



MARINE MAMMAL COMMISSION

11 August 2023

Mr. Jon Kurland
Regional Administrator
National Marine Fisheries Service, Alaska Regional Office
709 W. 9th St., Rm 420
Juneau, Alaska 99802

Dear Mr. Kurland,

The National Marine Fisheries Service (NMFS) has requested comments on its 2023 draft five-year Conservation Plan for the depleted Eastern Pacific Stock of Northern Fur Seal (Laaqudan) (88 Fed. Reg. 38010) (the draft Plan, herein), a revision of the 2007 conservation plan (NMFS 2007). The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors, herein provides comments and recommendations on the draft Plan.

In June 1988, NMFS designated the Pribilof Islands, Alaska, population of northern fur seals (*Callorhinus ursinus*) as 'depleted' under the Marine Mammal Protection Act (MMPA).¹ A provision added to the MMPA later that year directed NMFS to develop a 'conservation plan' for the North Pacific fur seal.² The MMPA states that a conservation plan's purpose is "conserving and restoring the species or stock to its optimum sustainable population," (OSP level) and a Senate report accompanying the 1988 provisions specified requisite elements of a conservation plan. In addition, the 1988 provision directed NMFS to model conservation plans after recovery plans as specified in section 4(f) of the Endangered Species Act (ESA). NMFS published its first conservation plan for northern fur seals in 1993, and revised that plan in 2007. The 2023 draft Plan retains the four objectives of the 2007 plan (emphasis added):

- 1) Identify and *reduce human caused mortality* of the Eastern Pacific stock of northern fur seals;
- 2) Assess and *avoid or mitigate adverse effects of human related activities* on or near the Pribilof Islands and other habitat essential to the survival and recovery of the Eastern Pacific stock of northern fur seals;
- 3) Continue and, as necessary, expand research and management programs to monitor trends and detect natural or human-related causes of change in the northern fur seal stock and habitats essential to its survival and recovery; and
- 4) Coordinate and assess the implementation of the Conservation Plan.

¹ "The MMPA defines a species, population, or stock as depleted if it falls below its optimum sustainable population [level]. The Pribilof Islands population was designated depleted because it had declined to less than 50 percent of levels observed in the late 1950s" (NMFS 1993).

² Section 115(b).

NMFS has made substantial and impressive progress on the objectives of the 2007 plan with regard to research and monitoring. In contrast, however, very little has been achieved in the areas of “*reducing human caused mortality*” and “*avoiding and mitigating adverse effects of human related activity*.” Moreover, since 2007, the stock’s abundance has continued to decline. Consequently, it is evident that the 2007 plan has failed to achieve its ultimate stated goal of restoring the stock to its OSP level. Given this fact, the Commission is concerned that the draft Plan, which largely duplicates the 2007 plan, is also unlikely to succeed. Therefore, the Commission recommends that NMFS modify the draft Plan by 1) ranking identified threats according to the magnitude of their respective contributions to the continuing population decline, based on the available science; and 2) adding specific *direct* conservation actions³ that NMFS, in close collaboration with its co-management partners, will undertake with the aim of mitigating threats and reversing the decline.

Threats

The draft Plan describes threats known, or with the potential, to impact Eastern Pacific northern fur seals. Yet, although the draft Plan provides qualitative appraisals of the relative impact of a few of these threats, it does not rank them all according to their severity or significance in preventing recovery. For example, the draft Plan states: “studies do not suggest the prevalence of disease and parasites have been a significant threat to fur seals in recent years.” However, the impact of most threats is not assessed, nor are they ranked by priority. Achieving the main goal of the draft Plan – reversing the downward population trend and enabling the population to recover to OSP – will require that all significant threats contributing to the population decline be mitigated. This, in turn, requires informed judgment concerning which threats are most likely to be impacting the stock, and those that are amenable to mitigation. The Commission appreciates that uncertainty will remain and that ranking of threats may be imperfect. However, due largely to NMFS’s impressive research and monitoring efforts, northern fur seals are among the best-studied marine mammal species in the United States. The Commission is confident that sufficient information is available to support a rigorous ranking of threats.

Conservation

The Commission is struck by the relative lack of direct conservation actions in the draft *Conservation* Plan. The draft Plan contains well over 100 activities, nearly all of which are focused on monitoring, research, management, and outreach. The Commission was able to identify only three *direct* conservation actions: 1) a disentanglement program, 2) the removal of marine debris from coastal habitats, and 3) preventing dogs from entering and keeping rats out of the Pribilof Islands.⁴ The Commission strongly supports the emphasis on continuing the prohibition of dogs, which are a potential source of disease introduction and disturbance. The Commission is not aware of any analyses that would suggest that entanglement in marine debris is likely to be a primary driver of the current population decline. Still, disentangling seals, especially when it is carried out with minimal

³ Disentangling fur seals or prohibiting entry into rookeries are examples of what the Commission refers to as *direct* conservation actions, whereas actions such as “developing marine debris prevention plans” or “work[ing] with landowners to develop agreements and plans [to restrict] public access” are examples of *indirect* conservation actions.

⁴ A number of actions categorized as management or outreach are indirectly linked to conservation action. An additional 15 proposed actions could provide some indirect conservation benefit.

associated disturbance to rookeries, has merit primarily as a way to reduce prolonged individual suffering and death. As such, the Commission strongly supports the continued efforts by NMFS and its numerous partners to disentangle fur seals, clean-up marine debris, and conduct prevention outreach. However, the relatively small number of seals that are disentangled, and the fact that those are typically juvenile males, suggests that such activities are unlikely to have significant population-level benefits.

The Commission recognizes that research and monitoring have been essential parts of the previous two plans and such work appropriately continues to be a priority in the proposed plan. As noted previously, NMFS has amassed a substantial body of knowledge, and yet is still unable to definitively identify the primary drivers of the prolonged population decline. That many uncertainties persist does not reflect negatively on NMFS's scientific endeavors; rather it shows how hugely complex the problem is. Lingering uncertainties are unlikely to be fully resolved in the near future, and some of them may never be. NMFS states in the draft Plan:

Effective management depends on a reasonable understanding of northern fur seals' interaction with human activities. Our incomplete understanding of northern fur seal ecology increases our uncertainty and confounds efforts to implement appropriate management measures to positively affect fur seal recovery.

The Commission agrees, but also strongly believes that a lack of complete understanding should not prevent the agency from undertaking ambitious conservation actions. ESA recovery plans, upon which Congress instructed NMFS to model MMPA conservation plans, often prescribe conservation actions in the context of imperfect knowledge. The Commission believes that NMFS has achieved a "reasonable understanding" of the factors likely driving the decline and should move forward with measures that have the best chance to benefit the fur seal population. Therefore, the Commission recommends that NMFS implement measures designed to mitigate threats ranked highest in terms of population-level impact as well as those that may be less impactful but are amenable to mitigation. Recognizing that some measures may prove ineffective, NMFS should assess the efficacy of its actions and make appropriate adaptive modifications over time. The following sections describe two examples of threats and associated conservation actions, which the Commission believes should be considered high priorities by NMFS and its co-managers.

Competition with the Bering Sea pollock fishery

Several studies have suggested that removal of Alaska or walleye pollock (*Gadus chalcogrammus*) by commercial fisheries has caused, at least in part, the decline in the fur seal population by limiting the prey available to the seals. This topic, which has been the subject of research for many decades, is well described in the draft Plan section entitled Indirect Fishing Effects. Briefly, under this hypothesis, lactating fur seals encounter insufficient prey in the vicinity of the Pribilof Islands. Consequently, pups are in less than ideal body condition at weaning, which compromises their subsequent survival, ultimately leading to a decline in the population. While recognizing that the causal relationships and mechanisms involved are not confirmed, the Commission believes that these findings constitute the best available science for identifying the most

likely driver of the decline. Research spanning over 120 years has demonstrated the importance of juvenile and adult pollock in the diet of Pribilof fur seals, especially that of lactating females, and more recently has documented the overlap between the distribution of foraging fur seals during the breeding season and that of the commercial exploitation of pollock in the Bering Sea (e.g., Antonelis et al. 1997, Gudmundson et al. 2006, Zeppelin and Ream 2006, Benoit-Bird et al. 2013, McHuron et al. 2020, Short et al. 2021, Divine et al. 2022). Other studies of northern fur seal pup growth rate and weight at weaning are negatively correlated with the length of foraging trips of their mothers (e.g., Calambokidis and Gentry 1985, Merrill et al. 2021). Baker and Fowler (1992) found that heavier northern fur seal pups exhibited higher post-weaning survival, a relationship that is also well documented in other pinnipeds. McHuron et al. (2020, 2023) provide what is perhaps the most comprehensive integration of the relevant information available on this topic.

Beyond the aforementioned studies, a strong association has been documented between the population trajectories on the three main fur seal breeding islands and the proportion of pollock in the diets of fur seals breeding on those islands. The proportion of pollock in the diet is greatest on St. Paul Island, lower on St. George Island, and far lower on Bogoslof Island (Figure 8 in the draft Plan, Antonelis et al. 1997, Kuhn et al. 2014). The relative reliance on pollock correlates with the population trajectories – pup production is declining on St. Paul Island at 3.4 percent per year since 1988, recently increasing at 2.8 percent per year since 2007 on St. George Island, and increasing at 4.8 percent per year since 2007 on Bogoslof Island (Figure 10 in the draft Plan). Given that the Bering Sea pollock fishery, the largest commercial fishery in the United States, removes substantial quantities of pollock (Ianelli et al. 2019), this correlation supports the possibility that competition for pollock between fur seals and the fishery is contributing to the population decline on St. Paul Island. Therefore, the Commission recommends that NMFS 1) incorporate fur seal foraging requirements into its ecosystem and stock-assessment models to inform management of the Bering Sea pollock fishery, and 2) work with the North Pacific Fisheries Management Council, its Alaska Native co-management partners, and the fishery, to identify, assess, and implement a range of fishery management measures intended to significantly increase the availability of pollock to Pribilof Island fur seals.

Disturbance

The draft Plan describes several forms of human disturbance that may affect northern fur seals on or adjacent to the Pribilof Islands. Northern fur seals are known to be very sensitive to the presence of humans, dogs or vehicles in the proximity to their rookeries. In some cases, stampedes occur, which disrupt normal behavior including nursing, and can result in injury and death of pups trampled by older animals (Ream and Sterling 2019). Some rookeries contain ledges and cliffs, where disturbance can cause fur seals to panic and fall off precipices, sustaining severe injuries or death. The draft Plan reports little or no evidence for a significant population-level impact of disturbance on northern fur seals, yet scant research on disturbance has been conducted. Nonetheless, the Commission believes that disturbance could have an appreciable effect on the population, although it is unlikely to be a primary driver of the population decline.

Ream et al. (1994) suggested that abundance trends at different St. George Island rookeries were related to the degree of access afforded by roads. In particular, East Reef rookery, which is relatively close to the village of St. George and was accessible by a road, declined much faster than other rookeries on the island during 1981-1992. Since then, the human population of St. George has decreased substantially, the road has become less passable, and, since the early 2000s, the rookery has been growing quite rapidly.

To minimize disturbance during the breeding season, most access to northern fur seal rookeries is restricted from June 1 to October 15.⁵ The starting date of the seasonal closure coincides with the arrival of adult male fur seals (Figure 2 in the draft Plan), but the ending date is long before the seals leave the Pribilof Islands. Nursing females and their pups are present on the rookeries until at least early December. Consequently, after October 15, fur seal mothers and pups are vulnerable to disturbance by humans approaching or entering rookeries for wildlife viewing, beachcombing, and subsistence hunting of both northern fur seals and Steller sea lions (*Eumetopias jubatus*). Because disturbance can contribute to death and injury, and may inhibit mass gain of nursing pups, the Commission recommends that 1) NMFS extend the closure of the fur seal rookeries on the Pribilof Islands until such a time (no earlier than December 1) that the risk of disturbance is negligible and 2) NMFS work closely with its co-management partners to minimize disturbance to fur seals on rookeries associated with subsistence hunting.

Engagement of Tribal governments and inclusion of Indigenous Knowledge

The draft Plan benefitted greatly from the addition of new sections on the history of the Unangan people (Unangax, or People of the Sea) on St. Paul and St. George Islands, their enslavement by Russian fur traders and then the U.S. Government for the purpose of commercial exploitation of fur seals, and the Unangans' modern-day cultural, spiritual, and subsistence-related values and practices as they relate to fur seals.

The co-management agreements between the Aleut Community of St. Paul Island and Traditional Council of St. George Island, and NMFS, established in 2000 and 2001, respectively, under the authority of section 119 of the MMPA, provide a framework for the co-production of knowledge and the co-management of fur seals and other marine mammals. The agreements have fostered collaboration and shared responsibilities for monitoring and reporting of fur seal subsistence use, and the participation by Unangans in management decisions made with regard to the subsistence use of marine mammals. It is important to continue to ensure that the resources and staff needed to fully implement co-management agreements are adequate, within both the Tribal Councils and NMFS. To address this in the draft Plan, the Commission recommends that NMFS continue to prioritize funding and internal staff support to ensure ongoing Tribal involvement in co-management and the sharing of information and ideas to identify, prioritize, and implement research and conservation actions that can be taken by NMFS, the Tribal Councils, and other entities to promote recovery of northern fur seals.

⁵ 50 CFR § 216.81

The Commission appreciates the opportunity to advise NMFS on the 2023 draft Northern Fur Sea Conservation Plan, and is available to answer any questions about these comments and recommendations.

Regards,



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Executive Director

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