RECOMMENDATIONS FOR WEST COAST PINNIPED REMOVAL

NATIONAL MARINE FISHERIES SERVICE (NMFS) REPORT TO CONGRESS

In those cases where enough is known about pinniped affects on other resources to raise valid concerns, management action should not be delayed while waiting for precise scientific documentation that eliminates all uncertainty. Delaying management decisions in those situations where there is an immediate need for action only increases the risk of losing present and future options. In that regard, these risks have been evaluated, and the following recommendations were developed to address issues regarding California sea lion and Pacific harbor seal impacts on salmonids and, more broadly, on human activities in coastal ecosystems. These recommendations are conservative in that they only recommend lethal taking of individual pinnipeds (rather than large-scale removal or population culling programs) and such takings are limited to specified sites and situations. Congress should work with PSMFC, the West Coast States, NMFS and the public to consider legislation where necessary to implement the following recommendations.

A. Implement Site-specific Management for California Sea Lions and Pacific Harbor Seals{tc \l2 "A. Implement Site-specific Management for California Sea Lions and Pacific Harbor Seals}

A new framework needs to be established that will allow state and federal resource management agencies to immediately address conflicts involving California sea lions and Pacific harbor seals. This framework should provide a streamlined approach for federal and state resource management agencies to take necessary and appropriate action with pinnipeds that are involved in resource conflicts. The framework should provide procedures for lethal removal of California sea lions or Pacific harbor seals where these species are impacting ESA-listed salmonids. In addition, the framework should provide procedures for lethal removal where these pinniped species are adversely impacting salmonid populations identified as being of special concern by states, or where these pinniped species are in conflict with human activities.

Under this recommended framework, state and federal resource management agencies would have a general authorization (without application or permit procedures) to lethally remove California sea lions and Pacific harbor seals, under the conditions described below, to immediately resolve certain resource conflict issues. State agencies would report any lethal takes of pinnipeds to NMFS within 72 hours, and NMFS would manage these takes, in addition to all other sources of human-caused mortality, to remain within the PBR level for the involved pinniped population. Lethal methods would be discontinued once safe, effective, and long-term non-lethal methods are developed for the specific situations. Agency personnel who participate in lethal removal activities would be trained, or demonstrate the ability, to distinguish among California sea lions,

Pacific harbor seals and other pinniped species that may be present in the area, in order to avoid accidental removals of other pinniped species.

The three components of this framework are as follows:

(1) *In situations where California sea lions or Pacific harbor seals are preying on salmonids that are listed or proposed for listing under the ESA, immediate use of lethal removal by state or federal resource agency officials would be authorized*. This authorization would only apply to those areas where resource agencies have determined that there is an urgency to immediately remove pinnipeds lethally, without having to expend resources on non-lethal methods that are not likely to provide immediate resolution to the conflict. Where salmon recovery plans exist for ESA listed species, the removal of pinnipeds would be consistent with those plans. Under this authorization, pinnipeds would be removed from an area only during those times when the salmonids of concern are present and vulnerable to predation. Lethal removal would only occur in specific areas where the conflicts occur, such as locations where salmonid passage is restricted or impeded and only during the period when affected salmonids are migrating through the area. It would be inappropriate to use this approach, for example, to remove pinnipeds in lower estuary areas when the actual predation problem clearly occurs upstream at a fish passage restriction. In addition, this immediate lethal authorization should not apply uniformly to every river system within the range of a listed salmonid population. Lethal removal would be inappropriate in cases where a particular salmonid run in a river system within the listed salmonid population is doing relatively well, and resolving predation at that site is not a recovery need.

(2) *In situations where California sea lions or Pacific harbor seals are preying on salmonid populations of concern or are impeding passage of these populations during migration as adults or smolts, lethal takes by state or federal resource agency officials would be authorized if (a) non-lethal deterrence methods are underway and are not fully effective, or (b) non-lethal methods are not feasible in the particular situation or have proven ineffective in the past*. This authorization would apply to those areas where pinnipeds are preying on state-listed "depressed," "critical," "sensitive," or similarly identified salmonids. It also would apply to situations where pinnipeds are impeding passage during migration of these populations. Lethal removal would occur only after non-lethal measures have been considered and applied up to some realistic point. Non-lethal means could first be used to drive pinnipeds out of an area, for example, but those few individuals that remain and successfully prey on salmonids could be lethally removed. It would not be necessary to repeat tests of non-lethal methods that have proven ineffective in similar situations in other areas.

(3) *In situations where California sea lions or Pacific harbor seals conflict with human activities, such as at fishery sites and marinas, lethal removal by state or federal resource agency officials would be authorized as a last resort when an*

individual pinniped fails to respond to repeated deterrence attempts, or when repeated deterrence attempts do not affect the behavior of an individual pinniped over the long-term. Under this authorization, the use of non-lethal methods would be required at the outset, and would be the primary method of response. Lethal removal would be used only in those few situations when (a) an individual pinniped is repeatedly involved in a conflict situation (e.g., a known rogue animal) such as an individual sea lion that regularly interferes with fishing operations, repeatedly raids bait barges or fish pens, or frequently blocks access to a marina; and (b) non-lethal deterrents that have been applied to the individual pinniped have not been effective. This authorization would allow state and federal resource agencies to more effectively resolve specific pinniped conflict situations where pinnipeds may not respond to non-lethal deterrents.

B. Develop Safe, Effective Non-lethal Deterrents{tc \l2 "B. Develop Safe, Effective Non-lethal Deterrents**}**

Effective non-lethal deterrence methods may be the key to resolution of many conflicts involving humans, pinnipeds, and other marine resources on the West Coast. California sea lions and Pacific harbor seals have demonstrated a remarkable ability to adapt to, avoid or circumvent most types of non-lethal deterrents. Where that is true, lethal removal remains the only effective alternative until satisfactory deterrence measures are developed. Satisfactory deterrence methods are those that would be effective in resolving the immediate conflict and would not have detrimental incidental effects.

In order to provide a broader array of options than lethal removal, there is a pressing need for research on the development and evaluation of deterrent devices and further exploration of other non-lethal removal measures such as the use of emetics for behavior modification. All potential options need to be evaluated in a concerted, adequately funded effort to address this issue. Impediments to testing non-lethal deterrent technologies need to be removed. Because there is a shortage of expertise in deterrence technologies within NMFS, due to continuing research needs for stock assessments, other development alternatives (e.g., external grant programs) need to be considered. Research and development of pinniped deterrence methods should be a research priority for addressing expanding pinniped populations on the West Coast. Investigating innovative new techniques will require adequate funding.

C. Selectively Reinstate Authority for the Intentional Lethal Taking of California Sea Lions and Pacific Harbor Seals by Commercial Fishermen to Protect Gear and Catch{tc \l2 "C. Selectively Reinstate Authority for the Intentional Lethal Taking of California Sea Lions and Pacific Harbor Seals by Commercial Fishermen to Protect Gear and Catch}

Prior to the 1994 Amendments to the MMPA, commercial fishermen were

allowed to kill certain pinnipeds as a last resort in order to protect their gear or catch. Although the 1992 NMFS legislative proposal recognized that there was a need for this, such authority was not included in the 1994 Amendments to the MMPA; it was replaced with authority to use deterrence measures that do not kill or seriously injure marine mammals. This non-lethal authority has proven to be of little use because no effective long-term deterrence methods are known. Conflicts between fishermen and pinnipeds have become more frequent, and the economic losses due to pinnipeds have increased. This has also placed increased pressure on federal and state resource agencies to take action to resolve the problems.

Some commercial fishermen should still be allowed to use lethal means to protect their gear and catch from depredation by California sea lions and Pacific harbor seals until such time that effective non-lethal methods are developed for their specific situation. These authorizations should be based on a demonstrated need, and be limited to specified areas and fisheries. Fishermen who receive such authorizations should be trained, or demonstrate the ability, to distinguish among California sea lions, Pacific harbor seals, and other pinniped species that may be in the area, to prevent accidental takes of other pinniped species. From a biological perspective, the limited return of lethal deterrence should not be a problem for either California sea lion or Pacific harbor seal populations. The lethal removals that were authorized prior to 1994 did not prevent either population from increasing at five to eight percent per year. Similarly, a limited restoration of this authority is not expected to adversely affect the continued growth of either population, since it will affect only those individuals that have learned to target commercial fishing operations as an easy source of food. Requirements to report such takes would still be in place, and existing PBR limits would restrict all removals to biologically ìsafeî levels.

D. Information Needs{tc \l2 "D. Information Needs}

Although there is sufficient information to warrant action to remove pinnipeds from areas where they co-exist with and prey on salmonid populations of concern, there is an array of additional information needed to evaluate and monitor California sea lion and Pacific harbor seal impacts on salmonids and other components of the West Coast ecosystems. These information needs include:

- Conducting site-specific investigations on pinniped predation impacts on various salmonid populations. This would include quantifying composition of the diet and food habits requirements, based on age/sex class information appropriate for the area of concern, and considering site-specific predator abundance temporally and spatially.

- Conducting state-by-state and river-by-river investigations on salmonid populations that are vulnerable to pinniped predation.

- Conducting studies of comparative skeletal anatomies of different salmonid species, so that specific prey species may be identified in food habits studies using scat and gastrointestinal tract analyses.

- Conducting research on site-specific seasonal abundance and distribution of California sea lions and Pacific harbor seals north of Point Conception.

- Conducting research to assess and evaluate potential impacts of pinnipeds on specific fisheries and fishing areas.

- Conducting socioeconomic studies on impacts of pinnipeds on various commercial and recreational fisheries.

- Conducting ecosystem research where the impacts of pinniped predation on non-salmonid resources can be addressed, beginning with small systems such as Puget Sound and expanding those studies to larger West Coast ecosystems.

- Collecting unbiased samples for food habit studies. This may require the direct lethal collection of pinnipeds for analysis of stomach contents.

Research in the above areas is needed, but completion of such research should not be viewed as a prerequisite to undertaking necessary actions and recommendations to address existing pinniped conflict situations identified in this report.