

Monterey Bay National Marine Sanctuary Advisory Council

December 9, 2022

FINAL Meeting Minutes

VOTING MEMBERS

Agriculture: Sarah Lopez

AMBAG: absent

At-Large: Gary Hoffman

At-Large: Dan Haifley

At-Large: Gwen Kellas

Business & Industry: Tom Rowley
(alternate)

CA Coastal Commission: Tami Grove

CA Dept. of Fish & Wildlife: Paul Reilly

CA EPA: Peter Von Langen (alternate)

CA Resources Agency: Elyse Goin
(alternate)

CA State Parks: Eric Abma (alternate)

Commercial Fishing: absent

Conservation: Rachel Kippen

Diving: Brian Nelson

Diving: Keith Rootsart (alternate)

Education: Pamela Neeb Wade

Education: Felicia Van Stolk (alternate)

Harbors: John Haynes

Recreation: absent

Recreational Fishing: Jose Montes

Recreational Fishing: Adam Helm
(alternate)

Research: Steven Haddock (alternate)

Tourism: Michael Bekker

Tourism: Dawn Mathes (alternate)

NON-VOTING MEMBERS

Channel Islands NMS: absent

College: absent

Greater Farallones & Cordell Bank

NMS: Brian Johnson (alternate)

US Coast Guard: Andrew Ireland

Monterey Bay NMS: Lisa Wooninck

Monterey Bay NMS: Dawn Hayes (alternate)

Elkhorn Slough NERR: Dan Brumbaugh (alternate)

National Marine Fisheries Service: Steven Lindley

National Marine Fisheries Service: Steve Bograd

ALTERNATES PRESENT

Tom Rowley - Business & Industry

Peter Von Langen - CA EPA

CA Resources Agency - Elyse Goin

Eric Amba - CA State Parks

Keith Rootsart - Diving

Felicia Van Stolk - Education

Adam Helm – Recreational Fishing

Steve Haddock – Research

Brian Johnson - GFNMS/CBNMS

Dawn Hayes – MBNMS

I. CALL TO ORDER

Welcome to Monterey Bay Aquarium Meeting Space: Pamela Neeb Wade

Approval of August Meeting Minutes: with editorial suggestions by Paul Reilly

Motion by Michael Bekker, seconded by Tom Rowley

Yes: 11 No: 0 Abstain: 5

Motion passes

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II. SUPERINTENDENTS REPORTS

Lisa Wooninck, Superintendent of MBNMS, shared a Superintendent's Report for Monterey Bay National Marine Sanctuary (MBNMS). Highlights included:

1. National Oceanic and Atmospheric Administration (NOAA) is celebrating Sanctuary Advisory Councils' 2022 achievements, recognizing 415 AC members across the system for 8,597 hours dedicated to informing system management valued at \$238,725.
2. Office of National Marine Sanctuaries (ONMS) released its Strategic Plan. The advisory council (AC) may consider putting a presentation on the strategic plan on the agenda for the coming year.
3. The AC recruitment period is complete. MBNMS received 21 applications from high caliber applicants for 17 seats. Reappointment selections have been made and are in clearance, while new appointments are still being considered. Thank you to Michael Bekker, Dan Brumbaugh, and Charlie Lambert for being on the review committee. MBNMS wants to stagger future recruitment periods by making shorter terms so that recruitment periods are less overwhelming with seat numbers to fill.
4. MBNMS presented research awards: The 2022 Ed Ricketts Award and Lecture was presented to Dr. Rick Starr, Moss Landing Marine Laboratories, while the Best Presentation in Community Ecology Award was presented to Sydney McDermott, a Moss Landing Marine Laboratories graduate student.
5. Nancy Foster Scholar, Vanessa Zobell, completed her summer project with the MBNMS research team servicing hydrophones and developing techniques for geographically locating fin whales using sound.
6. The diving operations team logged 212 dives by 9 divers in 2022. Dr. Steve Lonhart of MBNMS was appointed as the Deputy Line Office Dive Officer for the National Ocean Service as of November and is a voting member of the NOAA Dive Control & Safety Board.
7. MBNMS staff attended the Marine Biodiversity Observation Network meeting to work on how to support applications for research management, with specific attention to sharing indicators of sanctuary conditions online.
8. MBNMS education team released a brochure with the Marine Protected Areas (MPA) Collaborative Network that highlights things people can do sustainably to support our MPAs. An associated website was created to highlight responsible viewing and exploration practices.
9. MBNMS education team has partnered with One Cool Earth to provide more virtual programming to students. In-person school field trips have been successful so far, but more Covid-19 precautions may be needed in the coming year. The multiyear coastal signage project has installed 10 new signs educating MBNMS visitors.
10. The CA Coastal Commission has approved the Cal-Am Water desalination project in Marina. A special use permit will be issued for slant wells that reach into the seabed of the sanctuary.
11. The Pacific Grove City Council has unanimously approved a new harbor seal ordinance and NOAA is considering adding eFoils to the MBNMS regulatory definition of Motorized Personal Watercrafts. MBNMS resource protection staff plan to work with harbors and other entities to ensure understanding of the definition. Michael Bekker,

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Tourism seat, asked about technology that now speeds underwater. Superintendent Wooninck was unsure about what lay ahead for this kind of technology.

12. There were emergency responses to two vessel groundings. One split apart at the Santa Cruz Wharf before grounding on Cowell's Beach, while the other floundered in surf one mile south of Moss Landing before being towed back to Moss Landing Harbor. Brian Nelson, Diving seat, pointed out the importance of the MBNMS vessel incidents team for assisting with abandoned boats at anchor. He provided an example of a vessel abandoned at anchor that was vulnerable to storms. He stressed the importance of ensuring that the MBNMS vessel incidents team has the legal authority to take care of such vessels, which he is working with Superintendent Wooninck to ensure.

Brian Johnson, Deputy Superintendent of Greater Farallones National Marine Sanctuary/Cordell Bank National Marine Sanctuary (GFNMS/CBNMS), shared a Superintendent's Report for GFNMS/CBNMS. Highlights included:

1. Conservation Science
 - a. The conservation science team hired a new research operations specialist.
 - b. The 2022 ACCESS surveys are complete.
 - c. The 2021 Climate Indicators Report is available.
 - d. CBNMS and GFNMS Condition Reports are in the process of being completed.
2. Education and Outreach
 - a. The successful Sharktoberfest welcomed white sharks back to the Farallones region.
 - b. A volunteer appreciation event doubled as a 50th anniversary event to celebrate sanctuary stewards.
 - c. The Bay Area Underwater Explorers have completed five dives on Cordell Bank.
 - d. GFNMS/CBNMS Visitor Center Manager, Justin Holl, was featured in an ONMS web story article highlighting a plankton education program.
3. Resource Protection
 - a. The resource protection team has worked with the Office of National Marine Sanctuaries West Coast Region on the US Coast Guard Pacific Port Access Route Study.
 - b. The Seabird Protection Network is launching a campaign aimed at working with small boat fishermen to promote best practices for wildlife interactions.
 - c. GFNMS/CBNMS presented GFNMS regulations that would most likely be violated in California MPAs to the Golden Gate MPA Collaborative enforcement partners.
 - d. GFNMS/CBNMS completed mooring compliance surveys in Tomales Bay and also oversaw a research project to assess the status of eelgrass.

Deputy Superintendent Brian Johnson then presented on the Draft Restoration Plan and National Environmental Protection Act Evaluation for the YFD-70 Dry Dock. This vessel sank as it was being towed in the northwest portion of MBNMS. Data collected during ROV surveys in July 2018 revealed that it is located in Pioneer Canyon and there has been a permanent loss of habitat and ecosystem function within the area where the YFD sank. The vessel cannot be removed, but the damages caused by the sinking can be offset. The restoration plan falls into these steps:

1. Targeted removal between Point Sur and Point Arena from the coastal zone to 150 ft below sea level in a timeframe of 10 years.

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2. Coral outplanting at suitable depth based on established methodologies.

There was also a no action alternative and a preferred alternative. The document outlining this proposal is available for download and public comment until January 5, 2023. Please submit comments to GFNMS.

After Deputy Superintendent Johnson presented, there were a number of comments from the AC. Dan Haifley, At Large seat, wanted to know the funding source. Deputy Superintendent Johnson stated that he was happy to send the document, and Superintendent Wooninck clarified that the open litigation surrounding the issue limits what can be said. Diving seat Brian Nelson asked if there was an assessment of the stored hazmat material onboard. He said that it was something that should be considered because the vessel likely still had hydraulic fluids aboard. Deputy Superintendent Johnson did not know but stated that that question could be submitted as an official comment on the plan. Brian Nelson, Dive seat, then asked at what depth the vessel was. Deputy Superintendent Johnson did not know, but knew it was very deep in Pioneer Canyon. Tourism seat Michael Bekker asked if the vessel sank on its side or upside down; Superintendent Wooninck replied that it sank rightside up and was almost intact. Research alternate Steve Haddock asked if remotely operated vehicles (ROVs) had viewed it, and Deputy Superintendent Johnson stated that they had.

III. INFORMATION ITEM – CLIMATE VULNERABILITY ASSESSMENTS

ONMS' Dr. Zachary Cannizzo and MBNMS' Steve Lonhart shared the strategies employed by researchers making climate vulnerability assessments (CVAs). He explained that such assessments are not new to the system; many sanctuaries have done them or plan to do them. CVAs can help prioritize species and systems to inform management strategies. CVAs evaluate three measures to determine how climate change will affect the sanctuary in order to improve management approaches for long-term success: exposure, sensitivity, and adaptive capacity. Subject matter experts work through worksheets for every stressor and resource to rate vulnerability. In contrast to a condition report, which assesses current conditions of every resource by looking back at trends of the past years, CVAs allow us to assess an array of possible future conditions and project impacts. Using CVAs and condition reports together gives researchers a holistic climate-informed management plan. A comparison of MBNMS resources and GFNMS resources would inform respective sanctuary researchers about areas where species may need a CVA, based on commonalities. MBNMS' Steve Lonhart then explained that a total of sixty focal resources will be analyzed. GFNMS is completing its report, and then MBNMS will do its own, targeted for next year.

Paul Reilly, CA Department of Fish and Wildlife, asked Steve Lonhart if he was aware of a current CVA project at Southwest Fisheries Science Center to analyze 20 species that will be reviewed by subject matter experts. Steve Lonhart replied that he was aware of this project and will follow up with that to inform CVAs. Tami Grove, Coastal Commission, stated that the Coastal Commission is doing work with sea level rise plans, and she offered collaborative resources for Steve to use as the CVAs are performed. Dan Brumbaugh, Elkhorn Slough National Estuarine Research Reserve, asked if MBNMS is going to adapt from other CVAs, and would it mostly adapt from exposure, as sensitivities would likely stay the same. Steve Lonhart said that the researchers do not assume anything, as spatial, temporal, genetic, and environmental

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variation can change sensitivity. Lonhart said that there is also a confidence component for further refinement between sites.

IV. ACTION ITEM – ICONIC KELP

MBNMS's Steve Lonhart presented on iconic kelp in central CA. Kelp is a key habitat in CA MPAs. It supports deeper waters and terrestrial systems. When kelp forests decline, there are subsequent changes in the ecosystem, with ecological losers and loss of interest from recreational fishers, divers, et cetera. To better understand how kelp has been changing in the past years, researchers have examined satellite imagery as far back as 1984 to analyze nearshore systems for density of kelp and where it could exist. Kelpwatch.org visualizes this research with polygons for specific areas to pinpoint kelp density and how it has changed over time. Regional variation in kelp cover shows response to and recovery from marine heatwaves, which can then be compared to historic means. By mapping historical kelp density, researchers can identify drivers and project maps of kelp density across the entire state. They can then stack these maps year by year, creating a time series to estimate stability for each location in CA across time. Combining kelp stability and its ability to recover can help prioritize monitoring, investment, and restoration. Model results will be used to produce a restoration guide, which will enable resource managers to choose optimal locations, times, and methods for kelp restoration activities statewide. Possible methods include urchin culling, kelp seeding, kelp outplanting, and predator introduction. Multiple questions remain about scaling these studies up to actual management actions from small areas to large areas. There is work to be done on how best to work forward and prioritize funds. The Research Activity Panel (RAP) should be engaged to ensure things are done in the most scientifically sound way possible so that it can then be incorporated into new studies.

Superintendent Wooninck then stated that the AC can direct the RAP to evaluate the current understanding of kelp forests in the sanctuary; the AC can then decide to adopt this evaluation at the February meeting. The AC could also decide to create a working group in the future, but the Superintendent hopes to move forward in a timely manner to get this work started with broad-based funding.

Steve Haddock, Research alternate, expressed concern that the RAP does not specialize in kelp and that it may be better to forward Steve Lonhart's research than to create recommendations. Superintendent Wooninck said this request would not be asking the RAP to come up with something new, rather it would be asking them to evaluate what has already been researched by Steve Lonhart's team. Michael Bekker, Tourism seat, then said that it would be prudent to use historical knowledge rather than reinventing the wheel. In 2005 there was a presentation on a kelp study over a 20-year period. Stored studies like this could prove useful. Superintendent Wooninck agreed and said that working to bring forth all of this historical data will be a focus of the project. Paul Reilly, CA Department of Fish and Wildlife, asked what exactly the AC is asking the RAP to do. Superintendent Wooninck stated that it is important to focus on the why; the RAP is made up of the AC's scientific experts that advise the AC on issues related to science. Kelp is very important as demonstrated by Steve Lonhart's presentation, and having the RAP evaluate kelp will be helpful for evaluating and proposing scientific projects related to recovery

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and restoration and what the sanctuary should be doing in terms of long term monitoring. Brian Nelson, Diving seat, followed up on Paul Reilly's question. He stated that working in tandem with Steve Lonhart's team rather than a peer review of his process may be a better strategy. Steve Lonhart agreed, stating this way the RAP can look at the information from a more holistic perspective.

Motion to direct the RAP to evaluate within MBNMS suggested/proposed options to science to inform monitoring, recovery, and restoration of kelp forests.

Motioned by Dan Haifley, seconded by Sarah Lopez

Yes: 12 No: 0 Abstain: 4

V. PUBLIC COMMENT FOR ITEMS NOT ON TODAY'S AGENDA

No public comments.

VI. MEMBER ANNOUNCEMENTS PART 1

One person from each seat reported their updates in three minutes or less.

Keith Rootsart, Diving alternate, shared that he has been working with Steve Lonhart on the Tanker's Reef Project. As researchers have stopped doing aerial surveys, he was glad to see that there are studies being conducted to research a big knowledge gap. Covid-19 stopped some operations, but 1200 dives were performed without incident. He is looking to expand into areas with granite, a better substrate than slate, and he hopes to have restoration applied more broadly.

Tom Rowley, Business/Industry alternate, shared that the desalination plant has been approved with twenty conditions that Cal-Am Water must come up with before the permit is approved. When Tom was at the Naval Postgraduate School in 1970, his thesis partner was caught in the kelp of Point Lobos, as kelp was much thicker back then.

Dan Haifley, At Large seat, stated that Monterey Bay National Marine Sanctuary Foundation will have its impact report available for 2022 so that people can see activities done in support of the sanctuary.

Pamela Neeb Wade, Education seat, shared a community science opportunity called Solstice Seastar Search put on by the Nature Conservancy and Academy of Sciences. The Bay of Life book has been published, and resources are available [online](#).

Adam Helm, Recreational Fishing seat, shared that the end of the fishing season is coming. The Department of Fish and Wildlife will provide an update on new fishing regulations, specifically rockfish regulations, so that it can do its own posts. Adam is planning to do shared adventures again with MBNMS' Lisa Uttal.

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Steven Haddock, Research alternate, shared that the Monterey Bay Aquarium Research Institute's Western Flyer has been transferred to Florida School of Oceanography specifically to advance programs involving minority students.

Michael Bekker, Tourism seat, said that tourism slows normally between Thanksgiving and Christmas, and will likely pick up soon. Cardboard usage and collection has shown that many people are ordering and purchasing in Monterey. The tree lighting at Cannery Row had a great turnout.

Paul Reilly, CA Department of Fish and Wildlife, shared that the timing of the Dungeness crab fishery is influenced by the number of whales in the area. In northern California, fisheries are closed due to low meat yield conditions.

VII. INFORMATION ITEM – CA COLLABORATIVE FISHERIES RESEARCH PROGRAM

Moss Landing Marine Laboratories' Scott Hamilton presented on this program. The CA Collaborative Fisheries Research Program (CCFRP) is a community-based fishery and independent research program. It combines the expertise of the fishing community, academic sciences, and resource managers. The program conducts scientifically rigorous data collection through catch and release fishing and analyzes the data for MPA monitoring and fisheries management.

On each day CCFRP participants go out fishing, they visit randomly-selected 500 meter x 500 meter grid cells and fish in each cell for 45 minutes, broken into three 15 minute drifts. As they fish, they note the GPS coordinates of drift, the species name, the size, the number of fish, and the tag numbers of all fish that are tagged. Fish are released with the goal of high survivorship. There have been 690 sampling days at sea, 31 sportfishing boats, 53 captains, and 1800 volunteer anglers. These long term monitoring efforts monitor relative abundance by catch per unit effort. The results have shown that there is a higher biomass inside MPAs over time. MPA area, location, and age also impact biomass, with bigger, more southern, farther from fishing pressure, and older MPAs having more biomass. There have also been some findings of "fishing the line" behavior, which is fishing near the MPA boundary to catch fish spilling over. In central CA, the fishing the line response increases over time from the year of MPA implementation. Studies of tag returns have shown that most fish are staying close to where they were originally tagged. Approximately 17% of recaptured fish originally tagged in MPAs spill over to areas open to fishing. The CCFRP also conducted a study of opinions of MPAs held by CCFRP participants before and after volunteering with CCFRP. Positive opinions increased, especially in those who volunteer frequently.

Dan Brumbaugh, Elkhorn Slough National Estuarine Research Reserve, asked if the program pays for vessel operators. Scott Hamilton replied that the funding comes from NOAA, the program charters all boats, and the fishers volunteer their time. Dan Brumbaugh, Elkhorn Slough

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National Estuarine Research Reserve, also asked if there have been multiple regression models done to show the most important variables of biodiversity. Scott Hamilton replied that yes, these models have been made and the most important were size and age of MPAs.

Superintendent Wooninck asked if fishers with a positive opinion of MPAs ask why they are not being opened up when they are clearly working. Scott Hamilton said that they do ask this and he tells them that the long term benefits of MPAs such as offspring that leave the MPA make it important to keep the MPA in place. There is some talk of rotational reserves as a replacement option, although this may be hard to establish in CA.

Adam Helm, Recreational Fishing alternate, asked Scott Hamilton if he predicts any changes to this information with the depth changes in CDFW regulations in 2023. Scott Hamilton replied that CCFRP is not involved in this change, but can provide information for management decisions like that one. He also said that there is a 200 page report on the CCFRP website, along with a recording of a public brown bag seminar and different publications. He also encouraged AC attendees to volunteer.

Paul Reilly, CA Department of Fish and Wildlife, has participated in the program. He said that the scientific crew that comes along tries to get the fish back in the water with minimum stress. He also asked how CCFRP converts length to biomass. Scott Hamilton then said that biomass accentuates data by combining the metric of length and numbers of fish, relative to the measure of biomass (per angler hour) and should scale in a linear way. He said that CCFRP uses established weight/length regressions by species to convert lengths to weights.

Keith Rootsart, Diving alternate, asked why not just weigh the fish for the biomass. Scott Hamilton said that the program uses length because it is difficult to weigh things on a rocky boat. Keith Rootsart also asked about the difference between no take areas and areas when just recreational fishing is allowed without commercial fishing. Would these lend themselves better to the rotational measures discussed? Scott Hamilton responded that the program only studied state marine reserves that do not allow fishing, but he expects spaces where recreational fishing is allowed to have similar fish responses as inside SMCA's. The CCFRP's results can inform what needs to be changed, such that adaptive management is conducted.

VIII. INFORMATION ITEM – MANAGEMENT DECISIONS ON DIVERSITY, EQUITY, AND INCLUSION RECOMMENDATIONS

Superintendent Wooninck presented the management decisions on the Diversity, Equity, and Inclusion Subcommittee's recommendations to MBNMS. She thanked Rachel Kippen, Jenny McAdams, Mike Bekker, and PJ Webb for their service on the subcommittee. The management decisions on the recommendations can be found below in Appendix II.

Sarah Lopez, Agriculture seat, said that the management decisions say a lot about recruitment, but they do not discuss how the applications are reviewed once they come in. Mike Bekker,

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Tourism seat, served on the selection committee during the fall 2022 recruitment cycle. He stated that this last process was lengthy, with multiple people casting for multiple seats. Most gave very little information in the way of diversity, so the selection committee had to conclude certain things from what was presented. Superintendent Wooninck then said that MBNMS asked this last batch of applicants how they would incorporate diversity, equity, and inclusion values in their term. She also stated that there will be four meetings next year, and she proposes diversity, equity, and inclusion be talked about at all of them so that the focus is not just on recruitment but selection as well. Dawn Hayes, MBNMS, agreed, saying that these management decisions coincided with the recruitment period, which is why they are focused on recruitment.

Dan Haifley then asked who would volunteer to be on a committee focused on diversity, equity, and inclusion, and Rachel Kippen, Keith Rootsart, Felicia Van Stolk, and Dan Brambaugh raised their hands.

Motion to create a yearlong subcommittee to enact Diversity, Equity, and Inclusion recommendations

Motion by John Haynes

Seconded by Rachel Kippen

Yes: 12 No: 0 Abstain: 4

IX. INFORMATION ITEM – MANAGEMENT DECISIONS ON VESSEL INCIDENT RECOMMENDATIONS

Superintendent Wooninck explained the management decisions on the Vessel Incident Subcommittee's recommendations. She thanked those who participated on the subcommittee, including Dan Haifley, Brian Nelson, Gary Hoffmann, and PJ Webb. The management decisions on the recommendations can be found below in Appendix III.

Michael Bekker, Tourism seat, asked if a vessel sank outside of MBNMS jurisdiction, what would happen? Are there tow operators in the Bay? Karen Grimmer replied that it would still be under investigation, but via the Coast Guard. There are many tow operators at various levels in the bay, but there needs to be more communication with MBNMS on the part of the Coast Guard in regard to dead tows.

John Haynes, Harbors seat, stated that working with the other groups mentioned in Item 9 helps make responses much faster and put names to faces.

X. MEMBER ANNOUNCEMENTS PART 2

Sarah Lopez, Agriculture seat is working with marine sanctuary water quality staff on a virus that attacks lettuce crops. A multistakeholder panel was convened to bridge the gap of what we are able to achieve versus what is allowed by the waterboard. Rains have meant that farmers are trying to keep the first on the fields.

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Gwen Kellas, At Large alternate, mentioned tulip turbines and wondered if anyone would receive information about this technology.

Elyse Goin, CA Natural Resources Agency (CRNA), stated that the CRNA had approved its joint kelp restoration management plan as well as an equity plan. It has also approved MPA monitoring, including the work done by the CCFRP, and it has approved additional funding to the Tribal Marine Stewards Network. A decadal management review is underway for state MPAs, which will present in March to the CA Fish and Game Commission. The 30x30 biodiversity program will present its CA findings in Montreal.

John Haynes, Harbors seat, stated that Santa Cruz and Monterey both had their lighted boat parades recently, which were well attended. Santa Cruz Harbor maintenance is dredging with the US Army Corps of Engineers.

Dan Brumbaugh, Elkhorn Slough National Estuarine Research Reserve, shared that the reserve is working on improving infrastructure near the visitor center because the trail has been crumbling. This should improve handicap access. There has also been extensive monitoring of sea otters in the reserve, through a combination of effort by Elkhorn Slough Safari, the Reserve, and the Monterey Bay Aquarium. The volunteers garnered similar results as US Geological Study surveys, a win for citizen science.

Tom Rowley, Business and Industry alternate, shared that the real estate industry has felt the effects of layoffs.

XI. ACTION ITEM – WORK PLAN FINALIZATION

Superintendent Wooninck presented the finalized work plan for the AC in 2023. The priorities are the following: reduce marine debris, whale conservation, vessel incidents, climate change, iconic kelp forest, recreational fishing, and expanding community connections. She outlined the steps that the AC would be taking toward each goal during the 2023 meetings, and she explained that the AC would go from six meetings a year down to four with the option of an added retreat. See below in Appendix IV.

Dan Brumbaugh, Elkhorn Slough National Estuarine Research Reserve, asked how much the voluntary vessel speed reduction zones help, and how many whale strikes occur within MBNMS. Superintendent Wooninck replied that those questions would be answered in the vessel speed reduction zones presentation. Encounter rate models will show how many there are. Superintendent Wooninck already knows that there is a hot spot in the northern section of MBNMS.

Tom Rowley, Business/Industry alternate, stated that the AC needs to prioritize sea level rise. Cities will turn to MBNMS when they face a huge project in 2025. Perhaps MBNMS could

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advise and support cities and counties in their requests for funding to mitigate the damage from sea level rise. Superintendent Wooninck replied that she was unsure what information MBNMS could provide. Dan Brumbaugh, Elkhorn Slough National Estuarine Research Reserve, said that there are other offices of NOAA with more information useful to cities.

Dan Haifley then suggested to Lisa W that the foundation provide a report to a SAC meeting in 2023, and she responded that that was a good idea.

Motion to approve the work plan

Motion by Mike Bekker

Seconded by Keith Rootsart

Yes: 11 No: 0 Abstain: 1

Adjourn at 2:45

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Appendix I. Member Written Announcements

Name: Jose R. Montes

Seat: Recreational Fishing Primary

Announcement:

I have been monitoring the emergency measures regulating crab pot use. Currently we are into the second extension of the season banning the use of pots, but allowing the use of hoops with accompanying regulations for use.

Name: Dan Haifley

Seat: Northern At Large Primary

Announcement: 1) On December 3 MBNMS Foundation held an open house at its new office at 2222 East Cliff Drive, Suite 234, Santa Cruz 95062 (in the Santa Cruz Harbor next to O'Neill Sea Odyssey) and hosted students from around the region, including CSUMB and West Valley College, who engaged in a great career-oriented discussion with Superintendent Lisa Wooninck and foundation board and staff members. 2) A final report on grants and support by the foundation for 2022 is nearing completion and a blog with those details will be posted on the website soon.

Relevant Links: montereybayfoundation.org, Facebook, Instagram.



Name: Dan Brumbaugh

Seat: Elkhorn Slough NERR Alternate

Announcement: Interesting collaborative new study about sea otter monitoring by volunteers in Elkhorn Slough and Moss Landing Harbor

Relevant Links: <https://doi.org/10.1002/ecs2.4300> (for a copy, open access)

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Abstract

Volunteer monitoring can support conservation of imperiled wildlife, by providing higher resolution data in space and time than those available from professional scientists. However, concerns have been raised that data collected by amateurs are inaccurate or inconsistent and thus do not allow for robust detection of spatial or temporal trends. We evaluated the rigor and value of volunteer monitoring data for one iconic wildlife species, the southern sea otter (*Enhydra lutris nereis*), in Elkhorn Slough estuary in central California, USA, and explored whether volunteer monitoring could provide added value to complement limited professional surveys. First, we compiled and analyzed sea otter counts taken on daily ecotourist boat trips along the estuary, and then compared temporal patterns to data collected by professional scientists tasked with monitoring this federally listed species. Second, we analyzed data on sea otter abundance, habitat use, and behavior collected by a team of trained volunteers, the Elkhorn Slough Reserve Otter Monitoring Program. Overall, we demonstrated the ability to detect important ecological patterns relevant to sea otter conservation and wetland habitat management using volunteer-derived datasets. Long-term trends and inter-annual variability were similar between professional agency monitoring data and volunteer datasets. Moreover, the much higher frequency of volunteer observations allowed for seasonal and tidal dynamics to be detected that could not be revealed by less frequent professional monitoring. We found higher sea otter abundance in the estuary in spring?summer, indicating seasonality in use of the estuary. We detected differences in habitat use of the estuary between higher and lower tides, and greater frequency of foraging at low tide and in certain areas. Volunteer observations revealed fine-scale differences in habitat use: eelgrass beds were used much more heavily than adjacent areas only a few meters away. Volunteer data can thus provide critical information about coastal habitat use and behavior that can improve conservation strategies for threatened wildlife species.

Reference

Eby, R, S Rosso, J Copriviza, R Scoles, Y Gideon, J Mancino, K Mayer, J Yee, and K Wasson. 2022. Sea otters in a California estuary: Detecting temporal and spatial dynamics with volunteer monitoring. *Ecosphere* 13(11): e4300.

<https://doi.org/10.1002/ecs2.4300>

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FIGURE 2 Volunteer monitoring for sea otters. (a) Elkhorn Slough Safari boat trip and (b) captain pointing to raft of sea otters (photo credit: Elkhorn Slough Safari); (c) Reserve Otter Monitoring Program (ROMP) observer overlooking Yampah Creek (photo credit: Kerstin Wasson); (d) ROMP observer cruising Main Channel (photo credit: JoEllen Arnold); (e) ROMP observer using tablet to collect data at Seal Bend (photo credit: Ron Eby); (f) ROMP observer at North Harbor (photo credit: Heather Hayashi).

Name:Keith Rootsart
Seat: Diving Alternate
Announcement: G2KR New Diver Data Portal
Relevant Links:
Photos (add below)

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**Two Southern Sea Otters and a little bird enjoying the Giant Kelp on Tanker's Reef
Photo by Keith Rootsart**

Narrative - The Giant Kelp Restoration Project has published to the website g2kr.com a Salesforce powered data portal. This will help improve diver engagement in the successful kelp restoration project as the community grows. Much thanks to the Salesforce Non Profit Service Pack and our administrator and certified Kelp Restoration Diver, Mat Berthiet, working on this program since March. Phase 2 of the data portal will be published in the spring and use logins for divers to access their own data and have robust reporting.

Divers log lots of meaningful data about how long they took to cull X amount of urchins and how much area did they cover. They also log bycatch, damage to equipment, damage to the reef, marine mammal disturbances, and trash collected. Special attention is provided during in the water training to make sure divers practice peak buoyancy and not drag equipment over the reef. Safety is the first concern, and certification by local instructors is helping make it safe and fun.

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We see lots of sea life coming back to this kelp forest like a leopard shark, bat rays, blue rockfish. These two sea otters have been hanging out on the Tanker's Reef site since summer.

Name: Pamela Neeb Wade

Seat: Education

Announcement:

Bay of Life book

Santa Cruz County Office of Education along with several Education non-profits (including the Sanctuary Exploration Center), are working on curriculum to accompany the [Bay of Life](#) book. The Bay of Life, features the biodiversity of the Monterey Bay and MBNMS. There is also plan to release a version of the photo book for schools. In January there will be a launch at the Santa Cruz Museum of Art and History.

Solstice Sea Star Search- Dec 20-23rd

The Nature Conservancy along with California Academy of Sciences is launching a community science campaign to gather observations of sea stars along the coast. Interested educators, students, families or individuals can participate during low tide from December 20th- 23rd. For more information, please visit baynature.org/event/solstice-sea-star-search.

Relevant Links:

<https://bayoflife.net/>

<https://baynature.org/event/solstice-sea-star-search/>

Name: Paul Reilly

Seat: CA Department of Fish and Wildlife

Announcement:

Recreational boat fishing

During the second half of October and in to November, mornings were overcast with little fog, colder temperatures, and rough ocean conditions. A relatively strong storm passed though in early November. Relatively low to moderate fishing effort was observed as recreational boats primarily targeted rockfishes, lingcod, and bluefin tuna, with a bit of California halibut effort. Tuna effort was documented from the three Monterey Bay area ports but the only success was for boats out of Santa Cruz and Morro Bay.

Commercial and Recreational Dungeness Crab Fisheries – Central California

Information is only included for Risk Assessment and Mitigation Program (RAMP) Fishing Zones 3-5, which overlap with the Monterey Bay National Marine Sanctuary. A

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map is available on CDFW's Whale Safe Fisheries webpage. CDFW has conducted three risk assessments thus far to evaluate marine life entanglement risk in the recreational Dungeness crab and commercial Dungeness crab trap fisheries for the 2022-23 fishing season. The recreational Dungeness crab fishery opened under a trap restriction on November 5, 2022 (hoop nets and snares are allowed). The commercial Dungeness crab fishery remains delayed due to elevated marine life entanglement risk. CDFW anticipates conducting the next risk assessment around December 22, 2022, which would inform lifting of the commercial fishery delay and recreational trap restriction.

Appendix II. Management Decisions on Diversity, Equity, and Inclusion Recommendations

Recommendations from subcommittee on Diversity, Equity, and Inclusion October 2022	MBNMS response
<p>The AC support the following recent changes to the SAC Application Form and website:</p> <ol style="list-style-type: none">1. Changes to the AC application form have been recently implemented through Office of National Marine Sanctuaries (ONMS) headquarters and will be reflected in the new application form to be released later in 2021. Two additional questions were added that stemmed from an effort across the sanctuary system to engage in topics related to diversity and inclusion on sanctuary advisory councils: 1) "Describe how you will engage diverse, under-	<p>All recommendations related to the AC application and website have been accepted by MBNMS management.</p> <ol style="list-style-type: none">1. Recommended changes to the application have been made.2. MBNMS Website has been updated.3. We can work with a D&I working group on the development of an accountability statement4. We verified that we can add one question to the application related to a

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<p>represented, and under-resourced communities to ensure their voices are represented on the advisory council? Please be sure to include any past experience you have connecting with these communities.” and 2) “How did you hear about this opportunity” (this one is aimed at helping staff track outreach efforts and assess the success of reaching different communities).</p> <p>2. The AC web page be updated with a diversity statement prepared through the ONMS in the short term, but will be assessed in the long term to tailor to MBNMS.</p> <p>3. After implementation of recommendations, develop an accountability statement.</p> <p>4. Seek to see if we can tailor the application to add one question related to the specific seat requirements.</p>	<p>specific seat requirement.</p>
<p>Outreach:</p> <p>1. Modify MBNMS Web pages to outline the benefits of council membership and participation on the Executive Committee on the recruitment webpage (references, resume experience, etc.)</p> <p>2. Ask AC members to help identify opportunities (groups and/or locations) for greater outreach, and track these outreach points for future use. Have members take a more proactive approach in outreach for recruitment.</p> <p>3. Recommend sanctuary staff attend community events (like festivals or mariners markets) to share AC recruitment announcements. This can help break down barriers to application and offer a more authentic, inclusive connection for potential applicants.</p> <p>4. Encourage different communities that are not as well represented on the council to attend meetings as members of the public, so that they become more familiar with AC and more likely to apply in the future.</p> <p>5. Host a “Get to know you session” for interested applicants, or a field experience surrounding a topic of interest.</p> <p>6. Consider inviting a HS Government Class to participate in a meeting as a way of engaging future college seat applicants (in person or virtually). Engage Districts to host meetings at local high schools for this purpose.</p> <p>7. Create a list of potential partners, including local news</p>	<p>All recommendations related to the outreach related to the AC, membership and recruitment have been accepted by MBNMS management and MBNMS Staff will:</p> <p>1. Identify and request input from the council on the benefits of council membership and participation on the Executive Committee for use on the MBNMS website.</p> <p>2. Work with AC members on this action.</p> <p>3. Identify which community events would be most effective for outreach</p> <p>4. Work with AC members to identify which communities to invite to the table</p> <p>5. Plan for an information session with next recruitment</p> <p>6. Research opportunities for local HSchools to participate (even if remotely). We have already inquired about meetings on school grounds and were told not when students are present - as most campuses are not open to the public for security reasons.</p> <p>7. Work with AC members to identify non-media contacts for recruitment dissemination.</p> <p>8. Will explore various ad opens for recruitment</p> <p>9. Continue to use social media for recruitment purposes.</p>

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<p>media, to help disseminate the word about recruitment (see below).</p> <p>8. Review the current MBNMS media list to ensure the best coverage and assess if paid ads would be more beneficial (then make a line item for this expense).</p> <p>9. Ensure recruitment efforts extend to social media.</p> <p>10. Have education and outreach staff be able to speak to AC issues, needs, and recruitment (extending the reach of council recruitment at visitor centers)</p>	<p>10. Develop talking points about the AC and membership for Ed/Outreach staff and volunteers to extend the reach of recruitment.</p>
<p>Accessibility:</p> <p>1. The sanctuary should look into the feasibility of a “travel fund” that would allow members who may not otherwise have easy access to meetings to attend. Note: the council charter indicates council members may receive travel expenses.</p> <p>2. Explore opportunities to use hybrid in-person/virtual format options for meetings to ensure more inclusivity for all groups, even if they can not travel for meetings.</p>	<p>1. MBNMS Management can not unilaterally accept this recommendation without approval from ONMS and NOAA General Council. However, this was a recommendation from ONMS Advisory Council Coordinators across the system and options are being explored.</p> <p>2. MBNMS Management accepts and has implemented hybrid-in person/virtual meetings.</p>
<p>Mentorship</p> <p>1. Allow interested AC members to make themselves available, either in person or by computer or phone, to potential applicants for insights and Q&A. This will aid in creating a more welcoming and inclusive environment for potential applicants.</p> <p>2. Create an AC mentorship program, to help new members once they start</p> <p>3. Consider a former member “Alumni” group for former members to serve as advisory council Alumni Boosters.</p>	<p>MBNMS Management accepts the three recommendations related to council mentorship, but recognizes this will fall to individual council members to implement.</p>

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<p>Programmatic recommendations</p> <ol style="list-style-type: none"> 1. Explore stipends for qualified new members 2. Expand travel reimbursements to alternates too 3. Explore child care options (reimbursement, provided at meetings) 4. Resume member updates to be more inclusive and provide more interest/information and incentive to expand the reach of individuals and their interests. 5. Create a working group for Diversity, Equity, Inclusivity, Justice, Belonging (DEIJB) to build upon these initial efforts. 6. Bring on a professional third party for DEI engagement 	<ol style="list-style-type: none"> 1-3. MBNMS Management can not unilaterally accept recommendation without approval from ONMS and NOAA General Council. However, these were recommendations from ONMS Advisory Council Coordinators across the system and options are being explored. 4. Recommendation to resume members updates has been accepted and has been incorporated into the December 2022 meeting 5. MBNMS Management welcomes and accepts the recommendation to create a Diversity, Equity, Inclusivity, Justice, Belonging (DEIJB) working group, which will be formed at the December meeting. 6. MBNMS Management accepts the recommendation to utilize third party professional to aid in facilitating DEIJB engagement.
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Appendix III. Management Decisions on Vessel Incident Recommendations

Recommendations from subcommittee on Vessel Incidents October 2022	Management response
<p>1. Insurance requirements or similar for California-based vessels, and more readily available funds for emergency response, would enhance and assist the abilities of national marine sanctuaries in their mission-driven tasks to protect natural resources in the event of vessel incidents in their jurisdictions. Insurance that covers the costs of cleanup, restoration, soft and hard towing, and the response costs of government agencies in the event of a vessel incident that threatens resources from within – or in a watershed that flows to – Monterey Bay National</p>	<p>Hawaii’s HB 1033 can be used as a framework for implementing mandatory grounding insurance in California as it requires a minimum coverage of \$100,000, which is Hawaii Department of Land and Natural Resource’s average cost of vessel removal (HB 1033). As a federal agency, MBNMS cannot lobby for funds, so these efforts will need to be carried forward by a Foundation (NMSF or CMSF) or another non profit group. Potentially, the MBNMSF Board member could work on this</p>

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<p>Marine Sanctuary would provide some assurance that the responsible party would be able to pay those expenses. This would require development of legislation to be considered by the California State Legislature and Governor.</p>	<p>effort and assess if there is interest in the CA State Legislator to develop an assembly bill in 2023.</p> <p>MBNMS will forward these recommendations to state and federal partners and assess interest of MBNMSF board members in carrying this idea forward to CA State Legislators.</p>
<p>2. A readily available Derelict Vessel Removal Fund would ensure that immediate costs of towing, cleanup, restoration, and staff time to oversee those tasks would be provided to MBNMS and their approved contractors. Such a fund could be supported by Department of Motor Vehicle registration fees for vessels. Creation of a Derelict Vessel Removal Fund would require action by the California State Legislature and Governor by inserting such a fund in the state budget and identifying a fund source.</p>	<p>MBNMS will forward these recommendations to state and federal partners and assess interest of MBNMSF board members in carrying this idea forward to CA State Legislators.</p>
<p>3. On-call tow contracts for commercial vessels will help to prevent disaster by putting vessels under tow quickly. A USCG Basic Ordering Agreement (BOA) is one such tool, and national marine sanctuaries should be able to access or develop their own tool.</p>	<p>MBNMS will explore accessing the USCG BOA, as well as potentially develop a separate tool to provide "quick response" towing funds.</p>
<p>4. Establish "On-call" tow contracts with experienced companies for responding to vessel incidents to prevent grounding disaster by putting vessels under tow quickly. These contracts would be triggered by harbor or sanctuary personnel who are contacted about a vessel in distress.</p>	<p>Experienced salvors are vetted and listed in a Basic Ordering Agreement. Sanctuary Emergency Response personnel could then trigger an invoice for an emergency response, if funds are available.</p>
<p>5. MBNMS and USCG should strive for seamless coordination between pollution removal and quick response vessel salvage operations in order to reduce/prevent vessel groundings/sinkings.</p>	<p>MBNMS will pursue discussions with USCG Sector SF on streamlining coordination for vessel incidents that include both pollution and vessel salvage actions</p>
<p>6. ONMS should adopt regulations or protocols requiring "dead tow" operators to notify national marine sanctuary staff when dead vessels of over 100 tons enter and are towed through their jurisdictions.</p>	<p>Since there may be a threat of discharge when dead tow vessels are transported through NMSs, there may be a permit nexus. MBNMS will explore permit requirements for dead tow vessels.</p>

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<p>7. USCG should adopt regulations or protocols requiring “dead tow” operators to obtain a permit to enter and navigate through a national marine sanctuary. The permit should require the dead tow operator to show proof of insurance and 3rd party inspection/approval of the vessel transport</p>	<p>MBNMS will forward this request to USCG and coordinate on options.</p>
<p>8. ONMS should ensure that all mooring owners apply for and obtain permits located in sanctuary waters to conduct annual inspections and submit inspection reports to their respective sanctuary offices.</p>	<p>MBNMS is currently reviewing all mooring related permits, and will contact any mooring operators who are not permitted in order to provide consistency and compliance for mooring inspections and reporting.</p>
<p>9. Establish a working group to develop greater cooperation among federal, state, and local partners that has been and will continue to be a necessary component to effective responses to vessel incidents and prevention of groundings.</p>	<p>A number of RP related agencies and groups currently meet quarterly and discuss the afore mentioned issues, including the Monterey Bay Search and Rescue Council (led by USCG and State Parks), the Central Coast Area Sub Committee (led by CDFW OSPR), and the Abandoned Derelict Vessel Work Group (led by USCG). MBNMS would like to explore coordination discussions within these groups before standing up an AC working group.</p>

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Appendix IV. Finalized 2023 Advisory Council Work Plan

Proposed Tasks and Timeline						
	February AC Meeting	Tentative April AC Interim Meeting	May AC Meeting	June AC Meeting	August AC Meeting	Additional
MBNMS Priority						
<i>Reduce Marine Debris</i> - Assess and reduce the amount of marine debris in or entering Monterey Bay National Marine Sanctuary.					- Powerpoint presentation to AC on marine debris; Informational	Determine if this is a topic for the AC or RAP to create recommendations for. - presentation on bioindicators of microplastics
<i>Whale Conservation</i> - Reduce threats to large endangered whale species in the sanctuary.	- AC receives presentation on options to expand the Vessel Speed Reduction (VSR) zone in MBNMS - Tentative AC requests RAP review the risk assessment by Pt Blue in anticipation of 2023 VSR season May 1 - Dec 15 2023; OR - AC provides recommendations on MBNMS participation in VSR recommendations of GFNMS / CINMS	- AC forwards AC recommendations/resolution on scale of MBNMS from RAP for 2023 VSR season to superintendent; Action				

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Proposed Tasks and Timeline						
	February AC Meeting	Tentative April AC Interim Meeting	May AC Meeting	June AC Meeting	August AC Meeting	Additional
<i>Vessel Incidents</i> - Identify solutions that ensure timely and cost-effective cleanup/salvage after a vessel incident, including solutions that ensure the vessel owner/responsible party (RP) takes responsibility.						
<i>Climate Change</i> - Address coastal resilience, climate adaptation, and ocean acidification through capacity building and collaborative partnerships.	- AC requests RAP engage with CVA, including draft adaptation strategies; Action				- AC receives CVA results and convenes a subcommittee or working group of AC to refine adaptation strategies; Action	- presentation on climate adaptation strategies adopted by other units within ONMS; -Presentation on CVAs conducted by NMFS (marine mammals, salmon)
<i>Iconic Kelp Forest</i> - Better understand and monitor kelp status and invest in activities that promote recovery, restoration, and monitoring.	- RAP provides kelp recommendations to AC - options for AC to forward RAP recommendations to superintendent; or expand on recommendation; or hybrid; Action		-RAP provides kelp recommendations to AC -options for AC to forward RAP recommendations to superintendent; or expand on recommendation; or hybrid			
<i>Recreational Fishing</i> - Promote MBNMS as a great place to recreationally and sustainably fish.				- Recreational Fishing powerpoint presentation to AC; Informational		

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Proposed Tasks and Timeline						
	February AC Meeting	Tentative April AC Interim Meeting	May AC Meeting	June AC Meeting	August AC Meeting	Additional
<i>Expanding Community Connections</i> - Expand reach in general, and with a focus on underrepresented communities and minority groups.			- Powerpoint presentation to AC on WebCR - Sanctuary Watch; Informational		- Powerpoint presentation to AC on Indigenous Community Engagement and progress; Informational	
Other						Presentation on Wind Energy plans in Southern Region
						Presentation on the ONMS Strategic Plan