Independent Scientific Review Panel
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July 13, 2001

MEMORANDUM

TO: Dan Herrig, Mark Schuck, and Joe Krakker (LSRCP)

FROM: Rick Williams, ISRP Chair

SUBJECT: ISRP Review of Lower Snake River Compensation Plan Proposals in the Columbia River Plateau Province

Three Lower Snake River Compensation Plan (LSCRP) proposals were submitted for review in the Columbia Plateau Provincial Review. These proposals covered LSRCP activities in the Tucannon and Walla Walla subbasins and at Lyons Ferry Hatchery. Due to a distribution mix-up, these proposals were not reviewed as part of the ISRP's June 15 report on the preliminary review of Columbia Plateau proposals. Subsequently, in an effort to get the review on track with the other Plateau proposals, an ISRP review team conducted an expedited review of the three proposals in the context of the set of Columbia Plateau proposals and subbasin summaries. The ISRP's preliminary recommendation on the three proposals is "fundable if additional information is provided that adequately addresses the ISRP's comments."

The ISRP's final review of Columbia Plateau proposals is due August 10th, so we request that your response be provided by July 31 (per July 11 conversation between Joe Krakker and Erik Merrill) to ensure that the LSRCP project review is included in the final ISRP report.

We understand more LSRCP projects will be submitted by August 2, 2001 for the upcoming Mountain Snake/Blue Mountain Province Reviews. For this process, the ISRP welcomes oral presentations of your projects at the provincial review workshops this August. You should work with CBFWA on scheduling.

We look forward to your response.

ISRP Review Comments

Lower Snake River Compensation Plan – General

The LSRCP is a complex program to compensate for losses of fish in Washington due to construction and operation of the hydroelectric system. The program was initiated in response to the Water Resources Development Act of 1976 which Congress adopted to mitigate for the construction of the four federal dams in the lower Snake River. The fisheries mitigation provisions of the act have evolved into a highly complex program involving several co-managers. The program, as presented to the ISRP, is described in three parts. The first part is for the overall program at Lyons Ferry including two attachments describing the LYONS FERRY COMPLEX ANNUAL OPERATION PLAN (attachment 1), and Washington's LOWER SNAKE RIVER COMPENSATION PLAN HATCHERY EVALUATION PROGRAM (attachment 2). The second part describes the Tucannon River portion of the program, and the third part describes the Walla Walla River portion. Attachments (1 and 2) are included with each of the three parts. The authors generally did a good job putting the proposal together, although much of the material was repeated in each of the three parts.

The author(s) describe, to the program's credit, a substantial commitment to monitoring of many elements including hatchery practices, size and time at release, adult returns, smolt survival during migration, relative survival of hatchery and wild fish, and variability in brood stocks. Although the Tucannon and Walla Walla subbasin summaries contain some overall data on stock status, the response to the ISRP should include brief summaries of key data (figures?) from monitoring to show what gains have or have not been realized with respect to the program goals – gains that can be attributed directly to the compensation program. For example, is the recreational fishing program monitored to show where it is with respect to the compensation goal? The influence of ocean and riverine fisheries on the program's ability to meet the goals should be described.

The response should describe how past results have influenced project implementation. Have initial plans changed direction because monitoring trends showed the need? In regard to past or future failures of program activites to meet goals, the response should describe the option of phasing out unsuccessful activities, even the hatchery program altogether, at least for steelhead.

The response should provide information, where available, on the size of the 2001 spring chinook runs (both hatchery and wild) into the Tucannon and into the Walla Walla (from dam counts, hatchery returns, creel census, etc.) as pertinent to LSRCP performance. Did those stocks respond to ideal downriver passage and marine conditions the way other spring chinook stocks in the Columbia River Basin have this year?

In general, the Walla Walla proposal was well connected to that subbasin summary, but the Tucannon proposal needed to show better links to that subbasin summary. The Tucannon and Walla Walla subbasin summaries identify several areas of needed monitoring and evaluation, especially straying. The response should demonstrate how

these projects are addressing the need for more information on straying and the need to reduce the straying rate.

The response should include a budget section. Budget information allows reviewers to understand the scope and magnitude of tasks and to know whether the project is expanding, ramping down, or continuing on the same track.

Lyons Ferry

This proposal is to continue operation of the Lyons Ferry Hatchery and associated monitoring and evaluation, as part of the Lower Snake River Compensation Plan. The Lyons Ferry Hatchery serves as a central operational base for a complex of facilities, including the Tucannon Hatchery, and a system of acclimation ponds. Salmon and steelhead from individual parts of the complex are released into the Snake River proper, Tucannon River, and Walla Walla River (steelhead only).

The Plan is intended to produce 18,300 fall chinook salmon adults, 1152 Tucannon River spring chinook salmon adults, and 4656 summer steelhead adults back to the area of their release as smolts. An additional program goal is to produce and stock catchable sized fish to provide 67, 500 angler days of recreation.

Project personnel are putting salmon carcasses in streams in an effort to provide nutrients needed for productivity of the aquatic community. Methods to monitor results of this effort were not described, but should be in the response, as well as any linkages to other nutrient supplementation studies.

Program goals include measures to prevent deleterious effects on naturally spawning stocks especially those given protection under the Endangered Species Act. The strategy is to find methods that will permit the program to continue without causing further jeopardy for these populations. The alternative to stop releasing fish that could be causing further jeopardy was not included or discussed as an option, although it is mentioned that releases of summer steelhead were decreased in the year 2000 as a reaction to NMFS' determination that the Lyons Ferry stock constitutes jeopardy to the listed natural populations. Apparently, decisions on the numbers of fish to stock occur through a negotiating process (p.6). We have no information on the "Columbia River Fish Management Plan" that is referred to. In the response, there should be a discussion of the factors and data that enter into this process.

The monitoring and evaluation plan is discussed in Attachment 2. The plan would benefit by addition of further detail in several areas. For example, on page 37 it is mentioned that planting of chinook in Curl Lake will be done to increase survival of fish planted above the hatchery, and to increase salmon spawning distribution in the upper river sections. In the response, there should be a discussion of exactly what comparisons will be made in this evaluation. Will the survivals and distributions be compared with those in previous years? If so, what differences will be expected, and how many fish will be required to demonstrate a significant change? Or will a control group, not planted in Curl Lake be the

basis for comparison? What number of recoveries of tagged fish would be required to demonstrate a difference in that case?

Sub-objective 7.2.1 is to estimate adult return rates of fall chinook to southeast Washington streams and facilities. In order for these return rates to be meaningful, interceptions in ocean fisheries need to be taken into account. The sub-objective should include a provision for estimating ocean fishing rate. Returns of coded wire tags should make this possible.

Is the recreational fishing program meeting its goal? What is the basis and program for rearing and stocking brown trout, shown in Table 1 of Attachment 1? These questions should be addressed in the response.

Tucannon Hatchery

Spring chinook salmon. Spring chinook salmon are produced in two programs for the Tucannon Basin: LSRCP supplementation, and a BPA funded captive brood stock project (Project # 200001900). Supplementation fish are produced by trapping about 100 adult spring chinook salmon from the Tucannon River at the Tucannon Fish Hatchery and hauling them to Lyons Ferry Hatchery where they are spawned and their progeny reared for one year. All fish are then marked and transported back to Tucannon Fish Hatchery for rearing and release.

The program includes monitoring and evaluation of adult run size to the Tucannon River, trapping and using only brood fish that will help maintain the genetic integrity of the population (excludes strays), estimating juvenile survivals by age-class, abundance of migrating smolts, smolt size, and comparative performance of supplementation production with captive broodstock production (BPA Project # 2000001900). The results were not included in the proposal but should be summarized in the response.

Fall chinook salmon – Monitoring of fall chinook salmon includes counts of adults in the Tucannon River. Carcass samples and coded-wire tags help to document the origin of spawners, and smolts are counted in the lower river. The results were not included in the proposal but should be summarized in the response.

Summer steelhead – The proposal reported that no numeric goals for returning adult summer steelhead were included in the LSCRP, but steelhead are reared and released in the Tucannon River to provide harvest opportunity. Later in the proposal, however, it was reported that the overall program attempts to return 4,656 steelhead adults to the Snake River in Washington. The response should clarify the LSRCP's goals for steelhead.

Possibilities for reducing the number of steelhead released and for developing a locally adapted broodstock were discussed in the proposal as a means to help prevent harmful interaction of hatchery steelhead with ESA listed species. Project personnel have concluded that release of steelhead in lower river areas may keep them out of spring

chinook and natural steelhead rearing areas while providing opportunity for harvest. The alternative to stop the release of fish that could be causing further jeopardy was not included or discussed as an option. This option should be addressed in the response.

In the response, the study plan provided as Section 1 of the proposal is rather general with respect to most of the objectives and should be enlarged upon in places to provide specifics. For example, under Objective 2 Evaluate hatchery release strategies from all release sites, it is stated that WDFW will evaluate the effect of acclimation on subsequent adult spawning distributions, but no description is given of the method that will be used in the evaluation. (See our comments on sub-objective 7.1 under the Lyons Ferry Hatchery above.) As another example, where PIT tagging is proposed, there is no specification of numbers of fish that might be required to be recaptured (and thus numbers to be tagged) in order to obtain results that can be interpreted meaningfully.

Walla Walla

The Walla Walla portion of the program is a steelhead project. Goals include: 1) establishing brood stock(s); 2) maintaining and enhancing natural populations; 3) returning adults to the LSRCP area; and, 4) improving or re-establishing sport and tribal fisheries. Lyons Ferry Hatchery releases summer steelhead smolts into the Walla Walla and Touchet rivers.

In regard to the goal to establish broodstock, the reviewers support the ongoing regional effort to ensure that only appropriate local stocks be used as hatchery brood fish. The response should further describe the goal to establish brood stock(s) along these lines.

The proposal states that NMFS has determined releases of Lyons Ferry Hatchery summer steelhead stock constitute jeopardy to natural steelhead populations within the basin, and that WDFW should switch to local stocks. Although the program is examining possible strategies for helping to reduce any deleterious effects of hatchery steelhead on the natural populations, stopping present releases is not described as an alternative to help protect the jeopardized populations in the basin. The response should address this option.

The LSCRP monitoring protocol estimates adult returns and return rates, life history and genetic characteristics, and documents distribution of adult salmon and summer steelhead to southeast Washington streams and facilities. Evaluation procedures should be described in more detail, as with the other two proposals. For example, Objective 2 mentions an exercise experiment to determine whether exercise prior to release will increase the rate of survival of juvenile spring chinook, but no description is given of the method that will be used to determine whether there is an increase. The extent and relevance of the distribution studies to this project should be described and clarified. As requested above, the response should provide data summaries (graphs?) from monitoring and evaluation in the introductory materials to show what gains have or have not been realized with respect to the program goals.

The response should describe the level of agreement with the stocking goals of the CTUIR and the States of Washington and Oregon in the Walla Walla river subbasin.