



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
1315 East-West Highway  
Silver Spring, Maryland 20910

John Calambokidis  
Chair, Pacific Scientific Review Group

Dear Mr. Calambokidis:

Thank you for the letter to Janet Coit, Assistant Administrator for Fisheries, transmitting recommendations from the March 2021 meeting of the Pacific Scientific Review Group (SRG).

The SRG has made many valuable recommendations to help guide NOAA Fisheries' marine mammal science and management, which are addressed in the enclosure. We appreciate the service and contributions by members of the Pacific SRG in providing advice and support to NOAA Fisheries in accordance with the Marine Mammal Protection Act. We look forward to our continued partnership to improve the science supporting the conservation of marine mammals.

Sincerely,

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Francisco Werner, Ph.D.  
Director of Scientific Programs and Chief Science Advisor

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Samuel D. Rauch III  
Deputy Assistant Administrator for Regulatory Programs

Enclosure

cc: Janet Coit, Assistant Administrator for Fisheries  
Evan Howell, Director, Office of Science and Technology  
Kim Damon-Randall, Director, Office of Protected Resources



## Pacific SRG's 2021 Recommendations

1. **The Pacific SRG requests receipt of an overview of the NMFS preparation for the possible initiation of Makah subsistence whaling.** The Pacific SRG is aware that an Administrative Law Judge will likely soon rule on litigation concerning the request by the Makah Tribe for a waiver to resume subsistence hunting for the eastern stock of gray whale.

*Response:* The Makah Tribe's request to resume ceremonial and subsistence whale hunts is still under review by the Agency. At this time, we can only provide an overview of recent and anticipated procedural steps in the process, which is still ongoing.

On September 23, 2021, Administrative Law Judge (ALJ) George Jordan issued a recommended decision regarding NMFS' proposed waiver and regulations under the Marine Mammal Protection Act (MMPA) for the Makah Tribe to take Eastern North Pacific (ENP) gray whales in treaty-based hunts. This recommended decision was a key step in the MMPA waiver review process. The ALJ recommended the NMFS' Assistant Administrator approve the MMPA waiver for the Makah Tribe and allow limited hunting of ENP gray whales under regulations and permits issued by NMFS.

On September 29, 2021, NMFS published a request for public comments on the ALJ's decision and accepted comments through November 13, 2021. [On December 10, 2021, NMFS notified the parties](#) involved in the ALJ hearing of the timeline for next steps. These steps include, but are not limited to: the publication of the Supplemental Draft Environmental Impact Statement (anticipated June 2022); the Final Environmental Impact Statement (anticipated early 2023); the publication of the final waiver decision; and, if the waiver is granted, associated regulations (anticipated early 2023). More details about the process we are following can be found in the flowchart and frequently asked questions document on our [website](#).

2. **The Pacific SRG requests an update at its next meeting on NMFS' effort to designate new Biologically Important Areas (BIAs) and its anticipated applications.** The original BIAs NOAA developed, while not having any specific regulatory powers, were used far more extensively than had been anticipated and even became part of some mitigation settlement agreements. Given this, we support NOAA pursuing revising BIAs for all regions using new data and a more formal set of criteria applied more consistently among regions. As best as practical such BIAs should be made as consistent with other spatial protection frameworks, like critical habitat, to make them easier to use.

*Response:* As noted, NMFS is updating the BIAs for all regions using the best available information, a new scoring and labeling protocol, and an enhanced structured elicitation and review process to increase consistency across regions. As requested, we will provide an update at the 2022 PSRG meeting.

- 3. The Pacific SRG requests an update on findings from newly funded FKW monitoring and management efforts in 2022 and recommends further development of other FKW bycatch mitigation measures.**

*Response:* PIFSC and PIRO will present a status update to the PSRG on the projects funded from the FY21 FKW appropriations at the 2022 SRG meeting. PIRO will also present the results of the “weak” hook study that compared catch retention on 4.2 vs 4.5mm hooks. The final report from this study was completed in November 2021 and will also be shared with the PSRG as a background document. PIRO can also present and share a summary of the 2021 FKW interactions in the longline fishery, and outcomes of those interactions.

- 4. The Pacific SRG recommends that the M&SI determination not be made fully automated but involve internal validation and input from the SRG and invited experts, especially given existing concerns detailed below.** The Pacific SRG was presented with a proposal to use machine learning to automate the process by which M&SI determinations are made. The SRG welcomed the analysis and its intent to update the existing criteria for defining M&SI and provide greater consistency across M&SI determinations. However, the following concerns were raised; 1) the potential biases in machine learning approaches (e.g., Mehrabi et al. 2019), 2) a mismatch between the binary outcome from the algorithm and the three M&SI categories defined under the MMPA, 3) the potential for individuals to bias determinations if they are aware of the key words most likely to lead to certain outcomes, and 4) using the algorithms’ results to standardize the language used in M&SI reports would then invalidate the continued use of the model to make M&SI determinations.

*Response:* NMFS will continue to have the PSRG review serious injury cases annually under the current serious injury protocols. Any validation of the random forest method presented to the three regional SRGs at their 2021 meetings will require publication in a peer-reviewed journal and coordination with SRGs moving forward.

- 5. The Pacific SRG reiterates its recommendations from 2018, 2019 and 2020 for implementing time-area closures of resting bays to protect spinner dolphins. The PSRG also reiterates that a 50-yard no approach rule within spinner dolphin resting bays is almost certainly going to prove ineffective given the significant amount of acoustic disturbance from motorized vessels that will still occur, coupled with the difficulty in enforcing such a rule.** These recommendations are consistent with efforts by IUCN Marine Mammal Protected Area Task Force which has designated the main four Hawaii Island spinner dolphin resting bays as “Important Marine Mammal Areas” (IMMAs). IMMAs are characterized as “discrete portions of habitat, important to marine mammal species, that have the potential to be delineated and managed for conservation” and “consist of areas that may merit place-based protection and/or monitoring”. The recommendation is also in line with Governor Ige’s 30-by-30 Initiative “to effectively manage 30% of Hawaii’s nearshore waters by the year 2030”. The PSRG requests an intersessional meeting with NOAA’s PIRO to learn about their efforts and most recent updates on the spinner dolphin ruling.

*Response:* On September 28, 2021, NMFS published two rules related to the protection of Hawaiian spinner dolphins. A *final* rule was published prohibiting approaching Hawaiian spinner dolphins within 50 yards. A separate *proposed* rule was also published to establish time-area closures at five sites in the Main Hawaiian Islands. The public comment period on the proposed rule closed December 27, 2021. PIRO will present further details to the PSRG on these two rules at the 2022 PSRG meeting.

6. **The PSRG requests a presentation by Pacific Islands Regional Office (PIRO) during the 2022 PSRG meeting overviewing a synopsis of their science-based management priorities and plans for a) false killer whales, b) monk seals, as well as spinner dolphins and on issues pertaining to aquaculture and marine mammals.**

*Response:* PIRO will present to the PSRG at the 2022 meeting on management priorities and plans for the noted species. These presentations will include the publication of a final and proposed rule on protective regulations for Hawaiian spinner dolphins; the final Insular False Killer Whale recovery plan and implementation strategy; projects funded by the FY21 FKW appropriations and FKWTRT related activities; and an update on efforts to address intentional killings of Hawaiian monk seals. Given ongoing consultations and staffing shortages, PIRO will not be able to present on aquaculture and marine mammals at this time.

7. **The Pacific SRG recommends that NMFS include survey schedules in its planning for all stocks of marine mammals that occur in waters off the US west coast, where the information required to provide reliable estimates of minimum abundance would be available at an interval of no more than eight years.** The Pacific SRG was provided with detailed information regarding the survey schedule for California sea lions, eastern population of Steller sea lions, and cetacean populations along the west coast at our most recent meeting in March 2021. This information was very helpful to the Pacific SRG in understanding NMFS commitment to updating marine mammal stock assessment reports in a timely manner. It was noted that two species, harbor seal and harbor porpoise, are likely to have the highest interaction rate with commercial fisheries in U.S. waters and should therefore be a priority. Also, stocks that have their most recent abundance estimates from 2012 or earlier should also be considered a priority by NMFS for future surveys to determine abundance

*Response:* NMFS AFSC will present a table of planned surveys for West Coast pinnipeds at the 2022 March PSRG meeting. Our goal is to update all pinniped stock assessments by 2025 and develop a schedule to rotate stocks assessments in an effort to keep them current. However, the ability to meet the schedule will depend on funding.

8. **The Pacific SRG recommends that NMFS inform the SRG regarding its current strategy for the recovery of Hawaiian monk seals in light of the reduction of available pupping and resting habitat in the NWHI.** The Pacific SRG was informed that loss of beach habitat at French Frigate Shoals resulted in significant loss of pupping habitat (see background text below from NMFS Hawaiian monk seal website). This has been driven by a combination of factors including climate change and storm-related events. We encourage NMFS to clarify its approaches to responding to this emerging threat, which might include increasing recovery efforts for monk seals in the main Hawaiian Islands (e.g. increasing efforts to address

emerging issues such as Toxoplasmosis or disturbance) or performing viability analyses to evaluate the stock-level impacts of breeding habitat loss in the NWHI. It was further noted that the most current management plan was completed in January 2016, based on years 2016-2020, and that none of the key action items in that version of the Plan address concerns related to the impact of habitat loss in the NWHI. At a minimum, the Pacific SRG **recommends** that NMFS commit to updating the Hawaiian monk seal 5-year Action Plan within the next 18 months and include in the Plan a description of efforts that will be undertaken to address the loss of pupping and resting beaches in the NWHI, including modeling efforts to allow for a comprehensive understanding of the impacts of habitat loss on the population over the next few decades.

*Response:* NMFS is a participant in multiple working groups that seek to address the habitat loss issue at French Frigate Shoals (FFS), including the NOAA Habitat Focus Area and the newly established Papahānaumokuākea Marine National Monument PMNM Monument Management Board (MMB) working group which seeks to provide feedback and/or proposals for the MMB to make decisions regarding FFS. Members of the MMB and Pacific Regional Executive Board agree increased focus and collaboration is needed to better understand, predict, and adapt to climate-related impacts at Lalo/FFS in order to benefit key resources in the public trust. Lalo/FFS is a logical place in the Monument for this enhanced focus as there are near-term needs that would benefit from increased attention (mitigating entrapment hazards, examining impacts of habitat loss, etc.), there is a baseline of work that has been completed to build on, and it is an area of critical importance to the long-term survival of key species in the Monument (monk seals, green sea turtles, and a number of seabirds). To this end, the MMB has formed a MMB Lalo/FFS Working Group composed of members from all four PMNM co-manager agencies (NOAA, USFWS, Hawai'i Department of Land and Natural Resources, and Office of Hawaiian Affairs)). The NOAA Pacific Region Executive Board (PREB) has tasked a small cross-line office working group – the NOAA Core Team – to work in partnership with MMB Lalo/FFS Working Group agency representatives and other experts over the next 12-18 months to discuss specific issues facing this region, prioritize research and conservation needs, and explore potential management options for helping the species and habitats adapt to a changing climate. The Lalo/FFS Working Group, with support from the NOAA Core Team, aims to achieve the following objectives:

- 1) Invigorate on-going efforts among a broad group of stakeholders by reactivating habitat advisory committees (terrestrial, marine, adaptation), and holding a series of collaborative workshops and webinars to gather knowledge and identify innovative solutions;
- 2) Establish the state of current knowledge and identify current knowledge gaps pertaining to keystone species and habitats on Lalo/FFS and Tern Island, including system elements, sensitivities, thresholds, tolerances, and impacts;
- 3) Formulate a more nuanced understanding of the scope and timing of impacts on various natural and cultural resources within Lalo/FFS, both at the individual species and ecosystem-wide levels;
- 4) Identify a range of monitoring and management measures that can be taken to mitigate these impacts so as to optimize the abundance and persistence of key species; and

5) Ultimately develop a “Lalo Resilience Strategy”, a comprehensive and collaborative plan to maintain and enhance the resilience of terrestrial and marine habitats at Lalo/FFS in light of a rapidly changing climate.

The NMFS 5-year (2021–2025) Species in the Spotlight Action Plan for Hawaiian monk seals includes addressing threats facing monk seals in the Northwestern Hawaiian Islands, including issues due to habitat loss resulting from climate change at French Frigate Shoals. In addition, the current Hawaiian Monk Seal Recovery Plan includes efforts to model shoreline evolution under higher sea level scenarios and to devise strategies for active mitigation of hazards. The Hawaiian Monk Seal Recovery Plan is currently in process of revision, and NMFS will continue to include recovery actions addressing the threat of habitat loss in the broader Northwestern Hawaiian Islands.

9. **The Pacific SRG supports some of the progress NMFS is making on guidelines for non lethal deterrence methods but also has some concerns about exemptions from the policy and requests an update on how it is working in the next 5 years.** We were concerned about some of the limitations the plan operates under including the fact it excludes activities if they are not conducted for the purpose of deterrence. We know NMFS is operating under limitations in this regard but would like to ensure there are not other actions the Pacific SRG can recommend to help deal with those limitations if they end up allowing such a large loophole that it prevents effective implementation of guidelines on some of these activities.

*Response:* A brief update will be provided at the 2022 PSRG meeting, and NMFS can certainly provide annual updates to the PSRG after the deterrence guidelines are implemented. Given the guidelines may not be finalized by the 2022 meeting, we will tentatively plan for 2023.

10. **The Pacific SRG recommends NMFS actively foster communication and encourage collaborations between incidental take authorization applicants and researchers to better take advantage of opportunities to study the impacts of human activities.** There is a lack of information on the impacts of many human activities and sometimes the initiation of some of these activities in new areas provides unique opportunities to advance the understanding of the impact of those activities. NMFS is often consulted or issues permits for these activities and can play a positive role requesting that local researchers be informed of new activities and encourage collaborations to take advantage of those opportunities. A recent case in point is a planned large-scale seismic survey planned for 2021 off Oregon and Washington, an area where that has not been conducted for many years.

*Response:* NMFS agrees that coordination between MMPA incidental take authorization holders and researchers can provide important opportunities to better understand the impacts of human activities on marine mammals and their habitat. NMFS staff encourage coordination when and where they are aware of those opportunities (e.g., East Coast Offshore Wind developers working with the NEFSC on Passive Acoustic Monitoring plans). As part of the application instructions, NMFS specifically asks for “Suggested means of learning of, encouraging, and coordinating research opportunities, plans, and activities

relating to reducing such incidental taking and evaluating its effects. You should briefly discuss how you intend to coordinate (if practicable) your activities and/or your monitoring, as well as whether and how you intend to share information with other organizations to minimize incidental take of, and increase knowledge of, marine mammals." However, the staff processing authorization requests are not always aware of the researchers and/or programs with the expertise, capacity, or interest in coordinating on this sort of research. It would be helpful to have regional contacts or lists of contacts that we could refer applicants to to support these sorts of discussions and collaborations. NMFS incidental take program management will reiterate to staff the importance of encouraging these sorts of interactions and would be happy to discuss any mechanisms for supporting them that the PSRG can recommend.

- 11. The Pacific SRG recommends NMFS try to investigate and include in their entanglement reports information on how reporting biases may be playing a role in the trends reported.** From studies on the U.S. East Coast it is known the vast majority of entanglements go unreported and that under-reporting is likely even a bigger issue on the U.S. West Coast. Observed trends in documented entanglements could therefore easily reflect changes in reporting (including factors like COVID) rather than in numbers of entanglements occurring. Given the increased reliance on entanglement reports to track progress and even in decisions on operations of some fisheries it is important to acknowledge and investigate factors that could influence reporting. Examination for changes in the proportion of confirmed versus unconfirmed reports, those assigned or not assigned to a specific fishery, or those contributed by different types of reporting parties could all be used to evaluate whether there have been potential changes in reporting.

*Response:* NMFS agrees that entanglements are underreported and that quantifying the degree of underreporting is difficult, given the opportunistic nature of case reporting, which, in itself, is a form of biased 'search effort'. There have been gains in 'gear forensics' each year, where the number of entanglement cases that can be assigned to a specific fishery is improving due to better identification of gear, from high resolution photographs, or the collection of the entangling gear, which facilitates lookup of buoy and / or permit tag numbers to confirm fishery involvement. NMFS agrees that examination of the entanglement reporting data at-hand may yield information on trends in reporting by source and entanglement status (confirmed vs. unconfirmed) that further clarify the potential sources of biases. For example, during the last two years (2020 and 2021) there has been an increase in the relative fraction of entanglement reports that are deemed to be unconfirmed (~33%) compared to average rate over the last 20 years (~20%), although these are not unprecedented levels for any given year over the last two decades. In our 2020 West Coast Whale Entanglement Summary, we acknowledged that the COVID-19 pandemic had likely affected observation, reporting, and response capabilities. While reports can sometimes be confirmed even if they are only observed by members of the public (through photos and video collected, or a follow-up interview), confirmation is most likely to be successful when the public can stand-by with the whale until a trained responder can deploy on site; this was certainly reduced as reductions in network operations occurred during the pandemic. Certainly these effects that are likely ongoing, along with other potential biases, could continue to affect our ability to gather and evaluate entanglement report data effectively. When and where we are able to

identify the biases, we will continue to describe them in our entanglement summaries and other documents that are relevant even as we remain limited in our ability to interpret them fully.

- 12. The Pacific SRG supports the use of DASBRs to survey elusive cetaceans but recommends that further evaluations are conducted in the use of DASBRs to address duty cycling and investigate how drift patterns may be influenced by oceanographic features.** Drifting acoustic spar buoy recorders (DASBRs) to survey elusive beaked whale species acoustically over broad spatial and temporal scales have been shown to be highly successful in informing management and stock assessments. We are concerned with the approach on two aspects. Duty cycling has been shown to bias estimation of presence, increasingly so with rare occurrence of a species and longer off-effort periods (e.g., Stanistreet et al 2016). We suggest subsampling of existing continuous data to test for this possible caveat. A second concern is related to the question of whether drifters become entrained into dynamic oceanographic features (e.g., eddies and fronts) and hence are not sampling the study area completely at random. This may possibly be addressed through simulations with ocean models.

*Response:* We believe that technological advances (increased battery and memory) will now allow for continuous recording under most circumstances, with a minimum of 50% duty cycle going forward (Stanistreet et al. (2016) found 50% duty cycle lead to very low missed detections). Moreover, the metric we use for abundance estimation (percentage of recording periods with echolocation detections) is not affected by duty cycle. Stanistreet et al. (2016) used "daily presence" as their metric, which leads to the duty cycle effect that they found. Regarding the question of non-random sampling, we hope to test this by seeing if the encounter rates at the beginning of deployments (when location is more random) are higher or lower than later in the deployments.

#### **References:**

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