Federal Register advertised a Notice of Intent by the National Oceanic and Atmospheric Administration to conduct public scoping meetings for the Office of National Marine Sanctuaries to expand the Monterey Bay National Marine Sanctuary by approximately 100 square statute miles to include waters off southern Marin, San Francisco and San Mateo counties, termed the Exclusion Zone or "Doughnut Hole." Gulf of the Farallones National Marine Sanctuary, which administers the adjacent northern waters of the Monterey Bay sanctuary, hosted scoping meetings in Pacifica, Santa Cruz and San Francisco. On August 23<sup>rd</sup> the GFNMS Sanctuary Advisory Council passed a resolution in support of the boundary adjustment. News coverage was extensive, running in over 52 media outlets nationwide, including National Public Radio, CBS, KGO, ABC and NBC news. Public comment, mostly favorable, closed on October 10, 2012. The presence of endangered whales as well as other protected marine life in this area drew widespread attention to the importance of these currently unprotected waters. Informing the public about proposed sanctuary actions before a draft plan is developed helps ensure that it addresses public opinions and concerns, and reflects the community's and the sanctuary's needs and objectives.



Endangered humpback in Exclusion Zone/©Carol Keiper 2012



## *MANAGEMENT*

## America's Cup Kick-off Week Cruise, Events, Highlight Marine Sanctuary Expansion

America's Cup races kicked off August 21-26 and sanctuaries were a focus, as part of the America's Cup Healthy Ocean Project. This included featuring local sanctuaries in an exhibit in the AC "Village" – tents and exhibits overlooking the regatta's course. The AC sponsored a boat trip to the Golden Gate Bridge to highlight the Monterey Bay National Marine Sanctuary boundary adjustment proposal to include waters around the Golden Gate. Golden Gate Cetacean Research scientists worked with college students aboard the vessel to document harbor porpoises' use of the area. The expansion was a highlight throughout the AC "Dock Out" program. Later the San Francisco International Ocean Film Festival presented a mini-festival featuring "Sanctuary in the Sea." Major events such as the America's Cup are high-profile venues for raising awareness among a broad demographic about marine sanctuaries, and their role in protecting the cultural and biological resources within them.

## RESEARCH

## Monitoring To Understand Long-Term Trends

#### Farallones Fur Seals' Resurgence Breaks Century-long Record

Biologists from PRBO Conservation Science, the year-round scientific observers at the Farallon Islands, reported in August that northern fur seals (*Callorhinus ursinus*) counted from the lighthouse peaked on August 15<sup>th</sup>, with 213 pups and 375 total counted. A trip to West End on August 28th counted 521 total Fur Seals, including 201 pups. This is the highest single day total count for the Farallones in the last century.

#### Scientists Publish on Status and Trends of Farallones Intertidal Life

Science staff co-authored a paper on the status and trends of the rocky intertidal communities at the Farallon Islands to be presented at the 8<sup>th</sup> Annual California Islands Symposium in Ventura, October 23 through 26, 2012. Co-authors included Scott Kimura of Tenera Environmental; Natalie Cosentino-Manning from the NOAA Restoration Center, Russ Bradley and Pete Warzybok from PRBO Conservation Science. The paper reviews species inventory and the long-term (20-year) decline of upright algal foliage, while species diversity remains stable. The authors speculate that the decline may be due to several variables, including an increase of trampling from sea lions in the intertidal. The sanctuary's 20-year data set on the health of the rocky intertidal community at the Farallon Islands serves as a "control" and an example "pristine" habitat in comparison to mainland rocky intertidal sites. Long-term monitoring data are used to demonstrate baseline before an anthropogenic impact and trend data can be used to determine the length of recovery post-impact and restoration.

#### SEAS - 'ACCESS' CRUISES

#### **ACCESS Research Cruise Logs Abundant Whale Sightings**

In July science staff completed the Applied California Current Ecosystem Studies (ACCESS) cruise aboard the *R/V Fulmar*. The ACCESS partnership is working with Cordell and Farallones NMS resource protection staff

to develop a rapid assessment of baleen whales at risk from ship strikes. A map of uncorrected (minimum) count data was developed two days after the cruise as a potential product to accompany a Local Notice to Mariners and for the design and use of Dynamic Management Areas. In six days of observations over 125 baleen whales were documented; many east of the Farallon Islands, over Cordell Bank, in or near shipping lanes, and over the shelf break. ACCESS is a collaborative ecosystem monitoring partnership formed by PRBO Conservation Science, CBNMS and GFNMS. Integrated data collection assesses the health of the marine ecosystem and provides information to resource managers, including the abundance and distribution of baleen whales in relation to shipping lanes to reduce potential vessel strikes to whales. To view daily updates of the ACCESS cruise visit the ACCESS Partnership on Facebook or <a href="http://www.accessoceans.org/">http://www.accessoceans.org/</a>.

## **CONSERVATION**

## Minimizing Risk from Oil Spills and Vessel Impacts

#### Farallones Sanctuary Releases Draft Vessel Management Plan

The Tomales Bay Draft Vessel Management Plan was released, a public hearing was held, and the comment period has now closed. The plan is the result of a long-term multi-agency effort to streamline and coordinate vessel management activities for the benefit of the public. The plan aims to improve water quality, protect wildlife and habitat, protect public health and ensure recreational opportunities in Tomales Bay. The plan does not establish any new legal authorities, and the intended outcome is to have a coordinated, collaborative approach to vessel management that provides guidance to the agencies and the public. A total of 60 comments were received both verbal and in writing, and over 30 people attended the hearing. The plan also implements the mandates and regulations of both GFNMS and California State Lands Commission. It represents extensive input from the boating community and other local stakeholders, and addresses numerous issues including vessel sewage discharge, impacts from moorings, derelict or deserted vessels, introduction of invasive species, disturbance of wildlife, and discharges of oil, fuel, and vessel maintenance products.

#### F/V Sea Biscuit Grounding and Oil Spill

The 35 ft. fishing vessel *Sea Biscuit* grounded on the rocky shore of Bodega Bay in Gulf of the Farallones National Marine Sanctuary (GFNMS) next to a heavily used, popular recreational beach. It had approximately 150 gallons of diesel on board, which spilled into the sanctuary. Due to the failure of the responsible party to remove the vessel, GFNMS had to act immediately to minimize the damage to sensitive environments within the GFNMS. GFNMS successfully coordinated efforts between sanctuary headquarters and the NOAA contracts office in Boulder, CO to expedite clean-up efforts. Although the vessel did break up, removal of shipboard chemicals, engine, batteries, propeller, fuel tanks and large debris was successful. Additionally, GFNMS coordinated with a local non-profit to conduct a beach clean-up of smaller debris before increased visitor use over the weekend. *F/V Sea Biscuit* was comprised of chemical-laden wood and plastic and contained commercial fishing gear and shipboard chemicals. Removal of these hazards was critical to protecting federal resources under the trusteeship of NOAA.

#### **Grounding of 22 ft Unnamed Vessel on Stinson Beach**

On September 9, 2012, a 22 ft., unnamed dual outboard fishing vessel with an open cabin capsized about two miles off the coast in about 120 feet of water near Duxbury Reef in Marin County in the Gulf of the Farallones National Marine Sanctuary (GFNMS). The U.S. Coast Guard (USCG) reported that no fuel sheen was seen and the only fuel onboard was a self-contained gas can. The USCG was able to upright the vessel and stow it above

the mean high water mark on Stinson Beach. The responsible party, working with the Stinson Beach Fire Department, successfully removed the vessel the next day. GFNMS visited the scene immediately after the removal and did not find any significant marine debris or damage to the sanctuary's natural resources. The vessel is comprised of plastic and contained fishing gear and other materials onboard. The removal of the vessel prevented it from breaking up and producing marine debris and damage to Sanctuary resources.

#### Grounding of 18 ft Unnamed Vessel Near Pigeon Point Lighthouse

On September 30 an 18 ft., unnamed recreational vessel capsized and then grounded onshore of the Monterey Bay National Marine Sanctuary (MBNMS) north of the Pigeon Point Lighthouse in San Mateo County. The U.S. Coast Guard (USCG) conducted a search and rescue operation for two missing persons for several days. Unfortunately, one person was confirmed dead and the other was lost at sea. On October 3 the USCG incident management team determined that fuel was still aboard the vessel and removed it. Due to the failure of the responsible party to salvage the vessel, the U.S. Government had to act immediately to minimize the damage to sensitive environments within the MBNMS. GFNMS successfully coordinated efforts between the U.S. Coast Guard, San Mateo County Sheriff's Department, and NOAA Office of Law Enforcement to remove the vessel before damage to the sanctuary's natural resources occurred. The vessel is comprised of plastic and contained fishing gear and other materials onboard. As with the other groundings, the removal of the vessel prevented this vessel from breaking up and producing marine debris and damage to Sanctuary resources.

#### IMPACTS OF CLIMATE CHANGE

#### Farallones Sanctuary Hosts Symposium on Priority Climate Change Indicators

Gulf of the Farallones (GFNMS) staff held an Ocean Climate Indicators Workshop at the Presidio of San Francisco on August 27<sup>th</sup>. Thirty-seven regional scientists and managers attended this invitation-only workshop, which was a vital step in a two-year project to develop physical and biological climate change indicators for the North-central California coastal region. Before the workshop, participants (and 16 additional experts who could not attend) completed a survey to help rank candidate climate change indicators. Survey results formed the foundation for breakout group discussions at the workshop, during which each group developed a set of priority indicators for further evaluation. The final indicators will be incorporated into a collaborative climate change monitoring inventory and plan for GFNMS. This effort will help the sanctuary and its partners obtain and allocate funds to support future ocean indicator monitoring. For more information, visit the project webpage at: <a href="http://farallones.noaa.gov/manage/climate/indicators.html">http://farallones.noaa.gov/manage/climate/indicators.html</a>. This first-of-its-kind project within the National Marine Sanctuary System will provide the North-central California coastal region with a set of linked physical and biological climate change indicators.

#### REDUCING WILDLIFE DISTURBANCE

## **Protecting Breeding Seabird Colonies**

The Seabird Protection Network (SPN) is a program of the Gulf of the Farallones National Marine Sanctuary that reaches out to various groups who operate and recreate in areas near sensitive seabird habitats. It works to reduce human disturbance to seabird breeding colonies along the central California coast, and fosters an increase in local knowledge of sanctuary life and increased compliance with sanctuary over-flight and vessel approach restrictions that protect wildlife.

## Seabird Protection Network Produces Public Service Announcements to Reach Target Audiences

This summer the Seabird Protection Network released two public service announcements (PSAs). The first was designed to reach pilots, informing them how they can share the skies with the original aviators, avoid bird strike, and stay within the law while flying over California's National Marine Sanctuaries. The boater and kayaker public service announcement gives water recreationists and other boaters the chance to learn about California's amazing seabirds and learn how to help marine wildlife while enjoying the beautiful coast! Each audio/video file contains beautiful images from local photographers. These public service announcements inform coastal users, including pilots, boaters and kayakers of the impact they can have on sensitive seabird breeding colonies along the coast. These videos raise awareness, which is the first step along the path to changing behaviors and eventually promoting stewardship of our sensitive marine wildlife. See the public service announcements at Boaters & Kayakers and Pilots.

## Seabird Protection Network Hosts 6<sup>th</sup> Annual Technical Advisory Committee Meeting

On Thursday, September 20, the Seabird Protection Network hosted a Technical Advisory Committee (TAC) meeting. The focus of the network is to reduce human disturbances to seabird colonies throughout central California. Participants were presented with a summary of the year's accomplishments and challenges. The committee evaluated proposals to reprogram funds from scheduled Seabird Protection Network projects to new network projects that address developing concerns. Additionally, the committee discussed their involvement with the 5-year review of the Central Coast Marine Protected Areas. The TAC is comprised of federal, state and local agencies, representing all program areas, including expertise from scientists, natural resource managers, enforcement officers and ocean educators. The network relies on TAC members to: 1) prioritize recommendations for management, enforcement and outreach; and 2) set a timeline for recommended actions. The TAC also reviews work products produced by the network.

#### Targeting Pilots and "Coasties" to be Seabird-Safe

Seabird Protection Network staff spoke to pilots at the West Valley Flying Club in Palo Alto on August 8. Staff told pilots about the local sanctuaries, seabirds and history of seabird breeding populations. Pilots were given information on sanctuary overflight prohibition areas, and maps of where to avoid sensitive seabird colonies when flying along the coast. In addition, the network sounded an "S.O.S." for seabirds to Coast Guard Auxiliary members to "save" seabirds from aerial disturbance at a well-attended meeting in San Rafael. The Auxiliary presents a variety of boating courses including safety and seamanship, navigation and search and rescue. With increased awareness, these boating instructors will teach and exercise greater stewardship, in the sanctuaries. In addition, the Flotilla supports US Coast Guard patrol, escort and disaster response activities.

## Protecting Whales, Other Marine Mammals

## Whale Shipstrike Prevention Effort Gains USCG Help in Issuing Notice to All Mariners

Farallones sanctuary staff gave several interviews regarding progress in the prevention of lethal shipstrike on endangered whales. This summer the US Coast Guard issued and broadcast a Notice to All Mariners requesting that ships slow down if in the vicinity of whales. ABC affiliate KGO TV7, the San Francisco Chronicle, and KCBS Radio, Associated Press all conducted interviews with sanctuary staff, as well as a representative of the shipping industry. The story has been picked up nationwide.

 $\frac{http://www.sfgate.com/science/article/Ships-warned-to-look-out-for-whales-3732412.php}{http://abclocal.go.com/kgo/video?id=8748232}$ 

http://www.huffingtonpost.com/2012/07/25/san-francisco-bay-slow-whales\_n\_1703342.html

## **Farallones Staff Participates in Whale Disentanglement Workshop**

On August 29<sup>th</sup> in Bodega Bay, sanctuary staff took part in NOAA Fisheries Marine Mammal Health and Stranding Response Program's Large Whale Disentanglement Network Workshop conducted by rescue specialist Ed Lyman. The workshop included an update on entanglement reports in California waters, which have shown a marked increase over the annual average. The training included situation assessment, techniques and logistics, and impacts to endangered whale species recovery. Socioeconomic impacts on fisheries such as gear loss, loss of catch, increased time at sea and potentially more regulations were also discussed. Media protocols reviewed included the role of photos/videos as part of the official record of disentanglement activities, and subsequent restrictions and requirements on use of such imagery, and referral of media inquiries. This year 2012 saw a sizeable increase in reports of entangled whales off California. Increasing public awareness of this threat, and providing them with information on reporting incidents to properly permitted authorities is essential for swift and appropriate response, for the sake of the whales and the humans.

## **EDUCATION & OUTREACH**

## Increasing Awareness of the Sanctuary

#### San Francisco International Ocean Film Festival Launches New Season

Communications staff and the sanctuary superintendent were involved in a strategy session hosted by the San Francisco International Ocean Film Festival (SFIOFF). As part of the Screening Committee, staff were briefed on and reviewed the board's mission, vision, and goals for SFIOFF's future as well as plans for the celebration of its 10th Anniversary in March 2013. It uses primarily independent films as media to increase public awareness of the environmental, social and cultural importance of marine ecosystems, and to foster a spirit of ocean stewardship. SFIOFF is now the premier venue in North America for ocean-related films. The festival draws thousands of film viewers each year, and this festival is an excellent way in which to celebrate the sea with inspirational films that increase our appreciation of the oceans that surround us.

#### SF Ocean Film Festival Special Event Highlights Problems in Oceans, Solutions on Land

This summer sanctuary staff took part in presenting a special program for the San Francisco International Ocean Film Festival, including taking part in a panel discussion on the points touched on in the film "Ocean Frontiers." The film recounts how people around the world have begun using new approaches to ocean management. Unlikely but successful alliances that benefit the ocean and all parties have brought together scientists, businesses, farmers, fishermen, governments and citizens who care for the sea – and want to make a living. Communication staff provided logistical support for the event. Keeping the public informed of global ocean issues – and showing them models that exist for solutions – can be instrumental in prompting participation in resolving problems within their own communities.

## Celebrating California's Great Whales – a Thank You Ocean Message

Farallones communication staff recorded a Thank You Ocean podcast celebrating the unusual abundance and high visibility of whale sightings along the California coast this past season. The podcast included practical recommendations on responsible whale watching practices, and advised how the general public can help whales and other marine life to survive and thrive in the face of a changing ocean climate. Raising public awareness of California's remarkable marine life – especially as exemplified by charismatic megafauna such as whales – can help inspire an ocean stewardship ethic that can be used to support more effective conservation of both wildlife and wild habitats.

#### 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. This past quarter the visitor center served nearly 4,500 individuals for all its programs, both scheduled and drop-in visitors.

Crissy Field Visitor Center Special Programs include – Plankton and Pastries: Visitor Center staff offer this hands-on public program to promote ocean literacy where participants net their own plankton for study in the tide station pier house. Participants collect their own samples and create their own slides of phytoplankton and zooplankton for a hands-on microscopic exploration of the weird and wonderful world of plankton. In *Planktronica!* participants enjoy an evening exploring the prolific world of plankton amid a relaxed ambience at the stunning sanctuary Pier Classroom perched above San Francisco Bay. They learned about diatoms, dinoflagellates and copepods, and discovered bizarre larvae from barnacles, crabs, and mussels. Attendees learned to use microscopes and do plankton print-making.

The popular weekend program Creature Feature is presented to people of all ages. Fisherman in the Classroom reaches middle-school students and teachers at the visitor center during the school term. This program highlights the maritime heritage of the San Francisco and Pillar Point fishing communities. Local fishing folk participated in the development of curriculum, and deliver the programs.

Five hundred thirty two people took part in Visitor Center Field Trips, 31 students from the Chinese American International School and Beijing Middle School took part in a student exchange science program. The Seven Teepees Youth Program has worked with the sanctuary for several years, to positively impact the lives of innercity youth. A cornerstone of our work is connection to the natural environment. This quarter 12 students participated.

#### Marine Science Camp, Then Back into the School Year Swim!

In July, in partnership with the Randall Museum, sanctuary education staff delivered a two-week Marine Explorers Camp. Thirty-three campers explored the sanctuary, from the shore and on the water. In late August the sanctuary visitor center held its final summer camp for Redwood City-based Marine Science Institute (MSI). Over the summer over 400 MSI students visited The Farallones Visitor Center as part of this program, increasing their knowledge of the sanctuary, and their general ocean literacy. This is the fourth year MSI has partnered with the sanctuary for summer Marine Science Camps, geared to the learning levels of elementary and middle school students.

#### **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 8-12 week

window. The curriculum is best-suited for grades 3rd through 5th. This quarter it served 11 students for 14 hours of programs.

## Teacher Professional Development Workshops

#### Farallones Sanctuary, Exploratorium Partner to Teach Educators on Ocean Acidification

This quarter, Gulf of the Farallones education staff offered a half-day Teacher Workshop on Ocean Acidification in partnership with the Exploratorium, to a group of 25 teachers from over the San Francisco Bay Area. The program included hands-on experiments to demonstrate the impacts that changing pH levels have on various

#### Our Changing Ocean and Estuaries: A Professional Development Series for Educators

This series, held in July at the Romberg Tiburon Center and at Tomales Bay, connected teachers with local climate and marine/estuarine science, broadening understanding of climate change impacts along our coast, and helped bring these issues to life in classrooms. Multiple stresses compounded by climate change are changing our coast and ocean now. Organisms' reactions to ocean acidification and adaptations were discussed. Classroom kits and activities were provided. Workshops featured local marine/estuarine scientists from San Francisco State University and University of California Davis, and others. This series was co-sponsored by: Farallones Marine Sanctuary Association, Romberg Tiburon Center, NOAA's San Francisco Bay National Estuarine Research Reserve, and Cordell Bank and Gulf of the Farallones National Marine Sanctuaries. The National Marine Sanctuary Foundation's Ernest F. Hollings Ocean Awareness Trust provided funding.

## At-Your-School (AYS) Programs

#### AYS Sharkmobile, Seabird Shuttle and Crab Cab Hit the Road

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 grades.

During the quarter, students and their teachers from several Bay Area schools participated in At Your School Programs (AYS). 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 which in 23 programs involved 721 students and 15 teachers; Crab Cab serving 912 students and 43 teachers in 33 programs; there were 13 Seabird Shuttle programs for 349 students and 13 teachers.

## 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. We also introduce new teachers from a diversity of communities to the national marine sanctuary program.

## LiMPETS Regional Programs

#### LiMPETS Network Involves Over 4,000 Student Citizen Scientists in California

Once a relatively small regional program, LiMPETS (Long-term Monitoring Program and Experiential Training for Students) has grown. With over 4,000 students and volunteers collecting data and connecting with their local national marine sanctuary beaches and rocky intertidal areas, we are helping to establish a community of educated and informed youth excited and inspired about ocean science. Overall, some students we work with report that they expect the monitoring experience to be "dirty, uncomfortable, and boring." But afterwards, almost every student reports a changed, more positive attitude about the process of doing science. Students say the experience was "awesome, amazing, hella fun." They want to come back and do it again - an unquestionably good outcome in itself. LiMPETS is a statewide national marine sanctuary program that trains teachers and students to get involved in real scientific investigations. We also introduce students from a diversity of communities to the National Marine Sanctuary Program.

#### From Redding to Monterey, LiMPETS Attracts New Teachers

Staff from the Farallones Marine Sanctuary Association and the Pacific Grove Museum of Natural History, both key LiMPETS partners, trained teachers from near and far, from coastside to inland, at a summer *Introduction to LiMPETS Workshop*. The workshop was held on August 1-2 at the Seymour Marine Discovery Center in Santa Cruz, California. Eighteen participants attended.

#### LiMPETS Staff Evaluate Student Skills at Public Science Research Conference

In August the LiMPETS program presented a poster at the first Public Participation in Scientific Research (PPSR) conference in Portland, Oregon. The poster presented new results from the Farallones Marine Sanctuary Association's evaluation on the impact LiMPETS has on the scientific skills, knowledge, attitudes and career goals of our young participants. More than 300 science researchers, project leaders, educators, technology specialists, evaluators, and others – representing many disciplines including astronomy, molecular biology, human and environmental health, and ecology – attended the conference. This landmark event launched an ongoing conversation to share insights across projects and fields of study, and to advance the field of Public Participation in Scientific Research.

## Media Outreach Highlights

Quarterly Media/News Report will be posted to website at a later date.

FARALLONES SANCTUARY FUTURE EVENTS CALENDAR

#### OCTOBER 2012

9/22-11/3	Beach Watch Trainings, GFNMS
10/1-10/12	Deep Sea Corals Research Cruise
10/1-12	North American Association for Environmental Education

SharktoberFest at GFNMS
FMSA Whale Watch Fundraiser
Chilean Study Tour Delegation visit to GFNMS
Sunset Sail on San Francisco Bay

#### NOVEMBER 2012

11/3	Beach Watch Training concludes; graduation
11/3	Leatherback Sea Turtle "Soiree" with Scott Benson, Randall Museum, San Francisco
11/3	Climate Change Guaranteed Workshop, Romberg Tiburon Center
11/11	3371 1 337 4 1 1 4 1

11/11 Whale Watch in the sanctuary

#### **DECEMBER 2012**

12/1 LiMPETS Refresher / Enrichment12/8 Tidepooling at Pillar Point Harbor

#### 2013

#### **MARCH**

3/21/2 Wildlife Disturbance Symposium (invitational)

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#### GET INVOLVED - AND STAY INFORMED!

Sign up for the GFNMS listserv to receive email notices about upcoming sanctuary events and public meetings. To learn how to get involved in the sanctuary visit: <a href="http://farallones.noaa.gov">http://farallones.noaa.gov</a>.

To learn more about the Sanctuary Advisory Council visit: <a href="http://farallones.noaa.gov/manage/Sanctuary">http://farallones.noaa.gov/manage/Sanctuary</a> Advisory Council.html

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