4.1A Salmon and Steelhead Rebuilding Principles

The Council has adopted as part of 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 doubling goal applies to the basin as a whole. It may not be possible or desirable to double the populations of all species in all subbasins. Specific means and locations for increasing production will be identified in future planning.

The time needed to double the runs will depend on a number of factors, including the program policies for mainstem survival, harvest management and fish production, and on further assessment of production opportunities. 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 (for example, squawfish), 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 achieving its 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 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, seven principles should be used to evaluate activities in subregional planning (see Section 3.1D) 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.
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 fish on those that spawn in streams, and the cost of hatcheries, 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.
7. Accord high priority to projects that address peer-reviewed biological objectives.

The subregional process (Section 3.1D) 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 the Independent Scientific Group (Section 3.2B), and be reflected in the annual implementation work plan (Section 3.1B.2).

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.

4.1B Basis for the Salmon and Steelhead Goal

The Northwest Power Act directs the Council to develop a Columbia River Basin Fish and Wildlife Program to protect, mitigate and enhance fish and wildlife "affected by the development, operation and management" of the hydropower system in the basin. Essential to this definition is an understanding of the extent to which salmon and steelhead have been affected by the hydropower system. In 1985, the Council began gathering information on the extent and causes of the declining numbers of salmon and steelhead in the basin. In 1985 and 1986, the public reviewed and debated the nature and limitations of that information. (The results of the Council's efforts have been published in a separate volume entitled, Compilation of Information on Salmon and Steelhead Losses in the Columbia River Basin, document number 87-15A.)

After compiling information on salmon and steelhead losses, the Council solicited extensive public comment on the contribution of the hydropower system to declines in run sizes. Based on the losses information and on public comment, the Council identified alternative ways to estimate

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