Committee on Resources

Subcommittee on Fisheries Conservation, Wildlife and Oceans

Statement

STATEMENT OF DR. WALTER T. PEREYRA

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SUBCOMMITTEE ON FISHERIES CONSERVATION, WILDLIFE & OCEANS

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My name is Dr. Walter T. Pereyra. I am a former National Marine Fisheries Service ("NMFS") fisheries scientist. Presently I am Chairman and part owner of the Arctic Storm, Inc. ("Arctic Storm"). Arctic Storm owns and/or manages two catcher processors, one of which is in partnership with the Bristol Bay Economic Development Corporation, and two catcher vessels, all of which participate in the Bering Sea and Aleutian Island fisheries for Alaskan pollock. I am also Vice Chairman of the North Pacific Fishery Management Council ("Council") which is responsible together with NMFS for the conservation and management of the fishery resources in the federal waters off Alaska. I am serving my ninth and final year on the Council.

Mr. Chairman and Members of the Subcommittee: I am pleased to appear before you today to comment on the issue of the decline of the Steller sea lion populations in certain areas off Alaska. As requested, I will focus my attention on perceived and actual deficiencies in the NMFS' Steller sea lion research and management program, and how the agency could improve or expand on its current research program. I will also offer some comments on other research areas that could be pursued to better understand the reasons for the current decline in the western population of Steller sea lions. In developing my thoughts on this subject I have taken into consideration the extensive comments and recommendations of the Council's Scientific and Statistical Committee ("SSC"). The SSC not withstanding the conclusions drawn and recommendations put forth in this statement are my own.

Decline of the western population of Steller Sea Lions

The decline of the Steller sea lion populations in Bering Sea and Aleutian Islands ("BSAI") and the central and western areas of the Gulf of Alaska ("GOA") has been well chronicled. Despite considerable research and scientific inquiry into the factors that have led to this decline, these factors remain poorly understood at best. Moreover, there has been no conclusive evidence that the pollock fishery is the causative factor either directly or indirectly for the sea lions' decline. Despite this scientific uncertainty, though, the NMFS concluded in their Biological Opinion ("BO") following an extensive Section 7 consultation under the Endangered Species Act ("ESA"), that the pollock fishery as proposed for 1999-2002 was "likely to jeopardize the continued existence of the western population of Steller sea lions and adversely modify its critical habitat".

The roles of the Council and its SSC in regards to this Section 7 consultation have been minimal. While we were able to comment at length on the content of the BO and conclusions drawn, the BO itself was exclusively the domain of the NMFS - - - they had the responsibility for producing the BO and they alone arrived at the conclusion of jeopardy. Also they alone established the Reasonable and Prudent Alternative ("RPA") principals by which the Council had to shape its suite of recommended RPAs to NMFS for management of the pollock fishery. For the 1999 pollock fishery NMFS rejected the Council's RPA recommendations for the summer/fall portion of the fishery. We will meet next month in Kodiak to revise our recommendations for the remainder of this year, and for the year 2000 and beyond.

In my mind the difficulty in which we find ourselves today was created by the NMFS' listing of the western population of Steller sea lions as endangered under the ESA in June 1997 together with our poor understanding of the dynamics of the BSAI and GOA ecosystems and their relationship to the Steller sea lion population. This endangered listing immediately put the Council and NMFS in the difficult position of having to take so- called precautionary management actions to the pollock fishery without the benefit of an adequate understanding of the relationship between the fishery and the Steller sea lion population. Without such an understanding we have no assurance that despite our good intentions we in fact will be doing anything to benefit the recovery of the Steller sea lion population. We do know, though, that these remedial management measures will negatively impact the economics of the pollock fishery. Furthermore, there is some suggestion that certain RPAs could actually be hindering the recovery of the Steller sea lion population.

In gaining an appreciation of the considerable research required to adequately understand the complex subject of the Steller sea lion decline and RPAs, it is helpful to note NMFS' concluding opinion from their Section 7 consultation and the BO. They concluded that the decline in the sea lion population was due most likely to decreased juvenile survival with reduced availability of prey identified as the underlying cause. In response to this conclusion NMFS recommended RPAs consisting principally of additional fishery exclusion zones around rookeries and haulouts, and time-area restrictions on the pollock fishery as a means of "buffering" sea lions from possible fishery-induced localized depletion of prey stocks. These management measures have been invoked despite the fact that there has been no conclusive proof that the pollock fishery is responsible for any localized depletion of prey species or that if such localized depletion does in fact occur, that foraging ability of sea lions is compromised in any way.

Deficiencies in NMFS' Steller sea lion research and management programs

Certain deficiencies can be identified in NMFS' Steller sea lion research and management programs. These deficiencies appear to be due to a lack of funding, the need to invoke new measures to manage the pollock fishery following the listing of the Steller sea lion as endangered, and the narrow focus of the NMFS'

inquiry into the basic reasons for the sea lion's decline. Some of these deficiencies have been known for more than 10 years but remarkably little has been invested in research to answer the questions raised. A discussion of the more important research deficiencies follows.

1) Localized depletion - the underlying hypothesis driving the finding of jeopardy and the RPA principals is the notion that the pollock fishery is responsible for localized depletion of pollock within the Steller sea lion's critical habitat ("CH"); and furthermore, that this localized depletion has negatively impacted the sea lions. Attempts to measure localized impacts of fishing on the population density of pollock by tracking temporal changes in catch-per-unit-effort in the fishery and abundance of pollock within the CH have been unsuccessful. Therefore, fishery independent surveys in conjunction with the fishery are going to be required to quantitatively assess the relationship, if any, of fishing to localized depletion.

Along with studies on fishery-induced localized depletion there is a need to determine the degree to which localized depletion, should it be occurring, negatively impacts the sea lions' ability to forage successfully. We have no knowledge of this important relationship. If the pollock fishery impairs foraging success, we then need to know more as to the relationship between foraging success and the sea lions' overall condition and fitness.

2) Time-area distribution of pollock - The proposed RPAs involving time-area regulations on the pollock fishery are premised on an understanding of the distribution and abundance of the pollock population at the time of the fishery. Due to the lack of winter surveys and the timing of the summer surveys, time-area RPAs have had to be established in a speculative manner. This has put the conduct of the pollock fishery in jeopardy and raised the possibility of the pollock fishery being forced to operate disproportionately to the distribution of pollock, a situation that would be contrary to the intent of the RPAs themselves.

To reduce the potential risk to both the pollock fishery and the Steller sea lions, there is an immediate need for NMFS to conduct winter surveys to determine the winter distribution of pollock relative to the CH prior to the start of the fishery. There is also a need to expand and alter the timing of the summer survey to determine the distribution of pollock relative to the CH and the eastern and western portions of the eastern Bering Sea. Both the winter and summer surveys need to be conducted annually, synoptic in nature (multi-vessel) and include surveys of both the on-bottom and off-bottom components of the pollock population.

3) Efficacy of trawl exclusion zones - Trawl exclusion zones around certain sea lion rookeries have been in place since 1992. To date there have been no experiments or analyses conducted by the NMFS to test the efficacy of these no trawl zones. This lack of experimental studies is disturbing considering that in May, 1997 when it reclassified the western population from threatened to endangered, NMFS stated that it was premature to propose changes to the Steller sea lion protective measures, because "(1) more time is required to assess what, if any, benefit has been derived from the actions currently in place [a reference to the no trawl zones adopted in 1992 and 1993]; and (2) given the limited knowledge of the sea lion/fishery prey interaction and the effect of human disturbance, it is difficult to identify meaningful management actions in addition to those already in place". Recently an industry analyst examined NMFS' site-by-site sea lion count data and demonstrated that rookery sites open to trawling had experienced improving population trends as opposed to those sites closed to trawling. NMFS has refuted this finding but has not offered any research to counter these conclusions. It is imperative that NMFS design and conduct a controlled experiment to directly test the efficacy of the no trawl zones. Only in this manner will it be possible to determine whether the trawl exclusion zones around rookeries are beneficial (or adverse) to the Steller sea lions. It should be noted that the closure this year of the Aleutian Islands to all directed pollock fishing can not substitute for a controlled efficacy experiment of the trawl exclusion zones due to the importance of Atka mackerel as forage for sea

lions in this area and the lack of a suitable control to the Aleutian Island closure.

4) Predator studies - One of the ongoing debates surrounds the possibility that predation by killer whales ("orcas") could be impeding the sea lion's recovery. Fishermen have reported seeing large pods of orcas in the Bering Sea in recent years and observations of killer whales attacking sea lions are common. Unfortunately, due to the dispersed nature of the orca population, their distribution in pods and survey difficulties, our knowledge of the distribution and abundance, and feeding ecology of these known sea lion predators is wanting. Attention should be given to assessing the size and distribution of the orca population so as to ascertain their potential impact on the recovery of the Steller sea lion.

5) Feeding studies - Feeding studies of captive sea lions by Dr. Andrew Trites and his colleagues associated with the University Marine Mammal Consortium have revealed some illuminating results. For one they have found that pollock may in fact be an unsuitable food source for the Steller sea lion which may explain in part for the decline of the sea lion population despite an increased abundance of pollock. Conversely more oily species such as herring and/or a more diverse diet appear to be more suitable for sea lions. These studies suggest that diet and lack of diversity could be a leading cause for the decline of Steller sea lions. These captive studies need to be expanded and refined to help answer important questions regarding the relationship between the availability of certain species as food for sea lions and the robustness of the Steller sea lion population.

Ecosystem investigations

There is a growing realization that quite possibly a major regime shift associated with the Pacific Decadal Oscillation ("PDO") may help explain the long-term changes we have witnessed in the western population of the Steller sea lion. It has been hypothesized that changes in the position and strength of the Aleutian low pressure could be largely responsible for this regime shift and that this change resulted in fundamental changes in the production characteristics of the entire North Pacific Basin. One change may have been a reduction in the populations of oily forage species such as herring, smelts and caplin, all of potential importance in the diet of Steller sea lions. This in turn may have reduced the carrying capacity of the environment for Steller sea lions, which in turn would have resulted in a population decline. Unfortunately our historical knowledge of the characteristics of the Steller sea lion population is lacking, as is our understanding of the PDO and its effect on the Steller sea lion population.

An examination of the PDO and its possible effect on the Steller sea lion population should become a focused research endeavor. Such a holistic approach to understanding the reasons for long term changes in the sea lion population would be consistent with the recommendations by the NMFS Ecosystem Principles Advisory Panel in their recent report to Congress entitled Ecosystem-based Fishery Management. Research into the environmental causes for changes in the sea lion population would benefit from the "Integrated Ocean Observation Plan" as recently recommended to this Subcommittee by the National Ocean Research Leadership Council.

The foregoing comments on deficiencies in the NMFS research and management program on Steller sea lions, and ways in which the agency could improve or expand its current research program are not meant to be critical. I am acutely aware of the difficulties and costs involved in conducting research on Steller sea lions, particularly ecosystem studies. Our SSC has estimated the cost of improved and new research studies in the range of $10-14 million annually. They also have stressed the importance of improved communications on the part of NMFS so that inter-disciplinary and multi-institutional research efforts may emerge.

I hope that my comments may be helpful in moving this much needed research regarding Steller sea lions forward on a broad front. Certainly if we are ever going to be able to manage our fisheries in an adaptive manner, we must gain a better understanding of the reasons for the Steller sea lion decline and the efficacy of management measures taken to mitigate this decline. Without such an improved understanding of the dynamics of the Steller sea lion population and its relation to the fisheries we risk impacting the recovery of the Steller sea lions and the health of the important pollock and other fisheries of the North Pacific.

Thank you.

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