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United States Government **Department of Energy**

Bonneville Power Administration

memorandum

DATE: December 4, 2008

REPLY TO ATTN OF: KEC-4

SUBJECT: Supplement Analysis for the Hood River Fisheries Project EIS (DOE/EIS-0241/SA-02)

TO: Jan Brady - KEW

Proposed Action: Comparative Hatchery Release Evaluation for Spring Chinook.

Location: Parkdale Fish Facility in the Hood River Basin, Oregon; Round Butte Hatchery/Pelton Ladder in the Deschutes Basin, Oregon; Carson National Fish Hatchery in the Wind River drainage, Washington.

Proposed by: Bonneville Power Administration (BPA), the Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSR), and Oregon Department of Fish and Wildlife (ODFW).

Description of the Proposed Action: The proposed comparative hatchery release evaluation for Spring Chinook intends to increase annual Spring Chinook smolt releases from 125,000 to 150,000 in the Hood River basin, beginning in 2010, to boost adult returns and spawning escapement and subsequently improve tribal and sport harvest. The primary rationale for increasing production releases of Spring Chinook smolts is that previous planning efforts for the Hood River Production Plan (HRPP) used what is likely a highly overestimated smolt-to-adult (SAR) survival rate of 0.68% (ODFW and CTWST 1993). Evidence from other facilities in Oregon and Washington suggests that the average SAR for Spring Chinook programs is closer to 0.4% (USFWS 2007). Based on this, an increase in the number of smolts released into the basin is anticipated to facilitate increased adult returns.

The Revised Master Plan for the HRPP outlines long-term alternatives for Spring Chinook production one of which evaluates the complete in-basin rearing of Spring Chinook smolts. Currently Hood River fish facilities are not fully equipped for rearing all 150,000 smolts. Before committing to such a strategy the comparative hatchery release evaluation will compare the size of smolts at release, precocial maturation, and SARs of Spring Chinook released in the Hood River Basin that are reared at one of three facilities, in three separate basins:

1. Round Butte Hatchery/Pelton Ladder in the Deschutes Basin, OR – 75,000 smolts
2. Carson National Fish Hatchery in the Wind River drainage, WA – 45,000 smolts
3. Parkdale Fish Facility in the Hood River Basin, OR – 30,000 smolts

This proposed 5-year study will provide the necessary information to determine a long-term, biologically sound, and cost effective Spring Chinook production alternative for the Hood river Basin that balances harvest with ecological considerations. In order to rear 30,000 Spring Chinook smolts at the Parkdale Fish Facility, minor upgrades need to be made which include:

1. Re-plumb building to increase flow and decommission copper piping.
2. Construct one pump house, install two pumps, and 1 pipeline to existing hatchery building and two early rearing troughs.
3. Install one water heater system for temperature appropriate water for rearing of Spring Chinook.

Analysis: The Hood River comparative hatchery release evaluation for Spring Chinook has been reviewed to determine if the action is a substantial change from what was proposed in the Hood River Fisheries Project Environmental Impact Statement (EIS) (DOE/ EIS-0241, June 1996) and adopted in its corresponding Record of Decision (ROD) (October 1996). In addition, BPA must determine whether there are significant new circumstances or information relevant to environmental concerns since the EIS was completed.

Subsequent to the HRFP EIS, BPA completed a Fish and Wildlife Implementation Plan EIS (FWIP EIS) (DOE/EIS-0312, BPA 2003) and Record of Decision (ROD) (BPA 2003). The goal of the FWIP EIS was to develop a comprehensive and consistent policy to guide the implementation and funding of BPA's fish and wildlife obligations under existing statutes and policies. In the Record of Decision, BPA adopted the Proposed Action 2002 alternative that characterized the policy direction BPA would take. This alternative focuses on enhancing fish and wildlife habitat, modifying hydroelectric power operations and structures, and reforming hatcheries to both increase populations of listed fish stocks and provide long-term harvest opportunities. The Hood River Fisheries Project and the proposed implementation of comparative hatchery release evaluation are consistent with the Preferred Alternative 2002 described in the FWIP EIS and ROD. The cumulative effects of artificial production programs in the Columbia River Basin are addressed in the FWIP EIS.

Parkdale Fish Facility Additions

Additions within the Parkdale Fish Facility would have minor temporary or no impacts to air quality, terrestrial habitat, land use, aquatic habitat, wildlife, tribal interests, cultural and historic resources, aesthetics, socio-economics, and threatened and endangered species. All additions would be within pre-existing grounds and no expansion would be necessary. BPA initiated consultation with both the Oregon State Historic Preservation Office and the Confederated Tribes of the Warm Springs Reservation of Oregon Tribal Historic Preservation Office in regards to the installation of the pump house, pumps, and pipeline. Both offices concurred that no impacts would occur to cultural resources. However, if during construction, subsurface artifacts are uncovered, work will be halted and consultations held with the SHPO and CTWS to determine the significance of the objects and the mitigation, if any, is required. A no effect determination USFWS resulted in a no effect determination for all listed species in the county.

Spring Chinook Smolt Additions

The proposed additional 25,000 hatchery origin Spring Chinook smolts represent a 16% increase in the Hood River basin. The proposed increase from 125,000 to 150,000 smolts is a result of 10 years of data collection, from 1996 to 2006. Given this research, the revised Biological Objectives for the HRPP are listed in Table 1.

Factor	Spring Chinook	
	Wild	Hatchery
Adult Escape to Mouth of Hood R.	300	600
Adult Escape to Natural Production	205	8
Broodstock Collection	20	180
In-Basin Harvest (Tribal & Sport)	30	318
Pre-Spawning Mortality	45	90
Smolt Production	15,000	150,000
Egg-to-Smolt Survival	4%	78%
Smolt-to-Adult Survival	2.0%	0.4%
Pre-Spawn Mortality	15%	15%
Tribal & Sport / Incidental Harvest	10%	53%

Table 1. New Biological Objectives for the HRPP

The overall goal is to get an increase in adult Spring Chinook smolts. With a revised SAR of .4% the additional 25,000 Spring Chinook smolts will allow for such an increase.

The effect of an increased Spring Chinook hatchery smolt release in the Hood River subbasin on NMFS ESA listed salmonid populations has been evaluated in the revised Hood River Spring Chinook Hatchery and Genetic Management Plan (HGMP) listed as Appendix I to the Revised Master Plan for the HRPP (April 2008). An addendum to the HGMP also considers the effect of releasing Spring Chinook smolts on native bull trout, an ESA listed species by the USFWS. Incidental take of bull trout is covered by ODFW under Section 6 of the ESA.

Overall, the release timing of hatchery Spring Chinook smolts is intended to result in rapid migration from the Hood River and limit interaction with other species. Primary rearing habitat for bull trout in the Hood River Basin is above projected release sites in the Middle Fork of the Hood River. A limited time for conversion from a hatchery diet to a natural diet reduces the likelihood of predation by hatchery fish on other salmonids. It is possible that adult bull trout may use HRPP spring Chinook smolts as a prey base, potentially a benefit for the bull trout from this Chinook propagation program. The possibility for disease transfer between species is thought to be limited since HRPP smolts are not released unless they have received disease clearance from ODFW pathologists. Competition for food, space and habitat in the migratory corridors will be abbreviated as PIT tag data suggest mean travel time from release to being detected at Bonneville Dam for hatchery smolts is 25 days.

Findings: The comparative hatchery release evaluation is consistent with the Northwest Power Planning Council's Fish and Wildlife Program, BPA's Fish and Wildlife Implementation Plan EIS and ROD, and the Hood River Fisheries Project EIS. This Supplement Analysis finds that: 1) implementing the proposed action will not result in any substantial changes to the Hood River Fisheries Project EIS that are relevant to environmental concerns; and 2) there are no significant new circumstances or information relevant to environmental concerns and bearing on the Hood River Fisheries Project EIS or its impacts. Therefore, no further NEPA documentation is required.

/s/ Jason Karnezis
Jason Karnezis
Environmental Protection Specialist – KEC-4

CONCUR:

Katherine S. Pierce DATE: *12-4-2008*
Katherine S. Pierce
NEPA Compliance Officer – KEC-4

cc:
Chris Brun, Confederated Tribes of Warm Springs
Mr. Rod French, Oregon Department of Fish and Wildlife

References:

BPA (Bonneville Power Administration). 1996. Hood River Fisheries Project Environmental Impact Statement. U.S. Department of Energy, Bonneville Power Administration, Portland, OR (DOE/EIS-0241).

BPA (Bonneville Power Administration). 2003. Fish and Wildlife Implementation Plan EIS (FWIP EIS,) Bonneville Power Administration, Portland, OR (DOE/EIS-0312).

ODFW (Oregon Department of Fish and Wildlife) and CTWSR (Confederated Tribes of the Warm Springs Reservation of Oregon). 1993. Hood River Master Agreement.

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USFWS Columbia Basin Hatchery Review Team. 2007. Draft Carson, Spring Creek, Little White Salmon, and Willard National Fish Hatcheries: Assessments and Recommendations. Final Report, Appendix B: Briefing Document; Summary of Background Information. December 2007.