

MARINE MAMMAL COMMISSION
4340 EAST-WEST HIGHWAY, ROOM 905
BETHESDA, MD 20814

2 April 2007

Mr. P. Michael Payne
Chief, Permits Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910

Re: Draft Programmatic Environmental Impact Statement on the Effects of National Marine Fisheries Service Permitted Scientific Research Activities on Threatened and Endangered Steller Sea Lions and Depleted Northern Fur Seals

Dear Mr. Payne:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the above-referenced Draft Programmatic Environmental Impact Statement (DPEIS) with regard to the goals, policies, and requirements of the Marine Mammal Protection Act and the National Environmental Policy Act. We offer the following comments and recommendations.

RECOMMENDATIONS

The Marine Mammal Commission recommends that—

- the DPEIS be revised to include a thorough discussion of the costs and benefits of an adaptive experimental approach to assess potential fishery effects;
- the Service develop a research implementation plan that provides the functional framework for establishing annual research and recovery priorities in accordance with the recovery plan;
- the DPEIS be revised to include (1) the data and/or assumptions that form the basis of the National Marine Mammal Laboratory's professional opinions about the rates of post-research mortality and non-lethal effects on Steller sea lions and northern fur seals, and (2) to the extent available, information on such rates from scientific reports and other data sources such as photo-identification databases and telemetry reports;
- greater emphasis be given in the DPEIS to evaluating potential unintended effects of research activities;
- the Service and other researchers seek to optimize the value and minimize the costs of their research strategies by identifying and using "best practices" whenever possible;

- any alternative chosen by the Service include additional coordination, mitigation, and monitoring measures to minimize the potential impacts of the research on Steller sea lions, northern fur seals, and their habitats and on the availability of these species for subsistence hunters; and
- the Service collect and maintain information on the handling of individual animals from endangered, threatened, and depleted species in a database that, over time, will provide a basis for judging whether adverse effects are occurring as a result of cumulative takes during scientific studies.

RATIONALE

The debate surrounding research on Steller sea lions and northern fur seals hinges primarily on whether and to what extent the research programs will contribute to the recovery of these species. Will the research programs provide information needed to promote recovery (i.e., benefits)? Will the research unintentionally cause or contribute to significant adverse effects (i.e., costs)? Decision-makers responsible for overseeing recovery efforts for Steller sea lion and northern fur seal populations need to consider both the benefits and the costs of research in their evaluations of research alternatives. The comments and recommendations that follow are intended to help the Service refine its description of the key issues involved and, particularly, improve its assessment of the potentially adverse impacts and the potential benefits of the research alternatives presented in the DPEIS.

High Priority Research and an Adaptive Experimental Research Strategy

In many respects, the construction of the DPEIS suggests that the research described in the draft 2006 Steller Sea Lion Recovery Plan and the Draft Revised Conservation Plan for Northern Fur Seals is all of more-or-less equal value for conservation and management purposes, and that the deciding factor should be the costs of any particular research strategy. Hence, the DPEIS focuses on the potentially adverse effects of the various research activities being proposed. At one level this is understandable because of past criticisms of the research programs that such costs have not been adequately considered.

Although a forthright assessment of costs or adverse effects is essential, such an assessment by itself is not sufficient. By focusing on costs, the DPEIS does not give sufficient consideration to research benefits. Both costs and benefits need to be weighed for informed decision-making that considers the net value of particular research strategies. With regard to endangered and depleted species, the net value depends on whether the research provides the information necessary to identify, understand, or address the causes of population declines and overcome obstacles to recovery. By specifying the benefits of the proposed research, the Service could provide the basis for a more directed, selective, and efficient research program. Without such direction, non-essential research may be conducted with potentially adverse effects, and essential research may be foregone with associated loss of information.

The best example of essential research that is not being conducted is the implementation of an adaptive experimental approach to assessing the potential impacts of fisheries. For years, scientists from both within and outside the Service have called for an adaptive, experimental

program to investigate the ecological effects of fishing. The draft 2006 Steller Sea Lion Recovery Plan does the same. Such an approach would provide information to guide recovery efforts for both the Steller sea lion and the northern fur seal. Despite the potential utility of this type of research, the DPEIS states (page 4-11, second paragraph in section 4.6.5) that “none of the alternative policies for continuing SSL and NFS research would have a direct, indirect, or cumulative effect on commercial fisheries.” This telling statement suggests that there will be no attempt to modify the fisheries in any way to investigate their impact. Such an approach is remarkable in view of the fact that the most controversial question regarding Steller sea lions, and more recently northern fur seals, has been whether and to what extent commercial fishing has contributed to their decline and may be impeding their recovery. If the Service is committed to investigating and understanding the effects of commercial fishing on marine ecosystems, including species like the Steller sea lion and the northern fur seal, then it must implement those research strategies, including manipulation of fisheries, that will provide the essential information. For that reason, the Marine Mammal Commission recommends that the DPEIS be revised to include a thorough discussion of the costs and benefits of an adaptive experimental approach for assessing potential fishery effects.

On this topic, the Commission notes that alternatives focusing on priority research identified in the Steller Sea Lion Recovery Plan and the Northern Fur Seal Conservation Plan—including an alternative that would involve designing and implementing an adaptive management program for fisheries, climate change, and predation—were discussed at a DPEIS focus group meeting held by the Service in August 2006 but not carried forward for analysis. The Service should explain why they were rejected.

Implementation and Coordination of Research

The Commission believes that the research on these populations would be enhanced by an implementation plan. The draft 2006 Steller Sea Lion Recovery Plan defines an implementation plan as “a comprehensive ecological and conceptual framework that integrates and further prioritizes the numerous recovery actions provided in this plan.” On page 4-58, the DPEIS notes (third paragraph, section 4.8.1.4) that “[t]he expanded research efforts under Alternative 4 [the Service’s preferred alternative] would highlight the need to address Objective 1.5 of the Draft Recovery Plan for Steller Sea Lions – develop an implementation plan.” The DPEIS further states that such a plan would serve to “refine research priorities, determine an overall strategy for where, when, and how research efforts should be conducted, and specify how research results should be evaluated and used for management decisions.” The Commission agrees with this assessment and recommends that, as a priority, (1) the Service develop a research implementation plan that provides the functional framework for prioritizing and guiding research and recovery efforts in accordance with the recovery plan, and (2) such plan be used to guide research during the 2007 research season.

Using an implementation plan to guide research should improve coordination among researchers and research activities, which remains a Commission concern. Although proposed pre-season workshops held by the Service will be helpful, it is not clear how the Permits Office, the Commission, and others will be able to assess the potential costs and benefits of those projects and determine whether the research is sufficiently coordinated to avoid unnecessary adverse effects from, for example, multiple research projects at a particularly accessible rookery. This concern is reinforced by the statement in the DPEIS (page 4-48, first paragraph, section 4.8.1.3) that “many

permittees do not specify which specific rookeries/haul-outs their research would affect until a month or two before they begin their fieldwork. . . . It is therefore not known at the time of permit issuance how permittees would distribute their activities within a large area.” The DPEIS notes that those activities could be widely dispersed across the range of the species or concentrated in a few locations. Without a clear indication of how the research effort will be distributed and how the activities of the various researchers inter-relate to one another, it is difficult to make the required findings at the permit-review stage. If that level of specificity is lacking at the outset, the Service should consider alternative ways to conduct its analyses of potentially adverse impacts versus benefits to the species’ recovery once the necessary information has been provided. Here, again, we believe an implementation plan is needed to give direction to efforts for addressing such potential problems.

Quantitative Assessment of Research Impacts

The DPEIS generally provides excellent qualitative descriptions of the potential adverse impacts of varying types and levels of research effort. However, quantitative analyses or, in the alternative, the identification of strategies for obtaining the information necessary to do such analyses, are lacking. For both species, the DPEIS is forced to rely on opinions provided by its experienced researchers, but such opinions are by their very nature compromised because, as the DPEIS explains, experiments to assess research impacts have not been conducted. One omission in the qualitative analyses of the proposed research is any consideration of the potential adverse effects of research proposed by the Alaska SeaLife Center to evaluate drag and buoyancy. This should be added to the final EIS.

We do not suspect that research activities are a primary or even major source of impact. We are, however, concerned that, together with fishing activities, changes in environmental conditions, natural predation, subsistence harvesting, and other risk factors, research activities may be contributing to significant cumulative impacts. Research impacts that are not adequately accounted for also may bias scientific results, resulting in misinformation regarding impediments to recovery. For those reasons, and to be consistent with good scientific practice, the Marine Mammal Commission recommends that the DPEIS be revised to include (1) the data and/or assumptions that form the basis of the National Marine Mammal Laboratory’s professional opinions about the rates of post-research mortality and non-lethal effects on Steller sea lions and northern fur seals, and (2) information on such rates from published reports and other data sources such as photo-identification databases and telemetry records. More generally, the Commission recommends that the Service place greater emphasis on evaluating potential unintended effects of research activities. Concerns have been raised with regard to research on a number of endangered species, and we believe the recovery process for these species would be enhanced by an agency effort to identify and assess potentially negative effects in a systematic way. This would help to avoid unnecessarily prolonged (and costly) debate and controversy.

The Effects of Handling Individual Animals

With regard to the potential effects of handling individual animals, the Commission has two general concerns. The first involves the use of research methods that may cause adverse effects. Researchers should strive to identify best practices that minimize the probability of such effects.

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For example, branding of animals is one such technique, although it may be the only available method for reliably identifying individual animals for certain types of study. Nonetheless, legitimate questions have been raised as to whether branding causes significant serious injury or mortality that is avoidable and that may skew research results. Also, questions have been raised as to whether branding should be conducted with or without anesthetizing the animals to be branded. Scientists proposing to use this technique should evaluate the potential adverse consequences of each approach to determine the “best practice.” We understand that researchers are moving toward using general anesthesia during the branding process. The Commission believes that this is appropriate and consistent with the concept of “best practices” associated with this activity. As a general rule, the Marine Mammal Commission recommends that the Service seek to identify and implement “best practices” for all permitted research activities. Doing so may require new monitoring schemes and extra efforts to track handled animals, but in the long-run such procedures should minimize both unnecessary adverse effects on the research subjects as well as the potential for controversy that may be associated with issuing permits for certain activities.

The second general concern is that, to our knowledge, the Service has not established a mechanism for keeping track of individual animals that have been handled (i.e., captured, sampled, tagged, etc.), especially those that have been handled repeatedly, to determine if the handling results in cumulatively adverse effects. We believe that animals belonging to endangered and depleted species that may be exposed to repeated disturbance or handling should be monitored for long-term “cumulative” effects. At a minimum, a method is needed for keeping track of the number of times individual animals are handled and what procedures are done to them. The DPEIS states (page 4-17, last paragraph, section 4.7.5) that permit holders are required to monitor and report any adverse effects of handling animals or disturbing them at rookeries. The Marine Mammal Commission recommends that the Service expand these requirements to ensure collection and maintenance of information on the handling of individual animals from endangered, threatened, and depleted species in a database that, over time, will provide a basis for judging whether adverse effects are or might be occurring as a result of repeated takes during scientific studies. How the database should be managed (e.g., within the Permits Office) is uncertain, but should be addressed in the final EIS.

Please contact me if you have any questions concerning the Commission’s comments and recommendations.

Sincerely,

Handwritten signature of Timothy J. Ragen in black ink.

Timothy J. Ragen, Ph.D.
Executive Director