The Ocean Commission Northwest Regional Meeting
Response to Follow-up Questions
Living Resource Management in the Pacific Northwest Panel
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Question: Since, as your own testimony indicates, most of the factors depressing populations of salmon are land management issues, should primary responsibility for salmon recovery reside with the Department of the Interior rather than NOAA/NMFS?

Answer: Conservation, recovery, and wise management of salmon are challenging. Salmon have a complex life history, wide geographic ranges that overlap many jurisdictions, and use a variety of habitats from freshwater streams and rivers to estuaries and the ocean. Although in our testimony we may have highlighted the impacts of land use on salmon populations, this is but one of the factors that have led to salmon declines.

Salmon declines have been the result of many factors, including hydropower, overharvest, habitat destruction, over-reliance on hatcheries, and changes in climate and ocean conditions. A myriad of federal agencies are involved in these areas on the West Coast. · The Department of Agriculture (Forest Service) and Department of the Interior (Bureau of Land Management) are the two primary federal agencies with land responsibilities. · The Department of Defense (Army Corps of Engineers) and the Department of Energy (Bonneville Power Administration, and the Federal Energy Regulatory
Commission) are the two primary agencies responsible for hydropower development, licensing, and operation. · Hatcheries are funded and operated by a variety of federal agencies, including the Department of the Interior and the Department of Commerce (NOAA). · The Department of Commerce (NOAA) is responsible for protecting and conserving salmon under the Endangered Species Act, sustainably managing salmon harvests, and understanding the ocean ecosystem as it relates to marine and anadromous species, safe navigation, and atmospheric and climate conditions.

Given the number of federal agencies involved, with the addition of state, tribal, and local agencies, it becomes apparent that a clear delineation and centralization of responsibility is necessary if we are to truly achieve salmon recovery goals. For a number of reasons, we believe that the Department of Commerce (through NOAA/NOAA Fisheries) should maintain lead responsibility for salmon recovery. Our reasoning is as follows:

1) Salmon are an integral part of the marine ecosystem, for which NOAA has significant management authority. When most people think of salmon, they think of them in freshwater habitats because that is where they typically see and experience them, but salmon spend the majority of their life cycle in the ocean (from 1-4 years of their 2-7 year life cycle). The marine environment is also where salmon feed and grow the most and experience approximately half their life cycle mortality.

NOAA is the lead agency responsible for better understanding the ocean environment and applying that knowledge to marine resource issues. While there are still big gaps in our knowledge, this is primarily the result of resource constraints and the lack of priority given to studying the ocean portion of the salmon life history.

2) When the Endangered Species Act (ESA) was first passed, there was discussion regarding which agency should have responsibility for which species. In 1974, the Directors of NOAA Fisheries and the USFWS signed a Memorandum of Understanding (MOU) defining their respective jurisdictions. Under this MOU, NOAA Fisheries was assigned responsibility for species that spend the major portion of their lifetimes in marine waters, while the USFWS was assigned responsibility for species that spend the major portion of their lifetimes on land and/or freshwater. For species that spend part of their lifetimes in estuarine waters, responsibility was determined based on where the species spends the majority of its remaining time. Based on this MOU and subsequent discussions, NOAA Fisheries became responsible for the conservation of Pacific salmon species under the ESA.

3) NOAA is responsible for managing the marine fisheries of the United States, including salmon fisheries. While not often recognized, salmon are also an important factor in managing other fisheries, such as rockfish, where salmon often appear as bycatch in the fishery.

Harvest and recovery are inextricably linked. Overharvest is historically one of the primary factors responsible for salmon declines. Separating responsibility for salmon harvest and recovery into different agencies would fragment salmon conservation. This could increase tension between the harvest and recovery side of the salmon equation, resulting in a potential standstill when it comes to implementing necessary actions. Housing harvest management and recovery under one agency, like NOAA, enables a more holistic and coordinated approach to the management, conservation, and recovery of salmon populations.

4) Due to the multitude of risks that salmon face, salmon recovery must be approached in the context of the entire life cycle of salmon. Habitat degradation, which is associated with land use, is only one of the many factors that impact salmon populations. Whoever is charged with salmon recovery, must be able to address risks to salmon over their entire life cycle--from freshwater streams and rivers to the ocean and back. NOAA has experience managing highly migratory species that cover wide geographic areas and studying fish in the ocean environment, which is very different from conducting terrestrially-based surveys. NOAA also has highly-regarded staff with expertise in biology, ecology, toxicology, hydrology, engineering, and other disciplines related to salmon recovery. Over the years, these staff have developed new approaches, techniques, and technologies to better protect and conserve salmon, including developing an innovative approach to address salmon resource issues in a life cycle context.

In the end, to ensure that recovery efforts are successful, the agency with lead responsibility must have: 1) a strong mandate to recover salmon that is supported at every level of the organization--from the highest level of the agency to individual scientists and policy analysts, 2) a strong resource base from which to conduct the science that is needed, and 3) strong communication and coordination mechanisms in place with other federal, state, tribal, and local agencies as well as between technical and policy staff.

Question: Please provide examples of how the "Shared Strategy" approach to salmon restoration has dealt with translating scientific information for use in the public arena during policy negotiations and in the evaluation of implementation options.

Answer: Translating scientific information for use in natural resource decision-making, such as salmon recovery, is a huge practical challenge. In the Puget Sound region, the Shared Strategy for Salmon Recovery (Shared Strategy) has set up several means by which such translation and subsequent communication can occur. The Shared Strategy is a collaborative process for addressing salmon recovery in Puget Sound. Representatives from federal, state, tribal, and local agencies, as well as from watershed and marine waters groups and the private sector are involved with this effort.

The Shared Strategy has both technical (Technical Recovery Team, or TRT) and policy staff (Interagency staff work group, or work group). Technical Recovery Teams (TRTs) provide the scientific underpinning for salmon recovery efforts and consist of a mix of experts in relevant disciplines. NOAA Fisheries has created or is creating TRTs in eight discrete geographic areas on the West Coast. TRTs are chaired by NOAA Fisheries scientists and are developing scientifically based criteria for delisting endangered and threatened evolutionarily significant units of salmon.

Under the Shared Strategy, scientific information, developed by the Puget Sound TRT, is created independently of policy considerations. There are observers present at technical meetings, however, to increase the flow of information and keep the public aware of the activities that are taking place. The TRT and interagency staff work group (work group) meet once a month to discuss technical results that emerge from the TRT and identify scientific results that are important to communicate to the Shared Strategy Development Committee (the chairs of the Shared Strategy effort) or to watershed groups. Once these scientific results are identified, the TRT and work group develop the content of the message, translating the scientific information into useable formats that are presented in the form of written documents and/or oral presentations. The TRT and work group have agreed to commit a significant amount of time to joint meetings and to co-editing documents and presentations to ensure that the communication of technical results is accurate and understandable.

An example of how the TRT and work group have worked together to translate complex scientific information for use in the public arena is in communicating chinook population targets to watershed groups to help focus their salmon recovery planning efforts. The TRT completed analyses that identified the abundance and productivity that individual salmon populations in the Puget Sound region needed to exhibit in order to be considered viable (i.e., have a negligible risk of extinction). The TRT and work group then spent many meetings preparing summary tables of data, and finally presented a written document to the Shared Strategy Development Committee for their review. After much discussion and further analyses to clarify questions that arose, the Development Committee decided to present single populations targets to watershed groups (rather than the range of numbers that the TRT had developed) to keep the main message simple and effective. The single targets were chosen by state and tribal "co-managers" --and the numbers fell within the range produced by the TRT.

In short, the critical task of translating complex scientific information for use in decision-making under the Shared Strategy is occurring because:

1. A common goal is shared between leadership and technical and policy staff

2. There is a joint commitment to translate scientific information into formats that are useful to managers 3. There are regular meetings to tackle the challenge 4. The process is flexible enough to change the way technical information is presented, without changing its meaning (i.e., sound science is the
foundation)

Question: Please provide a list of activities and events that you believe have been obstacles to State implementation of actions to protect and improve the health of marine waters.

Answer: We were able to clarify with Ocean Commission staff, that you would like us to outline obstacles that we have experienced in our implementation of actions to protect and improve the health of marine waters. A few key obstacles are as follows:

1. Level and Allocation of Funding
Protecting and improving the health of marine waters are huge tasks that require resources. If we are to truly be proactive in conserving and wisely using marine resources, we must dedicate resources to crisis (e.g., endangered and threatened species and overfished stocks) as well as non-crisis (e.g., ocean exploration and long-term monitoring) areas in a well thought-out, holistic manner that has science as its foundation. Educating Congress and the public and providing informative responses to Congressional inquiries about marine resource issues is a critical component to achieving adequate resources to protect and improve the health of marine waters.

2. Support for Monitoring and Evaluation
Understanding the dynamics of ocean ecosystems sufficiently to develop effective scientific advice on how to conserve and protect these ecosystems for the use of this and

future generations is a large, complex and long-term undertaking. Ocean processes can operate on decadal to multi-decadal time scales. To understand these systems and the impacts that we have on them, including implemented management actions, we must be able to monitor key areas of the ocean system on a consistent, long-term basis, including fish populations, which serve as key biological ocean observation systems. Without this information, we severely restrict our ability to "see" what is going on and learn from our actions.

3. Investment in Social Science

Marine resources are inextricably linked to the economy and livelihoods of communities and families dependent on such resources. Depleted fishery stocks are driven in part by economic factors, such as overcapitalization, and social conditions in fishing communities. A larger investment in social science will provide a better understanding of the economic and social impacts of fishery management and help identify potential mechanisms for resolving overcapacity in fisheries.

4. Bridging the Gap between Science and Policy

Science provides the foundation for sound ocean management—it does not provide the answer. Developing a common understanding between scientists and managers so that they understand the needs and limits of one another's capabilities is critical to advancing marine conservation and management. The Shared Strategy (as outlined in the previous question) is a good example of how a common understanding and joint commitment to a particular issue can use the strengths of technical and policy staff to develop viable solutions.

5. Coordination of Efforts

There are a myriad of players in the coastal and ocean realm, including federal, state, tribal, and local agencies. Better coordination of individual efforts is required to improve and protect the health of marine waters. This will require strong commitments toward common goals, dedication of time and effort, strong leadership, and clear delineations of roles and responsibilities.