



# CORDELL BANK NATIONAL MARINE SANCTUARY SANCTUARY ADVISORY COUNCIL

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## MEETING MINUTES

April 27, 2017

9:30 AM

Point Blue Conservation Science, Palomarin Room, Petaluma, CA

Note: The following meeting notes are an account of discussions at the meeting of the Sanctuary Advisory Council for Cordell Bank National Marine Sanctuary (CBNMS). The council is an advisory body to the sanctuary superintendent. The opinions and findings of this publication do not necessarily reflect the position of CBNMS and the National Oceanic and Atmospheric Administration (NOAA).

### **Call to Order/Roll Call** (George Clyde)

George Clyde, Advisory Council Chair, called the meeting to order at 9:30 AM and welcomed everyone. Lilli Ferguson, advisory council coordinator, then called roll.

### Nongovernmental Members Present:

George Clyde (Chair; Community-at-Large – Marin County)

Mike Cummings (Community-at-Large - Marin County)

Lance Morgan (Conservation)

Sarah Hameed (Community-at-Large – Sonoma County)

Bill Wolpert (Community-at-Large – Sonoma County)

Leslie Adler-Ivanbrook (Education)

Bec Detrich (Education)

Richard Ogg (Fishing)

Noah Wagner (Fishing)

John Berge (Maritime Activities)

Kevin Krick (Maritime Activities)

Tessa Hill (Research)

Jaime Jahncke (Research)

### Agency Members and Alternates Present:

Brian Johnson (Greater Farallones National Marine Sanctuary [GFNMS] Alt.)

LCDR Jason Brand (United States Coast Guard [USCG])

### Members of the CBNMS staff present:

Dan Howard (Sanctuary Superintendent)

Michael Carver (Resource Protection coordinator)

Lilli Ferguson (Resource Protection Specialist and advisory council coordinator)

Danielle Lipski (Research Coordinator)

Jennifer Stock (Education and Outreach Coordinator)

### **Review and Approve Agenda** (George)

The advisory council reviewed the agenda. The NOAA Office of Law Enforcement Report would not be given as planned, since Dayna Matthews was unable to attend the meeting. George suggested Dan Howard show some films from the San Francisco International Film Festival. For the CBNMS Resource Protection Report, Michael Carver, the CBNMS Resource Protection Coordinator, was present at the meeting, and so would give the report instead of Lilli. With those changes, the advisory council unanimously approved the agenda.

### **Review and Approve February Meeting Minutes (George)**

The advisory council reviewed the February 2, 2017 meeting minutes. Bill Wolpert asked that in the Members' and Alternates' Reports section, his report be corrected to note that the Sonoma County Climate Action Plan: 2020 and Beyond was still in mediation, so was not complete yet. With that change, the advisory council unanimously approved the minutes.

### **Advisory Council Business - Chair and Vice-Chair Election (George and Lilli)**

- The officer terms of the current Chair (George) and Vice-Chair (Kevin Krick) end in April, and the new officers terms will begin after the election, after this meeting, Lilli noted.
- Lilli reviewed the election process and procedures, the discussion that took place at the February meeting regarding people reaching term limits, and the status of nominations. Kevin, Sarah Hameed and Bill were nominated to serve as Chair. Lilli let the advisory council know after the February meeting that Bill after thinking it over, declined to accept the nomination. Sarah announced to the group that she was declining the nomination for Chair.
- Lilli stated for Vice Chair, the nominations were: Sarah, Leslie Adler-Ivanbrook, and Jaime Jahncke.
- Sarah elaborated that she removed her name from consideration for Chair as she is not able to take on the role at this time and there is another candidate willing to do so. For Vice-Chair, her member term ends before the officers' terms would end, so she urged the advisory council to consider selecting one of the other candidates.
- Dan noted he did not think that should be a barrier to her election, as an interim election to temporarily fill the officer seats could be held by the advisory council at the appropriate time [as discussed at the February meeting].
- Leslie commented she was excited to be considered for Vice-Chair, and was dedicating to participating as well as supporting the education constituents of the advisory council.
- Jamie said his member term would also be reaching its limit, and thought it would be a good chance to run for the role. He would like to understand what we do from the inside and thinks it would be a great opportunity, even with a full plate.
- Kevin observed the advisory council has seen him in action as Vice-Chair, including stepping up to chair a meeting. He would be honored to serve as chair.
- After the ballots were cast and counted. Lilli announced the new Chair would be Kevin, and the new Vice-Chair would be Leslie.
- Dan and Lilli thanked George for his service as Chair and Kevin for his service as Vice-Chair.

### **Sanctuary Superintendent's Report (Dan)**

- Though there was no budget yet, Dan expected a short term Continuing Resolution (CR), or a CR for the rest of FY 17, might soon be passed by Congress. It would likely mean level funding. There had been a proposal to decrease the NOAA budget by 18% and zero out "coastal management agencies" (which could have referred to Sea Grant); however, the last internal news Dan received was optimistic for the FY 18 budget.
- Some concern was expressed recently to Dan about term limits for all advisory council participants, that having both a primary and alternate for a given seat exit at same time could be problematic, if an incoming person was unclear on their duties, and for recruiting two people from the same constituency. Dan said these things have not been an issue in the past and Lilli has been working hard to get the recruitment cycle in order is in terms of regular rotation of seats. Dan wants to keep the recruitment as it is now, as the process is working fine and we are where we want to be. Down the line, if there are problems with new member contributions, he will consider looking at this again.
- The National Marine Sanctuary Foundation (NMSF) now has board members assigned as liaisons to the sanctuary sites; for CBNMS, the liaison is Adam Lowry. Adam met the staff. Dan would like to have him meet Bob Van Syoc and maybe come to a Cordell Marine Sanctuary Foundation (CMSF) board meeting.

- President Trump's evaluation of monuments has been in the news; no one knows what will come out of it. A preliminary report is due in 45 days and a final report in 120 days. Some stakeholders were upset about the designation of Bears Ears National Monument. Some have suggested changing the Antiquities Act. There has also been talk of oil and gas development and the California Coastal Monument. NOAA has not planned any listening sessions. There has been some misunderstanding about the different designation processes for monuments (done under the Antiquities Act) and for national marine sanctuaries (done under the National Marine Sanctuaries Act or by an act of Congress).
- Some Office of National Marine Sanctuaries (ONMS) human resources actions have recently taken place. Jim Delgado stepped down from leading the Maritime Heritage Program and is now with SEARCH in Florida. ONMS is figuring out how to move forward with backfilling positions; the hiring freeze may affect the decision. For Florida Keys National Marine Sanctuary (FKNMS), after an investigation into some of the management practices and an anonymous claim of a hostile work environment, the superintendent, Sean Morton, was reassigned to work at the National Centers for Coastal Ocean Science (NCCOS) Center for Coastal Environmental Health in South Carolina. The FKNMS deputy director, Mary Tagliareni, was reassigned to Thunder Bay National Marine Sanctuary as deputy. Billy Causey, ONMS Southeast Region Director, was reassigned to the Marine Protected Areas Center to assist with international marine protected area development. In the short term, Ed Lindelof and Lisa Symons will continue acting as FKNMS Superintendent and Deputy Superintendent for FKNMS. Reed Bohne, Northeast and Great Lakes Region Director, will be acting temporarily as the Southeast Region Director. Russ Green went to Wisconsin to act as liaison for the process to designate a national marine sanctuary in Lake Michigan. Becky Holyoke is on a temporary detail to NCCOS, serving as Acting Deputy Director.

### **Monitoring Greenhouse Gas Emissions to Improve Operations at Greater Farallones National Marine Sanctuary (GFNMS) (Brian Johnson)**

- Brian Johnson, GFNMS Deputy Superintendent, noted GFNMS had been making efforts over many years to reduce greenhouse gas emissions associated with sanctuary operations. This could serve as a guide for CBNMS moving forward. People can reduce their carbon footprints wherever they work.
- The GFNMS effort examines what has been happening at its San Francisco facilities at Crissy Field, where it has three buildings and a staff of thirty. The GFNMS ocean climate program began in 2004-5 and planning for green operations began in 2006. The vision is to improve energy efficiency and energy conservation of the San Francisco facilities. Steps include setting targets, measuring emissions, and modifying behavior.
- GFNMS drafted a green operations plan with a group of stakeholders. The group came up with measurable reduction targets for actions in five categories.
- Brian uses a Climate Leadership in Parks (CLIP) tool to input information on activities, and get emissions data as output; year 2008 is the baseline. Their report, with results, is on the GFNMS website.
- Results varied for several reasons, including where efforts were placed to achieve emissions reductions, the addition of a building, a change in mission, how realistic a target was, etc. They hit some targets but not others – there were challenges and successes.
- GFNMS requested ONMS to allow employees to telecommute up to two days per week, and that request was granted.
- They have carpooling parking spaces. Sometimes, carpooling is difficult based on where staff live.
- Getting to GFNMS on public transportation is not currently as convenient as desired; there is bus that goes around the Presidio several times a day, but no MUNI bus.
- A source of clean power is currently not available to GFNMS; however, the staff is working on getting biodiesel for use by the Research Vessel Fulmar.
- Air travel ebbs and flows, with budget a factor influencing that.
- The lawns were not irrigated during the drought, and high efficiency water fixtures were installed.
- GFNMS is continuing to work on other actions to reduce emissions, such as getting electric vehicle charging stations.

- All of the other sanctuary superintendents have received a version of this presentation, and Brian is available to provide advice to others about this kind of process. For example, he made a similar presentation to staff of the Golden Gate National Recreation Area.

#### **Proposed United States Coast Guard Discharge Rule Update (Dan)**

- The draft environmental assessment on the proposal to allow USCG discharges of sewage [untreated, and graywater not meeting the regulatory definition of clean] and discharges related to live fire and search and rescue training in the expansion areas of CBNMS and GFNMS is still in clearance. Dan had hoped to review and discuss it at this meeting. The two agencies have some similar missions, and we want the proposed solution to meet both our needs.

- Lilli added the headquarters staff hoped to get the USCG comments and publish the draft documents, along with another notice delaying the CBNMS and GFNMS regulations with respect to USCG discharges in the expansion areas by June 9, with a comment period to include the upcoming advisory council meeting.

- LCDR Jason Brand noted the USCG and sanctuary staffs have done good work locally, and have drafted some good alternatives so far.

#### **Viewing of Select San Francisco International Film Festival 2017 Films (Dan)**

Dan said CBNMS sponsored the student film completion again this year. He has stepped off the film festival board. There were close to 100 submissions; the top ten high school and top three middle school films were shown during the festival. Overall, the films were fabulous. He showed a few of the student films to the advisory council.

#### **Public Comment**

There was none.

#### **Crab Recruitment Research and CBNMS (Sarah and Christy Juhasz)**

- Sarah shared some of her dissertation work, working with about eight years of Applied California Current Ecosystems Studies (ACCESS) data on the crab larvae that were collected. Christy Juhasz, of the California Department of Fish and Wildlife (CDFW), followed, talking about Dungeness Crab.

- Most marine organisms look and behave differently as larvae than as adults. The study of larval abundance is about production, transport, and survival. The ACCESS data set covers almost a decade.

- The old idea of crab larvae along the California coast was they all mixed up in the water column, from different populations and species, with the larvae having no control over where they were transported.

- There has been a lot of evidence, including from the larvae abundance data she studied, that this is not a good sense of the story about how larvae operate. Some crab larvae keep closer to shore, some traverse the shelf, and some go off the shelf; different species exhibit different behaviors that allow them to be transported in different ways.

- The study showed that the patterns of larval distribution for different crab taxa hold across the shelf across years.

- Regarding if there were oceanographic drivers associated with larval abundance across space and through time, there is some distribution variability from year to year, not well explained by environmental data (when all species are lumped). There were some associations with primary production.

- Christy brief the group on the long-term Dungeness Crab light trap study. The Dungeness Crab fishery has been ranked as number one for revenue to fishermen for the last five years; she reviewed the regulations for and management of that fishery, then the Dungeness Crab life cycle. This area is the southern edge of the Dungeness Crab range. Using landing data that goes back to the 1916-17 season, the data shows no overall long-term decline in the landings. About 90% of the males have been removed by the fishery.

- The study focuses on the last larval period of Dungeness Crab (megalopae); they are trapped in Bodega Bay and in two other California locations in light traps. The scientists look at the abundance and at the sizes of the individuals. Pulses of larvae arrive during the spring settlement season.
- Megalopae annual abundance varies; there are several orders of magnitude at each site and there are orders of magnitude between sites each year. Regarding the average size of individual megalopae, there are significant differences in size between years, and significantly larger megalopae some years north vs south, with different patterns of average size over time each year.
- In the future, they will link the megalopae time series with local ocean conditions (tides, temperature, salinity, etc.) and oceanographic indices.
- CDFW does this work in collaborations with a number of partners, including Bodega Marine Laboratory.

### **Draft ONMS Strategic Plan (Dan)**

- The draft ONMS Strategic Plan has been out for a while for comment; the comment period ends April 30. This plan is unlike most agency strategic plans in that it tries to lay out priorities for a five year period in an accessible manner that is easily understood. It contains principal goals, with strategies and objectives. Some activities are broad and some are specific.
- The plan does not cover everything ONMS does. An example of a very specific priority is to collaborate with partners to establish a new visitor center or public facility adjacent to the expansion areas of CBNMS and GFNMS. Just because an ONMS function is not in the plan does not mean it is not important.
- People can comment as individuals. Or, as desired, advisory councils may put forward a motion, for advisory council discussion and action.
- After consideration of comments, ONMS will publish a final version of the plan, likely in the summer or fall. ONMS will try to fund some of the activities in the plan, or items aligned with the plan.
- There was a comment about wanting to see the area covered by the three sanctuaries (CBNMS, GFNMS and Monterey Bay National Marine Sanctuary [MBNMS]) included in some of the activities, along the lines of the sentinel site activity for Olympic Coast National Marine Sanctuary (OCNMS). Dan responded that though it is not in the plan now, that does not necessarily exclude us from pursuing those kinds of activities in the future. CBNMS and its partners are also already doing monitoring activities similar to those in OCNMS.
- Someone asked why was there not a greater call to rally the public in support of oceans, when there is so much evidence oceans are collapsing? That is part of the outreach work, but raising awareness should not be the only objective for the next five years. ONMS also needs to understand ocean resources and manage and protect the resources.
- CBNMS has its own Management Plan, which is more specific than the draft ONMS plan.

### **CBNMS Research, Education, and Resource Protection Reports (Danielle Lipski, Michael, and Jennifer Stock, CBNMS)**

Research: Danielle Lipski, CBNMS Research Coordinator, noted the research program focus is on getting information that can be used for management of the sanctuary. This includes knowing the condition, health, and status of the sanctuary's resources and habitats.

- Three ACCESS cruises are planned, for late May, early June, and late September. People who wish to go out one day may let her know. There will be some graduate students helping.
- She has planned for two benthic surveys coming up, using remotely operated vehicles (ROVs). The first, [with the Ocean Exploration Trust] is on the vessel Nautilus, August 6-14. She, Dan and CBNMS Education and Outreach Coordinator, Jennifer Stock, will be on board the vessel. People can join online any time of day at Nautilus.org. The scientists will explore some areas of the sanctuary that have not been explored before. The ROV, tethered to the vessel, can take physical samples, a capability that CBNMS does not normally have. There will be opportunities to chat with the people on the vessel. Some mapping will be done, including in the area of the historic vessel. The CBNMS ROV survey will be August 20-29,

using a ROV the National Marine Fisheries Service has provided to CBNMS. It will characterize the seafloor, returning to previous survey areas as well as going to new ones, the data obtained will be part of the long term-monitoring effort.

- In September, the hypoxia buoys (deployed in April 2017) and the acoustic buoy (deployed two years ago) will be retrieved.
- Money that came from a settlement with the Navy will be used for acoustic research. Dani thought this research would focus on Southern California, Washington, and the Pacific. Some of the research will be in sanctuaries. CBNMS does not have a lot of impact right now from Navy noise, but addressing noise is a priority issue across the sanctuary system.

Resource Protection: Michael, CBNMS Resource Protection Coordinator, noted there have been no incursions, per Dayna Matthews, according to Vessel Monitoring System (VMS) data – no one has crossed the line. Some fishing vessels carry a VMS, and if they fish where they are not supposed to be, the system sends a signal [to the authorities]. A member clarified that the system sends a ping all the time. The fishermen are only allowed to fish outside the Rockfish Conservation Area (RCA). If the people monitoring a vessel notices it doing any odd movements within the RCA, they call and ask the captain what he or she is doing. It is OK to transit the RCA. Fishermen can use GPS waypoints to determine if they are in the RCA or not.

- There is a Joint Enforcement Agreement (JEA) by which NOAA provides money to the State of California. There have been no reported violations in CBNMS.
- We give money to CDFW enforcement officers. Michael met with a group of CDFW officers and went through the CBNMS, GFNMS and MBNMS regulations.
- Nicole Capps from the ONMS West Coast Region does training for U.S. Coast Guard boarding officers in Alameda.
- Michael asked Lilli, CBNMS permit coordinator, to speak briefly on recent permits. She stated there were two new permits issued, and two permits pending, since the last advisory council meeting. There was a brief discussion about the activities allowed by the permits; permits are for activities that would otherwise be against the CBNMS regulations, and for which there is a good justification to allow them, such as for research that adds knowledge about the sanctuary. Permits for research purposed may cover things like discharges or disturbance of the seabed.
- Michael then reviewed the voluntary Vessel Speed Reduction (VSR) project, which aims to reduce ship strikes of whales in the San Francisco Traffic Separation Scheme. Letters went out to 105 shipping companies/industry groups that had vessels greater than 300 gross tons and five or more transits during the period the recommendations were in place. The letters included statistics on the percentage of time the ships voluntarily followed the recommendations to slow down. About 27% of ships followed the VSR in the most recent year, compared to almost 19% the year prior. Dani did the data analysis. The sanctuaries are collaborating with the Air Quality Management District (AQMD), which is providing funds to serve as an incentive to have ships voluntary follow the VSR recommendations. There is also a proposal to use Benioff funds for this topic, possibly starting with voluntary VSR around the Channel Islands. On the East Coast, the NMFS Protected Resource Division has provided funds to support similar efforts there.
- Members of the CBNMS and GFNMS staffs had a retreat to discuss resource protection and collaboration among the two staffs. Resource protection topics of high concern to both sites were prioritized, and the staffs will continue discussions about working together efficiently to achieve mutual goals.

Education and Outreach: Jennifer reviewed the status of the 2017 pilot program for Winged Ambassadors. She and Leslie received a small Hands on the Land grant, to pay for Leslie's time and buses for students in the 5<sup>th</sup> and 7<sup>th</sup> grades, from two schools, to get to field trips. There program included classroom activities, setting a marine debris transect and sampling for microplastics. After the last field trip, Jennifer will conduct evaluations with the teachers and students. One goal will be to determine if the program can be scaled up to more schools or not.

- The nominee from CBNMS for the NMSF Volunteer of the Year is Phil Takata, a teacher. His students, as part of service learning, worked on transcripts of Jenny's radio program. Though the award is one person, the whole class was involved in the work.
- The Nautilus Live project features live streaming during the expedition.
- Using a small grant from the NOAA Ocean Acidification Program, the West Coast Region education team is piloting a tool, which would synchronize with a phone, to test for ocean acidification. They will compare results with scientist who are monitoring ocean acidification to compare results. A high school curriculum would go with the tool.
- World Ocean Day at the Oakland Museum of California is June 9. There will be a short film festival.
  
- Though not part of the agenda, Michael briefed the group on some office operations items. Soon (timeline unknown), the CBNMS office will be compliant for accessibility with the Americans with Disabilities Act.
- Related to research, he will be picking up the new-to-CBNMS ROV and getting it ready for the upcoming cruise. Thanks to the CMSF, it will have new lights.
- The office will have a new hybrid plug-in van soon.

#### **CMSF Update (Bob)**

- Bob said two new members joined the board. One will contribute legal knowledge and referalls to legal specialists. Sarah is the other. Seven out of nine board positons are filled. People can let him know if they know of someone who might be a good fit.
- About \$10,000 was raised via a year-end appear to donors. This will enable the CMSF to fund most of Dan's requests.
- Kris Sarri hired a new web/marketing director, is reaching out to sanctuaries' friends groups, and has board members working as ambassadors to different sanctuaries. Bob would like to meet the CBNMS liaison to see how they can collaborate.
- The next board meeting is May 3.
- Bob asked people to reach out to members of Congress to support sanctuary matters and budget. The CMSF is also doing that. If people want to help support these efforts, they can contact him via email.

#### **Members' and Alternates' Reports (advisory council)**

Dick Ogg – participated in a phone call the morning of this meeting on whale entanglement, a coast-wide issue. It is not easy to determine how whales get entangled in gear, but the group is looking at ways to determine where whales are, what can be done with existing gear to prevent whales from getting tangled, etc. On fishing, crabbing has fallen off. He is still currently helping with the gear efforts, for line profiling and gear locations, otherwise his gear would be out of the water. He described the plans for salmon season, when and where fishing will be open. He was not sure why fishing was allowed in August and September as that is when fish that are ready to spawn are present. Regarding smolt release, he felt net pens were probably the best way to release smolts. If released anywhere in the area, the stripers, birds and seals could get to the smolts while they were groggy. If released inside Bodega Bay, that would not be the right way, as they do not want them to imprint there.

Sarah – there was a march for science day in Santa Rosa the Saturday prior to this meeting. The Saturday following the meeting, there will be a march for action in Santa Rosa and Sonoma. A crab feed is also taking place. Regarding the Bodega Marine Laboratory seminars, some sessions will be videotaped, then posted for online viewing. There are also U.C. Davis (main campus) presentations, which sometimes includes Coastal and Marine Science Institute presentations.

LCDR Jason Brand – Dan's update in the morning covered some of the progress on the discharge rulemaking issue. LCDR Brand is also a part of the whale entanglement group. That group will meet again in a month. He is on the Pacific Fishery Management Council, which is working on sustainable

swordfishing. They are doing exempted permits for them right now. There is new set gear for swordfishing. Lance Morgan said that should eliminate some entanglements with sea turtles and marine mammals.

Lance – a number of people are pushing back on the Executive Order (EO) regarding reviewing terrestrial and marine national monuments, and it pushes over into a review of national marine sanctuaries and other marine protected areas (MPAs). There is a Congressional hearing on MPAs. His group is trying to urge scientists and others to weigh in on the value of MPAs. The President can designate areas as monuments. The ability to revoke monuments has not been given to anyone; this is why this EO is a review. Likely Congress would have to revoke a monument, if they desired to do so. Tessa Hill added one of the concerns is the areas being formed without incorporation of significant stakeholder concerns or feedback. National marine sanctuaries have a long public process to form or expand, and have stakeholders. President Bush did not get much public comment on his monuments. President Obama got more public input. Lance mentioned a hearing in May to be held by the Senate committee on Commerce; comments could be submitted ten days after the hearing. He briefly talked about monument management structures.

Tessa - There was a science communications workshop at U.C. Davis earlier in the month, attended by academia, agencies and the public. They hope to hold another one, maybe next year. U.C. Davis is looking at potentially hiring for marine positions over the next few years, including those that may focus on fisheries and aquaculture. Two positions may be with Sea Grant. Some of the people would be at Bodega Marine Lab and some would be at the main campus. Regarding ACCESS, some of her students will be participating. Last month, Tessa was in meetings with six sets of Congressional staff members (of California members of Congress); budget, marine sanctuaries, and the Antiquities Act were topics of discussion. There is some confusion about how marine sanctuaries are formed and managed. The advisory council as a group could do a lot to talk about the services marine sanctuaries provide. The staff for Congressman Jared Huffman mentioned needing to hear from constituents about support for marine sanctuaries and the roles they play in people's lives. People in this group can speak with their represented communities about vocalizing their interests to Congress. Regarding general talk about cuts to science programs, the majority of the money for those programs supports people's jobs.

Noah Wagner – per the director of Sonoma County Parks, dredging of Bodega Bay channel will take place this year, to a 12-foot operational depth. More funds are sought to finish dredging by the restaurants. He said he was not sure what would be done with the spoils. Dick noted the spoils would be fairly clean. Noah can check into where the spoils will go and get back to the advisory council.

George - said he was pleased to have served the advisory council as Chair; he thanked Lilli for her efforts to assist him and for her support. He appreciated the great interest and attendance shown by the group.

Kevin - thanked George for his efforts as Chair (which was affirmed by all). Kevin's employer has a new environmental specialist, a Marin native, who hopes to attend an advisory council meeting in the future. Kevin is now a board member for the Smithsonian Environmental Research Center; its next meeting will be at the Romberg Tiburon Center, and will focus on sea level rise and marine infrastructure. Also, if people have good ideas about projects for local Life Scouts, which include a leadership component, please let him know.

John Berge – infrared cameras are used in Southern California to monitor gray whales from shore. For the last few years, efforts have been made to adapt the cameras for ship use, to help in avoiding whales. The cameras can collect data on whales day and night, but heavy fog would likely impact them. Beta testing will take place within a month or so on a whale watching vessel in Santa Barbara. In 2015, the Refugio spill in Santa Barbara resulted in oil in the ocean; afterwards, people pushed for change in oil spill response in California. One of the provisions of SB 414 is to have emergency response tug boats along

the coast, available to assist ships. One of the drivers was from the Environmental Action Committee, which wanted a rescue tug stationed in Bodega Bay. The bill mandated CDFW do a risk assessment of tug boat resources for emergency response. The first two studies, by the Los Angeles-Long Beach and San Francisco area Harbor Safety Committees (HSCs), will be sent to the Office of Spill Prevention and Response, which will forward them to the state legislature. Those ports already have a lot of tug resources. Also, tugs have been getting larger and more powerful. They are manned 24 -7 and ready for emergency response. The HSCs for the Eureka, Port Hueneme, and San Diego areas will work on similar reports.

Leslie - Jenny already spoke on the marine debris program they put together. She applied for another grant to support this. Leslie also helped Jenny with an Ocean Exploration day at a local school. An Earth Day event with marine debris cleanup took place at Limantour Beach. Her participation with the National Network for Ocean and Climate Change Interpretation climate change communications study circle continues, focusing on communication strategies and empowering people at the community level.

Bec Detrich - continues to work on the Sonoma Environmental Education Collaborative with Jenny. The Sonoma County Dia del Niño will be held the Saturday following the advisory council meeting, to encourage folks to get out into nature to learn about ecology and science. She reviewed her involvement, with others. in helping get several hundred Coho Salmon released in the Russian River watershed.

Brian – the seven GFNMS summer day camps, which last a week each, sold out very quickly. He mentioned the most recent GFNMS Soiree event, and reminded people Sharktober fest would be held again in October. During the upcoming Nautilus cruise in GFNMS, they hope to dive on the Puerto Rican, which sank in 1984 and still has oil on it. All of the moorings and vessels slated for removal in Tomales Bay have been removed. The effort to study “doghole” port sites continues. Signage will be installed at some of the state parks. The GFNMS nominee for NMSF Volunteer of the Year is George, for his work with the GFNMS Advisory Council leading its overflight working group. A GFNMS Advisory Council working group is working on a coastal sediment management plan for the Sonoma Coast, including the issue of sea level rise. The Greater Farallones Association (GFA) has been prioritizing funding needs and examining fundraising strategies. He encouraged Bob to be in touch with the GFA.

Jaime – Point Blue has been asked to contribute data for review related to wind energy off Washington, Oregon and California. The biogeography group of NOAA’s National Centers for Coastal Ocean Science is collaborating on the study with the Bureau of Ocean Energy Management and the U.S. Geological Survey. Jaime is having a meeting with Michael, Sean Hastings and others to discuss Whale Alert 3.0, including needs and expectations. Jaime will be participating in the ACCESS cruises. Some data will be gathered on crab pots, in support of work to address the issue of whale entanglements.

George adjourned the meeting at 3:35 PM.