

**MONTEREY BAY NATIONAL MARINE SANCTUARY
ADVISORY COUNCIL**

**Final Meeting Minutes
June 15, 2018
Santa Rosa Catholic Church, Cambria, CA**

VOTING MEMBERS

Agriculture: absent
AMBAG: absent
At Large: Dan Haifley
At Large: Gary Hoffmann
At Large: PJ Webb
Business & Industry: Al Budris
CA Coastal Commission: Tami Grove
CA Dept. of Fish & Wildlife: Deb Wilson-
Vandenberg
CA EPA: Maria de la Paz Carpio-Obeso
CA Resources Agency: absent

CA State Parks: absent
Commercial Fishing: Jim Moser
Conservation: Katherine O’Dea
Diving: Brian Nelson
Education: Jon Hill
Harbors: Steve Scheiblauser
Recreation: Gary Pezzi
Recreational Fishing: Rich Hughett

Research: Dr. Steve Haddock
Tourism: Mike Bekker

NON-VOTING MEMBERS

Channel Islands NMS: absent
College: VACANT
Cordell Banks NMS: absent
Elkhorn Slough NERR: Dan Brumbaugh
Greater Farallones NMS: absent
Monterey Bay NMS: Paul Michel
National Marine Fisheries Service: absent
U.S. Coast Guard: LT Kip Hutchinson

Alternates present in audience:
Keith Rootsart – Diving
Dawn Hayes – MBNMS

I. CALL TO ORDER, ROLL CALL, AND MEETING MINUTES

Chair PJ Webb called the meeting to order and Secretary Brian Nelson attended to roll call.

Bruce Gibson, District Two Supervisor for San Luis Obispo County, welcomed the Advisory Council. He thanked the council members for conducting a meeting at the southern end of the sanctuary. He noted he was pleased by the variety of things being covered during this meeting. The topics are of great concern to California, especially coastal California. He noted the importance of the Advisory Council’s ability to focus many vested interests and how they interact. He wished the council a happy and productive day. He also thanked LT Kip Hutchinson for his service.

APPROVAL OF MEETING MINUTES

Approval of April 20, 2018 DRAFT Meeting Minutes

The advisory council approved the April DRAFT Meeting Minutes.

Al Budris introduced a motion to approve the April meeting minutes.

Seconded by Steve Scheiblauber.

MOTION: Passed

(Vote: 14 in favor, 0 opposed, 0 abstentions)

II. STANDING ITEM: Superintendent Report

Paul Michel attended Capitol Hill Ocean Week June 5-8. It was hosted by the National Marine Sanctuary Foundation to celebrate ocean conservation and marine policy. There was a conference and a gala fundraiser. Volunteer of the Year, Will Benson from Florida Keys, was honored at the gala. He is a recreational fisherman and serves on the Florida Keys National Marine Sanctuary Advisory Council as the Fishing alternate. All sessions were streamed on the Capitol Hill Ocean Week website. The opening presentation focused on the importance of communicating ocean conservation to a wide audience. There was a session with NOAA Administrator Tim Gallaudet. He is a big supporter of sanctuaries and is fully committed to visit and dive in each sanctuary. Paul was able to brief Congressman Salud Carbajal and Congressman Jimmy Panetta on a general update of what MBNMS is working on. Both of these congressmen are veterans and this year Get Into Your Sanctuary will focus on getting veterans into sanctuaries. Hoping Congressmen Carbajal and Panetta will be a part of special events on July 28 in Santa Barbara and July 29 in Monterey. August 4 will be the main weekend at MBNMS visitor centers.

Paul updated on the National Marine Sanctuary Foundation (NMSF) local chapter. The board has been established including Leon Panetta, Fred Keely, Sam Farr, Ted Balestreri, Hilary Bryant, Dan Haifley, Paul Michel and Kris Sarri. Busy trying to raise funds. Currently being staffed by NMSF with help from Laura Kasa. Close to \$153,000 has been raised since September 2017. Need to raise an additional \$47,000 by the end of July to maximize the Monterey Peninsula Foundation challenge grant. This year the board decided to focus on fully funding BayNet and TeamOcean as well as funding whale rescue work through NOAA vessels and the many partners. The board is also interested in outreach and public relations. The board just approved the mission, vision statement and case for support for programs they want to implement this year. For more info:

<https://montereybayfoundation.org> The California Marine Sanctuary Foundation will still be working to fund contractors, write grants and support sanctuaries and state marine protected areas. The NMSF local chapter will focus on raising money. All money raised locally will stay locally.

Paul gave an update on projects MBNMS staff are working on. The Research team is planning for two deep-sea cruises in July and October. Deep-sea benthic ecology and benthic corals will be the primary focus. The Resource Protection team continues to work on the CalAM desalination project as the National Environmental Policy Act (NEPA) lead. This project is on track for the California Public Utilities Commission to certify in September and MBNMS then issue a record of decision. The Deepwater Desalination project is teetering on beginning. MBNMS will be the NEPA lead on this project. The Resource Protection team is also working on many of the Management Plan Review action plans. The Education team is busy at both visitor centers. Lisa Uttal is working on new exhibits for salmon and soundscapes. MBNMS is also collaborating with US Forest Service to discuss the health of watersheds and forests. The Program Operations team is focusing primarily on the MBNMS budget and Management Plan Review.

III. PUBLIC COMMENT FOR ITEMS NOT ON THE AGENDA

Amanda Rice, Cambria Community Services District: Read a letter (attached as Appendix A) from Congressman Salud Carbajal to US Department of Commerce Secretary Wilbur Ross regarding his support for Chumash Heritage National Marine Sanctuary designation.

IV. STANDING ITEM: Member Announcements

Keith Rootsart, Diving alternate: Launched website G2KR.com to recruit volunteers for urchin barren assessment and future removal studies.

Working with James Moskito and GFNMS AC's Kelp Restoration Working Group to perform NIR (near infrared) drone surveys of historical kelp forests from Breakwater to Pt. Lobos in June and October.

Karen Grimmer mentioned the kelp restoration working group has held a couple meetings. Steve Lonhart is participating on this working group. They will continue to meet through the fall and should have recommendations by early 2019.

Brian Nelson, Diving primary: May 9 – Presentation by Brian Nelson at CSUMB in Monterey for the Marine Science Divers

May 26 – Presentation by Keith Rootsart to the Blue Endeavors Dive Club in Alameda, Ca.

Published the Sanctuary Diver Newsletter to 2,943 active emails with an open rate of 27.9%

An increase of 125 new email contacts since our last publishing

Gary Hoffmann asked if the sea star wasting disease was attenuating. Brian said sea stars are starting to make a comeback but it still is not enough to handle purple urchins. Steve Scheiblauser asked if sea star wasting disease was considered a natural process. Deb Wilson-Vandenberg responded there is nothing to suggest it is not a natural occurrence. It was suggested this topic be a future presentation to the AC.

Dan Haifley, At-Large primary: O'Neill Sea Odyssey will host a free party for its 100,000th student on Sunday, June 24 at Cowell Beach in Santa Cruz. Jack O'Neill Way, next to the Dream Inn, will be dedicated at 1:30 then we will have plastic waste art, face painting, sand sculptures, a photo booth, food trucks, bike valets, and lots of other free fun.

Tami Grove, CA Coastal Commission alternate: no new announcements

Maria de la Paz Carpio-Obeso, CA EPA: Indicators of Climate Change in California Report - The Office of Environmental Health Hazard Assessment (OEHHA), and California Environmental Protection Agency released, on May 2018, the report titled Indicators of Climate Change in California. The indicators are scientifically-based measurements that track trends in various aspects of climate change. The report presents 36 indicators that show how climate change is affecting California. The report is intended to promote scientific analysis to inform decision-making on mitigating and adapting to climate change and to serve as a resource for decision makers, scientists, educators, and the public. The report discusses the indicators under four categories human-influenced (anthropogenic) drivers of climate change, such as greenhouses gas emissions, changes in the state's climate, impacts of climate change on physical systems (oceans, lakes, and snowpack) and impacts of climate change on biological systems. For more information please visit <https://oehha.ca.gov/climate-change/document/indicators-climate-change-california>

Sediment Quality Objectives - On June 5, 2018, the State Water Resources Control Board adopted the sediment quality provisions for the enclosed bays and estuaries. Note that these provisions do not go into effect until the Office of Administrative Law approves the administrative record and USEPA approves the action for Clean Water Act purposes. The sediment quality provisions include application and implementation of the sediment quality objectives protecting human consumers from contaminants that bioaccumulate from sediment into fish tissue. For more information please visit https://www.waterboards.ca.gov/water_issues/programs/bptcp/sediment.html or e-mail Chris Beegan at chris.beegan@waterboards.ca.gov

Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (Once-Through Cooling Policy) - The State Water Board Statewide Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling, also known as the Once-Through Cooling or OTC Policy, regulates the use of seawater for cooling purposes at the power plants in California. The OTC-Policy requires owners or operators of existing power plants to implement measures to mitigate interim impingement and entrainment impacts resulting from their cooling water intake structures. The interim mitigation period started in October 2015 and continues up until owners and operators achieve final compliance. Staff worked on the interim impingements and entrainment determinations and invoices covering OTC from October 2016 through September 2017. Following the State Water Board's Resolution 2015-0057, the draft determinations are subject for 20 days public comments. Currently, the draft determinations are under public comments period. For further information please visit

https://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/interim_mitigation.shtml#determinations Written comments must be received no later than 12:00 noon on July 6, 2018.

Provisions and Water Quality Standards Variance Policy. The Bacteria Provisions are intended to protect human health by updating water quality objectives associated with recreational exposure to water containing fecal bacteria. The Bacteria Provisions would apply to fresh, estuarine, and marine waters; include *Escherichia coli* (*E. coli*) as the indicator of pathogens in freshwater, and fecal coliform and *enterococci* indicators for estuarine waters and ocean waters. The update of the Bacteria Provisions staff report will be released on June 29, 2018. The Bacteria Provisions will be for Board consideration on August 7, 2018. For more information please visit

<http://www.waterboards.ca.gov/bacterialobjectives/>.

Triennial Review of the California Ocean Plan - Staff will start the process of the California Ocean Plan Triennial review in summer 2018, through stakeholder outreach, public workshops, and public hearings. Triennial reviews of the Water Quality Plans are required by the Clean Water Act section 303(c)(1) and U.S. EPA title 40 of the Code of Federal Regulations, section 131.20. The purpose of the triennial review of the Ocean Plan is to assess the continued adequacy of water quality standards, and as appropriate, modify and adopt new standards. For more information please contact

KatherineFaick@waterboards.ca.gov.

Gary Hoffmann, At-Large primary: Mylar Balloons - While out on the Bay conducting marine mammal surveys with Marine Life Studies on the two-day following Mother's Day, we retrieved from the waters of the bay 78 mylar balloons. Interestingly, only approximately 50% of those balloons were identified as "Mother's Day" balloons. We attributed (in part) our ability to spot and retrieve the balloons due to the extremely calm ocean conditions on those two days.

It raises the question of how many more mylar balloons are out in the bay that go unnoticed when the conditions are more difficult to spot them.

We request that the SAC consider an action item recommending to the Superintendent that the Sanctuary facilitate creation of a stakeholder group to address the problem of marine debris caused by the purchase of mylar and rubber balloons from retailers.

Recent Whale Entanglements in Monterey Bay - During the last four weeks, three separate and distinct whale entanglements were documented in Monterey Bay.

On one occasion, the Marine Life Studies vessel was authorized to attach a telemetry buoy to the trailing crab pot lines on the whale. The MLS crew included certified WET first responders at the time of the event.

MLS vessel was successful in attaching the telemetry buoy for approximately 15 minutes when the whale dislodged the buoy. Due to the time of day the pursuit of the whale was terminated on that day. A search for the whale was conducted on the following day without any success in locating the entangled whale. Photo identification of the fishing gear showed as having an Oregon license. The MLS WET deployed following the reports and documented entanglements but unfortunately were unable to locate the whales.

Dan Haifley mentioned PG&E has been campaigning against the use of mylar balloons for years because they can become tangled in power lines.

Gary Hoffmann reported for Carol Maehr regarding cruise ship inspections - Based on a Q&A provided by Karen Grimmer, both MBNMS and the US Coast Guard have shared authority for conducting these inspections.

Carol Maehr, AC At-Large member alternate, has attempted to get copies of cruise ship inspection reports from MBNMS staff without any success.

MBNMS staff has stated that where no violations are cited during the ship inspections, no documented reports are completed.

According to MBNMS staff only one violation has been identified during these ship inspections.

Carol Maehr spoke with the Mayor of the City of Monterey regarding the stated random and undocumented inspections of cruise ships that dock in Monterey Bay. The Mayor expressed concerns that the inspections are random and not well documented.

We request that the AC consider an action item recommending to the Superintendent that all cruise ship inspections be documented with written reports identifying the date, ship name, specific areas that are inspected and the results of the inspection. These inspection reports should also be available for review by the public when completed.

We also request that the US Coast Guard AC representative provide detailed information to the AC regarding the role and responsibility of the US Coast guard with respect to cruise ship inspections and reporting requirements as soon as practicable.

Dawn Hayes commented MBNMS does not document these inspections, the US Coast Guard does.

It was suggested a presentation be given on this topic. Karen Grimmer agreed future presentation would inform the AC how MBNMS is involved in the inspections, what MBNMS documents and what is actually inspected.

It was asked if the US Coast Guard cruise ship reports were available to the public. LT Kip Hutchinson explained the US Coast Guard Prevention Department is responsible for these reports and is unsure how much of the report is available to the public.

Golf Ball Pollution Follow up for AC - Several meetings ago, the AC saw an amazing presentation from a couple of Carmel High School students who initiated a project to collect golf balls that have been deposited into the sanctuary from Pebble Beach Golf Course.

There is concern that the Students' project and other efforts to identify the extent of the problem and mitigation/prevention is not receiving the requisite support from the Pebble Beach Company.

We request that the AC request that the Superintendent contact the appropriate PBC representatives to ascertain the status the PBC efforts and support of addressing the golf ball marine debris originating from the Pebble Beach Golf Course.

Paul Michel comments MBNMS is working on finalizing procedures for regular cleanups.

Drone Use in the Sanctuary - The use of drones in the Sanctuary to observe whales, killer whales, dolphins and other marine mammals and birds is now so disturbing that drones have been observed flying within 10 feet of the animals and clearly changing their behavior.

The continued absence of any drone use permitting in the Sanctuary is clearly causing actions that can only be characterized as "Takes" under the Endangered Species Act (ESA), and in violation of the provisions and protections afforded under the ESA.

We suggest that the AC formally express the concerns over the continuing delays in drafting and adopting regulations or guidance regarding the use of drones for commercial and private marine mammal viewing in the Sanctuary.

Karen Grimmer suggested to document observed disturbances and forward that information to NMFS who has jurisdiction under the Marine Mammal Protection Act. Paul Michel also suggested notifying the NOAA hotline of these disturbances.

Rich Hughett, Recreational Fishing primary: the next Recreational Fishing newsletter should be out in July. Let him know if you have people to add to the email list. Also, Monterey County Fish and Game Advisory Commission has received money and would like to use it proactively on projects. They have a list of 15 things they are looking at including gear removal. Looking for any information to start putting a project together focusing on gear removal.

Jim Moser, Commercial Fishing alternate: about the current salmon season, the federal government has drawn another line in the ocean at Pidgeon Point and won't allow any fishing above that line until July 26. Below that line we could fish the first 7 days of May, our normal starting date but then it is closed until June 19. During the May opener we had some bad weather so many of the smaller boats in Monterey Bay only got to fish for 3 days. This is not viable for salmon fishermen or the buyers and all the support facilities. There is fish in the ocean but they do not observe federal lines. Seems like the Pacific Fishery Management Council wants to put Salmon fishermen out of business rather than provide more water in the rivers and support better hatchery management and smolt release. The price of Salmon is high but that does not make up for drastic loss of fishing time. A little observation on the squid fishery, there was some good fishing about a month ago that drew most of the large purse seiners from southern California to Alaska to the Monterey Bay but fishing is slow now and many are tied up waiting for fishing to improve. The harbors are full of these large 70 to 90-foot seiners, even the Santa Cruz Yacht Harbor has up to nine seiners and at least that many light boats that help search, they fill the harbor up.

Katherine O'Dea, Conservation primary: Save Our Shores has been working in collaboration with Moss Landing Marine Laboratories (MLML) to organize a forum on August 10 and 11 at MLML to explore pathways for responsible aquaculture in California. Save Our Shores 40th anniversary is this year. There will be a big gala on September 22 at Monterey Bay Aquarium. Concerned about not hearing about the sanctuary review process and that no decision has been made about the BOEM proposed oil and gas leasing program. Wrote a grant proposal for \$10,000 to revive a campaign to

ensure Davidson Seamount is not lost as part of MBNMS. Have online petition to collect 10,000 signatures by mid-September.

Paul Michel responded a letter has been prepared in response to Katherine's letter to Secretary Ross. It has not been signed yet so can't share it yet.

Gary Pezzi, Recreation primary: the Surfrider Foundation will be celebrating International Surfing Day on June 16. This is a grassroots effort to build ocean awareness. For more information:

<https://www.surfrider.org/isd#find>

PJ Webb, At-Large primary: no new announcements

Deb Wilson-Vandenberg, CDFW: striped bass fishing from the beaches of central and southern Monterey Bay accelerated in part due to the breaching of the Salinas River at its junction with the bay, allowing land-locked stripers to emigrate. Many sublegal (less than 18 inches) fish have been caught along with a fair number of keepers.

Most recently, the majority of the landings of coastal pelagic species (CPS) into Moss Landing and Monterey has been anchovy with only a few boats being active. Market squid has made an appearance in the bay. The 2017/18 sardine fishing year is closed but vessels are allowed to land 40% sardine in their CPS loads until total incidental landings reach 2,000 metric tons (mt). As of this week, a total of 276 mt of incidental Pacific sardine has been landed in the state.

The Department is in the design phase of a new web-based Portal which will allow online access to the most recent, as well as historical, information on our state-managed fisheries, including life-history and ecological aspects, landings and catch totals, monitoring, and research. This information will be in the form of Enhanced Status Reports, which are described in our revised Master Plan for managing fisheries.

Al Budris, Business/Industry primary: Fort Ord Reuse Authority (FORA) released their 2018 Jobs Survey on April 5, 2018. Highlights of that survey:

- 132 employers and 5652 positions were identified within the former Fort Ord boundary, 45 square miles or 28,000 acres, representing a 14% increase in total jobs since 2017.
- Business types on the former Fort Ord include:
 - Professional services (42%)
 - Retail/food service (23%)
 - Education (19%)
 - Recreation (8%), and
 - Military (6%)
- The jobs report results represent an overall progress of 31% towards the Base Reuse Plan target of 18,000 jobs. (Metz and Prew, 2018).

Metz, J. and Prew, N. (2018). *2018 jobs survey*. Fort Ord Reuse Authority. Issued April 5, 2018.

Dr. Steve Haddock, Research alternate: Cruise for a week in May, visited a site that Paul mentioned. Did some quick bottom surveys. Have a bioluminescence camera on the ROV now. Were able to pick up things at 3,000 meters and hold them in front of the camera. Were able to film some sea stars, brittle stars, sea cucumbers and a bioluminescent sponge. On this dive, we saw a ctenophore we've never seen before in this area. Also, had a NSF proposal to look at food web studies and to analyze ROV data. This project has received funding and can get Jelly Watch back up and running.

Lastly, State Bill 1309 a fisheries omnibus bill, has provisions about salmon, anchovy, crab and halibut. Part of that includes opening up a portion of Monterey Bay to halibut trawling.

Jon Hill, Education alternate: Monterey Peninsula Unified School District has put music back in schools. Hired many new music teachers. Shared a letter from a new band director's wife to help her find work.

Mike Bekker, Tourism primary: mentioned a presentation to the MBNMS AC years ago from a doctor with a 25-year photo study of kelp from Big Sur to Monterey, an eye-opening presentation. Suggested a possible committee or booth at US Open. Maybe we want to educate at the event. Tourism, a \$52 billion industry, second to agriculture, has over 200 unfilled positions in housekeeping. There are not enough people to fill these positions. This is a growing concern. Lastly, a museum/education center is going up at Pebble Beach Golf Course.

Dan Brumbaugh, ESNERR alternate: expressed interest in ESNERR giving a future presentation on their work. ESNERR work highlights include construction in slough, part of Hester Marsh Restoration project. This construction is just about completed. Fixing subsidence in marsh. Reshaped a hillside, graded it and 20,000 native plants going in.

LT Kip Hutchinson, US Coast Guard alternate: during salmon opening, decent turnout considering the weather. Joint Op with NOAA close to the CA/OR border for a Pacific halibut derby. Mentioned to Gary Hoffmann, the USCG air station in San Francisco are out flying all the time and would be willing to help spot a whale. Lastly, he mentioned this will be his last AC meeting. His replacement will be Lieutenant Darrina Willis.

Steve Scheiblaue, Harbors primary: City of Monterey hosted a listening session for public thoughts for US Coast Guard project to bring Western Flyer (boat that transported John Steinbeck and Don Rickett's to Sea of Cortez) here. Owner is interested in it being in Monterey. Steadily moving forward. The use of boat is aimed at high school and community college students for scientific exhibitions. Also, SB1309 law would allow FGC to decide if northwestern corner of Monterey Bay reopen to halibut trawling. Decision would be based on ecological conditions already in place with FGC. Noted the State Water Resources Board alerted the City of Monterey about illegal discharge by cruise ships. He believes there are reporting requirements by state. This is another source of information/reporting.

V. INFORMATION ITEM: Southern Region Update

Carolyn Skinder gave a presentation on the southern region of MBNMS. She started with an overview of the area and MBNMS's neighbors in San Luis Obispo County including California State Parks, Hearst Ranch, California State MPAs and Bureau of Land Management. Carolyn discussed the many services provided by Coastal Discovery Center (CDC) such as education and outreach through school groups, public programs, interpretive signage and the Junior Ranger Guide program to name a few. CDC also participates in citizen science monitoring through Beach COMBERS, LiMPETS, Snapshot Day and beach cleanups. CDC works on park safety and enhancement through addressing visitor concerns and emergencies, being a liaison for agencies and non-government organizations and alerting CA State Parks to potential public hazards. CDC assists the Marine Mammal Center, Pacific Wildlife Care and researchers in wildlife protection. The CDC has exhibits focused on agency partnership, watersheds and steelhead, plankton, ocean exploration, wildlife

viewing and the history of San Simeon Bay. They also recently created a shore whaling exhibit with the help of Lisa Uttal. CDC has developed various education programs including guided and self-guided tours. Docents assist with education and outreach as well as citizen science. They help educate over 16,000 visitors each year. Carolyn works with a variety of schools ranging from grade school to college through various programs to educate on marine biology, oceans and natural history of the area. Carolyn discussed the many partners the CDC has in addressing coastal and marine conservation as well as tourism. She ended by thanking local ocean heroes, Cubby Chasen and PJ Webb for their contributions and dedication to MBNMS and San Simeon.

VI. ACTION ITEM: Urchin Resolution

Keith Rootsart and Brian Nelson introduced a resolution recommending MBNMS staff coordinate with the State of California on collaborative purple urchin removal projects.

Concerns were raised about these collaborative urchin removal projects interfering with natural processes. It was stated the goal is to assess through studies if removal projects should be implemented.

A motion was made by Dan Haifley to approve the resolution.

Seconded by Al Budris.

MOTION: PASSED

(Vote: 11 in favor, 2 opposed, 2 abstentions)

VI. STANDING ITEM: Working Group Updates

Conservation Working Group (CWG): the working group has been moving along on building a collaboration related to plastic pollution to ask the State of CA to consider extended producer responsibility legislation for plastic packaging. At the last CWG meeting they received a presentation on how this process works in other parts of the world. Katherine volunteered to write a proposal for this coalition/campaign. In addition, the CWG continues the conversation about coordination and finalizing guidance for approach distance to whales.

Research Activity Panel (RAP): the RAP met on May 11 at MBARI in Moss Landing. Francisco Chavez provided the host presentation on the Marine Biodiversity Observation Network (MBON) including eDNA collection efforts (2013-2018); Long Range AUV with Environmental Sampling Processor (potential phase); MBON web portal (interactive tools); and challenges with data systems and archiving. The take home message was that you can never stop monitoring because there are always surprises; the world changes and management has to adjust.

For MBON information see: <http://www.marinebon.org>

The RAP discussed the Management Plan Review and offered to provide comments on the current draft.

John Calambokidis and Cotton Rockwood gave a presentation entitled "High mortality of blue, humpback and fin whales from modeling of US west coast vessel collisions." They concluded that it is important to revisit shipping routes in MBNMS because previous lane-setting did not consider ship strikes and voluntary routing has proved ineffective.

<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0183052>

Updates from RAP members

Andrew DeVogelaere mentioned three new hydrophones coming for placement in MBNMS at the end of summer/early fall.

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From Andrew:

Heidi Dewar, Steven G. Wilson, John R. Hyde, Owyn E. Snodgrass, Andrew Leising, Chi H. Lam, Réka Domokos, James A. Wraith, Steven J. Bograd, Sean R. Van Sommeran and Suzanne Kohin. Basking Shark (*Cetorhinus maximus*) Movements in the Eastern North Pacific Determined Using Satellite Telemetry. *Front. Mar. Sci.*, 16 May 2018.

<https://www.frontiersin.org/articles/10.3389/fmars.2018.00163/full>

To fill data gaps on movements, behaviors and habitat use, both near- and offshore, two programs were initiated to deploy satellite tags on basking sharks off the coast of California. Basking sharks are large filter-feeding sharks that are second in size only to whale sharks. Similar to many megafauna populations, available data suggest that populations are below historic levels. In the eastern North Pacific (ENP) Ocean, the limited information on basking sharks comes from nearshore habitats where they forage. From 2010 to 2011, four sharks were tagged with pop-off satellite archival tags with deployments ranging from nine to 240 days. The tags provided both transmitted and archived data on habitat use and geographic movement patterns. Nearshore, sharks tended to move north in the summer and prefer shelf and slope habitat around San Diego, Point Conception and Monterey Bay. The two sharks with 180 and 240 days deployments left the coast in the summer and fall. Offshore their paths diverged and by January, one shark had moved to near the tip of the Baja Peninsula, Mexico and the other to the waters near Hawaii, USA. Vertical habitat use was variable both within and among individuals and changed as sharks moved offshore. Nearshore, most time was spent in the mixed layer but sharks did spend hours in cold waters below the mixed layer. Offshore vertical movements depended on location. The shark that went to Hawaii had a distinct diel pattern, with days spent at ~450–470 m and nights at ~250–300 m and almost no time in surface waters, corresponding with the diel migration of a specific portion of the deep scattering layer. The shark that moved south along the Baja Peninsula spent progressively more time in deep water but came to the surface daily. Movement patterns and shifts in vertical habitat and use are likely linked to shifts in prey availability and oceanography. Data collected indicate the potential for large-scale movements and the need for international dialogue in any recovery efforts.

Sanctuary Tourism and Recreation Working Group (STAR):

Report was part of the Friends to the Sanctuary Program agenda item.

VII. INFORMATION ITEM: Acoustic Research in MBNMS

Andrew DeVogelaere gave a presentation on the progress MBNMS has made on the recommendations by the AC's Management Plan Review Wildlife Disturbance – Ocean Noise Working Group.

Recommendation 1: We recommend increasing research efforts, including CeNCOOS (Central and Northern California Ocean Observing System) monitoring sound as a core variable tracked over time, and work to integrate the project into similar NOAA efforts. We recommend collaboration with and support for the MBARI real time cable hydrophone and adding additional nodes so it can precisely locate sounds.

MBNMS progress: Monterey Bay has one of the few cable observatories that has sound. Data is streamed in 24/7. Because of all the interest in sound, the RAP added Brandon Southall in November. CeNCOOS – have to decide what the core variables are that they measure. Andrew is on the Governing Council for CeNCOOS to see that sound is considered as one of those variables. CeNCOOS has had a complete turnover in staff so making things difficult. Andrew is serving on the

National Marine Sanctuary Noise Coordination Team. A team of scientists and engineers has developed around the MARS hydrophone and new acoustic monitoring in MBNMS. This team is working on developing classification methods and automated detection of the soundscape. Three Navy/Sanctuary hydrophones will be deployed this summer and MBARI will be deploying a directional hydrophone in the fall of 2018. Additionally, NOAA Ocean Acoustics Program hydrophones will be deployed in 2019. Lastly, a series of publications are scheduled to come out on sound within MBNMS.

Recommendation 2: We recommend sound be featured in the Sanctuary's visitors centers- utilizing exhibits, events and outreach programs describing sound in the marine environment that will reveal how sound is used by animals in the ocean and that manmade sound can have impacts.

MBNMS progress: There has been some progress, which is largely due to the work of Lisa Uttal. A beta version exhibit displayed at the Sanctuary Exploration Center (SEC) in February 2016 led to receiving \$15,000 in NOAA construction funds to initiate a soundscape exhibit at SEC. Visitors will hear, see and feel sound from the MBARI hydrophone. The planned launch for the exhibit is December 2018. Andrew also mentioned MBARI's live stream and listening room of deep-ocean sound.

Recommendation 3: We recommend Sanctuary staff consult with appropriate agencies and fishing industry representatives to catalog current uses of seal bombs and where applicable encourage continued enforcement by appropriate agencies.

MBNMS progress: Some preliminary work was done by Scripps and MBARI looking at how often the MARS hydrophone heard seal bombs between August 2015 and January 2016. Most seal bombs were heard during November 2015 at a count of 976 of the total 2,308 heard during that time. Monterey Bay has a genetically distinct population of harbor porpoise that has shown a recent decline in abundance. Sunset Beach is an area this species is commonly seen and an area with increased fishing activity. NMFS is interested in looking at this correlation and the new hydrophones will be key.

Recommendation 4: We recommend the Sanctuary convene collaborative groups of stakeholders with the goal of developing strategies to both minimize future seal bomb use and developing effective alternatives in the Sanctuary.

MBNMS progress: MBNMS has not made headway on this recommendation yet but can be addressed throughout the Management Plan Review process.

It was asked if the hydrophones are in an array to locate things. Andrew responded it is more difficult than it sounds to triangulate with hydrophones. It will be a goal though when more hydrophones are deployed.

It was asked if the Navy's old SOSUS array system is being used to locate and triangulate. Andrew responded MBNMS does not have access to these data from the SOSUS array. The Navy is training engineers at MBARI but not with their instruments.

VIII. INFO ITEM: Friends to the Sanctuary Program

Brian Nelson gave a presentation on the development and progress of the Friends to the Sanctuary (FTTS) Program. This program will allow MBNMS to connect with businesses and organizations that serve tourism and citizen recreation. It will provide educational opportunities and business opportunities to organizations by capitalizing on the advantages of eco-tourism economies. The

Sanctuary Tourism and Recreation Working Group (STAR) have already worked to build an email contact list, initiated contact with local businesses, invited stakeholders to the working group, developed a draft program and had that program reviewed by local businesses and a CSUMB Business School class. Brian requested each AC member review the draft program framework (provided prior to this AC meeting) and submit their recommendations for the STAR to review, incorporate, edit and redistribute to businesses for review. The draft framework will then need approval from the AC. Once approved, the STAR envisions using local college business schools to assist with implementation of the program. Brian discussed the risks and rewards of implementing a program like this. Risks include having to manage bad actors, having minimal structure in the voluntary recognition program, having scarce manpower/resources and difficulty with follow-through and management. The rewards include providing niche marketing for businesses, providing education and outreach, partnering with the business community, promoting MBNMS brand value and encouraging positive conservation behaviors.

Advisory Council Member Discussion:

It was asked if this program will be available to those that have achieved certification through the Green Business Program. Elements from other “green” programs were integrated into the Friends to the Sanctuary program. It will be an easy process for businesses with other certifications to obtain the FTTS recognition.

It was asked how the success of this program and branding of the whale tail will be measured. Brian Nelson responded you can measure an increase or decrease in hits on a website. Paul Michel mentioned there will be a lot of anecdotal information from hotels and other local businesses. Jeff Gray from Thunder Bay NMS can be invited to talk about the success in that sanctuary and the brand value they have brought to the Alpena area.

It was asked if MBNMS could charge businesses for the whale tail branding.

Paul Michel responded that this cannot be a certification program. Even if it was done through the foundation, it still would be attached to the federal government making it appear the government is charging for the whale tail branding.

It was suggested to include questions such as “do you use alternate forms of energy, produce organic food, sustainable seafood, etc.?” be added to the framework. It was mentioned to consider different scoring categories names, colors, number of stars, etc.

Brian Nelson welcomed all input and suggestions from the AC and requested them be sent to him via email.

It was also mentioned to consider the possibility of this program not bringing in additional tourists, but instead redistributing tourists to businesses that have this FTTS recognition.

IX. INFO ITEM: Adapting to Sea Level Rise

Kelsey Ducklow, Climate Change Analyst with California Coastal Commission (CCC), gave a presentation on sea level rise adaptation planning and addressing sea level rise in local coastal programs. She discussed various coastal hazards such as bluff erosion, flooding and inundation. Some hazards such as saltwater intrusion can be more difficult to address as it can't be stopped by coastal armoring since it is in the groundwater. She mentioned that although hard structures on the beach such as seawalls can help manage erosion, they do have an impact on habitat as well as visual

aesthetics (an important consideration for tourism). Kelsey discussed adaptation options such as beach nourishment, sediment augmentation and natural infrastructure. Each of these options have advantages and disadvantages to consider during planning.

Background information was given on Coastal Act policies requiring protection of various resources. She specifically mentioned two hazard minimization policies which directly relate to addressing sea level rise that ensure a structure be safe for its anticipated lifetime without needing protective devices as well as providing shoreline protection to pre-Coastal Act structures in danger from erosion.

Kelsey also touched on the CCC Sea Level Rise Policy Guidance and various scientific updates on sea level rise in California.

Kelsey discussed various projects CCC has denied or approved and the reasoning including a Morro Bay Wastewater Treatment Plan, the Monterey Bay Shores Resort, the Highway 1 Realignment at Surfer's Beach in Half Moon Bay and the CEMEX sand plant in Marina.

She gave an overview of local coastal plans and grants awarded as well as examples of local coastal plan sea level rise policies such as committing to additional planning work, location-specific adaptation strategies and hazard zoning overlays.

Tami Grove touched on ways CCC is working with other agencies. CCC works with CalTrans planning for sea level rise adaptation as well as with CA State Parks planning for sea level rise effecting their facilities along the coast. She mentioned CCC is looking forward to working with MBNMS during the Management Plan Review process and addressing sea level rise.

Advisory Council Member Discussion:

Clarification was requested on addressing sea level rise and erosion. Pillar Point is a good example of how CCC has addressed this hazard. CCC is working with Greater Farallones NMS on beneficial reuse and replenishment. CCC is also considering bridge projects.

It was asked how a lifetime of a structure is determined and how development projects along the coast are approved. The lifetime of a structure depends on the type of structure. When reviewing development projects, the lifetime of the structure and the potential erosion in that lifetime is considered.

It was asked why the Monterey Bay Shores Resort was approved. Kelsey responded when allowing a permit there are specific conditions to that location that are considered and the developers have to agree to certain requirements such as waiving the need for coastal armoring.

It was asked to what extent insurance companies are involved in coordinating insurance or finance on new structures along the coast. Kelsey responded that is an evolving and complicated topic. All flood insurance is through the Federal Emergency Management Agency. There is no private flood insurance. She also mentioned flood insurance is not reflective of true hazards. If the real cost of hazards and sea level rise were factored in, insurance would become very expensive.

V. ACTION ITEM: Nominations and Elections of Executive Committee

PJ Webb took nominations for Council Chair. Brian Nelson was the sole nominee and was confirmed as Council Chair. PJ took nominations for Council Vice Chair. PJ Webb was the sole nominee and was confirmed as Council Vice Chair. PJ took nominations for Council Secretary. Gary Pezzi was the sole nominee and was confirmed as Council Secretary.

Meeting adjourned at 4:06 PM.