Northwest Power and Conservation Council

November 22, 2010

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Northwest Power and Conservation Council
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Re: Request for the ISRP to Review the Lower Snake River Compensation Plan Spring Chinook Hatchery Program Review

Dear Eric and Erik,

The Northwest Power and Conservation Council (Council), in cooperation with the U.S. Fish and Wildlife Service, requests that the Independent Scientific Review Panel (ISRP) review the Spring Chinook Hatchery Program of the Lower Snake River Compensation Plan (LSRCP). ISRP review of projects implemented under the LSRCP was directed in 1998 by U.S. Congress Senate-House conference report for the fiscal year 1999 Energy and Water Development Appropriations bill. The ISRP's review responsibilities are also incorporated in the Council's 2009 Fish and Wildlife Program. The ISRP will review the Spring Chinook Hatchery Program using its standard criteria, that the Program is based on sound science principles; benefits fish and wildlife; has clearly defined objectives and outcomes; and has provisions for monitoring and evaluation of results.

To conduct this review, the ISRP is invited to participate in a three-day symposium being held November 30 through December 2, 2010 in Boise, Idaho. The purposes of this symposium are to evaluate the successes and failures of the LSRCP Spring Chinook Hatchery Program since 1998 and identify what changes are warranted based on what was has been learned. The ISRP review will be based on program summaries developed as part of the symposium and LSRCP project evaluation reports that can be accessed at www.fws.gov/lsnakecomplan/reports.html (see the most recent "Program Evaluations" under the various program cooperators, for example, Idaho Department of Fish and Wildlife). The Council and the USFWS request that the ISRP complete a review by May 2011, understanding the review will likely include a response loop in which the ISRP may request clarification or additional information following the symposium.

This effort is part of continuing, periodic review of the LSRCP. Specifically, the Council, Bonneville Power Administration (Bonneville), ISRP, and U.S. Fish and Wildlife Service agreed that an ISRP review of Lower Snake River Compensation Plan projects be incorporated in a three-year rolling programmatic review that is organized by species. In addition to the spring Chinook review in 2010, the ISRP will review the steelhead program in 2011 and the fall Chinook program in 2012.

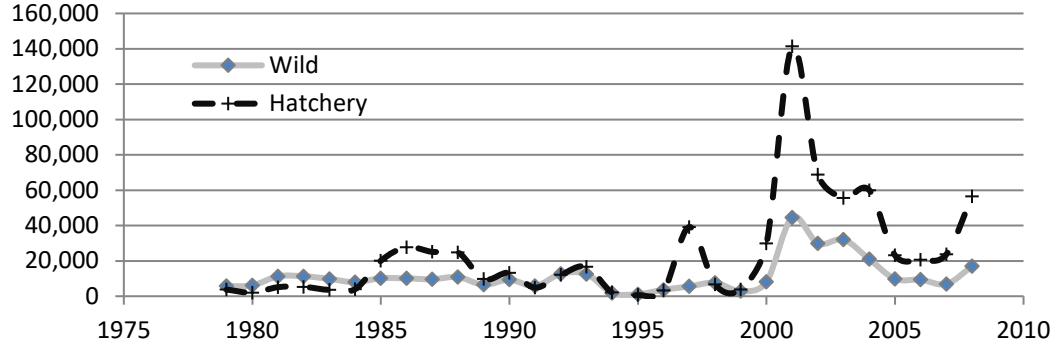
Background

This background information is from the USFWS's description of the symposium. The LSRCP was authorized by Congress in 1976 to replace the lost fish and wildlife resources caused by the construction and operation of four hydroelectric dams on the Lower Snake River in Washington. The established goal for spring/summer Chinook was to return 58,700 adult fish above Lower Granite Dam after providing 234,800 adults to coastwide and Columbia River basin fisheries below the project area. Spring Chinook are reared at six LSRCP facilities; Lookingglass, Lyons Ferry, Clearwater, Dworshak, McCall, and Sawtooth hatcheries. The U.S. Fish and Wildlife Service (Service) owns these facilities and administers the program. State, federal, and tribal fish and wildlife agencies in the region operate the facilities and evaluate program success.

The LSRCP has conducted two programmatic reviews. The first review occurred in May 1990 and at that time all the spring Chinook facilities reported success in developing a broodstock source and working to achieve smolt production goals. While only a few years of adult returns had occurred, operators did report large numbers of adults being trapped at the facilities in the mid 1980's (Figure 1). Overall the participants judged progress to date as very successful (Herrig, 1990).

In 1992 NOAA Fisheries listed Snake River spring/summer Chinook as Threatened under the Endangered Species Act. In 1994 and 1995 the annual returns were so low (Figure 1) that some believed extinction may be eminent.

Figure 1. Counts of Hatchery and Wild Spring/Summer Chinook Salmon Crossing Lower Granite Dam



Planning for a second symposium began in 1997 under this dark cloud. The tone of the second symposium held in February 1998 was very somber. A common theme was expressed in one of the reports (see Carmichael, Parker and Whitesel 1998): "If we cannot improve mainstem passage survival and increase natural productivity so that progeny-to-parent ratios consistently exceed 1.0, recovery will never occur. Natural populations will go extinct and only hatchery fish will remain"

Dismal returns of the early – mid 1990's led the state and tribal agencies to rethink how best to direct their LSRCP hatchery programs and by 1998 sweeping changes were being implemented in many programs. Most notably, 1) captive broodstock and rearing programs were being developed (Oregon, Washington and Idaho), 2) the centralized releases of an out-of-basin stock was discontinued at Lookingglass Creek in favor of developing comprehensive endemic supplementation programs in the Grande Ronde basin, 3) a sliding scale was developed to control the genetic risks associated with the natural spawning of hatchery-origin fish (Imnaha) and, 4) a basinwide study was funded by the Bonneville to rigorously test the efficacy of supplementation at LSRCP and other spring Chinook hatcheries in Idaho. While some facilities made major programmatic changes, others did not and continued to operate programs directed primarily at harvest mitigation.

It has been 12 years since the last program review and much has happened to inform us about options for the future direction of the LSRCP spring Chinook hatchery program, including:

- New information is available regarding the roles that system operations, barging of smolts, predation, climate and ocean conditions play in determining smolt to adult survival rates,
- A new Columbia River Fishery Management Plan has been approved to guide harvest and production, through 2017,
- A Biological Opinion for the FCRPS has been approved to guide system operations and offsite mitigation.
- Two scientific reviews (HSRG and HRT) have been conducted of LSRCP hatchery programs,
- The scientific knowledge regarding the efficacy of captive and conventional supplementation programs has been greatly expanded,
- Improved smolt to adult survival rates have allowed for extensive harvest opportunities in some areas.

For this program review, the U.S. Fish and Wildlife Service is especially interested in ISRP feedback on potential program gaps, the appropriateness of assumptions, and the quality of the data and analyses at the program and project levels.

ISRP Review of the LSRCP in 2002

In addition to these two LSRCP programmatic reviews, the ISRP reviewed LSRCP program proposals in 2002 as part of the Columbia Plateau, Blue Mountain and Mountain Columbia provincial reviews (ISRP 2002-6). The review included an evaluation of 26 LSRCP proposals. The ISRP found that it was difficult to review the LSRCP as a program based on the individual projects. Thus, the ISRP recommended a programmatic-level review of the LSRCP. The purpose and process of this Spring Chinook Hatchery Program Review are consistent with what the ISRP recommended. In addition, the ISRP provided programmatic comments on the program's success; stock origins and transfers; monitoring and data base issues; and adaptive management. The Council anticipates that the ISRP will evaluate how the LSRCP has addressed these past issues.

Council Questions from the Research, Monitoring & Evaluation and Artificial Production Categorical Review

This Spring Chinook Hatchery Program Review is envisioned to augment the categorical review of all Research Monitoring & Evaluation (RM&E) and Artificial Production (AP) projects in the Council's Fish and Wildlife Program. The results of the Spring Chinook program review coupled with the evaluation of Fish and Wildlife Program projects that are integrally linked with the LSRCP program should help the Council get a more complete picture of how the programs are coordinated and implemented.

To ensure a level of consistency of review for the Spring Chinook program, the Councils asks that the ISRP take into account the questions asked of Fish and Wildlife Program projects during the categorical review. These questions come from three sources: the proposal form, the Council's letter to project proponents, and the Council's letter to the ISRP.

A. The Proposal Form (imbedded in Taurus)

Artificial Production:

1. Summarize the HSRG recommendations for this production program.
2. Does the production program take into account the recommendations of the HSRG? If yes, please explain how you plan to implement the recommendations. If not, please explain why you are not implementing the HSRG recommendations.
3. Indicate the pHOS on spawning grounds within the project's area and the pNOB for the hatchery.
4. Is the facility operated as an integrated or segregated production program?
5. Describe the current status of referenced HGMPs.

B. Sponsor Packet - letter from Council to project Proponents (June 1, 2010):

In furtherance of more coordination, efficiency and effectiveness of monitoring and evaluation within the Columbia Basin, the Council asked that these key questions should be addressed by all project sponsors:

1. What question does your project answer, at what spatial scales over what time period, and for what priority species, limiting factors or habitats?
2. How does your project inform a high-level indicator, provide data required to implement the Biological Opinion, or answer a management question?
3. What have you learned from the project and how will on-the-ground activities be adapted as a result?
4. How your data are made accessible to others and who will likely be the primary users of the data? Can you describe the level of confidence or uncertainty associated with these data?
5. How have you communicated the major lessons learned? What have been the major accomplishments of your project to date? Sponsors of all ongoing projects are asked to provide a summary table of their data that illustrates the value of the data collected.
6. What have your costs been to date, what do you expect to need in the future and what have you done to coordinate with other monitoring efforts? [Not part of the ISRP review]
7. Has the effectiveness of similar projects been measured in the region or is the effectiveness being measured now?
8. To what extent is monitoring data provided by a broader monitoring project, perhaps making individual project monitoring unnecessary?

C: Council Letter to ISRP requesting review (July 15, 2010):

Among other questions, the Council asked this specific question to the ISRP about artificial production projects:

Is the project consistent with the general principles of the Hatchery Scientific Review Group (HSRG)? Projects should 1) address the HSRG's scientific analysis to the extent to which the HSRG's recommendations are applicable to the project and 2) be consistent with both the Program and strategies to protect wild fish. A project may use adequate alternative strategies to achieve the HSRG principles.

The Council looks forward to the ISRP's review.

Sincerely,

Tony Grover, Fish and Wildlife Division Director

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