SECTION 2

PROGRAM FRAMEWORK AND GOAL

INTRODUCTION

To be effective, the fish and wildlife program must be more than a collection of measures. Individual efforts must be coordinated and measures integrated into an overall plan designed to achieve specific goals and objectives.

To achieve this coordination, the program does three things:

First, the program is focused and organized around a framework. This framework consists of an overall goal of doubling salmon runs without loss of biological diversity and rebuilding targets for Snake River salmon populations. The program also provides a process for developing additional rebuilding targets, salmon rebuilding schedules, survival targets and performance standards to track change for individual measures. (See Appendix A for details on the framework elements.) The goal and rebuilding targets, along with the other program measures, should guide the region toward salmon and steelhead rebuilding, while important work is done to complete the framework.

Second, the program establishes a coordinated implementation process (see Section 7) in which implementing agencies, working through the Bonneville Power Administration's implementation planning process, can systematize and prioritize the implementation of program measures. Recognizing that the Council is a planning and oversight entity, not an implementing entity, action on program measures will be managed by implementing agencies, not the Council. The Council will monitor and comment on this process, offer help where requested, and may, through additional program amendments, establish new measures or priorities.

Third, reflecting the Council's longstanding commitment to adaptive management, the program establishes a process to monitor and evaluate program implementation in a way that adds systematically to the region's knowledge of salmon and steelhead recovery (see Section 7).

2.1 PROGRAM GOAL: DOUBLE SALMON RUNS WITHOUT LOSS OF BIOLOGICAL DIVERSITY[1]

In crafting the overall goal of this salmon rebuilding strategy, the Council is faced with the challenge of balancing the need to increase the number of fish in the Columbia, maintain and enhance biological diversity, and preserve wild and naturally spawning populations.

The production of salmon and steelhead in the basin prior to development has been estimated at 10 million to 16 million fish. Today's total production of salmon and steelhead amounts to around 2.5 million fish. Five million to 11 million fish are estimated to have been lost due to development of the hydroelectric system. Thus, significant change in the system is required. To address the loss due to hydroelectric development, the Council set a numeric target for the 1987 program—doubling of salmon and steelhead production in the Columbia Basin.

While numeric increases are needed, they must be tempered by the understanding that the Council wants increases that can be sustained over the long term. The importance of this was recognized by the Council in the 1987 program. Rebuilding was not to be driven inexorably toward a numeric goal, but was to be tempered by the assessment of genetic impacts, use of a mix of production methods and emphasis on the area above Bonneville Dam.

1. Biological diversity means the array of genetic, physical, life history and behavioral characteristics contained within the salmon and steelhead resource of the Columbia Basin.

Concern for biological diversity and preservation of wild and naturally spawning stocks has been heightened by the listing of several Snake River salmon populations as endangered or threatened under the Endangered Species Act, and the identification of numerous other weak populations. There is increasing concern that preservation of the diversity of populations and biological traits present in the Columbia Basin may be essential to maintain increased fish numbers on a sustained basis.

Unfortunately, these two resource values—increased numbers and biological diversity—often appear incompatible. On the one hand, measures to increase population size in the short term can decrease biological diversity. On the other, measures to conserve biological diversity may limit the region's ability to achieve short–term gains in production. Sustainable increases in numbers, however, will require a healthy, biologically diverse resource that can be productive and accommodate environmental variability.

The Council sees its role as planning for the restoration of a healthy, productive resource throughout the accessible range of habitat in the Columbia Basin. To do this on a sustained basis will require actions directed not only at increasing the number of fish, but also actions to conserve biological diversity and increase the productivity of natural stocks. Increased numbers and the conservation of biological diversity are not incompatible. They are both key to the conservation of the resource and fulfillment of the obligations of the Northwest Power Act. A productive and biologically diverse population is essential to increased production that can be sustained over the long term.

2.1A Doubling Goal

The Council has adopted as its overall goal the doubling of the total number of adult salmon and steelhead in the Columbia Basin as fast as possible without further loss of biological diversity among or within anadromous and resident fish populations.

The Council recognizes that any action has the potential for causing some genetic change in the population. In establishing biodiversity as part of its goal, the Council states its desire to avoid adverse genetic change to the maximum extent practicable; to consider genetic impacts as important criteria for selection of measures; and to monitor changes in genetic and life history diversity as measures are implemented. This does not preclude carefully designed, controlled and monitored supplementation programs.

Except where human–induced habitat changes have produced increases in some species to the detriment of salmon and steelhead (squawfish as an example), efforts to meet these goals for salmon and steelhead should not occur at the expense of other native species and wildlife. Because most of the loss of salmon and steelhead production as a result of hydroelectric development has occurred above Bonneville Dam, the Council will continue to focus its efforts on this area.

The Council recognizes that this goal will require actions on all fronts over many life cycles of salmon and steelhead. In the short term, it will require increased attention to the need to conserve biological diversity and halt the decline in many salmon populations. This may occur at the expense of actions that might provide greater short–term increases in numbers, but could possibly jeopardize the biological health of the resource in the long term. It will require increases in mainstem passage survival, improved habitat and production practices, and diligent management of harvest.

To help focus efforts toward this goal, six principles should be used to evaluate activities in subregional planning (see Section 6.1) and other program processes:

1. Priority should be given to activities that aim to rebuild weak, upriver populations, including populations listed under the Endangered Species Act. (See page 97 for a definition of weak stock.)
2. Program activities should pose no appreciable risk to biological diversity among or within fish populations (including resident fish, with the exception of principle number five, below). The best available data and assessment tools should be used to evaluate biological risk before determining whether to proceed, and activities should be followed–up with monitoring and evaluation.
3. The region should approach habitat and production activities from a total–watershed perspective, not as activities that occur in isolation from land and water conditions in watersheds. Special priority should be given to projects that are part of model watersheds or other coordinated watershed programs, especially those with local community involvement.
4. While the bulk of the region's attention is currently focused on threatened and endangered stocks, it is important not to lose sight of this region's obligations to fulfill Indian treaties and provide fish for Indian and non–Indian harvesters. Investments and adjustments should be made to provide harvest opportunities in tributaries or other areas and to facilitate rebuilding weak populations.
5. Consistent with the Council's adaptive management policy, priority should be given to activities that address critical uncertainties and/or test important hypotheses. Activities should be designed as experiments so that the results fill in the region's understanding of salmon and their survival requirements. Even a measure that poses risks for a population may be acceptable if the potential learning benefits are high enough.
6. Because of concerns over the basin's salmon carrying capacity, the effects of hatchery–produced salmon on salmon that spawn in streams, and the cost of hatch-

eries, new salmon production facilities generally should not be constructed unless it is clear that the need for fish cannot be met with existing facilities, or a new facility would be a better way to achieve the program's goals.

The subregional process (Section 6.1B) should generate important information on the costs and biological effectiveness of habitat and production measures. This information will contribute to the independent evaluation of program cost–effectiveness by an independent scientific group (Section 7), and be reflected in the annual implementation work plan (Section 7).

All of these principles reflect important concerns, but for at least the next five years, the preponderance of the ratepayers' investment should be directed to rebuilding weak stocks. Both the potential biological value of weak stocks and the requirements of the Endangered Species Act suggest that the path to doubling must begin with weak populations.

This weak–stock priority includes populations listed under the Endangered Species Act, but is not limited to these populations. The Northwest Power Act calls for a long–term approach to fish and wildlife mitigation, not simply a reaction to immediate problems. Treaties with Indian tribes and with Canada call for the United States' best efforts to rebuild these populations to self–sustaining, harvestable levels. The Council is committed to this cooperative effort. Moreover, there are many weak salmon populations not listed under the Endangered Species Act. It is in the region's interest to take forceful steps to strengthen these populations before it becomes necessary to list them. Limiting ratepayer investments to threatened or endangered species in these circumstances is simply an invitation for new Endangered Species Act petitions.

While the preponderance of the ratepayers' investments should be directed to weak stocks, weak stocks should not be the exclusive focus of the program. Over the past decades, Indian tribes and other harvesters have given up harvest on species after species, and that disturbing trend appears to be continuing. For tribal fishing rights to have meaning, there must be enough fish in the rivers to allow a reasonable harvest. Upriver fishers are entitled to salmon populations that are more than museum specimens. In the long term, as weak stocks are rebuilt, harvest opportunities may be expanded throughout the basin, consistent with rebuilding targets. In the short term, the region should also make investments and adjustments to provide harvest opportunities in tributaries or other areas where there will be no significant negative effect on weak populations.

2.1B Performance Standards for the Program Goal

Doubling performance standard: The doubling goal should be based on the average number of adult salmon and steelhead in the Columbia River Basin from 1977 to 1981, the five years prior to the Council's adoption of its first Columbia River Basin Fish and Wildlife Program. That five–year average has been estimated to be 2.5 million salmon. Today's salmon numbers should be obtained by combining the number of adult salmon of all species counted at Bonneville Dam, the number of fish spawning below Bonneville Dam and the estimated number of salmon caught in the ocean and in rivers below Bonneville Dam. The program monitoring report (Section 7) should provide an annual accounting of production relative to this performance standard.

Biological diversity performance standard: The performance standard will be the existing level of biological diversity. Existing biological diversity will be defined by a list of base–line populations against which populations will be compared annually. The natural processes of extinction and speciation will result in variation around the base line over time. New knowledge also may indicate the need for revision in the base–line list of populations.

Implementing Agencies and Fishery Managers

1. To establish the biodiversity base line, the Council calls on participants in the implementation planning process to convene an appropriate group of experts from the fishery agencies, tribes and elsewhere to provide recommendations for the population list. A final recommended list of populations should be submitted to the Council by December 31, 1992. The program monitoring report (Section 7) should provide the annual list of populations and include a qualitative, and if possible, quantitative assessment of status and conditions for each population. The annual review will also include recommendations to modify the population list on the basis of new information.

2.2 SNAKE RIVER CHINOOK REBUILDING TARGETS, PERFORMANCE STANDARDS AND MONITORING

To focus the region's efforts until further biological and policy decisions are made, the Council sets rebuilding targets for wild and naturally spawning Snake River salmon populations above Lower Granite Dam as follows: annual averages of 50,000 adult spring chinook, 20,000 adult summer chinook and 1,000 adult fall chinook. These represent ambitious targets, but targets the Council believes are achievable in the long term. Relative to the estimated 1991 returns of wild and naturally spawning fish, they will require more than an order of magnitude increase in numbers. Although the targets call for a strong recovery from the current situation, they will not restore these populations to their condition prior to development of the basin's hydroelectric system. The key component for achieving this rebuilding target is increasing the percent of smolts that survive to return as adults. Survival improvements of this magnitude will require aggressive implementation of all immediate and intermediate–term measures in the program.

Rebuilding targets do not quantify any party's obligation under the Northwest Power Act. Rebuilding targets represent the Council's judgment of ambitious, interim population sizes that achieve the Council's goal and can be achieved by carrying out the mix of measures called for in this program. The feasibility of achieving these targets with measures in the program was checked using the best analytical computer models available. Because the program provides options for some actions (e.g., in mainstem passage), the analysis indicated a range of possible outcomes, reflecting possible future decisions.

The Council supports rebuilding Snake River salmon populations to productive, fishable levels as rapidly as possible within program goals. The Council recognizes that immediate measures are not enough to achieve an adequate level of rebuilding or the management goals of the state of Idaho and will continue to seek greater rebuilding. Accordingly, the Council has identified additional actions for fast–track evaluation. Because these evaluations are in progress, the framework does not prejudge Council decisions on additional steps that may be needed to rebuild salmon and steelhead populations. Expeditious action is required of the fishery agencies, tribes, Bonneville, the Corps and others to complete actions, such as modeling rebuilding schedules and evaluating drawdown engineering and costs, thereby permitting timely decisions by the Council in 1993, and thereafter.

The Council will initiate an amendment process by August 1993, to be concluded by October 1993, if possible, to adopt revisions to the rebuilding targets for Snake River spring, summer and fall chinook. The Council's decision on the rebuilding targets for Snake River stocks will be based on the best scientific information available at that time.

Independent Scientific Group

1. In the Snake River, the Council will track progress toward rebuilding targets through Lower Granite Dam salmon counts corrected for the hatchery contribution, and with other techniques. The independent scientific group, which is described in Section 7, should devise methods to track program progress. These methods should address the effect of natural variation in fish populations and assess the likelihood that the rebuilding targets will be achieved within the specified time frame. If the rebuilding targets are not being achieved, the Council will review the measures in the program during its future amendment processes.

2.2A Population Monitoring

While dam counts of salmon will provide important, timely information on progress toward rebuilding runs, they combine several possibly diverse populations of spring, summer and fall chinook above Lower Granite. In so doing, important information about the status of these individual populations can be lost. At the same time, it may be prohibitive, both in terms of money and effort, to closely monitor every potentially distinct portion of this larger population. Monitoring activities themselves also have the potential for causing salmon losses within weak populations.

For these reasons, the Council intends to establish a limited number of indicator populations that will be the focus of intensive monitoring. The genetic stock identification project in Section 5 may indicate that revision of these indicator populations is needed in the future. The purpose of indicator population monitoring is not only to provide detailed stock status information on these particular populations, but also to provide basic life history and survival information that will be applicable to all populations within the larger population. This will provide the Council with a clearer picture of the factors limiting natural populations and permit refinement of the program over time.

Implementing Agencies and Fishery Managers

1. The Council calls on the implementing agencies and fishery managers to propose a limited set of populations that can serve as indicators of Snake River chinook populations. These can include hatchery stocks if necessary to provide harvest rates for wild and naturally spawning populations. The indicator stocks selection should be closely coordinated with and take advantage of existing monitoring and research efforts including U.S./Canada Treaty efforts, Idaho habitat evaluations and Idaho supplementation research. The entities should work closely with the Idaho Department of Fish and Game and the Nez Perce and Shoshone–Bannock tribes to prepare a proposal. The proposal should include not only a list of populations, but also the appropriate information to be collected for each population. This should include basic life history and survival rates as well as stock status. The proposal should be submitted to the Council by December 31, 1992, for implementation in 1993.

2.3 DEVELOPMENT OF REBUILDING ELEMENTS

In this document, the Council has introduced the idea of a program framework to structure and focus program measures. Work on the framework elements as well as coordinated development and refinement of analytical tools will continue. These tools will help analyze additional actions and, equally important, help identify information needs. This will help the Council establish new and review existing program biological goals, measures and performance standards. Key purposes of further analytical development and Council action are to establish clear links between the rebuilding targets and the performance standards and measures needed to accomplish the targets and to establish a relationship between flow, river velocity and survival. (See Section 7.3.)

A major part of the framework is the rebuilding plans for each Snake River chinook population. Because of pending decisions on regional initiatives, the Council is unable at this time to establish all the elements of rebuilding plans. These decisions are scheduled to be made between 1993 and 1995. The Council calls on participants in the implementation process to work with the Council to develop recommendations for the rebuilding plans in time to contribute to the process of deciding on these regional initiatives. After the decisions are made, the Council will adopt rebuilding plans for identified Snake River chinook populations. These will include rebuilding targets and schedules. Commencing such a process is not intended to and does not substitute for expeditious action on the rebuilding measures already adopted in these amendments. Details on framework elements are provided in Appendix A.

Implementing Agencies and Fishery Managers

1. Working with the Council, begin to develop rebuilding plans for identified population management units. The plans should include the elements of a rebuilding plan identified in Appendix A, including definition of the population management unit, management goal, rebuilding target, survival targets, rebuilding schedule and performance standards. The Council views this as a limited effort that should draw on the information developed in system planning, new information developed since then (including information on genetic needs and weak stocks) and the coordinated analytical methods process (Section 7.3). As much as possible, rebuilding plans should reflect and incorporate the subbasin plans developed as part of the 1987 program. A schedule and work plan for development of the rebuilding plans should be submitted to the Council by January 15, 1993. Recommendations on the rebuilding plans for Snake River populations should be submitted to the Council by March 1, 1993. Recommendations for other populations should be submitted to the Council as soon as possible and not later than January 15, 1995.

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2. Fund travel and reasonable expenses of the fishery managers necessary to develop these recommendations.

2.4 DEVELOPMENT OF PERFORMANCE STANDARDS

The effectiveness of actions is often uncertain and depends on other actions. It will be important for the Council and the region to track measures in a timely manner. Performance standards for each action or set of actions should provide an easily measurable index that relates to the type of biological or physical change intended. Performance standards are intended to provide a point of reference against which to monitor change, and units of measure to define change. They are not intended to state or limit obligations or to resolve technical uncertainties.

Performance standards will take a variety of forms. In some cases they will specify changes in survival when these are presently measurable; in others, they may relate to physical or qualitative changes, or relate to accomplishing certain tasks within certain time frames.

However, it is the Council's intention that performance standards relate to actual biological results (e.g., improvements in survival) whenever feasible, and not just to factors that relate inferentially to biological change.

At the same time, performance standards must be measureable on a timely basis and relate directly to the biological change intended by the measure. Performance standards should be linked to the rebuilding schedules and survival targets, and reflect changes needed to meet the biological objectives. They are not intended to be rigid and inflexible, but should respond to new knowledge. As information improves, better performance standards may become apparent.

Implementing Agencies and Fishery Managers

1. Solicit input from the following groups to develop additional performance standards: Fish Passage Advisory Committee, Fish Transportation Oversight Team, Integrated Hatchery Operations Team, Regional Assessment of Supplementation Project and the Technical Advisory Committee of the Columbia River Compact.

   Recommendations for additional performance standards for individual measures or logical groupings of measures should be developed through the implementation process. Participants in the process should solicit input from other appropriate groups or individuals. Each group should review program measures appropriate to its area of expertise and provide recommendations for performance standards. A final list of recommendations should be submitted to the Council by March 1, 1993. Performance standards should reflect program measures and survival targets. The Council will review and act on these recommendations to provide a final set of performance standards.