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## **Some Questions and Answers about Columbia Basin Salmon and Steelhead**

### **What are the regulatory agencies and what are their responsibilities?**

Under the Endangered Species Act (ESA), the National Marine Fisheries Service (NMFS, Department of Commerce) and the Fish and Wildlife Service (FWS, Department of the Interior) decide which species to list as endangered or threatened with extinction and prepare recovery plans for listed species. NMFS has authority over marine and anadromous fish (such as Pacific salmon) and marine mammals, while the FWS has authority over all other species of fish, wildlife, and plants.

### **Explain the BA, BO, and consultation process.**

In the ESA, an action agency is any Federal agency whose proposed actions may affect a listed species or its habitat. Action agencies must assess the potential impacts of those actions in a biological assessment (BA), and then consult with the regulatory agencies (NMFS or FWS). The regulatory agencies issue the Biological Option (BO) stating whether the proposed actions will jeopardize the continued existence of the species.

### **For Columbia River Basin fish recovery, which are the action agencies and what are their responsibilities?**

The Army Corps of Engineers (Corps), the Bureau of Reclamation (Reclamation), and the Bonneville Power Administration (BPA). The Corps and the Bureau of Reclamation coordinate operation of the 14 Federal hydropower dams in the Federal Columbia River Power System. The Corps owns and operates 12 dams and Reclamation owns and operates two dams, including Grand Coulee, which generates about 25 percent of the systems total power production. BPA transmits and markets the power, and provides funding to mitigate the effects of the hydropower system on fish and wildlife resources.

### **What other Federal agencies have a role in recovery?**

The Environmental Protection Agency which enforces the Clean Water Act; the Bureau of Indian Affairs which is the trustee for tribal land and resources held in trust for tribes; the U.S. Forest Service; and, the Bureau of Land Management which manages Federally-owned forest and range lands that provide habitat for listed species. These last two agencies are developing an ecosystem-based strategy, including an aquatic component, for managing these public lands in the Columbia River Basin.

## **What is the Federal Caucus?**

The Federal Caucus is the name given to the nine Federal agencies that have natural resource responsibilities under the Endangered Species Act. The agencies are: National Marine Fisheries Service, U.S. Fish and Wildlife Service, Bureau of Reclamation, Bonneville Power Administration, U.S. Army Corps of Engineers, Bureau of Indian Affairs, U.S. Forest Service, Bureau of Land Management, and the Environmental Protection Agency.

## **What is the All-H paper?**

The All-H paper was the working name for what is now being formally called the Conceptual Recovery Plan. It is a conceptual salmon restoration plan developed by the Federal Caucus to guide future Federal actions in the four human-affected areas that influence salmon and steelhead survival: habitat, hatcheries, harvest, and hydropower.

## **What are the recovery goals?**

- Conserve species
- Conserve ecosystems
- Assure Tribal fishing rights
- Balance the needs of other species
- Minimize adverse effects on humans

## **How does dam breaching fit in?**

Much of the regional debate has focused on removal of Snake River dams. There is little doubt dam removal would benefit Snake River salmon and steelhead and considerable debate about how much. Our plan proposes a responsible and orderly approach to that contentious issue that does not rush to judgment one way or the other. The Federal agencies are recommending deferring a final decision on dam removal at this time because of narrow benefits, high costs and important uncertainties. Snake River dam removal will benefit only the four Snake River stocks and not the remaining eight listed stocks in the Columbia River, which are also in poor shape. Further, there is important additional homework that should be completed before moving to a final judgment about whether to breach the dams. That homework includes further engineering and design studies; economic mitigation plans to ensure that any drawdown plan is fair and affordable; and, continuing ongoing research to resolve important scientific uncertainties about the degree to which breaching would provide benefits to those Snake River stocks.

This strategy calls upon the agencies to complete that remaining work within the next 5 years and to test out aggressive efforts in other sectors. If the program is being fully implemented and is showing promising results as measured against the performance standards, then the agencies would continue with it. If the program is not being implemented or if the results are not occurring, then the agencies will reopen the program itself and make the needed adjustments, either in the hydropower sector or in the other sectors depending upon the nature of the problem. If the Snake River stocks remain in poor shape, then the homework on breaching will have been completed and NMFS is likely to recommend seeking breaching authority, if the science supports that recommendation. NMFS may also recommend other major adjustments in the program to improve performance and results.

### **What is meant by the term flow augmentation?**

The purpose of flow augmentation is to provide more natural flows for migrating salmon and steelhead. Flow augmentation is the release of water from storage of headwater reservoirs to meet flow targets in the lower river for migration salmon and steelhead. Flow is the volume of water in a stream moving past a given point, typically measured in thousands of cubic feet per second (kcfs). The Corps and Reclamation have specific flow augmentation targets to achieve each year under the NMFS Biological Opinion. Of this amount, about half was rented from water users through rental pools. An acre-foot is a body of water one foot deep and an acre in area. The new plan contemplates more and improved flows from the systems.

### **What are the names of the four lower Snake River dams?**

From west to east (i.e., heading upstream), they are Ice Harbor, Lower Monumental, Little Goose and Lower Granite.

### **What are the listed species in the Columbia River basin?**

Snake River sockeye, listed as endangered November 1991.  
Snake River fall chinook, listed as threatened April 1992.  
Snake River spring/summer-run chinook, listed as threatened April 1992.  
Upper Columbia River steelhead, listed as threatened August 1997.  
Snake River Basin steelhead, listed as threatened August 1997.  
Lower Columbia River steelhead, listed as threatened March 1998.  
Lower Columbia River chinook, listed as threatened March 1999.  
Upper Willamette River chinook, listed as threatened March 1999.  
Upper Columbia River chinook, listed as threatened March 1999.  
Columbia River chum, listed as threatened March 1999.  
Upper Willamette River steelhead, listed as threatened March 1999.  
Middle Columbia River steelhead, listed as threatened March 1999.

### **What does the science say?**

The science says that there are many stocks in the Columbia and Snake River basins that are at very real risk of extinction, and that we must act now to save those stocks. The science further says that there are no silver bullets for salmon recovery and that the changes must be comprehensive to be successful. The science suggests that we place priorities on those improvements that will afford the greatest potential benefits and points to improvements in the tributaries and in the estuary as holding real promise.

For Snake River dams, the science says that taking out Snake River dams is likely to provide substantial benefits for some stocks and may ultimately be necessary for recovery. The science strongly suggests that drawdown alone will not do the job and that other substantial improvements will be needed. The science reveals significant uncertainties about the ultimate benefits of drawdown due to the issue of “delayed mortality” associated with the barging of juvenile salmon around the dams, but also expresses optimism at being able to greatly reduce that uncertainty in the coming few years through further monitoring and evaluation.

## **How does this plan address the issues of predation in the lower parts of the river?**

Predation is part of a properly functioning ecosystem, but given the decline of certain populations and the loss of numbers caused by other factors, predation is a factor to consider in the recover of these species. Migrating juvenile salmon are a targeted food source of many species, including other aquatic species such as northern pikeminnows, bird species such as Caspian terns, pelicans, and cormorants, and marine mammals. The agencies intend to continue and expand programs aimed at controlling predation by Caspian terns, marine mammals, and northern pikeminnows.

## **Performance standards provide a basis for accountability and measuring results.**

Despite significant advances in scientific knowledge, there are still large gaps in what we know about salmon. This strategy recognizes the significant uncertainties that remain and commits to a major investment in monitoring, research and evaluation to ensure actions and assumptions are tested and adjusted as needed. Performance standards will set a framework for accountability and for determining if recovery actions achieve results. Those results will be evaluated at 5, 8 and 10 years. If something isn't working, it will be evident and it will be subject to more aggressive actions.

## **Requires region-wide cooperation to succeed.**

It is important to remember that recovery of endangered salmon will require unprecedented cooperation and involvement among the people and governments at every level of the Northwest. This strategy is designed to be consistent with and supportive of their regional efforts to protect or recover endangered salmon, including the Northwest Power Planning Council's sub-basin planning and actions being taken by state and tribal governments.

## **What is the relationship between the off-site mitigation under the NMFS Biological Opinion and the Council's Program?**

Coordination with the Council plans an important role in guiding the management of fish and wildlife resources in the Columbia basin. Federal agencies responsible for managing, operating, or regulating Federal or non-Federal hydroelectric facilities in the Columbia basin are to take the Council's Fish and Wildlife Program into account to the fullest extent practicable and to coordinate with other governmental entities in implementing their responsibilities. Off-site mitigation, particularly habitat improvements on non-Federal lands, will be facilitated through the Council and others. The Council will help with development of sub-basin assessments and plans as well as implementation of immediate actions. Species benefits realized by these efforts can be credited towards recovery goals established for the hydropower system.

## **What are you doing about ocean conditions?**

Mother Nature is in charge here. Shifts in ocean conditions, brought about by shifts in climate, have produced abrupt differences in salmon survival in the ocean. Although the mechanisms affecting ocean survival are largely unknown, they are presumed to be the result of annual and decadal variation in nutrient availability (and thus, in and upward cascade, algal and zooplankton production). Our approach takes into account potential changes in ocean conditions, by using a database that includes

good and poor ocean conditions. We will continue to monitor ocean conditions to monitor their changes and effects, particularly given the possibility that global warming may be changing ocean productivity more dramatically than we have seen in the past.

**What are the next steps?**

After release of the draft All-H paper and NMFS Biological Opinion on July 27, state and tribal governments will have 60 days to complete a technical review and submit comments to Federal agencies. After considering the comments, the agencies plan to complete the document and release them in late fall 2000. After release of the final documents, each agency responsible for implementing the recovery measures will seek additional from Congress.