



MARINE MAMMAL COMMISSION

18 December 2020

Ms. Ann Garrett, Assistant Regional Administrator
Protected Resources Division
National Marine Fisheries Service
Pacific Islands Regional Office
1845 Wasp Blvd, Building 176
Honolulu, HI 96818

ATTN: Krista Graham

Dear Ms. Garrett:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, reviewed the National Marine Fisheries Service's (NMFS) draft Recovery Plan¹ and draft Recovery Implementation Strategy² for the Main Hawaiian Islands insular false killer whale (MHI IFKW) distinct population segment (DPS) (85 Fed. Reg. 65791). The Commission generally concurs with the draft Recovery Plan and Recovery Implementation Strategy, and provides the following comments and recommendations for your consideration.

Background

The Endangered Species Act (ESA) requires NMFS to develop recovery plans for 'threatened' and 'endangered' species. A status review was conducted by a biological review team in 2010 (Oleson et al. 2010) and, based on those findings, the MHI IFKW DPS was listed as endangered³ in 2012.⁴ In September 2016, NMFS developed a 'recovery outline'⁵ that would guide recovery actions until a plan was developed. Shortly thereafter, in October 2016, NMFS held a recovery planning workshop to review and update the threat analysis that was part of the 2010 status review. Government and independent experts from many fields participated and contributed to the workshop summary,⁶ published in February 2017. NMFS recently revised the status review (NMFS 2020),⁷ which was used in the development of the draft Recovery Plan and Recovery Implementation Strategy considered herein.

¹ <https://www.fisheries.noaa.gov/resource/document/draft-recovery-plan-main-hawaiian-islands-insular-false-killer-whale-distinct>

² <https://www.fisheries.noaa.gov/resource/document/draft-recovery-implementation-strategy-main-hawaiian-islands-insular-false-killer>

³ The ESA defines DPSs of vertebrates as species.

⁴ 77 Fed. Reg. 70915.

⁵ <https://www.fisheries.noaa.gov/resource/document/recovery-outline-main-hawaiian-islands-insular-false-killer-whale-distinct>

⁶ <https://repository.library.noaa.gov/view/noaa/20060>

⁷ <https://www.fisheries.noaa.gov/resource/document/recovery-status-review-main-hawaiian-islands-insular-false-killer-whale-distinct>

The 2012 MHI IFKW DPS listing was based on declining sighting rates over multiple surveys from 1989 through 2003, which indicated the size of the population likely had decreased from several hundred to fewer than 200 animals (Reeves et al. 2009, Oleson et al. 2010, NMFS 2020). The 2020 status review includes point abundance estimates obtained since 2003 ranging from 144 to 187 animals. The most recent estimate, from 2015, puts the abundance at 167 animals (95% CI: 128-218; Bradford et al. 2018). There is no evidence that the population has continued to decline since 2003, but methodological/statistical limitations make it difficult to identify any trend, or lack thereof, in the population (Bradford et al. 2018, NMFS 2020).

The status review concludes that the MHI IFKW population is small enough that it is at risk of lethal or semi-lethal genetic effects, which the review states typically occur when effective population size (N_e) is less than 50 individuals (Franklin 1980, cited in NMFS 2020). A more recent treatment (Frankham et al. 2014) finds that an N_e of 50 is not sufficiently conservative (risk-averse), and concludes that “ $N_e > 100$ [is] required to limit loss in total fitness to $< 10\%$.” The current N_e for the MHI IFKW DPS has been estimated to be ~ 58 individuals (Martien et al. 2019), only slightly higher than Franklin’s (1980) suggested threshold, and substantially lower than the Frankham et al. (2014) threshold. Furthermore, a small population size puts the population at risk from stochastic mortality events and a range of ‘Allee effects’, such as mate limitation, less effective cooperative feeding and defense, and demographic stochasticity.

Recovery Plan

Based on the findings in the 2020 Recovery Status Review (NMFS 2020), the draft Recovery Plan identifies and ranks 19 threats to the MHI IFKW DPS. The main threats are 1) small population size, 2) bycatch in non-longline commercial and recreational fishing gear, and 3) inadequate regulatory mechanisms. The next highest threats are competition with non-longline commercial and recreational fisheries for the same prey/target fish, environmental contaminants,⁸ and biotoxins.⁹ Remaining threats, in no particular order, include oil spills, anthropogenic noise, intentional harm, incidental take by longline fisheries, aquaculture facilities, climate change, marine debris, vessel strikes, whale watching, and competition with, or predation by, other marine species, as well as potentially cumulative and synergistic effects of threats.

The draft Recovery Plan also sets forth objectives necessary to achieve recovery and specifies criteria for reclassifying the ESA status of the MHI IFKW DPS from ‘endangered’ to ‘threatened’ (‘down-listing’), and ultimately for removing the DPS from listed status (‘de-listing’). The highest-priority recovery objectives in the draft plan are 1) ensuring high productivity and social connectedness (the ‘demographic objective’), 2) minimizing incidental take by, and competition with, non-longline commercial and recreational fisheries, and 3) reducing contaminant levels. The draft Recovery Plan identifies 32 recovery actions designed to address the various threats and recovery objectives. These actions include monitoring; research; and implementation of mitigation and management measures that address the impacts of contaminants, anthropogenic noise, climate change, and whale watching, and most importantly the incidental take by, and competition with, non-longline commercial and recreational fisheries. The draft plan gives highest priority to those

⁸ E.g., POPs (persistent organic pollutants) such as PCBs, DDT, and PBDEs (fire retardants), and heavy metals such as mercury, cadmium, and lead.

⁹ E.g., ciguatoxin and algal toxins, such as brevetoxin, domoic acid, and saxitoxin.

recovery actions that “remove, reduce, or mitigate major threats and *prevent extinction* and often require urgent implementation.” The next-highest priority is given to actions that prevent continued population decline and to research that fills critical knowledge gaps.

Finally, the draft Recovery Plan provides an implementation table developed as part of the Recovery Implementation Strategy. The table provides information on each of the 32 recovery actions, including each action’s priority, cost estimates for each of the first five years of the plan’s implementation, a total cost estimate for years 6 to 50, the frequency and duration of the application of the action, and the agencies potentially involved. The approximate total estimated cost of the recovery actions over 50 years is at least \$347M, or \$6.9M/year.¹⁰ Approximate estimated costs for the first five years are: \$8.75M, \$8.30M, \$7.14M, \$6.63M, and \$6.38M. The draft plan does not anticipate that expenditures would be made sequentially by priority, but rather simultaneously and proportional to priority. For example, actions anticipated in the first year for top priorities related to population size and non-longline fisheries amount to a total of \$2.14M, while actions related to anthropogenic sound would cost just \$250K.

General Comments and Recommendations

The Commission broadly agrees with the draft Recovery Plan, including the proposed prioritization of threats, objectives, and actions. The Commission also agrees with the plan’s conclusion that recovery of the MHI IFKW DPS should be given the highest priority¹¹ because: “the DPS experiences a high demographic risk; major threats are well understood; the U.S. has jurisdiction and authority for management or protective actions to address major threats; there is high certainty that management or protective actions will be effective; and the DPS is in conflict with economic activity.” The Commission does, however, believe that the plan could be improved in the following ways.

Implementation Practicality—The draft Recovery Plan lacks any consideration of the overall practicality of implementation. While it is important and necessary to identify the full range of recovery actions that need to be taken, realistically, not all actions are likely to be funded and some may be very difficult to implement due to technological, management, regulatory, or political constraints and/or impediments. Because of the extreme risk of further population decline or extinction of the MHI IFKW DPS, the Commission recommends that the Implementation Strategy be aligned with the Recovery Plan but provide a more practical assessment of which actions are achievable at this time and in the near future, and that will provide a significant conservation benefit, given likely budgetary and other constraints. The Implementation Strategy needs to identify those actions that can be undertaken immediately by the agency, those that require development of collaboration with the State of Hawaii or other stakeholders, and those that realistically may not be implementable (e.g., reduction of contaminants) or for which the probability of success is low. In addition, the strategy should identify the constraints on, or impediments to, implementation, such as insufficient funding at the federal or state level, inadequate existing federal or state regulations, or resistance from commercial and recreational fishing communities to monitoring/observation and compliance, and ways that they may be overcome. Alternatively, if NMFS believes that recovery can

¹⁰ Note, a substantial proportion of these totals, ~\$4.5M/year, comes from ongoing monitoring and management of the pelagic longline fisheries, expenditures that are incurred independent of plan implementation.

¹¹ Recovery priorities are defined in guidelines published by NMFS in 2019 (84 Fed. Reg. 18243).

be achieved only through the full implementation of the plan and strategy, then the Commission recommends that NMFS, in guiding and leading all of the contributors to the recovery effort, provide additional details on how the necessary resources will be secured and collaborations will be orchestrated to achieve the desired recovery outcomes.

Implementation Immediacy—The draft Recovery Plan clearly identifies ‘small population size’ and ‘fisheries interactions’ as the principal threats that merit the highest priority for recovery actions, an assessment with which the Commission agrees. The Commission also agrees that the only way to address potentially detrimental small-population effects is to increase the size of the population, and that implementation of management actions and monitoring population abundance, distribution, demography, and ongoing threats will provide information on recovery progress that will be critical to meeting this objective. In light of evidence indicating a precipitous population decline prior to 2003 and a lack of detectable recovery in the past 18 years, it appears that one or more anthropogenic or environmental factor(s) are inhibiting population growth. While there are several potential candidates, based on evidence of frequent line scarring and dorsal fin disfigurements (see references in NMFS 2020), coupled with anecdotal reports of false killer whale depredation of catch and bait on non-longline gear, the Commission agrees with NMFS that the most likely cause of the decline and lack of recovery of the MHI IFKW DPS is interactions with non-longline commercial and recreational fisheries. Such interactions could be reducing the population’s growth rate to near zero through increased mortality or reduced reproductive success due to sublethal injuries from hookings and entanglements. Therefore, the Commission recommends that NMFS, in collaboration with the State of Hawaii, prioritize the monitoring of these fisheries using a combination of observers and electronic monitoring, and based on the findings obtained, adopt management actions to reduce or eliminate highest fishery-caused deaths and injuries to insular false killer whales. Actions addressing less urgent recovery actions should be delayed until additional resources become available.

Specific Comments and Recommendations

Down-listing and De-listing Criteria—The draft Recovery Plan identifies measurable criteria for ‘down-listing’ the MHI IFKW DPS to threatened and, ultimately, ‘de-listing’ the DPS entirely. ‘Down-listing’ and ‘de-listing’ criteria are proposed for each of the recovery plan objectives. For example, for the ‘demographic objective’, productivity, abundance, and social-connectedness criteria are specified. The abundance and social-connectedness criteria are the same for either down-listing or de-listing, whereas the productivity criterion differs between the two measures (down-listing and de-listing) both qualitatively and in magnitude. The proposed down-listing criterion for productivity is: “An increasing average annual population trend is greater than or equal to 2% over one generation (25 years), and [that] there are, at a minimum, 248 individuals [in the population].” The proposed de-listing criterion for productivity is: “The population is, on average, stable or increasing over at least one additional generation (25 years), and there are, at a minimum, 406 individuals [in the population].”

The Commission concurs with statements in the draft Recovery Plan that: “Reclassification criteria primarily focus on the threats of highest concern to the MHI IFKW,” while “[d]elisting criteria include all reclassification criteria, as well as additional criteria to ensure all threats are addressed.” However, the Commission suggests that different criteria be defined for down-listing and de-listing and that those criteria reflect not only the difference in the priority of down-listing

versus de-listing, but also the focus of the criteria. Under the ESA, ‘endangered’ is applied to a species “in danger of extinction throughout all or a significant portion of its range,” while ‘threatened’ pertains to a species that “is likely to become an endangered species in the foreseeable future throughout all or significant portion of its range.” Thus, whereas ‘endangered’ species are in immediate danger of extinction, ‘threatened’ species are not. The recovery approach should recognize this distinction. Actions designed to enable an ‘endangered’ species to recover, i.e., improve its status to the point where it can be down-listed, should reflect the urgency of the risk to the species. To the extent possible, those actions should not be gradual, incremental, and designed to achieve only a modest rate of recovery, as suggested in the Recovery Plan:

“Because a current population trend does not yet exist, our recovery criterion is based on a population size that increases at an acceptable average annual growth rate. Similar to killer whales, false killer whales have a low intrinsic growth rate (a consequence of late maturity and low birth rate). With plausible growth rates of less than 4% a year (Oleson et al. 2010), we chose an average annual growth rate of at least 2% over one full generation, or 25 years, which is a known acceptable rate of increase for a cetacean.”

The Commission encourages NMFS to be more aggressive in its recovery approach. NMFS’ goal should be to remove the species from immediate risk of extinction as quickly as possible, and then to achieve full recovery as quickly as is reasonable. There is considerable uncertainty regarding what the maximum, long-term, population growth rate might be for MHI IFKW’s (NMFS 2020). A two-percent rate may be realistic, but the population may be capable of more rapid growth. The Commission urges NMFS, resources allowing, to undertake the research necessary to determine what a reasonable expectation is for a maximum growth rate over the recovery time-frame.

Fisheries monitoring—The Recovery Plan identifies ‘regulatory inadequacy’ as one of the greatest threats to the MHI IFKW DPS. Identified inadequacies include a lack of direct monitoring of non-longline commercial and recreational fisheries (i.e., there are no observer programs or electronic monitoring), fishermen using multiple gear types but reporting on just one type, no requirement for all fishermen to report interactions with marine mammals, and very limited fisheries effort data. The Commission agrees with the draft Recovery Plan’s statement that “we need more information on the operations of non-longline commercial and recreational fisheries to better assess the spatial extent, frequency, trend, and severity of this threat.” This being the case, the most pressing recovery actions involve gathering the information needed to define, characterize in detail, and quantify the threat that non-longline commercial and recreational fisheries pose so that it can be managed and minimized. The Commission therefore recommends that NMFS immediately, in collaboration with the State of Hawaii, establish a statistically robust monitoring program for all non-longline commercial and recreational fisheries conducted in areas where they may interact with MHI IFKW’s. That program should, at minimum, involve placing trained fisheries/protected-species observers on fishing vessels, and/or installing electronic monitoring systems with capabilities similar to those of live and attentive observers, on a representative and statistically sufficient sample of vessels in each fishery; i.e. a sample that will produce robust estimates of the bycatch rates. The program should be conducted as long as the MHI IFKW DPS remains listed under the ESA, with periodic review and adjustments to achieve or maintain statistical targets.

Thank you for the opportunity to comment on the draft Recovery Plan and Recovery Implementation Strategy for insular false killer whales. Please contact me if you have any questions about our recommendations or rationale.

Sincerely,



Peter O. Thomas, Ph.D.,
Executive Director

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