



CORDELL BANK NATIONAL MARINE SANCTUARY SANCTUARY ADVISORY COUNCIL

MEETING MINUTES

November 1, 2018

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 (Kevin Krick)

Kevin Krick, 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 (Community-at-Large - Marin County)
Mike Cummings (Community-at-Large - Marin County)
Bill Wolpert (Community-at-Large – Sonoma County)
Leslie Adler-Ivanbrook (Vice-Chair; Education)
John Berge (Maritime Activities)
Kevin Krick (Chair; Maritime Activities)
Jaime Jahncke (Research)
Tessa Hill (Research)

Agency Members and Alternates Present:

LT Darrina Willis (United States Coast Guard [USCG], Alt.)

Members of the CBNMS staff present:

Dan Howard (Sanctuary Superintendent)
Lilli Ferguson (Resource Protection Specialist and advisory council coordinator)
Danielle Lipski (Research Coordinator)
Jennifer Stock (Education and Outreach Coordinator)

Review and Approve Agenda (Kevin)

The advisory council reviewed and unanimously approved the agenda.

Review and Approve August Meeting Minutes (Kevin)

The advisory council reviewed the August 23, 2018 meeting minutes and unanimously approved them.

Advisory Council Business (Dan Howard)

- The CBNMS Superintendent, Dan Howard, noted it was both a sad and happy day. He thanked the outgoing members and hoped they would stay in touch. He announced the new members: Tom Anderson, Community-at-Large – Sonoma County; Steve Tubbs, Community-at-Large – Sonoma County; Scott Artis, Conservation; Morgan Patton, Conservation; Chris Hendry, Maritime Activities; and Kai Martin, Maritime Activities (unable to be present). Each of the new members present provided a short self-introduction.

- Regarding the outgoing folks, whose terms had ended, Dan said he appreciated their time, effort, thinking, working together to address issues, and letting him know things they were hearing about; these

were, Sarah Hameed, Community-at-Large – Sonoma County (unable to be present); Bill Wolpert, Community-at-Large – Sonoma County; Lance Morgan, Conservation (unable to be present); Todd Steiner, Conservation (unable to be present); John Berge, Maritime Activities; and Kevin Krick, Maritime Activities. Bill, John and Kevin all said a few words about highlights during their times as members of the advisory council, including significant sanctuary achievements; Dan presented each with a small token of appreciation, noting he would do the same for the Sarah, Lance, and Todd.

- With the changeover of the six member seats, the updated list of nongovernmental members present was: George, Mike, Tom, Steve, Scott, Morgan, Leslie, Chris, Jaime, and Tessa.

- For the benefit of the new members, Dan explained a little about what he and the advisory council try to do at these meetings. He is trying to access a broad set of folks representing interests relevant to CBNMS management. Issues are brought to the council at these meetings by advisory council members and alternates, and there then there is a discussion around those issues. The most important thing about those discussions, Dan said, was to respect others' opinions; it is OK to have dissenting opinions. The roles of advisory council members are to provide advice to him at meetings, and to be liaisons with their represented constituencies, including bringing information constituents bring up outside the meetings back to the advisory council meetings. CBNMS is an offshore sanctuary, and so managing it means we often do not get hung up on issues that a sanctuary with shorelines might.

- The other advisory council members present, who had not introduced themselves yet, did so.

- Lilli mentioned that elections for the CBNMS Advisory Council (CBNMSAC) Chair and Vice-Chair happen every two years, in April. In 2019, at the February meeting, there will be a period for nominations for candidates for Chair and Vice-Chair, and the election will take place at the April meeting.

- Dan encouraged the new folks to ask questions as needed.

Sanctuary Superintendent's Report (Dan)

- Dan provided some introductory remarks about himself, and had each of the staff members present introduce themselves. His report would focus on things that had arisen since the last meeting, he said.

- Michael Carver, the CBNMS Deputy Director and Resource Protection Coordinator, is on detail with Florida Keys National Marine Sanctuary (FKNMS) in Key West, for about 120 days. Hired to work for CBNMS in 2000, he was looking for a new challenge. He will be acting as a deputy to Sarah Fangman, the FKNMS Superintendent, dealing with hurricanes, dive buoy networks, a visitor center, etc.; Dan thinks he is being challenged. We will see what happens after 120 days. In the meantime, all the CBNMS staff members are doing a bit more.

- John Armor, the Office of National Marine Sanctuaries (ONMS) Director, is on detail to NOAA's National Ocean Service. Becky Holyoke, the ONMS Deputy Director, is acting as Director, and her position is temporarily backfilled.

- The decision about the proposed regulations to certain United States Coast Guard (USCG) discharges to continue, an issue that arose from the expansion of CBNMS and Greater Farallones National Marine Sanctuary (GFNMS), may be released within a few days. The proposed USCG discharges are associated with vessels and with training for live ammunition and search and rescue. Once released, Dan will notify the advisory council. The advisory council can discuss it at the following meeting.

- A budget has not yet been received for Fiscal Year (FY) 19, which goes from October 1, 2018 – September 30, 2019. He is working with the staff now to put together three scenarios, at 85%, 100%, and 115%, of last year's budget, and will provide the information to ONMS the week following this meeting. He will provide updates at future advisory council meetings.

- Two Essential Fish Habitat (EFH) areas of the seafloor have been declared by the National Marine Fisheries Service to be "no bottom trawl zones" for commercial fisheries; however, NMFS uses bottom trawls to sample for their groundfish stock assessment for research. They sample by depth. There are two new areas on the continental shelf in CBNMS in which they have said they will not do this research [to avoid habitat impacts], and later will talk about other areas along the shelf break for potential exclusion. The exclusion areas will need to be officially memorialized.

- Dan and Tessa Hill talked about recent memorial events held to honor Susan Williams of U.C. Davis, who was killed in a highway accident. Dr. Williams had helped push for the CBNMS and GFNMS expansions. She loved the sanctuaries.
- National Marine Sanctuary management plans are supposed to be reviewed every five years. There are 14 sites in the ONMS system, so to deal with the workload, ONMS created a “rapid management plan review” process, to occur in between more extensive review of management plans. He, Lilli and the rest of the CBNMS staff have started to review the current plan, to catalog such things as activity completion/ongoing status, major accomplishments achieved, etc. In response to a question, Dan noted he did not envision needing the advisory council’s input to help the staff in this review but would summarize the results for the group. New issues would not be addressed in this process.
- Lilli added they thought Dan could provide results to the advisory council in early 2019; she briefly explained that ONMS now had two types of review cycles, “rapid” and full. The next time after this CBNMS would go through a full review of the plan. She said people could bring up anything related to CBNMS management at any advisory council meeting, however. This is one reason why several public advisory council meetings are held each year.

FY 19 Priorities for ONMS and Relationship to ONMS Five Year Strategy for the National Marine Sanctuary System (Dan)

- Dan recently received annual guidance from ONMS regarding funding for six categories in FY 19. This is the first such annual guidance. He passed around a sheet Lilli compiled for him which related these categories back to the ONMS Strategic Plan goals and objectives.
- Regarding “System Expansion”, CBNMS already recently expanded. “Blue Economy” is about ways to conduct activities and reduce impacts on the sanctuaries, such promoting responsible tourism through things like “Get Into Your Sanctuary” day. “Organizational Health” is about having an effective and efficient organization, including staff training, collaboration, and a diverse and inclusive workplace. “Resource Protection” focuses on resources under threat from disease, conditions, tracking changes, working to address degradation, etc. “Safety” is considered everywhere. “Vessel Needs” relates to effective, safe operation of existing vessels and development of a vessel recapitalization strategy, to sustain the ONMS mission and continue research and monitoring. The R/V Fulmar, homeported in Monterey, must travel to CBNMS when it is needed for research and monitoring; this vessel, and others around the system, are approaching the end of their lifespans. ONMS has initiated a process to figure out how to replace worn out vessels.
- Dan said he participated in constructing this guidance. He will be tying the CBNMS budget submittal to the guidance and the ONMS Strategic Plan, to show how CBNMS activities fit under the categories, which are fairly broad. All CBNMS activities can fit under them.
- There was a question if there were opportunities to do things not being done now, and if this could be used to target additional funding. Dan responded that, even if funded at the 115% level, CBNMS would be scraping to accomplish the work it is already doing.
- Lilli explained that these kinds of annual guidance documents are typically used within NOAA in conjunction with other plans already in place [such as the ONMS Strategic Plan, the CBNMS Management Plan, and any current National Ocean Service or NOAA strategic plans].
- Was climate change mentioned? It would be part of resource protection - changing ocean conditions.
- Is education there? No, unless it is considered to be under “Blue Economy.” Conservation science is also not mentioned. Dan expected these functions would fall under resource protection.
- The intention for the guidance is for ONMS units to use the stated priorities in the FY 19 budget exercise, to ensure budgeted funds align with priorities.
- Dan thought the last significant budget increase was in 2003. CBNMS gets a slight increase every year, with fixed costs going up every year too. By staying even funded, we lose money every year to support programs (i.e., activities outside salaries and other fixed costs.) The Cordell Marine Sanctuary Foundation (CMSF) can help, and is helping, with that.

High Mortality of Blue, Humpback and Fin Whales from Modeling of Vessel Collisions on the U.S. West Coast Suggests Population Impacts and Insufficient Protection (Cotton Rockwood, Point Blue Conservation Science)

- Jaime Jahncke reviewed that one of the issues Point Blue Conservation Science (PBCS) has been deeply engaged in is reducing the risk to whales from ship strikes in CBNMS, GFNMS and northern Monterey Bay National Marine Sanctuary (MBNMS). Blue and humpback whales migrate here in fall to feed. There are risks to whales in all of the shipping lanes. Three years ago, the voluntary Vessel Speed Reduction (VSR) started, in which ships transiting the shipping lanes were requested to transit at 10 knots or less, to provide a higher chance of whales that may be struck to survive. This was based on east coast research. PBCS has a contract to produce analyze data regarding how that has been working in terms of increased protection for whales. He and Cotton Rockwood are working on it.
- Cotton said he would first talk about work done in the West Coast Exclusive Economic Zone (EEZ), with Cascadia Research, then about the contract for local work.
- After giving a brief overview of the history and work of PBCS, Cotton said his presentation would cover a description of the strike model; their model results for U.S. Exclusive Economic Zone (EEZ) strike mortality; using the model in CBNMS and GFNMS; and next steps for coast-wise and Southern California work.
- One of the only ways in which people can determine the cause of death of a whale is to examine stranded whales for cause of death. However, detection bias and other factors mean this is a bad overall way to understand the problem of lethal ship strikes of whales. He provided statistics of strandings and percent that wash ashore dead of blue, humpback and fin whales for the years 2006 – 2016, and explained what the Potential Biological Removal (PBR) numbers were. PBR is a maximum number of a population that can be killed by human causes without threatening the growth, health or viability of that animal population. He then explained the mortality framework and study methods for the West Coast, including that it covered the whole U.S. EEZ, the data was Automatic Identification System (AIS) data and whale density data, etc.
- Their model estimated total mortality of 18 blue, 22 humpback and 43 fin whales for the 6-month peak abundance period of the study. It indicated most of the mortality was predicted to be from nearshore vessel traffic. A large proportion of whale deaths occur in 10% of the total EEZ. CBNMS has a high mortality prediction, especially for blue and humpback whales; less so for fins, primarily because of the whales' distribution. Blue and humpback whales tend to be on the shelf, while fins are more offshore, so a shift of effort could change which whales experienced mortality.
- He found the vast majority of strikes in the study area are outside the designated shipping lanes where all of the current mitigation efforts are focused.
- The mortality numbers for the shipping lanes and sanctuaries in central California are the highest, when looking at all the shipping lanes in the region.
- There is a need for broader efforts to address the strike problem. Strike mortality is higher than the PBR.
- Any changes to defined shipping lanes (on the charts) would require regulatory action. He suggested that mitigation measures could combined: speed restrictions, Areas to be Avoided and a shift of traffic offshore.
- Cotton then talked about a study specific to CBNMS, GFNMS, and a portion of MBNMS, for which the results have not yet been released (so the information is preliminary). This study has two main categories of analysis: improving local understanding of strikes, and simulation of management outcomes for saving whales. He described the study area and methods, as well as work done through the Applied California Current Ecosystem Studies (ACCESS). The data they used was from 2012 – 2017.
- The prediction estimated higher deaths of whales per month than in the West Coast study. The prediction for blue whale mortality was about the same inside and outside the shipping lanes. For humpback whales, it predicted the mortality to be about 2/3 inside and 1/3 outside the shipping lanes.
- Outside the lanes, he suggested seasonal management areas could benefit the whales.
- There was little change in mortality after the speed changes in 2015; the speed changes in 2016-17 led to mortality reductions of about 15% for blue whales and 13% for humpback whales.

- If vessels had a higher cooperation rate with the voluntary 10-knot speed limit in the lanes, the model showed that would further reduce whale mortality by 15-20%.
- He thanked those who provided the data and funding for the study.
- Discussion ensued. Humpbacks are becoming more abundant in this areas; blue whales are also increasing, but not as much. The shipping volume has decreased over this time. PBR is precautionary.
- Dan noted the contract for the study was one that was advertised, in a competitive process. The funding came from the federal budget. Jaime said PBCS added some private funds as well. Cotton noted there were a number of funders for the West Coast study.
- An advisory council member said it was important to remember a lot of whales wash up on shore that may not be counted as being struck by ships. The deaths are important, as is health.
- Cotton noted it was also important to remember that whales are a success story, and have recovered a lot since whaling stopped.
- In response to a question, Cotton said 99 % of the mortality could be influenced, though not eliminated, if effort to reduce ship strikes of whales were undertaken both inside and outside the lanes.
- A finer scale look has not been done on the other parts of the West Coast, though Cotton would like to.
- Dan noted there was no intention of pursuing a regulation change at this time to slow vessels.
- In response to a question about whale behavior when a vessel approaches, Cotton said there was some anecdotal information, and some information from tagged animals. Anecdotally, whales tend to not respond much or to respond slowly. Blue whales tend to surface when a vessel approaches. Responses from tag data provide some evidence of diving when vessels approach, with the dives slow and at a fairly low angle.
- Dan noted the maritime shipping industry is working with the national marine sanctuaries and other partners to reduce the number of ship strikes of whales.

Public Comment

- Sarah Bice from Marin County noted it was easy for the public to take interest, as they read about strikes of whale in the newspaper, such as one in Bolinas this summer. She was dismayed the problem was so great, and difficult to discuss. She said there was a need to work on the health of workers in the sanctuary and on the health of the whales. She commented that the graphics in the presentation just given could be improved. She also commented that New England has great apps (she just got one); she asked that apps please be used, along with interns. She also questioned who is paying the costs.

Ocean Acidification Communication Toolkit: Dungeness Crab Case Study (Jennifer Stock)

- Jennifer Stock, CBNMS Education and Outreach Coordinator, said that the ONMS West Coast Region educators put together a toolkit on ocean acidification and Dungeness crabs. There are five sanctuaries in the West Coast Region, and their waters are connected via the California Current. Ocean acidification rates are high on the West Coast.
- In 2009, each Sanctuary Advisory Council in the West Coast Region passed resolutions calling for coordinated action by the sanctuaries on ocean acidification. A West Coast Task Force produced an Ocean Acidification Action Plan in 2011. She described the education and outreach strategies in the plan, which included developing tools and resources to help fill in knowledge gaps. A 2012 workshop on the ocean in a high CO₂ in Monterey led to, among other things, the development of the NOAA Ocean Acidification Education Implementation Plan.
- The people working on the toolkit did a needs assessment about what partners wanted, messages to develop, and audiences to reach. Case studies tell the importance of various species to the ecosystem. NOAA science stories can be told through the species. The information can get people talking and taking action. The toolkit was released about a month before this meeting.
- Some of the messages are that ocean chemistry is changing and making it hard for species to thrive. Dungeness crab are economically important. A laboratory study showed they were showing stress under acidic conditions. These crab are also important ecologically, such as their larvae serving as food to

various fish species and the adults cleaning up as scavengers. Dungeness crab are also culturally important, especially to some Native American tribes.

- Jennifer then described the tools in the toolkit, including a fact sheet, photos, videos, a PowerPoint presentation, and more.
- The project was done in collaboration among NOAA ONMS, NOAA Fisheries, the NOAA Ocean Acidification Program, and the National Marine Sanctuary Foundation
- Jennifer asked the Advisory Council how people may use the tools, and a suggestion was made that it could be used in conjunction with GFNMS LIMPETS programming. Jennifer said she would encourage the GFNMS Education and Outreach Coordinator to talk with the LIMPETS team about that possibility.
- Someone asked if the information in the kits could be condensed to fit on the information boards that various marinas have. Jennifer replied the infographics could be used for that.
- The outreach to teachers and schools varies by sanctuary site. At CBNMS, Jennifer does teacher training workshops.
- There was a question regarding if teachers could learn about this virtually. There was a webinar on this, part of a webinar series people can sign up for, and the sanctuary educators are also disseminating news regarding availability of the toolkit on various lists.
- Next year, Jennifer is looking at having virtual field trips via a webinar or other means. She will also reach out to Dick Ogg, who wanted to hear about this topic.
- Finally, there was a suggestion that the infographic could be shared with restaurants serving crab or organizers of crab feeds who may wish to make placemats with the information.

CBNMS Education and Outreach, Research, and Resource Protection Program Reports (Jennifer, Danielle, and Lilli)

Education and Outreach: Jennifer provided background from the National Marine Sanctuaries Act, and what it says regarding an education mandate. She explained that she also uses different guiding documents and statement in planning and implementing her work, including the NOAA Education Plan, the ONMS Strategic Plan, the ONMS Education Plan, the CBNMS Management Plan, and the ONMS Education Vision and Mission.

- Among the things she does is connecting California Next Generation Science Standards to Marin County's Bay and Ocean Backyard. The county got a grant from the NOAA Bay Watershed Education and Training (BWET) program, and will talk about and teach about San Francisco Bay and the ocean in the classroom. She is working with them and other partners. The driving question for the county's grant is how to include the study of climate change as it relates to the county's coastal and ocean ecosystems in the curriculum and engage students to better understand their local aquatic ecosystems in a way that moves them to stewardship and action. She described the field experiences for professional development for the learning community and what has been done so far.
- Jennifer mentioned a workshop for teachers to take place December 1st, Climate Change Literacy and Global Change.
- She has also been working on upgrading the exhibits at the Point Reyes National Seashore Bear Valley Visitor Center, to have updated panel text and visuals.
- The Seashore staff are doing a major renovation at the Point Reyes Lighthouse, where there is another small Visitor Center with ocean exhibits. It should reopen in about a month.
- Ocean Currents is a radio show she had done for over ten years; Azula recognized it as one of 12 best ocean podcasts.

Research: Danielle Lipski, CBNMS Research Coordinator, gave an update on what she had been working on since the August Advisory Council meeting. She tends to do a more-in depth presentation at the first Advisory Council meeting of the calendar year, to talk about the priorities and plans. She will plan to do that in February.

- She reviewed the CBNMS science mission.

- In September, she presented on some of the CBNMS benthic science survey work at the Deep Sea Biology Symposium in Monterey; she talked about the work done on the R/V Fulmar and the E/V Nautilus. This is an international conference and so it will probably be a while before it is back on the West Coast. Though a bit academic, and was a good opportunity for her to learn from scientists from all over the world.
- The September ACCESS cruise marked the end of the 15th season of this study. From the Advisory Council, Leslie and Bec Detrich were able to go out one day. John Armor also was able to join one day also. She showed the ACCESS survey lines in relationship to the sanctuaries' boundaries, and described what they observe, and the data they collect. CBNMS works with a number of scientific partners on this.
- In October one hypoxia mooring was deployed; there are two at the north end of Cordell Bank. Hypoxia means is low oxygen conditions in the water; this can be detrimental to ocean species. We do see pulses of low oxygen conditions here. We have not seen really low oxygen conditions. Of the two moorings, one was missing. We, and others she reached out to, will be keeping eyes out for it. One lost previously was found and recovered.
- In FY 19, the highest CBNMS priority is ACCESS. Also, there will be work to finalize the benthic science analysis of the 2017 expeditions, and begin analysis of the 2018 surveys. It is looking like we will get more time on the E/V Nautilus, to characterize areas of the sanctuary we do not know much about. The hypoxia monitoring will continue. There is an acoustic monitoring buoy in CBNMS, part of the NOAA Noise Reference Stations system. The buoy deployed from 2015 – 2017 was recovered, and Samara Haver a graduate student, is working with that data now; results may be available to share next fall or winter. Another buoy went back when the first one was removed, to continue the monitoring; it is planned to be removed in the fall of 2019. Finally, CBNMS work will take place regarding integration of efforts on site, regional and national issues.
- The week following this meeting, Dani will be in the Florida Keys to meet with her counterparts. They have not met in a few years.
- There is opportunity right now to apply for a part time research technician position at CBNMS, with Cardinal Point Captains. The work location is at the CBNMS office in Point Reyes Station.
- There was a question about when the next Condition Report would be coming out. Dani replied that ONMS has a schedule, and that it was ideal to do these before reviewing/redoing the management plan. The CBNMS Condition Report is due for an update, and the schedule is for that work to begin is 2020, to finish by 2022.

Resource Protection: Lilli noted that, as Michael is away on a detail from mid-September to the end of January 2019, Lilli is currently the acting CBNMS Resource Protection Program Coordinator, and is assigned to work on a subset of his resource protection and Deputy Superintendent duties.

- On the voluntary VSR project in the San Francisco Traffic Separation Scheme, Sean Hastings, the Resource Protection Program Coordinator at Channel Islands National Marine Sanctuary (CINMS), is now the lead for this project, and is working with a contractor hired to work on it. The 2018 voluntary VSR in this area is coming to an end on November 15.
- Regarding permits, Lilli works with Dan on issuance of national marine sanctuary permits in CBNMS and participates on calls with other permit coordinators across the system. A permit is required when an action would violate a sanctuary regulation. Permit applications are required, and are reviewed on a case-by-case basis. In general, the types of activities that may qualify for a permit include research on or monitoring of sanctuary resources, educational activities, and activities that further sanctuary management objectives. Since the last Advisory Council meeting, one permit was issued for deep sea surveys and two permit applications are under review.
- A permit is required for NMFS to do their West Coast surveys for groundfish stock assessments in national marine sanctuaries. Dan and staff members from other sanctuaries have been in discussion to avoid doing research trawling in certain areas within Essential Fish Habitat in the sanctuaries which are already not allowed to be commercially trawled.

- Don Tanner is the National Marine Fisheries Service representative to the Advisory Council; he is with NOAA's Office of Law Enforcement (OLE) [part of NOAA Fisheries]. OLE, with the U.S. Coast Guard and other agencies, are authorized to enforce the NMSA and its associated regulations. Don was unable to make this meeting, but provided an enforcement update via email. OLE just extended offers to 5 people selected for hire as new agents in California. A few should start in December, with the field training program. Others will start later, taking training at the Federal Law Enforcement Training Center. They are to be stationed in Santa Rosa – 2; Monterey – 1; and Long Beach - 2.

- Any violations of sanctuary regulations should be reported to the NOAA Enforcement Hotline at 800-853-1964 (available 24 hours/day).

- Lilli mentioned she was taking a class called Resilient Communities Marin on her own time, a series of five classes to learn about things you can do to reduce your carbon footprint and live more sustainably. So, there the discussions have included some energy topics, such as switching to LED light bulbs, use of electric vehicles, and working through the energy company and, in Marin, Marin Community Energy, to have your home powered 50% or 100% by renewable energy.

Members' and Alternates' Reports (advisory council)

Leslie – noted it was the 10-year anniversary of the restoration of the Giacomini wetlands, done by Point Reyes National Seashore, the Point Reyes National Seashore Association (PRNSA), and others. A celebration was recently held, with hikes and other things. There has been a lot of good change for Tomales Bay and the shorebirds that depend on the ecosystem. PRNSA is having a bird event on January 13, which could be good for young kids interested in birding; check the PRNSA website. PRNSA has a new development director and a new education and diversity outreach coordinator.

Mike Cummings – welcomed the new folks, and noted he was looking forward to hearing new perspectives from sanctuary communities.

Morgan – said it was the 10th anniversary of the West Marin Environmental Action Committee's Point Reyes Birding and Nature Festival, and she would be talking to Jennifer about that. It will be at the end of April, with Ken Kaufman as the keynote speaker.

Scott – Turtle Island Restoration Network completed first phase of floodplain restoration in Lagunitas Creek. It is amazing to see the water flowing, the willows, and new habitat for freshwater shrimp. Grasses are growing too. Oceanwise, the big thing on people's minds is plastics, from watersheds as well as the ocean. People also want to know what they can do about microplastics.

Tom - said he appreciated the great presentations and local knowledge, and for the group making him feel welcome.

Chris - said there were a lot of takeaways from this meeting for him and for the community. He said there was a Harbor Safety Committee Navigation Work Group, and one of the things they have been discussing is a new sail race coming to the bay, to take place May 4-5, 2019; over 1000 folks are expected to attend.

Steve – commented he was looking forward to working with everyone, and that he found the presentations to be informative.

Tessa – reported that the California Ocean Agency awarded \$24 million for agencies that work on ocean issues in the state, and listed funded projects. A project she is working on funded, using ACCESS data and integrating it into the state's work. The California Ocean Acidification Action Plan outlines six steps the state needs to do to adapt to ocean acidification. The 4th assessment on climate change was released; the state does it in parallel with a federal climate report. The newest California assessment includes a

section on California coasts and oceans, which has not been a standalone chapter before. She was a part of a group of about a dozen authors of that chapter.

George – announced that, on the California Coastal Commission agenda for the week following this meeting, is a report on wind power. This provoked a proposal at a GFNMS Advisory Council meeting that wind power not be approved until the scientific effects are known. He announced that he and Sarah Hameed are now CMSF board members. Thanks to the efforts of Bob Rubin, another CMSF board member, an organization, “Changing Seas”, which does documentary films that air on PBS, will do its first one on the West Coast, focused largely on CBNMS and GFNMS. There was a film crew out this summer, and Tessa’s student, Carina Fish, was interviewed, as well as John Largier, and Bay Area Underwater Explorers divers. Dan, Jennifer and Dani all helped with this process. That group will be start editing in December, and the film may air in June. It will be available to us for presentations, etc. CMSF is growing, and will start focusing more on development, to get more private support for CBNMS. CMSF will be reaching out to this group and he hoped people would consider a gift. CMSF will be working on outreach programs this year. Also, CMSF will work with Dan and the CBNMS staff on recognizing CBNMS’s 30th year anniversary in May. Dan added he was open to ideas for celebrating the anniversary.

LT Wilson – the USCG unit out of San Francisco, Sector San Francisco, conducted an operation with 87-foot patrol boats offshore and in the San Francisco Bay, and educated boaters and mariners about humpback whales. They passed out fliers, observed boaters’ behavior, and reported back on any poor behavior; however this time, there were no harassment or endangerment concerns. The USCG did 33 living marine resources boardings, some in Monterey Bay, San Francisco Bay, and some north. San Francisco, with crew from an 87-foot patrol boat, assisted with disentangling and freeing a baby whale. She had nothing to report for CBNMS specifically. Coming up, the USCG will be working with the California Department of Fish and Wildlife on the Dungeness crab season opener, probably doing a surge.

Jaime - his group started doing a marine conservation prioritization, in which they will compile work by others (done by tribal, state, and federal agencies and nongovernmental organizations), prioritize it, and see if the work is correct. The West Coast Alliance will be helping, and some of the work will be with Washington and Oregon. He reached out to the Central and Northern California Ocean Observing System and the other relevant Ocean Observing Systems, and they will help with the stakeholder engagement. He also reached out to other ocean nonprofits. The recently PBCS work for CBNMS and GFNMS has been completed (i.e., the whale work discussed during Cotton’s presentation) and PBCS will start with CINMS this winter to model ship strikes of whales, and try to figure out how many whales were saved. In parallel, PBCS is working with a foundation to analyze shipping policy, but they have not met yet. PBCS is also getting communications from a number of folks regarding compilation of 700 data layers for offshore energy. They are still trying to figure out how to get the project moving and who can pay for it. They are still working on whale entanglements as part of the Dungeness crab gear working group, which has had lots of discussion about when a high risk year will happen, and what to do to account for that, such as decreasing fishing effort.

- As a final update from Dan, he said that Bill Douros, Regional Director, has been involved in the offshore wind energy issue for Morro Bay, and will be sharing what he has learned soon with sanctuary staff members in the region. There is no sanctuary in the area being talked about (it is just south). Right now, such a project could not be permitted [in CBNMS, if one were proposed] due to our regulations. MBNMS has the ability to authorize another agency’s approval of such a project, if the staff agreed with what the other agency did.

Leslie adjourned the meeting at 2:19 PM.