



# **Briefing on Tomales Bay in Greater Farallones National Marine Sanctuary**

### State of the Resource

### **Condition Report Data (in preparation)**

- Water Quality:
  - Tomales Bay is listed as impaired under Section 303(d) of the Clean Water Act due to sedimentation/siltation, nutrients, mercury, and pathogens. Advisories for swimming and consumption of seafood were present in Tomales Bay without a clear trend. Sea Surface Temperature, aragonite saturation, and salinity increased during the study period. Water quality parameters in Tomales Bay are monitored by a variety of agencies and organizations including: Tomales Bay Watershed Council, Environmental Protection Agency, California State Water Quality Resources Control Board, and California Department of Public Health.
    - Water quality risks to human health included exceedances of shellfish biotoxin saxitoxin (the toxin causing Paralytic Shellfish Poisoning), and from a norovirus outbreak from a shellfish aquaculture operation in Tomales Bay in 2018-2019. To mitigate risks to human health, four types of shellfishery closures (due to rainfall<sup>1</sup>, PSP, Vibrio, and norovirus) occurred in Tomales Bay; no clear trend was evident.
    - Sea Surface Temperature increased during the study period in Tomales Bay and positive anomalies were observed during the Marine Heatwaves (MHWs) in 2014-2016 and 2019.
    - For aragonite saturation (a measure of carbonate ion concentration used to track ocean acidification), seasonal patterns were observed which included decreases in winter below the threshold considered more difficult for shell forming. However, there was an overall increase in aragonite saturation since 2014, which is more favorable for shell-forming organisms
    - Seasonal patterns were observed in stream flow discharge into Tomales Bay and salinity. During the study period there was a significant decrease in discharge and an increase in salinity.

#### Habitat:

 Restoration of marsh and eelgrass habitats appear to be improving these habitats in certain locations.

- Marsh restoration has occurred at the southern end of the bay at Giacomini Ranch since 2008, which has resulted in improved hydrology across 51 acres of marsh floodplain and new tidal channels being formed (Parsons & Ryan, 2015). More data are needed to determine the trend for marsh and mudflat habitats
- Surveys may suggest an increase in eelgrass extent in Tomales Bay, although the difference in methodologies used complicates the

<sup>&</sup>lt;sup>1</sup> Heavy rainfall can lead to increased runoff and pollutants from land in coastal waters, which accumulate in shellfish. Rainfall closures are preemptive based on forecasts and previous testing data to prevent human health impacts from contaminated shellfish consumption (Rankin, 2022).

- assessment of a trend. Anecdotal evidence suggested there were dense eelgrass beds in Tomales Bay that appeared to be healthy and may be expanding; the presence of eelgrass wasting disease was of concern.
- More data are needed to better understand any specific, quantitative changes in mudflat, marsh, and eelgrass habitat over time.
- Living Resources:
  - Overall, more information is needed on the abundance and density of Olympia oysters. Non-indigenous species are present in Tomales Bay. Information on seabirds and shorebirds, fish, and marine mammals are covered in other topic briefings.
    - Anecdotal reports from Tomales Bay suggest Olympia oysters were once abundant enough to benefit the ecosystem by improving water quality through filter feeding and providing structure (i.e., a reef comprised of shells) to help buttress fragile shoreline habitat against waves, storm surge, or future sea level rise. Abundance and density have not been assessed in recent years and it is unknown if Olympia oysters are providing these ecosystem services at their current abundance.
    - 61 non-indigenous species are known to exist in GFNMS estuaries (not specific to Tomales Bay). Green crabs, Japanese oyster drill, Atlantic oyster drill and Japanese mud snail are species of interest for Tomales Bay. Trends for the Japanese mud snail and Atlantic oyster drill varied from 2009-2019 and the Japanese oyster drill decreased after 2015 and has remained low.

### **Climate Vulnerability Assessment Findings**

- Vulnerability is calculated from exposure to climate and non-climate stressors, sensitivity
  to those same stressors, and the resource's ability to adapt to the impacts. Ratings
  presented are from the original 2015 report and from 2023 revisions of some indicators.
- Estuaries have a high vulnerability score (second most vulnerable habitat in the sanctuaries) based on very high exposure to climate change stressors, namely increased water temperatures, wave action and sea level rise, and reduced dissolved oxygen, and high or moderate sensitivity to sea level rise, sea surface temperature, and precipitation; however, estuaries do exhibit high adaptive capacity due to high species diversity and value to people. Estuaries also have very high exposure to non-climate stressors such as land use impacts; disturbance from structures, vessels, or moorings; and invasive species. The vulnerability of estuaries did not change since the original assessment.

### **Pressures on Tomales Bay**

- Sedimentation/siltation
- Nutrients and pathogens
- Anchoring in eelgrass

# **Summary of Relevant Regulations**

All regulations related to discharge, seabed disturbance, wildlife take and possession, introduced species, and motorized personal watercraft apply to Tomales Bay. Specific regulations that apply within or directly adjacent to Tomales Bay include the following:

- There is a Special Wildlife Protection Area that prohibits disturbing marine mammals and seabirds by flying aircraft below 1,000 feet above ground level at Tomales Point.
- There is a prohibition on anchoring a vessel in a designated seagrass protection zone in Tomales Bay, except as necessary for aquaculture operations conducted pursuant to a valid lease, permit or license.

See full text, definition, and exemptions on the regulations page of the **GFNMS** website.

# **Summary of Relevant Sanctuary Projects**

#### **Conservation Science**

- Beach Watch survey sites: Tomasini Creek Beach, Brazil Beach, Dillon Beach
- Sediment science in the sanctuary assesses long-term coastal change at erosion 'hotspots' in Tomales Bay to understand the impacts of storm flooding and sea level rise inundation and identify nature-based solutions to address impacts to shoreline ecosystems.

### **Resource Protection**

- Review and comment on project proposals, including proposed actions from other
  agencies, that could potentially: 1) violate sanctuary regulations and impact Tomales Bay
  habitat, species, water quality and hydrological functions or 2) protect and restore
  Tomales Bay. For example, review of Marin County's living shorelines project to allow for
  transitional habitat in areas that are affected by sea level rise.
- Through permitting actions the sanctuary manages, reduces, or eliminates injury to Tomales Bay.
- Work with NOAA's Office of Law Enforcement to document incidents that violate sanctuary regulations and/or injure Tomales Bay resources.
- In partnership with all agencies with jurisdiction in Tomales Bay, implement the Vessel Management Plan
- In partnership with the California State Lands Commission, implement the Tomales Bay Mooring Program.
- Coordinate with other stakeholders to promote and implement programs that aim to protect Tomales Bay.

### **Education and Outreach**

- School programs
  - Teacher professional development in partnership with Marin County Office of Education including lesson plan modeling, kayaking, eelgrass exploration, and interviews with scientists. Training was part of a year-long intensive professional

development effort with 27 teachers to develop Next Generation Science Standard units focused on climate change and local coast and ocean habitats.

### Community Programs

- Sanctuary Explorations: Kayak trips (including evening bioluminescence trips) for the public with participants led by local kayak outfitters and sanctuary educators.
- Sanctuary Naturalist Training Program includes a Bay and Estuaries module with sections highlighting Tomales Bay physical factors, biological communities, protection, and how to plan a visit.
- Exhibits/Signs
  - Miller County Boat Launch Interpretive Sign about Eelgrass/Tomales Bay
- Media and Outreach activities
  - o Radio program/Podcast "Ocean Currents" Episodes focused on Tomales Bay
  - o Earth Is Blue Photos/Videos
  - Tomales Bay Boater Outreach

### Infrastructure and Vessels

Sanctuary infrastructure supports this work through through office space, at sea assets, and administrative, logistical, and operational assistance including:

- Meeting spaces for staff and partners to collaborate on projects and storage for field equipment.
- Spatial analysis products and services
- Crissy Field Visitor Center as an exhibit and teaching space to deliver related programs to educate the public about the importance of Tomales Bay.
- GIS support for habitat mapping and to conduct spatial analysis in order to plan and assess resource protection activities.
- Government vehicles for transportation to and from Tomales Bay.
- Vessel support for field operations.

# **Summary and Staff Recommendations**

### **Summary**

Tomales Bay is an important estuary with international, federal, state and local designations to protect the waters and habitat. In general, information on the condition of Tomales Bay shows that there are water quality risks to human health, and that some habits appear to be improving, but there are living resources that may have impacts from diseases, are impacted from introduced species or are at population levels that may affect the ecosystem function of the Bay. Tomales Bay has a high vulnerability score due to climate change stressors and non-climate stressors. The sanctuary focuses on sediment science in Tomales Bay to assess long-term coastal change at erosion 'hotspots'. The sanctuary, with partners, implements actions that protect and restore Tomales Bay including vessel and mooring management. Education projects inform students and adults about the importance of Tomales Bay through school programs, community programs, exhibits and signs, and targeted outreach to visitors. Sanctuary infrastructure supports this work through through office space, at sea assets,

and administrative, logistical, and operational assistance.

#### **Staff Recommendations**

### Conservation Science:

- Update the science needs assessment and develop a science plan for estuaries in GFNMS to address the highest priority needs.
- Explore partnerships with agencies and organizations conducting research and monitoring on water quality in Tomales Bay to identify synergies and opportunities to address sanctuary priorities.
- Support or conduct monitoring to understand the status and trends of water quality, habitat, and species to inform management of Tomales Bay.

### Resource Protection:

- Continue to review and comment on project proposals, including proposed actions from other agencies, that could potentially: 1) violate sanctuary regulations and impact Tomales Bay habitat, species, water quality and hydrological functions or 2) protect and restore Tomales Bay in order to maintain Tomales Bay as a UN Wetland of International Significance.
- Continue to work with all agencies with jurisdiction in Tomales Bay to implement the Vessel Management Plan.
- Continue to partner with the California State Lands Commission to implement the Tomales Bay Mooring Program.
- Encourage good boating practices and stewardship of sanctuary resources through outreach to the local boating community.
- Consider a role in coordinating with agencies and organizations monitoring water quality impacts in Tomales Bay in order to promote a holistic approach to ameliorate impacts.
- Review eelgrass bed survey data to determine the extent of the beds and determine if changes to the designated seagrass protection zones are needed.

# **Education and Outreach:**

- Highlight Tomales Bay as a local focus for school curriculum and public programming in Marin and increase awareness of Tomales Bay as a regionally significant location ecologically, recreationally, and economically.
- Expand programming and teacher training with Shoreline Unified School District schools to build stewardship and local awareness of the value of Tomales Bay.
- Increase awareness of the benefits of the Giacomini Wetland Restoration Project to GFNMS through communications and media.
- Continue to conduct outreach to Tomales Bay boaters.

### Infrastructure:

- Maintain meeting space and offices in San Francisco and Point Reyes Station to facilitate collaboration among science, resource protection, education, and operations staff and partners.
- Provide spatial analysis products and services.

- Expand Crissy Field visitor center to develop an estuary exhibit, provide teaching space to train teachers, and to deliver estuary habitat education programs to promote stewardship of Tomales Bay.
- Ensure staff have vehicle and vessel access to conduct field work. Ensure GFNMS vessel has covered storage and dock access on Tomales Bay to facilitate field work.





# GREATER FARALLONES & CORDELL BANK NATIONAL MARINE SANCTUARIES JOINT ADVISORY COUNCIL MEETING

9:00am – 4:30pm PT Hybrid Meeting San Francisco Zoo and Botanical Gardens <u>and</u> Google Meet

### **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 Cordell Bank National Marine Sanctuary (CBNMS), Greater Farallones National Marine Sanctuary (GFNMS), or the National Oceanic and Atmospheric Administration (NOAA).

To view slides from any presentation referenced in this document, please email tishma.patel@noaa.gov.

# **CBNMS Advisory Council Business**

CBNMS Advisory Council (CBNMS AC) Chair Jeff Dorman welcomed all to the meeting and called roll for the council. See Appendix I for CBNMS AC attendance record for this meeting.

The council then welcomed new member Dick Ogg who will serve as one of the two Fishing members, Daisy Ruvalcaba who will serve as one of the two Maritime Activities members, Jeff Dorman who will serve as one of the two Research members, and Jaime Jahncke who will serve as one of the two Research members.

The council then approved the draft meeting highlights from the November 2023 council meeting. Community-at-Large Sonoma County member Steve Tubbs motioned to approve the highlights and Maritime Activities member Kai Martin seconded the motion.

<u>CBNMS AC MOTION: Approve November Meeting Highlights</u> Vote: 6 yes, 0 no, 0 abstain

A copy of the meeting highlights is available upon request to tishma.patel@noaa.gov, and will be posted online at <a href="https://cordellbank.noaa.gov/council/documents.html">https://cordellbank.noaa.gov/council/documents.html</a>.

### **CBNMS Advisory Council Member and Alternate Reports**

Council members and alternates shared reports from their constituencies.

Community-at-Large Mendocino-Sonoma member Steve Tubbs has been continuing to contact constituents on social media to promote awareness of our local National Marine Sanctuaries and the National Marine Sanctuary system in general. He teaches fly casting and fly fishing classes to children and adults at the Russian River Fly Fishers organization and is sharing information to promote awareness about the GFNMS and CBNMS in these classes. As a board member of the RRFF, he shared that the organization continues to sponsor the Steelhead in the Classroom

Program and has sponsored over 30 classrooms this year (of more than 100 participating classrooms in Sonoma and Mendocino County). The sponsorship involves mentoring participating classrooms as needed with RRFF volunteers. Steve also leads hikes on the Sonoma Marin coast and shares information with these participants regarding GFNMS and CBNMS.

Fishing member Richard Ogg mentioned that the crab fishery got a late start, all crabbing has been reduced to 50% and the fishing industry will maintain that percentage throughout the season and that resources have been concentrated. Fishermen are beginning to see whales return and there is some speculation that the season will end soon. Also, there has been an opportunity to develop an emergency gear recovery program to access lost gear in water to prevent marine mammal interactions.

Maritime Activities member Kai Martin stated that there has been a voluntary vessel slowdown for whale conservation.

Research member Jaime Jahncke went to the Marine & Coastal Area-based Management Federal Advisory Committee meeting at the beginning of February where the participants discussed how the committee will work. He is working on completing a four year project on offshore winds to meet the target for the California Assembly Bill 525 that will become public on March 15.

Research member Jeff Dorman highlighted the recent influx of data and financial support for ocean observing systems, for both central and southern California, through the Inflation Reduction Act.

# **State Treasurer Fiona Ma Welcoming Remarks**

Fiona Ma addressed both GFNMS and CBNMS Advisory Councils and mentioned that Ocean Beach is dealing with erosion and she is working with the Surfrider Foundation. She also highlighted that spreading awareness for the ocean and conservation is important.

# **GFNMS Advisory Council Arrives and Roll Call**

GFNMS Advisory Council (GFNMS AC) Vice Chair Sarah Bates welcomed all to the meeting and called roll for the council.

See Appendix II for GFNMS AC attendance record for this meeting.

# **GFNMS and CBNMS Superintendent's Report**

Maria Brown, Superintendent of GFNMS and CBNMS, provided updates on GFNMS and CBNMS Operations, Research, Education/Outreach, and Resource Protection program activities since the last council meeting in February.

Highlights included 1) developing a memorandum of agreement with UC Davis Bodega Marine Laboratory to partner on research and educational programming; 2) a new publication, released in December 2023, regarding remote mapping on the West Coast to determine the appropriate mapping process for kelp canopy monitoring; 3) GFNMS Condition Report has a target completion date in July; and 4) a Coastal Resilience Permitting Efficiency Roadmap to navigate the regulatory process for coastal sediment management actions on the North-Central California Coast to be released next week.

# **Emergency Response and Enforcement Updates**

Sam Reigner, NOAA Enforcement Officer, Paul Ortiz, NOAA Office of General Counsel Enforcement Section, and Eric Kaufmann-Cohen, General Counsel Department of Justice, Aviation, Space & Admiralty Section all provided a brief report on recent events that have occurred within the sanctuaries.

Sam Reigner, highlighted six resolved incidents that occurred recently which are: 1) a SUV in Bolinas Lagoon; 2) two plane crashes, one near Moss Beach and the other at Poplar Beach, both in the northern portion of MBNMS; and 3) three recreational sailboats in Tomales Bay. There is currently one active incident, a fishing vessel, *Aleutian Storm*, that grounded 1 mile north of Mussel Point, in Sonoma Coast State Park. The vessel had approximately 800-1,000 gallons of diesel on board and roughly 200 gallons have been removed. Operations to remove the vessel are limited due to the tides and the unified command will continue to monitor the vessel owner's salvage operations to ensure the safety of the public and protection of the environment.

Community-at-Large Marin County alternate Richard James asked if boating incident reports from responding agencies are publicly available, to which Sam responded yes after the case is closed.

Community-at-Large San Francisco-San Mateo member Bart Selby inquired about the issues with Jet Skis at Pillar Point Harbor. Sam responded that the Monterey Bay National Marine Sanctuary (MBNMS) has listed Jet Skis as an important issue and it is being assessed.

Fishing member Richard Ogg asked if there was a way to improve coordination on efforts for grounded vessels. Sam responded that there is thorough documentation and increasing communication efforts between agencies.

Paul Ortiz mentioned that this year the policy on penalties is being re-evaluated and in about four months a draft will be available for public comment. There is a statute that is produced every year for the amount of penalties that can be issued, but these penalties in no way cover the complete cost of damage. Also, data and weather buoys are frequently hit by boats and are sometimes used by fishing boats as bait tethers. These buoys are also used to detect tsunamis so efforts are being made to try and enforce regulations to keep them from being used unlawfully and/or damaged.

Fishing member Richard Ogg asked if there was any visual monitoring on the buoys to identify perpetrators. Paul mentioned that the buoys have cameras, but fishermen have been known to put bags over the cameras.

Education member Mary Miller asked how the penalty policies align with maritime disasters. Paul responded that they are separate.

Community-at-Large Marin member George Clyde asked for clarification on the policy on penalties. Paul stated that the NOAA Office of Law Enforcement has different penalty ranges for on scene tickets and it offers the violator an option to settle quickly.

# Monterey Bay National Marine Sanctuary Superintendent's Report

Lisa Wooninck, Superintendent of Monterey Bay National Marine Sanctuary (MBNMS), provided a brief report on recent and upcoming events at the sanctuary.

Highlights included 1) a new tool, the West Coast National Marine Sanctuaries Marine Heatwave Tracker, in collaboration with the California Current Integrated Ecosystem Assessment team to see where marine heatwaves occurred recently in each of the six West Coast sanctuary regions; 2) a project at Tanker Reef where divers culled urchins; and 3) on February 24 shipping containers were lost and only one container was found outside of MBNMS waters.

### **Public Comment**

Margaret Fisher, Bay Area Resident: I strongly support the resolution for expanding the Voluntary Speed Reduction to year round, since scientific studies show whales are present year round. I encourage you to approve the Sanctuary Advisory Councils for Greater Farallones and Cordell Bank National Marine Sanctuaries joint recommendation to expand the voluntary, sanctuary-wide, vessel speed reduction (VSR) to include year-round vessel speed reduction measures to protect whales in the waters of the Greater Farallones and Cordell Bank National Marine Sanctuaries. If we want to truly protect whales we need to follow the science.

<u>Linda Saint Amant, Stinson Beach Resident</u>: It is imperative that container ship speed be reduced to limit, or better yet alleviate any ships from striking whales off the coast of Marin County. Container ships cross their migratory path, along a route they have taken for thousands of years. The least we can do to protect them is to simply enforce that ships slow down to a prescribed speed limit, while carefully looking out for them in this busy shipping hub.

Geoff Moore, Ocean Beach Resident: I support the idea of GFNMS incorporating the San Francisco Pacifica Exclusion Area into GFNMS non-contiguously. I have been a resident of Ocean Beach for several decades, and continue to eagerly await this type of positive change for properly and carefully managing our coastal resources. Ocean Beach and nearby bay marine areas are a critically important part of Northern California's marine environment and should be recognized with this change and should join other existing protected areas. We are witnessing the possibility of serious and extreme environmental impacts from natural and human effects upon the coastline. Please take the necessary steps to pursue this positive change. Thanks again.

Margaret Cox, Sonoma State University: As a graduate student in marine mammal biology, a working marine mammal biologist, and a resident of Bolinas, I strongly recommend that the vessel speed reduction be extended. We have seen multiple whale strandings in Bolinas with confirmed mortality from ship strikes over the past few years, including blue and fin whales. A true tragedy for these fragile species. An extended vessel speed reduction would likely be impactful in preventing these events. The choice seems clear to value these sentinel species over the monetary gain of huge corporations. Please make the decision to further protect vulnerable whales.

<u>Jill Field</u>: Please extend this reduction in speed of the large ships passing our coast in protection of the whales.

<u>Doug McCauley, Callie Leiphardt, and Rachel Rhodes, Benioff Ocean Science Laboratory:</u> Submitted a letter in support of the GFNMS and CBNMS Proposed Resolution to Support Year-Round Protection for Endangered Whales

<u>Jeff Loomans, President, Greater Farallones Association</u>: On behalf of GFA as President of the Board and as a resident of coastal Marin County, I support the proposed resolution for Year-Round Protection for Endangered Whales.

<u>Deb Self, Executive Director, Greater Farallones Association (GFA)</u>: As executive director of Greater Farallones Association (GFA), which operates in partnership with GFNMS and CBNMS to conduct community-based science to inform management decisions, and operates joint education and restoration projects with the sanctuaries, I'd first like to voice strong support for the resolution to extend the voluntary speed reduction program to a year-round basis. Secondly, I wanted to note that many of the "community programs" included in the Sandy Beach Topic Briefing are operated by GFA as joint projects under a Memorandum of Agreement between GFA and the Office of National Marine Sanctuaries (ONMS). I am gratified that GFNMS staff have recommended to the advisory council that this science, restoration, and education work continue. I wanted to clarify for everyone's awareness that many of the projects listed are funded completely by grants and gifts raised by GFA, and the work is dependent on our ability to continue raising funds from foundations. I should have mentioned this earlier in the year, as many other joint projects recommended for continuation in prior topic briefings are also entirely dependent on GFA funding. These include: 1) Marine Explorers Camp: (3rd-6th grade); 2) Oceans After School; 3) At Your School; 4) LiMPETS high school students conducting sandy beach and rocky intertidal science; 5) Kelp science and restoration; 6) Blue Carbon research; 7) Whale Protection strategy workshops; and 8) Beach Watch. Also, I would like to request that the Education and Outreach portion of each of the topic briefings, including Sandy Beach, include the language from the kelp restoration topic briefing: "The advisory council recommends that Greater Farallones National Marine Sanctuary explore a cultural landscape approach to developing responsive and equitable access, education, and community engagement." Finally, I would like to ask the Sanctuary Advisory Council to form a Working Group on equitable access and engagement with underrepresented communities to advise GFNMS (and any related Federal Advisory Council).

Leila Monroe, Clear Resource Law on behalf of the Natural Resources Defense Council (NRDC) and as a Resident of West Marin: NRDC respectfully encourages that first, the GFNMS management plan review process prioritize actions to address those impacts of greatest concern to the Sanctuaries and California's marine ecosystems, including future industrial activities that are likely to be proposed and expanded in coming years. Second, given California's interest in working with the National Marine Sanctuaries to fulfill its 30x30 commitment, it is critically important that there be strong, two-way coordination between the State of California and the Sanctuaries as the Management Review is proceeding. Third, NRDC urges the Advisory Councils to consider strengthening the Resolution to jointly recommend year-round mandatory vessel speed reduction measures to adequately protect endangered whales in the two sanctuaries.

<u>Evan Rosen</u>, 24 years ago the San Francisco Board of Supervisors passed a resolution saying waters off of Ocean Beach should be included within GFNMS. I am asking to alter the current boundary to encompass the entire Gulf of Farallones, and I am asking San Francisco and Pacifica to be included within GFNMS along with the waters off of Ocean Beach.

<u>Eileen Boken, the Coalition for San Francisco Neighborhoods</u>: Incorporate the waters off of Ocean Beach into GFNMS as a non-contiguous area.

<u>Grace Milstein, Environmental Action Committee in West Marin</u>: I am asking for protection of deep sea corals, and I thank the GFNMS Advisory Council for adopting the resolution in their December meeting. I am upset that the California Department of Fish and Wildlife declined the motion in December.

### **Presentation on Blue Carbon Sediment in the Sanctuaries**

Sara Hutto, Conservation and Climate Program Coordinator, provided a presentation on Blue Carbon Sediment within GFNMS and CBNMS.

Following the presentation, the council engaged in discussion with sanctuary staff.

Fishing member Richard Ogg asked if you can tell if there is movement of sediment and temporal dynamics. GFNMS/CBNMS Conservation and Climate Program Coordinator Sara Hutto responded that processes leading to carbon accumulation seems pretty consistent since it is more dependent on hydrology so there may be some effect but not significant enough.

# Joint GFNMS and CBNMS Advisory Council Business Action item: Joint GFNMS AC and CBNMS AC 2024 Draft Workplan

The councils reviewed and discussed the 2024 Joint GFNMS AC and CBNMS AC Work Plan. Council Coordinator Tishma Patel reiterated that all council meetings in 2024 would be held jointly with both GFNMS and CBNMS Advisory Councils given that both sanctuaries are headed into management plan review.

Conservation member Francesca Koe inquired about deep sea coral protections in the management plan review process. Superintendent Brown mentioned that during the management plan review, any actions that either GFNMS AC and CBNMS AC request for the sanctuary to explore will happen during the management plan review. Also, the sanctuary will be developing a scoping document that will include recommendations from both GFNMS AC and CBNMS AC over the last 10 years and will be available to the public.

Maritime Activities member Kai Martin motioned to approve the joint 2024 workplan and Community-at-Large Sonoma member Steve Tubbs seconded.

<u>CBNMS AC MOTION: Approve 2024 Joint GFNMS AC and CBNMS AC Workplan</u> Vote: 6 yes, 0 no, 0 abstain

To view the 2024 Workplan, please visit <a href="https://cordellbank.noaa.gov/council/charter.html">https://cordellbank.noaa.gov/council/charter.html</a>

Conservation member Kathi George motioned to approve the joint 2024 workplan and Research alternate member Ellen Hines seconded.

GFNMS AC MOTION: Approve 2024 Joint GFNMS AC and CBNMS AC Workplan Vote: 11 yes, 0 no, 0 abstain

To view the 2024 Workplan, please visit <a href="https://farallones.noaa.gov/manage/sac">https://farallones.noaa.gov/manage/sac</a> handbook.html

# Action item: GFNMS AC and CBNMS AC Proposed Resolution to Support Year-Round Protection for Endangered Whales

The councils discussed and provided edits to a draft Proposed Resolution to Support Year-Round Protection for Endangered Whales prepared by GFNMS AC Chair Jaime Jahncke.

Following discussion, both councils made suggested edits to the draft Proposed Resolution to Support Year-Round Protection for Endangered Whales, to send the letter to Superintendent Brown, and request that she send it to the West Coast Regional Office and the National Office of the National Marine Sanctuaries.

CBNMS AC Community-at-Large Sonoma member Steve Tubbs motioned to approve the draft Proposed Resolution to Support Year-Round Protection for Endangered Whales. Maritime Activities member Kai Martin seconded.

# CBNMS AC MOTION: Approve Joint GFNMS AC and CBNMS AC Proposed Resolution to Support Year-Round Protection for Endangered Whales

Vote: 6 yes, 0 no, 0 abstain

GFNMS AC Conservation member Francesca Koe motioned to approve the draft Proposed Resolution to Support Year-Round Protection for Endangered Whales and Maritime Recreational Activities member Mark Bartolini seconded.

# <u>GFNMS AC MOTION: Approve Joint GFNMS AC and CBNMS AC Proposed Resolution to Support Year-Round Protection for Endangered Whales</u>

Vote: 12 yes, 0 no, 0 abstain

CBNMS Advisory Council adjourned and GFNMS Advisory Council continued to meet on agenda items that are specific to GFNMS.

### **Update on Deep Sea Coral Research and Restoration Areas in GFNMS**

The council was given an update on the response from the California State Representatives to the Pacific Fishery Management Council.

Following the update, the council engaged in discussion with sanctuary staff.

Commercial Fishing member Sarah Bates asked for clarification if the project will continue within GFNMS, Superintendent Brown stated no but the sanctuary will continue data collection on deep sea corals.

# Presentation on the Coastal Resilience Permitting Efficiency Roadmap

Wendy Kordesch, Geological Oceanographer, provided a presentation on the Coastal Resilience Permitting Efficiency Roadmap within GFNMS and CBNMS.

Following the presentation, the council engaged in discussion with sanctuary staff.

Education member Mary Miller asked if the tools could also be used for San Francisco Bay even though it is excluded? Wendy stated, yes because this is for state, local, and federal information.

Community-at-Large San Francisco-San Mateo member Bart Selby asked how would the sanctuaries reconcile harbors in living shoreline? Wendy responded that harbors are essential and living shorelines are being placed where there is room and the ability to do so.

### **Action item: Sandy Beach**

GFNMS/CBNMS staff provided a comprehensive presentation on Sandy Beach work that has taken place since the last management plan review in 2014. The presentations included information on resource protection, conservation science, and education activities as well as staff recommendations for activities for the next management plan.

Following the presentations, the councilsengaged in a discussion with sanctuary staff.

Education member Mary Miller asked GFNMS/CBNMS Education and Outreach Coordinator/Media Liaison Jenny Stock if she could discuss ongoing work for undergraduates and community college students regarding internships and outreach to marginalized groups. Jenny said that current programs work with undergrads in field trips to Visitor Center. LIMPETS helps with this as well but also recommendations are welcome. Justin added that they emphasize outreach with professors at City College of San Francisco and students

Following discussion, the councils made edits and additions to staff recommendations. GFNMS Advisory Council motioned to support the staff recommendations with Sanctuary Advisory Council edits. Maritime Commercial Activities alternate member Kai Martin motioned to support the staff recommendations with Advisory Council edits and Conservation member Francesca Koe seconded the motion.

### GFNMS AC MOTION: To support recommendations for Sandy Beach

Vote: 11 yes, 0 no, 0 abstention. The recommendations will be forwarded to the sanctuary.

To view the recommendations within the topic briefing, please visit <a href="https://farallones.noaa.gov/manage/sac">https://farallones.noaa.gov/manage/sac</a> actions.html.

# **GFNMS Advisory Council Business**

The council approved the draft meeting highlights from the December 2023 council meeting. Maritime Commercial Activities alternate member Kai Martin motioned to approve the highlights and Community-at-Large Mendocino-Sonoma member Steve Tubbs seconded.

### GFNMS AC MOTION: Approve December 2023 Meeting Highlights

Votes: 11 yes, 0 no, 0 abstention.

# **GFNMS AC Member and Alternate Reports**

Council members and alternates shared reports from their constituencies.

Community-at-Large San Francisco-San Mateo member Bart Selby states our brown pelicans, who usually head for Mexico and the Channel Islands in November or early December, were here in substantial numbers into January. A paper he is a co-author on investigated brown pelican injuries and rehabilitation was published in the fall and was presented last week at the seabird meeting in Seattle. The bulk of the sightings data for that paper came out of Pillar Point harbor, making it one of the most important non-breeding roosts in the state. Observers on the coast and in Pillar Point harbor have noticed an alarming number of dead and ill seabirds over the last few weeks' these were mostly Common Murres. The county is doing no collection, placarding or testing of carcasses that he is aware of. On top of this the harbor district does not enforce off leash dog laws, and the beaches are overrun with off leash dogs essentially all day every day. This potentially toxic mix, if birds are dying from Highly Pathogenic Avian Influenza (HPAI), is a vector for further spreading it out of the marine environment. The big wave events were a disaster for wildlife, jet skis in the harbor at 40 mph terrorizing birds and pinnipeds. He received calls from stand up paddle boarding surfers concerned about the potential for serious injuries complaining about jet skis operating too fast too close to surfers at the break. Jet skis continue to use the break anytime there are waves, regardless of restrictions. The harbor continues to be anything but that for wildlife. In high wind events birds seek shelter on the jetties- kite surfers run sails and foils over them at speeds in excess of 40 mph, flushing and causing injuries. A kite surfer was fatally injured last week in the harbor. On the big surf days jetskis were doing 20-30mph in the inner harbor, flushing pelicans. Up to a quarter of our harbor seals on some days have significant propeller scars.

Conservation member Francesca Koe recently attended the Eastern Pacific Kelp Recovery Workshop. Also, there is a Kelp Restoration Network meeting in March where there will be a presentation on the resilience of kelp in different ecosystems. The International Ocean Film Festival Celebration of Women in Ocean Science is honoring Jennifer Stock as a woman in science.

Commercial Fishing member Sarah Bates stated that the crab season started late and is in full swing. Projected ocean abundance of Sacramento River Fall Chinook is expected 15-20% return; have reached the conservation minimum by unsustainable measures. She is attending the Pacific Fisheries Management Council meeting in March. There is a multi-port gear recovery effort to set up retrieval of any gear found after the crab fishery season ends and there are also efforts to seek to change some policy on gear recovery.

Commercial Fishing alternate member Richard Ogg added to Sarah Bate's comment on gear retrieval, since fishermen do not have as much gear in the water currently, there is tendency of losing or leaving behind equipment. So, they are anticipating a lot of lost gear and the industry is trying hard to retrieve all crab fishing gear.

Conservation member Kathi George stated that the Harbor Safety Committee Marine Mammal Working Group is seeking to reduce mammal impact with the bay and 24 recommendations have been made to prevent ship strikes. Also, she will be on a panel at the meeting in Chicago on ship strikes and safety, and the working group will be trying to replicate these efforts in other ports.

Maritime Commercial Activities alternate member Kai Martin stated that there has been a voluntary vessel slowdown for whale conservation.

Education member Mary Miller had no updates at this time.

Maritime Recreational Activities member Mark Bartolini wants to create a best practices guideline for mooring boats.

Community-at-Large Marin alternate member Richard James mentioned that the recent storms have caused an influx of beach trash, especially in Tomales Bay and would like to see the reduction of it

Community-at-Large Mendocino-Sonoma member Steve Tubbs has been continuing to contact constituents on social media to promote awareness of our local National Marine Sanctuaries and the National Marine Sanctuary system in general. He teaches fly casting and fly fishing classes to children and adults at the Russian River Fly Fishers organization and is sharing information to promote awareness about the GFNMS and CBNMS in these classes. As a board member of the RRFF, he shared that the organization continues to sponsor the Steelhead in the Classroom Program and has sponsored over 30 classrooms this year (of more than 100 participating classrooms in Sonoma and Mendocino County). The sponsorship involves mentoring participating classrooms as needed with RRFF volunteers. Steve also leads hikes on the Sonoma Marin coast and shares information with these participants regarding GFNMS and CBNMS.

Research alternate member Ellen Hines is getting ready for the International Whaling Commission Scientific Meeting for risk assessment.

Research member Jaime Jahncke stated that Point Blue Conservation has lost their government funding for their work on the Farallon Islands. They are trying to raise funds in order to keep collecting data.

Community-at-Large Marin member George Clyde has no updates at this time.

Meeting highlights prepared by Tishma Patel, Advisory Council Coordinator.

Appendix I. CBNMS AC Attendance for the February 2024 GFNMS/CBNMS Advisory Council Meeting. The blue rows are voting members and the purple rows are non-voting members.

| Name            | Seat                      | Attendance |
|-----------------|---------------------------|------------|
| Vacant          | Community-at-Large Marin  |            |
| Vacant          | Community-at-Large Marin  |            |
| Frank Capurro   | Community-at-Large Sonoma | N          |
| Steve Tubbs     | Community-at-Large Sonoma | Y          |
| Scott Artis     | Conservation              | N          |
| Vacant          | Conservation              |            |
| Bibit Traut     | Education                 | N          |
| Vacant          | Education                 |            |
| Chris Ohanian   | Fishing                   | N          |
| Richard Ogg     | Fishing                   | Y          |
| Kai Martin      | Maritime Activities       | Y          |
| Daisy Ruvalcaba | Maritime Activities       | Y          |

| Jeff Dorman<br>(Chair) | Research  | Y |
|------------------------|---|---|
| Jaime Jahncke          | Research  | Y |
| Lisa Wooninck          | Monterey Bay National Marine Sanctuary (Non-voting member)    |   |
| Dawn Hayes             | Monterey Bay National Marine Sanctuary (Non-voting alternate) | N |
| LT Kynan Barrios       | National Marine Fisheries Service (Non-voting member)         | N |
| Vacant                 | National Marine Fisheries Service (Non-voting alternate)      |   |
| LTJG Nazere<br>Jones   | United States Coast Guard (Non-voting member)                 | N |
| Vacant                 | United States Coast Guard (Non-voting alternate)              | N |

# Appendix II. GFNMS AC Attendance for the February 2024 GFNMS/CBNMS Advisory Council Meeting. The blue rows are voting members and the purple rows are non-voting members.

| Name        | Seat                         | Attendance |
|-------------|------------------------------|------------|
| Sarah Bates | Commercial Fishing (Primary) | Y          |

| Richard Ogg   | Commercial Fishing (Alternate)                         | Y |
|---------------|--|---|
| George Clyde  | Community-at-Large Marin (Primary)                     | Y |
| Richard James | Community-at-Large Marin (Alternate)                   | Y |
| Steve Tubbs   | Community-at-Large Mendocino-Sonoma (Primary)          | Y |
| Vacant        | Community-at-Large Mendocino-Sonoma (Alternate)        |   |
| Bart Selby    | Community-at-Large San Francisco-San Mateo (Primary)   | Y |
| Vacant        | Community-at-Large San Francisco-San Mateo (Alternate) |   |
| Francesca Koe | Conservation (Primary)                                 | Y |
| Kathi George  | Conservation (Primary)                                 | Y |
| Scott Artis   | Conservation (Alternate)                               | N |
| Vacant        | Conservation (Alternate)                               |   |
| Mary Miller   | Education (Primary)                                    | Y |
| Vacant        | Education (Alternate)                                  |   |

| Jacqueline Moore | Maritime Commercial Activities (Primary)               | Y |
|------------------|--|---|
| Kai Martin       | Maritime Commercial Activities (Alternate)             | Y |
| Mark Bartolini   | Maritime Recreational Activities (Primary)             | Y |
| Peter Molnar     | Maritime Recreational Activities (Alternate)           | N |
| Jaime Jahncke    | Research (Primary)                                     | Y |
| Ellen Hines      | Research (Alternate)                                   | Y |
| Amelia King      | Youth (Primary)  | N |
| Vacant           | Youth (Alternate)                                      |   |
| Jenn Eckerle     | California Department of Natural Resources (Primary)   | N |
| Abby Mohan       | California Department of Natural Resources (Alternate) | Y |
| Craig Kenkel     | National Park Service (Primary)                        | Y |
| Ben Becker       | National Park Service (Alternate)                      | N |

| LTJG Nazere Jones | U.S. Coast Guard (Primary)                            | N |
|-------------------|---|---|
| Vacant            | U.S. Coast Guard (Alternate)                          |   |
| Matthew Brown     | U.S. Fish and Wildlife Service (Primary)              | N |
| Gerry McChesney   | U.S. Fish and Wildlife Service (Alternate)            | N |
| Jennifer Boyce    | National Marine<br>Fisheries Service (Primary)        | Y |
| Vacant            | National Marine Fisheries Service (Alternate)         | - |
| Chris Mobley      | Channel Islands National Marine Sanctuary (Primary)   | N |
| Mike Murray       | Channel Islands National Marine Sanctuary (Alternate) | N |
| Lisa Wooninck     | Monterey Bay National Marine Sanctuary (Primary)      | Y |
| Dawn Hayes        | Monterey Bay National Marine Sanctuary (Alternate)    | N |

### **Advocating for Continued Support:**

# The Crucial Role of Farallon Island Data in Sanctuary Management

### The Challenge

- The U.S. Fish and Wildlife Service is working closely with our on-site conservation partner,
   Point Blue Conservation Science, to adapt how the Farallon Islands National Wildlife
   Refuge is managed.
- Moving forward, the Service is evaluating year-round presence on the islands due to resource challenges.
- Point Blue and the Service are working on a plan to prioritize management activities on the islands and focus on critical seasonal activities.

### Why bring the Farallon issue to the SAC?

- Loss of year-round data will impact the sanctuary, not just the Farallon Island NWR, or PB's research.
- The SAC members can help identify what sanctuary management issues may be affected by the lack of island data and what sanctuary activities may need to be modified (or cut) if there is no data to support management issues.

### What potential actions can the SAC take?

- The SAC members can write a letter to Maria and HQ requesting financial support for data that may be critical for sanctuary management.
- Individuals and organizations can lobby their state and federal representatives, as individuals, for more funds for the refuge system and/or the sanctuary (I did this recently for NOAA IOOS, about 53 individual letters!).

The loss of Farallon data will likely impact the following goals in the ONMS Strategic Plan Five Year Strategy for the National Marine Sanctuary System 2022-2027 | Office of National Marine Sanctuaries (noaa.gov)

# **Goal 1. Ensure Healthy and Resilient Sanctuaries and Other Marine Protected Areas**

This goal is crucial in fostering ecosystems that can resist and recover from environmental pressures, including human impacts and climate change. The collection of data from the Farallon Islands data supports this goal and the loss of the data will have significant impacts to sanctuary management.

- Island Stewardship Activities: The presence on the island during fall and winter helps deter unauthorized landings and supports ongoing scientific research and outreach focused on sanctuary wildlife and ecosystems. Without this data, stewardship and protective measures are compromised.
- White Shark and Whale Data Collection: The collection of data on white sharks during the fall, as well as whale counts in the fall and winter, are essential for understanding predatorprey dynamics and overall ecosystem health. This data collection supports understanding of species' seasonal arrivals and departures and shifts in seasonal dynamics over time,

presence and absence of species, and is one of the only datasets for the winter months in the GFNMS offshore environment when at-sea surveys are not active. This data informs critical management decisions such as the timing of the Voluntary Speed Reduction (VSR) to reduce ship strikes to whales, and the crab fishery opening to prevent whale entanglements.

- Reporting Violations: Information on disturbances to wildlife and violations is critical to sanctuary management as Point Blue is the often the only source of information from the islands in the winter months. Also, information on the sources and magnitude of wildlife disturbances were critical datasets for the GFNMS condition report. Effective enforcement of regulations is jeopardized by the inability to report boat violations, including disturbances to seabirds and approaching white sharks too closely, as well as overflight violations. This lack of reporting makes it difficult to enforce rules that are designed to protect these sensitive environments.
- Response to Environmental Threats: Immediate responses to vessel groundings and oil
  pollution events, including capturing oiled wildlife for rehabilitation, are integral to
  minimizing environmental damage. Without timely data and intervention, the impact of
  such events could be much more severe.

# Goal 3. Increase and Broaden Public Support for Ocean Conservation and the Sanctuary System

Engaging the community through educational and outreach activities helps build a strong foundation of support for conservation efforts, which is critical for the long-term sustainability of these protected areas. The impact of losing Farallon crew support and data on this goal includes:

- Reduced Outreach and Education Opportunities: The loss of island stewardship activities limits opportunities to produce educational content and engage the public on sanctuary wildlife and ecosystems, such us Live from the Farallones focusing on sharks or elephant seals. This reduction in outreach efforts may lead to decreased public awareness and support for conservation initiatives.
- Point Blue Collaboration: The collaboration with Point Blue supports the sanctuary's
  intertidal science team and facilitates access to the island, which is crucial for both research
  and development of the outreach products this team develops (e.g., 360 immersive
  imagery). Loss of these collaborative efforts can diminish the effectiveness and reach of
  sanctuary programs.
- Support for Marine Mammal Disturbance Permits: Assisting with marine mammal disturbance permits involves public awareness and regulatory compliance, which are vital for maintaining public trust and support for the sanctuaries.

### **Goal 4. Deepen Understanding of Sanctuaries**

Data collection activities such as monitoring white sharks, whales, pinnipeds, and elephant seals, as well as gathering information on seabird and pinniped mortality events, are essential for ongoing sanctuary management. The loss of Farallon data directly affects this goal by eliminating critical year-round research and monitoring activities:

- Comprehensive Data Collection: The loss of comprehensive fall and winter data on pinnipeds, elephant seals, seabirds, unusual wildlife mortality events, and the tracking of Highly Pathogenic Avian Influenza during critical seasonal migrations hinders the ability to monitor ecosystem health and trends.
- Environmental Monitoring: Long-term year round environmental monitoring data such as salinity and temperature, crucial for understanding climate change impacts, will also be lost, compromising the ability to assess long-term ecological changes.
- Facilities Maintenance and Support: The loss of facilities maintenance undermines the
  infrastructure necessary for ongoing research activities, further reducing the capacity for
  scientific studies and data collection. Without staff on the islands during fall and winter
  would lead to deterioration of crane and power house (solar panels, generator, batteries),
  mice infestation of the main house and the loss of usability and access to visiting scientists
  such as sanctuary staff.

### List of potential impacts

- 1. All island stewardship activities in fall and winter (presence on island deterring people from landing, producing science and outreach on Sanctuary wildlife and ecosystems) (Goals 1, 3, 4)
- 2. white shark data collection in fall (Goal 1, 3 and 4)
- 3. whale count data collection in fall and winter (no data to inform crab fishery opening and prevent entanglements, no year-round data needed to support year-round vessel speed reduction request or regulation (Goal 1, 3, 4)
- 4. pinniped data in fall and winter (Goal 4)
- 5. all elephant seal data in winter (Goal 4)
- 6. reporting mortality events in relationship to mainland events (seabird or pinniped wrecks) (Goal 4)
- 7. tracking Highly Pathogenic Avian Influenza during the fall and winter songbird migration months (Goal 4)
- 8. salinity and temperature data from fall and winter for the shore station established in 1925 (Goal 4)
- 9. reporting boat violations. State violations that also protect sanctuary resources such as vessels entering the seabird special closures and causing disturbances (Goal 1 and 4)
- 10. reporting shark related violations. Vessels getting too close or approaches white sharks (Goal 1)
- 11. reporting fall and winter overflight violations (Goal 1)
- 12. maintaining and replacing the Farallon Webcam (Goal 3)
- 13. Point Blue support to GFNMS intertidal science staff to access the island, assistance with permitting and facilities (Goals 3 and 4)
- 14. loss of facilities maintenance (Goal 1, 3, and 4)
- 15. assisting sanctuary with marine mammal disturbance permit (Goal 3 and 4)
- 16. reporting oil pollution events and capturing oiled wildlife for rehab (Goal 1)
- 17. immediate response to vessel groundings (Goal 1)

# We plan to highlight impacts to other federal and state agency programs and will be making similar requests to those agencies

### **Federal agencies**

- NOAA ONMS GFCBNMS Maria Brown (use data to assess sanctuary species status and trends of sanctuary resources for condition reports and management)
- NOAA ONMS CINMS/MBNMS/GFCBNMS BWBS and VSR (Ask Sean Hastings)
- EPA BWBS Collaboration (suggested by Sean Hastings)
- USCG BWBS Collaboration (suggested by Sean Hastings)
- USGS Contaminant monitoring among others (Ask Herzog, Ackerman)
- NOAA's IEA Chris Harvey, Andy Leising (use data annually for PFMC report)
- NOAA's NMFS John Field, Nate Mantua (use data to monitor fish stocks and analysis)
- NOAA's CalCOFI Noelle Bowlin, Andrew Thompson (use data for state of the CA current report)
- NOAA CeNCOOS and SCCOOS Henry Ruhl and Clarissa Anderson, critical data for ocean IOOS community, included in MOCI-kelp seabird indicator analysis.
- NOAA's MML Tony Orr, Sharon Melin (tagging studies, pinniped resighting, pinniped diet)
- NPS Point Reyes National Seashore Sarah Allen & Sarah Codde (pinnipeds), Ben Becker (seabirds); collaboration ELSE, share permit

### State agencies? Would they get involved?

- CDFW Marine Region MPA enforcement and report violations for NFISMR, SFISMR, SFISMCA, special closures during breeding season - who should we ask? (ask Ryan Bartling or Lindsay Bonito for suggestions)
- CFDW Marine Region Dungeness Crab RAMP whale data for management who should we ask? (ask Ryan Bartling or Lindsay Bonito for suggestions)
- OPC MPA related (Jenn Eckerle)
- OST MPA related (Liz Whiteman)
- Air Pollution districts BWBS collaboration SF area

#### **Science collaborators:**

- Farallon Institute Bill Sydeman
- HT Harvey Dave Ainley
- Oikonos Michelle Hester
- Greater Farallones Association Deb Self
- MBARI Francisco Chavez
- Bird Population Studies Peter Pyle
- Benioff Ocean Institute and WhaleSafe Program Callie Steffen
- The Marine Mammal Center Kathi George, Jeff Boehm
- California White Shark Project Paul Kanive, Scott Anderson
- Conservation Metrics Matthew McKowan

• Berkeley Seismographic Laboratory – who should we ask? (we support/maintain their equipment)

### Mouse eradication partners:

- ABC Ask Brad Keitt
- TNC Ask Nick Holmes or Jono Wilson
- IC Ask Patty Baiao

### **University partners:**

- Stanford Barbara Block (sharks)
- SJSU Scott Shaffer (tagging)
- UC Davis Elisha Hull (seabird ecology)
- UC Berkeley David Ackerly
- SFSU Ellen Hines (ecosystem studies)
- HSU Dawn Goley
- Others?

### **Advocacy and environmental NGOs:**

- CBD Shaye Wolf
- NRDC Sandy Aylesworth
- Oceana Geoff Shester
- Audubon Madhavi Colton
- Oceanic Society Chris Bierteumpfel
- MCI Lance Morgan
- Shark Trust Glenys Heafield
- California Academy of Sciences Scott Sampson?
- eBird/Cornell Lab of Ornithology Brian Sullivan?
- Local Audubon Chapters Barbara Salzman, MaryJane Schramm
- Others?

### Request to write to:

Paul Souza
Regional Director
Pacific Southwest
U.S. Fish and Wildlife Service
2800 Cottage Way, Suite W-2606
Sacramento, CA 95825
paul souza@fws.gov
916-414-6469

Curtis McCasland Assistant Regional Director Refuges Program U.S. Fish and Wildlife Service California Great Basin Region 2800 Cottage Way, Suite W-2606 Sacramento, CA 95825 curt mccasland@fws.gov

Matthew Brown
Complex Manager
San Francisco Bay National Wildlife Refuge Complex
U.S. Fish and Wildlife Service
matthew brown@fws.gov
(510) 453-6695

# Request to write to:

# Congress

### California representatives

- Member Name
- Doug LaMalfa
- Jared Huffman
- Kevin Kiley
- Mike Thompson
- Tom McClintock
- Ami Bera
- Doris Matsui
- John Garamendi
- Josh Harder
- Mark DeSaulnier
- Nancy Pelosi
- Barbara Lee
- John Duarte
- Eric Swalwell
- Kevin Mullin
- Anna G. Eshoo
- Ro Khanna
- Zoe Lofgren
- Jimmy Panetta
- Jim Costa
- David Valadao
- Jay Obernolte
- Salud Carbajal
- Raul Ruiz

- Julia Brownley
- Mike Garcia
- Judy Chu
- Tony Cardenas
- Adam Schiff
- Grace Napolitano
- Brad Sherman
- Pete Aguilar
- Jimmy Gomez
- Norma Torres
- Ted Lieu
- Sydney Kamlager-Dove
- Linda Sanchez
- Mark Allan Takano
- Young Kim
- Ken Calvert
- Ken Calvert
- Robert Garcia
- Maxine Waters
- Nanette Barragán
- Michelle Steel
- Luis Correa
- Katie Porter
- Darrell Issa
- Mike Levin
- Scott Peters
- Scott Peters
- Sara Jacobs
- Juan Vargas