

NORTHWESTERN HAWAIIAN ISLANDS CORAL REEF ECOSYSTEM RESERVE
RESERVE ADVISORY COUNCIL

Non-Government (Voting)

Timothy E. Johns (Chair)
State of Hawai'i

Linda Paul (Vice Chair)
Conservation

Kem Lowry (Secretary)
Citizen-at-Large

Louis "Buzzy" Agard
Native Hawaiian Elder

Pelika Andrade
Native Hawaiian

Rick Gaffney
Recreational Fishing

Bill Gilmartin
Research

Bobby Gomes
Commercial Fishing

Gail Grabowsky
Education

Tammy Harp
Native Hawaiian

Cindy Hunter
Research

Richard Lee
Ocean-Related Tourism

Don Schug
Research

Laura Thompson
Conservation

Jessica Wooley
Conservation

Government (Non-Voting)

Athline Clark
Papahānaumokuākea MNM

Malia Chow
HIHW National Marine Sanctuary

David W. Laist
Marine Mammal Commission

Michael Lesser
National Science Foundation

Eric Roberts
U.S. Coast Guard

Janice Fukawa
U.S. Department of Defense

Kitty Simonds
WESPAC

Barry Stieglitz
U.S. Fish and Wildlife Service

Samantha Brooke
NOAA Fisheries PIRO

Meeting January 25, 2016

9:00 a.m. – 4:00 p.m.

*NOAA/Inouye Regional Center, 1845 Wasp Blvd., Bldg. 176, Honolulu, HI
Ko'olau Haka Conference Room*

Meeting Minutes

ATTENDEES:

Voting Members: Bill Gilmartin (Research); Gail Grabowsky (Education); Tammy Harp (Native Hawaiian); Cindy Hunter (Research); Tim Johns (State of Hawai'i, Chair); Richard Lee (Ocean-Related Tourism); Kem Lowry (Citizen-at-Large, Secretary); Linda Paul (Conservation, Vice-Chair); Don Schug (Research); Laura Thompson (Conservation); Bonnie Kahapea-Tanner (Native Hawaiian); Jessica Wooley (Conservation); Rick Gaffney (Recreational Fishing)

Non-Voting Members: Brian Bowen (Research Alternate); Eric Roberts (U.S. Coast Guard [USCG]); Chris Hawkins (Western Pacific Regional Fishery Management Council [WPFMC]); Janice Fukawa (Department of Defense); Athline Clark (Office of National Marine Sanctuaries [ONMS]/Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve [CRER]); Samantha Brooke, Hoku Ka'aekuahiwi (National Marine Fisheries Service [NMFS]); Paul Wong [part day], Hawaiian Islands Humpback Whale National Marine Sanctuary (HIHWNMS)

Absent: Pelika Andrade (Native Hawaiian); Bobby Gomes (Commercial Fishing); Michael Lesser (National Science Foundation)

Papahānaumokuākea Marine National Monument (PMNM) Staff: Maria Carnevale, Alton Miyasaka, and Naomi Worcester and Matt Saunter of the Kure Atoll field camp (State of Hawai'i, Department of Land and Natural Resources [DLNR]); David Swatland, Alyssa Miller, Pua Borges-Smith, Toni Parras, as well as [part-day] Tia Brown, Randall Kosaki, Scott Godwin (ONMS/CRER); Brad Wong (Office of Hawaiian Affairs); Matthew Brown and Dan Polhemus (U.S. Fish and Wildlife Service [FWS])

Members of the Public and Non-PMNM Staff Presenters: Brandon Jim On (Office of Law Enforcement [OLE]); Michelle Mansker, Pacific Remote Islands Marine National Monument; Mark Marini, USCG; Courtney Couch, Hawai'i Institute of Marine Biology (HIMB); Patrick Opay, Jeff Walters, and Angela Amlin, NMFS-Pacific Islands Regional Office (PIRO); Charles Littnan, NMFS-Pacific Islands Fisheries Science Center (PIFSC); [on phone]: Barbara Mayer

I. CALL TO ORDER (Johns)

Chair Tim Johns called the meeting to order. Introductions followed.

II. REVIEW OF AGENDA AND APPROVAL OF MINUTES (Johns)

1. Action items and suggested topics from the previous meeting were reviewed to see if anything should be added to the agenda. No action items were added to the agenda. Dr. Don Schug requested that we add a discussion of the sanctuary nomination process to the agenda. Mr. Brad Wong informed the RAC that Dr. Kekuewa Kikiloi will not be able to make it to the meeting to present. Ms. Athline Clark informed the RAC that someone from Hawaiian Islands Humpback Whale National Marine Sanctuary (HIHWNMS) might not be available to provide an update. Mr. Johns amended the working agenda as noted and requested.

2. The minutes of the September 10, 2015 meeting were reviewed. Dr. Bill Gilmartin noted that he is neither in the list of those who attended nor in the list of those who were absent. Ms. Linda Paul corrected the last full sentence on pg. 5, which should read “Two years ago,” rather than just “Years ago.” The minutes were approved with these corrections.

3. Ms. Paul provided an overview of the ONMS advisory council summit, which took place in Annapolis from January 11 through January 14, 2016. Mr. David Holst, the Acting Deputy Assistant Administrator of the National Ocean Service (NOS), gave the opening remarks. He described the three priorities for ONMS in the next year: climate change resilience, coastal intelligence research and data, and place-based conservation that accounts for socio-economic values. Mr. John Armor, Acting Director of ONMS, spoke about the evolution of the sanctuary system and plans for the 50th anniversary of ONMS. There were updates on new sites nominated for inclusion in the system and a discussion of the ONMS strategic plan being developed. Attendees commented that the ONMS process is very top-down, and it was agreed that in three months, there would be a conference call in which ONMS headquarters would provide updates on the development of the plan, and the chairs can have some input. There was also a fundraising primer, followed by a free-flowing discussion among council chairs and Mr. Armor.

Mr. Johns asked if there is any word on a permanent replacement for retired director Dan Basta. Ms. Paul replied that no one was named and no timeline for a replacement was given. Mr. Johns asked if the position is a political appointment or a civil service position. Ms. Clark responded that it is a civil service position, and NOAA makes the hiring decision.

Dr. Gail Grabowsky asked if other advisory councils are recommending plans for climate change at their sites. Ms. Paul responded yes, they are all making resolutions to take action on climate change and educate the public on it. Mr. Johns asked if we are revising our management plan to incorporate strategies for climate change. Dr. Dan Polhemus stated that the MMB has just completed a climate change action plan. He added that the plan has been created, vetted, and approved by all co-managing agencies except the State, which is still determining what internal approval process needs to be followed. If that final approval comes through, the MMB can present this plan at the next RAC meeting.

III. MONUMENT CO-TRUSTEE/MANAGEMENT AGENCY UPDATES (Member Agencies)

1. Office of National Marine Sanctuaries (ONMS): Ms. Clark summarized some of the activity highlights of the Monument in the past few months. The Monument supported National Park Service’s “Every Kid in a Park” initiative, which drew over 400 school kids. ONMS worked

Minutes of the meeting of the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve Advisory Council held on January 25, 2016 at the Inouye Regional Center

with the State to bring awareness to the public about the current archipelago-wide coral bleaching event. Intertidal monitoring training was conducted on Kaua‘i and in other communities. The “In the Heart of the Sea/Lightning Strikes Twice” movie event was well attended. An education and outreach strategic plan is being developed; the focus on education technology is particularly exciting. Many schools have visited the Mokupāpapa Discovery Center, which also held a monk seal talk with the State Department of Education. Big Ocean is having a Human Dimensions Think Tank, and the Monument will be hosting a reception and 10th anniversary celebration in conjunction with that conference. The *Okeanos Explorer* is getting ready for another expedition in the Monument.

Mr. Rick Lee asked how Monument staff interact with the different schools. Ms. Clark responded that the Monument’s connections with the schools primarily is through the Navigating Change curriculum. The schools contact the Monument to do presentations. Mr. Lee advised getting more schools on board via an e-blast or something on the website that allows them to sign up for presentations. Ms. Clark agreed to follow up on this request. Ms. Laura Thompson asked about plans for an O‘ahu discovery center. Ms. Clark responded that the Monument is working to partner with other institutions rather than establishing a center on Oahu, which might compete with many of our partners.

Ms. Paul requested a budget and schedule for updating the management plan. She said in her discussions with people at the summit, when she conveyed that the RAC had been told that there is insufficient funding to conduct a management plan update, she was told that budget should not be an obstacle to going through with an update, and probably the Monument just needs to allocate the funds appropriately. Ms. Clark replied that our management plan is for 15 years, and it is not just an ONMS plan; it is a multi-agency document. As a preliminary step, the Monument has a staff person dedicated to tracking the different actions in the plan as part of the evaluation process, so the Monument *is* putting resources toward an update.

Mr. Johns enquired as to what means the RAC has to get reports on this tracking. Mr. David Swatland replied that the staff is in the process of putting together a State of the Monument report, which is based on six specific parts of the management plan, as identified by working groups, and might ready in time for the World Conservation Congress (WCC) in September. Ms. Clark added that an update on the evaluation process can be given at the next RAC meeting, as well. Ms. Paul replied that the RAC advises the Coral Reef Ecosystem Reserve (CRER), not the whole Monument, and the RAC is supposed to be part of the evaluation/management review process, not just a recipient of information. Ms. Clark responded that for most sanctuary advisory councils (SACs), the council members provide comments that the sanctuary takes into consideration as it revises its plan, and the RAC already has been included in the process by means of the working groups that provided the comments they used to develop the evaluation process.

2. State of Hawai‘i (DLNR): Ms. Maria Carnevale presented an overview of the State’s activities in the past quarter. As part of the governor’s package, \$150K was requested for Kure Atoll field activities. Usually about \$250K is requested, but that has not been granted historically. Hopefully the reduced request will be more successful. Also requested was funding for the co-manager position. The My Hawai‘i Stories contest is open, and this will become part of the Young Voices workshop at the upcoming WCC.

Dr. Gilmartin asked for confirmation that there has never been State funding for Kure Atoll. Ms. Carnevale explained that Kure is part of DOFAW (Division of Forestry and Wildlife) and has been portioned out funding from that; it has never received its own funding. Dr. Gilmartin also asked if funding has been designated for the State co-manager position. Ms. Carnevale replied no, there is no direct funding for the position, but the State provides in-kind support. Mr. Johns asked for the gist of the official bills included and appendix materials in the State's report. Ms. Carnevale replied that the bills establish the State's Papahānaumokuākea program, allowing them to set fees for permits, accept grants and donations, and other things.

Mr. Matt Saunter and Ms. Naomi Worcester, who have been co-managing the summer field camps at Kure Atoll, presented an update on activities at Kure:

- This season, March through September 2015, 197 field days were completed.
- They have worked on incorporating more cultural practice activities such as collecting feathers and bones; using oli at appropriate times; and working to create a cultural calendar for Kure.
- Habitat restoration continues, which includes removing 158,000 *Verbsina enceliodes*; moving from control to removal of *Cassythra filiformis*; and implementing the SOS (Save our Scaevola!) program to protect the naupaka, the primary dune-stabilizing native plant. As support for the wildlife, they are maintaining and creating freshwater catchments.
- The big-headed ant eradication, although for the most part successful, continues as spot-checking and treating about every six months. Following planned transects, every 30 meters or so cards with Spam, peanut butter, and honey are put out. If ants are found, those specific sites are treated. Only one site, of 856, had ants this year, and it was treated.
- Christmas shearwater numbers are improving. Inventory was conducted over three nights this summer. Prior to the rat eradication program, the average number was 40 – 60. On this count, there were at least 400 individuals.
- A census of the ground-nesting boobies was also conducted. 141 nests were monitored. They also banded some of the chicks, including 21 masked booby and 87 brown booby chicks.
- The Laysan albatross census also shows an increase in nesting numbers, with 38,337 nests counted this year, and 28,483 chicks, which indicates a 74% survival rate. Mr. Johns asked if there is a particular reason for the increase in the nesting numbers. Mr. Saunter replied that there is no definitive reason, but very possibly because this is an El Niño year, the warmer water means that there is greater food availability closer to land.
- Twelve monk seal pups were born and twelve were weaned, four females and eight males. One male pup was lost. All the 2014 and 2015 cohorts are still seen.
- The crew removed coastal entanglement hazards as part of their monitoring efforts and removed about 5,000 lbs of marine debris, with 2,500 lbs. taken away by the Hi'ialakai and another 1,000 lbs taken away by the *Sette*. The remaining debris is in an inland location until another removal opportunity presents itself. A thick fish aggregation device washed up this year, about 20 ft in length, made of fiberglass and stainless steel; they were able to trace it to an island off of Japan.

Dr. Grabowsky asked if they are working on putting together a book on their restoration work for education programs. Mr. Saunter responded that there isn't really much time for writing, but they work with education groups, such as those coordinated by Ms. Barb Mayer. Ms. Mayer, present at the meeting by phone as a member of the public, noted that the Kure field team posts to a blog on their website, and this is part of an educational project with Kapa'a High School. Dr. Gilmartin requested of the presenters that the next time numbers and current data are presented, it would be helpful to have historic data as context to see trends over time.

2. U.S. Fish and Wildlife Service (FWS): Mr. Matt Brown noted that a written report is included in everyone's packet. He highlighted a few things, including the Coast Guard bringing a new generator up to Midway Atoll and taking away a large stock of marine debris via the USCG Cutter *Walnut*. Mr. Robert Peyton, the new Refuge Manager for Midway Atoll, assisted the crew. The EPA has been working with him and the others on remediation of some of the contaminants on Tern Island. FWS is working with them and all the agencies of the MMB to figure out what they want for Tern Island long term.

The Laysan albatross Wisdom (the oldest known bird in the wild) has her partner sitting on the egg now. FWS staff members are hoping the egg will hatch on February 4.

The biggest challenge Midway is experiencing now is a drastic change of behavior in the mice. The mice on Sand Island are attacking—and even killing—adult nesting albatrosses. So far about 50 albatrosses have been killed and more than 300 have been injured. FWS staff are not sure what has triggered the change in behavior but they are now working to depress the mouse population. Mr. Rick Gaffney asked if the attacks are occurring only on Sand Island. Mr. Brown confirmed that for now, they occur only there. Mr. Gaffney then asked if FWS staff have reviewed the rodent eradication program. Mr. Brown responded that the eventual goal is to eradicate the mice; right now they are working just to control them. However, they have decided to move up the timeline of the eradication program. Mr. Brown further explained that the mice have figured out where they can get to the albatrosses without the albatrosses being able to defend themselves, such as the back of their necks and the small of their backs.

Dr. Gilmartin asked about the status of the seawall of Tern Island. Mr. Brown stated that the wall is deteriorating. All parties involved agree that something needs to be done, but the decision on who is responsible for funding it is still pending. Ms. Paul noted that in the closed session with Mr. Armor at the council summit, the council chairs requested of ONMS clarification on lobbying and fundraising. Perhaps, Ms. Paul suggested, the RAC could update its charter to enact a friends group for those purposes.

Dr. Dan Polhemus noted that nine federal and State agencies are moving forward with the NEPA process on a strategy to control mongooses and other rodents, and anyone interested may comment. They are also moving forward with a proposal to list 49 species in Hawai'i as endangered.

Dr. Polhemus then began his presentation on climate drivers in the Monument. We just got through the hottest year on record. The NWHI were warmer than usual but did not fare as badly as other places; in the global context, the temperatures were closer to normal. The main Hawaiian islands, however, experienced record warmth. The prediction is that this El Niño event is waning and should be over by summer. Dr. Grabowsky asked how this will affect sea level

Minutes of the meeting of the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve Advisory Council held on January 25, 2016 at the Inouye Regional Center

rise. Dr. Polhemus said that the question is being addressed by the climate change working group of the MMB (Monument Management Board, comprised of DLNR-DAR [Division of Aquatic Resources], DLNR-DOFAW, FWS-NWRS [National Wildlife Refuge System], NOAA [National Oceanic and Atmospheric Administration]-ONMS, NOAA-NMFS, and OHA).

3. Office of Hawaiian Affairs (OHA): Mr. Brad Wong highlighted OHA's support of the voyage by Bonnie Kahapea-Tanner's organization, Kānehūnāmoku Voyaging Academy, as well as its support for the documentary based on that voyage, which was featured at the Hawai'i International Film Festival (HIFF). OHA hosted the HIFF reception for the film.

OHA also has been working with ONMS on Monument education and outreach. And OHA will be helping the Kure program with some equipment upgrades. They also have been working with researchers to get bird parts for cultural practices.

Mr. Keola Lindsey and Dr. Kekuewa Kikiloi have been working with the Bishop Museum about the upcoming exhibit featuring the Northwestern Hawaiian Islands. OHA will provide support this year for another of Dr. Kikiloi's archaeological research trips to Nihoa and Mokumanamana. Dr. Kikiloi was scheduled to present at today's meeting but is unable to do so because he is very busy. OHA has several video clips featuring Dr. Kikiloi speaking about his research on Nihoa and Mokumanamana. He recommends that the clips be shared with the RAC.

Mr. Wong also stated that the Native Hawaiian Cultural Working Group (NHCWG) are solidifying their methods for assigning Hawaiian names to new—or just yet unnamed—coral and other species. They also have been discussing ways to incorporate “pu'uhonua,” as it was the name Uncle Buzzy (Louis Agard, Jr., late Native Hawaiian Elder representative) had wanted for the Monument, and they want to incorporate it somehow. Ms. Paul suggested using that as the name for the sanctuary that the reserve might become. Ms. Tammy Harp did not feel that would be good because Uncle Buzzy had said “no” to becoming a sanctuary out of concern that protections would be lost. Mr. Wong clarified that the working group did not intend for it to be a new name or part of an existing name. They were thinking of incorporating it in a new tag line, like the current “where nature and culture are one.” They are still working on it and will make a recommendation when they decide.

4. NOAA – Office of Law Enforcement (OLE): Mr. Brandon JimOn reminded the council that the OLE annual report had been distributed via the RAC list serve previously. He distributed a handout with excerpts from that report that refer to the Pacific Islands division, and he noted that the national office of OLE has a new director, Mr. Jim Landon. As shown in the excerpt, there was a \$54,000 NOVA (Notice of Violation and Assessment) for fishing in the Monument last year. The case was successful. In November, there was a case of a long-line fishing vessel fishing within the closed area of the Monument, but that case is still being investigated. Dr. Schug asked if Mr. JimOn had discovered the infraction by VMS, and Mr. JimOn affirmed this. (2:07 – 2:10)

5. United States Coast Guard (USCG): Mr. Eric Roberts distributed a report from the USCG with information on marine activities for the last quarter. Of note, the Coast Guard Cutter *Kukui* patrolled the Monument for four days. No foreign vessels were encountered and no domestic fishing violations were seen. They also provided assistance to Kure and brought Ms. Cynthia Vanderlip from Kure up to Midway. The crew very much appreciated the hospitality of the staff

Minutes of the meeting of the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve Advisory Council held on January 25, 2016 at the Inouye Regional Center

on Midway when they stayed there. He also introduced Mr. Mark Marini, the new Environmental Engineer. Mr. Marini will be taking over the Kure remediation project, as well as a special project that will start in August or September, and possibly could present on this at the next meeting.

Mr. Gaffney asked if the Coast Guard is getting satellite data. Mr. Roberts replied that they are, and they get national and international GPS data.

IV. PRESENTATIONS

1. Report on the 2015 Biological/Geographic (Bio-Geo) Cruise (Kosaki)

Dr. Randall Kosaki began the presentation by passing around to the RAC specimens of probable new species of flora collected on the recent bio-geo cruise. Dr. Kosaki then explained that this past bio-geo cruise made use of closed-circuit rebreathers, and these apparatus allow divers to go far below scuba depths and stay down longer for more in-depth surveys. They also wanted to explore the reefs of under-studied banks and seamounts, as opposed to those of the islands and atolls, which have been studied much more. They had predicted that at the 200 – 300 ft depth range, they would find more temperate species of algae rather than tropical, and preliminary results seem to match predictions. At Kure they found lipoa algae almost a meter long. Samples of the new species were brought back for the NHCWG to smell and taste in order to help with the Hawaiian naming process. The crew also discovered new species of wrasse and dragonet fish.

The most important findings occurred at Kure Atoll, the northern-most point of the NWHI. Six dives were conducted there down to the 300 ft depth, the deepest dives ever done at Kure. Every one of the six surveys showed 100% endemism, the highest level of endemism reported for any place on earth. The findings indicate that the deep waters surrounding Kure might be a speciation engine driving diversity in the Pacific. These deep waters also are resistant to invasive species. Only three introduced species are known at mesophotic depths in the NWHI; none are recorded north of French Frigate Shoals. Available information indicates that the deeper, colder waters in the most northern areas are not good environments for tropical fish, even invasive fish. These essentially are invasive-free zones.

If the RAC proposed a boundary expansion north of the current boundaries, Mr. Johns asked, would researchers there see the same thing? Dr. Kosaki stated that this year's *Okeanos Explorer* expedition surveyed some of the areas just outside of the Monument's boundaries, and the findings will be presented as part of a report on that cruise at the next meeting. Dr. Grabowski asked if the ancestry of the endemic fish is temperate species or tropical species. Dr. Kosaki responded that the ancestry is definitely tropical.

2. Report on the Reef Assessment and Monitoring Program (RAMP) Cruise (Godwin)

Mr. Scott Godwin summarized the activities and preliminary findings of the 2015 RAMP cruise, which ran from July 27 through August 28. The coral disease team spent several days reviewing the permanent transect sites to survey coral health, and that information was shared with Dr. Courtney Couch for her research, which will be presented later. The ship was also used by sea turtle biologists conducting shoreline surveys. Results of the surveys are still being analyzed.

Minutes of the meeting of the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve Advisory Council held on January 25, 2016 at the Inouye Regional Center

Some activities by the numbers:

- 652 scuba dives, no incidents
- 7 permitted projects on board
- 4 MOP students on board
- 60 coral and 96 fish sites

The maritime heritage team discovered a new shipwreck, the *Mission San Miguel*. They also found a new WWII plane at Midway. While at Kure they provided re-supply services, including about 700 gallons of water, which was especially critical because they were experiencing a water shortage. Their stay there was extended by three days because a storm necessitated an evacuation of that camp, as well as those at Laysan and Pearl and Hermes. The RAC requested a maritime heritage update.

3. Coral Bleaching Update (Couch)

Dr. Courtney Couch of the Hawai‘i Institute of Marine Biology indicated that she is working on a report on two years of coral bleaching study that will be wrapped up this winter, and much of this information is from that draft report.

As background: Coral get some of their energy by capturing and feeding on plankton, but 80-90% of their energy comes from a symbiotic relationship with algae. When coral are stressed, this symbiotic relationship breaks down and they lose algae, the source of their pigmentation, and this is coral bleaching. Factors contributing to coral bleaching include low salinity, sediments and other pollutants, high UV irradiation, and high temperature. Without the algae, the coral can survive on plankton for a certain period of time. If the stressor goes away, the coral can regain their algae; but if the coral are stressed for a significant period of time, the long-term loss of algae causes the coral to die. Coral-level recovery can happen in months or sometimes weeks, but reef-level recovery takes years or even decades.

Global mass bleaching events occurred 1997-1998, 2010, and 2015-2016. 2015-2016 is the worst global bleaching event. Climatic processes driving mass bleaching include climate change, El Niño, the Pacific Decadal Oscillation, and “the Blob” (an area of unusually warm water in the northern Pacific, off the west coast). Specifically in Hawai‘i, bleaching events occurred:

- 1996 in Kaneohe Bay
- next two in the NWHI, especially Kure, Midway, and Pearl and Hermes
- 2014 in waters around Lisianski Island, then the main Hawaiian islands

During the 2015 RAMP cruise, when Dr. Couch returned to the 2014 permanent transect sites, there was a significant decline in coral cover around Lisianski—less than 1% cover in 2015. There was some recovery at other sites, and the reefs near Neva Shoals showed very positive recovery. In the current coral bleaching event, the main Hawaiian islands were hit the worst, especially the Kona coast, with 80 – 90% bleaching in some areas; there was also significant bleaching in Kaneohe Bay.

Collectively, we can minimize the frequency and severity of coral bleaching by reducing atmospheric carbon, supporting research that monitors bleaching risk and impacts, and, as a

subset of the second, by identifying factors of bleaching resistance and recovery. In the Hawaiian Islands, we need to minimize environmental stressors.

Ms. Harp asked if there is a correlation between severity of coral bleaching and calm water days. Dr. Couch responded yes, water movement helps to relieve stress, and there were a lot of calm water days this past summer. Dr. Cindy Hunter asked if the bleaching occurs at all depths. Dr. Couch replied that the bleaching is more or less extensive by coral type and depth, but significant bleaching can be seen even at 30 – 40 ft, and some bleaching reached down as far as 130 ft or so. Dr. Grabowsky asked if there will be recovery data with which to compare the main with the northwestern Hawaiian islands. Dr. Couch indicated that they do hope for such data, and that they would like to keep monitoring the permanent transect sites in the NWHI, as well as establish additional permanent sites in the main islands. Dr. Polhemus requested confirmation that the Blob has had more detrimental impact and will last longer than El Niño. Dr. Couch affirmed this, and reaffirmed that Hawai‘i is not out of the woods just because El Niño is coming to an end. Ms. Jessica Wooley asked if there is research on how the fish are affected by coral bleaching and recovery. Dr. Couch stated that that research is in progress. Mr. Gaffney asked if higher or lower infestation of COTs (Crown of Thorns) is associated with coral bleaching. Dr. Couch responded that they are starting to get reports of large numbers in areas of bleaching, but there are no real data. Ms. Paul asked if it is true that if a coral bleaches one year but the next year is cool, the zooxanthellae return; but if the coral bleaches two years in a row, they do not? Dr. Couch stated that in some cases that is true, but not always. Dr. Polhemus added that some studies show coral can regain more thermally tolerant zooxanthellae.

V. PUBLIC COMMENT

There was no public comment.

VI. LUNCH

VII. PRESENTATIONS (CONTINUED)

1. Endangered Species Refresher and Issues Update (Opay)

Mr. Patrick Opay of PIRO’s Protected Resources Division presented an overview of the Endangered Species Act (ESA), followed by updates on the status of several actions regarding endangered species in Hawai‘i. The ESA is in effect up to territorial limits. Mr. Opay reminded everyone that an “endangered” species is currently in danger of extinction, and “threatened” species are likely to become endangered soon. “Species,” for ESA purposes, includes species, sub-species, and distinct population segments (DPSs). A DPS is a vertebrate population segment that is discrete from other population segments and significant to the larger species.

As an update on the Hawaiian humpback whale, Mr. Opay informed the RAC that if the final rule goes through, that DPS is no longer on the endangered species list, but a post-delisting monitoring plan is under development. Ms. Paul, regarding the map showing the habitat locations of the humpback whale DPSs, pointed out that DPS 3, coded yellow for “threatened,” is shown to travel to the same feeding areas off of Alaska as DPSs 4 and 5, coded blue for “not at risk.” Mr. Opay affirmed that some DPSs that have a different endangered status mix in the same

areas, which can create management problems. Mr. Johns asked if DPSs are treated as separate species. Mr. Opay indicated that for ESA purposes, they are. Dr. Jeff Walters noted that even though the Hawaiian humpback whale has been delisted, the Marine Mammal Protection Act (MMPA) still applies. Ms. Paul asked about the importance of genetics in determining DPSs. Mr. Opay stated that genetics play a big part in the determination. He does not know the details about the particular circumstance of the Hawaiian humpback whale, but if the RAC members have any questions, they can email Ms. Allison Ikeda, who will forward the question to Mr. Opay or Ms. Susan Pultz, who knows more of the particulars.

For the Hawaiian green sea turtle, Mr. Opay explained that of the 11 DPSs, none were proposed for no ESA coverage, although some were reduced to “threatened” status. The Hawaiian green sea turtle is one of the smallest DPSs, and most of them nest in one place: French Frigate Shoals. Therefore, the Hawaiian green sea turtle will have no change in its status as “endangered.” The request for a status review came from the Association of Hawaiian Civic Clubs. The comment period has closed, and now they are working on going through the comments.

There are other recent listing actions for sharks and manta rays. Mr. Opay offered to send the RAC information after the meeting. Also, recovery planning is underway for the insular false killer whales in the main Hawaiian islands, as well as for some species of coral. And they have recently completed the Hawaiian monk seal management plan for the main Hawaiian islands. Mr. Johns asked if the comment period has passed for species with recent listing actions. Mr. Opay explained that the 90-day finding period has passed, but when the reviews are done and the proposed rules are released, there will be another comment period. Mr. Johns then requested that Ms. Clark inform the RAC when this happens, and she agreed. Mr. Johns also requested that Ms. Clark provide information to the RAC about how these status changes might affect what is in the management plan, and she agreed.

Mr. Opay then reviewed the basics of “take” regulations, which essentially make it illegal to take endangered species unless authorized in some specific way, such as Section 7, which applies to federal agencies, or Section 10, which applies to non-federal entities. Generally, consultations are required in most circumstances to evaluate effects on applicable species.

Dr. Hunter asked how laws can allow for DPSs given that many species are highly migratory and possibly move out of protected areas. Mr. Opay clarified that DPS determinations are mainly concerned with nesting areas, rather than other areas of activity. Mr. Johns elaborated on Dr. Hunter’s question, asking if populations can really be segmented if species are mixing. Mr. Opay responded that genetically, they are DPSs, and there is very little genetic mixing, as well as very little mixing in breeding areas. Ms. Paul asked if human predation is considered in determining endangered status. Mr. Opay replied that one of the five factors considered is commercial harvest, so in that sense it is considered. Mr. Gaffney asked if climate change is considered in status review, and Mr. Opay indicated that it is, but not much. Ms. Samantha Brooke offered to send the review documents for humpback whales and green sea turtles so that people know what specific factors were considered for each.

2. Monk Seal Field Camp Update (Littnan)

Dr. Charles Littnan of PIFSC’s Protected Species Division, the head of the monk seal program, provided a summary of monk seal assessment and recovery for 2015 and 2016. The 2015 field

Minutes of the meeting of the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve Advisory Council held on January 25, 2016 at the Inouye Regional Center

camp was the longest since 2011. The NWHI monk seal census is up to 881, from 810; 179 are at Nihoa and Mokumanamana, about 20% of the NWHI population. The juveniles are surviving better in the NWHI, and every juvenile at Kure has survived, but there has been a downturn on Lisianski and Pearl and Hermes. Midway and French Frigate Shoals are seeing better survival rates.

There were 51 life-saving interventions, including:

- 17 pups translocated in French Frigate Shoals
- 12 seals disentangled
- 3 seals given assistance when trapped behind the seawall at French Frigate Shoals
- 7 seals brought to Ke Kai Ola for rehabilitation

Other activities include:

- Mitigation of shark predation – At French Frigate Shoals, four pups were attacked by sharks, and two of them died. One Galapagos shark was relocated. Other sharks have been caught and released.
- UAS – A UAS was used for monk seal assessment in a total of 41 flights. There were no injuries to wildlife. They are able to get higher-resolution imagery with this method.
- Marine debris – They are starting a pilot project for marine debris removal. The field camp enjoyed doing it, and collected between 700 and 800 lbs of plastics, so they probably will do that again.

Dr. Littnan also reviewed the circumstances surrounding the death of an adult male monk seal, TE50, at Laysan. The September 17 incident happened during a regular health assessment. Three debriefings have been done to review this. The assessment found that there were no negligent actions, but the death was due entirely to handling. Based on the incident, they have created a risk assessment tool and will do additional training. They are also changing an aspect of the health assessment process. Instead of the veterinarian doing monitoring and sample collecting, the veterinarian now will do only monitoring, while veterinary technicians collect the samples. This will allow the veterinarian to notice subtle cues sooner. They also are establishing a database of behavior during capture, as behavioral history might be a sign of higher current risk.

Mr. Gaffney asked if they will do anything different this year in their shark mitigation efforts. Dr. Littnan said nothing will be done differently, except that they are seeking permission to use previously deceased monk seal flesh as bait. It is hard to trap them because of their erratic behavior. It takes approximately 600 line hours to catch one shark. Dr. Grabowski asked how the sharks are learning new behaviors. Dr. Littnan replied that they do not know yet, but it is being studied. The sharks exhibiting the behavior number in the tens. Dr. Grabowski also asked if the overall number of monk seals is trending up or down. Dr. Littnan stated that the estimate for 2014 is 1,266, so the population at least is stabilizing. He added that the efforts to recover the monk seal population are part of the world's most proactive marine mammal recovery program. Dr. Gilmartin asked if there is a different level of mortality for males or females. Dr. Littnan indicated that females have a high mortality rate primarily due to male aggression, although this is getting better.

3. Marine Debris Removal in the NWHI (Manuel/Chon)

Mr. Mark Manuel and Ms. Grace Chon of the NOAA Marine Debris Program provided a summary of their marine debris removal efforts in the NWHI. The program, which is a multi-agency partnership, has been ongoing since 1996. Between 2000 and 2005, they focused on large-scale removal. Since 2006, the focus has been maintenance removal. The main method is in-water removal using towboard and swim surveys. 95% of removal is done using free-diving techniques. On-shore marine debris also are removed. As part of the Nets to Energy program, nets are removed, then transported and burned at H-Power. To date, 837 metric tons of marine debris have been removed, primarily derelict fishing gear.

In 2015 they did a special clean-up at Midway Atoll. Eight divers went in and conducted micro-plastic trawls, including almost 10,000 bottle caps and 1,000 lighters. They also did a coastal clean-up focus on debris 10 cm or larger. In total, 14.6 metric tons of debris were removed, including almost 6,000 buoys and floats. Ms. Paul asked if they could tell how much of the debris came from the Japan tsunami. Mr. Manuel responded that most debris is not easily tied to the tsunami, but some presumed Japan tsunami debris were collected, such as the boats and fishing tubs found. Only 64 items in the whole Pacific have been definitively traced back to Japan

4. Permit Season Summary and Report on Intertidal Monitoring ('Opihi) Cruise (T. Brown)

Ms. Tia Brown provided the RAC with a copy of the 2015 Permitted Activities Report and summarized some of the highlights. Twenty-two permits were issued. One permit was denied—a request to bury a Buddhist statue at Midway. One of the main issues was that it is encased in plastic. So far this year six permits have been approved.

As a summary of the 2015 field season:

- Several re-supply trips were made.
- The Nihoa millerbird project went up in May and June.
- The intertidal monitoring cruise and Dr. Kikiloi's archaeological cruise went up in June and July, as well as Dr. Pua Kanahale's summer solstice research trip.
- In June through September, the marine turtle and monk seal field camps were in the NWHI.
- The RAMP cruise went in July and August.
- The *Okeanos Explorer* conducted its survey in August.
- The Bio-geo cruise went up in September.
- A deep-sea trawling research expedition went to identify sites.

Ms. Paul asked Ms. Brown to explain the deep-sea trawling research. Ms. Brown explained that they were researching the impact and recovery of previous deep-sea trawling for fish by first using multi-beam mapping, and then an ROV will be used to collecting samples this year. The ROV will not touch the bottom, except for a robotic hand to collect samples.

The 2015 intertidal monitoring cruise occurred between May 12 and May 25. The joint cruise to Nihoa and Mokumanamana combined Native Hawaiian practice and scientific research as a learning exchange using an integrated monitoring protocol. Due to unusual weather conditions, the transect surveys were conducted on the north side of the Nihoa instead of the usual area on the south side. In addition to the transect surveys, they also did rapid assessment surveys, which

essentially involves just counting the ‘opihi. The rough estimates are 140,000 ‘opihi on Mokumanamana and 320,000 on Nihoa. The crew also used a huli ‘ia data sheet for environmental observation. The research and cultural crew learned that collaborations and partnerships are important, and that integrated monitoring is important for a bigger picture.

Ms. Paul asked if any intertidal monitoring is being conducted in the main Hawaiian islands. Ms. Brown responded that they are trying to engage local communities in doing this. Currently, there are efforts on Maui in Hana and Kipahulu, as well as on Moloka‘i. And PMNM just conducted a workshop on Kaua‘i.

VIII. UPDATES AND DISCUSSION

1. Update on HIHWNMS draft management plan: The update was postponed until the next meeting, as no one from HIHWNMS was available to present it.

2. Update on the Native Hawaiian seats (Clark): Ms. Clark informed the RAC that at the September meeting, a preliminary review team selected names for the Native Hawaiian alternate and Native Hawaiian Elder alternate. Before moving forward, however, Ms. Clark wanted to bring the process back to the RAC for consideration. Given that Uncle Buzzy has passed away, perhaps it would be best to pull those applications back and re-open them when we solicit applications for Uncle Buzzy’s seat. Dr. Gilmartin said it seems like bad policy to throw out what they have. Mr. Gaffney proposed that it might be good to revisit what experience we want in the seat, as real kūpuna is a small pool of people. Mr. Johns felt that the RAC should ask the NHCWG to get involved, that the RAC should not be making the decisions about who counts as a kupuna or not. Ms. Clark stated that she will contact those who have already submitted applications for the Native Hawaiian Elder alternate seat and coordinate with the Native Hawaiian RAC members about reopening the recruitment process. Possibly the non-Buzzy alternate seat will move forward.

Ms. Clark also informed the RAC that when Uncle Buzzy passed, the staff submitted a request for him to be accepted into the ONMS Memorial Garden in Florida Keys. The application was approved, and Uncle Buzzy will be included, with a ceremony on February 25. However, although an application was also submitted for Dr. Isabelle Aiona Abbott, that application was not approved. The only feedback from ONMS headquarters was that the application was not explicit enough about what she did for the Monument or for ONMS. Ms. Paul suggested that perhaps a memorial garden could be established at the IRC.

3. Commercial fishing seat (Gilmartin): Dr. Gilmartin requested that the RAC discuss the commercial fishing seat, which he feels is essentially vacant. The RAC discussed and agreed that the primary and alternate have not attended for years. Mr. David Swatland noted that there are specific procedures for removing members of the RAC. Dr. Gilmartin requested that the RAC get the information on how to remove a member. Ms. Clark volunteered to follow up with both to see if they are still interested in being on the RAC.

4. Education and outreach strategic plan development (Grabowsky, Clark): Dr. Grabowsky informed the RAC that PMNM held an education and outreach planning meeting over three days, September 30 – October 2. Dr. Grabowsky participated on one of those days. Dr. Grabowsky felt that the workshop was both exhaustive and deep in its discussion. The main

Minutes of the meeting of the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve Advisory Council held on January 25, 2016 at the Inouye Regional Center

outcome of that day was a set of goals, including integrating research and education; forming a single integrated plan, rather than just many separate little actions; and getting more “ins” with educational institutions, among other goals. Ms. Clark added that the notes from the three-day workshop will be used to create a strategic framework with plans and action items that include both what is already in the current management plan and new ideas.

Mr. Johns asked if this is the interpretive plan. Ms. Clark replied no, this is the first step, and a subset of the strategic plan will be an interpretive plan. When it is completed, it will be presented to the RAC. Ms. Paul asked if the management plan review is waiting on the development of the education or interpretive plan. Ms. Clark responded no, the management plan is not waiting on this. [As further clarification, it should be noted that this is step down plan. Since there was no action plan in the management plan for outreach or education, it is spread throughout the plan. This effort is to provide more focus to the plan.] The plan was published in 2008 and is for 15 years. In that development process, the comments of the RAC working groups were used to provide input on the plan and the management plan evaluation process. Dr. Kem Lowry, who led the evaluation review, noted that there were six meetings with the groups responsible for the six action plans, but the last meeting was two years ago, and they have not met since then. Ms. Clark explained that Dr. Alyssa Miller, the Evaluations Specialist, took over after input from the subgroups to track the actions of the Monument against the action plans, and someone can present on that at the next meeting. Ms. Paul stated that she did not like the idea of the evaluation and assessment of the management plan being presented to the RAC, as the development of plans is supposed to be an interactive process with the RAC. Ms. Clark responded that the status update can be presented at the next meeting, and from there they can talk about what we want the RAC to do.

5. Letter about the sanctuary process (Paul): Ms. Paul reminded the RAC that they received via email a draft letter to Mr. Armor regarding the sanctuary designation process, and also there is a hard copy in their packet. Mr. Johns stated he felt the letter was different from what had been discussed. Ms. Paul felt that the letter is what the RAC had wanted, which is to pose the question to Mr. Armor about whether the RAC can pick up the process it left off in 2006 or if it has to begin from the start and follow the new sanctuary designation process. Mr. Chris Hawkins said the letter does ask that question, but in a very roundabout way with a lot in it that does not need to be included, so that it is hard to determine exactly what the question is. Mr. Johns noted that the letter says the RAC agreed to submit an application, but he believes the RAC agreed to draft an application for review.

Mr. Johns recommended that people submit comments, and the letter can be reviewed by RAC leadership and then resubmitted to the full RAC. Dr. Schug suggested that the letter could be much simpler and ask the question in just one page instead of the way it is currently written. Ms. Paul added that the RAC has not yet answered three questions: what the timing will be, what the desired boundaries are, and what name will be given when the CRER or PMNM becomes a sanctuary. But, she added, this all rests on whether or not the RAC really does want to pursue becoming a sanctuary.

Ms. Clark distributed copies of the State’s position on the draft revised management plan put forward by HIHWNMS, which she thought would be of interest to the RAC, as they had indicated in the May 2015 meeting that they were concerned about the timing of the RAC’s

Minutes of the meeting of the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve Advisory Council held on January 25, 2016 at the Inouye Regional Center

sanctuary nomination process being so close to the management plan review process of HIHWNMS. The letter from Ms. Suzanne Case, Chairperson of the State Department of Land and Natural Resources, addressed to Mr. Armor of ONMS, expressed concern that the HIHWNMS draft DEIS and Management Plan “could restrict the State's ability to recover damages for violations of the state laws and rules governing its natural resources by giving NOAA primary jurisdiction to prosecute cases for damage to any sanctuary resource within the boundaries of the Sanctuary.” The DLNR determined that the sanctuary should continue in its current form and activities. Mr. Gaffney asked Mr. Johns if the statement is different from the State’s initial position. Mr. Johns replied that he does not know if the State was consulted for an initial position before the draft was released to the public.

Dr. Grabowsky then returned to the subject of the letter and asked what the answer to the letter would do or signify. Ms. Paul responded that it would simply indicate that if the RAC wants to move forward with the sanctuary designation, could they pick up where they left off and just update an EIS for release and public comment or do they have to start from the beginning. Ms. Paul asked if the RAC wanted to take a vote on whether or not it wants to move forward. Mr. Johns noted that if the RAC wants a vote, before he votes he would want to check with the State about what it would want so that the RAC does not hit a roadblock later. There was no move to hold a vote.

Dr. Schug brought up that there is still the unanswered question of whether or not protections could be lost if the RAC moves forward with the sanctuary designation process. The RAC generally felt that that question has never been answered formally and should be included in the letter about process. The question on protections will specify whether or not protections will be lost if the CRER becomes a sanctuary, or if the Monument becomes a sanctuary.

6. Action items, items for the next meeting, and next meeting date: A summary of action items and items for the next meeting follows:

Action Items

- Ms. Clark will follow up on the RAC request for a page on the website for schools to request Monument visits.
- Mr. Opay offered to send the RAC information on current and upcoming listing activities for sharks and rays possibly found in the Monument. Ms. Brooke offered to send the review documents for Hawaiian humpback whales and green sea turtles.
- Ms. Clark will contact the current applicants for the Native Hawaiian Elder alternate seat to let them know we are re-opening the process due to the vacancy of the primary seat.
- Ms. Clark will contact the commercial fishing primary and alternate to see if they are still interested in serving on the RAC and will report their responses to the RAC at the next meeting.
- RAC members will send comments on the draft letter questioning the sanctuary designation process to RAC leadership. RAC leadership will revise the letter and re-submit it to the RAC for review.

Topics for the Next Meeting

- The MMB climate change strategic plan
- Update on the management plan evaluation process

Minutes of the meeting of the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve Advisory Council held on January 25, 2016 at the Inouye Regional Center

- Update on how change in status of Hawaiian humpback whales affects what is in the management plan
- Possibly—presentation from new USCG environmental engineer on special projects
- Maritime heritage update

IX. PUBLIC COMMENT

There was no public comment.

X. ADJOURNMENT

Mr. Johns adjourned the meeting for the day at 4:40 p.m.