



**GREATER FARALLONES NATIONAL MARINE SANCTUARY
ADVISORY COUNCIL MEETING**



Wednesday May 24th, 2017

8:30AM – 3:45PM

Bodega Bay Firehouse, Bodega Bay, CA 94923

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, Richard Charter, Bruce Bowser, Elizabeth Babcock, Barbara Emley, John Berge, Joshua Russo, Oliver York, Steve Mietz (for Cicely Muldoon), Sarah Allen, Jason Brand, Dan Howard

Copies to:

Bill Douros, ONMS West Coast Regional Office

Call to order at 9:23 AM

Review Agenda

Roll Call

Review Agenda

Acknowledge new officers for 2017-2019 term: John Largier, Chair; Dominique Richard, Vice-chair; Barbara Emley, Secretary.

Announce new and renewal of SAC members and seats: Bruce Bowser, Conservation Primary; Elizabeth Babcock, Education Primary; Bibit Traut, Education Alternate.

Farewell to Oliver York as he will be graduating and moving on to college. This will be his last meeting. Maria presented him with a certificate of recognition for his service on the Advisory Council.

SAC Recruitment Update: The quarterly SAC member recruitment period will take place August 1st-31st. We will be recruiting for the Community-at-large Sonoma/Mendocino Alternate, Conservation Alternate, and Youth Alternate.

GFNMS Superintendent's Report

Permits

A research permit was issued to Courtney Opshaug of Blue Ocean Gear LLC to deploy a new proprietary device called a "smart crab trap". An electronic sensor will be deployed with a crab trap to transmit real-time data on how much catch is in the trap and whether smaller by-catch species are escaping as designed. The goal of the device is to allow fishermen to know precisely when to retrieve the trap and provide an immediate location via GPS signal, so they can locate

and pull traps more quickly, reduce soak times, and thus reduce entanglement risks for marine life. The project proponent is working with a licensed fisherman during crab season; the GFNMS permit is needed for any test deployments that may be conducted outside the crab season.

John Mellor (guest of Barbara Emley) mentioned he is involved in the research related to the crab trap permit. Dan asked if this came out of the Whale Entanglement Group. No, this did not come directly from that.

A research permit was issued to John Largier and David Dann of UC Davis Bodega Marine Lab to deploy a mooring and buoy to continue an ongoing study on upwelling. The goal of the project is to determine the frequency of deep-water intrusion events into San Francisco Bay. This season, BML staff is deploying a mooring in the same location as the last 2 upwelling seasons, offshore of Rocky Point. Two other moorings are being deployed within SF Bay to monitor if and when the intrusions make it past the turbulent mixing zone of the Central Bay.

A research permit was issued to Tim Janssen of Spoodrift Technologies to deploy 3 moorings to collect in situ measurements of wave energy and wave direction. Each mooring is attached to a surface buoy and solar-powered instrumentation and will remain in place for a period of 6 months to test the long-term data collection functions and telemetry of each unit. This data will be collected and analyzed by the team to ensure data quality and instrument consistency throughout the deployment period.

A Letter of Authorization (LOA) under the Superintendent's Permit was issued to James Raives of Marin County Open Space District to remove the branches from two eucalyptus trees that have fallen into Bolinas Lagoon. The trunks from the two trees will remain in place to minimize further impact to salt marsh habitat. Marin County's contractor was unable to complete the work last year so this LOA is being reissued to allow additional time.

A salvage and recovery permit was issued to Skip Vilicich. GFNMS issued two time extensions this quarter for a previous salvage permit. The permit was originally issued in 2016 for the removal of two boat moorings (tagged during the August 2015 Tomales Bay Vessel Mooring Program). The permittee was unable to conduct the work over the winter and now has a final deadline of June 22, 2017 to complete the project.

A research permit was issued to Anne Dekas of Stanford to conduct sediment coring at 3 locations in the northern portion of MBNMS in order to investigate the activity of microorganisms (i.e., bacteria and archaea) in deep-sea sediments, and specifically their role in nitrogen cycling. At each site, approximately eight (8) sediment cores will be collected (with an average length of 30 centimeters). One (1) gravity core will also be collected at the deeper sampling sites which will be a maximum of 6 meters-long and 10 centimeters-wide.

A research permit was issued to Suzanne Olyarnik of Bodega Marine Reserve to continue to maintain an existing oceanographic buoy and mooring offshore of the Bodega Marine Reserve, in Sonoma County. This buoy is part of a long-term coastal ocean observing system called the Bodega Ocean Observing Node (BOON). It is a node in the larger observing system, CeNCOOS, as well as other national and global systems. The mooring is located in 100ft of water

immediately offshore from the Lab and provides data on currents (including velocity and direction), seawater temperature, salinity, chlorophyll fluorescence, light transmissivity, dissolved oxygen, and other parameters.

A research permit was issued to Meghan Cronin of NOAA PMEL to deploy a subsurface mooring attached to an Acoustic Doppler Current Profiler (ADCP) and temporary discharge an Unmanned Sailing Vessel (USV), also equipped with an ADCP and other instrumentation. The data from the instrumentation on the mooring will be used to compare ocean current profile data acquired by the USV, to verify that the newly developed capability of the USV meets NOAA standards for climate-quality measurements. This is part of a year-long NOAA-funded development project to expand the use of Saildrone USVs to collect scientific quality wind stress and ocean current measurements that are critical to observing air-sea interactions.

A research permit was issued to Janet Walker of UC Davis to examine how burrowing crabs impact the interactions of two dominant salt marsh plants (cordgrass and pickleweed) at different latitudes on the California coast. The permittee will conduct a manipulative caging experiment in which caged-fences will be constructed and crab density will be manipulated. Field work will involve the temporary installation of traps constructed from plastic mesh cages (0.7 meter x 0.7 meter x 0.6 meter) in 25 plots (including five “no cage” control plots). During the experiment, plant community structure will be non-destructively assessed within each plot by recording the percent cover of different plant species and measurements will be taken from the sediment to assess how the crabs alter environmental stress.

A research permit was issued to Patrick Robinson of UC Santa Cruz to use UASs (drones) to conduct surveys of elephant seals at Ano Nuevo Reserve. The objective of the long-term study is to monitor and examine northern elephant seal population growth and status, mating and reproductive strategies, behavioral and physiological adaptations for diving and fasting, general physiology and metabolism, and sensory physiology. Previously, censuses have been conducted for many years by transporting researchers to the island by small boat. It is the goal of this project to minimize the disturbance to wildlife by reducing the human presence on the island, while increasing the quality of the data collected.

A research permit was issued to Rachel Meyer of UCLA to collect sediment samples to evaluate the presence of DNA from prokaryotes, eukaryotes, plants, fungi, and vertebrates in these samples using the latest next-generation barcoding approaches. The program will take advantage of the environment’s ability to naturally preserve DNA in various ecological settings. This work is being conducted through a UC program, called CALeDNA, which collects California Environmental DNA in order to catalogue the diversity of different classes of biota. Samples will be used to generate a genetic baseline across the sampling locations with the larger goal of providing a statewide resource for assessing future biodiversity changes. Field work involves collecting 180 2-milliliter sediment samples from 10 intertidal sites in and around the shoreline at Pillar Point, in Half Moon Bay (a total of 360 milliliters (0.8 pounds)). One of the principal goals of the CALeDNA program is to foster public involvement in biodiversity research, so citizen scientist volunteers will be involved in the collection process.

A research permit was issued to Phil Capitolo of UC Santa Cruz to conduct low overflights using fixed-wing aircraft to conduct aerial photographic surveys of seabird colonies along the California coast, from the Oregon border to the Mexico border. These surveys are used to determine the locations of all Common Murre, Brandt's Cormorant, and coastal Double-crested Cormorant breeding colonies. Results of surveys are used to build a photographic archive for use in determining breeding population sizes, population trends of these species over time, and providing baseline data for assessing impacts to seabirds and the coastal marine environment from anthropogenic sources such as oil spills.

A research permit was issued to Diane and Bryant Hichwa of the Coastal Stewardship Task Force of the Sea Ranch Association to conduct low overflights using UASs (drones) at Gualala Point Island (GPI) for the purpose of collecting aerial imagery of seabirds. This work is being done in collaboration with the US Fish and Wildlife Service, BLM's California Coastal National Monument (CCNM) and the Madrone Audubon Society. The goal of the project is to test the effectiveness of using UASs to monitor the nesting success of seabirds at GPI and to develop "no impact" protocols to minimize and/or prevent disturbance to the birds while employing these UASs. The permittee expects that the advantages of using UASs include less noise, greater flexibility in flight timing, increased image resolution at a reduced cost, increase safety to personnel (i.e. pilot and photographer), greater scheduling flexibility to allow more frequent sampling, and less risk of disturbance to seabirds and other wildlife.

A Letter of Authorization under the Superintendent's Permit was issued to Dr. Nicole Raineault and Dr. Katherine Bell of Ocean Exploration Trust (OET) to discharge ten (10) expendable and degradable "Sippican T7" bathythermographs (XBTs). These XBTs are being released to help map and characterize deep-sea corals and sponges and other living habitat in four different deepsea canyon areas in the sanctuary. The XBTs collect temperature data as they fall through the water column to better understand long-term changes in marine climate.

A research permit is under review for 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.

A research permit is under review for Kate DuBois to conduct research to compare the thermal tolerance of six eelgrass populations distributed along the length of Tomales Bay. Experiments in the field will be followed by lab-based experiments at the Bodega Marine Laboratory. The goal of this experiment to learn how eelgrass meadows within bays could be locally adapted or acclimated to gradients in temperature regimes under the influence of climate change.

A management permit is under review for Graham Groneman of the Marin County Fire Department to use motorized personal watercraft (MPWC) for life-safety and search and rescue training within the sanctuary. The exact areas and seasonal windows in which trainings will be conducted are still being determined.

A research permit is under review for Suzanne Olyarnik of Bodega Marine Reserve and Lab to continue to conduct research activities as part of their long-term research program within the state-designated Bodega Marine Reserve.

A research permit is under review for Ben Rubinoff of UC Davis to examine how invasive fouling community composition changes spatially along an estuarine gradient and temporally across seasons under the influence of climate change. The applicant is proposing the deployment of settlement plates at three sites along the western shore of Tomales Bay, CA to quantify community shifts.

There is a permit appeal for an education permit for Ms. Jane Reifert and Mr. Greg Barron of IA Worldwide Inc. aka Incredible Adventures to appeal an amendment issued on October 2016 to allow IA Worldwide Inc. to attract white sharks using decoys only for educational tours. As in previous seasons, the permittee's request to use chum or scent attractants was denied and the permittee is appealing this decision. This is the 6th permit appeal by Incredible Adventures since GFNMS white shark regulations took effect in 2009.

Shark Tourism Permit - Joshua opposes any permit to them and commented that he went on one of their tours and was very unsatisfied since it was expensive and he felt they were lying to customers – overall felt like a huge rip off. Cea pointed out that their argument and supplement information did not make sense. Richard added that this issue of scent attractions was established as part of our management plan a long time ago and it is interesting that this continues to pass our radar. Maria added that the Sanctuary Advisory Council recommended the sanctuary allow decoys but no scent. This is how sanctuary has been issuing permits ever since (2008).

Vessel Groundings

None.

Vessel Speed Reduction Update – Provided by Michael Carver

For the third year in a row CBNMS and GFNMS have issued a voluntary Vessel Speed Reduction (VSR) request effective May 1 - November 15, 2017 for the San Francisco Traffic Separation Scheme (TSS). We requested all vessels 300 gross registered tons or larger reduce speeds to 10 knots or less during this time period. We distributed this message through published and broadcast local notice to mariners, NOAA marine band weather radio, as well as through direct communication with the industry via email and letters.

Following 2016 VSR season we mailed letters to over 100 companies with friendly “report cards” on their cooperation with the recommended speed reduction. Out of the 3,084 transits in 2016 941 (27.37%) of them were in full cooperation of the VSR (traveling at 10 knots or less for their entire transit in the TSS). In 2015, cooperation was 18.6%.

In other ship strike related news, the Bay Area Air Quality Management District has given the National Marine Sanctuary Foundation \$50,000 to expand the Channel Islands National Marine Sanctuary incentive-based vessel speed reduction program to the Bay Area. Through this partnership, we are able to address our management need as well as achieve reductions in

nitrogen and sulfur dioxide, CO₂, and particulates, which are of particular concern for the Bay Area counties.

Lastly, The Benioff Ocean Initiative (a foundation started by Mark Benioff) selected ship strike reduction as its first ocean initiative with \$1.5 million. The project aims to build a dream team of researchers to solve this problem. The initiative is very tech focused and has shown an early interest in acoustic listening stations similar to what Stellwagen Bank National Marine Sanctuary has deployed. Office of National Marine Sanctuaries staff are helping to review proposals.

Brian Christy asked if the Sanctuary is doing mortality studies. Maria clarified that Michael Carver is working with NOAA Fisheries on research. There have been some studies looking at mortality rates and reduced speed. We are currently working with Point Blue Conservation Science to model mortality.

John Berge added that during the joint working group, the question came up of determining how it is successful. The consensus was that results may be seen after 20 years, but overall it is a precautionary practice. Dan Howard added that they are working with the shipping industry to refine when ship strikes may have occurred. We currently do not know where whales are being struck. The responses from the letters we sent out were positive (about six responses). We will focus on moving forward, building relationships, keeping our message consistent and working with the industry. Once the information of the modeling has been published, we can present at a future SAC meeting.

John Mellor asked if the speed reduction dates are geared specifically towards blue whales. Maria answered that they are geared towards blue and humpback whales. Typically, July has been the peak, but in the last few years, we have been seeing whales earlier and earlier.

Conservation Science Update

Conservation Science staff, Jan Roletto, was a guest lecture of federal and state laws and conservation actions to protect marine mammals. The lecture was given to a class of senior level undergraduate students at San Francisco State University, Romberg Tiburon Center for Environmental Studies. Students learned about the numerous federal and state laws protecting marine mammal populations, their habitats and their forage species. This lecture has been provided to numerous undergraduate and graduate classes at several northern California colleges and universities. Highlighted in this lecture is how National Marine Sanctuaries augment and enhance other federal and state marine mammal protections and conservation actions. For more information contact Jan.Roletto@noaa.gov.

Conservation Science staff from Beach Watch and Applied Ecosystem California Current Surveys (ACCESS) are co-authored on three abstracts submitted to the 22nd Biennial Society for Marine Mammalogy Conference on the Biology of Marine Mammals, October 2017, Halifax, Nova Scotia, Canada. One abstract reviews the seabirds and marine mammals affected by the anomalously warm water years, 2014-2016, which resulted in massive mortality events in Cassin's Auklets, Guadalupe fur seals and the anomalous northern distribution of sea slugs and other vertebrates and invertebrates. A second abstract reviews the effort to incorporate effort-based shoreline survey data of marine mammals, into the Central and Northern CA Ocean

Observing System database. A third abstract summarizes the increase of entangled baleen whales in Cordell Bank, Greater Farallones and Monterey Bay sanctuaries and our resource protection actions. For more information contact Jan.Roletto@noaa.gov or Kirsten Lindquist, KLindquist@farallones.org.

Conservation Science staff from Applied Ecosystem California Current Surveys (ACCESS) are assisting staff from Monterey Bay sanctuary to design and execute ACCESS throughout the Monterey Bay area and Santa Cruz County coast. Over the past two years, there have been increased sightings of entangled humpback, blue and gray whales in commercial and recreational crab pot gear. Sanctuary staff are working with National Marine Fisheries Service, The Nature Conservancy, and the California Dungeness Crab Fishing Gear Working Group to collect data, model the co-occurrence of large whales and crab pots, and identify baleen whale hot spots in an effort to decrease the risk of entanglement of large whales in central California. For more information contact Jan.Roletto@noaa.gov or Karen.Grimmer@noaa.gov.

Conservation Science staff participated in a biennial workshop on new technologies for oil spill detection, response and assess impacts from oil spills. The workshop was hosted and coordinated by the state's Office of Spill Prevention and Response. Approximately 150 people attended the 4-day workshop from numerous federal and state marine resource protection agencies, academic institutions and commercial organizations. The workshop emphasized new technologies in communicating resources at risk, data sharing platforms, geo referencing and visualization of response and damage assessment data, shoreline oiling assessment and clean up end points, wildlife reconnaissance and recovery, and digitizing and automating field data more effectively. For more information contact Jan.Roletto@noaa.gov.

Conservation Science staff participated in a study and co-authored a paper submitted to the journal *Science*, on the large scale mortality of Cassin's Auklets in 2014 and 2015. The mortality event was highly correlated with sudden shifts in zooplankton prey and loss of cold-water foraging habitat due to the presence of usually warm water, referred to as the "Warm Water Blob" (WWB). The WWB likely forced dispersing post-breeders into an atypically narrow band of cold upwelled water near the coast, where they eventually starved. The study shows that up to 11% of the world's adult population of Cassin's Auklets (270,000-530,000) died along the West Coast of North America. The GFNMS Beach Watch project is one of three beached bird monitoring programs, which participated in the collection and analysis of this mortality event. For more information contact Jan.Roletto@noaa.gov or Kirsten Lindquist, KLindquist@farallones.org.

Conservation Science staff are working with staff from California Academy of Sciences, in San Francisco and Royal British Columbia Museum (RBCM), in Victoria to complete the taxonomy describing two new species of sponges (a yellow Picasso sponge, *Staurocalyptus* n. sp. and a white vase sponge, *Hyalascus* n. sp.), which were discovered last year on the USS Independence. A third species of sponge, *Farrea aculeate* (Schulze), also found on the USS Independence, was only previously known to occur north of California. Dr. Henry Rieswig from (RBCM) is currently performing the measurements and imaging to describe the two new sponge species, and report the range extension and update the taxonomy of *Farrea aculeate*, since it was only described once, 1899. For more information contact Jan.Roletto@noaa.gov.

Conservation Science staff, participated in a meeting with staff from Central-Northern California Ocean Observing System (CeNCOOS) and BeachCOMBERS to determine how to best display beached bird data on the CeNCOOS data portal. Participants discussed common structure for data parameters, timeline and funding, with the goal to provide data feeds from Beach Watch database. There are similar efforts underway to post effort-based marine mammal stranding and sightings data for both live and dead marine mammals. Beach Watch data feeds will include effort-based rates for live and dead marine mammals and dead seabirds. Using the CeNCOOS data portal, the public and researchers can then easily map observations and coupled data with environmental data. For more information contact Kirsten Lindquist, Klindquist@farallones.org and Jan.Roletto@noaa.gov.

Conservation Science staff, participated in a workshop sponsored by Ocean Protection Council, Ocean Science Trust, NOAA Office of Coastal Management and researchers from west coast universities, to review the state of the science on the ability of aquatic vegetation to ameliorate ocean acidification. The group identified science needs and potential sites for demonstration projects in California. The group identified the differences between localized benefits of aquatic vegetation and the pros and cons of relocating sequestered carbon back to the atmosphere and the value of removal of carbon from the ocean to reduce the impacts from acidification. Localized benefits to shellfish were identified, as well as the limitations of eelgrass and kelp to sequester carbon and reduce acidification. A summary report will be available in the next few months and include next steps and time line and potential funding. For more information contact Jan.Roletto@noaa.gov.

Update on the notice to delay discharge requirements for the U.S. Coast Guard activities in Greater Farallones and Cordell Bank National Marine Sanctuaries

As part of the final rule for the expansion of GFNMS and CBNMS, which took effect on June 9, 2015, NOAA postponed the effectiveness of the discharge requirements in both sanctuaries' regulations within the expansion areas for 6 months. The reason for the postponement was based on comments from the U.S. Coast Guard that Office of National Marine Sanctuaries (ONMS) discharge regulations being implemented as result of the expansion, had the potential to impair the operations of USCG vessels and air craft conducting law enforcement, search and rescue training and other statutorily mandated activities in the sanctuary. The intent of the postponement was to allow time for a separate regulatory process to be undertaken to consider allowing certain USCG discharge activities in GFNMS and CBNMS. Since then, NOAA published three notices to extend the postponement of the discharge requirements (for an additional 6-months each time) to provide adequate time for completion of an environmental assessment (EA), and subsequent rulemaking, as appropriate. This current time extension is set to expire on June 9, 2017.

GFNMS and CBNMS staff have now completed a draft of an EA, which has been reviewed internally and by West Coast Regional Office. The draft is currently awaiting final review from National Headquarters. In the meantime, because the June 9th deadline is approaching, NOAA HQ is currently working on preparing a Federal Register (FR) notice to allow another 6-month time extension on delaying the discharge requirements. GFNMS and CBNMS hope to have a

draft of the EA ready to release for public comment later this summer and will be scheduling public hearings as soon as the release date has been finalized.

Introduced Species Update

A Memorandum of Agreement (MOA) was signed in 2016 between the Office of National Marine Sanctuaries, the State Of California Natural Resources Agency, Ocean Protection Council, California Fish and Game Commission, California Department Of Fish and Wildlife, and California Coastal Commission for the purpose of defining the consultation process on commercial shellfish aquaculture projects approved through California permits and leases for non-invasive introduced species.

An application for a new aquaculture lease was submitted to the California Fish and Game Commission in February, thus triggering the agreement. The Commission has since forwarded the application to the California Department of Fish and Game for review. The application is currently incomplete.

We met with the aquaculture coordinator from California Department of Fish and Wildlife to determine how we are going to coordinate in the spirit of the agreement signed.

We reviewed the coordination language in the MOA, and we have agreed on how we are going to communicate and conduct consultations. We are now part of the internal review team.

Since the application is not complete, there is no formal consultation or review scheduled at this time, but as part of the team, we anticipate receiving all information in near real-time. The State has developed an electronic tool that will make it easier for all parties to communicate and be notified when additional information is provided by the applicant.

Joshua Russo asked what species were included in the application submitted. Maria answered Pacific Oyster, Atlantic Oyster, Kumamoto Oyster, Geoduck Clams, etc. and the application has been submitted by San Andreas Shellfish. It is an incomplete application and they will need to do surveys. Some of the species listed in the application include introduced and native.

Budget Update – Maria

The Office of National Marine Sanctuaries (ONMS) has received its 2017 fiscal year budget and have allocated funds to all the sanctuary sites and monument. GFNMS received \$100k less than last year.

Elizabeth asked in regards to the \$100K reduction in the budget, do you know what programs will be effected and do you know why this is happening? Maria clarified that ONMS received our base number and received an additional \$2 million for offshore cruises and mapping. Within the flat budget, our internal NOAA tax, cost of living, and performance increases have increased ONMS costs.

Maria also mentioned that the ONMS strategic plan will play a large role in deciding funding priorities. In the future, we may no longer have base budgets. If there are any strategic priorities

that the SAC feels strongly about, you should comment on this since this plan will affect how sites are funded.

Education Programs/Fisherman In the Classroom Update

From January 1, 2017 to March 31 2017, Greater Farallones National Marine Sanctuary education staff teamed up with local fishermen to deliver 24 Fisherman In The Classroom programs to 614 grade school students at 13 schools in San Francisco and Berkeley. The teaching team brought in fishing related props like a salmon specimen, an industrial crab trap, fishing lures and hooks, and delivered a presentation on fishing in Central California. The students learned about the challenges, economics and rewards of fishing for salmon and Dungeness Crab in sanctuary and adjacent waters, as well as the relationship between the fisherman and sanctuary conservation policies.

Maritime Heritage Update

The ONMS Maritime Heritage team is partnering with CA State Parks to return to the Sonoma coast for a week this August to complete the Doghole Port Survey. They will be visiting a few ports they missed last summer, and looking for places to install interpretive signage in state parks. The team will document important historic remnants on land, and look for artifacts on the adjacent seafloor using scuba divers. There will be at least two public presentations, and we will share the dates when we have them.

Richard Charter suggested not using magnesium signs in regards to the Doghole ports project. Elizabeth asked if we could broadcast these projects live, and California Academy of Sciences could help. Maria answered it has been very low tech in the past, but we could look into the possibility.

Cordell Bank National Marine Sanctuary Superintendent's Report – Dan Howard, Superintendent

We got funding for ACCESS and three cruises will be happening in May, July and September. Unfortunately, we did not get money for cruises in the expansion area. Also, we received funding for the ROV cruise out of Cordell Bank. The *Nautilus* is currently out doing bottom mapping at Cordell Bank and collecting data from priority areas where the ROV surveys will be. They have been working with Greater Farallones staff to look at ways to decrease redundancies and increase effectiveness; for example, combining forces with Resource Protection and Education. They are also working with Brian Johnson from GFNMS to set up the Climate Leadership In Parks (CLIP) tool to quantify the carbon footprint for their site.

Greater Farallones Association Report – Bob Wilson, Greater Farallones Association

Welcome Bob Wilson, new Executive Director of Greater Farallones Association (GFA). In the current climate, GFA's new role is to save programs. This administration poses the greatest threats to Sanctuaries, ocean health and science that we have seen in our lifetime. Bob was asked by the National Marine Sanctuary Foundation to go to Washington D.C. in March to educate

Members of Congress about the Sanctuary budget. The current budget for fiscal year 2017 is \$52 million; for fiscal year 2018, he was asking for \$66 million, which include \$4 million for visitor centers. Three points of stress: maintain FY17 with no changes, seek increase for FY18, and get community support for existing and future sanctuaries.

All our local congressional representatives are on board. GFNMS is in good standing that way, but we do have some problems since the Republican Congress and Senate has not “governed” before. We also need to keep in mind that in the past, if money is cut within NOAA, they start by taking money out of the Sanctuaries.

In dealing with your congressional representatives, the things that come to the Congressperson’s attention is individual letters from influential people in the community – people that represent a constituency. It is important that people like yourselves reach out. Use pieces of the template letters, but personalize it and tell them why you are influential people in the community. In the budget request, we stressed the importance of the community involvement in Sanctuary Advisory Councils. Congressional addresses and letter template are on the back table.

Yesterday, the President’s FY18 budget was released. In the proposed budget, they cut 25% from the Sanctuaries; the budget would be \$39 million. Since the Sanctuary is 90% labor, it cannot function on \$39 million. It cuts NOAA overall by 16% and within NOAA Fisheries all science was cut. This eliminates coastal science grants, coastal zone grants, Sea Grants, estuaries and reserve systems, defunds the Marine Mammal Commission, etc. This is what we are faced with in the next few weeks. It is going to be a challenge for Congress as well.

A second threat is that of oil and gas exploration. There is an executive order requiring the review of the last 10 years of new Sanctuary designations and expansions. It is unclear if Congress is going to ask for public comment on this issue. If allowed, your comments will mean a lot. Most of the objections have been to monuments since that designation process is quicker and less of a public process. Our expansion was not driven by legislature and was done through NOAA’s administrative process so we followed the full public process.

The Association is now faced with challenges of saving Sanctuary programs more so now than in the past, so we will be communicating more with the SAC and asking for your help.

Cea Higgins asked about how we can get an exact list for the budget cuts. Richard will email it out.

BREAK

[Golden Gate Biosphere Presentation and Discussion – Karen Reyna](#)
[Presentation available here](#)

Elizabeth asked who made it through the process alongside Greater Farallones? Channel Islands, Rocky Mountain, and the Grand Canyon made it through.

Josh asked about the current protections for white sharks. We have the regulation that protects against attraction. Approaching is only in the islands; can't attract within the sanctuary.

Cea asked if [Point Arena] Stornetta Lands is one of the terrestrial sites? Yes, it is Bureau of Land Management (BLM) land, indicated by light green on the map, under "Conservation of lands network" (managed use area). Maps are available on the website:

<http://farallones.noaa.gov/manage/goldengatebiosphere.html>.

Cea asked if they had a council at the UK site? Karen responded that they have volunteer docents but no council that we know of.

Elizabeth asked if this designation would come with any funding. Karen clarified that it does not come with funding. There have been success stories that because areas are biosphere reserves, there are new opportunities and the designation can be used as a leveraging tool.

Elizabeth suggests having this conversation with the Mayor's office in SF. It would be a good convention and visitor's bureau discussion, if there could be any funding coming from that. Now that SF is part of the biosphere reserve, this opens the door to more discussion. San Francisco Supervisor Peskin has been appointed a Commissioner on the California Coastal Commission. Bodega Marine Lab will be hosting a reception to introduce him to the community on July 28th. Richard will share more info.

Sarah Allen comments she would like to commend the team for this project. BLM is a terrific partner. She noted to consider what tribes to pull into I,t because they have lands and jurisdiction in the area.

Brian Christy asked if this is this a non-governmental organization (NGO)? Karen clarified that it is not an NGO; it is a United Nations (UN) designation and we commit to fulfill the mission as agencies. It allows the agencies' existing management structure to exist, and acts as a network of networks.

John Mellor asked about when changes in boundaries happen, if they have to clear through the UN with their boundaries. Karen clarified yes, when changes in boundaries happen, you would have to submit a review with maps.

Ecosystem Restoration in Bolinas – Kate Bimrose, Bruce Bowser and Veronica Pearson
[Kent Island Restoration/Green Crab presentation available here](#)

Bruce Bowser introduced Kate Bimrose from GFNMS. He mentioned that the GFNMS staff is great, upbeat, and involved, and has been happy to work with Kate on the projects in Bolinas.

Kate Bimrose, Bolinas Lagoon Restoration Project Coordinator, Marine Debris Project Coordinator, GFNMS

Kate gave an overview and updates of restoration projects occurring in Bolinas Lagoon. In 2008, the SAC released the Locally Preferred Plan (Bolinas Lagoon Ecosystem Restoration Project), which lists 25+ recommendations for restoration and management.

Kent Island is one of the projects in Bolinas Lagoon. Different parts of the island are inundated with water depending on the tides. Kent Island has gone through many changes over the years; the island has grown in size in terms of area and profile and there have been changes in vegetation. This vegetation is now affecting the island's natural ability to shift, move and transport sediment around the larger lagoon and has cemented the island. Most barrier islands are supposed to move and shift to help the resilience of the island and the lagoon's ability to adapt to storms. The island is capturing sediment which gets stuck in one place, impacting the overall function of the lagoon. Non-native plants on the island are also pushing out native species, changing the dynamics of the island.

Kent Island Restoration: We are in our fifth of year of the Kent Island Restoration volunteer program, which includes hand removal of invasive species on Kent Island. The program runs March through October. Marin County is the lead on all the Bolinas Lagoon Projects. Thus far, we have girdled trees and over the course of the next few years, the trees die. Native salt grasses have started to return, red fescue also has room to grow and expand. Some of the other natives have started to return, such as Pink Sand Verbena and Salt March Owl's Clover. We are not planting these; they are coming back naturally.

Part of the island has also started to shift and erode which is great. If anyone is interested in joining the project, Kate has a sign-up sheet.

European Green Crab Removal at Seadrift Lagoon: Seadrift Lagoon is tidally linked to Bolinas Lagoon. Greater Farallones Association, Romberg Tiburon Center, and Bodega Marine Lab have worked to remove invasive European Green Crabs. These crabs are linked to ecological and economic impacts, most notably the collapse of shellfish industries in New England. They were first spotted in the San Francisco Bay in 1989. This project is part of a greater removal project that extends from Elkhorn Slough to Tomales Bay. Crabs are removed, frozen and donated to farms and ranches as fertilizer, in a "surf to turf" full project. In 2009, there were 80,000 crabs; in 2012, they were down to 10,000; in 2013, there was no project funding; and in 2014, there were 300,000 crabs. By 2015 the population had collapsed dramatically; there were not enough resources to sustain a population of that size. Estimates for the upcoming year are 30,000 crabs. This year, we have funding to go out again for four weeks.

We also have a Bolinas Lagoon Bulletin – if you would like to sign up for that let Kate know.

George Clyde asked about what the long-term goals for the green crab are. Kate answered that locally, there has been discussion of introducing a natural predator, but there is no current plan. Barbara asked if these crabs are edible. Yes, but not widely used. Brian Christy added that someone was importing these green crabs into San Francisco, but he could not enforce anything since the state of California does not consider this species an invasive species. Many people grind them up for fish food.

Kate clarified that the ultimate goal is to get to a place where the crabs are self-sustained and other native species can reappear. Some shore crabs have come back, such as baby Dungeness, clams, oysters, and habitat. Loons, river otters, and birds are natural predators for the green

crabs. Joshua asked if these are subtidal crabs. Yes, they are. Bruce added that you can see them scurrying around in Seadrift. In order to get population estimates, we use the mark and recapture method.

Brian added that Massachusetts has a market for Green Crabs. They hold onto it and sell it. Joshua will check with California Fish and Wildlife to add Green Crab to invasive list.

The North End Wetlands Enhancement and Sea Level Rise Adaptation Project

Veronica Pearson: Marin County Parks

[Presentation available here](#)

Veronica Pearson from Marin County Parks presented on the Bolinas North End Wetlands Enhancement and Sea Level Rise Adaptation Project. The project is a partnership with Greater Farallones National Marine Sanctuary, Point Reyes National Seashore, Golden Gate National Recreation Area, and the communities of Stinson Beach and Bolinas. In 2015, the North End Project was developed. Phase I and II include the project goals of improving the function of Lewis Gulch and Wilkins Gulch Creek, enhancing riparian and wetland habitats, allowing for future expansion of Bolinas Lagoon as sea level rises, and alleviating roadway hazards. A site conditions report for Phase I was conducted. Three conceptual design alternatives were created based on the Phase I site conditions report, partner input, and technical expertise.

Elizabeth asked how much it would cost to do Phase I and Phase II; is it 10 million, 100 million? Veronica answered that the rough cost estimates for the whole project (Phases I-III) it would be in the range of 35 to 55 million dollars. With our partnership, our costs could be a lot lower because we would be working with the Parks Conservancy. A lot of the restoration work will be self-formed and self-recruited. We are tapped into a number of resources that we are able to utilize and keep restoration costs down.

Joshua asked if Bolinas Lagoon is excluded from Sanctuary boundaries. Maria clarified it is part of Sanctuary boundaries. They are taking into consideration limitations of certain things in our Sanctuary waters, like a retaining wall.

It was asked if steelhead salmon are recorded nearby. Veronica said that Wilsons Gulch Creek has steelhead recorded there. There are Coho salmon documented in Pine Gulch Creek. It is already rich with potential, and it is mostly being able to provide the access for fish to go higher into the tributaries.

LUNCH

PUBLIC COMMENT

Office of Law Enforcement Update – Brian Christy

We now have an officer in San Diego, Monterey (graduates end of June), processing the Santa Rosa position so that by the end of the year we would have a total of five officers. Office of Law

Enforcement (OLE) posted 5 special agent positions, 3 in California. By next year, we are hoping to bring four additional officers to the California coast.

Barbara asked when Dayna Mathews retires. End of 2018. Brian's position within NOAA Office of Law Enforcement is new and is being phased to attend Advisory Council meetings. Cea asked if patrolling would change with more personnel; do you have a vessel? Brian cannot get into details yet in terms of vessels. Aside from Marcos and Brian, there are only two other special agents.

Sanctuary Advisory Council (SAC) Business

Approve February Meeting Minutes: Bruce had a correction in regards to Tomales Bay Oyster Company permit: Mr Tod should be Mr Friend.

Motion: Joshua
Second: Barbara
Aye: all
Naye: 0

Verbal approval

Discussion: Elevating Alternate Seats: Elizabeth Babcock and Joshua Russo

The subcommittee reviewed the SAC charter and handbook; on page 15-18. Our interpretation is in a situation where the primary seat was not able to be at a meeting, that there was an alternate present that could represent that constituency's voice. The language says the alternates do not have to come to the meeting unless the primary cannot attend.

Pros of eliminating distinction of primary & alternate: diversifies the voices and could represent another data point, creating two equal seats validates the time of the alternates.

Cons: During voting we have to have a quorum. With the current structure, we have 14 members so we need 8 members minimum; if we eliminate that, we would have 28 voting members and require 15 members minimum. That could be very challenging for us; it may result in government agencies on our council being under-represented since the government agencies are often only able to send one representative. To change this would require changing our bylaws and sending up the pipeline to NOAA. There are also minor increased costs of staff time, food, and other expenses.

Our subcommittee spent a great deal of time deliberating the pros and cons of making alternates voting members. We weighed them carefully while considering the opinions of those alternates that answered the e-mail survey about their thoughts on the issue. Of the six alternates that answered the survey, only two supported the idea and only one of the two felt strongly that current structure should be changed. While we recognize the importance of giving every member of the committee a voice and we agree that every member should feel an equal part of this body, we believe there may be an easier solution. The current issue we perceive is that at least one alternate feels that they are a second class member of the committee. Every decision

that comes from this committee represents the collective consensus of all members, voting and non-voting. Because of this, we feel this is the most important issue to address. Making alternates a voting member may solve this issue, but the process of changing the bylaws is lengthy and involved. While allowing alternates to vote solves the one problem, it creates others.

We believe there may be other options that have fewer drawbacks. The most important thing to remember is that the non-voting positions are most definitely not intended to be lesser members; so if that is how some feel now or in the future, something is being done wrong. Either the importance of the positions or the reasons for them are not being communicated. It is possible that personalities between primaries and alternates or between any member and the committee are creating an atmosphere where someone does not feel that the decisions of the committee are reflective of their ideals. Our suggestion is to create a forum where new members of the committee are taught the importance of all positions as well as their intended equality. This could be a new member orientation, or something like a workshop at our annual retreat or during a regular committee meeting. While non-voting members are able to participate in the discussion leading up to the vote, perhaps also giving them a chance to comment after a vote would be helpful. This may be true of voting members as well. We see no reason why the chair couldn't recognize any member of the committee to make a comment if anyone has something they'd like to say after a vote.

Therefore, it is our recommendation at this time that we keep the structure of the SAC as it is currently outlined.

Barbara commented we are lucky that we started as a much smaller group. On the Monterey Bay Sanctuary Advisory Council, alternates have to sit behind primaries. We have always included alternates at the table and in the discussions. George introduced the idea originally since Cordell Bank's Sanctuary Advisory Council went through a similar change on their SAC. Part of the reason CBNMS did it was that alternates couldn't run for office. It has worked out well for Cordell and it does make recruitment easier. Regarding quorum, it did not make a big difference since on Cordell Bank's SAC, government agencies do not vote so there was no concern for diluting the government voice.

Richard is part of another council that is small as well and is a manageable and optimal group size, and would agree with the recommendation. Oliver added that it is the right recommendation, and might consider as a separate suggestion that the charter allows the superintendent to appoint the alternate to finish out the primary term, so if a primary leaves the alternate can be elevated to fill that seat (as the more senior person). He agrees it would change the dynamic if we change the voting members. He suggested that we could also just strike the term "alternate", which might help for recruitment.

Elizabeth added that George brought up a good point that we did not examine looking at alternates becoming officers. Dan added that Cordell Bank's council is half the size of Greater Farallones. Cea reiterated Oliver's point, saying that the process of an alternate being elevated does not need working group normal process, but can be bypassed by the superintendent. The SAC decided to maintain status quo for now.

Discuss Draft Resolution of SAC Supporting Established Site Configuration and Management Protocols – Richard Charter

Richard proposed a draft resolution of SAC Supporting Established Site Configuration and Management Protocols in response to the April 2017 Executive Order. We have noted that some of the similar executive orders have had a 15 day public comment period which is unheard of. If the Sanctuary review has something like a 15 day public comment period, it would be hard for us to get resolutions from our counties, so he has begun to craft a resolution. There is one in motion in Sonoma County. Marin County is looking at it on June 6 and Mendocino County is taking action on one. We want to have these ready for a 15 day public comment period. Our Sanctuary Advisory Council was the first to call for an expansion formally. Therefore, we propose a draft resolution that says that we do not think a review is necessary.

Language amendments: John Berge suggested to change ‘Pacific Current’ to ‘California Current’ and Bob Wilson suggested a different ending – “Therefore, the Greater Farallones National Marine Sanctuary Advisory Council hereby adopts this resolution of support for the existing duly-established geographic boundaries, Designation Document, and regulatory framework of this site, thereby concluding that any proposed external agency “review” of any aspect of the site would demonstrate there is full compliance with the required considerations during the expansion designation process.”

Elizabeth asked who would be requiring the review. Maria clarified the President requested the Secretary of Interior work with the Secretary of Commerce and Secretary of Homeland Security to do the review. There is definitely going to be a review; a big focus is looking at lost opportunity cost in regards to opportunities for offshore oil drilling.

Cea asked how the opportunities presented by the Sanctuary outweigh the opportunities for mineral exploration can be shown. Richard answered that in existing county resolutions they are plugging in dollar amounts. In ours, there are a couple studies we could reference, including the statewide economic study and NOAA economic study. We could reference that or plug it in. Joshua says I think what you are asking for is unanimous constituency support of this Sanctuary; however, this letter is saying more that we don’t want a review.

Cea suggests including some of the language from the review mandate to say what has already been included. Joshua recommends putting the data in a footnote.

asked Joshua clarifying questions on his request.

Maria said while we have been at this meeting she has been notified that NOAA will be leading the efforts for the Department of Commerce. The team is being led by John Armor, Jennifer Lukens, and Michael Wise. They have met with Department of Interior and will work to coordinate in the field and in DC. They have asked us to pull together information specific to the sites and present to the criteria outlined in the executive order.

Brian Christy asked for clarification on the difference between a sanctuary and monument. A monument can be designated by the president without a public process. Sanctuaries are

designated through an extensive, complex, and lengthy process. Our Sanctuary designation took 18 years.

Cea asked who funds these reviews. Maria clarified that they are funded by taxpayers.

Dan Howard said we are pretty confident that we have met all the criteria that was laid out in the Executive Order.

Motion to approve resolution of SAC support.

Motion: Barbara

Second: Richard

Aye: 8

Naye: 0

Abstain:1

Motion to approve resolution of SAC support was passed.

[Resolution available here](#)

Clarifications on SAC Low Overflight Report – Karen Reyna

Karen presented a list of clarifications needed from the SAC comments at the February 1st meeting regarding the Low Overflights Working Group report. Currently included in the report are the summarized Sanctuary Advisory Council members' comments/questions/discussion items from the meeting followed by staff clarifications/comments. Sanctuary staff have questions on how the SAC wants their comments addressed and/included in the final report.

George looked at the motion that was passed from the February meeting and it said: “Having reviewed the working group and associated public comments, SAC endorses this report and forwards it and all the recommendations to GFNMS while noting vote tallies and public comments received, orally and written, specifically the comments from the pilots, consistent with any enhancements our SAC may define as we go forward today.”

Regarding GR-2: Minimum Altitude

- The SAC recommends to include the FAA comments about congested areas in the final report.
- The SAC recommends to include Jaime Jahncke's comment “because there is no flushing event, does not necessarily mean there was not a disturbance; it could be a release of stress hormones or things that are less evident” as a comment in the final report.
- The SAC discussed whether or not they wanted a discussion of known or reported low overflight incidents in the report, and concluded it was not necessary to add into the final report.

Regarding Drakes Bay area-specific

- The SAC discussed Elizabeth Babcock's note that there is some scientific data that indicates it would be nice to extend the zone out more than 1,000 ft., and if this was a request for the Sanctuary to investigate if there is more information on disturbance distances. The SAC concluded it was not necessary to add into the final report.

Regarding GR 2-a: Exemptions for Emergencies or Weather

- There was a lot of discussion regarding weather and emergencies. The report does not include GFNMS regulations or policies. The SAC concluded it was not necessary to clarify GFNMS regulations in the final report.
- The SAC recommends to make the change to include the marine scientist's perspective in the body of the report [from Anne Morkill's editorial comment regarding that one perspective of the pilots is presented in the body of the report and the marine scientists' perspective is written as a footnote. She asked if this could be corrected].
- The SAC recommends the Sanctuary to request the FAA to forward any "emergency reports that may deviate from the regulations" to the Sanctuary and the Advisory Council as an informational piece. *Richard added that if you have public safety issues, reporting it seems good to inform future regulatory processes; it should come to the Sanctuary because it might inform future decisions. George clarified the best you can do is to request the FAA to forward it to the Sanctuary.*

Regarding GR 2-b: Permitting

- The SAC discussed if they want more information about the Sanctuary permit process and categories for permits and how many and how long we issue them in the report. The SAC concluded it was not necessary to add into the final report.

Regarding GR-3 Horizontal Dimensions of Coastal NROZs

- The SAC discussed whether or not they wanted a discussion about safe gliding distance to shore and what that means for different size zones. The SAC recommends that the sanctuary further investigate distance from shore. *Richard comments he continues to hold the same opinion as he did at the last meeting; existing zones are between a mile and a mile in a half; the recommendation was 1000 ft. Maria speculates that the zone was established based on the guidance that if a plane is 1000 ft. up, the safe gliding distance is a mile and a half; that may be how NOAA came up with the distance. Elizabeth added she thought that was a less conservative recommendation than she would have thought.*
- The SAC recommends that sanctuary staff investigate further "other wildlife values" such as whales, pinnipeds, foraging wildlife in terms of the horizontal distance.

Regarding GR 4-b: Improved Markings of NROZs

- The SAC discussed the issue of the 2,000 feet blue dots. The SAC recommends to keep the language of the report as is. *George added the working group spent 6 hours on blue dots. In the report, it is explained as clearly as can be. Not sure if there is a resolution that this group can come to today. Karen added that where there can be consensus is very helpful. Elizabeth added, in regards to the blue dots that they are ambiguous. Sarah Allen clarified it is federal land; the blue dots remain around the shoreline for the land. Richard added that from his personal experience that pilots like to get near rocks; a rational person is not going to do anything risky, but not everyone is rationale. Barbara asked why blue dots are going to dissuade these same irrational people. Bruce asked about the possibility of looking at the legends. Karen clarified that the SAC comments were mixed on this, but maybe the recommendation is for the Sanctuary to work with the FAA to figure out what would be best. Cea wanted to say how uncomfortable she was*

with the removal of the blue lines; the pilots talked about how they are successful in their education efforts and how this blue line is an educational tool. George answered that the blue dots dilute the low overflight zones, which are the magenta areas; this can be confusing for pilots. Cea added that we are also worried about low overflights in other areas offshore; removing these blue dots means you would have a large area that is not designated at all. Maria asked for a recommendation from this. Oliver asserts to keep it as is and forward the information.

General

- The SAC recommends to add Advisory Council comments and staff comments into report and elevate to “Advisory Council directions/recommendations”.

Discuss Fall SAC Retreat

Fall SAC Retreat Date: Wednesday October 4th, 2017

Topics: Accomplishments and Workplan, Benthic Habitat goals, Nautilus presentation, ROV, deep sea coral curriculum

Location: Point Reyes Boathouse on Drakes Bay

Tourism in the Sanctuary

Jenn Gamurot (GFNMS Sanctuary Advisory Council Coordinator) is representing Recreation and Tourism interests for Greater Farallones and Cordell Bank National Marine Sanctuaries for the West Coast Region Recreation and Tourism team. She is working with Office of National Marine Sanctuaries staff to create a survey that assess visitation to the sanctuaries, with questions to assess if people are aware that they are in a Sanctuary, what is their satisfaction, etc. Jenn has identified some members of the Advisory Council to help distribute and conduct surveys. Please let Jenn know if you would like to get involved. The window for conducting this survey is Memorial Day – Labor Day.

Richard mentioned the Sonoma Tourism Working Group is dealing with institutional constraints on tourism and they are dealing with that, and they may be able to help us out. Cea has been connecting with the Sonoma County Board of Tourism. They are well funded since some of their money comes from transportation tax. It could be an excellent opportunity to promote the sanctuary and promote certain behaviors. They publish maps and other outreach materials. It is a wonderful opportunity to engage and educate. Jenn will connect with Cea on this.

Jason Brand said the Coast Guard boats could try to pass the survey out to boats. Jenn will email out survey to the SAC.

The SAC reviewed the survey and suggested some wording changes.

Elizabeth recommends rephrasing the last question to ask where visitors are coming from.

Brian Christy suggested changing question number 7 on witnessing visitors interacting with wildlife. He suggested changing the wording to “what kinds of wildlife did you see? Did you have any negative experiences”? He noted that this is a subjective topic and a lot of times people

will say yes, wildlife was disturbed, when it may not have been. Jenn clarified that the question asks if you see someone disturbing wildlife, did that negatively impact your experience?” Maria asked if the SAC was requesting the language change to read “Did they have an interaction with wildlife” or “did you witness someone else interacting”? Other suggestions included “how did the wildlife react to your presence?” “Are you limiting this to animals or plants?” “Did you notice any negative activity by other visitors?”

Oliver asked if this will only be done on paper in person, or will you do electronic surveys? Jenn answered the survey is electronic on Survey Monkey as well. Bruce also added that West Marin Association is working in a similar way to find out about visitation. Bruce can put Jenn in contact. Richard added that bright paper does really well.

Saturday August 12th is our annual Get Into Your Sanctuary Day, a system wide initiative to promote public visitation to sanctuaries. All sanctuary sites have special programs and events that day. The Sanctuary will be hosting a Whale Watch into the Sanctuary and tidepooling at Fitzgerald Marine Reserve, among other activities. There is a photo contest and social media campaign leading up to this. More details will follow this summer.

Sediment Management Working Group Update – Cea Higgins, Chair

Cea gave an update on the Sonoma/Marin Coastal Sediment Management Working Group. When she last gave an update, it was at the beginning of the process and the planning stages. Since then, they have had two successful working group meetings and are halfway to the goal of developing climate smart sediment management recommendations for specific priority areas on the Marin and Sonoma Coasts. The recommendations will be presented to the SAC at the November meeting for discussion and approval before they are forwarded to the Sanctuary for consideration in the final Regional Sediment Management Plan.

A brief overview of the Working Group timeline and broad topics of discussion:

- Meeting 1 (Point Reyes Station): Setting the Stage and Reviewing Information
- Meeting 2 (Santa Rosa): Making the Recommendations
 - o *In between: Engage Technical Advisory Committee (TAC) to provide regulatory and permitting guidance
- Meeting 3 (Bodega Bay Grange): Determining Governance for Selected Projects
- Meeting 4 (San Rafael): Approving the Final Plan

We tried to vary the locations of the meetings to meet the needs of the members represented from both Counties. Those at the table include NPS, State Parks, Regional Parks from both counties, Marin & Sonoma planning departments, The California Coastal Commission, Caltrans, Sonoma County Water Agency, SAC members, US Army Corps of Engineers, Fisherman’s Association and several NGOs. The upcoming TAC sessions will in engage more players such as the US Geological Survey, Federal Emergency Management Agency, San Francisco Bay Conservation and Development Commission, National Marine Fisheries Service, State Lands Commission, & State Coastal Conservancy. We are doing our best to reach our process goal of outreach to ensure participation and also having a well vetted outcome.

The first meeting focused on familiarizing the working group with timelines, roles, guidelines, and existing data, and we also pooled their knowledge of areas of concern for sediment management (areas either currently at risk of flooding, over-sedimentation, or erosion) on both coasts as well as what criteria would be used to prioritize those areas.

In between March & May 17th (the 2nd meeting), staff compiled the gathered information (both existing and from the working group's input); had several internal meetings as well as meetings with partners such as Caltrans & MBNMS; did extensive shoreline change analyses using Geographic Information Systems (GIS) mapping tools; and created maps and tables presenting priority areas that were identified and located within areas of existing or predicted shoreline change for two climate change scenarios (accounting for variations in SLR predictions) over three projected timelines of 10, 30, & 50 years.

A list of areas of concern for Sonoma and Marin were presented to the working group at the May meeting. The working group reviewed the areas of concern but decided to prioritize through the recommendation process. They did not want to rule areas out until they had the chance to consider all possibilities. GFNMS staff then introduced the group to relevant Sanctuary regulations that would impact recommendations as well as reviewed climate smart strategies to consider including protecting and restoring habitat, beach nourishment, living shorelines, managed retreat, promoting education, investing in science needs, moving away from coastal armoring & preserving public access if feasible.

The various agencies and groups represented worked together in small groups to formulate specific recommendations over projected timelines using these recommendation worksheets. They also considered informing factors such as economic feasibility, regulatory guidelines, visual or scenic impacts, impacts to vulnerable communities and the environment.

The next steps are to review and compile the recommendations as well as integrate the regulatory and permitting processes to help develop the governance structure to implement the recommendations, which will be the focus of Meeting 3 at the end of summer.

Maria asked if there is any recommendation or advice from the SAC for Cea to pass on to the working group. Cea noted that looking at Scotty Creek, the timeline of the Sediment Management working group does not meet the timeline of the permitting process, since this project is already under review. Based on their experience this morning or during this meeting, if anyone has any specific recommendations, please give to Cea sooner rather than later. Ask that we look as a Sanctuary Advisory Council to submit comments.

It was asked what the fishing industries involvement is in the working group? One reason they are involved is the one source of dredging comes from Bodega Harbor. Richard asked if the Working Group meetings are closed. Cea clarified that they were closed unless it was determined that it would be beneficial to open up to the public. Richard expressed some interest in attending. He also added that he would not worry about the timeline for Scotty Creek, as things could happen there similar to Bolinas Lagoon. Cea is worried that Scotty Creek becomes the negative precedent with how to deal with coastal erosion.

Monitoring Greenhouse Gas Emissions to Improve Operations at Greater Farallones National Marine Sanctuary: 2015 GFNMS Emissions Report – Brian Johnson, GFNMS Deputy Superintendent
[Presentation available here](#)

The Emissions report looks at the three GFNMS buildings in the Presidio with 30 staff. Green Operations planning started in 2006 to address climate change impacts in the region. The Green Operations Plan was developed by the Advisory Council in 2008.

The Climate Leadership In Parks (CLIP) tool is a macro enabled Excel spreadsheet that converts greenhouse gases into one number so yearly comparison can be made. The CLIP tool was used for measuring emissions at GFNMS.

The process involved setting targets, measuring emissions, and modifying behavior. There are four categories for reduction targets: energy, transportation, water, and waste. GFNMS met our energy and transportation targets for 2015, but missed the water and waste targets. We have set 2020 targets for energy, transportation, water, and waste. To reach these, GFNMS is prioritizing actions such as converting to LED lighting, installing high efficiency appliances, repairing and weather stripping windows, purchasing Green Power, changing telecommuting policies, paying for carbon offsets for air travel, improving or eliminating irrigation, installing low flush toilets and water faucets, purchasing green products, and meeting Recology's 2020 Waste Zero goal.

We are encouraging information sharing, including with other national marine sanctuaries leadership, Park partners, Advisory Councils, and on the website.

Observations include that although there are various measuring tools, the results are very important; trends and data can be used to drive change in policies and behaviors; organizations are dynamic; and transportation targets are the most challenging to meet.

Member Reports

Joshua Russo, Maritime Activities/Recreation – California has regulated ballast water discharge that is a source of invasive species. Last month they passed a regulation to regulate hull fouling as well. California is the first state in the nation doing this. It codifies what is viewed as best practices, and creates a framework to regulate and enforce them. We had also been in contact with a company that has been using infrared cameras for whales. They just got a grant to put a system on a whale-watching vessel in Channel Islands called the Condor Express.

Elizabeth Babcock, Education – There has been some progress at the state level to advance environmental education. It would increase funding for the California Regional Environmental Education Community (CREEC). Trying to get an additional \$14 million to those four regions. Elizabeth will keep you posted next time if it has passed. We are looking at doing another *Nautilus* Broadcast this summer at Cal Academy of Sciences. Elizabeth will send out information.

Barbara Emley (Maritime Activities/Commercial) ceded her time to John Mellor, who gave the report for Maritime Activities/Commercial.

We are happy to see the waters returning to their normal form after the Blob, El Niño, domoic acid and all the repercussions. We are in a krill style regime with the cold water upwelling and it looks very productive. John is also on the CA State Whale Entanglement Working group, and there has been incredible progress there. The group consists of NGOs, scientists, agency folk, and all are collaborating and working well together. The group is working on developing data loggers: a tool for management to see where the traps are. This year there have been few entanglements so far. Past years have been a perfect storm for entanglements; anchovies were driving whales in closer to shore, domoic acid closures forced people to fish in April, etc. Moved the Rockfish Conservation Area line for the first time in a long time. Crab season opened on time this year. It seems like the ecosystem is in good shape. Normally crabs mate in March/April; this year they are still biting rather late in the season.

Dominique Richard, Community at Large Marin/Sonoma – Dominique volunteers at Drakes Bay for Beach Watch, but it has been closed for the past two months due to road closures. Last week he was at Horseshoe Beach for a marine debris survey and saw two whales that were dead.

Steve Mietz (Acting Superintendent at Point Reyes National Seashore) and Ben Becker, National Park Service – Ben Becker presented about the big clean up at Drakes Estero. The project removed debris, non-native oysters, oyster racks, and sandbar debris. There were 2.8 million pounds of metal, plastic, debris removed. The project wrapped up three weeks ago and now the Park is doing post-restoration monitoring.

*John Berge asked if some of the negative impacts would potentially be seen at Tomales Bay oyster farms. Ben said they did not have rack culture there. John Mellor asked in reference to the whale with the rack on its head, if they saw any type of rack similar to that? Ben said they found wooden rack systems. There is the floating bag method as well in Tomales Bay. Dan asked if they are doing any removal of the *Didemnum vexillum*. There was a lot of die back on the eelgrass.*

Sarah Allen, National Park Service – There is an international Marine Protected Area (MPA) meeting down in Channel Islands next month. NOAA and Latin America countries are involved. There are a few upcoming MPA collaborative meetings.

Richard Charter, Conservation – Off the coast of Santa Barbara County, 29 offshore oil rigs are nearing the end of their useful life of production. Three of those are ready for recommission. Oil industry is not in a big hurry to take them away. The oil companies would like to cut them off and leave the stubble of the jacket legs and dump or take away. They have a bill SB588 by Robert Hertzberg that would create a financially advantageous situation for the companies that want to decommission these and makes it more advantageous for new projects to be in more remote areas. Santa Barbara County Board of Supervisors opposed the SB588; oil industry decided to have a hearing with people in DC. On the website stopcaliforniaoceandumping.org you can track rigs to reef issue. State Lands is the lead agency. This would create the new one stop shop for considering all permits for decommissioning. This is a big debate playing out in Washington.

Bruce Bowser, Conservation – Bruce is helping lead the Sanctuary Explorations Tidepooling trip this Sunday May 28th at Duxbury Reef. He is chair of downtown Bolinas Parking and Traffic Committee. Successful meeting with Coastal Commission. Set up special parking for residents (20 spots) to alleviate parking problems on weekends and high surf days.

Oliver York, Youth – Wanted to thank you all for a good year. He has enjoyed coming here. As a student, this is what government is supposed to be, not only gathering people who care, but also having a variety of interest groups involved and in the same room. These meetings have been a wonderful chance to meet people. Even though Oliver is graduating in the next month and headed off to Harvard next year, he will be involved in a couple projects over the summer. Interested in attending board of supervisors meeting, voting members, tourism survey. Maria added that she has been very appreciative of his insights and contributions to the council.

Cea Higgins, Community at Large, Mendocino/Sonoma – Regarding the *Verna A* shipwreck, Parker Diving Services responded the day of the wreck; the wreck became subject of interest of art, photos. It was also a public safety concern; there was hazardous debris and the beach was littered. There were several cleanup efforts. Natural processes took over and the boat is now not visible. All you can see is the very top of the boat. Cea attended the Mendocino College Coastal field station workshop on March 31st. They were happy to have the sanctuary presence at the meeting. Look at the field station as a potential retreat site. Took time to meet people up in the area. They are having an event “Discover our Lands” at the Point Arena Lighthouse on June 3rd.

George Clyde, Community at Large Marin/Sonoma – Have a good holiday weekend!

ADJOURN