



GREATER FARALLONES NATIONAL MARINE SANCTUARY  
SANCTUARY ADVISORY COUNCIL MEETING

Wednesday, February 19, 2020

9:00AM – 5:00PM

Bodega Bay Fire Protection District Firehouse  
510 Highway One, Bodega Bay, CA 94923



**MEETING HIGHLIGHTS**

Note: The following notes are an account of discussions at the Sanctuary Advisory Council meeting and do not necessarily reflect the opinion or position of the Greater Farallones National Marine Sanctuary (GFNMS) or the National Oceanic and Atmospheric Administration (NOAA).

Copies to: Bill Douros, Office of National Marine Sanctuaries, West Coast Regional Director

**Call to Order: Roll call**

Dominique Richard (Chair)

VOTING MEMBERS: 12 present (quorum met)

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| At-Large Marin: Dominique Richard      | Education: Elizabeth Babcock                                 |
| At-Large Mendocino/Sonoma: Cea Higgins | Maritime Commercial Activities: Julian Rose (for John Berge) |
| At-Large SF/San Mateo: Joe Fitting     | Maritime Recreation Activities: absent                       |
| California Resources Agency: absent    | National Parks Service: Ben Becker (for Cicely Muldoon)      |
| Commercial Fishing: Barbara Emley      | Research: Jaime Jahncke (for John Largier)                   |
| Conservation: Bruce Bowser             | U.S. Coast Guard: LCDR Lee Crusius                           |
| Conservation: Richard Charter          | U.S. Fish & Wildlife Service: Chris Barr                     |

NON-VOTING MEMBERS: 2 present

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|---|
| Channel Islands NMS: absent               |
| Cordell Bank NMS: Dan Howard              |
| Greater Farallones NMS: Maria Brown       |
| Monterey Bay NMS: absent                  |
| National Marine Fisheries Service: absent |
| Youth: vacant                             |

ALTERNATES PRESENT: 4 present

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|---|
| At-Large Marin: George Clyde                  |
| Commercial Fishing: Sarah Bates               |
| Conservation: Francesca Koe                   |
| U.S. Fish & Wildlife Service: Gerry McChesney |

GFNMS staff present: Maria Brown, Superintendent; Brian Johnson, Deputy Superintendent; Max Delaney, Permit Coordinator; Mary Jane Schramm, Media/Outreach Specialist; Justin Holl, Visitor Center Manager; Alayne Chappell (Affiliate), Advisory Council Coordinator; Olivia Johnson (Affiliate), Administrative Assistant

Other NOAA staff present: Dani Lipski, Research Coordinator, Cordell Bank National Marine Sanctuary; Radford Dew, Special Agent, NOAA Office of Law Enforcement; Daniel Glick, Special Agent, NOAA Office of Law Enforcement

**Call to Order, Roll Call, Review Agenda, Swear in new member**

Dominique Richard, SAC Chair

- Agenda changes:
  - o Cea Higgins suggested adjusting the agenda to offer more time for public comment related to the USFWS proposed project discussion; Dominique agrees, and 15 minutes is added to the public comment period for a total of 25 minutes.
  - o Deb Self is not able to attend so we will not have the Greater Farallones Association (GFA) update.
- Julian Rose, new Maritime Commercial Activities alternate, was sworn in

**SAC Business**

Alayne Chappell, SAC Coordinator

**MOTION: Approve August meeting draft minutes**

First: Bruce Bowser

Second: Joe Fitting

Vote: unanimous

Motion passed.

**Rewording of the Zoo partnership resolution**

Regarding the SAC resolution passed during the November 2019 meeting recommending the sanctuary partner with the San Francisco Zoo (Zoo) to interpret GFNMS, Cordell Bank National Marine Sanctuary (CBNMS) and Monterey Bay National Marine Sanctuary (MBNMS) through the Zoo's proposed Ocean Conservation Zone: Maria agrees with the recommendation but would like to revisit the wording to be clear that it would be GFNMS working with the Zoo in consultation with CBNMS and MBNMS.

**MOTION:** Change the language from “Resolution to recommend that the Office of National Marine Sanctuaries (ONMS) work with the San Francisco Zoo Gardens (SF Zoo) to interpret the Greater Farallones, Cordell Bank, and Monterey Bay National Marine” to “Resolution to recommend that Greater Farallones National Marine Sanctuary work with the San Francisco Zoo & Gardens (SF Zoo) to interpret the Greater Farallones, Cordell Bank, and Monterey Bay National Marine Sanctuaries.”

First: Dominique Richard

Second: Joe Fitting

Vote: unanimous

Motion passed.

**Member recruitment update**

Selections made for conservation alternate and youth primary and alternate seats. Thank you to the Application Review Subcommittee (Dominique, Francesca, and Abby) for their recommendations. The new members will be sworn in at the next meeting. We do two rounds of recruitment per year. The next round will be this summer. If any terms are up from now until that time, those members may stay in the seat until recruitment is complete.

## **2020 Retreat Planning**

We have the suggested topic of climate change. The topic came up frequently during the 2019 retreat and it's a topic that is intertwined into so much of the sanctuary's priorities for the next 10 years. Elizabeth Babcock has generously offered to host the 2020 retreat at the California Academy of Sciences, including helping to facilitate NNOCCI (National Network for Ocean and Climate Change Interpretation) training as part of the retreat and host us for Thursday Night Life for the evening. Alayne will send a Doodle Poll to begin scheduling for September or October.

*Several members prefer early October.*

## **SAC Workplan**

We have added a column to the workplan spreadsheet where we can keep track of specific individuals that we may want to engage with SAC (e.g., people with expertise in a topic related to the sanctuary who we may want to invite to speak to the council). Members can forward any names to the SAC Coordinator to add to the spreadsheet.

## **Pacifica Exclusion Zone Subcommittee**

Dominique (Subcommittee Chair) gave an update that the subcommittee had its first call and has an in-person meeting planned for March. They plan to bring their research and recommendation to the council at the May meeting.

## **Greater Farallones National Marine Sanctuary Superintendent's Report**

Maria Brown, GFNMS Superintendent

### **Permits**

The permit matrix was distributed to SAC prior to the meeting and printed copies were provided today. Are there any questions about the matrix?

*None.*

### **Vessel Groundings**

#### *Grounding of a 22-Foot Striper Near Francis State Beach*

On November 16th, at approximately 10:30am, a 22-foot fiberglass striper capsized with several people on board just offshore between Venice and Francis Beach in Half Moon Bay. The vessel was intact but a 20-gallon fuel tank was released along with other marine debris into the sanctuary. The boat was successfully removed and returned to the responsible party, who agreed to take full responsibility and pay full costs for removal.

#### *Sinking of the FV Mandy Jane*

At approximately 4:45pm on December 18th a 49-foot commercial fishing vessel issued a mayday call after they began taking on water approximately 12 nautical miles southwest of the Golden Gate. A US Coast Guard Search and Rescue helicopter arrived on scene, located the fishing vessel and rescued all five people onboard before it sank. The Coast Guard reported an estimated potential fuel release from the vessel of 1,000 gallons of diesel; and 30-50 crab pots were onboard along with other fishing gear. The vessel is presumed to have sunk approx. 0.3 nautical miles inside the sanctuary. The sanctuary worked with the NOAA Office of Restoration and Response to generate an oil fate & trajectory estimate model, which estimated the product would dissipate within 8 hours with no expectation of

shoreline impacts in the sanctuary.

#### *Car Crash into Gray Whale Cove*

On December 30<sup>th</sup>, an SUV was observed driving off a cliff north of Montara State Beach in San Mateo County. The car was driving northward along Hwy 1 and continued driving straight across the oncoming traffic lane over a berm and off a cliff, landing in Gray Whale Cove in northern MBNMS. Sanctuary staff contacted the US Coast Guard Command Center right after being notified and confirmed the site location, but no additional info was available on the license plate number, responsible party, or cause of the accident. A US Coast Guard helicopter conducted an overflight shortly after the incident and could not spot the vehicle in the ocean because surf conditions were too large. Currently, the vehicle is presumed to be in sanctuary waters at the south end of Gray Whale Cove. Impacts are unknown and it is unknown how much fuel was discharged by the vehicle. California Highway Patrol and San Mateo County Sheriff's Department have suspended the search for the vehicle until weather and surf conditions improve and investigators can safely access the site. The sanctuary is working with NOAA Office of Law Enforcement to continue to maintain communications with the Highway Patrol and Sheriff's Department to track when they intend to re-investigate the scene, whether they will use aircraft, and what the proposed course of action will be regarding a potential salvage.

#### **COP25**

In December, I attended the United Nations COP25 (Climate Change Conference of the Parties) in Madrid. I presented on the relationships between marine protected areas and climate issues at the Global Climate Action in Marine Protected Areas (MPA) panel hosted by Chile. The sanctuary's focus was on the role marine protected areas play in addressing the conservation and restoration of blue carbon habitats. The panel included MPA managers from the United Kingdom, France, Chile, Costa Rica, and the United States and helped fulfill the commitments in the Memorandum of Understanding between the United States and Chile on protected area cooperation. ONMS was invited to participate to share the efforts to include climate change as a consideration for management decisions, as well as expanding ONMS' opportunities for international cooperation on climate change mitigation through well managed MPAs.

The takeaway was that we're reaching a point of no return on emissions and we have 10 years to make changes. Some people I spoke with at the conference expressed that they miss having the NOAA presence in these discussions. At Greater Farallones, we're prioritizing reducing emissions and bolstering carbon sequestration in the sanctuary.

*Barbara Emley: 10 years to do so something?*

*Maria Brown: Yes, 10 years to address rising carbon in the atmosphere until we hit the tipping point of where there will be no recovery. I attended the Climate Connections Expo with NOAA scientists as well. They are already looking at engineering solutions for removing carbon from the atmosphere. Engineered solutions are not viable right now aside from putting sulphur into the atmosphere to put a sulfur blanket around the world. Strong message that we need to double down on what we're doing to the atmosphere.*

*Barbara: When you say the "marine protected area" is going to be carbon neutral, is that the sanctuary as the marine protected area? And does that include the Greater Farallones office?*

*Maria: Yes, the whole sanctuary including the offices. So, what would carbon neutral mean? What I have in my draft proposal is that carbon neutral would mean that the operations at our offices as well as the activities in the sanctuary will be carbon neutral. We need to look at how we get there. I'm writing an initial proposal that includes the definition of carbon neutrality and looks at how we achieve it. Right now, it's a combination of reducing carbon emissions and carbon offsets. I'm recommending we don't do more than 10% carbon offsets. For carbon offsets, we can purchase solutions that absorb carbon, but there are options that don't involve purchasing.*

*I also learned more about blue carbon at COP25. I was on the committee that initial identified blue carbon habitats as wetlands, sea grass, and mangroves. But there are a lot more potential blue carbon storage and sequestration possibilities (including blue whales). So the second part of my proposal is looking at what are the blue carbon options in temperate environments where we can offset our emissions through restoring additional blue carbon habitat and increasing blue carbon sequestration.*

*Richard Charter: Does the recent work in Bolinas Lagoon have blue carb potential?*

*Maria: Yes, but it's relatively small.*

*Richard: Is it going to be intertidal?*

*Maria: We're going to look at everything. For carbon offsets, we need to quantify what we have now and make sure we don't lose it, and then look at where we can increase that blue carbon storage and sequestration.*

*Cea Higgins: Would restoration of kelp beds be a part of that?*

*Maria: Potentially. The literature is varied. Some say kelp forest habitat is carbon neutral as it stands now; others say they think there is carbon sequestration in kelp because it is captured and sinks to the sea floor. But we need more information to determine how much our kelp can contribute and that's something we're looking into.*

*Cea: You also mentioned speaking to someone at the conference about NOAA. Has there been an absence of NOAA?*

*Maria: Yes, I did not see a staff person from NOAA at COP25. In the past we sent a delegation.*

*Cea: Is there something we can do to support this effort?*

*Maria: Yes, letting ONMS know how important it is to this community. I will be briefing the National Ocean Service administrator in March about our climate work so if you have recommendations for me I can bring that to NOAA.*

*Richard: Is there something important about the warm water Blob that we can use to show this?*

*Maria: Yes. We recently published a paper with partners on the warm water Blob and the affects to the marine environment. We had previously reported thousands of dead common murrelets found on the beach, and now this peer-reviewed paper links that mortality event to the warm water Blob. There is a link to the paper in the [Quarterly Superintendent's Report](#).*

**The 2018 Emission Inventory Is Complete**

Our 2018 emissions inventory is complete. The [inventory PDE](#) went out to members yesterday. The emissions inventory is the result of a SAC recommendation that came from the Green Operation Working Group on how we can reduce emissions at the sanctuary. Brian Johnson has been actively working on implementing those recommendations. What we've found is that by far the greatest emissions over the years comes from transportation. Transportation has been about three quarters of our emissions. So if we're going to reduce our emissions we have to focus on where our greatest output of carbon is. We've been able to reduce emissions from heating our offices by updating the heating system. For transportation, we've been able to reduce to about 66% of our emissions so, by about 10-15%. So that's good news, but it's not going to get us to net neutrality so we have to look at what measures we can take to further reduce emissions. We're looking at putting in charging stations. We've moved the majority of our government vehicles to hybrid, and we're looking at moving them to electric and having electric charging stations at the office, and encourage staff to buy electric vehicles. The greatest source of transportation emissions is commuting; this is challenging in the Bay Area because people are having to move further out to afford housing, so we're looking at how we can support telecommuting. We will continue to report annually. We made great progress for the first 4-5 years, but this is the tough part so we're going to be working hard toward those goals.

### **Beach Watch increases monitoring sites, graduates new corps of surveyors**

Our Beach Watch program graduated new class of volunteers. We have 25 new volunteers who will begin surveying 14 beaches. We now have 59 beaches that will be monitored every two weeks, from Point Arena in Mendocino County down to the Santa Cruz County line.

### **Marine Mammal Commission, sanctuaries meet on whale ship strike prevention**

Marine Mammal Commission staff met with Greater Farallones and Cordell Bank staff to discuss the sanctuaries' efforts to reduce ship strikes to whales. They were very happy with the work they have funded through the GFA to work with the sanctuary. We're excited we've seen an increase in cooperation and I will be able to report more on that in May when the numbers are out. Our goal is 100% cooperation for vessel speed reduction. We've increased the slow down zones so it's a greater area as well. The Commission is interested in working with us further on bringing this to the international community as a model for other countries facing the same issues.

### **Farallon Islands Intertidal Surveys**

Sanctuary staff are out on the Farallon Islands this week doing intertidal monitoring surveys. These are our control sites for intertidal monitoring in which there are no people to see how it compares to intertidal sites on the mainland. This can give us an idea about what impacts are climate-related versus human activity-related. Thank you to USFWS because they host us on the island.

### **Amendment 28 - Groundfish EFH Conservation Area Update**

The NOAA Fisheries Final Rule to implement Amendment 28 on the Essential Fish Habitat (EFH) has been released. An email was sent out to the SAC with this information, but as a recap: The Environmental Impact Statement was approved so there's an additional groundfish no-trawl designation that protects an additional 261 square miles of sanctuary waters from bottom-trawling. So there are five new areas closed to bottom trawling throughout the sanctuary, including four areas we characterized, which Jan reported back to you last year and which we worked with CBNMS to characterize: Rittenburg Bank, Cochrane Bank (aka the "Buffalo Grounds"), the Farallon Escarpment, and "The Football." Now we're looking at the Point Arena Biogenic Area South, which is in the Expansion Area. We didn't look at that area for the EFH because it wasn't part of the sanctuary at the time. But that area has been opened to bottom trawling so we've gone out there and we have a baseline

for what it looks like now—the majority of it is soft substrate, with a little bit of it being hard substrate and some corals—so we can look at that and compare in five years to see if there are any difference since being opened to trawling. So we will bring those results to you.

*Richard: Will those results be factored into the Department of Commerce's continuing review of the boundary expansion? We haven't heard anything about that.*

*Maria: NOAA leadership is focused on the blue economy and designating new sanctuaries.*

### **Farallones Sanctuary Naturalist Course is Underway**

Last year we launched Farallones Sanctuary Naturalist course. It was full with a 25-person waitlist. This is the second offering of the course this filled up with those waitlisted and is underway. We do that in partnership with GFA.

### **Update on GFNMS actions toward SAC recommendations, and reports from MBNMS**

- We forwarded your resolution to support the Rapid Management Plan Review process to ONMS leadership. They appreciate the feedback.
- We haven't heard anything else regarding the Sonoma Coast Marathon environmental impacts inquiry in response to your recommendation. They had decided not to host it last year.
- Marin-Sonoma Regional Sediment Management recommendations: We now have the North Central California Coast Sediment Coordination Committee (NCCSCC), which includes Sonoma, Marin, San Francisco, and San Mateo counties, and they are meeting quarterly. Those meetings are going really well. We've identified our priorities for the year and developed a plan for the sanctuary based on the regional plans and the SAC recommendations. We're focusing on sediment as a valuable resource and looking at where people are removing sediment, what areas need sediment, and where can we store sediment. We're working on developing online tools where we can house that information. Next, we're looking at types of sediment and we've started working with GFA staff on sampling and typing in Bolinas Lagoon.
- Bull kelp recovery recommendations: We have secured funding from the National Marine Sanctuary Foundation to start the next phase of the recovery plan. We're developing standardized assessment protocol for the entire west coast region so that we're all assessing the extend of kelp cover in the same way and can make comparisons on kelp growth and loss, and where we have the greatest potential for kelp recovery.
- Tomales Bay Native Oyster Restoration recommendations: Sara Hutto, Climate Program Coordinator, is creating a restoration plan based on your recommendations. We will bring that back to you on what that plan will look like in terms of what recommendations we will take action on. We have also forwarded your recommendations to Marin County and they have hired a consulting firm to complete a feasibility study on the four sites your recommended for restoration.
- GFNMS Facilities Master Plan: SAC had sent a letter to ONMS leadership. Nothing is happening on that yet. They've asked us to do another facilities assessment so we're working on that.
- Overflight recommendations: We are continuing to implement those recommendations. We have developed the flying seabird safe course for pilots and that will be available online.
- Definition of clean dredge materials recommendation: MBNMS is incorporating your input into their revised Management Plan, which should be out this spring for public comment. We will share that with you when it's out.

- Closing the Donut Hole: The new SAC subcommittee is looking into this. MBNMS has said they are not going to move forward on it in their management plan.
- Motorized Personal Watercraft zones: MBNMS is moving forward on the MBNMS SAC recommendations to not remove the zones we recommended, which was to remove zone 1 due to no use. The other recommendation to extend the time zone 5 is open will be in the MBNMS revised management plan.
- The only recommendation we haven't gotten back to you on is on the oil spill emergency response. But this is still on our priority list and we aim to get back to you on that later this year.

### **Cordell Bank National Marine Sanctuary Superintendent's Report**

Dani Lipski, CBNMS Acting Superintendent

Dan Howard, CBNMS Superintendent, is back full time soon. Jenny Stock, CBNMS Education Coordinator, is back from detail.

In December, we participated along with GFNMS and other sanctuaries in a drill to test our disaster response. The drill was titled "Shaken Sanctuary" and the scenario included an earthquake off the coast of Monterey. In the past these drills have been more about protecting our resources but this this was about how NOAA responds to effects on our personnel and continuing operations. We had a supporting role. Also in December, Rear Admiral Tim Gallaudet, the second in command at NOAA, visited CBNMS and GFNMS. We showed him our priority programs. He's an advocate of the sanctuary program and wants to be connected to our work force.

We are kicking off our Condition Report this month. Condition Reports includes status and trends of our resources and every site completes these. The last CBNMS Condition Report was done in 2009. It should be a two-year process, and then we move to the Management Plan revisions based on the Condition Report.

Jenny Stock did a radio show on ocean topics. She also has a podcast that's up to date online. Jenny is working with Point Reyes National Seashore to update exhibits for both CBNMS and GFNMS at Bear Valley Visitor Center. The Center gets a lot of traffic so it's great for us to get information out to the public.

Our resource protection staff is working with Channel Islands National Marine Sanctuary (CINMS) staff to integrate ship strikes programs. We will be recognizing shipping companies from the 2019 season in 2020. Regarding Amendment 28 changes, CBNMS also has changes that went into effect. It wasn't much of a net change in area but we did add protection around Cordell Bank and the area north of Cordell Bank called "Gobblers Knob" or "the Office". We lost a little portion on the shelf. We have areas where bottom trawling is prohibited but National Marine Fisheries Service (NMFS) as a part of their groundfish stock assessments would trawl the entire coast. So in conversation with NMFS they have agreed to exclude the southern part of our no-trawl area from sampling. That means we now have an area east of Cordell Bank where there's no disturbance from commercial bottom trawling.

Our next CBNMS SAC meeting is coming up. We're working on a new working group on tribal engagement to determine if and how we can include tribal communities in our work. The CBNMS SAC is developing its annual work plan, including input for the Condition Report.

Science staff have developed an annual science accomplishments report that highlights our projects for the year. We have kicked off field season early to service our hypoxia mooring to measure oxygen and look at other oceanographic parameters. We are planning for three ACCESS cruises with GFNMS and Point Blue, expanding into Monterey. No *Nautilus* cruise time planned for this year. We have a few reports on data from last year's cruises that are online looking at deeper strata of Cordell Bank and differences from shallower strata as a part of long-term monitoring. Characterization from *Nautilus* cruise is giving us a first look at the very deep ocean habitat, including a new sponge species being described now.

There is a NOAA noise reference station acoustic buoy in CBNMS that has been there since 2015, that is collecting noise data near shipping lanes at the border of CBNMS and GFNMS. We have a Nancy Foster Scholar who is looking at the data for her thesis to looking at when we are seeing whales versus when we are hearing them. She did a webinar of the first look at the data and what she's heard. The initial take away is that we can't rely on one source of information to get best picture of resource use. She may come to present at a future CBNMS SAC meeting.

*Maria: That work is in response to recommendations from the joint GFNMS-CBNMS SAC working group on vessel impacts and acoustics.*

## **Member Reports**

**Ben Becker, National Parks Service:** Our Point Reyes National Seashore Superintendent is on detail for Yosemite National Park. Drakes Beach elephant seals are not as much of an event this year; last year we had 50-70 pups with the beach closures. This year we've had some elephant seals there but we didn't have significant pupping. Beach access has been open but more controlled. But as the seal population increases, we'll be running into this more and more. We are nearing the end of our general management plan amendment. We are setting core policy on how we manage the ranch lands in the park. There was an oyster farm at Drakes Estero until 2014, since it was removed, we've been undergoing restoration and monitoring mitigation. We have mitigation requirements for eelgrass re-growth. It looks like we've doubled mitigation requirements with about 220% eelgrass growth, which is more than we expected and that satisfies are National Environmental Policy Act (NEPA) requirements. We are also working with University of Virginia and University of California, Santa Barbara looking into doing drone mapping of all eelgrass in the estuary. We started a black abalone recruitment study with University of California, Santa Cruz. We have been monitoring since 2010 and densities are extremely low and dropping. We have recruitment modules out but we're not too optimistic. The Department of the Interior (DOI) stepped down all use of drones by DOI program about two months ago. Two weeks ago, the Secretary of the Interior said no drone use even by partners or research groups can be used on DOI lands, which affects us and our partners heavily. We hope it will be lifted. Their concern is over the security of the data from the drones because they are Chinese drones.

**Sarah Bates, Commercial Fishing, Alternate:** We had a late crab season this year. It was pushed to December 15<sup>th</sup> mostly due to concern around whale entanglement. The fleet was crucial in the voluntary delay of crab season. Even when the California Department of Fish and Wildlife (CDFW) opened it, the fleet decided we aren't going to go fishing. The good news is, as far as I know, there have been zero whale entanglements in crab gear this season. There have been low harvest numbers on Dungeness crabs this year. It's possible they moved further out by the time the gear got out there. Gear is now back on the beach and everyone is done for the season, so it will easier for whales and salmon

boats. I've been teaching for the Fishermen in the Classroom program at high schools in San Francisco and Oakland through GFA, which has been interesting.

**Barbara Emley, Commercial Fishing:** Just to add that we may have had fewer crabs in the harvest because CDFW delayed us. There was a longer recreational fishery and they took a lot of crabs out of the shallower areas.

**Chris Barr, USFWS:** My apologies for not making a lot of meetings over the past year. We hope to correct that with more hires. We are looking forward to presenting on the mouse eradication project later today.

**Bruce Bowser, Conservation:** I'm busy with professional work that has kept me at the drawing table but have had a few opportunities to get out for tidepooling. I was encouraged to see three full grown *Pisaster* sea stars, which gives me hope that they're coming back.

**Richard Charter, Conservation:** The federal waters immediately surrounding GFNMS continue to face a range of environmental threats posed by the Administration's still-pending Department of Interior Five-Year Outer Continental Shelf (OCS) offshore oil and gas leasing plan. This plan includes six offshore drilling lease sales along the entirety of the California coast, including two OCS lease sales proposed for the region surrounding the GFNMS. The proposed offshore drilling plan is presently "temporarily on hold" due to a successful Court challenge brought by the conservation community and other plaintiffs, and because nationwide political opposition to the offshore drilling proposals it contains have been deemed by the Administration to have the potential to interfere with the outcome of the current presidential election. Subsequent to November 2020, however, this offshore oil and gas leasing plan is expected to advance rapidly. In this context, keystone federal environmental laws like the National Environmental Policy Act, the Clean Water Act, and the Migratory Bird Treaty Act are all suddenly facing substantial erosion due to the Administration's proposed regulatory rollbacks. Even weakening amendments to the Coastal Zone Management Act have been proposed that would, if adopted, weaken the role of coastal states in making "federal consistency" determinations affecting decisions like offshore drilling lease sales. Off of Humboldt County, proposed floating offshore wind energy development, combined with limited local rural electrical load demand in the immediate region, has now raised the prospect of a large seafloor power transmission cable transiting to the San Francisco Bay Area. Routing of such a subsea power cable through at least one National Marine Sanctuary would be necessary if this avenue proceeds. Meanwhile, at the local level, the County of Sonoma is in the process of updating its Local Coastal Plan, with implications and potential jurisdictional overlap for the proposed Caltrans Scotty Creek-Gleason Beach Highway One realignment project and for other large coastal projects that may be proposed.

**Dominique Richard, CAL Marin:** Christmas bird count: Good weather and more new volunteers. Overall slight increase in species count compared to previous years. Beach watch: Elephant seals are back on Drake's beach! Access has been difficult (early February's Drake's survey was cancelled). Low bird and species counts in the last two surveys. Elephant seals are one the move again so Drake's surveys can resume after February 15. Tomales Bay Watershed Council: Financial reporting is finally settled; the governance (Executive Committee vs. Foundation) is being clarified. The five-week sequence of water sampling is under way. So far very low flows are recorded throughout the watershed. County draw down project: Point Reyes climate change awareness initiative being developed. Clam acquisition of the former coast guard station may yield to a retrofit to respond to climate change. Personal commitment: plug in hybrid car, more solar panels, induction stove, mini split heater; mini split hot water heater. GFNMS volunteer appreciation event: Great company and

good food. Pleasant surprise to find my neighbors, Jim and Jane, being involved. One regret: the last ferry was too early!

**Jaime Jahncke, Research:** Prioritization exercise: literature review to select priority species and habitats for conservation and management. Work conducted in communication and collaboration with Central and Northern California Ocean Observing System (CeNCOOS) and NOAA West Coast Ocean Acidification Cruises (WCOA). Both CeNCOOS and WCOA are proposing a set of indicators some of which match our report.

MPA assessment: compiled spatial information on priority species and habitats, human threats and impacts to identify opportunities for conservation. So far greatest opportunities appear to be along the coast of Oregon and Northern California, from Heceta Bank, Piedras Blancas south to Cape Mendocino and Point Arena.

World Marine Mammal Conference: Presented 2 studies at the conference including new whale habitat models, speed reduction assessment for northern and southern California, and changes in the timing of migration. The three papers were submitted for publication, received journal review with minor revisions which we are currently addressing for publication.

The paper on long term impacts for a single mortality event on western gulls has been reviewed and we are also addressing comments for publication.

We have initiated a new project funded by OPC to identify areas suitable for offshore wind energy development that minimize impacts on wildlife and human uses. We will also review existing BOEM call areas and suggest issues that may need to be addressed to minimize potential impacts.

Participated (also Jan Roletto) in a PFMC workshop to develop potential future scenarios for climate change and assess impacts on fish, fishermen and coastal communities. A total of 27 scenarios were developed and mostly focused on impacts to fishermen and communities. Facilitators were 'pleased' with that and changed their agenda a bit to fill the gap about how climate was going to impact fish which were missing from all developed scenarios.

Invited to participate in a marine mammal climate vulnerability assessment that will take place over the next 6 months. Jan Roletto also invited.

**Julian Rose, Maritime/Commercial Activities, Alternate:** I've been working on the ship strike issues. One thing that came up with the harbor safety working group is that ships are slowing down and complying more with the traffic separation scheme, but sometimes there was an uptick in speed once they pass the sea buoy and proceed toward San Francisco where there are also whales. So we convened a working group to talk more about that. The Harbor Safety Committee said that they would be broadly supportive of recommending reduced speed best practices for that area.

**Joe Fitting, CAL San Francisco/San Mateo:** Golden Gate Park is having their 150-year celebration. They just moved tons of sand from upper Great Highway to the area right off of the San Francisco Zoo to stop erosion. There was an interesting report that came across my desk related to climate change; they're calling in a "car splat meter" study that shows a huge insect die off and looks at what kind of bugs are found on your windshield. 95% of animals on this planet are animals without backbones and there is a huge die off going on in the invertebrates world and that will affect bird populations.

**Francesca Koe, Conservation, Alternate:** There is a CDFW meeting Friday at 8am in Sacramento if you're interested. There will be proposed emergency regulation to allow smashing of purple urchins in Casper Cover in Mendocino and that will be a pilot project to determine impacts and efficacy. There are some people we work with at the Waterman's Alliance that don't like to have to remove them so this is in response to that. From a narrative point of view, it's a challenge for us to create a villain out of the urchin. The Ocean Protection Council (OPC) is meeting on February 26<sup>th</sup> in Sacramento. Mike Esgro at the OPC has been very involved and they are supposed to be allocating half a million dollars to commercial group so that they can work to remove purple urchins at a large scale. My counterpart from Tasmania is coming to California in March to come see our urchin barrens. They have a similar issue going on where they are. I had a meeting with Mary Miller from the Exploratorium yesterday. We applied to NOAA for a climate and restoration grant and was approved and we've been invited to submit full application to increase civic participation and communication in climate change. On the heels of Maria's fantastic performance at COP25, she has been invited to speak at the American Climate Leadership Summit in March as the expert on American oceans.

**George Clyde, CAL Marin, Alternate:** Concerning Marin County's Local coastal program for sea level rise and how data for that comes up, there are two initiatives: protecting dunes at Stinson Beach and conducting a living shorelines feasibility study in Tomales Bay. Marin County hired a consultant for the feasibility study. There was a presentation on Stinson dunes last week; another one on February 25<sup>th</sup> on sea level rise adaptation in Tomales Bay using living shorelines. Marin County has formed a coastal community working group to participate in adaptation programs and to advise the county and California Coastal Commission.

**Cea Higgins, CAL Sonoma/Mendocino:** There is a letter circulating by Healthy Oceans Coalition and Ocean Conservancy recommending funding projects for coastal protection. There were 13% budget cuts to NOAA, cutting out the Sea Grant Program and coastal zone management programs. This letter is to support the NOAA budget to maintain those programs. March and April are the deadlines. I will pass it along to Alayne so she can share with the group. I was recently in the paper about a shipwreck cleanup. I end up coordinating many of these shipwreck clean ups to remove debris. For shipwrecks in remote areas, sometimes the only way to remove the debris is to pack it out. We were looking for volunteers to remove debris. I ended up going down and removing a lot of it. But how can we coordinate a response that works with agencies instead of relying on citizens? This highlights the budget constraints of the sanctuary to respond to these clean ups at mean high tide line and above. There are a number of agencies involved but one has to take the lead. There has been a lot of press around purple sea urchins, Urchinomics, and the proposed aquaculture farm around the mouth of Estero. They are looking for a place where there is an existing permit to draw and release ocean water. I'm concerned about permits for water discharge and impacts. Has there been buzz about this at the sanctuary level? In order to make that work they would have to breach the estero because the pipes are on the inside. There hasn't review or public comment and I'm concerned about the scale of the operation. Do we have baseline studies and what are the impacts of breaching?

*Maria: They are still in the exploratory phase so nothing has come to the sanctuary.*

*Cea: I think the exploratory phase should take public comment.*

*Richard: Very large numbers have been in the paper about the size of their facility on the coast. Are there active permits?*

*Maria: There are no permits for the sanctuary at this point in time. They may not need a permit.*

*Richard: People are curious about this new industry of fattening and selling urchins, but we don't know where or how.*

*Francesca: They're doing a pilot project with Bodega Marine Lab. If you're interested, we can connect you with people at Urchinomics.*

**John Berge, Maritime/Commercial Activities:** *Not present. Written report: Shipping Industry Adopts Worldwide Low-Sulfur Fuel Standard:*

In October 2016, the International Maritime Organization (IMO), a specialized agency within the United Nations, adopted a resolution to significantly limit the sulfur content of fuel used worldwide in marine transportation. Sulfur in marine fuels results in emissions of Oxides of Sulfur (SO<sub>x</sub>), which contribute to particulate matter in ship emissions, and subsequent acidification of the environment.

The first worldwide marine fuel sulfur limit of 4.5% was adopted in 2005. That was reduced to 3.5% in 2012.

The newest requirements, called IMO 2020, entered into force on January 1st of this year. The maximum sulfur content to be sold or consumed in marine transportation is now set at 0.5%, an 85 percent reduction.

Beyond simply the reduction in sulfur content, the new requirement means a move away from the residual fuels (bunker fuel) previously purchased and consumed by ships, to the use of fuels that have been refined into distillate form. Besides the lower fuel content, refined fuels have lower levels of other contaminants that can end up in ship emissions.

The other major difference is the significant increase in price for these cleaner fuels; approximately a fifty percent increase. With fuel being the major cost component of shipping, this will lead to higher costs for moving goods.

Although the new requirement stipulated that all marine fuels purchased after January 1 must be compliant under IMO 2020, a 3-month grace period was granted to allow consumption of fuel already purchased and on-board vessels prior to January 1st. That grace period ends on March 1st of 2020, and ships are not allowed to have any non-compliant fuel left onboard.

The U.S. Coast guard is the federal agency that will be enforcing these requirements through their Port State Control inspections.

*North American Emission Control Areas (ECAs):*

Although these new sulfur limits apply worldwide, there are already much more stringent standards in place for fuel consumed in designated ECAs. In 2010, a North American ECA was established, which covered an area 200 miles seaward from the coastlines of the United States (including Hawaii and Puerto Rico) and Canada. In 2012 a sulfur limit of 1.5% was set for the ECA, and in 2015 that was further reduced to a limit of 0.1%. So, the United States and Canada have benefited from much stricter fuel requirements for many years now.

*Greenhouse gas (GHG) Issues Related to Low Sulfur Fuel:*

One issue that has been raised by some energy sectors is the overall impact to GHG emissions in the production and use of lower sulfur fuels. Although the health benefits to affected communities from lower sulfur fuels, and the reduced acidification of the atmosphere in coastal areas is clear, there is still an outstanding question as to whether there is an increase in GHGs produced at the refining stage to remove the additional sulfur; greater than potential GHG reductions from consumption of the cleaner fuels. I do not have any studies on hand to provide regarding that question, but it does underscore the need to look at environmental solutions holistically and account for unintended consequences.

*Decarbonization of the Maritime Industry:*

Looking forward in time, the maritime industry is addressing the importance of decarbonization that all countries and industries are facing. The IMO has adopted a 50% reduction target of GHG emissions from a 2008 baseline by 2050. This will require a carbon efficiency improvement of up to 90 percent to meet the target, with full decarbonization of many industry sectors. A group of shipping lines have proposed establishing a \$5 billion fund for R&D to accelerate the development of commercially viable zero-carbon emissions ships by 2030, with technologies such as green hydrogen, fuel cells, batteries and synthetic fuels produced from renewable energy sources.

**Nancy Trissel, CAL Mendocino/Sonoma, Alternate:** *Not present. Written report:*

Updates on the timber harvest plans in the Gualala River Watershed:

Please forgive my lack of originality and read Jeanne Jackson's excellent update, available in full [here: http://gualalariver.org/news/update-on-litigation-concerning-the-magical-forest-aka-the-timber-harvest-plan-dogwood/](http://gualalariver.org/news/update-on-litigation-concerning-the-magical-forest-aka-the-timber-harvest-plan-dogwood/)

- "The Return to Writ on the Dogwood timber harvest plan (THP) was heard Friday Jan. 24, 2020, in Superior Court by Judge Wick. The two matters being considered were "alternatives" and "cumulative impacts." In a tentative ruling, Judge Wick ruled against FoGR and sided with Cal-Fire. The final ruling from the hearing is due shortly.
- The one matter on which Judge Wick was silent in his tentative ruling was whether the THP needs to be recirculated for additional public comment. FoGR contends that recirculation is necessary to abide by California Environmental Quality Act. Our hope is that Judge Wick will require this, giving us more time and a reprieve from logging, which could start April 15. ...
- There are two new THPs we are concerned about, "Little" (<http://gualalariver.org/news/more-floodplain-logging-the-little-thp/>) and "Elk," both in the North Fork of the river, in Mendocino County. In these cases, though, the North Coast division of CDFW is also expressing significant concerns regarding the potential for significant, adverse environmental impacts. CDFW is doing what agencies enforcing regulations to avoid environmental harm should be doing, and we thank them for their strong stance. Unfortunately, "Dogwood" is in Sonoma County, and did not receive the same level of scrutiny."

**Sanctuary Enforcement Coordination**

NOAA Office of Law Enforcement (OLE) Update

Rad Dew, Special Agent, OLE

Presentation highlights:

- The open cases Maria mentioned on vessels sinking in the sanctuary are under investigation.
- Regarding the Carnival cruise ship discharge case: Our General Counsel for Enforcement issued a civil penalty of \$1.4 million for 188 counts of discharge to Carnival Cruise Lines. This is one of the largest national marine sanctuary civil fines ever issued. That money goes to GFNMS and CBNMS.

- Staffing: Special Agent Dan Glick and I have been added to the Santa Rosa office within the past year. That office was empty for two or three years prior to that. There are two new enforcement officers recently hired. They will be out on the docks and in the sanctuary.

Briefing on U.S. Coast Guard Enforcement Activities in the Sanctuary

LTCDC Lee Crusius, USCG, SAC

[View presentation.](#)

Presentation highlights:

- Operational highlights from fiscal year 2020, first quarter: we have 43 planned flight hours for California sanctuaries; 80 total patrol hours for domestic fisheries flights.
- Shift as an agency to put more energy toward sanctuary enforcement, as opposed to just fisheries enforcement.
- C-27 flights for supporting science staff and Dungeness Crab Working Group (DCWG)
- Working with state and federal enforcement partners (NOAA CDFW) through Joint Enforcement Agreement (JEA) authority is enhancing enforcement capabilities for the sanctuary and resource protection missions.
- Aviation coverage and surface enforcement has expanded. We have 200 additional patrol hours under the National Marine Sanctuaries Act (NMSA) in addition to hours under the Magnuson Stevens Act (MSA). It's important to distinguish these hours to ensure we're focusing on sanctuary enforcement and that sanctuary enforcement is funded.
- Future actions: advance enforcement programs within GFNMS, develop/exercise enforcement partnerships, advance COTP relationship, integrate non-enforcement USCG personnel into SAC. Expand and integrate captain of the Port of SF with sanctuary staff. Look to maintain enforcement presence but bring in people in waterways management.

*Richard Charter: A peer-reviewed paper came out last week about the Deepwater Horizon oil spill, showing that the geographic footprint of that spill was understated at the time. Given that there are still human health implications from exposure to Corexit, do we still have small planes on call at Buchanan Field to start Corexit application? How reliant on Corexit are we here?*

*Lee: The dispersant challenge is the micro level. I read that paper, but I don't have a good answer for that. Our oil spill prevention and response in San Francisco operation is extensive. Figuring out how GFNMS falls into that is another piece.*

*Elizabeth Babcock: Thank you for providing a holistic approach to your enforcement for the sanctuary. In regard to quantifying how you apply enforcement hours toward the sanctuary versus other resources, can you clarify how you're able to count that? And does how you count that influence how much money is set aside for the sanctuary?*

*Lee: From my perspective, NOAA is very compartmentalized and that means more specialized presumably in what your responsibilities are. But we've become more broad and we lose the ability to define responsibilities well and program for ships underway. It's my task to work on that and make sure we're programming for what you're responding to (e.g., marine mammal incident versus responding to a whale strike in the sanctuary). It's important for us to calculate how many USCG resources are going toward different response activities. We look at total number of hours and determine what percent went toward enforcement activities in the sanctuaries.*

## Update on sanctuary processes and communications with enforcement

Max Delaney, GFNMS

[View presentation.](#)

- We manage huge area: approximately 4,500 sq. miles. Now we have two special agents and one in Monterey helping us. Sanctuary staff are not the enforcers, we rely on enforcement partners: NOAA OLE, USCG, and joint enforcement agreement with CDFW. Depending on scope or nature of a violation, we could be working with all three offices at the same time or just one.
- We track incidents, submit referrals to appropriate agencies, document harm, and develop reporting requirement. We develop case packages for partner agencies, develop trainings, and conduct outreach to the public to prevent violations from occurring.
- We regularly have 30 tasks related to tracking incidents, communicating with programs, agencies, and enforcement. We have to document every known detail of an incident to have a viable case.
- The goal for the current enforcement plan is to track what kind of violations are happening in our sanctuaries and the number of cases, and report to enforcement partners. We with our enforcement partners to inform them about our priorities.
- We keep the ONMS West Coast Region (WCR) office updated on cases, projects, and priorities.
- Incidents for enforcement include marine mammal harassment, aircraft violations, and vessel grounding.
- GFNMS responsibilities include receiving reports, documenting incidents, notifying NOAA OLE and partners, assessing damages/reports, continuing to track incident and provide updates to NOAA/colleagues.
- Potential enforcement pathways: Strict liability cases (NOAA General Counsel enforcement section manages the case), Natural Resource Damage Assessment cases (NOAA General Counsel natural resources section manages the case; GFNMS develops damage assessment)

*Elizabeth: What percent of your time do you spend filling out all those forms? So, you don't get to recoup your cost (e.g., for staff hours) unless you get money from the responsible party? How do you budget for those hours not knowing how many incidents you might have per year? Is there a way we can help secure more funds? Set higher fine levels? Can we help recoup costs with the unpredictability of these events?*

*Max: Unfortunately, we've added more forms and it can be time consuming.*

*Maria: That's a good question and I don't have the answer. This wouldn't be open to public comment. But we can bring it to ONMS headquarters and let them know our SAC is wondering if there is a role the council can play in recouping staff costs for enforcement.*

*Max: It's unpredictable how much time I might spend on incidents. When we get money from settlements, the funding usually goes toward restoration.*

*Maria: We can look into what role SAC can play role in recouping the costs.*

*Rad Dew: Those funds are earmarked for certain things. Like a police department, you can't base funding on how many incidents you have.*

## LUNCH

### **Presentation: Greater Farallones Visitor Center Field Trips**

Justin Holl, GFNMS

[View presentation.](#)

Presentation highlights:

- The *why* of field trips: Making connections to the sanctuary, helping the public develop a sense of stewardship, and creating a more informed and connected public. The goal is to provide high quality programs.
- Our educational field trips are 90 minutes long, include students from kindergarten through college undergraduates, and align to state and national science standards.
- At GFNMS we serve over 2,000 students annually, about 700 of which qualify for free and reduced lunch (which is a proxy for socioeconomic setting). We serve a lot of Title I schools with support from San Francisco Unified School District. We charge \$200 per program through GFA, which is a pretty good price point. Our philosophy though is that if you want to do a program, we'll figure out how to make it happen.
- K-5 programming includes:
  - Kindergarten: Sensing the sanctuary
  - 1<sup>st</sup> grade: Intertidal table manners
  - 2<sup>nd</sup> grade: Growing up underwater
  - 3<sup>rd</sup> grade: Suitcase for survival
  - 4<sup>th</sup> grade: Pass the plankton
  - 5<sup>th</sup> grade: Seabird Scientists & squids
- The top 10 things I've learned include: take care of your teachers, don't cancel a fieldtrip, two thirds of your jokes need to be funny for everyone (not just the kids but the teachers and parents too), one third need to go over the kid's heads, don't set expectations that they'll see something they won't, you need a good registration system, not every registration system works for every teach/school, reflection and humility are important, field trips are great for bring education into visibility for colleagues in other programs in the building, avoid a riot and make sure the kids know what they're doing, a lot of people learn about GFNMS through these fieldtrips as the first touch.

## BREAK

### **PUBLIC COMMENT**

*Maria clarified that public comment at SAC meetings should be directed to the SAC and will not be forwarded to an outside agency through this forum. Therefore, any comments made directly to the USFWS regarding their proposed projects will not be considered by the USFWS. Any member of the public that wishes to comment directly to the USFWS should do so through proper USFWS channels and not through this sanctuary advisory body. Comments to the SAC are welcome on matters related to sanctuary management.*

Note: Per the instructions provided during the meeting, commenters who did not provide a comment summary in the comment card submitted, or provide a written version of their verbal comment, will not be reflected here. Their comments were heard at the meeting but are not reflected here in the record.

Comment cards, verbatim (in random order):

Commenter 1: Barbara Salzman; Affiliation: Marin Audubon Society; Issue of Interest: (not provided)  
Comment Summary: (not provided)

Commenter 2: Leo Chyi, Affiliation: Supervisor Lynda Hopkins; Issue of Interest: (not provided)  
Comment Summary: (not provided)

Commenter 3: Kelle Kacmarcik; Affiliation: WildCare; Issue of Interest: SEFI Mouse Eradication project; Comment Summary: WildCare is strongly opposed to the use of highly toxic poisons on the Farallon Islands. While we agree that the mouse problem needs to be addressed, non-toxic options were not thoroughly explored, and were considered “outside the scope” of the project. The potential for secondary exposure in nontarget wildlife is too high.

Commenter 4: Alison Hermance; Affiliation: WildCare; Issue of Interest: Farallones poison drop (SEFI Mouse Eradication Project); Wildcare’s Wildlife Hospital sees on a daily basis the threats of anticoagulant rodenticides, including brodifacoum, to wildlife. These poisons are deadly and they persist in the environment for hundreds of days. The poison drop is not only unnecessary (a more measured approach to reducing the rodent population will work) it also sets a dangerous precedent of saying that poison is an acceptable solution to a rodent problem. Please join us in opposing the proposed poison drop.

Commenter 5: Shey Roth; Affiliation: Sonoma County Conservation Action; Issue of Interest: No poison in the Farallones; Comment Summary: We need to look at the long-term impact of poison and err on the side of caution. Malibu and the Santa Monica Mountains have the type of protection we need to implement, and it is crucial to ban brodifacoum and other second generation pesticides.

Commenter 6: Larry Bragman; Affiliation: Marin Water District Board – Division 3 Representative; Issue of Interest: USFWS Mouse Eradication Program; Comment Summary: Marin Water District has led a decades long effort to preserve and protect coho and salmon habitat of Lagunitas Creek Watershed. The proposed aerial drop of rodenticide threatens that effort. Publicly available information indicates that the rodenticide pellets take up to 30 days to dissolve. Hence the pellets will inevitably be eaten as bait by fish and contaminate the fishery food chain.

Commenter 7: Michelle Irwin; Affiliation: Jenner Community Center (Bd. President); Issue of Interest: Mouse Eradication Project; Comment Summary: In general: Caution. – Use natural methods? – Make sure it (the process) is thought out – regarding results.

Commenter 8: Brad Keitt; Affiliation: American Bird Conservancy; Issue of Interest: Farallon Island Restoration Project; Comment Summary: I am here to express support for the mouse removal project. I wish to share why this project should be considered an important effort to restore the Farallons and in turn help the sanctuary be more resilient to climate change by strengthening the marine ecosystem.

Commenter 9: Tim Larson; Affiliation: none; Issue of Interest: Mice project; Comment Summary: Have materials to distribute.

Commenter 10: Kraemer Winslow; Affiliation: Marin IPM Commission Chair; Issue of Interest: Southeast Farallon Island; Comment Summary: Will email to you.

Commenter 11: Norma Jellison; Affiliation: Bodega Bay Resident; Issue of Interest: Public comment and Item = Mouse Project. Comment Summary: (printed copy provided; See Appendix 1)

Commenter 12: Lynn Woosley; Affiliation: Congresswoman Lynn Woosley (Retire); (no comment card provided); (printed copy provided; See Appendix 1)

Commenter 13: Frank Egger; Affiliation: North Coast Rivers Alliance & Pesticide Free Zone; Issue of Interest: USFWS Project; Comment Summary: (printed copy provided; See Appendix 1)

Commenter 14: Dr. Loretta Mayer; Affiliation: (not provided); Issue of Interest: (not provided); Comment Summary: (printed copy provided; See Appendix 1)

Commenter 15: Supervisor Lynda Hopkins; Affiliation: County of Sonoma Board of Supervisors; (no comment card provided); (digital copy provided by Marissa Montenegro; See Appendix 1)

**Presentation: Presentation from Sonoma County on their Local Coastal Plan and Resiliency**

Robert Pennington and Gary Helfrich, Sonoma County, Permit Sonoma

[View presentation.](#)

Presentation highlights:

- Local coastal plans (LCPs): Are required for all coastal jurisdictions, implement the California Coastal Act, and allow for local control of most land use decisions. Policies only apply within the Coastal Zone. We do not regulate the activities in the ocean or on tidal lands.
- We are in the process of updating our local coastal plan: holding public review draft workshops, incorporating public comments, and will attend hearings for the Planning Commission, Board of Supervisors, and Coastal Commission later this year.
- We are working on goals for updating our LCP to comply with the Coastal Act, modernize document for public use (interactive GIS viewers), and update information and policies in five key areas: Geologic Hazards, Sea Level Rise (SLR), Water Quality, Public Access, Biotic Resources
- Public safety element and major hazards: fire, seismic, SLR and erosion. LCP policies require geologic hazards reports with recommended mitigations in a hazard area.
- Major hazards that connect to the sanctuary:
  - Bluff and coastal erosion: Gleeson beach, more than 300 feet of erosion where homes were built. Build resiliency into our coastal zone, can't put anymore structures close to a bluff, 100 ft minimum setback, priority to relocate existing development, only when all other options are deemed infeasible should shoreline protection structures be considered. Shoreline protection guidelines – only for existing structure prior to 1977, roads, and public beach, no significant impact to sand supply, natural landform, wetlands.
  - SLR: Uncertainty around how much SLR we're going to see. LCP policies: flood hazard report for any new projects, minimum 100 ft buffer from wetlands (high tide) or riparian zones. Release of liability to county if within inundation areas. Focused Bodega Bay Vulnerability Assessment done in 2016. Three strategies: protect, accommodate,

retreat. Vulnerable assets: Doran Park, West Side Park, Marinas, Westshore, Eastshore, Bay Side roads

- LCP Programs:
  - Adaptation plan and incentives for retreat
  - Focused vulnerability and risk assessments
  - Geological hazard area combining zone
  - Flood hazard area combining zone
  - Fires safe standards and wildfire risks

*Richard: Within the inner harbor, there might be intertidal restoration opportunities, with necessity of maintaining vessel channels. Interested in a vegetation option or intertidal restoration that could help with buffering shorelines. Places where intertidal vegetation/blue carbon might work.*

*Robert: County of Sonoma holds the land in trust, but we're running into this right now about taking down piers that are dropping material into the bay, coastal commission made it clear that we don't have jurisdiction over the bay. We have no jurisdiction past high tides. When sea level rises out jurisdiction gets smaller. The county is interested in collaborating to develop a strategy for restoration and protection of assets.*

## **BREAK**

### **Presentation: Informational Item: USFWS Proposed South Farallon Island Mouse Eradication Project**

Chris Barr, Gerry McChesney, USFWS, SAC

[View presentation.](#)

*Maria clarified that there is currently no action in front of the sanctuary related to the USFWS proposed Farallon Island invasive mouse eradication project. There is nothing proposed to take place in sanctuary waters and the USFWS Environmental Impact Statement (EIS) states that the USFWS does not intend to discharge in the sanctuary as part of this project. GFNMS submitted a comment letter to USFWS in February 2019 on the Administrative Draft Final EIS. These comments were sent after the review period and after the EIS was finalized. USFWS responded to the sanctuary that they will address the sanctuary's comments during consultation. There is no decision currently on what action USFWS will take, therefore there are no requests for permits or any potential for enforcement action from any injury to sanctuary resources at this time.*

Presentation highlights:

- Chris Barr is the Acting Project Leader of the San Francisco Bay National Wildlife Refuge Complex and works on issues surrounding chronic misuse of poisons, and has worked on establishing wildlife refuges along California's coast to protect wildlife and conserve resources.
- Gerry McChesney is the Farallon Islands National Wildlife Refuge Manager and has focused his career on environmental conservation and wildlife protection.
- The South Farallon Islands (SFI) are small: 120 acres, 360 feet tall, rugged and remote, with some inaccessible areas of the islands.
- It is home to:
  - the largest seabird colony in the contiguous United States with 300,000 breeding seabirds and 13 species.
  - 5 species of pinniped with 3,000-6,000 animals.

- Endemic species including Farallon arboreal salamander, maritime goldfield, Farallon camel cricket.
- We have been researching and monitoring the islands for over 50 years. Point Blue and many other groups contribute. Monitoring has helped us make management and restoration decisions for the whole island ecosystem.
- The Problem: We are experiencing a global extinction crisis with a large majority of extinctions occurring on islands mostly due to invasive species.
- The density of invasive house mice on the SFI is approximately 500 mice per acre. This is higher than any other island in the world. House mouse densities commonly range from 4 to 20 per acre.
- Ecosystem damage from invasive house mice on SFI: They eat everything including each other with direct impacts to other organisms and indirect impacts where they damage resources.
- The mice feed on Ashy Storm Petrels. They also cause predatory owls to come to the islands to feed on mice. These owls also feed on Ashy Storm Petrels.
- Ashy Storm Petrels are a rare seabird, endemic to California, breed on a small number of islands and rocks, and about 50% of the breeding population is on the Farallon Islands.
- Relationship with mouse and owl population: mice bring burrowing owls during the fall and stay, when mice populations crash during the winter and the owls stay, they switch to feeding on Ashy Storm Petrels. As burrowing owl predation increases, Ashy Storm Petrels population decreases. If we remove the mice that are attracting the owls to the island, we will see a benefit to Ashy Storm Petrels.
- Native plants, endemic salamanders and camel crickets, other invertebrates, and the native ecosystem function, will all benefit from removing mice from the island.
- Finding a Solution: Developing action plans and evaluating alternatives. The planning process:
  - Feasibility Study: 2004
  - Public Scoping: 2006
  - Comprehensive Conservation Plan: 2009
  - EIS Pubic Scoping: 2011
  - Draft EIS and public comments: 2013 (553 public and agency correspondences received)
  - Final EIS published: March 2019
  - Section 7 ESA (black abalone) and Essential Fish Habitat concurrences obtained: April 2019
- Potential action alternatives: 49 alternative methods examined; 6 nonrodenticide methods (mechanical: live-trapping, snap trapping, predator introduction); 15 rodenticides with 3 delivery methods (aerial broadcast, hand broadcast, bait station). USFWS looked at environmental concerns, operational considerations, minimal operational criteria, mitigation considerations, and narrowed down to 3 alternative methods:
  - Contraceptives: Dismissed from further analysis. Currently available only for rat control; Not currently feasible for eradication; Future availability for eradication uncertain.
  - **Brodifacoum-25D Conservation: Preferred Alternative in Final Environmental Impact Statement**
    - This product is a pelleted rodenticide specially formulated and regulated for large scale conservation project use for the protection of State or Federally listed Threatened or Endangered Species or other species determined to require special protection. It is different from what's available to the public.

- This product is a pelleted rodenticide used for control or eradication of invasive rodents in dry climates on islands or vessels for conservation.
- This restricted use pesticide is for sale only to employees of Federal agencies responsible for wildlife management and is to be used only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.
- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
- Risk to Soil: Disintegrates within 6 months; Pellets break down within 5 weeks; Becomes biologically unavailable once the pellet breaks down
- Risk to Water : Not soluble in water; Pellets break apart within a few hours; Toxicant settles to the bottom making it virtually inaccessible to nontarget species
- Brodifacoum Risks to Fish & Wildlife: Highly toxic to small mammals and birds; Toxic to some fish; Not toxic to most invertebrates; Does not biomagnify; Impacts are short-term
- Delivery: you have to get every single rodent; it's not about control, it's about eradicating completely on the first go
  - Concentration of rodenticide within rodent bait = 0.0025% (2.5 parts per million)
  - Total amount of rodenticide to be applied = 1.6 oz (33 g)
  - Total Operational Period = ~5 weeks
- Bait application is state of the art and organized. GPS guided systems are used to disperse the bait. The goal is to get bait where you want it and not get bait where you don't. This is not to say that you won't get any bait in the marine environment, some small amounts will drift. But other eradication projects have shown that those levels are very low. We want to protect the wildlife and marine environment as much as possible. Timing will be in the fall when wildlife populations are at their minimum. Gulls are at the most risk so we need to protect that population. Owls and hawks will be captured while this is happening. We will remove carcasses of birds and mice that were exposed. Most rodents die underground and there are not many mice on the surface for scavengers to pick up.
- Gull Hazing Success: during hazing trials gull numbers declined from as high as 2,500 gulls to 0, and nearly all those gulls were successfully hazed from the islands. Most gulls there are only coming to roost overnight.
- We have an extensive monitoring plan. We are prepared for the unexpected and have contingency plans (bait spill, fisheries exposure, significant non-target impacts)
- There are examples of success stories throughout the world. 600 successful eradication projects; since 2007, nearly 100% of mouse eradications have been successful. Anacapa Island saw no negative impacts to gulls, seawater, marine invertebrates, or marine fish. There was extensive monitoring done on this project.
- This is about restoring an ecosystem. The islands and the sanctuary are closely linked and what benefits the island benefits the sanctuary, and vice-versa. USFWS would not propose and go ahead with this if we felt it could not be done safely with minimal impact.

## Presentation Q&A:

*Joe Fitting: How do you haze the gulls?*

*Gerry: A variety of tools are used: pyrotechnics, gull carcasses hanging, noise. Benefit with the Farallones is that they're not coming to the islands for food, just for roosting.*

*Francesca Koe: Thank you for the thorough and well-research presentation. For USFWS to deliver something so pragmatic amid so much sensationalized opinion is refreshing.*

*Barbara Emley: So, pellets drop to ocean floor right away?*

*Gerry: They may float, but they will break down shortly after, and the toxicant will drop to the bottom.*

*Barbara: What about the animals that live on the ocean floor?*

*Gerry: We're talking about a very small area and very small amount of toxin. Biologically unavailable, anticoagulant rodenticides don't impact invertebrates. From other projects we have not seen any impact to marine invertebrates.*

*(Brad Keitt, member of the public asked to comment by Jaime Jahncke): To answer about pellets, looking at pellets that might get underwater. They sink almost as fast as a stone, they break apart in about 30 min from wave action, becomes less and less available to critters to eat them.*

*Elizabeth Babcock: How much will this project cost? Are there funds allocated if something bad happens? What mechanisms are in place to ensure this wouldn't go forward without having funding in hand if some budget cut happened and the project was half done? Is this the most important place to put \$2 million?*

*Gerry: We will make sure to have all the resources that we need. The latest estimate was \$1.9 million. A lot of that will go to mitigation measures. We have our first million dollars from USFWS dedicated to the project from the invasives fund. At USFWS, there were other proposals that were submitted for that year, but this project was ranked as the highest and got funded. We have mechanisms in place that ensure we can't go forward if we don't have enough money in place. We are obligated to complete the project once it's been funded.*

*Chris: There is no plan to implement this fall. We need more formal consultations and to secure remaining funds. We have some of the partnerships in place. The earliest we could do this project if everything goes through would be the fall of 2022. That's a rough estimated timeline.*

*Cea: You are using some level of explosive noise to deter gulls. We have low overflight regulations to minimize noise. Noise is a way of injuring. I'm wondering about permit requirements on that level to use them for a sustained period of time.*

*Gerry: I can't speak to the needs of the permit from the sanctuary perspective. We need to do it without adverse effects on marine mammals and marine mammal response was a part of the hazing trials. We were pleasantly surprised by the lack of reaction from marine mammals. We saw a little bit of movement but very short term, and no stampeding. I don't think we came close to the amount of disturbance we were allowed by NMFS. You don't have to keep up the techniques all day long. You*

*disperse in the morning and the rest of the day they typically don't return. We came away from the trials feeling confident about the process.*

*Cea: What is the greatest number of burrowing owls that you observed and has there been actual observation of their predation on Ashy Storm Petrels?*

*Gerry: Yes, there have been observations of predation. Point Blue Conservation does regular wing walk surveys to look for fresh carcasses. We see where burrowing owls are bringing them because we find giant piles of Ashy Storm Petrel wings. Diet studies also show the change in owl diet throughout the year. They switch almost entirely to feeding on Ashy Storm Petrel in the spring. Just getting rid of the owls would only be one part of the problem though. There are many other impacts that mice have on the ecosystem, so we need to remove the mice not just the burrowing owls.*

*Cea: If you get rid of the mice population, what would stop the owls from staying to just feed on storm petrels?*

*Gerry: They probably wouldn't stay. The Storm Petrels not a normal part of their prey. The petrels are at the end of their breeding season when the owls come. If there are no mice, they won't find much of a food supply and won't stay at the island.*

*Barbara: You said it's only 3oz? That seems disingenuous if it has the ability to kill this many animals. If it's a highly toxic amount, how is this true? You said there have been issues when this is done on mainland but not on islands?*

*Gerry: Yes, it is pretty toxic. But mice are very small so they don't need much of a dose to be affected by it. Because it breaks down quickly, a few ounces isn't much. It's enough to eradicate the mice because each pellet has a tiny amount of toxin in it but not enough to harm soil and water. The difference between mainland and island is that they are misused and overused on the mainland; they've gotten into every facet of the ecosystem. In in this case for an island, it's a one-off event and when it breaks down, it's gone from the environment. There is a bill in the State Legislature being put forth for restriction on these anticoagulants in ecosystems but the use for conservation on islands is not a part of that.*

*Richard: Islands and the surrounding waters are one big ecosystem. They are linked. This is a project that originated outside of the sanctuary but that changes sanctuary values. You said you expect the project to begin in November or December 2022. When would the record of decision occur?*

*Gerry: Record of decision would be in June of this year.*

*Richard: In the event of a spill, which happened in New Zealand, on point of origin, what is your first responder plan, is there a supplemental EIS that you're going to bring back?*

*Gerry: There has been one event of a spill. That would be a part of the contingency planning. Contingency plans are a part of the operational plan. There are still too many things that could change in the operational plan to finalize a contingency plan, which is why it's not in the EIS. We have identified what plans need to be developed in consultation with GFNMS, the California Coastal Commission, Environmental Protection Agency (EPA), United States Department of Agriculture (USDA), and USCG. There are many moving targets. There are more details to iron out, e.g., how*

would we get bait to the island; will we stage on the islands or on the mainland?

*Richard: Is there technology in place to deal with three dimensional spills in the water column? For example, looking at slurry spills from ocean mining, they have not come up with a way to clean those up. I'm curious about how that could be cleaned up if the pellets sink rapidly.*

*Gerry: Not that I'm aware of. We would have to develop a contingency plan.*

*Richard: Regarding discard of contraceptive baits, I'm assuming it's because contraceptives were not ready at the time the Draft IES was prepared three years ago? Why did you discard Diphacinone? It's a lot less likely to be absorbed by birds.*

*Gerry: We had two action alternatives that we fully analyzed in the EIS: Brodifacoum25D Conservation and Diphacinone, which is another rodenticide that does have an approved label for conservation just like the Brodifacoum25D. We came to the conclusion that Diphacinone will not work for mice because it is not palatable to them. We have been told by the EPA and USDA, who are the real experts on this stuff, that it is not an option because it will not work. Risk of failure is too high.*

*Richard: They both have labels that say do not apply this to areas where surface water is present or to intertidal areas below mean high tide line. In 2007, Diphacinon50 was used on another project and the agency requested a label change from the EPA having to do with amount of application per square meter. Do you anticipate any label change requests for this project for use near water or for higher density of application?*

*Gerry: We will most likely request a supplemental label. There is a standard label and then if there is a reason that you feel you need a modification to that label to be successful in your project, then you can request a supplemental label. The EPA has suggested we will need a label for applying around dwellings we will use bait stations and hand baiting. They said that given that this is not a residential area and any people around are part of the project and because there are steep areas that are non-planar, they recommend that you air bait the whole area, and that will require a supplemental label. They suggested to calculate what the non-planar acreage would be and use an increased rate of baiting for those steep areas which would call for a supplemental label.*

*Richard: Would you agree that each pellet is considered a "piece of poison"?*

*Gerry: Correct, each pellet has poison.*

*Richard: The amount of 2.9 oz seems to be an area of contention. A good way to explain for people to understand LD50. The lower the LD50, the more toxic the poison. LD50 means half the exposed population dies and Brodifacoum has an LD50, which means a ton and half of bait pellets means it has to get to every part of the food chain and that's why every pellet has poison in it. But the LD50 of Brodifacoum is one milligram per kilogram. That's incredibly poisonous.*

*Gerry: You have to remember, each Brodifacoum is different depending on the animal.*

*Richard: We are talking about a soil half-life of 85-157 days. I can't imagine a compound that could be let loose that could be more toxic than that. And to say "it's only 2.9 ounces." The recognition that each pellet is a poison is intrinsic in this project because you have to kill every mouse. It seems like*

*this line between the sanctuary and refuge, how do be sure that that pellets aren't going to go into the ocean? Elsewhere is has gone into the ocean, how come we're not being asked for a permit if we know that one or more pellets will go into the sanctuary? Considering gravity, wind, waves, etc.*

*Maria: At this point they don't have a record of decision so they cannot ask for a permit now.*

*Richard: At the point of record of decision, will there be a request for a permit?*

*Gerry: There will be a 304d consultation and request for a permit for low overflight.*

*Richard: There was a Diphacinon application of 11.5 tons of bait in 2017. It didn't kill the rats but it did kill some other things including in the ocean. Everywhere there is a steep side of the island, the pellets go into the water.*

*Gerry: We recognize that there will be some small amount of bait that will inadvertently go into the ocean, as was said in the presentation. Every eradication project that I have researched, the amount that gets into the water is so small that it is not detected in water, bird, or fish samples. The amount is essentially negligible.*

*Richard: So, after the record of decision, it will not trigger a required permit from the sanctuary?*

*Gerry: There will be no intentional bait application into the water, and that is a primary design of the bait application. Will there be some small inadvertent amount that will enter the water with essentially no impact to the marine environment? Yes. That's why we will do a 304d consultation with GFNMS. I can't speak to what will happen after that in regard to a permit.*

*Chris: We've learned from past processes. For example, using the small drip targeted method.*

*(Brad Keitt, member of the public asked to comment by Jaime Jahncke): I was involved in research on pellet degradation on Anacapa Island. I was also involved with the water and invertebrate tissue testing after that project. The samples showed no signs of residue of toxins, and Anacapa is a very steep -sided island. I was not involved in the Lehua Island project but from what I understand, there was no evidence of marine related mortality associated with that project.*

*Cea: Is part of the contingency plan removing certain samples of species?*

*Gerry: That would be part of the mitigation plan. It's fairly standard in eradication projects. Even if you feel a species won't be affected by the project, you still take samples so that if something unexpected happens, you have measures in place to make sure you don't unduly damage the population. So for the endemic salamander population, we will take a sample just in case.*

*Cea: If you remove that sample then you use it to repopulate, wouldn't that genetic pool then be significantly reduced?*

*Gerry: The sample would be at least 40. It would be a bit smaller of a gene pool after repopulating but we would ensure an adequate sample size to preserve genetic diversity.*

*Elizabeth to Maria: To clarify process: Regarding the 304d consultation, at the end of the day, do you as the Sanctuary Superintendent have to agree to this project? Or is it just that they can take or leave your advice? And is there a document that comes out of that for the record? I'm trying to figure out what is our role here as the advisory council? I don't want to be interjecting into something that is not our place. Is this 304d process where we play a role?*

*Maria: The 304d consultation is part of the National Marine Sanctuaries Act so it's legislative. It outlines the process for federal consultation for the sanctuary. Is it binding? No. We don't have jurisdiction over another federal agency's actions outside of the sanctuary. But because we are in the federal family, we try as best as possible to work together. The 304d consultation happens if ONMS finds that the proposed action of another agency is likely to injure sanctuary resources, the sanctuary must within 45 days of receipt of complete information on the proposed action develop and recommend reasonable and prudent alternatives for the agency to implement measures to protect sanctuary resources. Upon receipt of these alternatives, the agency must consult with ONMS to develop plans for coordinating the sanctuary's recommendations into the proposed action. If the agency decides not to follow the sanctuary's recommendations, it must provide a written explanation to ONMS. If the agency takes an action other than what was recommended by the sanctuary that results in the destruction of, loss of, or injury to a sanctuary resource, the head of the agency must promptly prevent and mitigate further damage and restore or replace the resource in a manner approved by ONMS.*

*Richard: How late is too late for USFWS to re-add a previously discarded alternative? For example if contraceptive options are ready for the use by 2020, can you modify without doing another EIS?*

*Gerry: Contraceptive was never looked at as an alternative. That method was dismissed and not a part of the EIS. Nothing has changed enough to make it a viable alternative. If that suddenly changed, we would have to do a supplemental EIS at the minimum.*

*Jaime: From what I understand, contraceptives help control populations, but do not work for eradication.*

*Gerry: It would have to be applied over a long period of time, at a bait station, and in liquid form.*

*Chris: We don't want to use a new application. We want to use tested and true methods for eradication. We can't hypothesize about future treatments. We need to move forward with the contingencies and with the information we have now.*

*Gerry: For any experimental technique that is being developed, before people are going to accept it in an eradication product, it's going to take a lot of testing. It will need field trials and we feel even if something was ready to test now, the Farallon Islands is not the place for testing.*

**MOTION to consider the proposed resolution authored by Dominique; work on the language as a group.**

**First: Richard Charter**

**Second: Cea Higgins**

*Not everyone is in agreement with the language as written.*

*Richard proposes a motion to work on editing the resolution as a group. Cea seconds.*

*Dominique welcomes edits to the proposed language.*

*Francesca: A lot of the questions asked in Maria's letter to USFWS were answered today.*

*Elizabeth: I do not understand what this resolution is asking for other than answers to questions that will clearly get answered in the 304d process, so why do we feel it's necessary to pass a resolution?*

*Jaime and Francesca agree.*

*Maria: They can't answer all the questions until they have a final project. I can't speak for USFWS. We are not going to invest anymore time into a project until we have a record of decision.*

*Barbara: This seems like the partnership is already established and there is an outlined process of getting feedback.*

*Richard: Should we have SAC express support for consultation process or have them ask for a permit?*

*Maria: What would be helpful from SAC is for the group to let me know if there are questions we haven't asked related to potential impacts to the sanctuary. Are there specific questions that you think would be beneficial for me during 304d consultation? The 304d process is not open to the public because federal agencies must have the opportunity to brainstorm openly and consider all options and all information without fear of public scrutiny. So the council will not be involved in that process but can advise me on what it feels are the most important questions to be asking.*

*Jaime: Could we just say that at this time we don't need this resolution until there is a process is triggered where USFWS is coming to you for consultation?*

*Maria: The earliest a decision would come would be this summer. You can provide input at any time.*

**MOTION to pass a resolution requesting USFWS provide answers to the questions asked in the February comment letter from the sanctuary as well as additional questions the council agrees upon today, including:**

1. Will there be a matrix over time provided so that the Sanctuary is aware at various points in the project and remains apprised of the data/status throughout?
2. What funds is USFWS allocating for education and public engagement for the project? What responsibility are they taking vs what the Sanctuary would handle related to public education, and how will funds be allocated for that (not just around regulatory issues, project impacts, or mitigation plans; but education around the "why" (e.g., why the ecosystem matters, and what the end goal is for the environment)?
3. What contractual language will there be for overflight distribution accuracy (e.g., target drops)?
4. How many non-target Sanctuary species are estimated to be affected and how?
5. Provide additional analysis on the estimated amount (weight) of pellets and anticoagulant that may be accidentally spilled into the Sanctuary. How will this be monitored?
6. Provide further discussion on how the preferred alternative may be affected during rain and wind events.

7. Address the impacts to the large numbers of pinniped pups expected to be present on the islands when aerial bait drops and hazing efforts of gulls are occurring.

**First: Elizabeth Babcock**

**Second: Richard Charter**

**Final vote: 10 yes, 0 no, 2 abstain (Chris Barr, USFWS; Ben Becker, NPS)**

[View final resolution.](#)

**Adjourn.**

*Meeting highlights prepared by Alayne Chappell, Advisory Council Coordinator.*

## **Appendix 1: PUBLIC COMMENT**

Commenter 11: Norma Jellison; Affiliation: Bodega Bay Resident; Issue of Interest: Public comment and Item = Mouse Project. Comment Summary: printed copy provided:

Chair and Members of the Advisory Council

My comments are regarding the proposed So Farallon Island Mouse Eradication Project.

I first note that I disagree with the determination that no permit or approval is required of

The Sanctuary, based in part on a determination that no impact will accrue to the Sanctuary.

Such bifurcation of jurisdiction for this project is convenient and not altogether consistent with previous positions.

Further, how can there not be impacts to the Sanctuary?

- None of the thousands of poisoned birds - the bykill - will drop into Sanctuary waters?
- An unexpected rain storm with associated runoff won't enter Sanctuary waters?
- Waves crashing on the Island will never wash errant pellets into Sanctuary waters?

Such examples to my mind = potential impacts to the Sanctuary with associated unacceptable significant negative impacts to the its pristine ecosystem and the marine mammals and fish nurtured therein. Regardless, I believe the Sanctuary has jurisdiction.

**To the point of the chosen eradication method.**

I am not a scientist. Nor am I a hysterical naysayer.

I do stand with a tide of public opinion *- in my local area* and scientific advancement and associated evidence that there are better alternatives to the proposed poison drop of a bio-accumulating rodenticide.

The Advisory Council in its capacity and role taken today has the responsibility to call for the US Fish & Wildlife Service to seriously explore using available and effective non-toxic contraceptive rodent baits, rather than the expedient use of the currently proposed poison baits.

**Please Do the Right Thing for The Sanctuary!**

I believe public comment should be allowed on the agenda item in as much as the Council will be taking an action.

The public should have an opportunity to address statements made by the proponents of the chosen mouse eradication methods.

Please Do the Right Thing for The Sanctuary! Be transparent and protect the Sanctuary.

Norma Jellison  
Bodega Bay Resident

Commenter 12: Lynn Woosley; Affiliation: Congresswoman Lynn Woosley (Retire); (no comment card provided); printed copy provided:

LYNN WOOLSEY

Dear Sirs:

It has been brought to my attention that rat poison pellets are being delivered to the Farallones for use in eradication of the mice living on the island. This solution to the mouse infestation has been considered and rejected by previous governments on the grounds that the use of such poison will cause far more damage than good.

Our ecosystem and our ocean would be severely harmed by this shortsighted action.

While it is, indeed, necessary to deal with the mouse problem it is <sup>2020</sup>~~2019~~ and there are certainly less damaging, and yet successful solutions to this problem. I would hope that the Coastal Commission would hold off on this decision and make a commitment to find a solution that would be less destructive to our environment - and our future.

Please remember that the Gulf of the Farallones was made a marine sanctuary as a protection for our wonderful Sonoma coast.

Thank you.

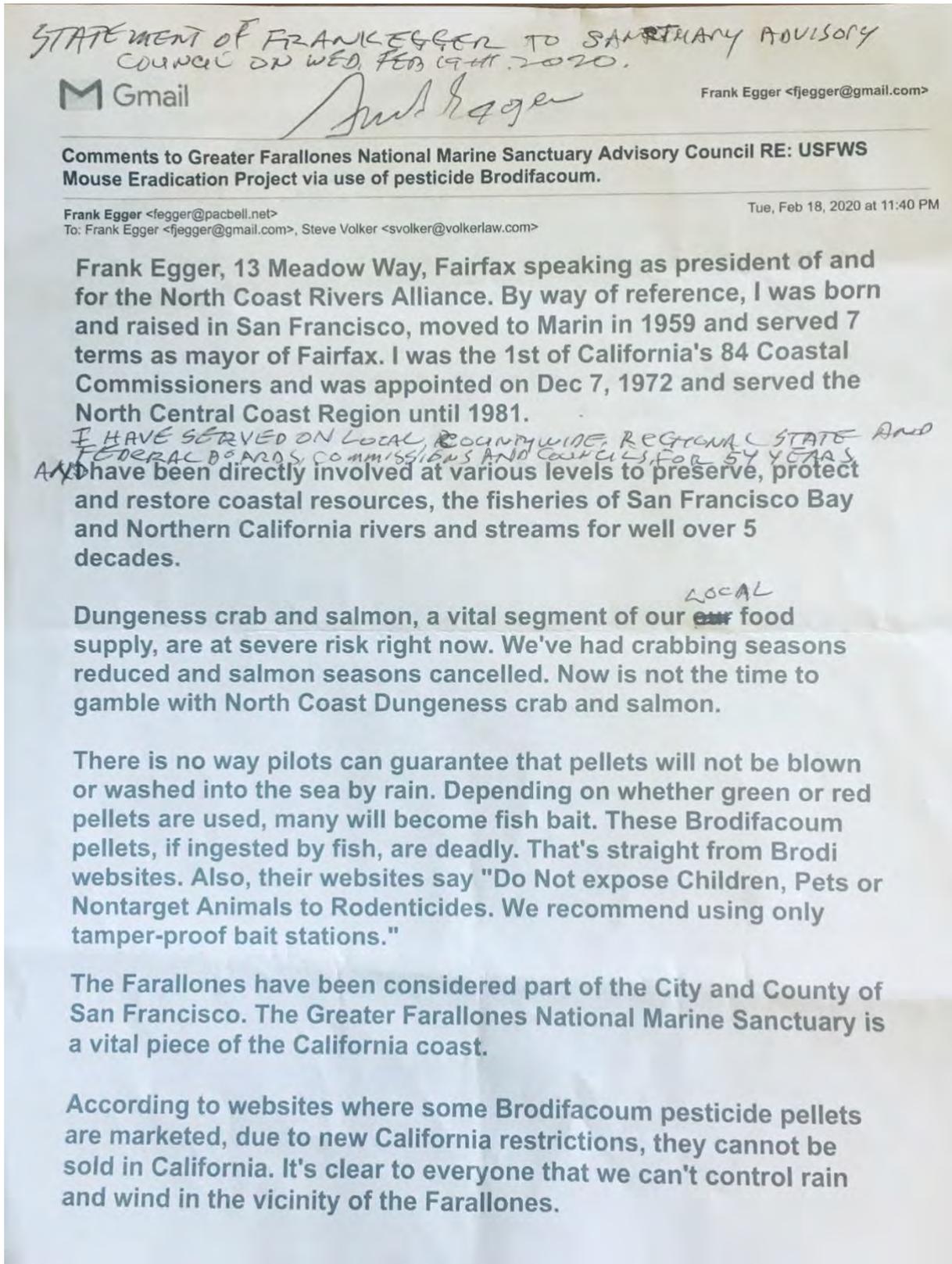
Congresswoman Lynn Woolsey (Retired)

Cell: 707-509-9709

Home: 707-763-7933

Address: 923 B Street, Petaluma, CA 94952

Commenter 13: Frank Egger; Affiliation: North Coast Rivers Alliance & Pesticide Free Zone; Issue of Interest: USFWS Project; Comment Summary: printed copy provided:



From 1946 to 1970, the sea around the Farallones was used as a nuclear dumping site under the authority of the Atomic Energy Commission. 47,000 55 gallon drums of low level nuclear waste were sunk in the vicinity of the Farallones. That's only 50 years ago and now is not the time to dump a ton & 1/2 of pesticides from helicopters on the Farallones. How much poison can we put into our environment? Why would our government now approve a "taking" of an endangered species, Coho salmon, in a National Wildlife Refuge?

If I can quickly change hats and speak as a board member of Marin's Pesticide Free Zone, I urge you to reject this project and demand that the US Fish and Wildlife Service find a safe alternative to deal with the island's mouse problems.

Thank you.

Commenter 14: Dr. Loretta Mayer; Affiliation: (not provided); Issue of Interest: (not provided);  
Comment Summary: printed copy provided:

Cea Higgins

#### Statement for Sanctuary Advisory Council Meeting 19 February 2020

Thank you for the opportunity to provide support for a novel approach to the conservation problem you are addressing in the Farallon Islands. My name is Dr. Loretta Mayer and together with Dr. Cheryl Dyer we have spent the past 25 years working with scientists around the world to bring the concept of fertility control in wildlife and pest species into practice. The literature is irrefutable in support of restricting reproduction as a sustainable solution to rodent infestations. For rats, Dr. Dyer and I co-invented the fertility control product ContraPest®, currently in commercialization by SenesTech, Inc. With science stakeholders and environmental specialists, we developed and registered the rat fertility control solution with the EPA in August 2016 for use in the United States. The product has proven effective, with the benefits of being non-lethal, it does not persist in animals or the environment, and it is harmless to non-targets such as birds, and other wildlife. We have been asked by many, as well as the EPA, to consider a fertility control option for mice. We are developing that currently.

In 2012 Dr. Dyer and I were approached by members of the EPA, Region 9, and joined a call with USFWS, Island Conservation and other stakeholders to consider a project for the Farallon Islands. We joined in a conversation, however, our product development was too immature to consider the task at that time, ..... we are ready now. The scientific approach we are using provides a non-lethal approach that does not bioaccumulate or affect the food supply, will leave no hazardous carcasses, will not persist in soil and water, and can be deployed as a solid palatable product. Our scientific objective is to provide a solution that will not harm the surrounding environment, predators, air quality, or push the population to resistance, a deeply concerning situation developing in the US with anti-coagulant rodenticides driving rodents to resistance to these common and damaging poisons.

We will be working with a CMAS, California Approved Contractor, and GSA federal contractor who has extensive experience with rodent fertility control deployment and is committed to supply the Farallon mouse project. We will be asking the EPA for an Experimental Use Permit and join with California animal rescue and conservation stakeholders. We are current supporters of Raptors Are The Solution, a project of Earth Institute. Dr. Dyer and I are co-founders of the non-profit FYXX Foundation, a foundation for fertility control in wildlife species. We will be directing the project on behalf of the foundation.

I am grateful for the opportunity to be heard today and would be with you in person if at all possible. We are available for further informational meetings on the use of contraception, and plan to have a detailed proposal for the June 2020 meetings of the California Coastal Commission.

Thank you for your time and attention.  
Dr. Mayer

Commenter 15: Supervisor Lynda Hopkins; Affiliation: County of Sonoma Board of Supervisors; (no comment card provided); (digital copy provided by Marissa Montenegro:

**COUNTY OF SONOMA  
BOARD OF SUPERVISORS**  
575 ADMINISTRATION DRIVE, RM. 100A  
SANTA ROSA, CALIFORNIA 95403



**LYNDA HOPKINS**  
FIFTH DISTRICT SUPERVISOR  
Lynda.Hopkins@Sonoma-County.org  
(707) 565-2241

February 19, 2020

Ms. Alayne Chappel  
Attn: Greater Farallones Sanctuary Advisory Council  
NOAA Greater Farallones National Marine Sanctuary (Headquarters)  
991 Marine Drive, The Presidio  
San Francisco, CA 94129

**RE: South Farallon Islands Invasive House Mouse Eradication Project**

Dear Ms. Chappel:

I am writing in opposition to the U.S. Fish and Wildlife Service plan for the South Farallon Islands Invasive House Mouse Eradication Project.

The U.S. Fish and Wildlife Service (FWS) is proposing to eradicate introduced, invasive house mice from the South Farallon Islands within the Greater Farallones National Marine Sanctuary (Sanctuary) this fall.

The U.S. Fish and Wildlife Service (FWS) is proposing to eradicate introduced, invasive house mice from the South Farallon Islands within the Greater Farallones National Marine Sanctuary (Sanctuary) this fall. I understand that an aerial broadcast of the rodenticide Brodifacoum has been identified by the US Fish and Wildlife Service as the preferred alternative in the Final Environmental Impact Statement published in March 2019. I am concerned that the proposed strategy will pose significant risks to the Sanctuary and adjacent fragile coastal ecosystems and non-target species.

The proposed poisons are the subject of increased scientific scrutiny because of non-target wildlife disasters during similar airdrops on other island locations. I am also in receipt of an EPA Region IX letter which supports a well-planned restoration and cautions the considerable complexity of this project and the risks posed to non-target species including secondary human exposure. I am in support of the recommendations in the EPA's letter and I respectfully request that the recommendations be fully considered prior to approval of this complex and potentially perilous plan. Thank you for your consideration of the health of California's ocean ecology.

Best regards,

Lynda Hopkins  
Supervisor, Fifth District