

STATE OF ALASKA

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MEMORANDUM

TO: Kevin Duffy, Deputy Commissioner
Alaska Department of Fish and Game

 FROM: Gordon H. Kruse
Alaska Steller Sea Lion Restoration Team

DATE: January 9, 2001

SUBJECT: State Restoration Team Advice to NPFMC
on Steller Sea Lion RPA Implementation

Later this week, the North Pacific Fishery Management Council (Council) will convene a special meeting to discuss a schedule for implementing regulations associated with sea lion protective measures. Given the progress on these issues to date by the state's Alaska Steller Sea Lion Restoration Team, our team wishes to provide some advice to you for consideration at the Council meeting.

The Restoration Team has now met three times: November 20, December 15, and January 5. Minutes have been distributed from our first two meetings, and minutes from our last meeting are now being finalized. We are in the process of compiling an extensive written review of the Biological Opinion (BiOp) issued by the National Marine Fisheries Service (NMFS) on 30 November 2000. Based on our review of the sea lion situation, the team is preparing a second document with our advice on management measures that we feel represent a rational approach to promoting the recovery of the Steller Sea Lion populations while sustaining viable commercial fisheries in Alaska. Although our work on these products continues, the team felt that it would be prudent to pass along some preliminary advice on sea lion protective management measures given the urgent timeline for Council actions starting this week.

The Alaska Steller Sea Lion Restoration Team offers the following specific advice for consideration at the special Council meeting:

1. **Given our initial review, the Restoration Team feels that the Reasonable and Prudent Alternative (RPA) defined in the BiOp is not justified based on the data and analysis provided.** The BiOp identifies two types of sea lion foraging behaviors: (1) foraging around rookeries and haulouts by adult females with pups and by juveniles, and (2) foraging over much larger areas where these and other animals may range once they are no longer tied to rookeries and haulouts. Therefore, it may not be necessary to close all rookeries and major haulouts all year without regard to seasonal use of these areas. As a second example, the Restoration Team feels that designation of Shelikof Strait as a critical foraging area should be analyzed more thoroughly. This designation is based largely on historical data from the roe-stripping fishery by foreign fleets. Contemporary data on present-day domestic fisheries should be considered in the analysis, along with any new data on sea lion distribution and foraging behavior in Shelikof Strait. An analysis of the rate of decline in this area versus other areas may also shed light on the importance of this designation. As a third example, the team feels that the experimental design within the monitoring plan creates overly restrictive management measures with inadequate contrast among treatments to provide a high probability of meaningful results.

2. **The Restoration Team recommends that NMFS should plan to develop a new BiOp that addresses subsequent reviews by the state's Restoration Team, National Academy of Sciences, and the Scientific and Statistical Committee and Council family.** The team feels that a new BiOp is warranted to fully address alternative hypotheses for the causes of the original decline (1970s and 1980s) versus the causes for the current decline and lack of recovery (1990s). Moreover, a new BiOp is necessary to consider new data not included in the recent BiOp, such as foraging data collected since 1993. New analyses of existing data are needed to evaluate fishing and other factors at relevant temporal and spatial scales associated with sea lion life history and population dynamics. Analyses are needed to evaluate potential roles of different factors responsible for the historical decline versus the more recent (1990-present) decline. For instance, the BiOp mentions some of the recent data that largely indicate the western population of Steller sea lions is not nutritionally stressed when compared to the eastern population, at least for adult females and pups up to 5 weeks old. However, these results must be considered when evaluating alternative mechanisms associated with the lack of recent recovery. As another example, all sources of mortality (predation, entanglements, bycatch, shooting, disease, etc.) should be analyzed comprehensively and cumulatively for their ability to explain recent sea lion population trends. The Restoration Team feels that a new RPA will result from a new BiOp that objectively considers these factors.

3. **Given the imminent reviews by several groups, the Restoration Team recommends that the Council put into place new regulations for fishing in 2001 with the realization that those regulations will not constitute the ultimate management regime associated with sea lion restoration.** The ultimate set of sea lion protective measures should take into account the relative vulnerability of Steller sea lions by age, sex, season, and area, and the relative risk imposed differentially by various fishing activities by season, area, distance from rookeries and haulouts, and size and species of fish harvested. The team envisions a different RPA more closely matched to spatial and temporal aspects of sea lion ecology in

which levels of conservatism correspond to levels of risk from specific fishery activities.

4. **The Restoration Team recommends delaying the implementation of an experimental management plan until after a better one has been developed.** Sea lions respond to the prey fields that they encounter. The team is concerned that the differences in fishery removals among "open" and "closed" in the BiOp provide inadequate contrast among treatments to have discernable differential effects on sea lion prey much less a population-dynamic response. A sound experimental design must consider all fishery removals of sea lion prey including those in state waters. Finally, the team feels that the inclusion of the entire Alaskan coastline in the experimental design commits NMFS to an unattainable monitoring program for each area, if covariates of response variables are monitored, as we feel is essential to discern true underlying mechanisms.
5. **The State should consider the need for complimentary actions in the state waters Pacific cod fishery.** As Pacific cod appear to be one population in the Gulf of Alaska, management of the state and federal waters cod fisheries needs to be coordinated.
6. **The Restoration Team is developing recommendations about specific research needs, but we wish to convey the following broad advice at this time:**
 - a. **Develop a research approach that is well coordinated among organizations and among disciplines, especially given major increases in funding for sea lion-related research.**
 - b. **New appropriations should be designed as multi-year expenditures to create a research program with a greater degree of stability.**
 - c. **Although, as indicated above, the Restoration Team advises against commitment to a long-term experimental design at its present stage of development, the team recommends initiating some intensive small-scale manipulative experiments designed to maximize opportunity to resolve key unknowns about sea lion biology and fishery and ecosystem interactions.**

The restoration team will continue to keep you apprised of our progress via meeting minutes. Drafts of our major written products, including our extensive review of the BiOp, will become available in late winter or early spring.