

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

23 November 2007

Mr. D. Robert Lohn
Regional Administrator
Northwest Region
National Marine Fisheries Service
7600 Sand Point Way, NE, Bldg. 1
Seattle, WA 98115

Dear Mr. Lohn:

Thank you for requesting the Marine Mammal Commission's comments on the report and recommendations submitted by the Columbia River Pinniped-Fishery Interaction Task Force. The purpose of the Task Force is to consider the application from Oregon, Washington, and Idaho seeking authority under section 120 of the Marine Mammal Protection Act (MMPA) for the intentional lethal taking of California sea lions preying on salmonids in the Columbia River. The Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the Task Force's recommendations and offers the following recommendations and comments.

RECOMMENDATIONS

The Marine Mammal Commission recommends that—

- The Service provide sufficient supporting documentation to justify its decision regarding potential sea lion removals, including summary tables describing for the various salmonid stocks (1) their status under the Endangered Species Act (ESA), (2) their temporal overlap with each other and with the occurrence of pinnipeds in the Columbia River, and (3) the extent of mortality attributable to each source, including fishing and other forms of human-related take;
- The Service determine whether individually identifiable pinnipeds are having a significant negative impact on salmonid stocks by first considering the impact of pinnipeds collectively and, second, evaluating which individual pinnipeds are significant contributors to the overall impact;
- The Service clearly articulate a quantitative standard for any finding that California sea lions in the Columbia River are having a significant negative impact on salmonid stocks. If this standard differs from that used at Ballard Locks, the Service should justify those differences;
- The Service compare the estimated level of removals of ESA-listed salmonids by pinnipeds with authorized levels of incidental and directed take from other sources and explain why some sources are considered significant while others are not;
- The Service identify the level at which predation of salmonids by pinnipeds no longer would be considered significant and adopt that level as the goal of any authorized removal program;

- The Service establish clear criteria for differentiating between those individually identifiable pinnipeds having a significant negative impact on salmonid stocks and subject to lethal removal and those that are not;
- The Service reject the proposal to allow removal of all California sea lions simply on the basis that they appear in a specified area, absent a showing that all such animals are significant contributors to the predation problem;
- If the Service adopts Lethal Option 1, which was recommended, with little supporting rationale, by a majority of the Task Force, the Service explain its basis for determining that —
 - a single observed predation event or attempt is an appropriate measure of significance;
 - all animals on Table 3.3 should be subject to lethal removal simply because they are in the vicinity of the dam; or adopt a higher threshold for determining which pinnipeds are subject to lethal removal;
 - all sea lions should be subject to removal when the run size is predicted to be 82,000 or less;
- The Service prioritize and phase the removals based on additional selection criteria that will more appropriately filter those animals that warrant removal from those that do not (i.e., number of salmon consumed by an individual sea lion, the number of years the sea lion has been present at the dam, and the duration of time that it has been present at the dam);
- The Service and other federal and state agencies involved in addressing this issue continue and expand their marking and tagging programs to maximize the number of individually identified California sea lions and their programs for monitoring and documenting pinniped predation on salmonids, both in the vicinity of Bonneville Dam and in areas of the Columbia River farther downstream;
- The Service adopt the Task Force recommendation that lethal removal authority not extend beyond six years if it does not appear to be working, but that a longer duration be allowed to accommodate a program that appears to be effective;
- If lethal taking is authorized, it include a condition requiring the states to pursue an aggressive non-lethal deterrence program, including areas farther downstream, aimed at preventing new sea lions from becoming established at Bonneville Dam;
- The Service and other involved agencies continue to pursue the development of non-lethal alternatives for addressing the pinniped predation problem and, in particular, take steps to facilitate the development and testing of electrical field barrier technology;
- The Service consider the need to issue additional guidance to clarify whether and how all of the elements set forth in section 120(d) will be used in determining whether to issue an intentional lethal taking authorization; and
- The Service adhere to the requirements of section 120 in determining whether to authorize the intentional lethal taking of California sea lions in this instance, and if it believes that greater flexibility is needed to address the predation problem at Bonneville Dam, it—
 - encourage the states to consider other available provisions for authorizing taking under the Marine Mammal Protection Act, or

- work with the Commission and others to develop suggested amendments to the Act to address any identified shortcomings of the existing provisions.

RATIONALE

The Commission provided comments on the states' application in a 2 April 2007 letter to Donna Darm. In that letter the Commission noted the plight of endangered and threatened salmonid stocks in the Columbia River and recognized that the conservation needs of those stocks should take precedence over the protection of healthy stocks of California sea lions that are having significant adverse effects on salmonid numbers and recovery. Our view on this has not changed and we reiterate the need to give precedence to the protection of the endangered and threatened salmonid stocks. Under the present circumstances, the issues being considered pit the persistence of whole stocks against that of individual sea lions and, we believe, the former should warrant a correspondingly greater level of concern as strategies to address this matter are developed. Such a weighting is essential if the overall goal of the Marine Mammal Protection Act—to maintain the health and stability of the marine ecosystem—is to be achieved.

To that end, we believe that all involved in this matter will be best served by a rigorous decision-making process that addresses all the requirements of section 120 so that proposed remedial actions are as well justified as possible, given the existing information, and long-term resolution of this problem is not delayed, adding to the risk of extinction of the salmonid stocks. We also believe that a rigorously developed management strategy will set a useful precedent for future consideration of similar problems.

By and large, the Task Force addressed the issues raised by the Commission in its earlier letter and reviewed much of the information that we had recommended be developed. In many cases, however, that information remains buried in background documents that obscure its relevance and undermine its usefulness to decision-makers and the public. For example, the Commission recommended that the Task Force, in examining whether pinnipeds in the Columbia River are having a significant negative impact on salmonid stocks, compare predation by pinnipeds with other sources of mortality, including all forms of human-related take. The Commission also recommended that the Task Force review information on the various salmonid stocks, their status under the ESA, and their temporal overlap with one another and with the occurrence of pinnipeds in the Columbia River, as well as all available information on fishing and other forms of human-related take of those stocks. We still consider such information to be crucial in making and supporting a finding of significant negative impact, and the Marine Mammal Commission recommends that the Service include summary tables with this information in its decision documents.

Statutory Standard

The basic finding to be made under section 120 to support the issuance of lethal taking authority is that “individually identifiable pinnipeds are having a significant negative impact on the

decline or recovery of [any] salmonid fishery stocks” identified in section 120(b) (e.g., those listed as threatened or endangered under the ESA). During the Task Force meetings, Oregon officials put forward a novel interpretation of this phrase, essentially arguing that if pinnipeds are collectively having a significant negative impact on salmonid stocks, that impact should be attributed to all pinnipeds, whether or not they have been identified as individuals contributing to the problem. The Commission believes that Oregon’s suggested interpretation is clearly at odds with the statutory provision and recommends that it be rejected by the Service. When one considers the references to “individually identifiable pinnipeds” in section 120(b)(1), “identifying the individual pinniped or pinnipeds” in section 120(b)(2), and “a description of the specific pinniped individuals or individuals” in section 120(c)(3)(A), it is clear that Congress established a high evidentiary burden on the States to identify and target individual animals that are contributing to the predation problem.

Although the Commission believes that there may be some situations in which all animals in a certain area could be characterized as having a significant negative impact on salmonid stocks, it does not believe that this is the case with respect to pinniped predation in the Columbia River or even in the vicinity of Bonneville Dam. Data available for marked animals at Bonneville Dam (Appendix D to the Task Force report) indicate that at least some of the pinnipeds that appear at the dam do not stay there long, may not return or return infrequently, and have been seen consuming few or no salmonids. Such a conclusion is supported elsewhere in the information considered by the Task Force, e.g., the 2004 report by Robert Stansell (Appendix H, Document 24), which states that more than 50 percent of individual sea lions appear to take two or fewer salmon each season, and “a few individuals account for the majority of fish caught.”

At the opposite extreme of possible interpretations of the statutory standards is one that would require a finding that each pinniped targeted for removal individually has a significant negative impact on the salmonid stocks. Such a construction is equally untenable and would undermine the intent of section 120 by establishing a threshold that could be met only in the most extreme predation situations.

The Commission believes that the findings required under section 120 can best be made by employing a two-part standard. First, the Service should establish that pinnipeds collectively are having a significant negative impact on the salmonid stocks of concern. If that determination is made, the Service should then determine whether the individuals to be removed are significant contributors to the overall level of predation. The Marine Mammal Commission recommends that the Service adopt this two-part test for identifying individual pinnipeds that meet the statutory criteria for lethal removal.

Significant Negative Impact

The Commission in its 2 April 2007 letter stressed the importance of supporting any recommended lethal removal of pinnipeds with an explanation of why predation by those pinnipeds is having a significant negative impact on salmonids. All but one member of the Task Force believed that California sea lions are having a significant negative impact on salmonids in the Columbia River.

However, the Task Force was unable to articulate a clear rationale for that view that tied the observed/estimated predation levels with quantifiable impacts on the decline of salmonid stocks or the impairment of recovery. The list of criteria for making a significant negative impact finding developed by the Task Force on pages 10–11 of its report is helpful but does not relate the observed rates of predation by pinnipeds to population-level impacts on salmonids. The Marine Mammal Commission therefore recommends that the Service undertake the analysis necessary to do so. For example, the Service might evaluate the increased risk of extinction or the estimated delay in recovery time of listed salmonid stocks as a function of pinniped predation at different rates and for different salmonid run sizes. Although there may be reasons to adopt a different standard for fish stocks (e.g., because of their different reproductive strategies and growth potential) than for depleted and ESA-listed marine mammals, the Commission has generally recommended that a delay in recovery time of no more than 10 percent be considered insignificant.

The situation in the Columbia River concerning the threats to listed salmonids is complex, involving multiple factors ranging from migration barriers, diminishment and degradation of habitat, fisheries takes, and predation by birds and marine mammals. Ensuring the conservation of these salmonid stocks will require the management of their combined impact, and there is no doubt that pinniped predation contributes to that combined effect. To put these levels of take in perspective and ensure comprehensive protection for the salmonid stocks, the Marine Mammal Commission recommends that the Service describe both the estimated level of removals by pinnipeds as well as other authorized levels of incidental and directed take. Such taking of listed salmonids should have been described in previous biological opinions under section 7 of the ESA, along with the rationale for concluding that those takings do not jeopardize the continued existence of the species (i.e., reduce appreciably the likelihood of the survival and recovery of the species). No-jeopardy findings are approximately equivalent to a finding under section 120 of the MMPA that the authorized level of taking will not have a significant impact on the decline or recovery of the listed salmonid stocks. If the authorized levels of taking from these other sources exceed the number of removals of salmonids attributable to pinnipeds, the Service will need to explain why the impacts of pinnipeds are thought to be greater.

In raising this issue, the Commission recognizes that assessing the population-level impacts attributable to various sources is not strictly a matter of numbers. When and where fish are taken also are important considerations. For example, for the salmonid stocks in question, the removal of mature fish migrating upstream to spawn can be expected to have a greater negative impact than a similar number of removals of smolts migrating downstream. However, the comparison of pinniped predation with authorized levels of takes from other sources is an area largely glossed over by the Task Force. The Commission therefore believes that the Service should conduct a comprehensive and systematic analysis that compares pinniped predation with authorized take levels from other sources and provides clear explanations to support any determinations that some are significant while other are not.

Because large-scale predation of salmonids by pinnipeds at Bonneville Dam is a relatively new phenomenon, some members of the Task Force considered any pinniped predation at

Bonneville Dam to be significant. They argued that the predation effect is in addition to the pre-existing factors, which, in combination, were already having significant adverse impacts on the fish stocks. The MMPA does not establish any such first-in-time priority, and the Commission therefore believes that the contribution of each source to the overall impact needs to be evaluated to determine its significance. A related issue is whether the remedies available under the MMPA and other applicable statutes must be prioritized on a first-in-time basis. In many respects, this issue is at the heart of the controversy over pinniped predation, and the Service will need to address it and provide a rationale to support its decisions on how to reduce a significant take level when multiple risk factors are involved.

Although Task Force members generally agreed that the observed level of predation by pinnipeds at Bonneville Dam this year was having a significant negative impact on salmonid stocks, they did not reach consensus as to the level at which the impact would cease to be significant. From the Commission's perspective, this is an equally important determination. Just as section 120 authorizes the intentional lethal taking of pinnipeds that are having a significant negative impact on listed salmonid stocks, it follows that the taking authority should lapse once predation is reduced to a level where it no longer is having a significant impact. In essence, reducing the take level below the significance threshold should be the goal of the pinniped removal program.

Some members of the Task Force argued that the goal of a lethal taking program under section 120 should be to reduce sea lion predation of salmonids to zero. Under current circumstances, sea lion predation in the Columbia River clearly ceases to have a significant negative impact on salmonid stocks at some higher level. The two lethal take options ultimately put forward by the Task Force recommended, in one case, that the goal be to reduce predation below Bonneville Dam to 1 percent of the returning fish and, in the other case, to 0.5 percent. In neither case, however, did the Task Force engage in any quantitative analyses to support the selection of these targets, and they were selected largely because they seemed "about right" and might be achievable. The Marine Mammal Commission therefore recommends that, as part of the analysis discussed above, the Service seek to quantify the level at which predation no longer would be considered significant and that that level be established as the goal of any authorized removal program.

The Commission in its 2 April 2007 letter recommended that the Task Force look at the experience at Ballard Locks (the only other time that section 120 has been used) in formulating its recommendations, especially in developing the supporting justification for the number of lethal removals it might recommend. This was not a focus of the Task Force's deliberations.

In authorizing the lethal removal of sea lions at Ballard Locks, the previous Task Force recommended, and the Service adopted, a requirement that lethal removal not occur unless sea lion predation over any seven-day period exceeded 10 percent of the available fish. That standard is higher than the trigger for lethal removals recommended by the current Task Force. These two situations differ and the current process should not be locked into the previously established measure of significance. However, deviation from previous standards should be explained, and we believe the Service's final decisions will be better supported if the Service addresses this issue head-

on by explaining why the Ballard Locks standard is not considered appropriate for the Bonneville Dam case. The Marine Mammal Commission therefore recommends that the Service address this issue in its decision-making process so that the justification for any change in approach is apparent.

Individually Identifiable Pinnipeds

The information from previous studies does not support the conclusion that all pinnipeds in the Columbia River or even in the area just below Bonneville Dam are having a significant negative impact on listed salmonids and should be subject to removal. Criteria are therefore needed to differentiate those pinnipeds that should be subject to lethal removal from those that should not. Both lethal removal options put forward by the Task Force include suggested criteria. Lethal Option 1 proposes seven different criteria (pages 12–13 of the Task Force report). Lethal Option 2 would authorize the removal of all California sea lions encountered in the proposed California Sea Lion Exclusion Zone (CSLEZ) and so-called “highly identifiable individuals” anywhere within the Columbia River.

The blanket removal authority for any California sea lion in the CSLEZ recommended under Option 2 is inconsistent with the statutory requirements absent any affirmative showing that all such sea lions prey on salmonids in that area to a degree that can be considered significant. The Marine Mammal Commission therefore recommends that the Service reject this proposal.

The criteria proposed under Option 1 are more finely tuned and, with certain exceptions, the Commission supports them. The Commission appreciates the difficulty in detecting all predation incidents and attributing the taking of a salmon to an individual sea lion, even in the area immediately below Bonneville Dam. That being said, the inferences underlying some of the suggested criteria should be better justified and explained. For example, Criterion A would allow the lethal removal of an identifiable sea lion observed catching a single salmon within the CSLEZ. This proposal appears to be based on either the belief that taking a single fish is significant or the belief that any animal in the CSLEZ that takes one fish is likely to be taking more. Although some sea lions become established below Bonneville Dam and are seen preying on multiple salmonids, it is not clear from the available data that this is the general pattern. A similar problem exists under Criterion D, which would allow on-the-spot lethal removal of any California sea lion observed eating a salmon or attempting to eat a salmon within the CSLEZ. The Marine Mammal Commission recommends that, if these proposals are adopted, the Service justify the finding that a single observed predation event or attempt is an appropriate measure of significance.

Criterion B under Option 1 would allow the lethal removal of any sea lion included in Table 3.3 (Appendix D) if it is seen in the CSLEZ in 2008 or any subsequent year. The Commission is concerned that some animals included in that table have little or no documented history of preying on salmonids in the CSLEZ. Some of the sea lions included in the table were observed eating only a single fish. A considerable number have never been observed eating a salmon. Similarly, a majority of the animals on the list have been observed in the vicinity of Bonneville Dam during only one season and many have remained in the area for only a short period of time (e.g., 24 of the animals

were present only a single day). Clearly, some of the sea lions listed on Table 3.3 should be considered individually identified problem pinnipeds that meet the criteria of section 120. We are not convinced, however, that all of the animals included in the table meet the statutory criteria. As such, the Marine Mammal Commission recommends that, if the Service decides to implement criterion B, it prioritize and phase the removals based on additional selection criteria that will more appropriately filter those animals that warrant removal from those that do not. Targeting the most significant contributors to the predation problem would allow the Service to examine the effects of sea lion removals on both the salmonids and the other sea lions present at the dam. We do not believe that sea lions that never have been observed eating a salmonid should be automatically subject to removal without applying other criteria that demonstrate more clearly that they may be significant contributors to the predation problem. We suggest that the Service identify different combinations of the three factors listed in Table 3.3 (salmonids consumed, number of years present, and duration of presence) that would be more appropriate indicators of significance.

Criterion G would allow the lethal removal of all California sea lions observed above Navigation Marker 85 in any year for which the predicted run size of the upriver spring chinook is 82,000 or less. The selection of this run size as the point where any predation should be considered significant is not explained in the Task Force report or accompanying documents. The Marine Mammal Commission recommends that, before adopting this proposal or any similar threshold that would allow all California sea lions to be taken based on projected run size, the Service undertake additional analyses to relate that run size to a finding of significance.

For a selective removal program to effectively target only those pinnipeds that are significant contributors to the predation problem, the involved state and federal agencies will need to maintain vigorous programs for marking animals and observing and documenting incidents of predation. The Marine Mammal Commission therefore recommends that the existing marking and monitoring programs be retained and fully funded. If section 120 of the MMPA is to be used to address the sea lion predation problem at Bonneville Dam, identifying and tracking individual animals will continue to be important. The involved agencies also should consider expanding the existing programs, at least in the short term, to provide the best possible information for, and assess the effectiveness of, a lethal taking program and to document whether sea lion predation is a significant problem in other areas of the Columbia River.

Duration of Authorization

Among other things, section 120 directs the Task Force to recommend the duration of any lethal taking authority it proposes. In this case, the Task Force recommended six years as sufficient time to determine if such removals are effective in addressing the problem. Many Task Force members expressed the view that, if lethal removals were not effective in addressing the problem by then, they should be discontinued. Other Task Force members believed that an aggressive removal program would be able to solve the problem within six years. The Commission believes that the Service needs to consider another possibility—that a targeted lethal removal program is effective in reducing predation of salmonids to an insignificant level, but that it needs to be continued beyond

six years to allow the removal of new animals that become established below Bonneville Dam and could engage in predation at a significant level, were they allowed to remain. The Marine Mammal Commission therefore recommends that the Service build in sufficient flexibility in any authorization it issues under section 120 to allow the program to persist beyond six years.

Non-Lethal Alternatives

Section 120 requires the Task Force to suggest alternatives to lethal removal if they are available and practicable. The Task Force noted that non-lethal alternatives had been tried extensively by the applicants and had not been sufficiently effective. Nevertheless, it recommended that hazing efforts be continued and expanded into areas farther downstream where they might be more effective in deterring less experienced animals from becoming established below Bonneville Dam. The Marine Mammal Commission concurs with the Task Force and recommends that any lethal taking program approved by the Service include an aggressive non-lethal deterrence component to minimize the potential for new animals to become established at the Dam.

The Task Force also recommended that the Service and others continue to pursue emerging technologies that may provide effective non-lethal alternatives. In particular, the Task Force considered the potential value of an electrical field barrier being developed by Smith-Root. We agree with the Task Force that this is a technology that might prove to be effective in deterring pinnipeds from traveling upriver, and the Marine Mammal Commission recommends that its developers be encouraged to undertake feasibility testing as quickly as possible. Further in this regard, the Marine Mammal Commission recommends that the Service and other involved agencies facilitate research on and development of the electric field barrier by contributing funding, making testing opportunities available, and expediting review of permit applications for such research.

Other Considerations

Section 120(d) directs the Task Force and the Service to consider multiple aspects of a pinniped-fishery interaction problem in determining whether or not to authorize lethal removal. Some of these seem relevant to making the basic findings required under section 120, such as the feeding habits of the pinnipeds, how and where interactions occur, how many pinnipeds are involved, past experience with non-lethal deterrence measures, and the impact of pinnipeds on salmonid stocks. Other identified considerations, however, are not directly related to the underlying findings to be made, such as whether the pinniped behavior presents a risk to public safety, pinnipeds present a risk to fish stocks or ecosystem components other than salmonids, and even the population trends of the pinnipeds (as long as they are not depleted or designated as a strategic stock). The Commission does not believe that lethal taking can be authorized under section 120 to address public safety risks posed by pinnipeds or to protect fish stocks other than salmonids unless those factors are somehow also related to pinniped impacts on salmonid stocks. Because of the apparent inconsistencies between the issues that the Task Force and Service are required to consider under section 120(d) and the statutory basis for issuing lethal taking authorizations, the Marine Mammal Commission recommends that the Service consider whether clarification of its decision-

making process is needed, either through the issuance of regulations or other agency guidance or policy statements.

Alternative Mechanisms for Authorizing Taking

Although the three states seeking lethal taking authority in this instance chose to apply under section 120 of the MMPA, the taking of marine mammals proposed in this instance also might be authorized under more generally applicable provisions of the Act. For instance, taking authority could probably be issued under a waiver of the taking moratorium under sections 101(a)(3)(A) and 103 of the Act, provided that the Service determines that California sea lions are at their optimum sustainable population and will not be disadvantaged by the authorized taking. Similarly, the states could have much greater latitude in their management options were they to secure a transfer of management authority under section 109 of the Act.

By choosing to operate within the confines of section 120, the states accepted certain limits as to what taking could be authorized and under what conditions. Only lethal taking of individually identifiable pinnipeds having a significant negative impact on the decline or recovery of salmonid fishery stocks can be authorized under section 120. We appreciate the concern of some members of the Task Force who appeared to be driven more by the pragmatic goal of designing the authorization they thought most likely to resolve the pinniped-fishery conflict than by whether that authorization would satisfy the requirements of section 120. At the same time, however, we believe that the requirements of section 120 are sufficiently precautionary to give the Service the leeway to ensure adequate protection of those stocks. By prioritizing and phasing in the implementation of any authorized removal activities, the Service has the opportunity to initiate actions in 2008 that will begin to resolve this problem. Clearly, additional analyses consistent with our recommendations will be required during and after 2008, but the Service should have the flexibility to initiate remedial measures promptly.

We believe completion of our recommended analyses and development of necessary justifications is important not only to satisfy the statutory requirements but also to provide better insights into how such circumstances might best be resolved if they occur in the future at Bonneville Dam or at other locations.

If ultimately it is determined that greater flexibility is needed—for example, by taking steps to exclude all California sea lions from certain areas irrespective of a documented impact on the salmonid stocks—or that the identification and monitoring requirements called for under section 120 are too costly or burdensome, we encourage the states to seek an authorization under one of these other provisions of the Act. If the states choose not to do so, we suggest that they work with the Service, the Commission, and other interested parties to identify possible refinements to section 120 for consideration by Congress.

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Mr. D. Robert Lohn
23 November 2007
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Thank you for providing the Marine Mammal Commission the opportunity to comment on the Task Force report and recommendations prior to the Service issuing its decision on the states' section 120 application. I hope that you find our comments and recommendations helpful. Please contact me if you have any questions about them.

Sincerely,

A handwritten signature in blue ink that reads "Timothy J. Ragen". The signature is written in a cursive style with a blue ink color.

Timothy J. Ragen, Ph.D.
Executive Director

cc: Ms. Donna Darm
Mr. Garth Griffin
Mr. James Lecky