



CORDELL BANK NATIONAL MARINE SANCTUARY SANCTUARY ADVISORY COUNCIL

MEETING MINUTES

August 22, 2019

9:30 AM

Point Reyes National Seashore, Red Barn Classroom, Point Reyes Station, 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 (Bec Detrich)

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

Nongovernmental Members Present:

George Clyde (Community-at-Large - Marin County)
Mike Cummings (Community-at-Large - Marin County)
Tom Anderson (Community-at-Large – Sonoma County)
Steve Tubbs (Community-at-Large – Sonoma County)
Scott Artis (Conservation)
Morgan Patton (Conservation)
Leslie Adler-Ivanbrook (Education)
Bec Detrich (Chair; Education)
Noah Wagner (Fishing)
Chris Hendry (Maritime Activities)
Kai Martin (Maritime Activities)
Jaime Jahncke (Research)

Agency Members and Alternates Present:

Brian Johnson (Greater Farallones National Marine Sanctuary [GFNMS], alt.)
LCDR Lee Crusius (United States Coast Guard [USCG])

Members of the CBNMS staff present:

Michael Carver (Deputy Superintendent and Resource Protection Coordinator)
Lilli Ferguson (Resource Protection Specialist and Advisory Council Coordinator)
Justin Holl (temporary Education and Outreach Coordinator)
Danielle Lipski (Research Coordinator)
Rachel Pound (Research Technician)

Review and Approve Agenda (Bec)

The Cordell Bank National Marine Sanctuary Advisory Council (CBNMSAC) reviewed and unanimously approved the agenda.

Review and Approve April Meeting Minutes (Bec)

- The advisory council reviewed the April 25, 2019 minutes and unanimously approved them.

Update on Regional Priorities (William Douros)

- Bill Douros introduced himself; he is the Office of National Marine Sanctuaries (ONMS) West Coast Region Director; his office is in Monterey. He tries to come to a meeting of the CBNMSAC every few years.

-He talked with Dan Howard, CBNMS Superintendent, who wanted to share what is going on with his health [he has been and continues to be on leave]. Bill summarized that, in early July, Dan was diagnosed with a brain tumor. In quick order, it was operated on and removed. Dan is doing well; he has lots of energy and is clear minded. He is going through chemotherapy and will undergo radiation treatment; however, the prognosis is good, though there is uncertainty. If nothing changes, Dan could come back to CBNMS between December and February; he would phase back in. Dan may try to make the CBNMS 30th anniversary event.

- To backfill during Dan's absence, ONMS put out an announcement for people within NOAA to apply for a 4-6 month temporary assignment or detail to come in and be the CBNMS Superintendent. Bill would ask that person to have some overlap with Dan, too. In the interim, Michael Carver, CBNMS Deputy Superintendent, is acting as the Superintendent.

- He gave an update like this at a joint meeting of the GFNMS and Monterey Bay National Marine Sanctuary (MBNMS) advisory councils the week before this meeting.

- Bill and the West Coast Region Superintendents will meet the second week of September. They talk about various issues, constraints, priority-setting for things two or more sanctuaries are working on, and coordinating and collaborating. They try to agree on main outcomes, products and tasks, and designate a lead person for regional issues. He also gets input from cross-cut team leads. Three examples of cross-cut teams are addressing ship strikes of whales, improving enforcement, and deep sea coral research. The regional priorities are things the sanctuary sites are trying to do. Bill wants superintendents to say if the activities are additive, in addition to what is in the sanctuaries' management plans. Those do a good job of laying out priorities for five years, but are imperfect.

- There was a national NOAA summit in June to discuss enforcement in national marine sanctuaries, which included NOAA General Counsel, the NOAA Office of Law Enforcement (OLE), the USCG, ONMS, and federal partners, discussing what could be done by region.

- Nicole Capps, in his office, does training of USCG boarding officers several times a year; one thing she talks about is what the sanctuaries would like them to focus on. Another thing the region is working on is what a uniformed officer would do, if locally based. In addition, they want to get state folks more engaged with the sanctuaries that have state waters.

- He mentioned Get into Your Sanctuary weekend, and a recent event up north. Last year and this, there have been efforts to connect with veterans and veterans groups, at the sanctuary level.

- The region has been planning for small boat needs. Multiple boats are part of the game plan. CBNMS is in good shape, using the Fulmar for Applied California Current Ecosystem Studies (ACCESS) cruises and for occasional deep sea remotely operated vehicle (ROV) missions. He has also pushed for day boat usage. He talked with Dan and Michael in June, and it did not seem then there was an immediate CBNMS need for day boats. He may tap a CBNMS person to help with a mission in MBNMS. Bill is also assigned to work on a strategy to recapitalize the existing fleet of boats ONMS has.

- There are also activities that the regional office staff do, including assisting the sanctuary sites, including things like expansion processes, management plans, and development of policies.

- He reviewed the potential for wind development in the West Coast national marine sanctuaries. For the most part, the best potential is south MBNMS and up off Eureka [where there is no national marine sanctuary]. The Department of the Interior, Bureau of Ocean Energy Management (BOEM) is the federal lead. The Department of Defense is heavily involved too, as they have concerns about things such as how wind farms could affect their radar and their training areas. The sanctuary regulations, with a focus on MBNMS, prohibit oil and gas development but not wind farms. There is a sanctuary regulatory prohibition on disturbing the sea bed; wind farms have large sea anchors. Theoretically, this might be allowed with a special sanctuary permit. BOEM is the lead for siting, and that agency is not so sure about siting a wind farm in a national marine sanctuary. There are also other concerns about other ocean uses,

such as fishing. The State of California is also a player, and has a law to increase the use of non-carbon sources of energy. At night, onshore winds die and there is no sun. Where transmission systems are is also important; there is none in Eureka but there is one in Morro Bay. He said there was a need for bold action. Bill is willing to talk about it, including how to do it without impacting marine resources.

- He noted the proposed Chumash Heritage National Marine Sanctuary is right where the potential wind farm activity is. He talked about some of the uses and other agencies that work in the regional area.

- Lisa Wooninck on the West Coast Region staff sits on the Pacific Fisheries Management Council (PFMC) Habitat Committee. This was made a regional priority ten years ago, to help show them what sanctuaries are all about. It also requires working with the National Marine Fisheries Service (NMFS) leadership. He gives the PFMC ecosystem reports and updates at meetings.

- Regarding ACCESS, he, Dan, Dani Lipski (CBNMS Research Coordinator) and Jaime Jahncke (working on a contract to Point Blue Conservation Science [PBCS]) talked about having a report of 15 years of ACCESS cruise results. Dani plans to get it out sometime this fall. It should help point people to the value of long term monitoring. Once done, the report results may be shared with the PFMC.

- Regarding the impact of wind farms on the ecosystem, Bill said there was growing data from a small scale wind farm in the Atlantic Ocean. The impact depends on the specifics. A big anchor would impact the sea floor and would also create new hard bottom habitat. They have big cables. There could be a hydraulic fuel failure. There are spinning turbines; the industry pitch is that seabirds that far offshore fly low over the sea. A national marine sanctuary is supposed to manage the aesthetics of a special place. It is unknown how vibration and noise could impact whales. It is unlikely whales would get entangled. The offshore California proposal would have more turbines than on the East Coast. Where a wind farm is sited affects where others go. For example, the site could drive shipping into or out of a sanctuary.

- Wave energy is not really part of the equation, though some research has been done. The equipment would have stress on it from waves, and corrosion. It is hard to envision how wave energy generation could be done on a large scale.

- BOEM's [energy] mandate is beyond 3 miles from shore, and within 3 miles from shore, it would be the mandates of the Department of Energy and the Federal Energy Regulatory Commission.

- In response to a question about if BOEM was required to look at all new technologies, Bill was not sure, but plans to ask next time he talks to BOEM.

- A huge impact would be bringing energy from wind to shore; doing so could include cables or substations, which could also have impacts.

Deputy Superintendent's Report (Michael Carver)

- Michael said he had been gone for almost nine months to Florida Keys National Marine Sanctuary (FKNMS). He came back in June. He reviewed that is a beautiful place and talked about some of its features, and the many users of the sanctuary, which stretches over 200 miles. He oversaw daily operations, budget, and facilities management. The scale of operations is different than it is here in California. FKNMS maintains 800-900 moorings to stop reef impacts.

- He noted he was deeply grateful for the opportunity. He presented a token of his appreciation to Lilli, who he said kept things running while he was gone. It has been some thick times, especially since Dan has been out of the office.

- FKNMS just released a draft Environmental Impact Statement, a restoration blueprint, for comment; the comment period goes until January 2020. He thought the decisions that may be made there could affect other sanctuary sites in the system that have Condition Reports saying the resources were declining, as the last FKNMS Condition Report did. He will give Lilli a link on this, to provide to the CBNMSAC.

- In July, ONMS announced the designation of the Mallows Bay-Potomac River National Marine Sanctuary, the first new designation in 20 years. About 45 minutes south of Washington, DC, it protects a blend of historic (ghost ships), recreational, and habitat resources. The designation is not effective until 45 continuous days of Congress being in session have passed; this may be about mid November.

- Flower Garden Banks and Monitor national marine sanctuaries are analyzing a range of potential expanded boundary alternatives. They are going through the process CBNMS went through a few years back to expand its boundaries.
- There are also nominations in process for designation of national marine sanctuaries in Lake Ontario [in New York] and Lake Michigan [in Wisconsin], to protect and increase awareness of a nationally significant collection of shipwrecks; foster partnerships and to increase opportunities for tourism and recreation.
- The ONMS website explains the [nomination/]designation process.
- Regarding funding, the FY 20 mark in the House is \$56 million. This is a \$1 million increase from last year. We hope the Senate will match it. The proposed ONMS Procurement, Acquisition, and Construction (PAC) funds, used to acquire and improve capital assets, increased from \$2 million to \$5 million.
- This year, five young women received Dr. Nancy Foster scholarships to study in national marine sanctuaries. He urged people to encourage anyone who might be interested in applying in the future; the scholarships are for graduate education, focused on ocean sciences and natural resource management.
- On August 15th, NMFS released a proposed rule for Amendment 28 of the Pacific Coast Groundfish Fishery Management Plan. The deadline for comment submittal to NMFS is September 16. He noted the advisory council had been briefed on some proposed changes to protect the bottom habitat from adverse effects from bottom-contact fishing in the past, and briefly went over a few of the details. He will also give Lilli the link to this proposal to provide to the CBNMSAC.
- NMFS declared an Unusual Mortality Event on May 15 due to the sudden, elevated die off of gray whales Baja to Alaska. These whales feed off amphipods in the Bering Sea that feed off algae in sea ice; last year, the sea ice was the lowest it had been in 41 years last year. Preliminary findings in some necropsies found emaciation. Nutrient deficiency is a significant variable.
- Senate Bill (SB) 69, the Ocean Resiliency Act, an omnibus [California] bill introduced by Senator Scott Wiener, has been amended seven times so far, currently in the Appropriations Committee. There is a provision in it to establish ongoing state funding for incentive-based Vessel Speed Reduction (VSR) programs to reduce emissions and mitigate ship strikes of whales, modeled after those in California funded by air districts and a foundation. Funding under the bill, which requests \$1.9 million annually, would be subject to annual state appropriations. He will send Lilli this link too.
- May 24 was the 30th birthday for CBNMS. Justin Holl will talk more about a 30th anniversary event CBNMS is planning with support from the Cordell Marine Sanctuary Foundation (CMSF).

CMSF Report (George Clyde)

- George Clyde reviewed that CMSF is a 501(c)(3) organization that Tom Lambert set up about a decade ago; Tom was then the chair of the CBNMSAC [and George is a CMSF board member]. Tom also got a CMSF board together. CMSF is a useful tool for CBNMS and helps serve as vehicle for funds to go to that cannot go to CBNMS; foundations can do things that national marine sanctuaries cannot. The active board is comprised mostly of scientists rather than those involved in fundraising, though they are moving in that direction.
- The board has two new student members, active with Bodega Marine Laboratory (BML).
- If anyone is interested in being on the board, please let him know.
- CMSF raises about \$10 – 12,000 per year. One thing funded by the money raised is a boat, out of Bodega Bay, to retrieve and deploy the hypoxia mooring buoys in CBNMS.
- CMSF is supportive of CBNMS events, and there is a big one coming up.
- The CMSF website has been improved. People can make contributions via PayPal on the website, and can get added to the CMSF email list.
- One problem he raised was finding good CBNMS projects to fund. He encouraged the CBNMSAC, the CBNMS staff, and Bill to come up with ideas of what CBNMS could do if it had more money, so CMSF could go out and seek funding, including for project staff members. People with ideas can let him or other CMSF board members know.

- George reviewed that Bob Rubin, a board member, was the impetus behind the Changing Seas documentary episode about CBNMS produced by South Florida PBS. It was aired on PBS and is online. It will be shown at the CBNMS 30th anniversary event. Justin will talk more about that event. CMSF is involved in promoting the event, producing promotional materials, funding food and drink, etc.
- He passed around a CMSF flyer and some bumper stickers.
- CMSF needs suggestions for projects to fund, three times a year. The next board meeting is in November. He had asked Dan to produce a list of what CBNMS would like to do if it had the money. Bill said he would work with the CBNMS staff to get CMSF three suggestions by the end of October. Bill thought he would look at last year's suggestions to ONMS for ideas to fund; he also remarked it would be important to explain the impact and importance of funding projects.
- There was a question if it would be a good idea to have a CBNMSAC working group to work with the Foundation on this. George replied it could be, but would take staff time.

Advisory Council Business (Lilli)

- Lilli said the CBNMSAC Charter, which is the document that enables this group to exist, expires later this year. She sent the draft revised charter to the group in advance of the meeting. She explained the update process. All the charters at the various sanctuary sites generally follow a template provided by ONMS, and ONMS provides guidance on what needs updating when the time comes. She consulted with ONMS already and incorporated some changes per their guidance into the draft. Once approved by ONMS, the ONMS director signs the new charter, and the group is chartered for another five years.
- The changes in the draft include: an update of the ONMS description and the ONMS Vision, Mission, and Goals; removal of the Channel Islands National Marine Sanctuary Superintendent governmental seat from the charter, making small editing changes, including removing reference to "Gulf of the" and replacing with "Greater" in front of "Farallones National Marine Sanctuary"; and changing the ONMS director name from Dan Basta to John Armor.
- The idea is to have the charter renewed prior to its expiration and to only do a full review once every five years. If a significant change comes up between the five year review cycles, it is possible for the Superintendent to request a charter amendment, as was done for the current charter, which had an amendment in 2016.
- Bill noted he wanted to check what charter text says about voting and what was required to pass a motion, with Lilli. Lilli said she would follow up with him on it.
- There was a question about things coming up between advisory council meetings, such as if the advisory council wants to send letter, meet by webinar, etc., outside of a public meeting. Another question was if there are other ways for the advisory council to meet publicly.
- Lilli mentioned there was a difference between the CBNMSAC charter and the national ONMS advisory council handbook, and that these may be issues guided by the handbook. She can raise the questions with her ONMS contact, and bring the responses back to the group. She noted that the advisory council had four regular, public meetings and one retreat per year, but that if an issue came up that was important enough to warrant another meeting, the superintendent and chair could agree to schedule an additional meeting. This was done when the USCG discharge rule was under consideration, for example. People can also talk to each other in between meetings.
- In further discussion, it was expressed the thought was not necessarily meeting more frequently, but how, when advisory council members know something is coming up between meetings, to meet without going through the entire process of full public notice and a sit down meeting. It would also be valuable to modernize meeting procedures.
- Bill said it was a thorny issue and that one must be careful about the process; opportunity has to be provided for the public to hear the advisory council discussions and be provided the opportunity to comment. An online chat room could kind of work, if everyone from public could do it too, but it is not feasible to be sending around emails with everyone chiming in.

- Bec took the opportunity to note that advisory council members have the opportunity to invite people from their constituencies to come to these meetings. When there are seats opening up, it is a good way to get people interested.
- Lilli related that the FKNMS Advisory Council met six times a year when she was the advisory council coordinator there and did not have a retreat, so the number of advisory council meetings was not limited to four plus a retreat. She reiterated that the Superintendent and Chair may call a special CBNMSAC meeting if an issue is brought to their attention and they feel a special meeting is needed. There are staffing considerations for additional meetings and as well as for using alternate meeting technologies.

Public Comment

- There was none.

Tribal Engagement Working Group Update (Morgan Patton)

- Morgan noted the working group had not met yet, but would meet in September.

CBNMS Resource Protection, Education and Outreach Program, and Conservation Science Reports (Michael, Justin, and Dani)

Resource Protection: Michael asked Lilli to give updates on permits and enforcement.

- Lilli reported four national marine sanctuary permits allowing activities in CBNMS and other national marine sanctuaries had been issued since the last CBNMSAC meeting: for long term ecological research on cetaceans, integrated ecosystem and Pacific Hake Acoustic Trawl Surveys, one for marine mammal and sea turtle assessments and ecosystem research, and one to continue operation of Coastal Data Information Program buoys. One Letter of Authorization under the CBNMS Superintendent's permit was signed, allowing for the ocean exploration and mapping. Also, three permit applications are under review.
- On enforcement matters, she noted that Rad Dew, a Special Agent with NOAA's Office of Law Enforcement (OLE), is the new Fisheries member on the CBNMSAC. He was unable to be at this meeting, but shared that OLE now has three new agents and one enforcement officer in Northern California, and that they hoped to add two more enforcement officers within the next year or so.
- Michael reviewed the purpose of the voluntary VSR in the San Francisco Traffic Separation Scheme and the dates of the request in 2019, as well as all the means used to get the word out to relevant vessel operators; cooperation is emphasized. He mentioned that CBNMS and Greater Farallones Association worked together, resulting in the Marine Mammal Commission providing a grant to enable Jess Morton to continue work on the project while Michael was gone. In looking at the data on vessel transits in and out of San Francisco Bay (2015-2018), the level of cooperation went from 28.7% to 45.5 % operating at less than 10 knots, with the percentage stalled over the last three years at about 45%. The data analysis is done in partnership with the USCG, which provides the vessel transit data. The sanctuaries thank the participating companies and give out awards. A NOAA Voluntary VSR Awards Ceremony was held in San Francisco on May 16.
- Six ship strikes of whales have been recorded so far in the ocean off Northern California and six off of Southern California. Of these, eight were grays, two were blues, one was a sei, and one was a humpback.
- The next steps include meeting with industry representatives on October 10 after the Harbor Safety Committee meeting to gather their recommendations for raising awareness about the voluntary VSR, and talk about motivating factors, best practices, etc. There have also been studies on this and related topics and the staff is looking at those.

Education and Outreach: Justin has been filling in for Jennifer Stock, about three times a week, as the acting CBNMS Education and Outreach coordinator. It has been fun working with the CBNMS staff in the trenches, but he noted there had been some tumultuous times lately.

- He asked if people have ever been enchanted by something almost no one knows about, and how it feels to share that thing with others. The group talked about that with respect to CBNMS.

- Justin recapped the Get Into Your Sanctuary Day event done this year on August 3rd, a Point Arena Ocean Film Festival, at which five films were shown that promoted ocean awareness and conservation. About 120 people came; Michael stood in for Dan as well as providing technical support. There was a question and answer session with Josh Berry and Ron Elliot.
- The unsung heroes of CBNMS outreach are outdoor interpretive signs. An assessment has been underway to document where they are and their status, so they can prioritize which need work, replacement, removal, etc. There has been a lot of time, money, and partnerships involved over the years with these signs. The idea is to review the sign database and update it annually.
- He reviewed plans for the CBNMS 30th anniversary celebration event being planned with CMSF for 9/14/19 at 5:30 pm at the Hotel Petaluma. The ONMS Director, John Armor, will be there. The CBNMS documentary will have its West Coast premiere. The CBNMS photo exhibit, the CBNMS remotely operated vehicle (ROV), footage from the ROV and virtual reality will be featured. It is OK to share the email about the event that Lilli sent to the CBNMSAC with others. The event has also been publicized to others via email and on Facebook and Twitter. CMSF may sell hats and will have an information table. This free event will have food and drinks.

Conservation Science: Dani noted the CBNMS conservation science team consisted of herself and two part time contractors, Rachel Pound and Kaitlin Graiff.

- The first two ACCESS cruises of 2019 were May 26 – June 1 and July 19-26. During the July cruise, a Teacher at Sea from Oakland participated; the teacher writes blogs, serves as part of the science team, and develops a curriculum following the cruise. The last 2019 cruise is September 20-27; this is when VIPs, funding, the media etc. are typically invited. Becky Holyoke, the ONMS Deputy Director, will be on that cruise. Often, she has been able to invite CBNMSAC members; it is possible there may be a chance to join on the 21st or 22nd (backup date), but there is a bit of a waitlist; email her if interested in joining.
- Jaime and his team finished the 2018 ACCESS report.
- Rachel is working on a draft of a report of 15 years of ACCESS cruise accomplishments and information about what the data have shown.
- There have been six years of hypoxia monitoring; this work is funded by CMSF. Kate Hewett, a Dr. Nancy Foster Scholar, has all the data she needs for her analysis and is writing it up. There will be a mooring maintenance trip next month.
- On benthic science, Kaitlin, who does all post processing of the images, did a Cordell Bank community zonation; there are two technical reports out. A goal for the coming year is to have a peer-reviewed publication on this. Kaitlin also finished with analyzing the images from the 2017 cruise on the E/V *Nautilus*, and a report is in draft. She developed a species guide for everything that was seen on that cruise, which will help inform dive planning. The collected specimens went to the California Academy of Sciences (CAS); some were identified.
- The next cruise on the E/V *Nautilus* is October 4 – 10; everything will be broadcast on Nautiluslive.org. There is a significant education component to this work, including what are sanctuaries, what we are doing in CBNMS, etc. Those on board also interact with people on shore.
- Members of the Bay Area Underwater Explorers, a group of citizen scientists, have been out a few times in CBNMS and have collected fantastic images, which they have let CBNMS use. They have also collected some specimens on behalf of CBNMS. Conditions can be rough, and the group may or may not be able to dive Cordell Bank every year or conduct other science-related activities there for CBNMS.
- There is an acoustic buoy in CBNMS, part of a network of other stations around the country, including CINMS. The hydrophones are all calibrated so their recordings can be compared to each other and compared over time; they record continuously for two years. October is when the equipment will be swapped out. Samara Haver, a Dr. Nancy Foster Scholar, has done some preliminary analysis of the data from October 2015 – October 2017. The goal is to develop a soundscape characterization that can facilitate future comparisons. The primary sounds Samara could discern were ships and blue, fin, and humpback whales. Humpbacks were detected year round, while there were seasonal peaks of blue and fin whales August to December/January. Samara is also looking at any overlapping of whale sounds and any

masking by anthropogenic sounds. In addition, she is taking ACCESS visual observation data and linking them to what she is hearing, and using Farallones data.

Species in CBNMS: Focus on Listed and New Species (Dani)

- Dani said there are a lot of ways to think about the topic of the species in CBNMS. In this presentation, she focused on listed and new species; a number of management activities focus on listed species.
- CBNMS has a list of confirmed occurrences of species in the sanctuary; currently, the list has 1,412 species and they are more recently observed species to be added to the list. There are other species thought to be in CBNMS, but in order to be added to the list of observed species, it has to be sighted or have a specimen collected of it. The species on the list are group by protest, algae, invertebrates, fish, birds, and mammals. The list contains the common name and scientific name, taxonomy, and listed status. She described additional information CBNMS has on observed or collected species and noted the earliest samples were from the 1890s. Those went to the Smithsonian Institution.
- Jaime noted he had a list of plankton species he could share with her.
- “Listed” is a term from the Endangered Species Act (ESA). She provided a list of key terms used in the ESA, and some excerpted text from it, focusing on the terms, “endangered” and “threatened.” It is unlawful to take any endangered species within the United States or the territorial sea of the United States. They also cannot be imported, exported, sold, etc. Federal agencies must insure any actions they authorize, fund or carry out are not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of those species’ habitat.
- There are other protections under other Federal laws, and CBNMS regulations prohibit taking or possessing any marine mammal, marine reptile, or bird except as permitted under the Marine Mammal Protection Act, ESA or Migratory Bird Treaty Act.
- She gave a review of mammal, fish and bird species in CBNMS that are threatened or endangered.
- In terms of new species, or the first record of a known species in CBNMS, in 2015, common dolphins and red pelagic crab were seen. This was attributed to the 2015 heat anomaly. Exploring new places with new technologies has led to confirmed sightings of black and bamboo corals. Gary Williams of CAS identified a corkscrew coral, *Radicipes stonei*, observed at 2,600 meters, the only known observation of this species outside of the Aleutian Islands. There is still a lot to learn about deep coral species. In 2017, visual observations made by scientists on the E/V *Nautilus* cruise included: 27 new coral species and one range extension; eleven new sponge species and one range extension with one possible range extension, and eight new fish species.
- Discovery of a new, undescribed species in CBNMS will be named in a paper, once published. There was already an announcement of a new coral species, published by earlier in 2019: Gary named it *Chromoplexaura cordellbakensis*. She and Kaitlin saw it topside and on videos, including from the past.
- They will continue to look for new species on the next cruise on the E/V *Nautilus*. She wants to do a full transect of Bodega Canyon and areas on the slope deeper than 1000 meters, as well as make targeted collections. GFNMS staff will look at an Essential Fish Habitat area near Point Arena. People will be able to watch it on Nautiluslive.org, and chat.
- In response to a question about how many first described species were found in CBNMS, Dani said it would be necessary to look at the CAS records to try to answer that.
- Bill commented he did not know that CBNMS had a known species inventory; other sanctuaries did not have complete inventories, though there is a pretty good one for Monterey Bay. This data is good to have for multiple reasons. He noted it was a pioneering accomplishment.

Members’ and Alternates’ Reports (CBNMSAC)

- Bec asked the advisory council members to share what is going on in the constituencies they represent, for about 2-3 minutes each. Advisory Council members have roles of explaining to their constituencies what is going on as well as reporting [at these meetings] what is going on in their constituencies.

Lilli (for Chris Hendry, who had to leave the meeting early) – read from an email Chris has provided about how whales put on quite a show for a Chevron captain outside the Golden Gate – a good reason for slowing down – and showed four whale photos from the captain.

Noah Wagner – the marina is full now. They are working on some infrastructure improvements; 100 yards of fuel line will be replaced, and he gave the estimated dates of the work. It is the only source of fuel for a 100 mi stretch; in the interim, vessels may fuel from a tanker truck. They are asking for 24 hours' notice for fuel purchases. This will be difficult as it is in the height of the salmon season, but they did not want to delay this critical maintenance work and the contractor has been picked. The old gas station at Mason's Marina, and polluted soil there, have been removed. Sonoma County Parks helped remove old finger docks, which had Styrofoam that was breaking up. The Bodega Bay Marine Laboratory said it found invasive kelp in the Bay that came in on a boat that had been down south. The Bodega Seafood, Art and Wine Festival is the weekend after this meeting in Bodega.

Leslie Adler-Ivanbrook – there will be a sand sculpture contest at Drakes Beach the weekend after this meeting; some local organizations will have tables there and Point Reyes National Seashore Association is trying to add an ocean education component. There will be a Coastal Cleanup Day event on September 21 at Drakes Beach, with other events along the coast. Learning how to use the miniature ROV she had mentioned previously has been exciting; she can share the link. They may use it to check the hypoxia mooring, if it can go that deep. It could possibly be used for educational purposes too. Point Reyes National Seashore (PRNS) has released a Draft Environmental Impact Statement for the General Management Plan Amendment, which is open for public comment; she mentioned when the public meetings would be. Among the issues covered are ranching practices, tule elk management, etc.

George – passed around the flyer for the CBNMS 30th anniversary event. On oyster restoration in Tomales Bay, the GFNMS Advisory Council (GFNMSAC) set up a working group, which just made its recommendations to the full GFNMSAC, which unanimously recommended them to the GFNMS Superintendent. He reviewed some of those recommendations, and noted the need for permits to implement some recommendations.

Tom Anderson – A fisherman in San Francisco Bay last month caught what he thought was a white shark about six feet long; later a fish expert said it was a salmon shark. Tom asked if anyone was aware of salmon sharks in this area.

- Bill commented that CBNMS was a premier destination for salmon sharks, but he was not sure about San Francisco Bay.

Steve Tubbs - announced an upcoming showing of the movie, "Artificial" in Occidental; this movie, a sister movie to "Damnation", was mentioned at the last CBNMSAC meeting. Through his fly fishing and instructing fly fishing activities, he has been continuing to promote all the national marine sanctuary posts on his Facebook page and on the Russia River Fly Fishers page. This has led to more and more people asking him questions about the sanctuary.

Morgan – The Environmental Action Committee (EAC) of West Marin participates in the Marine Protected Areas (MPA) Watch program, which monitors human activities and collects data in California MPAs; see mpawatch.org. Their intern has been working with Ben Becker of PRNS on a project to start a docent program at Duxbury Reef; they are reaching out to GFNMS, Marin County, and others. Docent outreach uses information developed by the MPA collaborative. They are also working with the same ROV mentioned by Leslie. Regarding coastal cleanups, there are events planned at Tomales and Drakes Bays; and, in partnership with Hog Island and Marconi State Parks, there will be a boat based and roadside cleanups. Information is available on the EAC web site. Finally, the California Ocean Protection Council has a public comment period open to comment on indicators adapted from the Green List.

Scott Artis - phase two restoration for coho salmon in Lagunitas Creek has started. Some people have been out to see the work done in phase one. Salmon are using the side channels. There are structures to help freshwater shrimp. They are working to acquire some acres of creekside property in San Geronimo Valley to restore; it is a good salmon spawning area. They will revive the California Naturalist training program and will cover both watershed and marine sanctuary information. Grants will be used for scholarships to bring folks from urban communities, for them to learn about the restoration work to bring back to their communities.

Brian Johnson – The GFNMS conservation science staff has a busy season, with many projects being jointly done with CBNMS, as Dani had explained. The GFNMS response team has responded recently in Tomales and Drakes Bays and the day before this meeting there was an airplane crash in Half Moon Bay. Regarding white sharks, they will have observers on the boats that go out to view the sharks. More Kent Island restoration work is gearing up. The GFNMSAC retreat on October 16 will be followed by a half day public seminar on connections between San Francisco Bay and GFNMS. Sharktoberfest is being held on September 28. Deb Self will start as the new Greater Farallones Association Director on September 3.

LCDR Lee Crusius – said he replaced CDR Jason Brand. His orders say he is a living marine resources analyst for the District and he is a California coastal region chief. He started in Alaska doing Bering Sea crab, fisheries commission, and drift net work. He also did patrol boat work in the Florida Keys and worked on fisheries in Astoria, Oregon. He returned to Alaska and did fisheries patrols, enforcement, and search and rescue work. He then went to graduate school, covering coastal issues (everything except fisheries). He is happy to be here in California as this is what he wants to do. He will not be able to attend the CBNMS anniversary event, though his alternate plans to go. Lcdr Crusius has been working to get more visibility for the sanctuary. He programs resource hours, and has gotten 1,500-1,600 resources hours for marine resources in national marine sanctuaries; the Admiral is being briefed on the plan. He is geared towards enforcement, but a lot of other positive things can come out of it. He will be ensuring surface asset presence in the sanctuaries for enforcing regulations, etc. Everything is better with aviation; however, those assets are being utilized for other missions now. Once surface assets are there, they may get more aviation assets too, but he is not able to influence where those assets go. The C-27 in Sacramento would be good for use in the sanctuary. He is data driven, and wants more predictive element to add to response.

Bec – the school year has started. Many summer camps were held over the summer. There was a coastal camp at Point Reyes, and other camps focused on oceans. She mentioned the CBNMSAC retreat is pretty fun, and includes brainstorming topics for possibly holding in the next year, setting dates for meetings for the year, plus fun time, chatting and hanging out. Lilli added a bit about what past retreats (a non-public event) are like. Bec reminded the group that the date of the November CBNMSAC meeting was reset, and is now November 22.

Bec adjourned the meeting at 2:49 PM.