



# CORDELL BANK NATIONAL MARINE SANCTUARY SANCTUARY ADVISORY COUNCIL

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## MEETING MINUTES

**August 24, 2017**

**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 (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)  
Sarah Hameed (Community-at-Large – Sonoma County)  
Bill Wolpert (Community-at-Large – Sonoma County)  
Todd Steiner (Conservation)  
Leslie Adler-Ivanbrook (Vice-Chair; Education)  
Bec Detrich (Education)  
Noah Wagner (Fishing)  
John Berge (Maritime Activities)  
Kevin Krick (Chair; Maritime Activities)  
Tessa Hill (Research)  
Jaime Jahncke (Research)

### Agency Members and Alternates Present:

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

The advisory council reviewed the agenda. Dayna Matthews was unable to attend the meeting, so Sanctuary Superintendent Dan Howard would provide the NOAA Office of Law Enforcement (OLE) report. With that change, the advisory council unanimously approved the agenda.

### **Review and Approve April Meeting Minutes (Kevin)**

The advisory council reviewed the April 27, 2017 meeting minutes and unanimously approved them.

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

- In response to Executive Order 13795- Implementing an America-First Offshore Energy Strategy, signed April 28, 2017, the Department of Commerce (DOC) is conducting a review of eleven designations or expansions of national marine sanctuaries and marine national monuments that occurred since April 28, 2007. The Secretary of Commerce will be submitting a report to the Presidential Administration. Public comments were accepted to inform the review. The superintendents of the four sanctuaries in California, which all expanded since 2007, have provided information to ONMS for the DOC formal response. Sanctuary designations and expansions are very public processes and considering oil and gas reserves is included as part of the process. The Bureau of Ocean Energy Management will be providing information on relevant offshore oil and energy leases.

- As described earlier in the year, a draft environmental assessment is being prepared to consider allowing certain United States Coast Guard (USCG) discharges (sewage discharges for vessels without Type I or II Marine Sanitation devices, non-clean graywater, and discharges related to training with ammunition and for search and rescue) within the expanded areas of CBNMS and Greater Farallones National Marine Sanctuary (GFNMS). The draft document is going through internal review in NOAA and the plan is to release it for public review in the fall. Two hearings to take comments are planned. The USCG enforces the sanctuaries' regulations, is the lead agency for oil spill response, provides the Automatic Identification System information for the work on preventing ship strikes of whales, and more. CDR Jason Brand added a lot of work had been done locally on the issue with the CBNMS and GFNMS staff.

- The ONMS Leadership Team met recently in Sheboygan, Wisconsin; there is a proposal for a new national marine sanctuary there. There were three days of core training, centering around administrative policies and responsibilities for leadership, on human resources, contracting, time and attendance, etc. There was a discussion about budget and continuing to look for ways to be more efficient with existing staff. CBNMS has not gotten a lot of additional money for programming in recent years. In some cases, after evaluating efforts, sanctuary staffs may need to either reduce what they do or at least not take on more. This year, funds may be allocated differently, on a region basis, with the regional directors rather than ONMS determining how much each sanctuary in the region receives. The ONMS Strategic Plan was reviewed and should be released soon.

- The National Marine Sanctuary Foundation (NMSF) has a new manager in place who is familiar with government operations and budgeting. They will be developing new initiatives. The NMSF board member who has been deemed an "ambassador" to CBNMS, Adam Lowry, recently met with the CBNMS staff. Capitol Hill Ocean Week events may be changed in the future to be more available to a wide range of people.

- It has been another good year for CBNMS, wrapping up with the Ocean Exploration Trust (OET) work on the E/V Nautilus, the CBNMS remotely operated vehicle (ROV) cruise, Applied California Current Ecosystem Studies (ACCESS), and continuing the partnerships and successes for education and outreach and resource protection.

- As CBNMS Research Coordinator, Danielle Lipski, is currently in the field on the CBNMS ROV cruise, Dan summarized some of the recent research work. The CBNMS ROV cruise is being conducted using the R/V Fulmar. A ROV that was donated by the National Marine Fisheries Service (NMFS) to CBNMS had a lot of new equipment on it; however, after weeks of hard work to get it ready by Michael Carver, CBNMS Resource Protection Coordinator, it could not be made operational in time. CBNMS used its other ROV and installed new equipment on it. Dani, Michael and others are currently surveying transects with the ROV on Cordell Bank in about 70 to 120 m water depth. The first three days were very successful with calm ocean, beautiful weather, successful dives, lots of whales and some puffins and albatrosses. One day was a training day off Tomales Point, and on two other days, transects were run.

- During the August 6-13 Nautilus cruise, the scientists discovered deep sea coral and sponge communities; some corals, sponges and other invertebrates had not been previously recorded in CBNMS. Scientists explored the seafloor using two ROVs in areas of CBNMS that were added to the sanctuary boundaries in 2015 but had never been surveyed. CBNMS staff members, along with scientists from GFNMS, California Academy of Sciences, and U.C. Davis surveyed the biological communities and

environmental conditions at depths from 2,700 to 740 meters, deeper than any previous surveys in CBNMS. Three of four priority target areas on the deep slope of the sanctuary were surveyed, including three dives in Bodega Canyon that ranged from 2,250 to 740 meters. In addition to visual surveys, the scientists collected organisms, sediment, and water samples - over 230 in all. Further analysis will be done to identify the species collected, and to determine eDNA and carbonate chemistry in the water samples. Sediment samples will be examined for benthic organisms, fossils and geochemistry. There were at least 16 new coral records for CBNMS, including the first records of black and bamboo corals in the sanctuary, and there were new species observations of sponges, sea cucumbers, anemones, and fish. All of the ROV dives were broadcast on Nautiluslive.org, allowing people around the world to see the work being conducted in real time. During the cruise there were live broadcast interactions with audiences, with special sessions on August 12 for Get into Your Sanctuary Day done by Jennifer Stock, CBNMS Education and Outreach Coordinator, Dani, Dan, and Jan Roletto, GFNMS Research Coordinator. Scientists ashore also participated in the surveys remotely by contributing their expertise and advising the scientists on the cruise. Poor weather cancelled the final two cruise days.

#### **Advisory Council Business (Lilli)**

- Lilli noted that the ONMS has a new policy on advisory council recruitment, and provided copies of it to the group. Instead of a notices publishing quarterly in the *Federal Register* regarding applying for appointments to advisory councils, there will now be one general announcement once a year in the *Federal Register*. That announcement will direct interested parties to the individual sanctuaries' web sites and site contacts to learn about their individual recruitment processes, including about seats available for application.

- The CBNMS recruitment period that normally would have started around August 1, to include the four member seats for Community-at-Large – Marin County and Research, has been delayed since the request to publish the notice in the Federal Register has not been cleared yet. The ONMS has said advisory council recruitment cannot take place at any sanctuary until that notice publishes. It is unknown when clearance will be given.

#### **NOAA OLE Report (Dan)**

There are two vacancies for enforcement offices in Santa Rosa, which are in process for hiring within the OLE. The enforcement officer in San Diego is fully operational. The enforcement officer for Alameda is at the Federal Law Enforcement Training Center. Interviews for hiring enforcement officers in Monterey and Long Beach will be held the week following the advisory council meeting.

#### **Cordell Marine Sanctuary Foundation (CMSF) Update (Bob VanSyoc)**

CMSF wrote letters of support on the National Marine Sanctuary System and CBNMS, as part of the effort related to the Executive Order. CMSF joined several California environmental non-profits in a joint letter as well as sending a letter from the CMSF and as individuals. The CMSF continues to look for a couple more board members. The next CMSF board meeting is November 16.

#### **Public Comment**

There was none.

#### **Highlights from the Annual State of the California Current Report (Jeff Dorman)**

- Jeff Dorman and Bill Sydeman have been working to study the California Current for a long time. Marisol Garcia-Reyes, a physical oceanographer, also contributed to the report.

- The Farallon Institute, based in Petaluma, is a non-advocacy, non profit scientific organization dedicated to understanding and preseving healthy marine ecosystems. Their science is used in management and policy decisions. The Institute has programs that focus on the physical enviornment, prey species and top predators. Jeff has traditionally done research on krill, a prey species, to understand their variability up

and down the coast, why the populations grow or decline, etc. He also works on seabird research, as seabirds are at the surface and feed on krill.

- The Institute also works on Eastern Boundary Upwelling Ecosystems, of which the California is one. With the state of the California current reports (a series of talks), they seek to describe what is happening in the coastal ocean, as that affects the economy, including food, coastal tourism and recreation.
- Jeff described the mechanisms that produce upwelling and the food web. One of the long term changes being observed is anthropogenic climate change, which has impacts on human health, ecosystems and how the atmosphere works. In the International Panel on Climate Change report on temperature, oxygen, and acidity from 1860 to present data show there has already been rising temperature, decreasing oxygen, and more acidity in the ocean. There are also some anomalies, with recent ocean cooling (1982 – 2010). The upwelling systems do not always respond in the way scientists think they will.
- A positive trend of increased winds and increased upwelling in most of California has been observed.
- There is a poleward shift hypothesis, that the mid-latitude high pressure systems are moving poleward with Hadley cells expanding. This area has one of the most intense areas of upwelling now, but it could move northward. Stronger upwelling could more quickly move nutrients offshore.
- Two other drivers that affect the California Current ecosystem are the Pacific Decadal Oscillation (PDO) and the El Niño Southern Oscillation (ENSO). The PDO results in warm/cool water phases of the sea surface temperature; scientists see shifts on a multi-year basis now. El Niño is due to slackening of equatorial tradewinds, which, during an El Niño year, causes our coast to get very warm.
- This year, 2017, has been a typical (slightly below normal) year for upwelling; with a slightly positive PDO and a slightly positive El Niño index, with no impact to the California current.
- There was a warm water blob off the coast in winter of 2014. Typically, winter storms mix up the layers and break the thermal stratification, but that did not happen that year as storms were pushed northward. Warm water moved onshore, with temperatures almost 5 degrees higher than normal, and some warm water tropical species moved in, and there were harmful algal blooms. Really warm water conditions cause an absence of northern copepods and the less fatty southern copepods move in, which is not ideal for forage fish. There was a lot of seabird mortality from fall 2014 – winter 2016.
- Per the multivariate ocean condition index (available on the Institute's web site), we are in the middle right now in 2017 – “abnormally normal” – a judgment based almost entirely on physical data, which is fairly well correlated with some biological indices. Other data and results from 2017, collected from various sources, are not yet available. It can take a lot of time after a cruise is over to get results.
- Jeff has worked with Google.org and the Monterey Bay Aquarium Research Institute to do krill abundance estimates using photography; the camera can take pictures of regular intervals of what is in the water column. He has a camera on a buoy in CBNMS currently.
- We know a lot about global and regional physical drivers of the ecosystem and how they are impacting the ecosystem now. Upwelling may increase and shift poleward.

### **CBNMS Education and Resource Protection Reports (Jennifer and Lilli)**

Education and Outreach: Jennifer reviewed the science communications for the Nautilus mission, including the events CBNMS did. Communications fellows schedule a number of interactions with museums and other groups. CBNMS has five ship to shore interactions a day, for twenty minutes each, with six on Get Into Your Sanctuary Day, for a total of thirty. These included an educator, others involved in the cruise, ROV video footage, highlights, and members of the public asking questions. There has been a good deal of publicity so far, with more to come, including a KWMR show on 9/1/17. Jennifer enjoyed talking about the expanded portion of the sanctuary (added in 2015), which includes coral gardens, weird deep sea creatures, lots of nutrients and more. Jennifer Hartigan, the 2017 Teacher at Sea, did a blog.

- Several teacher workshops are coming up, on climate stewardship and CBNMS ocean acoustics. The ocean acoustics work will also include a boat trip, where the acoustic buoy/instruments will be swapped out for new equipment.
- The CBNMS photo exhibit will be going up next at Santa Rosa Junior College, Petaluma Campus.

- There will be a North Bay Science Discovery Day on October 28; she is partnering with Bodega Marine Laboratory (Tessa Hill's laboratory) and Point Reyes National Seashore Association (PRNSA) (Leslie Adler-Ivanbrook) to offer hands-on activities that communicate the science and biological impacts of ocean acidification on marine organisms.

Resource Protection: Lilli gave the report on Michael's behalf. Since the April advisory council meeting, three Letters of Authorization (LOAs) were issued under Superintendent's permit. There is one LOA request pending and two permit applications are under review. For information about when permits are needed and applying, see: <https://cordellbank.noaa.gov/protect/permits.html>.

- On the possible use of coastal ocean dynamics applications radar (CODAR) to track vessel movements in CBNMS, CODAR may be utilized for tracking up to approximately 50 nautical miles offshore.

However, it may only track vessels about 6 meters or taller, and Automatic Identification System data is available for such large vessels. CODAR is not useful for tracking shorter (smaller) vessels movements.

- A contract has been awarded to Point Blue Conservation Science to do a quantitative analysis of the reduction of risk to whales of being struck by commercial ships in the San Francisco Traffic Separation Scheme.

- Separately, there are plans for an assessment of the impacts of commercial ship noise on whales, at different transit speeds in the San Francisco Traffic Separation Scheme.

- On the voluntary Vessel Speed Reduction (VSR) for the San Francisco area, a number of companies/vessels are enrolled in a pilot incentive initiative. The plan is to provide incentives for 125 vessel transits between Channel Islands National Marine Sanctuary, GFNMS and CBNMS. Companies whose vessels voluntarily transit the Traffic Separation Scheme at 10 knots or less speed will receive a small financial award. Some of the funding for the incentives awards (more than \$185,000) has been provided by the local Air Quality Management District. The maximum possible incentive is \$2,500 for vessels that slow transits to 10 knots in both regions in a single trip. Vessel air emission reductions from this are estimated at up to 75 tons of ozone-forming nitrogen oxides (NOx) and 2,500 metric tons of regional greenhouse gases. There is a video that focuses on the incentive program in the Santa Barbara area, Protecting Blue Whales and Blue Skies, which can be viewed at <https://www.youtube.com/watch?v=ryrM-PpA2wg> or <https://www.ourair.org/air-pollution-marine-shipping/>.

- There was some discussion about the need for an incentive program as there has been good adherence to the voluntary VSR in this area previously, but CBNMS and GFNMS decided to try it as a pilot project. The program is fully subscribed for this year. Some in the shipping industry have a concern about the fact that the recommended reduction in speed is to 10 knots in this area, but is 12 knots in the Santa Barbara and Los Angeles/Long Beach areas; from a compliance standpoint, it is not consistent. There is a cost to the shipping industry to slow down, depending on the schedule and longshoremen shifts.

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

Kevin - on the Executive Order, the last CBNMS advisory council meeting was April 27, and the initial due date for comments was in July, then that was extended. However, it is necessary to have the superintendent present at the advisory council meeting. With pre-existing busy schedules and other factors it was not possible to arrange an "emergency" meeting during that time. A lot of people from this group did provide comment on the Executive Order individually, including himself; he thought such comments carried a lot of weight with regulators.

John Berge – Pacific Merchant Shipping Association (PMSA) was approached by Toyon Research about testing infrared cameras on boat or ship based platforms, for possible use as an avoidance tool, including of whales, if it was known a large group of whales would be in a particular area. PMSA got a shipping company to offer ships to do testing from Long Beach to Oakland; however, 2-3 weeks ago, PMSA learned the funding had fallen through. Another funding source may possibly come through soon.

Tessa - noted CBNMS ended up on a national stage with the research done with the Nautilus in a way that had not been seen before, particularly with the social media, and excellent scientific facts were presented. Scientists will be working with the research information obtained for years. All are welcome to attend Bodega Marine Laboratory seminar series. There has been an effort to inventory all the monitoring of ocean acidification occurring along the West Coast. A group will be working, likely in public meetings, to determine if there are gaps in monitoring, and if there are some areas not being monitored now that should be. The State of California will soon embark on its fourth climate assessment, and it will include assessing the ocean. Separately, a climate indicator report will be coming out soon

Bec Detrich – The school year just started and Westminster Woods is finishing up training. She hoped teachers would share information from the Nautilus work with kids. Westminster Woods is working to improve its ocean curriculum, and will be going to Bodega Marine Laboratory. She is also starting a conversation with Jenny and Leslie about bringing the plastics curriculum they worked on into the Westminster Woods program.

Todd Steiner – Turtle Island Restoration Network generated 13,000 comments for the review of the Executive Order. They put together a letter from thirty organizations, which a newspaper published in an Op-Ed. On the gill net fishery, they tried to get it banned with a bill, with provisions designed to reduce impacts on marine mammals and sea turtles, but the bill did not pass. Turtle Island Restoration Network is seeking an early-career staff member to join the Cocos expedition in December. On September 23rd there will be a Celebrate the Coast event which will include kids and a coastal cleanup.

Noah Wagner - dredging has started in the federal channel and a little inside the marina in Bodega Bay. The project depth is 12 feet, using a clamshell dredge; they hope to finish within a month and a half. The spoils are going to the deepwater disposal site about 60 miles offshore of Bodega Bay. The salmon season is slow, with lots of small fish, and not a lot being caught overall.

CDR Brand – reported he is working on deep set buoy gear for swordfish. He was able to go out on a research vessel and tag fish. They also caught a bigeye thresher shark. This is a new fishery. He is the vice chair on the enforcement consulting team for the Pacific Fishery Management Council. They are testing the new gear to see if it is effective at avoiding marine mammals. He is also a part of the entanglement working group, comprised of people from the NMFS, the state, and others, working on best management practices. They will use some predictive modeling to try to figure out how to mitigate risks and lessen impacts on whales. They are also working to keep the fishing industry safe and in compliance.

Bill Wolpert – the Sonoma County Climate Action 2020 plan is still tied up in a lawsuit; issues include emissions generated outside the county by the wine and tourism industries.

Sarah Hameed - reported on the federal ocean protection panel held by Congressman Jared Huffman on 8/23/17 and mentioned who some of the attendees were. All the RSVP slots were taken within a few hours, but people on the waitlist were able to attend. Attendees stated their commitments to not having our national treasures taken away or diminished, particularly those off the California coast. A sample of 1000 comments submitted during the comment period showed all but two were supportive of national marine sanctuaries. The Secretary of the Interior, Ryan Zinke, stated that the report on national monuments did not proposal removing any, but that several may be shrunk. People are calling for public release of the report. Sarah will attend the Fourth International Marine Protected Areas Congress in Chile September 4-8; she has been working on a global ocean refugia project. The list of which areas meet criteria of marine protected area effectiveness will be released. Finally, she noted the Tidal Response show opened last week at the Petaluma Arts Center.

Jaime Jahncke – referred to the paper on West Coast whale deaths from ship strikes that everyone on the advisory council received. While people are doing a great job of trying to reduce deaths in the shipping lanes, there are also whale deaths happening outside the lanes. As mentioned, Point Blue will be doing an analysis for CBNMS using the last two years of ACCESS data to estimate where the whales are and how mortality can be reduced by ships slowing their speeds. The analysis will be used to come up with speed targets for reaching certain reductions of mortality. They may do a similar analysis for other areas. Jaime is also part of the crab gear working group. They want to do an analysis of the threat to whales from crab gear. One of Ellen Hines' graduate students is working with whale data that goes back to 1987, looking at arrival and departure times of whales during migration. There are no changes in when the whales leave, but they arrive earlier now than they used to. A different graduate student is analyzing ACCESS data on acoustics and fish. A third graduate student is looking at where fish are, how their locations vary over time, and persistent hot spots. ACCESS is doing a good job of targeting rockfish with acoustics.

Leslie - PRNSA programs are doing well and serving more and more people. The numbers of students served at summer camp increased as well as the number of scholarships. PRNSA has added some services for school programs where the participants stay at the education center that allows some schools to participate that could not before. There are also some backpacking trips for students. Coming up, there is a sand sculpture contest at Drakes Beach and Dinner on the Pacific Plate.

George Clyde – took his grandkids to the Lighthouse Visitor Center and they were fascinated. They read all the text.

Mike Cummings – said there was a comment period open on an Executive Order about the Clean Water Act and the definition of “waters of the U.S.” The comment period was to have closed August 27, but has been extended to September 27.

Kevin adjourned the meeting at 2:16 PM.