



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Silver Spring, MD 20910

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Michael Scott, Ph.D.  
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Inter-American Tropical Tuna Commission  
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Dear Dr. Scott:

Thank you for your letters to Eileen Sobeck, NOAA Assistant Administrator for Fisheries, transmitting minutes and recommendations from the March 2015 and February 2016 meetings of the Pacific Scientific Review Group (SRG). Your letters were forwarded to me because the Office of Protected Resources within NOAA Fisheries is responsible for national programs under the Marine Mammal Protection Act (MMPA) and leads the agency's coordination of the SRGs.

The SRG has made a number of valuable comments and recommendations to help guide marine mammal science in NOAA Fisheries. The letters were transmitted to NOAA Fisheries within a month of each other and contain many similar recommendations, so to reduce redundancy, we provide a single response to each of the SRG's unique recommendations in the enclosure.

I appreciate the continued service and contributions by members of the Pacific SRG in providing advice and support to NOAA Fisheries in accordance with the MMPA. I look forward to our continued partnership to improve the science supporting the conservation of marine mammals.

Sincerely,

Donna S. Wieting  
Director, Office of Protected Resources

Enclosure



## **Responses to Recommendations of the Pacific Regional Scientific Review Group**

- (1) *The SRG recommends that NOAA Fisheries collaborate with the State of Hawaii to produce two reviews that can aid in future management:*
- a. *Expand upon the information presented at the SRG meeting and the subsequent preliminary studies on the fisheries that operate in Hawaiian nearshore waters (such as the troll, handline, shortline, and other fisheries). In addition to the information that is currently collected from fishermen through self-reports, data should be collected on catch amounts, season, location, and types of gear used, including regional variations in gear used. The SRG supports the collaborative research proposed by the Hawaii Department of Land and Natural Resources, with its emphasis on scientific research and outreach to the fishing community and public.*
  - b. *Depredation of fish catches by cetaceans is recognized as a serious problem for both fishermen and cetaceans in Hawaii. To better understand the dimensions and dynamics of this cetacean-fishery interaction, a review and problem analysis for each of the applicable fisheries could provide both a historical perspective and a current assessment of the problem.*

*These reviews would be particularly valuable given the endangered status of the Hawaii insular stock of false killer whales and our current inability to identify causes for its decline.*

Information on catch, season, location, and gear type/method used is already being collected from State commercial fishermen through commercial fishing reports. We are not aware of any current plans by the State to revise their data forms to collect more specific information regarding gear types and methods. However, we recently met with staff and leaders at the Hawaii Department of Land and Natural Resources, and we will continue our dialogue with the State of Hawaii regarding data collection and marine mammal bycatch mitigation for State-managed nearshore fisheries.

In 2015, NOAA Fisheries' Pacific Islands Regional Office (PIRO) funded a pilot study using social science methods to characterize interactions between cetaceans and small-boat fishing operations in the main Hawaiian Islands (MHI). A final report is not yet available, but it is expected to provide some information on fishing methods from the areas and communities where the research was conducted on Oahu and the Big Island.

In response to a similar recommendation from the Pacific SRG in 2014, NOAA Fisheries' Pacific Islands Fisheries Science Center (PIFSC) conducted a preliminary analysis of marine mammal depredation information from State of Hawaii commercial fishery reports (<https://pifsc-www.irc.noaa.gov/library/pubs/DR-15-006.pdf>). Dr. Erin Oleson summarized the results of this analysis at the Pacific SRG's 2015 meeting. As Dr. Oleson noted, PIFSC researchers plan to conduct more in-depth analyses of the data and publish a peer-reviewed manuscript. NOAA Fisheries will provide information to the Pacific SRG regarding any additional findings.

NOAA Fisheries continues to collaborate with the State of Hawaii to better understand and characterize State fisheries, understand the dimensions and dynamics of interactions with cetaceans in Hawaii, and further species recovery efforts. The State of Hawaii received Endangered Species Act (ESA) Section 6 funding from NOAA Fisheries in 2015 for a 3-year project related to the conservation and management of false killer whales and other endangered cetaceans. Part of the project aims to assess the spatial and temporal overlap between insular false killer whales and State fisheries effort in the main Hawaiian Islands. In spring 2016, the State of Hawaii contracted Cascadia Research Collective (CRC) to perform the analysis, which is expected to begin later this summer.

The State of Hawaii has also begun preparations for their next proposal for the ESA Section 6 Grants, and NOAA Fisheries is working cooperatively with State staff to identify projects and initiatives that will enhance the conservation and management of marine mammals in Hawaii. Additionally, PIRO and PIFSC continue to coordinate with the State to provide education and outreach to Hawaii's fishermen about protected species, which helps improve relationships and build trust with Hawaii's sport and commercial fishing sectors.

Understanding fishery-related threats to the endangered insular false killer whale is also a priority for recovery planning for this stock. PIRO is currently developing a recovery outline for the MHI insular false killer whale and will begin recovery planning in the fall of 2016. Throughout the recovery planning process NOAA Fisheries will continue to work with the State of Hawaii and other partners to better understand and characterize fishery-related threats to this stock.

(2) *A recent publication (Harting et al. 2014) shows that about one-third of the current Hawaiian monk seal population is alive only because of the survival-enhancement efforts of NOAA Fisheries and its collaborators. Those efforts include rescuing sick or malnourished pups, translocating pups to areas where survivorship probabilities are greater, and mitigating mortality from male seal aggression, Galapagos shark predation, and entrapment. Not included in this total were the additional seals would have become entangled in debris were it not for net-debris removal efforts. To continue these vital conservation and recovery efforts, the SRG recommends that NOAA Fisheries:*

- a. Maintain sufficient resources to continue to operate the NWHI monk seal field camps and maintain rescue, rehabilitation, and survivorship-enhancement programs throughout the Hawaiian Archipelago. The field camps in the NWHI not only allow monitoring status of these subpopulations and research, but have been shown to play a critical part in survivorship-enhancement efforts*
- b. Continue the current NOAA Fisheries net-debris removal program near monk seal haulout areas where entanglement occurs.*

The Hawaiian Monk Seal Assessment and Recovery Camps continue to be a high priority for both PIFSC and PIRO. In recent years the population database, which results from these field efforts and serves as the basis of many of conservation activities, has been severely degraded due to diminished field effort. This decline in fieldwork is a result a combination of insufficient resources to deploy full camps and inclement weather shortening our field seasons. PIFSC was able to deploy full field camps in 2015 and 2016. Some camps were impacted by hurricanes in

2015, but overall there was sufficient effort to complete our stock assessment and undertake a large number of interventions to increase monk seal survival. Our 2016 camps will be undertaking the full suite of population monitoring and survival interventions as have been done in previous years. Each year monk seal field camps are supported by a grant that is funded from the previous fiscal year. The fiscal year 2016 monk seal budget initially did not have sufficient funds to support a grant for field camps in 2017. After many discussions with leadership throughout NOAA Fisheries, funds have been identified to help make up the monk seal budget deficit and support camps in 2017. There are also plans for a high-level meeting of NOAA Fisheries leadership to discuss ways to stabilize monk seal field camp support into the future. PIFSC is also considering other ways to fund field camps including partnering with outside agencies and non-governmental organizations to ensure monk seal research and recovery efforts continue into the future as necessary.

From 2001 to 2005, with funding support of \$3M/year from the NOAA Fisheries Office of Habitat Conservation (OHC), the Marine Debris team of the PIFSC’s Coral Reef Ecosystem Program (CREP) conducted large-scale, multi-agency, multi-vessel, multi-month marine debris survey and removal efforts across the shallow reef environments of the NWHI. During those efforts, 80-120 metric tons/year of derelict fishing gear and other large marine debris were removed and transported to Honolulu for proper disposal. In 2006, joint funding by the NOAA Coral Reef Conservation Program (CRCP), the NOAA Marine Debris Program (MDP), and the NOAA Papahānaumokuākea Marine National Monument (PMNM) was reduced to \$500K/year. This reduction in funding meant operations were scaled back to “maintenance-mode” levels aimed at keeping pace with new accumulation, estimated at 52 metric tons/year (Dameron *et al.* 2007) by resurveying areas historically shown to have high densities of derelict fishing gear. From 2009-16, funding has been further reduced to \$300-400K from NOAA MDP and PMNM, with occasional supplemental funds from the NOAA Damage Assessment, Remediation and Restoration Program (DARRP). While well intended, these scaled-back debris removal efforts have not been nearly sufficient to keep up with new accumulation. In 2016, efforts were scaled back to shoreline surveys and removals with no “in-water” effort, a substantial change from previous years when the in-water marine debris removal was the focus of the annual mission. In an effort to maximize the impact of this year’s removal effort, the mission focused on reducing the amount of potential lethal entanglement hazards to the critically endangered Hawaiian monk seal by removing derelict fishing gear from islands and atolls where monk seal research field camps are stationed. The 15-day survey and removal operation removed a total of 11 metric tons of marine debris, primarily derelict fishing gear and plastics, from the shorelines of Midway Atoll, Kure Atoll, Pearl and Hermes Atoll, and Lisianski Island, including 1,843 derelict fishing nets or net fragments weighing 8.5 metric tons (Table 1).

Table 1: Marine debris removal totals by island.

Location	Days of Effort	Total Marine Debris Removed (metric tons)
Midway	9	7.865
Kure	1	0.540
Pearl and Hermes	3	1.515
Lisianski	1	1.045

Over time, the decreasing funding and increasing operational costs have forced the program to operate in an ad-hoc nature where annual mission goals and objectives were often driven by availability of funds and ship-time. Moreover, there are significant costs associated with any removal mission to the NWHI regardless of scale and scope due to the remote location and the significant and time-consuming efforts to hire and train temporary staff to safely conduct small boat and diving operations needed for in-water debris removal operations.

The partner agencies (MDP, PMNMP, DARRP, and CREP) recognize that in the face of reduced budgets and sustained or even increased debris accumulation, a more strategic approach is necessary to maintain ongoing operations at a meaningful scale. Therefore, the partners have begun developing a 5-year strategic plan that pools resources over consecutive years to allow for more substantive and impactful removal efforts than are currently possible under the scenario of annual missions. The plan will include goals and objectives that focus on efforts that positively impact protected species, such as Hawaiian monk seals, sea turtles, and sea birds that are most at risk to entanglement and ingestion, as well as critical habitats like coral reefs. The PIFSC Protected Species Division will be involved in developing the strategic plan, to ensure it is focusing on islands and habitats where these impacts are most likely to occur. With a strategic plan in place, the next step is to develop new partnerships and collaborations with other NOAA line offices, federal/state agencies, and non-governmental organizations to generate additional funding sources that leverage current funding and allow for more robust, sustained, and effective removal efforts that keep pace with annual accumulation rates.

- (3) *The SRG has recommended that NOAA Fisheries develop a multi-year allocation of ship time for marine mammal surveys and increase the priority and funding for these surveys, which are necessary to obtain the abundance estimates used to calculate the potential biological removal (PBR) and thereby enable fisheries to meet the required Marine Mammal Protection Act (MMPA) standards. A multi-year survey plan for all U.S. waters was developed but has not been implemented. In the Pacific, a West Coast survey was completed that provided new abundance estimates and a Hawaii survey is planned for 2017. The lack of operational funds threatens to delay the Hawaii survey. The SRG again recommends development and implementation of a national survey plan to allocate both ship time and operational funding to obtain new abundance estimates for marine mammal populations in a timely and systematic manner.*

NOAA Fisheries continues to share the SRG's interest in maintaining current abundance estimates and time series for Pacific marine mammal stocks. An exercise to estimate ship time required to assess marine mammals in all geographic regions for which the U.S. is responsible under the MMPA began in 2012 and has since been revised to form a proposal for multi-year allocation of NOAA ship time on a 6-year cycle. In 2015, the agency completed a comprehensive review of protected species science (<http://www.st.nmfs.noaa.gov/science-program-review/index>) and a recommendation to develop and support a multi-year allocation of ship time for marine mammal surveys was made by more than one of the external review panels, echoing this recommendation by the Pacific SRG for the past three years. As a result, this proposal will soon be published as a NOAA Technical Memorandum from NOAA Fisheries' Office of Science and Technology. Related to this effort are partnerships with other Federal agencies, particularly the Bureau of Ocean Energy Management (BOEM), that have provided funding which, combined with NOAA Research Vessel time and NOAA Fisheries staff, form the

basis for regular marine mammal (and other protected species) surveys in the Atlantic U.S. Exclusive Economic Zone. A similar partnership has recently formed focused on the Gulf of Mexico. The four Pacific NOAA Fisheries Science Centers held a one-day meeting with U.S. Navy, BOEM, and the U.S. Fish and Wildlife Service earlier in 2016 with a goal of forming a similar partnership for a rotating series of Pacific marine mammal surveys. We appreciate the SRG's continued interest in and support of these efforts.

(4) *There is currently marine mammal bycatch during trawls by NOAA research vessels, but samples and carcasses cannot be collected because there is no NOAA permit issued to do so. The SRG recommends that NOAA Fisheries rapidly cut through the bureaucratic obstacles that hinder the collection of biological samples from the marine mammals incidentally killed during NOAA research activities.*

We thank the SRG for their continued interest on this topic. NOAA Fisheries is currently in the process of obtaining incidental take authorizations under MMPA for its fisheries research survey operations. The Southwest Fisheries Science Center, which has historically had the largest number of marine mammal incidental takes of any Science Center, has already been issued a permit and can sample incidentally caught animals.

The regulatory processes for the other Centers have not been completed yet; and, therefore, per NOAA Fisheries Office of Law Enforcement guidance, we cannot sample incidentally caught marine mammals by the other Centers until appropriate permits are issued. We take the compliance process very seriously and have to complete the necessary regulatory process.

Once the regulatory processes are complete, all Centers will have obtained the necessary permits to biologically sample marine mammals incidentally killed during fisheries research. It must be emphasized that incidental captures of marine mammals in fisheries research gear is a rare event and every effort is made to reduce or avoid interactions.

(5) *The SRG recommends continued funding for studies of movements and genetics of false killer whales and other cetaceans around Hawaii and in the Central Pacific to better understand stock structure. Much has been learned from these studies, but more information is required; for example, movement data from all the social clusters of false killer whales around the Hawaiian Islands are needed to understand stock structure, ecology, distribution, and fishery interactions.*

As mentioned at the 2016 Pacific SRG meeting and described in response to recommendation 1 above, the State of Hawaii received ESA Section 6 funding from NOAA Fisheries for a project to enhance conservation and management of false killer whales and other endangered cetaceans in Hawaii. This project began in October 2015 and is funded for three years. An objective of the project focuses on obtaining additional information about ESA-listed MHI insular false killer whale spatial use patterns, genetics, fishery interactions, and abundance. In spring of 2016 the State contracted CRC to help meet this objective. Fieldwork under this contract is expected to begin in October of 2016, following field efforts funded by PIFSC for summer 2016.

PIFSC continues to conduct research on cetaceans in the central and western Pacific, including insular and pelagic populations around Hawaii, and provide support to CRC to continue field data collection efforts and deployment of satellite tags on Hawaiian odontocetes and all false

killer whale stocks in Hawaiian waters. In late 2014, CRC deployed telemetry tags on main Hawaiian Islands insular false killer whales from social cluster 2, a social group that had not been previously tagged. In summer 2016, PIFSC will conduct a shipboard survey of the windward portion of the main Hawaiian Islands specifically with the goal of collecting photographs and biopsy samples, as well as deploying satellite tags on false killer whales and other cetaceans in this generally under-sampled region. PIFSC has also continued surveys for cetaceans in the Mariana Archipelago, including a survey to the northern islands in summer 2015 and intensive small vessel surveys in the southern islands in late-summer 2015 and in March and May-June 2016.

- (6) *The SRG recommends that full funding be reinstated for nationwide mammal stranding networks administered by NOAA (the John H. Prescott Marine Mammal Rescue Assistance Grant Program). Nationwide, marine mammal stranding response networks are run primarily through nonprofits and other non-government entities and coordinated through NOAA Fisheries. These networks perform an array of important functions as they respond to an average of more than 5,000 marine mammal strandings each year. Indeed, the fundamental work of the nation's stranding networks plays a vital role in enabling NOAA Fisheries to meet its Congressional mandate by supporting the "stewardship of living marine resources through science-based conservation and management and the promotion of healthy ecosystems". Stranding network investigations are necessary for a timely and accurate understanding of ocean health and to document mortality of marine mammals, which is a vital component of the Stock Assessment Reports. Without sufficient federal support, much of this vital work will cease.*

We agree that the National Marine Mammal Stranding Network plays an important role in enabling the agency meet its congressional mandates. The valuable data compiled by the Stranding Network and provided to NOAA Fisheries is used for informing marine mammal stock assessment reports, identifying key species recovery activities, monitoring ocean health, and identifying natural and manmade causes of stranding, illness, and death in marine mammals around the country.

The Prescott Grant Program is in the process of reviewing the FY 2016 applications and making funding recommendations. The FY 2016 Prescott awards will be announced late summer 2016.

The FY 2017 President's budget request includes \$3.0 million in funding for the Prescott Grant Program. The Prescott Grant Program will continue to remain an important collaboration tool for NOAA Fisheries and its stranding network partners to provide quality care for marine mammals and to evaluate causes or contributing factors for illness, strandings, and deaths of marine mammals.

- (7) *The False Killer Whale Take Reduction Plan instituted for the Hawaii-based deep-set longline fishery included operational changes to such things as branchline strength, hook shapes and strengths, and set procedures. The effectiveness of these changes has bearing on the comparison of mortality and PBR and, at its 2017 meeting, the SRG plans to review the effectiveness of these changes in reducing the mortality and serious injury of false killer whales. To facilitate that review, the SRG recommends that NOAA Fisheries provide, along with current mortality and effort data, an analysis on the effectiveness of the Take Reduction Plan measures, particularly with regard to 1) the interaction between the*

*branchline strength and weak hook effectiveness, and 2) potential differences in fishing practices and location for trips with and without observers.*

The False Killer Whale Take Reduction Plan Monitoring Strategy (<http://www.fisheries.noaa.gov/pr/interactions/fkwtrt/monitoring-strategy.pdf>) outlines how PIRO will gather information annually to monitor the effectiveness of the management measures outlined in the 2012 Take Reduction Plan (TRP) (77 FR 71260; November 29, 2012). Although the primary and secondary indicators of effectiveness focus largely on mortality and serious injury analytics, the monitoring strategy also aims to collect and analyze data to understand why the plan or specific measures within the plan are or are not working, including trends associated with observed false killer whale interactions. However, the number of observed false killer whale interactions remains low and discovering meaningful trends within this small data set remains difficult, especially for an analysis of the interaction between the branchline strength and weak hook effectiveness. Since 2013, of 22 observed interactions in the deep-set and shallow-set fisheries, only two hooks have straightened. Other interaction scenarios vary in number, but include the line being cut (7), broken (7), and let go (1), as well as the animal being released from the hook (4) and a hook breaking (1). A 2014 False Killer Whale Take Reduction Team (TRT) working group discussed handling and release of gear and noted that additional information may need to be collected by observers to better evaluate the effectiveness of gear modifications. However, the TRT has not yet identified the specific information that would support this analysis. Although we are unable to provide a meaningful analysis of the interaction between branchline strength and weak hook effectiveness for the 2017 SRG meeting, PIRO will provide a summary of characteristics collected from observed false killer whale interactions to date, similar to those presented to the TRT in 2015. This compilation may provide some insight for SRG discussions.

With regard to the second analysis, a request for support with the analysis has been sent to the PIFSC Fisheries Research and Monitoring Division (FRMD). FRMD is prioritizing a list of several tasks related to take estimation from observer data and expects to provide a plan for completing those tasks shortly. We will provide an update with regard to this analysis prior to the 2017 Pacific SRG meeting.

(8) *The Pacific Islands Regional Office's Observer Program has served the Region well by providing a long-term dataset for bycatch and effort estimation for observed fisheries. However, recent staffing shortages have limited the Program's ability to process those data, which compromises the timeliness and quality of analyses, jeopardizes bycatch estimation for 2015 and beyond, and undermines efforts to monitor the effectiveness of the False Killer Whale Take Reduction Plan. The SRG recommends that the Region quickly clear up this backlog of unprocessed data.*

NOAA Fisheries recognizes the significance of Observer Program data and shares the SRG's concerns regarding the consequences of a prolonged data backlog. PIRO's Observer Program has prioritized filling vacant positions and obtaining additional support services to clear the data backlog. The Observer Program recently filled two long-standing federal vacancies and acquired contract services for an additional data support position. With this additional support, the Observer Program processed the 2014 data in May of this year and has set a goal to finish processing the 2015 data by November of 2016. To meet this goal two additional support positions are expected to be filled in June of 2016. With staffing needs addressed and the



2014/2015 backlog cleared, the Observer Program will focus on bringing 2016 data up-to-date at the end of this calendar year.

### References

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