



GREATER FARALLONES NATIONAL MARINE SANCTUARY
ADVISORY COUNCIL MEETING



Wednesday November 14, 2018

9:00AM – 4:15PM

San Francisco Zoo

1 Zoo Road, San Francisco CA

DRAFT MEETING HIGHLIGHTS

Note: The following notes are an account of discussions at the Sanctuary Advisory Council meeting and do not necessarily reflect the opinion or position of the Greater Farallones National Marine Sanctuary or the National Oceanic and Atmospheric Administration.

Sanctuary Advisory Council Members Present: Dominique Richard, George Clyde, Cea Higgins, Nancy Trissel, Bruce Bowser, Richard Charter, Francesca Koe, Bibit Traut, Barbara Emley, John Berge, Abby Mohan, John Largier, Sandra Chu, Chris Potter, Darrina Willis, Jennifer Boyce, Paul Michel

Quorum – 10 voting members

Copies to:

Bill Douros, ONMS West Coast Regional Office

Call to Order 9:07am

Welcome LT Darrina Willis from US Coast Guard.

Approve August Meeting Minutes

First – Bruce Bowser

Second – Barbara Emley

Verbal vote – Unanimous

John Largier has edits to minutes, will email.

Minutes approved

GFNMS Superintendent's Report

Maria Brown, GFNMS Superintendent

Permits

A research permit was issued to Dr. Richard Starr of Moss Landing Marine Labs to deploy a video lander, which is an underwater camera system designed to assess the relative abundance of fishes and invertebrates in marine areas without conducting extractive sampling. Data collected from each survey will include geographic coordinates, starting and ending times, fish counts, and species observed. This project is being conducted in collaboration with the Nature Conservancy and NOAA National Marine Fisheries Service. This amendment is being issued to allow additional deployment locations with CBNMS.

An education permit was issued to Ms. Jane Reifert and Mr. Greg Barron (IA Worldwide Inc. (aka Incredible Adventures)) as an amendment to an existing permit to attract white sharks for

the purposes of conducting educational tours. This amendment extended the permit expiration date through November 30, 2021 and added Christopher Freeman and Christopher Throm as additional authorized persons on the permit. The amendment denied the permittees' request to use scent, bait, and sound attractants and to tow decoys behind moving vessels.

A research permit was issued to Dr. Cynthia Cohen of SF State University to disturb the seabed to place bolts and instruments at 8 field sites in order to evaluate water temperature and salinity differences at these sites to determine whether a relationship between these parameters and success of *Leptasterias* populations exists and to assess effects of drastic environmental change (storm events, heat waves, and others) on the symbiotic relationship between *Anthopleura* spp. sea anemones and their local symbiont, *Symbiodinium californium*.

An authorization was issued to Graham Stapelberg of World Surf League to use 15 MPWCs and place temporary buoys/moorings in order to run the annual big wave surf contest at the Maverick's surf break. The ONMS approval authorizes the USCG Marine Events Permit.

A permit was issued to Bill Carmen of EnvironDrones LLC to conduct low overflights in the NOAA regulated overflight zone in Bolinas Lagoon using a drone in order to map vegetation and morphologic changes. This project is being conducted as part of the Kent Island Restoration Project.

A letter of authorization (LOA) under the Superintendent's Permit was issued to Mr. Skip Vilicich amending an existing LOA to allow the LOA holder to disturb the seabed to re-install all mooring anchors that are removed for inspection or servicing. Mooring anchors are to be installed back in the same locations per the requirements of the TBMP and applicable SLC leases.

A permit is under review for Dr. Piero Fernandes Mazzini of SFSU to deploy oceanographic moorings for scientific purposes in the Gulf of the Farallones. Those moorings would be located in the inner-shelf (~20 m or less), between Bolinas and Pt Reyes and would be equipped with sensors to measure temperature, salinity and currents.

A permit is under review for Josh Russo of the Watermans Alliance to deploy 2 temporary moorings on the Sonoma Coast to allow for a dive boat to anchor, in order to assist the removal of purple sea urchins from nearshore waters.

A permit is under review for Kevin Daniel of Horizon Cable TV for the upgrading of an existing submarine cable pathway. In order to upgrade this network to have fiber optic capabilities, an underground fiber optic communication conduit and fiber optic cable will be added to the existing AT&T pathway from Stinson Beach to Bolinas. This is not a new cable project but rather continuing to maintain cables along an existing easement.

A permit is under review for Suzanne Olyarnik of Bodega Marine Reserve and Lab to conduct research activities as part of the Bodega Marine Lab's long-term research program.

Vessel Groundings

A 40-foot-long fiberglass fishing vessel grounded inside Bolinas Lagoon on 9-19-18. The vessel grounded on private property at 341 Seadrift Road. Staff from Marin County Open Space District (MCOSD) and the USCG initially responded and were able to work with the Responsible Party (RP) to secure the vessel to the seawall in the that location. Then MCOSD deployed boom from OSPR's nearby trailer, to surround the vessel and contain and potential for pollution spilling into the lagoon.

The USCG contracted Parker Diving Services to remove approximately 250-300 gallons of diesel fuel. Parker was also able to patch a hole in the hull so the vessel could float. Though the responsible party (RP) who is the captain of this commercial fishing vessel was uninsured, he was cooperative and was able to pay the \$6,000 towing fee to have the vessel towed to Berkeley Marina for repairs.

The quick response of GFNMS, MCOSD, and USCG helped prevent the vessel from starting to break up which would have required a more complicated, disruptive and costly salvage operation. Salvage typically requires the use of heavy machinery such as cranes and helicopters, which likely would have resulted in disturbances to the hauled-out harbor seals, pelicans, and cormorants all located in very close proximity to the vessel.

John Berge mentioned the Abandoned and Derelict Vessels working group run by the Coast Guard and suggested that the Sanctuary get involved with them.

Final Changes in Regulations for Certain U.S. Coast Guard Discharges

On November 9, 2018, NOAA finalized a rule to allow the U.S. Coast Guard to carry out otherwise prohibited vessel sewage, graywater and training-related discharges, seaward of approximately 3 nautical miles from shore, within the areas added to Greater Farallones and Cordell Bank national marine sanctuaries' boundaries when they expanded in 2015. NOAA is allowing these exceptions to the discharge prohibitions in order to address Coast Guard concerns about both complying with the discharge prohibitions in the larger, expanded sanctuaries and continuing to complete its mission requirements.

These regulatory exceptions will enable the USCG to continue surveillance of activities in GFNMS and CBNMS, conduct monitoring and enforcement activities to uphold the National Marine Sanctuaries Act and its implementing regulations; and conduct other USCG mission activities during non-emergency situations that support sanctuary management. This action will also support the USCG in training its personnel to be ready for emergency search and rescue and use of force activities. In formulating the final rule, NOAA considered a number of factors discussed more fully in the final environmental assessment, and various alternatives. The final rule will become effective 30 days after its publication in the Federal Register. Links to the final rule and EA can be found on the GFNMS website.

Conservation Science Update

In collaboration with scientists from California Academy of Sciences and the Royal British Columbia Museum, two new species of sponges were identified from collections during the 2016 research cruise with Ocean Exploration Trust. The specimens, *Staurocalyptus pamelaturnerae* and *Hyalascus farallonensis* were collected from the wreck of USS Independence, side of midship gun turret, off Farallones Is., Monterey Bay National Marine Sanctuary off San Francisco, California. A third species of sponge, also collected from the USS Independence had not been described since the late 1800's and was re-described, renamed and the range of occurrence was updated, *Farrea schulzei*. The paper, "Four new species of Hexactinellida (Porifera) and a name replacement from the NW Pacific", was authored by Dr. Henry M. Reiswig and published in Zootaxa, <https://doi.org/10.11646/zootaxa.4466.1.11> For more information contact Jan.Roletto@noaa.gov.

Conservation Science staff and volunteers hosted a potluck BBQ celebrating the 25th anniversary of data collection through Beach Watch, a collaborative project between Office of National Marine Sanctuaries and Greater Farallones Association. Over the past 25 years there have been over 22,000 shoreline surveys, covering more than 44,000 km. Over 400 volunteers have donated almost 91,000 hours, and documented more 53,000 dead animals (i.e. 401 species of birds, mammals, turtles, fish, one amphibian), including demographics and state of decomposition of each carcass. Surveyors documented more than 7.7 million live animals, as well as human use activities, status of streams and lagoons, (qualitative) beach erosion and deposition. Data from Beach Watch have been used in the damage assessment and restoration scaling for four oil pollution events, resulting in more than \$52 million in restoration projects. For more information contact Jan.Roletto@noaa.gov or Kirsten Lindquist, Klindquist@farallones.gov.

The third and final annual research cruise for the Applied California Current Ecosystem Studies (ACCESS) project finished on September 28, 2018. Now in its fifteenth year, the project measures oceanographic parameters, prey availability, and predator distribution and abundance on pre-determined transect lines three or four times a year. This cruise had exceptionally calm seas but foggy conditions that made observations challenging. Highlights included lunge feeding humpback and blue whales concentrated near the shelf break, where they normally occur. Seabird sightings included various species of shearwater, fulmar, and numerous storm-petrels and Rhinoceros auklets. Abundant krill were detected on our acoustic sampling but were mostly on the seafloor, making them difficult to sample in net tows. Scientists were joined by funders, media, advisory council members, and John Armor, ONMS Director and NOS Acting Deputy Director. For more information contact Danielle.lipski@noaa.gov or Jan.Roletto@noaa.gov.

Education Update

On Saturday November 10th, 170 people attended the Salmon Soiree held at the Randall Museum in San Francisco. It was a sold-out event with a panel of research scientists and biologists, guest chefs, artists, fishermen, and policy representatives.

Caltrans Report

Caltrans has released a Draft Transportation Concept Report for State Route 1 North. The TCR is a Caltrans long-range planning document that informs the regional transportation planning process. The TCR provides information regarding route segments, existing traffic data, problem identification, and recommended projects and strategies for the highway over a 25-year planning horizon. Any projects recommended in the TCR will require environmental and engineering studies before final approval, and recommendations are subject to change. TCRs are among the System Planning documents being developed for all statutorily identified State Routes in District 4. The document also includes the principles of [Caltrans Smart Mobility Framework](#) to meet State goals. Public comment period is open until Friday November 30th, send comments to Josephine Hsai at Josephine.Hsai@dot.ca.gov or Cameron Oakes at Cameron.Oakes@dot.ca.gov.

Francesca Koe suggests that the SAC and the sanctuary signal to Caltrans that this is of interest and the sanctuary would like to be kept updated. There is a need to bolster the highway in Bolinas Lagoon. The small turn-outs may be changed to large turn-outs. There was a suggestion to place educational signs about the sanctuary at the large turnouts. The sanctuary will reach out to Caltrans to let them know our interest. The SAC requested that Maria re-submit the letter written to Caltrans on this project. Maria will resubmit the SAC's letter on Gleason Beach and Scotty Creek to Caltrans and let Caltrans know that we want to stay involved. George Clyde will keep the SAC involved on Marin County.

Maria attended Commission for Environmental Cooperation Workshops in Mexico and Canada in October. She shared that the actions we take locally can influence the larger community through partnerships. In Mexico, the team came up with action plans to coordinate efforts around biodiversity, share data on species that migrate transboundary, and looking at noise effects on blue whales. They are looking at acoustic buoys technologies to use in Mexico to do a North America west coast soundscape. In Canada, the topic was updating the climate change adaptation toolkit to use climate adaptation tools. Sara Hutto is developing a rapid vulnerability assessment toolkit for other countries to use. Maria provided input how it can be useful. Jen Boyce suggested that Maria connect with the Trilateral group.

Monterey Bay National Marine Sanctuary Superintendent's Report

Paul Michel, MBNMS Superintendent

The MBNMS SAC received a presentation from the USCG from cruise ships to educate themselves on the threats posed by cruise ships. This followed a SAC field trip to board the Ruby Princess in Monterey. They are very efficient with their waste streams. There was a new octopus garden discovered near Davidson Seamount with the Nautilus cruise. There will be a Monterey Bay ecotourism summit on January 10 and 11, for more information visit mbetr.org. Their vision is to make Monterey an ecotourism destination. It will be led by the Cal State Monterey Bay College of Business, Sustainable Hospitality department. MBNMS is finalizing the draft action plans, performance measures, and proposed recommended regulatory changes, including the

proposed zone change in Pillar Point Harbor; the MBNMS SAC will act at their December 14th SAC meeting. They are also working on the NEPA and EA analysis; they hope to submit draft action plans by end of calendar year and hope to have the draft management plan out by March 2019. They are not pursuing action around the Donut Hole at this time.

Cordell Bank National Marine Sanctuary Superintendent's Report

On behalf of Cordell Bank, Maria shared a few updates:

Michael Carver is acting Superintendent at Florida Keys National Marine Sanctuary. CBNMS and GFNMS did a rapid management plan review the last week of October. Each site needs to do a review every 5 years. The GFNMS Staff will present the results at the February SAC meeting. It will be a memo to John Armor with the status of activities on the Management Plan.

Presentation of Kelp Recovery Working Group Recommendations

Francesca Koe, Working Group Chair

[Presentation available here](#)

Francesca presented the recommendations of the Kelp Recovery Working Group. She thanked the staff that helped put the group together. The charge of the working group was to develop research, community engagement, and management recommendations for the recovery of bull kelp populations along the North-Central California coastline. The working group held three in-person meetings, one webinar, and multiple conference calls and consisted of multiple stakeholders, scientists, government agencies, and community organizations. After the council receives the recommendations, they will vote to forward the recommendations to the sanctuary superintendent. Sanctuary staff will develop a Kelp Recovery Plan, including background information, data synthesis, recommendations, case studies, recovery characteristics, etc. to guide bull kelp management into the future. In February 2019, the Advisory Council will receive and discuss the Kelp Recovery Plan.

Paul Michel shared that MBNMS has an authorization to do a small pilot project of urchin removal in Monterey through volunteer divers. The Watermen's Alliance and California Department of Fish and Wildlife (CDFW) have been doing harvest events with recreation and commercial divers along the coast. Francesca attended one of the events where they collected 85,000 gallons of purple urchins. These events are important ways to engage the community.

Public Comment for Morning Agenda Items

None

Kelp Recovery Working Group Recommendations: Discussion and Action

Sara shared the Kelp Recovery webpage with resources and information on the project:

farallones.org/kelp

The working group came up with four sections of recommendations: Kelp Recovery Program recommendations, Monitoring recommendations, Community Engagement recommendations, and Site Selection Criteria recommendations.

[Recommendations available here](#)

Kelp Recovery Program Recommendations

The first set of recommendations includes a purpose statement and the development of a Kelp Recovery Program and Kelp Recovery Network. The timeline for this project would be now through February. There would be a Kelp Recovery Program Coordinator to work with this network and would re-evaluate in one year. Sara Hutto noted that there was some interest from funders and support for Tier 1.

Barbara Emley asked if we do this program, how permanent do we consider this problem? It was clarified that the group would re-evaluate in a year. Currently there is not enough information. It is paramount to invest efforts to better understand these communities and build the capacity now to respond to future impacts even after recovery. It is a mechanism of adaptive management. This issue is also creating engagement in the expansion area that we have not had previously.

ACTION: Motion to approve Kelp Recovery Program Recommendations

First: Abby Mohan

Second: Richard Charter

All in favor

Verbal vote – Unanimous yes

Motion Approved

Topic Area Recommendations: Monitoring

This topic area had input from experts to guide these recommendations. Comments included that the monitoring topic has a desire for more transparency, and to ask the sanctuary to address impacts of oil spills.

ACTION: Motion to approve Monitoring recommendations

First: Richard Charter

Second: Dominique Richard

All in favor

Verbal vote – Unanimous yes

Motion Approved

Topic Area Recommendations: Community Engagement

The community engagement recommendations are meant as a roadmap for the sanctuary to lead to an action plan. The goal is to leverage existing resources, build participation for greater success, and for there to be consistent messaging. Discussion included that it is equally important

to talk about marine protected areas themselves, to promote inspiration within the community to think about the beneficial uses of harvested urchins, the intention of the messaging is not to control what people say but rather stay consistent with nomenclature (“harvesting” vs “smashing”) and not vilifying urchins.

ACTION: Motion to approve Community Engagement recommendations

First: Abby Mohan

Second: Barbara Emley

All in favor

Verbal vote – Unanimous yes

Motion Approved

Topic Area Recommendations: Site Selection Criteria

The recommendations outline the process by which sites should be selected for recovery action. Specific recovery actions for specific sites are not identified, and are not the intent of these recommendations. Site selection criteria are organized by prioritization in Appendix D, which also clarifies the term “ecological significance”.

ACTION: Motion to approve Site Selection Criteria recommendations

First: Francesca Koe

Second: Bibit Traut

All in favor

Verbal vote – Unanimous yes

Motion Approved

Next steps would be that the sanctuary takes the recommendations and put into a kelp recovery plan. The CDFW will be involved. Francesca and Cynthia have discussed bringing this to the commission. The kelp issue is a high priority for the CDFW. The KELPRR program has been helpful in the process. Cynthia has been updating her managers, finding the right path forward to getting this integrated. Now the sanctuary can discuss these recommendations and can talk with other government agencies.

Resolution Regarding Recommendations for Science Needs for Floating Offshore Wind Leasing in California OCS Waters

Richard Charter proposed a draft resolution in response to the Call for Information and Nominations for Commercial Leasing for Wind Power Development on the Outer Continental Shelf (OCS) Offshore California. The resolution states the need for additional science to be conducted in and around the California Call areas. There are two call areas of concern: Humboldt Bay and Morro Bay.

Surfrider has written a comment letter regarding need for more science; the SAC could look at or refer to this letter. Jennifer Savage is their California policy manager. They have a blog site and a [video](#) with a summary of their recommendations. It is important to comment to the commission.

The sites were chosen by the Redwood Coast Energy Authority; they went to BOEM and requested to build an offshore wind mechanism. This is similar to the Trident in Monterey. This is a “free” energy source. John Berge mentioned a presentation from Morro Bay site that talked about the areas off California. There was no electrical grid infrastructure there.

There have been presentations from Coastal Commission meeting: [here](#).

Chris Potter mentioned that BOEM is holding a public workshop in San Luis Obispo on Thursday December 13th at County Council Chambers.

Discussion on the letter included that impacts on Pacific flyway should be addressed, the letter should be concise and clear about why the Advisory Council is concerned about the issue, a science based environmental impact is needed, and that the sanctuary is concerned about impacts outside of the sanctuary.

Francesca Koe proposed a motion that the council advises GFNMS to submit a comment letter to BOEM regarding the offshore wind issue. The letter would include that the council recommended to further investigate science needs.

ACTION: The SAC advises GFNMS to submit a comment letter to BOEM regarding the offshore wind issue.

First: Francesca Koe

Second: Bruce Bowser

All in favor

Verbal vote – Unanimous yes

Motion Approved

The draft resolution proposed by the Advisory Council was tabled. The SAC will hold a webinar/conference call in mid-January to revisit the letter, prior to the January 28, 2019 public comment period closing. It will be a public webinar and allow the public to call in to comment. Specific comments can be sent to Maria.

Maria will communicate to the West Coast Region Director that the GFNMS SAC requests a letter regarding the potential of offshore wind energy impact on GFNMS. There may ultimately be one letter from the West Coast Region on behalf of all the West Coast sanctuaries. Maria will then communicate the decision of whether the WCR as a whole will write a letter or GFNMS will write a letter. Maria will send the Advisory Council the letter a few weeks before the webinar. At the webinar, there will be an option for the council to endorse the sanctuary’s letter, and a second option to endorse and send the draft resolution as a public comment. The SAC may draft and send a letter separately from the sanctuary.

Office of Law Enforcement (OLE) Update

Max Delaney reported on behalf of Don Tanner that Office of Law Enforcement has made 5 offers to agents. One agent may start in December. Paul Michel added that Monterey is expecting an officer in early 2019.

Sanctuary Advisory Council Business

Officer Elections in February

The officer elections will take place at the next SAC meeting, February 27th. Our current officers (John and Dominique) have completed their allowed 2 two-year terms, so unfortunately may not be re-elected to their current officer positions. Barbara is still eligible for a consecutive term as Secretary. Jenn will send out an email with the nomination steps. You are welcome to nominate other primary members. If you do choose to nominate someone please speak with them.

SAC Recruitment & Charter Amendment Update

Nominations for Conservation Alternate, Community-at-large San Francisco/San Mateo Primary and Alternate were submitted to WCR and ONMS HQ; the nominees are now going through the vetting process. The charter amendment to add Commercial Fishing seat is complete and recruitment is open for Commercial Fishing (Primary and Alternate) and Maritime Commercial Activities (Primary and Alternate). The deadline for applications is November 30th. Francesca Koe and Dominique Richard volunteered to review applications for the four seats.

Discussion of 2019 SAC Retreat Topics

The 2019 retreat will be held in October most likely in Sausalito. The topic will be the San Francisco Bay-Sanctuary connection and will involve projects addressing the Bay-Sanctuary connection, such as ocean acidification, wildlife disease, sediment/sand mining, hypoxia, nitrification, discussion around the Donut Hole, maritime traffic, marine debris and plastics, tidal plume, recreation, and animals that migrate between the sanctuary and the bay. The goal will be that the SAC is informed about the connection between San Francisco Bay and the sanctuary and how things that happen in the bay impact the sanctuary. Abby Mohan volunteered to help plan the retreat. The Bay Model and Estuary & Ocean Science Center were proposed as potential locations.

Discussion on Permit Information Dissemination

There was a recommendation to publish the permits to the SAC ahead of time so that the SAC has the opportunity to read them prior to the meeting. Maria can provide an overview of the permits during the meeting.

Maria will send the list of written permits a week before the meeting, and at the SAC meeting she will list the permits out and highlight any of interest and allow time for questions.

Native Oyster Working Group Update

The Native Oyster Working Group will begin in January. The letters to invite members to the working group have been sent out. Julia Royster from the NOAA Restoration Center will be

joining the GFNMS Staff on detail to coordinate the working group. There will be two in-person meetings in January and March, and a webinar in April. Bibit Traut will co-chair the working group with Alex Westhoff from County of Marin. The final working group recommendations will be presented at the May 22nd SAC meeting in Point Reyes.

Guest Presentation: Athline Clark, Superintendent of Papahānaumokuākea Marine National Monument

Athline is the Superintendent of Papahānaumokuākea Marine National Monument and is visiting for the week. Papahānaumokuākea Marine National Monument is a particularly sensitive sea area that is now larger than all but 20 countries in the world. The purpose of monument to preserve access for native Hawaiian cultural activities. There are four co-trustees, and seven agencies are part of the monument management board and are involved in decision making. One of the important resources for the monument is monk seals. There is an extensive permitting process; there are six categories and the joint permitting system requires consensus from all 7 agencies and signed by 3 of the 4 trustees. Both marine and terrestrial permits are issued; this includes biological and cultural review of all permit applications. It is a United Nations World Heritage Site, the only mixed natural and cultural world heritage site in the US. It is a predator dominated site, and provides nesting grounds for 14 million seabirds and 90% of Hawaiian green sea turtles.

The monument is the northernmost location of Polynesian settlement and a sacred region for Native Hawaiians. They maintain living cultural connections to ancestors and sea. There are new records of known species and the marine endemics in the Northwest Hawaiian Islands increase the farther north you go. There are about 600 shipwrecks and airplanes in the expanded areas, most are from Midway Atoll.

The Mokuapapapa Discovery Center in Hilo, HI, supports school groups and communities. There is lots of community involvement including Reserve Advisory Council, Friends of Midway, Native Hawaiian Cultural Working Group, and Kure Conservancy. They are mentoring the next generation in science and culture, seeking new partnerships to grow mentorship programs.

There is lots of marine debris in the area, most of it is fishing gear. The annual accumulation rate is now over 2 million pounds, and has not been decreasing; 52 tons a year washes ashore annually. They are right in the middle of the Gyre.

Member Reports

Barbara Emley– It is the beginning of local crab season. There is a small area of domoic acid around the Russian River. There will be a joint state senate/assembly hearing on domoic acid and whale entanglement at Aquarium of the Bay on Nov 28th.

Chris Potter – Ocean Protection Council met on October 25th to approve and award \$6 million in research projects.

Dominique Richard – Participated in the SAC chairs webinar, heard that sanctuaries that are considered for designation are still active (Wisconsin). In Stellwagen Bank, they have had issues around crowding around humpbacks, ship strikes to right whales. He has been nominated to the executive committee for the Tomales Bay Watershed Council.

Francesca Koe – There was recently an urchin harvesting event in Caspar. The next event is January 12-13 in Van Damme. There are many volunteer opportunities. She is headed to Dive Equipment Manufacturers Association meeting. The National Marine Sanctuary Foundation has Flower Garden Banks as a case study. Francesca will be going to the fly-in for National Marine Sanctuary Foundation to talk to members of Congress about benefits and reasons to allocate resources to sanctuaries from March 4-7, 2019. She encourages all to attend as they like to hear from residents in the communities.

Abby Mohan – The Dungeness crab recreational fishery opened.

George Clyde – Attended the Tomales Bay Watershed Council meeting where there was a panel on recreational uses of Tomales Bay. John Dellosso from National Park Service spoke, Parks Service will now require human waste bags for areas that do not have restrooms. The NPS is trying to manage the amounts of people that are visiting the Point Reyes National Seashore. Richard James promoted the oyster industry to clean up debris. Will Vogeler of Lawson's Landing gave an informational talk on the clamming industry. The clams can get up to \$45 in San Francisco.

Bruce Bowser – Attended Sentinels of the Sea seminar at the Point Reyes National Seashore held by the Seashore, The Marine Mammal Center, and Cal Academy. The organizations gave presentations on what they do. It was a well-attended event. The Environmental Action Committee of West Marin has formed a Waters Committee to look at water quality in Tomales Bay. They are also doing a native oyster working group.

Sandra Chu – Joined marine biology club and they are interested in writing letters to support marine issues. If you have suggestions for topics or prompts for letters for her club, send them to Sandra.

Cea Higgins – County of Sonoma has formed a citizen Advisory Council to advise the government on coastal issues including local coastal plans. There is a lot of leptospirosis in the seals up north.

John Berge – Governor-elect Newsom was supportive of wind and wave energy.

Nancy Trissel – Beach Watch held their advanced training. Lots of sand has shown up on Gualala River Beach.

John Largier – CenCOOS is monitoring data and looking to incorporate it with the sanctuary. The SF Bay outflow plume mapping is being developed, linked to state interest in sediment plumes. It is looking at the flux of sediment from land to sea. Cordell Bank hypoxia monitoring is ongoing off Bodega Head and Tomales Bay. A reminder that Estuary & Ocean Science Center and Bodega Marine Lab have weekly seminars.

Presentation on GFNMS Facilities Master Plan

Brian Johnson, GFNMS Deputy Superintendent

[Presentation available here](#)

Francesca asked about using the Greater Farallones Association for capital campaigns. Maria said there is flexibility. Abby asked if we have looked at sea level rise. Environmental Science Associates did a demonstration project on sea level rise with our building in 2008. Sand has been accreting on our beach. Our site was originally selected because it was an island.

John Berge and Bibit Traut drafted a letter of support for the GFNMS Facilities Master Plan. The letter recognizes the need to prioritize investments in rehabilitating the GFNMS campus at Crissy Field.

[Letter available here](#)

ACTION: Motion to approve letter of support for GFNMS Facilities Master Plan

First – Bruce Bowser

Second – Francesca Koe

Verbal vote – Unanimous yes

Motion approved

The letter will be sent to ONMS Headquarters with West Coast Region Director and GFNMS Superintendent as CC.

Sanctuary Naturalist Program

Carol Preston, GFNMS Education Coordinator

[Presentation available here](#)

Carol Preston presented on the Sanctuary Naturalist Program that will begin in 2019. The goal of the program is to educate those that want to learn more about the sanctuary for their own edification or that want to volunteer with the sanctuary and become volunteer naturalists. There will be a core curriculum as well as six topic areas including whale watch naturalists, rocky shore partnership, white shark stewardship, Visitor Center naturalists, estuaries, and sandy beach. Classes start January 26, every Saturday. Rocky Shore is at Pillar Point.

There was a suggestion to give some accreditation for taking the class, there could be various options for certification.

Marine Debris Presentation

Kate Bimrose, GFA Staff

[Presentation available here](#)

How many nurdles in the jar? 1,312. John Largier was closest with 1,300!

Kate gave a presentation on NOAA's Marine Debris Monitoring and Assessment Project (MD-MAP) in the Greater Farallones Sanctuary region. She presented various results from the five years of the program from July 2012 to June 2018.

There is a proposal out to do a prevention program with waterfowl hunters to develop behavior change interventions. They want to partner with hunting groups to see how they manage disposal and how they operate in terms of shotgun wad debris. The goal is to develop some alternatives to reduce the number of shotgun wads ending up in the water, including signage, incentives, etc., and hope to see number of shotgun wads to reduce. Once the 5 year report is out we will send it out.

ADJOURN – 4:15PM