Chapter 10 Comments and Responses

BPA sent the Draft EIS to the public for comments on the Proposed Action and alternatives. The Draft EIS was distributed to agencies, groups, individuals and libraries in June 1996 (see Chapter 7). A 45-day public review period ended on August 16, 1996. Two public meetings with an open house format were held in Boise and Lapwai, Idaho to review and receive comments on the Draft EIS. An additional comment period was opened on December 13, 1996 and ended January 27, 1997. This chapter records and provides responses to the comments on the Draft EIS. This Final EIS also provides updated information developed as a result of the comments received on the Draft EIS.

This chapter contains the written comments from letters and comment sheets, and oral comments from public meetings and telephone calls. Letters and calls were recorded in the order they were received. Separate issues in each letter were given separate codes, for example, 01-01, 01-02, etc. Comments from the public meetings were coded similarly. BPA, BIA and the Nez Perce Tribe prepared responses to the individual issues. This chapter contains the coded comment letters on the left side of the page with the coded responses given on the right side of the page.
01-01

Impacts to native wild fish are described in Section 4.6, Fish.

01-02

Thank you for your comment. BPA feels a cost/benefit analysis for the Nez Perce Tribal Hatchery Program would be problematic at this point given the many uncertainties regarding adults returning to the system and issues related to that effort. Additionally, it would be difficult to quantify the economic benefits from a major project goal.

We acknowledge that costs associated with fish protection and restoration efforts may appear high. In most cases this correlates to the extent of current damage to the existing resource(s). Total construction costs for the Cherryline and Sweetwater Springs hatchery facilities as well as the six satellite facilities are estimated to be approximately $16 million. The amount of funds expended to date on the Nez Perce Tribal Hatchery Project is between $5-6 million. The latter figure includes costs incurred since 1983 for a myriad of activities including, but not limited to, project planning, coordination, research, site selection, preliminary design studies, and environmental impact analysis.

01-03

The third phase of the program (after 10 years) would be based on the first and second phases of the program (see Section 2.1, Proposed Action).

01-04

Comment noted.

01-05

Initial broodstock sources are described in Section 2.1.3.7, Broodstock Source and Management. Effects on these hatchery populations would be determined on an annual basis by NPT and other fishery agencies during negotiation for broodstock acquisition.

01-06

The EIS recounts the history of the Clearwater River's anadromous fish and their extirpation by non-Federal dams in the early twentieth
century. Research and history show that federal dams alone are not responsible for the decline of the Clearwater salmon runs. Although continuing mainstem passage is fundamental to the long-term success of the NPTH program, it is a difficult issue to analyze in the context of this EIS and is outside the scope. Section 1.7 lists several on-going efforts that address mainstem passage.
02-01
Yes. The Tribe employs many professional fishery biologists and hatchery operations experts with many years of experience in the Northwest and other parts of the country.

02-02
Section 4.6.1.2, Impacts, discusses the risk of introducing disease as fish are released.

02-03
These events are outside the scope of the EIS, but are noted in the EIS. See also a new adult return section, Section 2.1.3.5.

02-04
The role of salmonids and the effect of their loss is described in Section 1.1.1.1, The Clearwater River Fish Community.

02-05
As noted above, some actions and events that occur are outside the scope of this EIS. However, you may find the information you seek in the SOR EIS.
U.S. DEPARTMENT OF ENERGY - BONNEVILLE POWER ADMINISTRATION
800 TELEPHONE LOG

RECEIVED BY BPA
PUBLIC INVOLVEMENT
LOG: HEP-02-003
RECEIPT DATE: 11/02/99

INCREASED CONCERNS OF WILDLIFE GENETICS

IDAH0
208-388-1633

RECEIVED ON 1/9/00
4:34 PM

From: John Perkins
To: Jean
Subject: NED PERCE TRIBE

REJECT PLAN BY NED PERCE TRIBE
BECAUSE DON'T THINK THERE
SHOULD BE ANY TROUGHS (?) INTRO-
DUCTIONS FROM DRAINAGE TO
DRAINAGE

12 WILDLIFE BIOLOGIST
UNDERSTANDS WILDLIFE GENETICS

03-01
Comment noted.
4-01

Predicted annual returns of adults in the Proposed Action are displayed in Table 2-2. A discussion of survival rates of released salmon is presented in a new section, 2.1.3.5, Adult Returns.

4-02

Sections 4.4, Water Resources, and 4.6, Fish, describe water quality impacts.

4-03

Effects on fish are described in Section 4.6, Fish.

4-04

See responses to 01-06, and 02-03.

4-05

See response to 01-02.

4-06

Section 2.4.2, Natural Habitat Enhancement and Restoration, contains new information about important habitat restoration projects in the area.

4-07

Bull trout have been proposed for listing as a threatened species. No formal federal restoration effort has yet been developed. However, effects on bull trout are described in the biological assessment (see Appendix B). In addition, a description of the relationship of the state of Idaho’s bull trout conservation plan with NPTH is presented below.

Idaho Governor Phil E. Batt has proposed a State of Idaho Bull Trout Conservation Plan 1996. The conservation plan focuses on bull trout recovery within select key watersheds. Most proposed NPTH treatment and control streams (with the exception of Lolo and Eldorado Creek) are within the key watershed areas. Principal conservation activities have not yet been developed, but the plan indicates that they would focus on alleviating human-caused habitat related impacts such as sediment sources, bank cover and stability, migration barriers and poaching. The
plan does state that the loss of anadromous fish runs has led to a lack of prey for bull trout. Consequently, supplementation of chinook could increase that prey base serving to enhance bull trout populations.

04-08

The Cherrylane facility would be located downstream of three other hatcheries with known disease histories. Disease often occurs if water is used below another facility. For that reason, groundwater and surface water may be treated with ozone to insure that fish will be protected until their immune systems can defend them against disease.
Using existing facilities is now being considered as an alternative. Please see Section 2.2, Use of Existing Facilities Alternative, for additional information.

Dworshak is already used to provide water for anadromous fish passage. This project would not change operations at Dworshak Reservoir.

Comment noted. However, harvest regulations are outside the scope of this EIS.

Hatcheries require relatively flat sites close to sufficient water in order to operate. The Cherryleane site is a feasible site for a hatchery. It is of sufficient size, it is close to an adequate water supply, and it is available.

The Cherryleane site is developed agricultural land presently used for hay production. After the hay crops have been harvested, the site is used for fall pasture. Sweet corn may still be grown at Cherryleane by the landowner.

There is already an existing fishway built into the canyon wall at Selway Falls. The fishway improved passage, but salmon have always passed the falls and spawned in the upper Selway.

With respect to releasing spring chinook, Meadow Creek is designated a roadless area, not a wilderness area. With respect to releasing spring chinook, Section 2.1.3.4, Release Techniques, states that Meadow Creek is one of the three creeks that are proposed for spring chinook release sites. The fish would be distributed by helicopter through the reaches of accessible spring chinook habitat. According to the Wilderness Act, aircraft can be used to propagate fish if authorized by the wilderness manager of the forest in question. The Tribe would work with the USFS to minimize any impacts from the helicopters to the wilderness resource.
Impacts to grizzly bears are discussed in Section 4.7.1.7, Threatened and Endangered Species, and in the Biological Assessment (see Appendix A).

Section 1.1.1.2, Hatchery Fish Production, in the Clearwater Subbasin, describes the technological need to increase runs of naturally-reproducing salmon with the aid of hatcheries.
06-01

The 12-acre CherryLane site is located in two zoning districts within Nez Perce County: Agriculture (A) and Agriculture/Residential (A/R); however, 95% of the property, i.e., that which is located in Section 34, T37N, R3W, is zoned A (20-acre minimum). The remainder of the property, located in Section 35, is zoned A/R, five-acre minimum (Ruse, December 1996).

06-02

The proposed project has always included a fish ladder at CherryLane. However, a lack of detail in preliminary drawings and the fact that all but one of the proposed releases of fish produced at CherryLane occur at satellites may have caused this misunderstanding.

06-03

Section 2.1.4, Harvest Management, discusses how harvest management would be coordinated with other fisheries agencies in the basin. The intent of increasing runs of salmon is not for the purpose of excluding harvest of steelhead.
06-03 (cont.)

in prime fishing (abundance) at the "Cherry Lane Hole." The hatchery would cause that to be lost to sport fishing individuals.

06-04

The fallout from the whole project was wonderful but the concern is the neighborhoods. He stated that this could cause a divisive and potentially explosive situation with the tribes. Although there is income involved, he stated that he would much rather look at a ray field than a hatchery.

06-05

BPA will attempt to ensure that the Cherrylane facility is aesthetically pleasing.

Comment noted.
BPA - Public Involvement - CKP
Post Office Box 12999
Portland, Oregon 97212

Re: Nez Perce Tribal Hatchery Program

BPA should probably fund the Nez Perce Tribal Hatchery Program for a variety of reasons.

First of all, most previous efforts by the political process (BPA) have failed to restore Snake River salmon runs. Second, the tribes have complained for decades about State and Federal handling of rebuilding efforts. Third, new ideas and techniques would be employed in a new facility. For all these reasons, the Nez Perce should have their turn at the plate.

However, if BPA is going to continue business as usual with its flow regimes and generating priorities a hatchery built on every tributary in Idaho would not restore upper basin salmon runs. Perhaps if some flexibility and "investment in flows" with drawdown were implemented, there would be no need for more glisty, highly visible, politically correct, production facilities.

I personally would prefer some dull, boring invisible, politically neutral, mainstem velocity to get the alligators of smelt that we are already manufacturing to the ocean.

Sincerely,

[Signature]

Dan Magers
1. Please be sure your environmental studies include (for example, impacts on water quality) analyses that show that affect on on wants and that damage is avoided to protect downstream flow of water.

2. My environmental concerns about the Nez Perce Tribal Hatchery Program are

3. Other alternatives I'd like you to consider: You know a practical solution to this with the current approach, the program appears to have been "run down" in the past. If I could be valid, could I be valid? I would think a hatchery would be more utilized by reducing waste.

4. I need more information about

5. I have these other comments:

Please put me on your project mailing list. (You are already on the list if you received this in the mail.)

Name: David Cleary
Address: 1222 E. 11th Ave
City: Portland
State: OR
Zip: 97205

Please mail your comments by August 16, 1996 to:
Bonneville Power Administration
Public Involvement Office - CRP
P.O. Box 12999
Portland, OR 97212

08-01
Effluent releases would be minimal. See Section 5.12, Discharge Permits under the Clean Water Act, for a discussion of wastes.

08-02
Comment noted.

08-03
Comment noted.
09-01

Thank you for your comment.

09-02

Comment noted. Chapter 5 addresses consultation and permit requirements. Section 5.5, State, Areawide and Local Plan and Program Consistency, states “The Tribe would work with the USFS while designing and locating the proposed facilities. Special use permits would be obtained, and USFS PACFISH management objectives would be met.”

09-03

Comment noted.

09-04

Flows from the Section 6 bridge have been used in this revision.

Table 4-12 shows the estimated flow available from Yoosa/Camp creeks. It is based on the lowest flow measured over 5 years 1990-95 from NPT data.

Should flows fall below this amount, NPTH demands would not exceed 50% of the stream flow. Measures to counter low flows could include adjusting production capacity in the rearing ponds by releasing fish prior to the fall.

09-05

The existing water quality within streams on national forests is sufficient for purposes of NPTH. The watersheds in which activities are proposed are currently managed for their anadromous fish resources by Forest Plan standards and internal direction (e.g., Clearwater National Forest Desired Future Conditions analysis and PACFISH). These standards, guidelines, and directions incorporate thresholds for sediment and water temperatures, along with other habitat components. Additionally, both forests must meet Idaho Water Quality standards, which have defined water temperatures necessary to protect fisheries.

Short-term high sediment events would be considered in the final design.
to be ideal for rearing during the operational month of the facility. Water quality in Yoosa and Camp creeks should not be anticipated to exceed standards established in the Forest Plan or the requirements of the Clean Water Act. If the satellite facility requires water that exceeds these standards, then it is incumbent on the developer to provide design features such as specialized Intakes, settling devices, etc. as necessary to obtain E1. Is the facility be equipped to obtain water of the necessary quality when suspended sediment levels in Camp and Yoosa creeks exceed experience short-term peaks as a result of summer thunderstorm or spring runoff? There is no discussion of this condition in the DEIS.

Section 3.9. page 3-58: The DEIS noted that "only Nez Perce County has a comprehensive plan and a zoning ordinance." The Forest has a copy of a comprehensive plan for Clearwater County. We suggest the authors obtain a copy from the County.

Section 3.9.4.4. page 3-57 to 3-58: A portion of the Yoosa/Camp Creek site is indeed in management area M2 as stated in the DEIS. The Forest Plan delineated riparian areas (M2) at 100 feet on either side of the streams. The description within this section needs to cover M2 and E1. The description of the management area in the DEIS is M2. The M2 management area is associated with riparian areas, wetlands, floodplains, etc. E1 emphasizes optimum sustained production of wood products and is the largest management area on the Forest. Most of the area surrounding area (other than the stringers of M2 along riparian areas) is E1.

Section 3 11.4.4. page 3-70 to 3-71: There is no visual quality objective (VCO) from road 105 as it is not a visual travel corridor. The only applicable VCO in the area is from the Nee-Ma-Poo National Historic Trail which is correctly stated as modification for areas in the middle ground as viewed from the trail. Modification means that man's activity may dominate the characteristic landscape but should appear as a natural occurrence in the foreground and middle ground.

CHAPTER 4

Section 4.9.1.4. page 4-62: The DEIS states that a complete wetland delineation would be conducted to determine the amount of impacted area and mitigation strategies would be developed to have no net loss of wetland area and minimize impacts on remaining wetlands. How and where would such mitigation be accomplished? In fact, it is required?

Section 4.9.1.6. page 4-63: The DEIS states that "any proposed road associated with the timber sale at Camp Creek would need to be constructed so as to avoid alteration of Camp Creek," It is outside the scope of this DEIS to prescribe the management of the National Forest. Operations in Camp Creek as well as elsewhere on the Forest will be conducted to meet applicable Forest Plan standards regarding sediment.

As noted above, the reviewers expressed that the DEIS was a very good document. We appreciate the opportunity to comment on the DEIS. If you have any questions, please contact Pat Murphy or Doug Goddard at the Supervisor's Office.

JAMES L. CASWELL
Forest Supervisor

cc: Pat Murphy
Doug Goddard
Dave Johnson, Nez Perce Tribe

Comment noted. The text has been changed in the Final EIS.
August 13, 1996

Public Involvement Manager - CKP
Bonneville Power Administration
POBox 12999
Portland OR 97212

Dear Public Involvement Manager,

Thank you for the opportunity to comment on the proposed Nez Perce Tribe (NPT) Hatchery Program and to express our concerns. Potlatch supports the goal of re-establishing naturally spawning salmon in the Clearwater Basin. However, we do have some concerns about the proposal. Our concerns lie in five areas: 1) implications for the management of our Cherrylane Seed Orchard which is adjacent to a proposed hatchery; 2) possible impacts on land management flexibility and costs for our forest lands; 3) the relationship of the proposal to the Snake River adjudication issue; 4) lack of description of release practices and their effects on other fish; and 5) socioeconomic analysis in the DEIS.

As we have stated earlier, and is some assurance that we could continue to manage our Cherrylane Seed Orchard for seed production. In particular, spraying insecticides and herbicides is a necessary part of managing a successful seed orchard. The DEIS suggests that we consult with the Idaho Division of Environmental Quality to determine how to prevent the pesticides from impacting the hatchery. It goes on to say..."If the chemicals used by Potlatch are found to threaten the survival of hatchery or broodstock, and cessation of the use of these chemicals would prove to be infeasible to the continued operation of the proposed hatchery facility, the proposed hatchery site could be moved an appropriate distance east, to provide a buffer between the hatchery facility and Potlatch..." We already take the recommended precautions to prevent pesticide drift. However, it seems prudent to leave a buffer between our facility and the hatchery to provide additional protection for both of us. We request this be done.

It is not clear to us how and where our land management might be affected by the proposal. However, it is clear that if the program is successful, salmon will use many streams where they are now absent. We intend to manage our lands so as to protect stream habitats and water quality with or without salmon. However, if special restrictions are imposed because of salmon, we would be concerned. In particular, if "PACFISH" type buffer strips and management were required at a future point in time, we would be adamantly opposed. We would like to work cooperatively with the NPT to design management practices which protect stream habitats and water quality at minimum cost and impact on our forestry operations.

Comment noted. The exact location for a facility at Cherrylane would be determined after the Record of Decision.

10-02

PACFISH buffer strips are already required on National Forest lands (see Section 1.6.9). The proposed spring chinook outplant sites and satellites for NPTH are on National Forest lands. Fall chinook would be released into the mainstem Clearwater River and ESA regulations, in regards to critical habitat, already apply to the lower Clearwater.
We are currently involved in attempting to maintain the viability of our operations in the Clearwater Basin which are threatened by the instream claims of the NPT and the government. This proposal should explicitly address instream flow claims and the water diversions necessary for the hatcheries. The current NPT instream flow claims exceed the natural flow of the rivers on the average eight out of ten years. Would the hatcheries be closed when instream flows are not being met? It seems ironic that a proposal to withdraw water from the Clearwater River is being made by the same parties who are seemingly trying to prevent anyone else from doing the same thing.

The NPT presently operates a hatchery owned by the State of Idaho. Within the past two years, this hatchery has been used to raise coho salmon that were subsequently released in the Potlatch River basin on Potlatch Corporation lands. This was done in spite of the fact that best available knowledge indicates that coho were never present in this river system. Furthermore, this system currently supports a small wild steelhead run – and this fish is currently under ESA review. The indiscriminate growth and release of fish is a major concern to Potlatch. Given the NPT demonstrated record of freely distributing fishes, and the unwillingness of regulatory agencies to challenge the NPT on these actions, the ESA is incomplete in failing to address the effects or large releases of exotic fishes on stream ecosystems.

Finally, the socioeconomic analysis in the DEIS is severely lacking. It fails to include impacts associated with management restrictions on landowners and water users in anticipation of and following re-establishment of salmon runs. The EIS should either impact these employment and other social costs and dollar impacts, or should state that no actions or proposals will be forthcoming which would have negative impacts. The latter seems unlikely, particularly in view of the drastic impacts associated with instream flow claims which are essentially claimed to be necessary for the objectives of this proposed project to be accomplished.

If you have any questions, please call Larry Streeter at (208) 799-1121.

Sincerely,

David T. Prichard, Jr.
Resource Manager
DTP/RA

nn:
Rick Kelly
Kevin Baling
Larry Streeter

10-03

The Snake River Basin adjudication process and instream flow claims made as a result are outside the scope of this proposal. With regard to water withdrawal for NPTH, it would be non-consumptive and returned to the river or streams near the site of removal. Additional groundwater pumped by the hatchery would also be returned to the river which would add to river surface flow. The percentage of total river and stream flow used by the NPTH and groundwater used is displayed in Table 4-2.

10-04

The best knowledge available to NPT biologists indicates that salmon were present in the Potlatch River. Whether they were coho is unknown, but oral descriptions indicate the size and color to be consistent with coho.

A Biological Assessment addressing the effects on listed stocks of salmon was submitted to NMFS prior to the coho outplant in 1995. NMFS concurred with the finding that the actions were not likely to adversely affect any listed or proposed for listing anadromous stocks. At the time, steelhead were not proposed for listing. In 1996, coho were again outplanted in Potlatch River by the NPT and a Biological Assessment was again submitted to NMFS. NMFS again concurred with BIA findings that the outplant was not likely to adversely affect listed or proposed for listing stocks which now included Snake River steelhead.

The NPT, as co-manager of fisheries resources and as a regulatory agency, coordinates with other regulatory agencies on the coho outplant as well as other fisheries issues. The effects of NPTH releases on stream ecosystems are described in Chapter 4, Environmental Consequences.

10-05

Section 4.4.1.1, Groundwater, states that the main impacts to groundwater would occur at the two hatchery sites and at the North Lapwai Valley and Luke's Gulch satellite sites. All discharges would meet federal and state water quality standards and guidelines, and would satisfy all permit requirements. Hatchery effluents would be routinely monitored to assure compliance with
water quality standards. The overall impacts to groundwater would be low and no mitigation is required.

With respect to impacts to surface water, the EIS states that a number of stream channels would be altered by channel excavation and rip rap used for intake structures, fish ladders and equipment used to anchor fish weirs. The EIS recommends that all facility sites be gauged for flow and temperature to determine the amount of changes caused at the sites. Should they be determined to have adverse impacts, an adjustment to facility operations would be made.

Section 5.14, Permits from the State, states that a stream channel alteration permit would be required for all instream construction. This includes intake and outlet pipes placed within stream channels. EPA would coordinate with IDFG, the State Department of Water Resources, and the Corps to determine what permit (Corps and Water Resources joint permit) forms would be required.

With respect to underground injection permits, the proposed project would be designed to comply with local laws and ordinances and state water programs so as to not degrade the quality of aquifers or jeopardize their use as a drinking water source. It can be stated, therefore, that no actions or proposals would have negative impacts on water users permittees as long as these users do not negatively impact the hatchery facility or the hatchery operations.

With regard to management restrictions on landowners and water users in anticipation of and following the re-establishment of the fish runs, Section 1502.22 of the CEQ Regulations states, with regard to incomplete or unavailable information, “When an agency is evaluating reasonable foreseeable significant adverse affects on the human environment in an environmental impact statement, and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking.” The information requested by the commentor is not available.
Bonneville Power Administration
Public Involvement Office - CRP
P.O. Box 12999
Portland, Oregon 97212

Dear Sir:

We have reviewed the Nez Perce Tribal Hatchery Program Draft Environmental Impact Statement (EIS) and offer the following comments:

1. Abstract, 2nd paragraph - Since Snake River spring/summer and fall chinook are the only stocks involved that would be subject to generic risk, and these stocks are listed as threatened, the reference to endangered species should probably be removed.

2. Page 1-1, Section 1.1 - Need for Action - This section should mention that Snake River salmon populations have declined to the point that they have been listed under the Endangered Species Act.

3. Page 1-1, Sidebar - This is not the standard definition of wild salmonids. Wild salmonids are produced by wild parents, progeny of hatchery parents that spawn in the wild are usually referred to as natural.

4. Page 1-12, Sidebar - The National Marine Fisheries Service term is Evolutionarily significant unit, not Evolutionary

5. Page 1-15, Section 1.6.4 Lower Snake River Fish and Wildlife Compensation Plan (Additional Mitigation of Upstream Spawning) - Please identify the Lower Snake Compensation Plan (Comp Plan) as a Corps of Engineers program and that the Corps was directed to work with the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and state and tribal hatchery managers to develop additional fall chinook facilities.

Please correct the last statement of the first paragraph to indicate that acclimation facilities (not necessarily "temporary" facilities) are being considered on the Snake and Clearwater Rivers only. The Corps recently distributed a draft Environmental Assessment describing the impacts of developing two fall chinook acclimation facilities: one on the Clearwater River at the confluence with Big Canyon Creek in 1997, and one on the Snake River at one of two sites about 20 miles south of Clarkston, Washington, in 1998.

Comment noted.

Comment noted.

The definition has been clarified in the document.

Comment noted. The text has been corrected.

The text has been changed.
6 Page 1-16, Section 1.6.4, top paragraph - The facility set up by the Corps at Pittsburg Landing was an acclimation facility, not a rearing facility as the fish were there only long enough to acclimate to river conditions and to imprint on the site location. (Also, please correct the spelling of "Pittsburg Landing.")

7 Page 1-16, Section 1.6.4, second paragraph - Only one acclimation facility is being considered for the Clearwater River under the Comp Plan - Big Canyon Creek. This facility is to be operational in early spring 1997. However, on several occasions tribal fish hatchery biologists have indicated that once the Nez Perce Tribal Hatchery is constructed at Cherrylease, fall chinook acclimation activities will be transferred from these temporary facilities at Big Canyon to the Cherrylease Tribal Hatchery and the equipment from the Big Canyon site will be available for use elsewhere.

8 Page 2-5, Section 2.1, Proposed Action, 4th bullet item - Please define "natural living fish"

9 Page 2-7, Section 2.1.1.1 Cherrylease, 1st paragraph - Instead of "fall chinook eggs would be spawned" shouldn't the sentence read "fall chinook would be spawned"?

10 Page 2-7, Section 2.1.1.1 Cherrylease, 2nd and 3rd paragraphs - This section should include a discussion of how the Comp Plan fall chinook acclimation activities will be incorporated into the Cherrylease hatchery operation (see comment 4). This section should also discuss which age class of fall chinook, yearling or subyearling, will be released. Currently, yearling fall chinook are being acclimated at the Comp Plan facilities because the agencies involved, including the tribe, have agreed that yearlings have better survival and therefore are the preferred age class to release.

11. Page 2-7, Section 2.1.1.1 Cherrylease, 3rd paragraph - This paragraph states that the fall chinook will be released as subyearlings. Based on the current agreement for the Comp Plan that yearlings need to be released now because of their higher survival, will yearling fall chinook be released initially under the tribal hatchery program?

12 Page 2-8 - The label for Highway 12 needs to be reversed.

13. Page 2-9, Page 2-7, Section 2.1.1.1 Cherrylease, first full paragraph - This reads as if all adult fall chinook returning to the Clearwater River would be held at Cherrylease. Won't some of those fish be allowed to spawn naturally? How does the tribe intend to capture all the returning adults? How would wild fall chinook salmon entering the hatchery be distinguished and handled? Of the 1,020 adults needed for maximum egg take, how many would be male and how many would be female?

11-06
The text has been changed.

11-07
The text has been changed.

11-08
The text has been changed.

11-09
Comment noted. The text has been changed.

11-10
Section 1.6.4, Lower Snake River Fish and Wildlife Compensation Plan (Additional Mitigation of Upstream Spawning), addresses this issue. Section 2.1, Proposed Action, states that subyearling smolts are the proposed age class for fall chinook released by NPTH.

11-11
Section 2.1, Proposed Action, states that subyearling smolts are the proposed age class for fall chinook released by NPTH.

11-12
Comment noted. The figure has been corrected.

11-13
Section 2.1.3.7, Broodstock Source and Management, states that a portion of the hatchery-derived and wild fall chinook returns would be captured for broodstock, and others would be allowed to spawn. Capture methods are discussed in the revised Section 2.1.3.6 on Adult Collection.

Fish would be marked to distinguish hatchery origin. A 50:50 male to female sex ratio was used in model predictions.
True, survival would be lower. However, increasing opportunities to survive and return adults can be enhanced by a hatchery program. When adults return and spawn, their progeny would not have that benefit. An improvement in passage conditions is needed for these fish to accrue the same benefit.

Table 3-3 shows that 23% of the fall chinook spawning upstream of Lower Granite has occurred in the Clearwater; this is without direct artificial propagation efforts. Although juvenile fall chinook produced naturally in the Clearwater do face difficult conditions migrating through the series of mainstem reservoirs because of their late emergence timing, adults are consistently returning to the Clearwater to spawn. An increase in the spawning run and juvenile production of Snake River fall chinook salmon in the Clearwater River Subbasin would most certainly assist in salmon recovery.

Run forecasting in conjunction with baseline data on return rates to each stream would be used to predict if the runs are likely to drop below 12 pairs. Hatchery fish would be marked.

True. The M&E Plan discusses this in more detail.

The LSRCP hatcheries have not met their goal for chinook salmon. This is discussed in Section 1.1.1.2, Hatchery Fish Production in the Clearwater River Subbasin, and in Section 2.2, Use of Existing Facilities Alternative.

See response to 11-14, second paragraph.

Comment noted.
19 Page 3-1, Section 3.1.1, Background - Much of this section does not appear to be relevant to this hatchery program. As presented, much of this information such as the descriptions of Indian wars or tribal government structure does not have any bearing on the environmental impacts of the proposed project.

20 Page 3-20, Section 3.6 Fish - There does not appear to be a subsection describing threatened and endangered fish species. This should be added as Section 5.2.1 states that there are listed species of salmon in the project area.

21 Page 3-22, Table 3-2 - If the presence of native summer chinook and coho in the Clearwater drainage is unknown, how can they be considered to be extinct now?

22. Page 3-24, Section 3.6.1.1 Causes of Change in the Fish Community, 2nd paragraph - This paragraph reads as if the Snake and Columbia River dams are THE main reason for the decline of salmon numbers. While the dams have certainly played a part in the decline of Columbia basin salmon, they are not the only reason and are arguably not the main reason. Overharvest had caused declines in salmon numbers before the first hydroelectric dams were constructed. This paragraph should be rewritten to reflect that many factors (dams, harvest, habitat destruction, ocean conditions, etc.) have contributed to salmon decline.

23. Page 3-29, Section 3.6.2.1 Chinook Salmon, 2nd paragraph - Please correct the temperatures. It does appear that 14 degrees C can be equivalent to 37 degrees F.

24. Page 4-4, Section 4.1.2.2 Tribal Employment - The effects of the No Action Alternative on tribal employment would be "no increase" because no additional employees would be hired. There would also be a return to employment levels that existed prior to initiation of the hatchery program and EIS.

25. Page 4-34, Section 4.6.1.2 Impacts, 4th paragraph - Cumulative impacts could include an increase in salmon populations, but not necessarily naturally spawning populations. See comment 11.

26. Page 4-36, Section 4.6.1.2 Impacts, last paragraph - See comment 1.

27. Page 4-41, Section 4.6.1.2 Impacts, 1st paragraph - The text description of potential impact of mid-Columbia summer chinook on listed Snake River fall chinook is probably understated, although the "moderate" categorization is probably accurate.

28. Page 4-44, Section 4.6.1.2 Impacts, last paragraph - Change the status of fall chinook to threatened rather than endangered.

11-20 Effects on threatened and endangered species are specifically addressed in the Biological Assessments, Appendices A and B.

11-21 Presence of fish in the Clearwater River prior to the building of Lewiston Dam has been inferred from interviews with people present before then.

11-22 The text has been changed.

11-23 Comment noted. The text has been corrected.

11-24 Comment noted. The effects of the No Action Alternative would be no increase in employment prior to the initiation of the hatchery program. BPA contracted with the NPT to gather data to develop the EIS for this proposed project. Whether Tribal employment levels would return to the levels of employment that existed prior to the initiation of the hatchery program if the No Action Alternative were selected would depend on other factors unrelated to this EIS.

11-25 See response to 11-14.

11-26 Summer chinook production has been dropped from consideration.

11-27 Summer chinook production has been dropped from consideration.

11-28 Comment noted. The text has been corrected.
29. Page 4-44, Section 4.6 1.2 Impacts, last paragraph - The hatchery program would not necessarily increase threatened fall chinook populations. Fall chinook from Lyons Ferry are part of the ESU, but are not considered to be part of the listed Snake River stock. If the fall chinook released in the hatchery program were to spawn naturally, their progeny would be considered part of the listed stock even though they would not be considered to be wild fish. If these progeny were then able to return and spawn naturally themselves, this project could be considered to be increasing the population of the endangered fall chinook. However, as stated in our comment 11, it seems unlikely that a naturally spawning population would be self-sustaining given the habitat conditions. What this project would probably do is increase the number of adults returning over Lower Granite Dam as long as the hatchery continues to release juveniles.

Thank you for the opportunity to comment on this project. If you have any questions, please contact Ms. Sandy Simmons at 509-527-7265.

Sincerely,

[Signature]

Carl Christianson
Chief, Environmental Resources Branch
Dear Bonneville Power Administration:

Enclosed are the Idaho Department of Fish and Game’s (IDFG) technical comments to the Nez Perce Tribal Hatchery Program Draft Environmental Impact Statement (DEIS). There are two sets of comments, one general and one specific to the “Summary.”

In 1989, the Idaho Fish and Game Commission agreed to concept with the Nez Perce Tribal proposal to develop satellite facilities pursuant to development of specific management plans that addressed production and harvest of natural and hatchery stocks of salmon. The DEIS is a good conduit for bringing many of the planning issues to the forefront. We offer our comments in the spirit of identifying our concerns so that we can jointly work with the Nez Perce Tribe to address them and move forward in our common effort to restore Snake River spring, summer, and fall chinook to viable and sustainable levels.

Sincerely,

Steven M. Hufnagel, Chief
Bureau of Fisheries

Enclosure

c: Larson, NPT
   Cochenour, IDFG
   Hassemer, IDFG
Idaho Department of Fish and Game General Comments to Nes Perce Tribal Hatchery Program Draft Environmental Impact Statement, August 1996

Idaho Department of Fish and Game's (IDFG) major issues of concern are 1) Broodstock (selection, coordination, and collection, including stock transfer); 2) Disease management; 3) Harvest management; and 4) Production coordination. These elements of concern are reflected in our general comments regarding the Draft Environmental Impact Statement (DEIS) for the Nes Perce Tribal Hatchery (NPTH) proposal. We anticipate further discussion with the Nes Perce Tribe through the DEIS and other forums to fully address these issues.

* The general tone of the DEIS is that the proposal represents all new technology that will miraculously work. The strategy of a central incubation with acclimation facilities is similar to Clearwater Hatchery, on-line since the early 1990s.

Experiments using natural rearing techniques have already been implemented in some Idaho programs - but qualified successes remain elusive. All of the "proposed actions" on page 8-11 have been conducted in the Clearwater Basin, but on more limited scale than the NPTH proposal. The Nes Perce Tribe's incorporation of "natural rearing" strategies into their production proposal is commendable. Their proposal incorporates many techniques proposed in the literature to try to make hatchery fish more adept in the natural environment. Unfortunately, the DEIS misleads the reader to believe that the hatchery proposal will "fix" the problem of declining natural runs. Considerable survival benefits appear to be applied to the proposed strategies. Our experience to date has not supported conclusions about expected survival benefits from submolts (or smolt) releases, even with improvement in rearing techniques. The DEIS would be improved by scientific references supporting the survival assumptions as an effect of the proposed innovative techniques.

We suggest an analysis of the smolt-to-adult return (SAR) for Broodyear (BY) 1995 jacks to serve as an indication of a likely SAR under current (at least through 1999) maintenance conditions. It may be more prudent to phase in the NPTH program, utilize flexibility with other programs, and emphasize fixing limiting factors such as maintenance passage problems as a precursor or complementary to full implementation of NPTH.

* Reaching program goals within 20 years should be couched in terms of the assumptions used and not stated as fact. If NPTH is truly a supplementation program, then presumably, self-sustaining

12-02

The purpose of the EIS is to explain the environmental effects. The assumptions are stated in the document.

The success of the NPTH, other upriver hatchery or natural runs of salmon, whether the salmon are listed or not, ultimately depends on the salmon recovery efforts (including the Snake River Recovery Plan, the Tribal Restoration Plan and the Fish and Wildlife Program of the Northwest Power Planning Council). The NPTH was designed assuming the regional salmon recovery efforts would be successful, and that actions taken by NPTH to jump start populations in underseeded habitat would be simultaneously aided by coordinated efforts down river to improve passage conditions.

The survival rates calculated for various stages of development are explained in greater detail in the new Section 2.1.3.5, Adult Returns. BPA believes they are accurate, defensible predictors for survival.

Scientific references supporting the survival assumptions as an effect of the proposed innovative techniques have been included in Section 2.1.3.3, Rearing Techniques.

The model used to predict returns in Table 2-2 assumes the salmon recovery efforts have worked and that smolt-to-adult survival rate is double what it is currently (0.4% vs. 0.2%) such that a replacement rate of 1:1 is achieved.

12-03

NPTH relies on the assumption that salmon recovery efforts will work. The time period of 20 years was used to show how NPTH would work toward meeting the purpose and need.

If the proposed project is successful, production may expand to other drainages. Expansion would be evaluated in further environmental documents as necessary.
fish populations would render NPTH irrelevant if goals are reached. Perhaps this should be addressed in the DEIS.

There is question regarding the necessity of an additional central incubation facility for spring chinook production. There may be flexibility within the current hatcheries in the Clearwater Basin to act as central incubation facilities if the necessary satellite facilities to rear presmolts were developed. Subembryonic capacities of existing stations should be displayed as part of an alternative to meet NPTH production plans. State and federal management agencies have worked with the Nez Perce Tribe to incorporate their direction for offsite spring chinook releases in the Clearwater Basin, when Snake River Basin broodstock has been available. For the period 1990-96, a total of 3.17 million spring chinook smolts were released in the Clearwater drainage to augment areas with natural production components, a goal of NPTH. From 1989-95, another 3.32 million fingerlings or presmolts were also released. Availability of appropriate broodstock, as agreed to previously (Whitman, 1989) and in the DEIS, and acclimation facilities has been primary limitations to the NPTH spring chinook proposals. The broodstock limitation will not change just because NPTH comes on line because it is initially dependent on broodstock from sources other than its treatment tributaries.

The DEIS should examine the effects to the current steelhead fishery in the Clearwater River if a substantial number of fall chinook stack up returning to Cherry Lane. We have considerable concern that the steelhead fishery and fall chinook program may conflict. Tribal efforts to capitalize collection of fall chinook, for either harvest or broodstock collection purposes, may negatively affect the sport fishery and the migration of both wild and hatchery steelhead. This aspect of the proposed fall chinook program has not been evaluated in the document and should be, given the economics of the steelhead fishery, the ratepayer expenditures, and the federal responsibility in the steelhead mitigation program. There should be a more concerted effort to strategically plan with affected fish managers to ensure fall chinook and steelhead programs do not conflict in either production or harvest actions.

We do not agree that summer chinook derived from Mid-Columbia tributary stocks is an appropriate stock to use for NPTH in the Clearwater Basin. Empirical evidence of existing stocks from around the Snake Basin suggest a yearling summer chinook may be just as likely an appropriate stock. There are known summer chinook mainstream spawners in the Salmon River, and spring chinook stocks in the general vicinity of the Delay and South Fork Clearwater exhibit a yearling life cycle.

NPTH is designed to rear fish using innovative rearing techniques not commonly employed at existing Clearwater River Basin hatcheries. In Idaho, supplementation efforts to date have simply been outplants of surplus fry reared in a conventional hatchery setting. NPTH would use rearing strategies which attempt to better adapt fish to the natural environment and increase post release survival while offering the greater egg-to-fry survival benefits occurring in hatcheries. The novel rearing approaches would occur at the central incubation and rearing facilities as well as in the satellite locations, and encompass their life stages from incubation, to swim-up fry, to acclimated rearing at the satellites.

Existing hatcheries would have to be modified to accommodate such rearing techniques in addition to employing practices which have proven beneficial for their typical smolt production capabilities. However, the use of existing facilities is now discussed as an alternative.

Difficulties in acquiring broodstock have always been problematic in the Snake River Basin. It is unlikely that a surplus of eggs were offered to any management agency to initiate a program. The eggs come from foregone harvest opportunities, from a decrease in production at a donor facility, or from capturing fish returning to their natal streams. NPTH is no different in this regard.

Steelhead and fall chinook would occupy the mainstem Clearwater for the same period of time in the fall. Harvest management strategies and broodstock collection would require that fishermen and hatchery managers are able to distinguish between different species of fish. Similar type regulations and activities exist elsewhere in the Columbia River Basin where multiple species and stocks return to the same river system. The NPT would coordinate harvest management with other fisheries agencies in the basin.

Summer chinook production has been dropped from consideration.
The statement on page 3-28 of the DEIS that ocean-type (subyearling) summer chinook are best matched to the temperature regimes in the mainstem Clearwater River appears to be in direct conflict with statements on page 3-18 that accelerated growth in the hatchery is necessary to improve environmental conditions and survival for subyearlings. We have considerable concerns about straying and interaction with other spring chinook stocks, both natural and hatchery, returning to the Selway and South Fork. Our concerns were not allayed by the cursory impact scoring of interactions, which was vague and made broad assumptions about straying and spawning sites. We suggest more detail regarding risk assessment and description of risk containment should be features of the DEIS.

If subyearling fish adopt more of a stream-type life history (page 3-30), we question the utility of introducing an ocean type summer chinook (subyearling) rather than a stream-type summer chinook (yearling).

Snake River steelhead were proposed for listing; a final determination is expected within one year. We ask that particular attention be paid to wild S-run steelhead streams (Selway and Lochsa) in terms of interactions with chinook or other species released from HPTN.

We agree with the emphasis on utilizing estimated carrying capacity to direct release numbers (p. 12-5). However, at the time of the Subbasin Planning effort, there was not much information about subyearling carrying capacity in large rivers for fall or summer chinook and biologists expressed uncertainty regarding the density parameters used to estimate carrying capacity. New information may exist. It would be appropriate to review the literature to determine if the density factors utilized were appropriate.

We are pleased that the proposal includes marking all fish released for evaluation and identification purposes (p. 2-5). We support this effort, which we view as necessary both for the sake of HPTN and other production programs in the basin. Consistent with other Snake River production programs, we recommend that a visual mark be placed on all released fish. We are currently investigating elastomer marking as possibly a more benign, and more flexible, visible mark than a fin clip.

The Sweetwater Hatchery facility is owned by IDFG. A considerable increase in existing water rights would be necessary to operate the facility as proposed. IDFG has offered the Nep...
Perce Tribe use of Sweetwater Springs pursuant to an operating agreement until final decisions are made about ownership, which should allow elements of NPTH to move forward. This negotiation is currently in progress.

The logic employed in Appendix A is cryptic. For example, page 71 states: "a higher percentage of naturally produced spawners are needed among spawning in the hatchery than in the wild." The converse is that emphasis is placed on more hatchery spawners in the natural environment than natural spawners. Existing literature demonstrates that natural origin fish are generally less productive in the hatchery and hatchery origin fish less productive in the natural environment. Thus, the hatchery fish, less fit or productive in the natural environment, swamp the natural fish and any inherent natural productivity benefit may be lost. The strategy seems to emphasize putting less successful fish into the environment. If productivity and production is quickly diminished due to the "steep natural selection gradient" (p. 72) of hatchery fish, then focusing on a spawning criteria that emphasizes large numbers of hatchery fish spawning (but less production results) is not beneficial.

Per the enclosed letters between IDFG and the Nez Perce Tribe, it is clear that ocean type summer and fall chinook have not been jointly planned and assessed between state and tribal managers, compared to spring chinook production proposals. The DEIS represents the first step, but as pointed out in previous comments, we have concerns about interactions and conflicts with existing programs. NPTH production activities, particularly for fall and summer chinook, may complement or conflict with other salmon and steelhead programs, or other ongoing activities. NPTH is essentially introducing new chinook stocks into L太平 Creek, the Selway River, and the South Fork Clearwater River. Such efforts must demonstrate that they do not compromise native stocks of fish. The subyearling programs have not been jointly shaped and coordinated in a long-term strategic planning context. In agreement with the Nez Perce Tribe on the issue of strategic planning for state-operated hatcheries, the IDFG Commission has directed staff to work with the tribal and federal managers to develop an annual operating plan (AOP) for Clearwater Hatchery. This initial effort will be useful for identifying production actions to complement both state and tribal proposals.

The hatchery production goals for NPTH are clearly stated. Because NPTH is a supplementation program, the natural spawning goals for treatment and control streams, not just the number of fish left over for natural spawning (Table 2-2), should also be addressed.

IDFG has been aware since at least 1990 that NPTP desired to enhance a fall chinook run in the Clearwater Basin using NPTH. The subbasin plan (NPTP and IDFG, 1990) states that "IDFG does not support any enhancement (of fall chinook) until downriver harvest issues are resolved." IDFG has been party to negotiations which would make space available at existing hatcheries to produce NPTH fish (Wagner, 1990). Planned production included fall and summer chinook salmon, and IDFG decided not to use available space for NPTH production. The NPTH Master Plan was released in 1992 and also discussed summer and fall chinook propagation, and IDFG was fully apprised of that plan in formal presentations to the Fish and Game Commission. Additionally, IDFG has participated in the interagency planning meetings for development of the Draft EIS and reviewed the preliminary Draft EIS. It is apparent that IDFG has been informed, but has chosen not to be a participant in jointly planning fall chinook production by NPTH. Summer chinook production has been dropped from consideration.

The NPT will continue to coordinate with IDFG on operation of hatchery facilities in the basin.

This has been revised, see Table 3-8.
The effect of 2.5 million fall chinook and 800,000 summer chinook subyearling releases in June should be addressed in terms of mainstem corridor impacts scoring for the Selway, South Fork and Clearwater rivers. Although effect may be low, due to smaller size of these fish and their migratory behavior, it should be considered. Subyearling to smolt losses will reduce the number of spring chinook yearling migrants from MPIT considerably, which should minimize corridor effects more than the subyearling migrants.

References:

Huffaker, S.M., Chief, Bureau of Fisheries, Idaho Department of Fish and Game. [Letter to Mr. S. Whitman, Nez Perce Tribe]. 1989 September 8.

Page 8.1: The summary defines wild salmon as the progeny of naturally-reproducing salmon, regardless of parentage. This contrasts with Idaho Department of Fish and Game management definition (Idaho Department of Fish and Game 1992) which applies wild terminology to native fish without hatchery influence. There should be some distinction between fish with and without recent hatchery influence to fully define the salmon resource.

Page 8.2: In section 1.1.2, little attention is paid to the reason why runs declined after stocking ceased. Idaho Department of Fish and Game (IDFG) analyses demonstrate that runs declined because the primary limiting factor(s) were not addressed with the hatchery effort. The argument has little to do with hatchery methodology, whether it was traditional or supplementation. There exists a need to increase runs of naturally-reproducing salmon by fixing the limiting factor. It is debatable, and unlikely, that hatcheries alone will provide the fix. Thus, it should be clear that this hatchery proposal will likely play a similar role to other salmon hatcheries in the Snake Basin - They may help sustain runs until the limiting factor(s) is fixed. In years when limiting factor(s) are ameliorated, they can help increase natural production, but not natural productivity. However, when significant limiting factor(s) exist, hatcheries will ultimately provide little to no benefit to natural production. This aspect has been documented in the Snake Basin for both traditional and supplementation hatchery programs.

Page 8.3: It should be noted that the summer chinook currently inhabiting the Snake River ecosystem have a yearling life cycle, similar to spring chinook. Several populations are found in the Salmon River drainage; they are also believed present in the Imnaha River drainage. The tribal definition of summer chinook should clarify that this fish has a subyearling life history, not currently found in tributaries of the Snake River drainage other than for fall chinook in the lower, large mainstem of the Clearwater, Imnaha, Grande Ronde, and Salmon rivers.

Page 8.4: Local broodstock options for Boulder and Warm Springs creeks on the Lochsa River should be considered as an alternative to transplanting returns from Meadow Creek on the Selway. This would provide flexibility dependent upon success of hatchery releases and natural fish survival.

Page 8.5: It is not apparent how fall chinook will negotiate upstream migration unless Lapwai Creek gets a significant increase in flow during the fall. There did not appear to be any

12-16 Thank you for your comment. We have clarified our assumptions in our definition of wild salmon.

12-17 Comment noted.

12-18 Summer chinook production has been dropped from consideration.

12-19 True. However, BPA determined that the time, handling, travel, etc. involved in trapping and hauling fish from these streams to a central holding area would not make the operation desirable, at least at the outset.

12-20 North Lapwai Valley satellite site was selected for three principal reasons: 1) it is just upstream of an important fall chinook spawning area, Hog Islands; 2) it has the potential for an adequate water supply; and 3) the land for the site is under tribal ownership. Water flow is adequate in October through December of most years for fall chinook to navigate upstream, at least as far as the weir site (approximately 1 mile upstream from the mouth). In most years, stream flows increase during the fall with the rainy period.
flow in early August. If Lapwai Creek is not suitable natural production habitat, Table 2 should be revised to reflect broodstock collection only. This may alter the needed release size.

Although describing all habitat attributes of treatment streams may not be appropriate for the Draft Environmental Impact Statement (DEIS), a summary table of the major environmental factors that may constrain the success of releases, such as flow and temperature during critical production/migration periods, would enhance description of treatment streams.

Page 5-17: The section on disease management should note who would collect, process, analyze, and report disease samples since a fish health laboratory does not appear as part of the hatchery proposal. The Tribe should identify if the Pacific Northwest Fish Health Protocol will be utilized for Nez Perce Tribal Hatchery (NPTH). No mention of culling procedures, isolation facilities, or standard drug therapy for production is mentioned. We recognize that this level of detail may be beyond the DEIS, and thus, not displayed. However, we consider additional detail regarding disease management and treatment a necessity for NPTH production plans.

Page 5-12: The section on egg take should note that state transport permits would be necessary for crossing various state boundaries and importation. Under state authority, IDFG issues transport permits for eggs and live fish.

Page 5-18: An overall goal for NPTH is to rear and release a fish that will return to naturally produce viable offspring. However, the strategy for the subyearling life cycle is to accelerate juveniles to migrate during a spring yearling time period. The implication is that the acceleration will enhance survival but the other side of the coin is that natural fish, on a natural growth schedule, do not, or would not, survive in the environment very well. What is the logic of introducing subyearling fish for natural production enhancement? This does not seem prudent, especially if broodstock is limited or subtracted from more successful programs. Based on information in the DEIS, natural productivity of returning adults with subyearling life history will be questionable because of in-basin environmental constraints to their continued production.

Page 5-18: The DEIS identifies many experimental rearing techniques such as artificial lakes in ponds and underwater feeding options that hold promise for rearing fish more fit to complete their rearing in the natural environment. NPTH represents one of the most progressive proposals in regards to rearing fish for supplementation. IDFG supports Nez Perce tribal efforts to incorporate these ideas into their hatchery design. However, these are experimental techniques that may not work in

12-21

Descriptive of all treatment and control streams which include watershed area, discharge, length by channel type, gradient, elevation, habitat types, and stocking records, etc., are on file at NPT offices.

12-22

The annual operating plan would describe the comprehensive and detailed management of fish health and disease. Fish health technical services would be provided by either a federal agency (USFWS), or be developed by the NPT in accordance with Pacific Northwest Fish Health Protection Committee, IHOT, and NPT guidelines.

12-23

All necessary permits would be obtained.

12-24

Acceleration would be done to give the best advantage that is possible while fish are in our control. Release times would be compatible with flows. See response 11-14, second paragraph.

12-25

References to benefits of "new" rearing techniques are described in Section 2.1.3.3, Rearing Techniques.
production situations and will need considerable evaluation to determine biological effectiveness, particularly in light of the probable cost. There should be some indication from the scientific literature that supports the magnitude of survival improvement described in the DEIS from incorporating “new” techniques. Our experimental efforts to incorporate some of the aspects of “natural rearing” have not yet lead us to nearly as optimistic a conclusion of survival benefit as the Nux Parce Tribe, but we are hopeful that some benefit is achieved.

The proposal for fingerling spring chinook release techniques is supported by recommendations by Peery and Bjornn (1998). However, they caution against fall releases because hatchery fish may not have sufficient time to acclimate to stream conditions prior to the onset of winter, and releases may induce habitat displacement of natural fish from overwintering habitat. To date, our experimental fall preeminent releases have not been very successful. It is uncertain whether lack of success has been a function of hatchery methodology, or other factors. Additional adult data should be available soon from our experimentation to assist with decisions about the efficacy of a fall release strategy.

There is not enough explanation of strategies to provide pass-through of natural or other hatchery chinook stocks during adult broodstock collection. There is also little explanation of effects to other species. In many cases, stocks with substantial investment of ratepayer dollars could be negatively affected by collection strategies where there is mixed stock migration, thus a thorough evaluation and detailed strategy is needed. The impact scoring information (Chapter 4 of DEIS) is cursory. Only fish ladders and weirs were considered in Chapter 4, Environmental Consequences. Boat capture (seining, electrofishing, angling) and capture at Lower Granite were also identified as probable collection methods, but were not evaluated.

There are multiple studies and production activities in the Clearwater Basin. The intensive level of marking, coordination necessary for implementation of NPTM without negatively affecting other ongoing programs for salmon and other species should be further emphasized in the DEIS.

It is unclear if Table 2 refers only to hatchery produced fish, or potential returns from natural production as well. To illustrate contribution of the hatchery program to a goal of enhancing natural production, it would be useful to add a column of how many adults would be required to seed the available habitat, for example at 70% of parr production capacity. For example, by our estimation about 38 females (78 fish) would be needed to produce 70 percent of the parr capacity in Warm Springs.
Creek. After 5-10 years, Table 2 indicates that the hatchery program would contribute 10% to the natural production target.

We have technical reservations about the utility of Lapwai Creek for naturally spawning fall chinook based on its aspects of habitat for migration, spawning, and rearing. There is little information that supports a subyearling life cycle as prudent or viable in the Selway or South Fork. There is no scientific information presented to appraise the natural spawning needs for these programs.

In Table 2, there should be some documentation about the assumptions regarding post-release survival of 50-65%. Planners often use 50% for parr to smolt survival; IDFG research estimated a range of 20-30% for natural fish in Crooked and the Upper Salmon rivers. Fingerling to smolt survival would be even lower. Although the DEIS is directed at production methods to increase survival of hatchery fish in the natural environment, it is doubtful they would survive better than natural fish. Furthermore, there is no strategy offered by NPTH to support an assumption that current (whatever that is) survival rates will double.

5:24: We agree with the Nes Perce Tribe that Rapid River stock is the appropriate stock for supplementation and reintroduction efforts in the Clearwater Basin when local broodstock is not an option. Agreement on spring chinook broodstock for NPTH has been in place since 1989 (see attached letters). We agree with the Nes Perce Tribe, described in the DEIS, that substantial coordination will be necessary on an annual basis regarding broodstock and release strategies. IDFG will coordinate directly with the Tribe through in situ forums and the Production Advisory Committee to fulfill broodstock coordination. However, we are concerned about new production proposals because currently, not enough hatchery chinook salmon of Rapid River stock return to the Snake Basin to meet existing needs for harvest and production, much less meet new initiatives.

There is no discussion in the DEIS of the current programs that hatcheries, targeted for NPTH broodstock, already support. It is unclear if the Tribe is expecting changes to current mitigation programs, some already supported by ratepayer dollars, to support NPTH. There should be some description in the DEIS about the current status of the hatchery stocks and programs targeted to provide broodstock for NPTH.

A sufficient adult return from brood year BY1993 (1997-98) spring chinook is anticipated to afford harvest and supplementation opportunity for state and tribal programs. However, adult returns from BY1994 and BY1995 (1999-2000) will be extremely low. Adult returns from BY1996 (2000-2001) will improve, but still be low. Our expectation is that with status quo assumptions about survival, the BY1994-96 adult returns will

12-30

See response to 12-20.

12-31

See the revised description of adult returns in the Final EIS (Section 2.1.3.5).

12-32

Thank you for your comment.

12-33

The NPT evaluated the potential for current Clearwater Subbasin LSRCP mitigation facilities (Clearwater Anadromous and Dworshak National Fish Hatcheries) to meet their stipulated mitigation goals (Murphy and Johnson 1990). In summary, they found that the facilities were designed and constructed using an overly optimistic smolt-to-adult return rate. This results in the fact that the hatcheries would never meet their mitigation requirements, even if they functioned at full rearing capacity in every single year, unless the smolt-to-adult survival rate increases by at least fourfold.

The NPT does desire a change in current mitigation programs. The Tribe was not a formal participant in the design or implementation of the LSRCP, and so its concerns were not addressed in planning the mitigation program. Even though the NPT retained rights to fisheries resources of the Northwest in its 1855 treaty with the United States, it was not until after the Boldt decision in 1979 that these rights were recognized in fisheries management decisions. Because the LSRCP (and other mitigation programs) were implemented prior to 1979, they were designed without specific recognition of tribal desires, in relation to numbers or species produced. The NPT would continue in its efforts to shape mitigation goals for anadromous fish in the avenues available to do so.

The Tribe most certainly desires that mitigation for the Lower Snake River dams occur. Planned mitigation for LSRCP
not meet even current program needs. The next upward cycle would probably be in 2001-2003 with adult returns from BY1997-98.

Likely broodstock availability should be a critical consideration in construction planning.

S:241. We have substantial concerns about the mixed stock harvest management necessary to capitalize on returning adults in migration areas such as the Clearwater River (fall chinook returning to Cherrypine) and the mainstem Selway (Cedar Flat) and South Fork (Lake’s Gulch). Possible strategies should be identified in the harvest management section. As noted, harvest will have to be coordinated and negotiated between the fishery managers in the Clearwater Basin. The aspect of mixed stock will affect harvest in additional to the other factors identified in the DEIS.

S:245. The summarized broodstock strategy seems to put a greater priority on the use of wild spawners in the hatchery, rather than in the natural environment. Aspects of Table 3 seem inconsistent with other BPA-funded genetic strategies/proposals such as Regional Assessment of Supplementation Project (RASP) and Idaho Supplementation Studies (ISS).

S:246. Assuming the no action alternative means none of the NPTH supplementation proposals would be carried out is not fully correct. An alternative that focuses on acclimation facilities for spring chinook, without additional central incubation, has merit. State and federal fishery managers have worked with the Tribe on fish releases into tribal areas of interest previously. Lack of implementation has largely been a function of lack of appropriate broodstock, not a lack of central rearing facility, coordination, or desire to implement tribal programs.

References

Huffaker, S.M., Chief, Bureau of Fisheries, Idaho Department of Fish and Game. [Letter to Mr. S. Whitman, Nez Perce Tribe]. 1989 September 8.


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facilities would result in 21,000 spring chinook salmon returning to the Snake River Basin by fish produced at Dworshak and Clearwater Anadromous hatcheries. However, it is not realistic to argue that these mitigation goals would be severely compromised by the 645 spring chinook required for NPTH broodstock.

12-34

You describe the current status of spring chinook hatchery stocks in your comment. Returns in 1997 and 1998 would likely provide surplus broodstock for NPTH. Returns in 1999 and 2000 would be poor, although better passage and ocean conditions were encountered which could result in a larger return than in 1994 and 1995. In these years, broodstock would be scarce, and it is unlikely that spring chinook facilities would be operating at capacity. Beginning in 2001, surplus broodstock would again be available. Throughout this time, efforts would be made by the salmon recovery efforts to improve passage conditions, which should result in a better outlook for broodstock acquisition. When surplus broodstock does occur, NPTH would be making significant directed efforts to ensure that hatchery reared fish are better adapted to natural conditions and that increased returns would be to the natural stream. Without NPTH, returns (with the exception of those to Clearwater Anadromous Hatchery) would be back to the hatchery rack. It is probable that no new initiatives would be undertaken to encourage innovative type rearing strategies. Similar type troughs and surpluses are anticipated for fall chinook.

Broodstock availability would be a critical consideration in construction planning.

12-35

See response to 12-05.

12-36

See response to 12-12.

12-37

Using existing facilities is now being considered as an alternative. Please see Section 2.2, Use of Existing Facilities Alternative for additional information. The No Action Alternative assumes none of the supplementation proposals are implemented.
December 7, 1989

Mr. Allen Pinkham
Nez Perce Tribe
P.O. Box 366
Lapwai, ID 83540

Dear Mr. Pinkham:

The Idaho Fish and Game Commission agrees in concept with the Nez Perce Tribe hatchery development (Bonneville Power Administration Low Tech Facility) for satellite facilities as proposed.

Production of spring and summer chinook salmon at the facilities proposed offer mutual opportunities to increase the numbers of fish in their respective runs and thereby contribute to the goal of restoring Snake River spring and summer chinook to viable levels.

The Commission provides conceptual support in good faith expecting completion of ongoing NPT and IDFG agreements in several areas related to the proposed production facilities. Specific management plans related to hatchery breed provisions, natural spawning escapement, tribal/non-tribal fisheries operations, and other fish species considerations are anticipated. Completion and agreement of these plans need to occur to prior to commencement of hatchery construction activities to equitably provide for mutual long-term fishery benefits for both sport and tribal fishermen. We suggest a technical meeting to address these concerns be convened among IDFG and NPT at everyone's earliest convenience.

We trust and are confident that the recent improvements in cooperation between the Nez Perce Tribe and Idaho Department of Fish and Game will result in a Nez Perce Tribe fish production and comprehensive salmon management program fully supported by the State of Idaho.

We look forward to continued discussion and achievements in this and other areas relative to fish and wildlife resources.

Sincerely,

[Signature]

Keith E. Carlson, Chairman
Idaho Fish and Game Commission

KC,DP: mw
August 24, 1989

Mr. Steven Hufnagel
Idaho Department of Fish and Game
600 South Walnut, Box 25
Boise, ID 83707

Dear Steve:

We appreciated the opportunity to meet with yourself and staff on August 7 and 10 in your Boise office. We believe that the discussions were beneficial and continue to move us along in the direction of a coordinated approach to fisheries management in Idaho.

This letter is to summarize our understanding of the consensus reached at the August 7 meeting which addressed the species agreement discussion for the Nez Perce Tribal Hatchery (NPTH). The Tribe and State agreed that upriver stocks of spring chinook would be cultured at the NPTH. For example, spring chinook returning to Dworshak, Kooskia or Rapid River Hatcheries would be the targeted broodstock sources. Fall chinook production was deferred for future consideration based upon concern expressed by the State. Additional technical analysis and discussion and policy discussion needed to occur before fall chinook were artificially produced.

Satellite facilities for spring chinook would be located in the Lolo/Eldorado Creek area, Slate Creek and Newsome, Meadow and Mill Creek areas. Summer chinook production at Slate Creek was an acceptable option; broodstock would come from within the State. The Tribe would seek tributary fisheries on surplus adults returning to these sites. The State agreed with this approach but expressed the desire for a 50-50 harvest sharing between Tribal and sport fisherman and consideration of an exchange of fishing opportunity and quotas into different areas. For example, the State sought more sport opportunity in the South Fork Clearwater in exchange for Tribal tributary opportunities. The Tribe agreed in concept to the idea of harvest trade-offs and varying opportunity for harvest to occur. Policy level concurrence by the Commission and Tribal Executive Committee needs to occur.
Production and harvest plans would continue to be developed by the Tribe for discussion and agreement with the Idaho Department of Fish and Game. These plans will be the most in-depth for any hatchery facility or satellite constructed to date in Idaho.

We believe the consensus reached on a species agreement will allow the planning and design of the NPTM to be completed. The Tribe does desire to pursue a separate Memorandum of Agreement with the State to address the tribal hatchery production in the near future.

We believe the major points of consensus reached during our species agreement discussion are summarized herein. We would request a letter of concurrence and support of the species agreement from your Department be sent at your earliest convenience so that delays in the NPTM already experienced can be minimized and we can work together to rebuild healthy chinook runs to Idaho.

Sincerely,

Silas Whitman
Fisheries Program Manager

cc: C. Hayes (NPT)
File
September 8, 1989

Mr. Silas Whitman
Nes Perce Tribe
P.O. Box 385
Lapwai, ID 83540

Dear Sir:

Your letter of August 24 was a positive step towards improved understanding of how the recovery of Idaho chinook can be enhanced. We hope that our discussions can continue in this positive manner.

The use of locally adapted stocks of spring and summer chinook for tribal acclimation rearing facilities is agreed. What we must now do is determine how to assure adequate adult escapement to Dworshak, Kooskie, Rapid River, Sawtooth, and Pahsimeroi hatcheries and all natural spawning grounds so we have adequate supplies of eggs. It would be helpful if our technical people could meet and develop recommendations for escapement goals for each facility and tributary. These goals should include adults for adequate natural production, as well as for egg take needs. Once escapement goals are set, harvest plans can be structured around them. Please let me know when those meetings might begin.

We feel that the decision to defer action on fall chinook was a wise one. Although it was not stated in your letter, we assume that coho falls into the same category. We will be happy to pursue additional technical analysis on both those species.

The siting of tribal satellite facilities in the Lolo, Slate, Nezperce, Meadow, and Mill Creek watersheds (assuming the Meadow Creek you refer to is on the South Fork Clearwater) is agreeable to the Department, so long as locally adapted stocks of spring or summer chinook are raised there.

We anticipate that nontribal fisheries on these fish would primarily be on the South Fork Clearwater. Since nontribal fisheries are relatively inefficient, it will be the responsibility of the Nes Perce Tribe to provide escapement for egg needs of both hatchery and natural production where there are tribal satellite facilities. While we will
help by providing the eggs and fry necessary to bring back initial adult runs, we will not constrain sport seasons or existing mitigation and rebuilding programs to provide fish for the tribal satellites. We assume you will be able to constrain tribal harvest on existing runs as necessary to provide the eggs for production of runs at your satellite facilities.

We envision harvest sharing more in reference to an equitable share for nontribal anglers than to a 50:50 instate quota system. The courts have mandated a 50:50 sharing of harvestable surplus fish between tribal and nontribal entities. Since Idaho’s nontribal entities have extremely limited opportunity to share in lower river harvest, we expect to be able to fish more heavily on fish in Idaho at sites where both needed escapement and harvestable surpluses exist. Harvest time and area trade-offs will be essential to maintain equitable harvest opportunities. It is likely that nontribal anglers will need more days of opportunity than tribal fishers to maintain an equitable harvest. The tribe must realize that maintain mixed-stock “opportunity” for nontribal anglers is not a viable tradeoff for tribal tributary opportunity.

It does not appear to us that a tribal facility for incubation and early rearing of chinook to stock the satellite facilities is necessary. We feel that the design of the Clearwater station and the U.S. Fish and Wildlife Service operation at Doershuk and Kooski are adequate to provide sufficient space for culture of eggs and fry. We would prefer the tribe focus on satellite rearing and brood collection facilities and enhancing survival through passage, flow, habitat, and harvest management improvements, rather than making large capital investments in additional hatchery facilities.

We are pleased that we have been able to reach agreement on the siting of the Nes Perce Tribe’s spring chinook satellite facilities. We feel that working together to increase escapements to Idaho to provide fish for tribal facilities will enhance all our fisheries. We are hopeful that current cooperation on tribal facilities will lead to improved relations on other important issues.

Sincerely,

ORIGINAL SIGNED BY

Chief

Bureau of Fisheries

cc: CRITFC
    HPPC
    EPA
    USFWS

bc: David Hanson
    Bill Miller

SRH:bim
August 15, 1996

Bonneville Power Administration
Public Involvement Office-CKP
Post Office Box 12999
Portland, Oregon 97212

To Whom It May Concern:

I am providing my comments on the Draft Environmental Impact Statement you sent me regarding the New Parc Tribal Hatchery. My comments relate only to the monitoring and evaluation (M&E) plan proposed with this project. In my opinion, an M&E plan is one of the most important parts of a large project such as this and warrants a substantial description and review. If a project cannot be monitored and evaluated, then little, if any, information will be gained on the effectiveness of the supplementation project.

1) The stated goal of the M&E plan is to determine whether the supplementation program is achieving its stated objective, i.e., to restore naturally reproducing salmon to the Clearwater River Subbasin. The method to be used in the M&E plan is "Before-After Treatment Control" experimental design, however there is little description of how this method is to be used. Therefore, this plan cannot be properly reviewed. For example, the description (pp.2-40 to 2-41) fails to identify which response variables will be measured, how the data will be analyzed, what the null and alternative hypotheses are, and what the sample size requirements are.

2) A similar objective exists for the Yakima River Fisheries Supplementation Project. In that project, an experimental design was created and tested for power and sample size requirements. I would recommend that the authors of this EIS read the report I have enclosed and adopt a similar strategy for their M&E plan.

3) One claim made on page 2-41 is that "The M&E plan offers techniques that would not only evaluate the performance of hatchery fish, but would determine their impacts on wild fish and other aquatic biota." Impacts on other biota are notoriously difficult to detect. How will the study design in this project accomplish that? What impacts are to be studied, what will be measured to study them, and how will other sources of variation, that could also explain the data, be controlled?
I recommend the authors describe in much more detail their M&E plan and for this more detailed plan to be reviewed before it is accepted.

Sincerely,

Annette Hoffman
Fisheries Biometrician
Resource Assessment

AH:dht

Enclosures

See response to 13-01.
14-01

Section 3.6.3.2, Mainstem Rivers (Fall Chinook Habitat), describes the evidence for fall chinook in the Clearwater River. Section 3.6.2.1, Chinook Salmon, describes the evidence for believing that a summer type chinook existed at one time in the Clearwater River.

14-02

Comment noted. A history of fish stocking is described in Sections 1.1.1.2, Hatchery Fish Production in the Clearwater River Subbasin, 3.6.3.1, Tributary Streams (Spring Chinook Habitat), and 3.6.3.2 Mainstem River (Fall Chinook Habitat).

14-03

See response to 14-01.
COMMENT: I agree that decomposing salmon carcasses add to the nutrient level in the spawning areas and rearing areas immediately downstream. However, those nutrients are quickly tied-up by algae and aquatic macrophytes and are not carried vast distances downstream. My main objection to this statement is the period that adult salmon were present in the Clearwater River drainage. Historically, there was not a fall chinook salmon run present in the Clearwater River drainage. In the Journals of Lewis and Clark, they made no mention of chinook salmon spawning in the lower Clearwater River as they passed downstream over these riffles in October 1805 when fall chinook would have been spawning or at least staging in pools prior to moving onto the riffles to spawn. No fishery was present in October on the lower Clearwater and the Journals state that the Nez Percé were observed fishing on “Lewis’s River” (Snake River) as they passed downstream. The only other fisheries referenced in the Journals were an important spring chinook fishery on “Colter’s Creek” (Poudlach River), and an occasional “red salmon trout” in the Clearwater. Lewis and Clark observed attempts to take salmon from the main Clearwater in May and June, 1806, but these attempts were unsuccessful. On June 3, 1806, while camping on the Clearwater, Lewis wrote, “I begin to lose all hope of and dependence on the Salmons as this river will not hold sufficiently to take them before we shall leave it, as yet I see no appearance of their running near the shore as the Indians informed us they would in the course of a few days. I find that all the salmon which they procure themselves they obtain on Lewis’s River.”

Obviously, the Clearwater River did not support a fall chinook salmon run or the Nez Percé would have fished it rather than traveling to the Snake River for their fish.

Pages 1-4-5.

COMMENT: This section does a good job of listing the failure of anadromous hatchery programs already in place in the Clearwater River drainage. However, if a "technological" breakthrough exists for correcting hatchery survival, why are they not being incorporated into existing hatchery operations?

Page 1-15. Last paragraph. In reference to fall chinook, “Temporary adaption facilities are being considered in the Snake, Clearwater, Grande Ronde, Imnaha and lower Salmon rivers.”

COMMENT: This is another attempt to distort the historical record of where fall chinook salmon runs were present. I am absolutely certain that historically, fall chinook were unable to colonize the lower Salmon and lower Clearwater rivers. Others would be a better source for information on the lower Grande Ronde and Imnaha but I suspect that fall chinook were not historically present on the lower reaches of these rivers as well. I have compiled extensive temperature records on the lower Clearwater and Salmon rivers and without going into a long dissertation, the primary environmental variable lacking on the lower reaches of these two rivers is a suitable water temperature regime for chinook spawning, incubation, emergence, and rearing. Release of warmer water from Dworshak Reservoir has unusually altered the water temperature regime of the Clearwater River below the North Fork and in recent years, a few fall chinook have attempted to colonize this reach.

Page 1-18. First paragraph. “NMFS determined that proposed hatchery operations described by USFWS, NMFS, BPA, the Corps, and BIA at federal hatcheries are likely to jeopardize the continued existence of listed Snake River sockeye salmon, Snake River spring/summer chinook salmon, and Snake River fall chinook salmon.”
14-06
(cont.)

COMMENT: I concur with this statement. A case in point is the dismal failure of the Sawtooth National Fish Hatchery on the upper Salmon River. The bulk of the brood stock for this hatchery was "mined" from the wild stock in the upper Salmon River drainage. Both the hatchery and wild stocks continued to dwindle and last year, only two hatchery chinook females and four wild chinook females were counted at the weir below the hatchery. This stock is on the brink of extinction.

Page 1-19. Last paragraph. "This Tribal Recovery plan focuses more on restoring salmon runs to their historic abundance, not on preserving the genetic purity of the remaining populations."

COMMENT: As stated earlier, this plan, if implemented, will attempt to introduce non-indigenous, ill-suited salmon stocks in the Snake River drainage from the Grande Ronde to the Salmon River. Preserving those stocks that have adapted to the particular set of environmental variables in their habitat should be our number one priority, not a high-risk venture such as this hatchery program with all of the potential disease and genetic dilution problems.

Page 3-27. Second paragraph. "Depending on water temperatures, spring chinook fly in the Clearwater River usually hatch in December and emerge from the gravel in late February and March, but they may emerge as late as June."

COMMENT: This is a totally false statement. First of all, spring chinook do not spawn in the Clearwater River do to an inhospitable water temperature regime. Secondly, the fly emergence work I have done on the Bear Creek (Selway River) shows clearly that the peak of fly emergence most years is the first week of May. That timing comports with other fly emergence studies I have conducted in tributaries of the Salmon River as well as fall chinook fly in the Hells Canyon Reach of the Columbia River.

Page 3-28. Speculation on summer chinook salmon (ocean-type) existing in the Clearwater River Subbasin

COMMENT: The authors state that their is "compelling evidence" that another form of summer chinook may have spawned in the Clearwater River. To the contrary, the compelling evidence, as already stated above, shows that salmon did not spawn in either the lower Salmon or the lower Clearwater rivers.

Page 3-29. Last section on fall chinook salmon.

COMMENT: Again, the authors would have you believe that fall chinook salmon spawned in the lower reaches of the Clearwater, Grande Ronde, Imnaha and Salmon rivers. This is false.

Page 3-35. Last paragraph. "Between 1961 and 1987, nearly 50 million spring chinook eggs were outplanted into Selway and South Fork incubation channels (Horner and Bjornn 1981, Chapman et al., 1991)."

COMMENT: This may be a true quote but it is not a true statement. As stated earlier, I was the project leader on the reintroduction of salmon in the Clearwater River from 1960 to 1966. The first hatching channel in the Selway River drainage was a small channel in an irrigation ditch at Running Creek, band constructed in about 1964. Prior to this time, all the eggs (approximately two million/year) were planted in open streams channels in the Selway River and Bear Creek.

14-07

The stock used would be Snake River stock from Lyons Ferry which is considered to be part of the Snake River fall chinook ESU. Fall chinook spawning as determined by redd counts is shown in Table 3-3. It includes the lower mainstem of the Imnaha, Grande Ronde and Clearwater, as well as the Snake River. NPTH would strive to preserve that stock.

14-08

The spring chinook emergence statement refers to tributaries of the Clearwater River Subbasin, not to the mainstem river itself. The source of the information was U.S. Department of Commerce, NMFS (1995). The text has been changed to make this clear.

14-09

See response to 14-01.

14-10

See response to 14-01.

14-11

Comment noted.
14-12

See response to 14-01.

14-13

Cramer (1995a) reported that 400,000 eggs from Oxbow Hatchery in the Snake River were planted at Fenn (Selway River) in 1962. The source for his information was Richards (1967) and the report was Appraisal of Project Results for Salmon and Steelhead Reintroduction and Introductions into the Clearwater River Drainage, Idaho.

14-14

Comment noted.

14-15

A large body of research suggests that federal dams alone are not responsible for the decline of the wild salmon runs. The other factors you mentioned are also very real limiting factors. This project was developed as the result of many years of study. The principles of supplementation and adaptive management would be used to rebuild natural runs of salmon. The Nez Perce Tribal Hatchery Program would be a long-term effort designed to aid natural production until such time as conditions improve to a point where runs would be self-sustaining.

14-16

Comment noted.
August 22, 1996
Public Involvement Manager - CKP
Bonneville Power Administration
P.O. Box 12999
Portland, Oregon 97221

Dear Sir:

The following is a compilation of comments from the Washington Department of Fish and Wildlife (WDFW) relative to the Nez Perce Tribal Hatchery Program Draft Environmental Impact Statement. These comments are from several sources and in many cases are unedited. I have also included one comment in total from Anne Marshall of WDFW Genetics Unit with added reference material.

GENERAL COMMENTS REGARDING THE DRAFT EIS FOR THE NEZ PERCE TRIBAL HATCHERY

General Comments:

1. WDFW, NMFS and others have been involved in an eggbank program for Snake River fall chinook salmon since 1976. We currently make every effort to eliminate any stray, or unknown origin, salmon from contributing to the broodstock at Lyons Ferry Hatchery in an effort to maintain the genetic integrity of Snake River fall chinook salmon. As you are aware, we will be releasing Lyons Ferry fall chinook salmon into the Clearwater River in the spring of 1997. I am concerned about the proposed use of Columbia River summer chinook stocks (ocean-type chinook) in the Clearwater River. These fish have a similar life history to Snake River fall chinook, but their genetic composition is different. The summer chinook proposed for use in the Clearwater are not part of the Snake River fall chinook ESU and they are not part of the same genetic diversity unit (GDU). They are, however, part of the same major ancestral lineage (WDFW 1996). I am concerned about genetic introgression in the fall chinook population. This would not be consistent with ESA efforts in the Snake River and may negate our egg bank efforts to date. This action would jeopardize the listed stock that is protected under Endangered Species Act (ESA).
We have been unable to consistently meet our yearling and subyearling fall chinook production goals for Lyons Ferry Hatchery. The NPTH plan calls for 2 million subyearling fall chinook from Lyons Ferry Hatchery for several years to initiate their release program until they have adults return as broodstock. I am doubtful that enough broodstock will be available for quite some time at Lyons Ferry to provide our production needs and the needs of the NPTH. I am concerned current outplant efforts above Lower Granite Dam will be terminated to provide fish for the NPTH program, although Snake River releases have been given priority by PAC and others. The NPTH plan may severely compromise the Lyons Ferry Hatchery fall chinook program and its outplants upstream of Lower Granite Dam.

The releases of smolts at Lyons Ferry Hatchery have been at a low level in recent years and are limited by the 1996-1998 Management Agreement for Upper Columbia River Fall Chinook to 450,000. Additionally, the management plan calls for all adults that stray to Lower Granite from Lyons Ferry be released above Lower Granite Dam. This action will reduce available fish for the production program. The production needs for the NPTH may not be met for some years in the future.

The NPTH program relies on massive releases of chinook salmon and an unlikely assumption that the NPTH can double the smolt to adult survival rates to obtain program goals for adult returns. Massive releases have not overcome the mortality factors in the migration corridor, etc. The proposed experimental approaches to improve rearing and smolt to adult survival should not be assumed to double, or even increase, post-release or smolt to adult survival rates presently documented. The stated assumptions are likely too optimistic and appear unrealistic. The stated program goals are not likely to be attained based on these assumptions. For example, fall chinook would be released as subyearlings. I don’t believe that manipulating their rearing would double their smolt to adult survival rates. I obtain an estimate of 726 adults returning from the Cherry Lane release of the 1,020 adults projected in this draft EIS if I apply our documented smolt to adult survival rates from Lyons Ferry, with estimated losses at dams above Lower Monumental Dam, to the projected release numbers.

Three large hatchery programs are currently active in the Clearwater River. Why do we need more hatchery production there? Why can’t the existing programs be modified to address the needs identified for the NPTH program? How would the NPTH program releases fit under the ESA production cap, or be in compliance with ESA? Adjustments may need to be made with current facilities to improve distribution and increase survival and adult returns of salmon, while protecting or enhancing listed species. However, I believe spending another $10-20 million for more hatchery facilities, plus the associated operation costs, is the wrong approach to improving adult returns. The proposed program is inconsistent with NMFS' proposed recovery plan because it uses nonindigenous stocks (Columbia River summer chinook), will exceed

As stated in Section 2.1.3.7, Broodstock Source and Management, acquisition of broodstock would be determined by NPT within the Columbia River production forums. It is expected that production at NPTH would be gradually phased in as broodstock becomes available. Since NPT is a participant in efforts to bring fall chinook production upstream of Lyons Ferry, it would concentrate on those activities which do so in the most effective manner. These include releasing yearling smolts at the portable acclimation facilities (discussed in Section 1.6.4, Lower Snake River Fish and Wildlife Compensation Plan) in addition to releasing subyearling smolts as planned by NPTH.

Trade-offs would occur in negotiation for broodstock during years of poor returns and all restoration efforts would be considered by the PAC. However, in years of good returns, there has been a lack of space at existing hatcheries to attempt a true supplementation strategy which focuses on improving rearing conditions. Consequently, by default, hatchery production always emphasizes conventional rearing methods, and a harvest augmentation approach. Supplementation of natural spawning populations becomes a secondary endeavor. NPTH, and the yearling releases upstream of Lower Granite, reverse this focus. The NPT would continue to support these supplementation strategies in addition to maintaining the critical egg bank and mitigation program at Lyons Ferry.

See response to 15-02.

Doubling the smolt-to-adult return rates was not based on hatchery practices. Rather, it is based on the assumption that 20 years from now, salmon recovery efforts will work. In order for the recovery plans to at least yield a stable, non-declining run, there must be an improvement made in the relationship between the number of smolt(s) that leave the system to the number of adults that return. This smolt-to-adult survival rate must be increased by at least two fold.
15-06

the hatchery production cap, and may increase competition with naturally produced, listed, chinook salmon.

5 Complete marking of hatchery releases in order to identify returning adults usually insures that additional handling of target and nontarget fish will not occur. Trap facilities are rarely 100% effective, usually require excessive staffing and trucking costs, and can change the migration behavior and passage of target and nontarget fish if temporary weirs are involved. Potential impacts from fish traps, live boxes, ladders and weirs is listed as "moderate" for chinook and other salmonids. Configuration of traps and weirs can have moderate to high impacts in some situations for reasons that are not readily apparent.

6 Who, where, how are the extra Mid-Columbia chinook broodstock to be collected? For an 800,000 summer chinook program, about 435 adults would need to be collected at current survival standards for Rock Island/Wells programs. The environmental impacts of removing these fish and their future production from the Mid-Columbia was overlooked in the document.

Specific Comments:

1 A stated program goal of the NPTH is to "sustain long term fitness and genetic integrity of targeted fish populations." I believe that is impossible if you mix Columbia River summer chinook and Snake River spring/summer and fall chinook. These fish will interbreed and they will become genetically mixed. The NPTH "targeted chinook populations" are not in compliance with ESA recovery efforts.

2 On page 5-5, it states that the NPTH would rear and release chinook "biologically similar to wild fish to reproduce in the Clearwater River Basin." Columbia River summer chinook salmon are not similar genetically to fall, summer or spring chinook salmon in the Snake River, although they do have a similar life history to Snake River fall chinook.

3 The spring chinook stock should be determined (with public review) before this program begins.

4 Page 5-11 states that all fish would be marked to evaluate the program. The draft EIS should discuss how these fish would be marked. All with CWTs, and unique external marks to pass or collect summer and fall chinook at Lower Granite Dam? If they are not externally marked they may be collected at Lower Granite Dam and sent to Lyons Ferry for spawning as strays.

5 The document states that 500,000 subyearling fall chinook would be released into Lapwai Creek and the intent of the program is to return fish for natural spawning.

15-05

Section 1.1.1.2, Hatchery Fish Production in the Clearwater River Subbasin, discusses the need to increase runs of naturally-reproducing salmon with the aid of hatcheries.

The use of existing facilities is now being considered as an alternative. See Section 2.2, Use of Existing Facilities Alternative, for updated information.

Sections 1.6.2, and 4.6.1.2, describe how NPTH production fits within the production cap. Summer chinook would exceed the production cap and has been dropped from consideration.

Adjustments that may need to be made with current facilities to improve distribution and increase survivals and adult returns of salmon, while protecting or enhancing listed species, are outside the scope of the EIS.

15-06

Section 1.6.2, The Proposed Recovery Plan for Snake River Salmon, describes how NPTH fits in with the proposed recovery plan. Summer chinook production has been dropped from consideration.

Competition with naturally produced listed chinook salmon is described in Section 4.6.1.2, Impacts. In addition, NMFS will address the Biological Assessment for effects in relation to the proposed recovery plan.

15-07

Section 4.6.1.2, Impacts, discusses effects of fish traps, ladders and weirs. The methods for assessing impacts are described in Section 4.6.1.1, Method for Evaluating Impacts. The analysis was conducted using these methods.

15-08

Summer chinook production has been dropped from consideration.

15-09

Section 4.6.1.2, Impacts, describes genetic impacts. Summer chinook production has been dropped from consideration. The term "targeted chinook populations" was defined as part of the methods for evaluating impacts. The term is not intended to be used in reference to ESA definitions.
Lapwai Creek is a very small stream that is not a suitable spawning site for a mainstem spawner like fall chinook.

Use of ambient water temperatures to incubate spring chinook eggs and for hatchery rearing may produce hatchery fish that far exceed the size of wild salmon.

I applaud the proposals in the NPTH plan to attempt to produce juveniles that are as similar to naturally produced fish as possible. However, mortality is usually quite high from these attempts (higher than the assumed post release mortalities) On page 5-19 it states that spring chinook would be released in October at 100 fish per pound. We have attempted an October release in the Tucannon River and we documented less than 10% survival to smolt stage. Even wild fish in the Tucannon River may not have the 50% over winter survival assumed for hatchery releases under the NPTH plan. Releases of fish prior to smolting may conflict with the NMFS recovery plan and the Biological Opinion for the LSRCP program because of the potential for increased predation or competition with naturally produced salmon. These hatchery fish will be sharing habitat with naturally produced salmon for much longer periods of time than with smolt releases, so potential interaction would be increased as well.

The draft EIS is incomplete. Page 5-11 states that the exact locations of water sources, discharge lines, ponds, housing, temporary weirs and access roads are not available. It also states additional new facilities may be added later. There should be a process identified that ensures public review and comment for these details.

Page 5-23, at the bottom of Table 2, states a 65% or 50% post release survival and double the current smolt to adult survival rates. These rates are not well documented and appear to be overly optimistic.

Page 5-24 & 25, has inadequate discussion of how to determine the number of salmon available to spawn or harvest, and how to obtain appropriate spawning ratios to apply to Table 3 broodstock and spawning protocols.

The definition and use of "targeted" chinook is confusing. The summary of potential impacts is listed in Table 5, page 5-31. The impacts are not presented for impacts to listed, or naturally produced stocks of chinook (e.g. Snake River summer and fall chinook). The use of Columbia River summer chinook as a target chinook is inappropriate. Table 5 also lists low impact to non-targeted chinook for broodstock selection and maintenance, mating release, diversity and numbers, competition, predation, genetic exchange, etc. Throughout the pages that follow Table 5 there are comments that non-targeted chinook are not present or would not be affected. On page 5-36 it states that straying into NPTH facilities is not expected to be significant. We have documented a substantial interchange of adult fall chinook between the Clearwater, Snake and Grande Ronde rivers. We suspect that Clearwater

Summer chinook production has been dropped from consideration.

As stated in the EIS, the spring chinook broodstock which is proposed to be used would be Rapid River stock. See Section 2.1.3.7, Broodstock Source and Management.

Further discussion of marking strategies in coordination with other studies in the basin would be conducted with other agencies in the annual planning sessions available (e.g., Outplant meetings, Interagency production meetings).

See response to 12-20.

Spring chinook eggs would be incubated in water that approximates the temperature regime of the streams where fish would eventually be released. See Section 2.1.3.3, Rearing Techniques.

A more thorough discussion on the survival rates is presented in Section 2.1.3.5, Adult Returns. In that discussion, BPA assumes that survival from October release to smolt would be 19.5%. The model takes into consideration loss of fish due to effects of hatchery rearing, as well as loss occurring through overwinter survival in the natural environment.

A biological assessment is part of this EIS, (see Appendix B) and has been submitted to NMFS.

Final designs would be completed after the Record of Decision and would consider the concerns raised during the NEPA process.
Summer chinook production has been dropped from consideration. Section 1.6.1, Endangered Species Act, discusses that NMFS finds that the Snake River fall chinook ESU is made up of a single population which spawns in the mainstem Snake River and in the lower reaches of the major tributaries downstream of Hells Canyon Dam. Therefore, there may be interactions between NPITH fall chinook and Snake River, Clearwater River and Grande Ronde river fish, but they are all considered to be the same ESU. This premise underlies discussion of impacts to fish presented in the EIS.

Comment noted. If steelhead fishing in the Snake and Clearwater rivers would be restricted because of future efforts to protect hatchery chinook for broodstock or natural spawning, the impacts would be considered to be moderate to high for fishing and recreation in the area. Because BPA has no way of knowing whether steelhead fishing would be curtailed or restricted altogether to protect chinook salmon, the agency cannot assess the impacts on that event. According to Section 1502.22 of the Council on Environmental Quality Regulations, 1992, the agency can only assess environmental impacts of reasonably foreseeable events.

Summer chinook production has been dropped from consideration.

Effects on steelhead, spring/summer and fall chinook, and bull trout are described in Section 4.6, Fish, and in the Biological Assessments.

Summer chinook production has been removed from the proposed program. Fall chinook are expected to spawn in the mainstem during September - November. Spring chinook returns in Meadow Creek are expected to pass the mouth of that drainage by July.
rearing in the same areas as listed species how can you have "no to low" impacts?
ESA recovery does not allow the loss of listed species to be "offset" by the propagation of unlisted ones from outside the ESU

19 There are no contingencies listed for phase 2 if and when broodstock collection at the weirs fall short of goals.

Hope the collective comments are useful in preparation of the final EIS. I look forward to receiving a copy

Sincerely,

Robert W. Foster
Columbia River Coordinator

15-24
True. Thank you for your comment.

15-25
Carrying capacities are displayed in Table 3-8. The number of wild fish would be determined through monitoring adult returns past the weir sites, conducting redd counts and extrapolating for number of young.
Production from the hatchery would be adjusted accordingly.

15-26
Summer chinook production has been dropped from consideration.

15-27
Effects on spring and fall chinook are described in Section 4.6, Fish. The fact that there are no listed spring chinook in the Clearwater River is established in Section 3.6, Fish. Listed species of fall chinook would be spawning with listed species of fall chinook. Summer chinook production has been dropped from consideration.

15-28
At that time, NPT would negotiate for egg acquisition from hatcheries. After 5 years of outplanting, Phase II would offer the first real opportunity to use fish returning to the outplant streams as broodstock.
Summer chinook production has been dropped from consideration.

I have reviewed most of the Nez Perce Tribal Hatchery draft Environmental Impact Statement and have several comments on it. Overall however, their proposal to import mid-Columbia "summer" (sub-yearling outmigrant type) chinook for rearing and release in the Clearwater basin raises the most serious genetic concerns. I will first address this subject, and then other genetic or biological issues in the EIS.

The only description given for the broodstock source of summer chinook is "mid-Columbia stock". Although this is inadequate information for evaluating the basic proposal for a summer chinook component, I am not aware of any Columbia River summer chinook populations upstream of Bonneville Dam that I would find appropriate for transferring onto the Snake River basin. Extensive genetic data have been gathered by the WDFW Genetics Unit for summer-run (subyearling type) chinook from the Klickitat, Wenatchee, Methow, and Similkameen rivers, as well as the hatchery population maintained at the Weirs Dam facility. A comparative genetic analysis of these populations with Columbia fall- and spring-run chinook populations is available in a publication enclosed. There has also been considerable genetic work done on the Lyons Ferry Hatchery fall chinook population (e.g., "Status Review for Snake R. Fall Chinook Salmon" by Waples et al. 1991, NMFS Technical Memorandum), and also on wild-spawned Snake River fall chinook outmigrants (see progress reports for a BPA funded project "Upstream Passage, Spawning and Stock Identification of Fall Chinook in the Snake River"); and unpublished data, A. Marshall (WDFW) and B. Connor (USFWS)).

Results from this research are relevant to the summer chinook proposal for the Nez Perce project. Generally, summer chinook from populations in the mid- and upper Columbia show insignificant levels of genetic differentiation (40 allozyme loci) from fall chinook populations in the same areas. Although these summer chinook spawn approximately a month earlier than most fall chinook and usually in different area, indicating some reproductive isolation, the genetic data imply that isolating mechanisms have not been in place long enough for stock-specific genetic characteristics to develop. For most of the populations, if isolation and
15-29

(cont.)

differentiation had existed in the past, stock transfers and hatchery activities since the 1940's could have easily disrupted them. One population that did show a low level of divergence was the Wenatchee summer chinook. In recent times they have been geographically isolated from fall chinook and not subject to fall chinook transfers, and thus could be in the process of genetic divergence. In a recent WDFW Technical Report, Chapter D, "Genetic Diversity Units and Major Ancestral Lineages of Chinook Salmon in Washington", we chose to identify the upper Columbia summer chinook as a separate Genetic Diversity Unit even though genetic differentiation from fall chinook was minimal. We believed that the differences in geographic distribution, adult return-timing and spawn-timing were valuable characteristics, and that they had the potential to allow for divergence should future natural selection for them occur.

'Transferring summer chinook into the Snake River basin, Clearwater drainage, would likely create a high risk of genetic "contamination" for the wild fall chinook and the Lyons Ferry Hatchery fall chinook populations. Although return- and spawn-timing of the summer chinook source stocks are, on average, earlier than fall stocks from the same rivers, heritability levels of these traits is unknown. More importantly, the expression of these traits under different environmental conditions in the Snake basin could be altered. I believe that the opportunity for transplanted summer chinook to reproduce with native fall chinook, or to be crossed in a hatchery with fall chinook would be unacceptably high. Also, cumulative impacts should be expected (see p. 4-41).

The Lyons Ferry Hatchery fall chinook population is genetically differentiated from upper Columbia wild and hatchery fall populations, and from summer-run populations. Recent, unpublished genetic data from three years' samples of 0-age, fall chinook out-migrants, progeny of wild spawners upstream of Lower Granite Dam, indicate that they are also genetically distinct from upper Columbia fall and summer populations. These fall chinook have already been identified as important genetic resources through the ESA listing process, and it would be unacceptable to put them at risk of 'hybridization' with a non-local, genetically divergent, summer-run stock.

15-30

Perhaps the best, but more long range, opportunity for the Nez Perce Tribe to promote the development of summer-run chinook in the Clearwater River, would come from their work to build a large, self-sustaining fall chinook population. The premise being that summer and fall run, subyearling out-migrant-type, chinook are closely related genetically, and that natural variation in life-history parameters occurring in a fall-run group can be advantageous in certain environments, and could lead to the natural development of a summer-run component. The draft EIS claims (p. 3-28) that Clearwater River temperature regimes are well-suited to earlier spawn-timing and juvenile out-migration-timing, so perhaps selection pressures on fall chinook planted in the basin with variation in these traits would be high.

The mating protocol proposed for the overall hatchery program calls for mixing hatchery-origin fish with wild-spawned fish in particular ratios outlined in Table 2-3. It is claimed that this strategy is required to maintain long-term genetic fitness. I am not aware of any data from

15-30

Summer chinook production has been dropped from consideration. The NPTH Program would attempt to encourage the run suggested.

15-31

See response to 12-12. The fact that the total number of adults returning to the Tucannon is low is not surprising given that the total number of adults, of hatchery and wild origin, anywhere in the Snake River has been low. They are all subject to similar migratory conditions.
other salmon hatchery programs that provide any support for this hypothesis. On the contrary, there is more evidence that swamping the gene pool of a wild population with even local-origin hatchery fish does not aid in increasing survival of progeny, especially where environmental sources of stress and mortality are high. The efforts of the Tucannon Hatchery spring chinook program may be an example of this, where wild-origin fish have always been incorporated into the hatchery broodstock, yet the total number of returning adults has not increased.

These concerns about the removal of wild fish from wild spawning populations and the disruption of valuable wild gene pools may not be so relevant since their projects for spring and fall chinook are proposed for areas that have few if any established wild fish populations, and it will likely be many years before they have any substantial numbers of naturally produced progeny that return to spawn. However, I believe their broodstock practices should be labeled as experimental, with a goal of evaluating effects on establishing and enhancing natural production.

The following is a miscellaneous group of questions or comments. The proposal states that the number of hatchery chinook released would be limited so that they plus any wild chinook would not exceed habitat carrying capacity. I could not find information on what they proposed to do with the excess hatchery fish that they could not release. This needs to be clearly outlined.

The proposal states that fall and summer chinook would need an accelerated (=unnatural) schedule of incubation and growth so that released smolts can avoid poor passage conditions in the lower Snake River. Given this scenario, how do they expect fish that are eventually allowed to spawn naturally to survive well in the Clearwater, and become self-sustaining? Is there any indication that these passage conditions are going to be changed to the benefit of chinook life-history?

In their table of expected adult returns, they have assumed a smolt to adult survival rate that is double the current rate. They base this on an untested hypothesis that the fish raised in their program will acquire "a fitness advantage due to extended rearing in the wild". It seems like the largest sources of juvenile and smolt mortality in the Snake and Columbia are physical passage problems at dams, and environmental and predation problems in reservoirs. It seems unlikely that longer in-stream rearing will combat these problems, especially since wild Salmon River spring chinook and wild Snake River fall chinook are currently experiencing poor survival. I think they are unwise and unfounded in assuming a doubling of the rate, and should use revise their calculations.

Regarding harvest management, they propose that "surplus hatchery fish would be targeted, allowing weaker wild stocks to rebuild to self-sustaining levels". This seems somewhat contradictory to the way wild-produced fish are treated in hatchery production, in that weaker wild stocks are not exactly "allowed" to rebuild, but are removed (up to 100%) from wild production and taken into the hatchery. Perhaps their objectives or intentions need to be stated

The Supplement to the Nez Perce Tribal Hatchery Master Plan (Johnson, et al., 1995) describes the disposition of hatchery fish in years with surplus production. The Decision Tree from the Supplement is included in Appendix F.

Fish do survive now. The NPTH was designed with the assumption that the salmon recovery efforts would be successful.

See revised discussion in Section 2.1.3.5, Adult Returns.

Section 2.1.3.7, Broodstock Source and Management, and Appendix C describe the rationale for broodstock management to avoid genetic risks and for bringing fish into the hatchery
There is an error in the third sentence, second paragraph, p.3-29, about water temperatures and spawn-timing. The meaning of the sentence is a bit unclear and 14° C does not equal 37°F.

Attachment included

when they drop below a certain level.

15-36

Thank you for your comment. The text has been corrected.
Genetic Population Structure and History of Chinook Salmon of the Upper Columbia River

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Abstract—Chinook salmon Oncorhynchus tshawytscha that return to the upper Columbia River (upstream from the confluence of the Yakima River) are considered to be populations of similar genetic variation at 22 polymorphic loci, and不像 16 autosomal loci in downstream populations. Chinook salmon Oncorhynchus tshawytscha from the upper Columbia River are distinguished from spring-run fish by an eightfold greater genetic distance between groups than within either group. Each group was related to but categorically distinct from adjacent downstream groups within different major ancestral units, previously identified throughout the Columbia River. Summer-run chinook salmon Oncorhynchus tshawytscha are more closely related to fall-run fish of the mid-Columbia and Snake River, and spring-run fish to the spring-run fish of the Snake River. In both groups, the present geographic distributions and genetic population structures within the upper Columbia River reflect translocations, introductions, and cultural activities between 1930 and 1943 under the Grand Coulee Fish Maintenance Project, and subsequent introductions and habitat changes. The considerable genetic homogeneity within the summer-run group appears to have been maintained through past and present introductions and translocations over a single continuous river channel. Each of these genetic isolation measures supports the distinction between those chinook salmon Oncorhynchus tshawytscha that require oceanic gear line and permit maintenance and development of local aquaculture.

The Columbia River is the largest river entering the Pacific Ocean from North America, draining 870,000 km² of the northwestern United States and southwestern Canada (Figure 1). Historically, this drainage supported the world’s greatest runs of chinook salmon Oncorhynchus tshawytscha. The present distribution of returning fish in spring, summer, and fall seasons coexists with a seasonality of returns and a summer mode recorded in the nineteenth century (Thompson 1951). This altered distribution and an overall seasonal decline has been attributed to the combined effects of overharvest and habitat degradation (Mollan 1987; McNair et al. 1991). The currently depleted number of summer-run fish has stimulated petitions for their protection under the U.S. Endangered Species Act (ESA; 16 U.S.C. § 1533) since 1984 (Fahy 1993). An adequate understanding of the sectorial relationships among geographically and temporally isolated chinook salmon populations, particularly within the drainages of the upper Columbia River, is a necessary component of response to these petitions (Wayne 1991).

We examine relationships among chinook salmon Oncorhynchus tshawytscha populations of the upper Columbia River. Biochemical genetic data from 16 summer-run, fall-run, and spring-run isolates identify two distinct population groupings consistent with those indicated from previous studies in Figure 2. We relate these observations to historical fisheries management in the region and discuss the relationships of these groups to other populations, their relevance as evolutionary significant units (ESUs), and appropriate management strategies.

Background
Biochemical Genetic Stock
Biochemical genetic studies involving chinook salmon populations of the Columbia River have
16-01

Thank you for your comment.

16-02

NMFS will make a determination in the biological opinion about how proposed production will meet the production cap. Summer chinook production has been dropped from consideration.
The Proposed Recovery Plan (Schmitten et al. 1995) and 1995-1998 Hatchery Biological Opinion (NMFS 1995) specify an anadromous salmonid production ceiling of 20.2 million in the Snake basin, which is part of an overall 197.4 million ceiling in the Columbia basin. These numbers are based on actual production in 1994; they do not include "production to support recovery" (i.e., propagation of listed stocks), or releases of resident fish such as rainbow trout. Although they are not considered listed under the ESA, Lyons Ferry Hatchery fall chinook are considered part of the Snake River fall chinook Evolutionarily Significant Unit (ESU). It is our understanding that their propagation is intended to promote recovery of natural Snake River fall chinook salmon. Therefore, this could be considered "production to support recovery" and should be exempt from the production ceiling. The spring and summer chinook salmon stocks proposed for propagation in the NPTH are not listed and would not be considered "production to support recovery" of listed species. Summer chinook, therefore, would not be exempt from the production ceiling.

Total production of non-listed anadromous salmonids within the Snake River Basin in 1995 was 19.6 million, which includes 18.6 million described in the existing BiOp, plus 700,000 coho fingerlings and 290,000 steelhead fry covered in subsequent informal consultations. The 1995 total was only 600,000 below the production ceiling of 20.2 million. Total 1996 releases in the entire Columbia River Basin are approximately 173.5 million, of which 14.2 million are in the Snake River Basin (NMFS 1996), well below the production ceiling. The expected total releases in future years are unknown as hatchery programs change throughout the Columbia River Basin. Consequently, it is unknown whether any of the proposed NPTH production programs would exceed the production ceiling since this depends on total production within both the Snake and Columbia River Basins.

It is possible that the production ceiling policy will be amended when the Final Recovery Plan is completed in 1997, but for now it remains in effect, and will be an item for consideration when Endangered Species Act (ESA) consultation on the NPTH proceeds. However, it should be noted that the purpose of the production ceiling is to address the question of overall carrying capacity and is not intended as a means to inhibit specific programs.

* Item 2.1.3.6, Broodstock sources and management:

Fall chinook:

The Proposed Recovery Plan for Snake River Salmon (Schmitten et al. 1995) specifically recommends supplementation of Lyons Ferry fall chinook salmon above Lower Granite Dam, along with careful evaluation (Task 4.1.d, page V-4-22). Therefore, NMFS has indicated support for the Nez Perce Tribe’s proposed fall chinook...
supplementation programs. Although it is not part of the NPTM program proposed by BPA, NMFS also supports development of the fall chinook acclimation and release facilities at Pittsburg Landing on the Snake River, Big Canyon on the Clearwater River, and other sites (Stelle 1995). The allocation of Lyons Ferry Hatchery production among on-station releases and acclimation sites has been addressed in a recent fall chinook management agreement (CRITFC 1996).

Summer chinook:

As stated in our earlier letter (Smith 1996), NMFS has serious concerns with the proposal to transplant mid-Columbia stock summer chinook into the Clearwater Basin. The proposed release locations (Lukes Gulch and Cedar Plate) appear to be 30 to 50 miles upstream of current Snake River fall chinook critical habitat. However, mid-Columbia summer chinook and Snake River fall chinook have similar "ocean-type" life histories and appear to overlap somewhat in spawn timing. It is possible, therefore, that the introduced summer chinook would stray and spawn with the Snake River fall chinook in the lower Clearwater or elsewhere. Therefore, NMFS would not support the transfer of mid-Columbia summer chinook into the Clearwater Basin and strongly recommends that it be dropped from the proposed NPTM program because of potential genetic introgression with listed fall chinook. The transfer of Mid-Columbia summer chinook into the Snake River Basin would be a major consideration when ESA Section 7 consultation proceeds for the Nez Perce Tribal Hatchery.

Spring chinook:

NMFS generally supports the proposed spring chinook supplementation, assuming that the programs can fit within the Snake River Basin production ceiling and that the question of appropriate stock to use in each subbasin is agreed to by co-managers. Given the above, NMFS would support development of the Yoses/Camp Creek, Nlaka'max Creek, and Mill Creek sites as spring chinook acclimation/release and/or adult collection satellite facilities.

- Item 1.6.6, ESA Section 7 consultation:

As noted in Item 1.6.8 of the draft EIS, the NPTM was not included in the current comprehensive 1995-1998 Hatcheries Biological Opinion (NMFS 1995), because ESA Section 7 consultation had not been initiated at the time the BOP was prepared. ESA Section 7 consultation is appropriate for this project because BPA, a federal entity, is directly funding the proposed action. Before the project proceeds BPA should prepare a Biological Assessment (BA) which describes the potential impact of the project on listed Snake River salmon. Based on the information presented in the draft EIS the BA could conclude that

16-04
Summer chinook production has been dropped from consideration.

16-05
Thank you for your comment.

16-06
The Biological Assessment has been completed and is included in the EIS (see Appendix B). BPA has requested formal consultation from NMFS.
Comment noted. BPA and the Nez Perce Tribe are in the process of consulting with NMFS.

4

the project "may affect" listed Snake River salmon. BPA would, therefore, request formal Section 7 consultation with NMFS. The NMFS would then prepare a Biological Opinion in response to the BA and the ESA Section 7 consultation process would be completed. It should be noted that a similar Section 7 consultation with BPA was recently completed for the Cle Elum Hatchery on the upper Yakima River in Washington (BPA 1995, Stelle 1996).

* Proposed listing of Snake River steelhead:

It must be noted that several ESU's of steelhead were recently proposed for listing under the ESA, including Snake River steelhead proposed as threatened (NOAA 1996). When BPA requests ESA Section 7 consultation with regard to the listed Snake River salmon species (fall chinook, spring/summer chinook, and sockeye), BPA should also consider ESA Section 7 "conferencing" with regard to the steelhead proposed for listing. ESA Section 7 conferencing provides a means for federal entities to discuss the possible effects of actions on species before a final listing determination is made. We would be happy to discuss further the ESA Section 7 consultation and conferencing procedures with BPA and NPT staff as needed.

Thanks again for the opportunity to review the NPFH Final Draft EIS. If you have any questions or comments, please contact Moe Nelson at (503) 231-2178.

Sincerely,

[Signature]

Stephen H. Smith, Chief
Hatcheries and Harvest Branch

CC:
NOAA F/NWO - File copy, D.M. Nelson, S. Smith, M. Delarm
NOAA CS - D. Wisting
BPA - B. Austin, J. Bauer, R. Westerhof
NPF - D. Johnson
References


Smith, S. 1996. Letter from S. Smith, NMFS, to L. Kelleher, BPA, dated January 25, 1996, with comments on HPTN draft EIS.


United States Department of the Interior

FISH AND WILDLIFE SERVICE
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Portland, Oregon 97230-4181

Bonneville Power Administration
Public Involvement Office - CKP
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Portland, Oregon 97212

SEP 2 3 1996

RECEIVED BY BPA
PUBLIC INVOLVEMENT
LOG# 3375 02 017
RECEIPT DATE: SEP 2 3 1996

September 13, 1996

Subject: Nez Perce Tribal Hatchery Program (NPTH)
Draft Environmental Impact Statement (DEIS)

Thank you for incorporating many of our comments on the preliminary DEIS into this draft. We have reviewed your DEIS and offer the following comments for consideration.

The DEIS considers five alternatives but eliminates three from further consideration and analyzes only the proposed action and the "No Action" alternatives. The Service believes that there are other actions besides the proposed action that potentially could meet the purposes identified in Section 1. The "Use of Existing Hatcheries" and "Natural Habitat Enhancement and Restoration" alternatives should not have been eliminated from further consideration. The explanation for eliminating the "Use of Existing Hatcheries" alternative does not consider the potential for modifying Clearwater basin hatcheries or making programmatic changes to accomplish the purposes of the DEIS. Consideration should also be given to analysis completed for the use of existing facilities outside the basin. Facilities located outside the basin may be appropriate for incubation or rearing activities, eliminating the need to construct new hatchery facilities within the basin.

It appears that the DEIS analysis of the proposed alternative takes into consideration improvements in migration conditions in the Lower Snake River and the Columbia River downstream of the Snake River confluence. Elimination of the "Natural Habitat Enhancement and Restoration" alternative appears to have been without considering improvement of migration conditions. Such improvements would make this alternative a feasible action that could accomplish the purposes set forth in Section 1. Therefore, the "Natural Habitat Enhancement and Restoration" alternative should not be eliminated from further consideration and analysis.

I would like to reiterate our comment that until improvements in the migration corridor are made, we do not believe that the NPTH will return adult fish any better than hatcheries already existing in the Clearwater basin. When improvements in the migration corridor are made, return rates for existing hatcheries will improve, thereby providing additional fish for sport and tribal harvest. Natural production in the remaining habitat will also improve thereby providing enough adult to meet the carrying capacity of the streams, so some discussion of the fate of the NPTH at that time should be discussed. Will it be converted to a harvest augmentation hatchery, used for resident fish production, etc.? Will the changed hatchery practices comply with the Integrated Hatchery Operations Team (IHOT) Policies?
The discussion of hatchery practices in Section 1.1.2 is misleading. The term "traditional hatcheries" should not be used. Each hatchery is a tool to replace one or more critical factors in the life cycle of the fish and therefore operated to meet that goal.

The descriptions of Dworshak and Kooskin National Fish Hatcheries in Section 1.1.2 should identify these facilities as mitigation hatcheries. Their purpose is to mitigate for the fish that spawned and spent the freshwater part of their life cycle in habitat of the North Fork that is no longer available.

The hatchery practices described in Section 1.1.2 are especially misleading, they are against basin wide policy, and many have not been used in twenty years. Some of Section 2.2 (2.3.2) should be moved to this section.

It should be made clear that the National Marine Fisheries Service (NMFS) "suggested" to revise rearing techniques in the Columbia Basin is based on their priority to speed the restoration of listed populations that have declined due to poor migration conditions over their responsibility to mitigate for permanently lost habitat. Such revisions would be for recovery purposes and would not satisfy mitigation needs. Hatcheries designed for mitigation purposes were not designed to produce fish for restoration. Although they are already in existence and can be used, it may be more cost effective to construct a new hatchery than convert an old one for recovery purposes.

The discussion of NMFS "suggested" rearing techniques should indicate they are based on a theory that if the hatchery conditions mimic the wild, the fish will be better suited for restoration purposes. While this premise has merit, and it may be possible to construct and operate a hatchery that mimics wild habitat, under existing technology it would be more expensive than restoring degraded existing habitat. Some of the practices listed are affordable and should be used in the NPTH to produce fish that will be used to repopulate empty habitat. These practices will not compensate for the poor survival in the migration corridor. Hatchery protection cannot replace poor migration conditions and if fish are returning to good spawning and rearing habitat a hatchery becomes unnecessary.

Section 1.6 (Relationship to other Plans) should include a section on the relationship of the Nez Perce hatchery practices to the IHOT hatchery practice policies adhered to in the existing production plans.

In Section 1.6.6 it should be made clear that the NPTH monitoring and evaluation plan uses the same streams as control streams as the Idaho Salmon Supplementation Studies. The paragraph now reads as if fish could be released in a control stream.

The DEIS assertion that the NPTH program would be undertaken as a measure under the Northwest Power Act (NPA) and is independent of the United States Columbia River Fish Management Plan (CRFMP) is incorrect. Clearly the CRFMP is pertinent to every fish production program designed to rebuild anadromous runs and explicitly sets forth...
coordinated procedures between the Parties for the planning and implementation of existing and future production programs. In and of itself, the CRFMP is not a mitigation or restoration effort; it intends to coordinate those various state, tribal, and federal efforts towards rebuilding and harvest allocation goals set forth in the CRFMP. The CRFMP is indeed a "framework within which the Parties may exercise their sovereign powers in a coordinated and systematic manner to protect, rebuild, and enhance upper Columbia River fish runs while providing harvests for both treaty Indian and non-Indian fisheries."

Clearly the CRFMP recognizes existing, and anticipated new, state, tribal, and federal programs affecting fish restoration. The CRFMP was created in part to provide the coordinated inter-party forums the Technical Advisory Committee (TAC), the Production Advisory Committee (PAC), and the Policy Committee to ensure thoughtful, mutually agreed-upon, and biologically sound fishery restoration and run rebuilding programs from these various programs. In Section 1B 4 under the Scope and Nature of the Agreement, the CRFMP recognizes that several federal and state laws require fishery protective, mitigative or enhancement measures or affirmatively promote development of comprehensive and joint inter-party fisheries management and propagation plans and programs. It states the Parties "pledge to confer with each other and to use their best efforts to see that mutually acceptable provisions that will promote the easiest feasible achievement of the rebuilding and harvest sharing objectives specified in this Agreement are included in the plans and programs required or adopted under these laws." The DEIS claims that since this facility is constructed under the NPA it is independent of the CRFMP. It is also clear within the NPA that the Council and Bonneville Power Administration must ensure program consistency and approval with affected states and sovereigns. Therefore, the NPA is yet another federal law that would require close coordination and implementation of fishery enhancement programs that are mutually acceptable to the responsible fishery managers and sovereigns.

Further support for including the NPAH within the scope of the CRFMP are found in other sections. Section III Artificial and Natural Production of the CRFMP clearly sets forth procedures and actions required for the planning and implementation of present (at the time of the agreement) and future artificial production programs. Some of these include:

1. In Section A. "Purpose", present and future artificial production programs shall be integrated with natural production as described herein.

2. The PAC is to develop an Annual Broodstock Planning Report that coordinates state, federal, and tribal artificial and natural/wild fish production actions for each designated subbasin and artificial production facility.

3. In Section C. "Subbasin Plans" it states harvest and production management plans for each subbasin will be developed cooperatively by the affected state, tribal, and federal entities in consultation with other relevant entities.
4. In Section D, paragraph 3 of "Artificial Production Modifications" it states that the parties agree to identify long-term program adjustments in addition to those identified in Appendix B, including expansion of or additions to existing hatchery programs necessary to meet identified fish supplementation needs of the Parties. These long-term needs shall be designed to compliment harvest, production, and rebuilding needs of this Agreement.

In Section IV B, Procedures for the PAC it states that "Coordination of production and harvest management is essential to the successful implementation of this Agreement." It also states that PAC is hereby established to coordinate information, review and analyze existing and future artificial and natural production programs pertinent to this Agreement and to submit recommendations to the management entities. As stated in the Purpose under Section III, Artificial and Natural Production, it is the intent of the Parties to develop and implement those agreed-to production oriented actions to achieve the goal of rebuilding upriver anadromous runs.

As the Nez Perce hatchery is being designed for just such a purpose its production is pertinent to this Agreement and subject to the requirements of the Agreement.

Finally, not only is the language of the CRFMP clear on how new and future production shall be coordinated and therefore subject to the terms of the agreement but the Nez Perce Tribe has and is using the existing CRFMP policy and biological review processes of the Policy Committee and the PAC to obtain consensus for moving forward with the planning for the facility. It follows no logic path at this time to claim it will not be subject to the terms of the CRFMP when it becomes operational.

Section 2.13 that discusses hatchery operations should address the relationship between the NPTH hatchery operations and those of the IHOT basin wide policies. Section 2.13.1 is unclear when it states that the disease control and monitoring would conform with IHOT policies. Does this mean they will comply with all IHOT fish health requirements (i.e., transport permits etc.)?

Some discussion of the process for determining the trade-offs in use of the carrying capacity of the habitat between populations that exist now and the effects of the proposed hatchery programs should be presented in the section on release techniques.

There are still contradictory statements regarding fall chinook salmon. On page 3-30 (end of the second paragraph) states that fall chinook from the Clearwater River may be adopting more of a "stream-type" life history by migrating the following spring (The draft should reference literature or include in the appendices the data this is based on). Whereas, page 3-45 in the Potential Production paragraph states that "it is necessary to evaluate the minimum amount of habitat available in the Clearwater River by stating that fall chinook migrate during their first year anyway. Which is, do they migrate during their first year or the following spring? The amount of available fry habitat in the Lower Clearwater River (below Cherryrange) should be fully evaluated given the plan to release 1,500,000 juveniles. Even if the subyearlings do migrate during their first year, they rear 1-3 months before beginning their migration.

17-11
See response to 19-16 and 19-21.

17-12
See response to 19-22.

17-13
See response to 19-24 and 19-25.
We still disagree with the reds estimate of 95,000 (pg 3-45) and believe it is more likely 3,600 reds. The DEIS also does not mention the emigration problem for juveniles from the Clearwater River specifically. The best minimum survival (Tag-test detections at dams) we have seen from Clearwater River sampling is 19%. As you noted, fall chinook emerge and emigrate later from the Clearwater River, than from the Snake River. Therefore they are subjected to lower velocities, higher water temperatures, greater predator and disease susceptibility, and may revert to parr before reaching the Columbia River estuary.

The appendix A, Monitoring and Evaluation section appears to be incomplete.

We appreciate the opportunity to comment on this DEIS and look forward to the final. If you have any questions or need additional information, please contact Dan Diggs at (503) 872-2766.

Sincerely,

William F. Shake
Assistant Regional Director - Fisheries
Columbia Basin Ecoregion

17-14
See response to 19-26.

17-15
See response to 19-27.
Reply To
Attn: ECO-088

Public Involvement Manager
Bonneville Power Administration
P.O. Box 12999
Portland, Oregon 97212

Re: Bonneville Power Administration's Draft Environmental Impact Statement (EIS) for the Nez Perce Tribal Hatchery Program

Dear Sir or Madam:

The Environmental Protection Agency has conducted a limited review of the draft EIS for the Nez Perce Tribal Hatchery. Our review was conducted in accordance with the National Environmental Policy Act and our responsibilities under Section 309 of the Clean Air Act.

The Proposed Action is to build and operate the Nez Perce Tribal Hatchery. The purpose of the Proposed Action is to restore naturally-reproducing salmon to the Clearwater River. The draft EIS evaluated the construction and operation of the proposed Nez Perce Tribal Hatchery Program. This is a supplementation program that would rear and release spring, summer and fall chinook, biologically similar to wild fish, to reproduce in the Clearwater River Subbasin. The draft EIS also evaluates the No-Action Alternative.

Based on our review, we are rating this draft EIS EC-2 (Environmental Concerns—Insufficient Information). Our environmental concerns are based on the potential for adverse impacts to existing fisheries resources. We have requested additional information on fisheries impacts, mitigation and monitoring. An explanation of the EPA rating system for draft EISs is enclosed for your reference. This rating and a summary of these comments will be published in the Federal Register.
We appreciate the opportunity to review and provide comments on this draft EIS. If you have any questions about our review comments, please contact Cara Berman at (206) 553-6246 or Larry Brockman at (206) 553-1750.

Sincerely,

Richard B. Parkin, Manager
Geographic Implementation Unit

Encl (2)
The Proposed Action was evaluated according to its effects on the fisheries resource of the affected environment. Fisheries effects derived from the Proposed Action were discussed in relation to four major sources: 1) the design, siting, and construction of hatchery facilities, 2) hatchery operations and management, 3) fish interactions, and 4) human-fish interactions. These four sources of effects are further broken down into several principal categories and they are described in detail in Section 4.6, Fish. The discussion focuses specifically on risks to salmonids posed by this supplementation program. Where effects are determined to be significant, mitigation requirements are recommended to reduce the risk on the fisheries resource.

BPA agrees that ecosystem function and health need to be restored in all parts of the salmon's life cycle, from gravel-to-gravel. However, BPA believes, as do others in the Columbia River Basin (see NMFS, 1995 and Nez Perce Tribe, et al., 1995), that supplementation hatcheries can aid in restoring populations, especially in underseeded or vacant habitat. The existing condition of the Clearwater Subbasin is discussed in Section 3.6, Fish. The success of NPTH, as well as other hatcheries and wild runs of anadromous salmonids in the Clearwater River Subbasin and the Snake River Basin in general, is ultimately dependent on salmon recovery efforts.

NPTH developed a set of guidelines for Hatchery: Natural spawning ratios to address these problems, yet still allow the program to allow an increase in natural production. These are discussed in Appendix C. In addition, the M&E Plan addresses risks posed to the naturally spawning population by NPTH activities. Although it may indeed be difficult to avoid risks, the M&E activities allow for detection of impacts and an evaluation of changes needed to eliminate or minimize such risks.

A hatchery operation plan has not been completed and is dependent upon the outcome of the Record of Decision. Should the proposed
variability, increased intra- and inter-specific competition, and altered community dynamics. The operations plan should include hatchery stock selection criteria, identification of subpopulations collection methodology, minimum escapement levels, maximum catch limits, effective population sizes, juvenile release schedule, estimated stocking densities. To detect individual and population level effects, a monitoring plan including quality assurance/quality control plan, baseline genetic data, genetic monitoring procedures, monitoring duration, contingency plans, management feedback loops as well as a monitoring strategy for non-genetic impacts should be developed. Additionally, a supplementation target including time frame should be identified that when reached would halt further artificial propagation activities. The final EIS should include a peer-reviewed monitoring plan.

3) As mentioned previously (42) the final EIS should include contingency measures. If project associated risks (e.g., genetic demographic, behavioral) are not reduced or alleviated will management measures be modified the scope of project be reduced, or will the project be curtailed? Several potential adverse impacts may require several generations to be detected. Therefore, rapid alteration of supplementation plans to reduce impacts may not occur. As hatchery related impacts may be significant, the final EIS should address contingency planning and monitoring sensitivity.

4) The final EIS should discuss possible ramifications of transporting juvenile salmonids to various satellite rearing facilities and hence various water regimes. The precise timing of olfactory imprinting is unknown. However, it is believed that imprinting occurs at several early life history stages, i.e., that it is sequential. Proposed hatchery operations may not provide juvenile salmonids with the appropriate cues to successfully move to “natal” streams (i.e., increased risk of straying). The final EIS should provide a justification of early life history operation strategies, potential risks, and an operations schedule.

5) The draft EIS states that, “disease transmission from hatchery to non-hatchery fish is believed to be low since the pathogens responsible are already present in both groups of fish,... This statement regarding current disease/pathogen presence and fish susceptibility should be supported by actual data and data limitations should be specified. It has been shown that salmonid populations that co-evolve with infectious organisms may develop an immunity not present in other populations. Therefore, introduced diseased organisms may have a profound effect on indigenous fish populations.

18-05

Impacts on genetic variability, intra-and inter-specific competition and community dynamics are discussed in Section 4.6, Fish. Hatchery stock selection and the rationale for making such a selection is discussed in Section 2.1.3.7, Broodstock Source and Management, as well as in the Genetic Risk Assessments developed by Cramer and Neeley (1992), and Cramer (1995a), which are discussed in Section 1.2, Finding Solutions. Collections methodology are discussed in Section 2.1.3.6, Adult Collection, which includes a revised discussion on fall chinook. Minimum escapement levels are discussed in Section 2.1.3.7, Broodstock Source and Management. Maximum catch limits would be determined on an annual basis through coordination between the NPT and other fisheries agencies in the basin. The measurement of effective population sizes in relation to NPTH is discussed in the M&E Plan (Steward 1996) in the section on Genetic Variability (pgs. 81 - 85). The juvenile release schedule is discussed in Section 2.1.3.4, Release Techniques. Estimated stocking densities are discussed in Section 2.1, Proposed Action, and Section 2.1.5, Monitoring and Evaluation Plan.

18-06

The BPA published M&E Plan has been sent to interested fisheries management agencies in the Columbia Basin. In addition, the discussion on the M&E plan has been revised.

18-07

Prior to writing the M&E report, the author, Cleve Steward, had participated in the RASP process, had assisted in the design of the genetics monitoring element of the Idaho Supplementation Studies, and had represented NMFS and Mobrand Biometrics at meetings of the Yakima-Klickitat Fisheries Program (another supplementation hatchery). He had authored two papers and a lengthy literature review of hatchery impacts, and so was familiar with scientific literature on the subject.
While engaged in writing the report, Mr. Steward consulted frequently with geneticists and experts in the field of aquatic and fisheries sciences. He also presented papers describing various aspects of the M&E Plan at meetings of the American Fisheries Society, the Integrated Hatchery Operations Team, and the Northwest Power Planning Council. A draft of the report was reviewed by the team of biologists, engineers, and technical writers that completed the Environmental Impact Statement for the project. The report was carefully reviewed by Tribal fisheries managers and biologists before being released.

Although not subjected to a rigorous peer review process, the M&E Plan exceeded requirements set by the Northwest Power Planning Council. Moreover, the M&E Plan was based on the best known available science, benefited from technical reviews by project biologists, and was widely disseminated at scientific and technical meetings.

18-08

The M&E Plan (Steward 1996) discusses monitoring strategies for determination of effects resulting from operation of NPTH. Implementation of the NPTH M&E plan is essential to assessing and revising operations of the supplementation program. The NPTH Program is designed to use adaptive management, which allows managers to adapt the program to future events.

18-09

Spring chinook reared by NPTH would be spending a longer portion of their life in streams in which they are intended to return than are spring chinook reared by most other hatchery programs. This is a directed effort by NPTH to ensure imprinting. Those fish that are released directly in the streams are expected to reside through the summer and fall. A portion would migrate downstream in the fall while others would reside in the natal stream through the winter and migrate out in the spring of the following year. Those fish that are reared in satellite ponds would be introduced into the ponds in the summer and reared in
stream water from the stream in which they are expected to return. They would be released in the fall, and some may overwinter in the natal stream, while others may join other migrants moving downstream in the fall.

A portion of the fall chinook would also be moved to satellite facilities to encourage imprinting. They would be moved from Cherrylane or Sweetwater Springs to the acclimation facilities to complete an additional one to two months of rearing. Fish released from Cherrylane would be reared in acclimation ponds fed by the Clearwater River. These acclimation efforts are designed to specifically enhance the homing fidelity for the returning adults. Actual transportation of fish from the central incubation and rearing facilities to the satellite facilities is expected to take no more than one day for any given group of fish.

18-10

The effects of diseases introduced to wild fish are discussed in Section 4.6.1.3, Impacts, under Fish Health Management. It was the opinion of the Impact Assessment Team that the effect of disease transmission from hatchery to non-hatchery fish would be low. The Impact Assessment Team consisted of three professional fish biologists, an aquatic biologist, an engineer, and a hatchery production manager. Specific actions taken to prevent introduction of disease are discussed further in the discussion on Fish Health Management.
United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Governmental Policy and Compliance
380 N. Mail Street, Suite 400
Portland, Oregon 97204-9666

RECEIVED BY BPA
PUBLIC INVOLVEMENT
RECEIVED DATE: FEB 04 1997

January 30, 1997

ER 960790

Leslie Kelleher, Environmental Project Leader
Bonneville Power Administration
Public Involvement Office - CKP
P.O. Box 3621 - ECN
Portland, Oregon 97208-3621

Dear Ms. Kelleher:

The Department of the Interior (Department) has reviewed the Draft Environmental Impact Statement (DEIS) for the Nez Perce Tribal Hatchery (NPTH) Program, Laah, Nez Perce, Clearwater, and Idaho Counties, Idaho. The following comments are provided for your information and use when preparing the Final Environmental Impact Statement (FEIS).

GENERAL COMMENTS

Fish Resources

On September 13, 1996 the U.S. Fish and Wildlife Service (Service) provided technical comments to the Bonneville Power Administration (BPA) on the preliminary DEIS. Many of these comments have been incorporated into the DEIS. This information was not intended to represent the position of the Department. The Department’s position is represented in the following comments which largely reiterate the earlier technical comments from the Service.

The DEIS lists five alternatives. They consist of the proposed action, no action alternative, and three additional action alternatives. The DEIS states after study, three alternatives are eliminated from further consideration. Thus, only the proposed action and the "No Action" alternatives are further analyzed. However, the Department believes other action alternatives in addition to the proposed action could potentially meet the project purposes identified in Chapter 1. They include two of the three eliminated alternatives: "Use of Existing Production Hatches" and "Natural Habitat Enhancement and Restoration." The FEIS should further consider both alternatives. The explanation given in the DEIS for eliminating the "Use of Existing Production Hatches" alternative does not consider modifying Clearwater River basin hatcheries or making programmatic changes to accomplish project purposes. In addition
Leslie Kelleher, Environmental Project Leader

(continuation)

19-01

19-02

The DEIS analysis of the proposed action appears to consider improvements in migration conditions in the Lower Snake River and the Columbia River downstream of the Snake River confluence. However, the "Natural Habitat Enhancement and Restoration" alternative appears to have been eliminated without considering improvement of migration conditions. Inclusions of such conditions in the analysis of this alternative could make it feasible for accomplishing the purposes in Chapter 1. Therefore, the "Natural Habitat Enhancement and Restoration" alternative should be further considered and analyzed in the FEIS.

19-03

Until improvements in the migration corridor are made, the NPTH program would not return adult fish any better than hatcheries already existing in the Clearwater River basin. We believe when improvements in the migration corridors are made, fish return rates for existing hatcheries would improve. These improvements would allow additional fish for sport and tribal harvest. In addition, improvements in natural production in the remaining habitat would provide enough adults to meet the carrying capacity of the streams. The FEIS should provide a discussion of the potential roles of the NPTH program at that time, e.g., the role of the NPTH program being converted to a harvest augmentation hatchery or being used for resident fish production. Also, the FEIS should confirm the changed hatchery practices would comply with the Integrated Hatchery Operations Team (IHOT) policies.

19-04

The FEIS should clarify the National Marine Fisheries Service (NMFS) "suggestion" to revise rearing techniques in the Columbia Basin is based on resource priorities (Hatchery Practices on page 1-5). The NMFS has prioritized the need to speed the restoration of fish populations listed under the Endangered Species Act of 1973 (ESA) as endangered or threatened, over the need to mitigate for permanently lost habitat. The listed populations have declined due to poor migration conditions. Although such revisions would serve recovery purposes, they would not satisfy mitigation needs. Hatcheries designed for mitigation purposes are not designed to produce fish for restoration. Although mitigation hatcheries are already in existence and they can be used for restoration production, construction of a new hatchery may be more cost effective than converting an old one for recovery purposes.

19-05

The FEIS should indicate the discussions on NMFS "suggested" rearing techniques are based on the following premise: If the hatchery conditions mimic the wild, the fish will be better suited for restoration purposes. While this premise has merit and it may be possible to construct and operate a hatchery that mimics wild habitat, under existing technology it would be more expensive than restoring degraded existing habitat. Some of the practices listed in the DEIS are affordable and should be used in the NPTH program to produce fish for repopulating empty habitats. These practices would not compensate for the poor survival in the migration corridors and hatchery protection cannot replace poor migration conditions. If fish return to good spawning and rearing habitat, hatchery production becomes unnecessary.

19-06

BPA agrees that the natural habitat could eventually produce returns of salmon. However, the rate of population increase would be much slower than with supplementation intervention. See discussion for 19-02.

19-07

The primary focus of the EIS is the first 10 years of the program, the reasonable foreseeable future. Any change in facility production after this time would be discussed in further environmental documents as necessary. Until such time, those possible changes are remote and speculative.

19-08

Assigning or prioritizing NMFS strategies for salmon restoration and/or settling disputes on their strategies is outside the scope of this

19-09

19-10
document. Conventional hatcheries may not be the means to restore naturally-spawning salmon populations and constructing a new supplementation hatchery may be more cost effective than converting an old one for recovery purposes.

19-09

BPA has no estimates on the cost of restoring degraded existing rearing habitat, but because of the many landowners and land uses involved it is unlikely that this cost would be less than those of using innovative rearing techniques. Even with improvement in migration conditions attributed to salmon recovery efforts, an increase and restoration of salmon runs would occur at a slow rate that is dependent on straying and colonization. The purpose and need emphasize the timely restoration of salmon runs, and therefore the need to take an active role in seeding underutilized salmon streams in the Clearwater River. Supplementation activities proposed by NPTH do take such an active role.

19-10

The NPTH program depends in part on the success of salmon recovery efforts. However, as a new draft report from NMFS indicates, smolt barging is now viewed as fully mitigating for the federal hydrosystem and impacts on spring/summer chinook. The report's analysis “suggest that transportation, given that outside factors do not control adult returns, does not result in delayed mortality to fish, can alleviate the majority of losses from passage through the hydrosystem, and can provide historic adult return rates” (J. Williams, et al., June 1997). The report concludes with a short question and answer. “[D]oes the Columbia River hydropower system limit recovery of spring/summer chinook salmon? Most likely not” (J. Williams, et al., June 1997). Given that the hydropower system is not the limiting factor in spring/summer chinook recovery, BPA believes it is prudent to rely on methods of mitigation other than improvements in the migration corridor. At such time when naturally-spawning runs are restored that support a harvestable surplus, supplementation activities would become unnecessary.
In Section D paragraph 3 of "Artificial Production Modifications", it states that the parties agree to identify long-term program adjustments in addition to those identified in Appendix B, including expansion of or additions to existing hatchery programs necessary to meet identified fish supplementation needs of the Parties. These long-term needs shall be designed to complement harvest, production, and rebuilding needs of this Agreement.

Section IV B Procurement for the PAC of the CRFMP, states that "Coordination of production and harvest management is essential to the successful implementation of this Agreement." It also states that the PAC is hereby established to coordinate information, review, and analyze existing and future artificial and natural production programs pertinent to this Agreement and to submit recommendations to the management entities. As stated in the Purpose under Section III. Artificial and Natural Production, it is the intent "...of the Parties to develop and implement those agreed-to production oriented actions to achieve the goal of rebuilding upriver anadromous runs...". As the NPFH program is being designed for just such a purpose, the production is pertinent to and subject to the requirements of the Agreement.

The language of the CRFMP is clear on how new and future production shall be coordinated and, therefore, is subject to the terms of the Agreement. Further, the Nez Perce Tribe has and is using the existing CRFMP policy and biological review processes of the Policy Committee and the PAC to obtain consensus for moving forward with the planning for the facility. However, the EIS does not follow a logical path in claiming the proposed NPFH program would not be subject to the terms of the CRFMP when the proposed NPFH facilities would become operational.

Water Resources

The proposed Sweetwater Springs Central Incubation and Rearing Facility lies upstream of Sweetwater Diversion Dam which diverts water into Reservoir A (Moun Lake). Both of these facilities are part of Bureau of Reclamation's (Reclamation) Lewiston Orchard Project which provides irrigation, municipal, and industrial water to the Lewiston Orchard Irrigation District.

The analysis presented in the draft EIS indicates that no consumptive water use would occur at the Sweetwater Springs facility, and discharges from this facility would meet Federal and state water quality standards. Based on the analysis in the draft EIS and with an adequate water quality monitoring program, it appears that the Sweetwater Springs facility would have no effect on Reclamation's Lewiston Orchard Project.

SPECIFIC COMMENTS

Page 1.4.1.1.1.2. Hatchery Fish Production in the Clearwater Basin. The descriptions of Dworshak and Kooska National Fish Hatcheries should identify these facilities as mitigation hatcheries. They provide mitigation for the fish that would have been spawned and spent the freshwater part of their life cycle in the North Fork.
The term “traditional hatcheries” was used to present a distinction between traditional (or conventional) harvest augmentation hatcheries and supplementation hatcheries. The word has been changed to reflect your concern. The discussion on hatchery practices is a valid representation of negative consequences that have occurred over the years.

The information presented in Section 2.3.2, Use of Existing Production Hatcheries, does not apply to the discussion presented in Section 1.1.1.2, Hatchery Fish Production in the Clearwater Subbasin. The discussion in Section 2.3.2 presents the reasons given at the February 13, 1990, meeting between the Northwest Power Planning Council, the USFWS, IDFG, and the NPT stating why it was the preference of the agencies to not use space at the existing hatchery facilities to accommodate new (i.e., NPTH) production. The discussion in Section 1.1.1.2 presents information on the use and production at the existing hatcheries.

Section 1.6 has been amended to reflect the role of IHOT to NPTH. The NPT would follow IHOT guidelines. However, as is discussed in IHOT meetings, every federal, state and tribal agency maintains its own sovereignty when applying its fish health policy, and IHOT guidelines do not supersede this management authority.

NPTH can focus on improving survival prior to smoltification. Further discussion on the rationale for improvement as a result of rearing strategies has been added to the Final EIS. NPTH would rely on improvements made as a result of implementing the recovery plans for salmon to increase smolt-to-adult survival.

The text has been changed to clarify this point.
Leslie Kelleher, Environmental Project Leader

Page 2-33. 2.1.3.4 Release Techniques The FEIS should discuss the process for determining the trade-offs in use of the carrying capacity of the habitat between populations that exist now and the effects of the proposed hatchery programs.

Page 2-43. 2.3.2. Use of Existing Production Hatcheries As previously stated, some information in this section would be appropriate for inclusion in the Hatchery Practices discussion. Please refer to comments given under Page 1-5 Hatchery Practices.

Page 3-30. Second Paragraph, Last Sentence This sentence states the Clearwater fall chinook salmon may be adopting some of a “stream-type” life history by migrating the following spring. However, on page 3-45 in the Potential Production paragraph, the DEIS attempts to justify the minimal amount of fry habitat available in the Clearwater River by stating fall chinook salmon migrate during their first year anyway. The FEIS needs to clarify this apparent contradiction whether fall chinook salmon migrate during their first year or the following spring.

The amount of available fry habitat in the Lower Clearwater River (below Cherrylane) should be fully evaluated given the plan to release 1,500,000 sub-yearlings. Even if the sub-yearlings do migrate during their first year, they rear 1-3 months before beginning their migration making the availability of fry habitat important.

Page 3-45. Potential Production We agree the red drum estimate of 95,000 is an overestimate. The FEIS should provide a discussion on potential production based on a reliable red drum estimate; the Service believes 3,600 reds is a more reliable estimate.

The FEIS also should address the emigration problem for juveniles from the Clearwater River specifically. The best minimum survival (Phi-tag detections at dams) the Service has observed from Clearwater River sampling is 19.1%. As the DEIS notes, fall chinook salmon emerge and emigrate later from the Clearwater River than they do from the Snake River. Therefore, they are subjected to lower water velocities, higher water temperatures, greater predator and disease susceptibility, and reversion to “parr” before reaching the Columbia River estuary.

Appendix A. Monitoring and Evaluation This section should be completed in the FEIS.

Thank you for the opportunity to comment on this DEIS.

Sincerely,

Preston Seyer
Acting Regional Environmental Officer

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19-19
See Section 1.6.7, Columbia River Fish Management Plan (CRFMP), for clarifying language.

19-20
The Nez Perce Tribal Hatchery Predesign Study (Montgomery Watson, 1994) evaluated the proposed sites for their capability to grow fish. Spring runoff is the most typical time period in which the streams would carry a large debris load and suspended sediment. Spring chinook would be moved to the satellite facilities in the early summer, avoiding complications posed by spring runoff. Water intake for the satellite sites for fall chinook would use a combination of infiltration galleries and well water to avoid problems with high suspended sediment load and debris.

19-21
 See response to 19-16.

19-22
Effects on other fish species present are discussed in Section 4.6, Fish. Existing carrying capacities are discussed in Section 3.6, Fish.

19-23
See response to 19-15.

19-24
It is likely that they do both. Arnsberg and Statler (1995) discuss PIT tag detection data from fish collected in the Clearwater River. They found that a greater percentage of fish tagged in 1993 and 1994 were detected as yearling migrants (rather than subyearling migrants). However, preliminary results of their 1995 tagging show a higher proportion of fish were detected as subyearling migrants. In addition to PIT tag data, analysis of scale patterns have indicated the presence of yearling fall chinook migrating through the Snake River in the early spring (Sneva, 1996). These fish have also adopted a variance of the typical fall chinook subyearling smolt life cycle. Arnsberg and Statler (1995) discuss that a possible reason for the variability in migrant ages is the flow fluctuations
from Dworshak Dam. They find that unseasonably high and cold Dworshak Dam releases coinciding with early juvenile fall chinook salmon rearing in the lower Clearwater River may be influencing selective life history traits including growth, smolt development and outmigration timing.

19-25

Section 4.6.1.3, Impacts, discusses the competitive interactions between fall chinook released from NPTH and their wild living counterparts. The fish would be released with a demonstrated propensity to smolt. Such hatchery release practices, i.e., releasing smolts, are typically employed in the Clearwater River Basin by Dworshak and Kooskia National Fish Hatcheries. There are approximately 1,050,000 spring chinook smolts and 2,300,000 steelhead smolts released from Dworshak National Fish Hatchery into the Clearwater River, and another 800,000 spring chinook smolts released from Kooskia National Fish Hatchery into the Clearwater as well. The fish are not believed to rear and compete with the existing natural production in the river. The Biological Assessment for the spring chinook releases (Idaho Fishery Resource Office, 1993) states that, “Competition between hatchery released smolts and natural chinook salmon should be minimal due to the rapid emigration time in free flowing river sections. In addition to rapid emigration timing, chinook salmon habitat preference criteria studies have shown spatial habitat segregation. Larger juveniles select deeper water and faster velocities which should minimize competition between emigrating hatchery chinook and natural fry in free-flowing sections (Hampton 1988).” Fall chinook sub-yearling smolts released from NPTH are expected to be larger than naturally rearing fish and would be actively migrating as well.

19-26

Potential production for fall chinook spawners in the Clearwater River is based on the best information available.
19-27

This is true. In spite of the problems in migratory conditions, Table 3-3 shows that approximately 23% of the fall chinook spawning in the Snake River Basin above Lower Granite Reservoir occurs in the Clearwater River.

19-28

The Executive Summary is included as Appendix D. The Executive Summary of the Monitoring and Evaluation Plan can be obtained by calling the BPA document request line at 1-800-622-4520.
BPM-01
Will techniques such as those at the Leavenworth hatchery be used for this project?

BPM-02
What effect will this project have on Lewiston Orchard Irrigation District water and flows for irrigation?

BPM-03
Where is the Bureau of Reclamation involved with this project?

BPM-04
Sounds like a good project.

BPM-05
Do we have support from USFS?

BPM-06
Will habitat re-seed?

BPM-07
Are there push-up dams for irrigation?

BPM-08
We have the habitat—now we need the salmon!

BPM-09
Idaho will not be supportive in drought conditions—water flows from Snake River.

BPM-10
Hope you get support for your project.

BPM-11
Movement “afoot” in Idaho to remove 4 Snake River dams.

BPM-12
Sounds like a good project.

BPM-01
Leavenworth Hatchery is a conventional harvest augmentation hatchery, similar to those described in Section 1.1.1.2, Hatchery Fish Production in the Clearwater Subbasin. NPTH would differ from this facility by being a supplementation hatchery as described Section 1.1.1.2.

BPM-02
There would be no impact to the Lewiston Orchard Irrigation District.

BPM-03
The Bureau of Reclamation is not involved in this project, but received copies of the Draft and Final EIS.

BPM-04
Comment noted.

BPM-05
USFS is a cooperating agency on the EIS.

BPM-06
Yes, habitat will reseed. Please refer to Section 2.5.2, Natural Habitat Enhancement and Restoration.

BPM-07
Push-up dams are not in this project.

BPM-08
Comment noted.

BPM-09
Comment noted.

BPM-10
Comment noted.
BPM-13
What species are you producing?

BPM-14
What is the purpose of the project?

BPM-15
I like it!

BPM-16
Looks like a good facility design.

BPM-17
If Snake River steelhead are listed or proposed for listing, how will this affect the project?

BPM-18
What impacts will outside forces (i.e. Regional Forum, election, etc.) have on this project and others?

BPM-19
FISH PASSAGE, INC. - J. R. WOODWORTH
The hazards to smolts during downstream migration through the slack water of reservoirs, powerplant turbines, supersaturated water below dams, and predator-infested waters are the major causes of their reduced populations. Some species are near extinction from these impacts, along with overfishing.

Efforts to reduce smolt damage at power plants are centered on new or improved screening and bypass systems . . .

A pipeline transport alternative is described in this report. This alternative will require a series of tests and exploration to validate its feasibility from a biological, engineering and cost standpoint . . . . There is also a potential for the combined application of the canal and the pipeline methods of transportation. [See report commentor submitted, “Report and Proposal to Study the Boylan Smolt Transport System.”]

BPM-11
Comment noted.

BPM-12
Comment noted.

BPM-13
Spring and fall chinook salmon.

BPM-14
Chapter 1 describes the Purpose and Need for the project.

BPM-15
Comment noted.

BPM-16
Comment noted.

BPM-17
Projects effects would have to be addressed through “conferencing” with NMFS.

BPM-18
Anything is possible. State, tribal, and federal elections may change focus of fishing policies and strategies as in other areas of concern.

BPM-19
Although mainstem passage is important to the long-term success of the NPTH program, it is a difficult issue to analyze in the context of this EIS and is therefore outside our scope. Section 1.7 lists several ongoing efforts intended to address mainstem passage.
COMMENTS FROM LAPWAI PUBLIC MEETING 7/11/96

LPM-01
Problem not in river system. Fish populations are declining. Not dams.

LPM-02
Problem is people (drawdowns, etc.)

LPM-03
Not in favor of hatchery on reservation. Hatchery at this location is a "double dip."

LPM-04
How does this project mesh with CRITFC?

LPM-05
Good project.

LPM-06
Problem is basically ocean harvest.

LPM-07
Need more hatcheries.

LPM-08
What is BPA's solution to the fish problem?

LPM-09
How is this project different?

LPM-10
Clearwater should be managed to mimic natural flows and temperatures.

LPM-11
Will a certain percentage of adults be allowed to spawn naturally?

LPM-01
Comment noted.

LPM-02
Comment noted.

LPM-03
Comment noted.

LPM-04
Founded to coordinate and to provide technical services, the Columbia River Inter-Tribal Fish Commission is made up of the Warm Springs, Umatilla, Nez Perce and Yakama tribes. This project is proposed by the Nez Perce Tribe, one of its members.

LPM-05
Comment noted.

LPM-06
Comment noted.

LPM-07
Comment noted.

LPM-08
This program is one of many proposed and implemented by BPA.

LPM-09
The proposed program uses innovative rearing techniques.

LPM-10
Comment noted.

LPM-11
Yes.
LPM-12
Will habitat management remain status quo?

LPM-13
Address recreational impacts to returning adults.

LPM-14
Does or will BPA do/assist the USFS in an EA for Eldorado Falls?

LPM-15
Cherrylane Inc. concerned about outfall, by-pass, and returning adults/releasing smolts. Will restrict fishing. Also concerned with fish ladders.

LPM-16
I think hatchery program is necessary but that’s only part of the answer. There are mainstem issues to be dealt with.

LPM-17
Concern about impacts to other wildlife, e.g., elk, from construction of hatcheries (Lolo Creek).

LPM-18
Look at Tom Curets thesis.

LPM-19
What will Dworshak drawdowns do to fall chinook releases in July and August.

LPM-20
Where do I get copies of recovery plan? And what does it say about commercial ocean harvest?

LPM-21
What is design and construction schedule and how long will it take to complete entire NPTH program?

LPM-12
There are efforts planned to improve habitat in the Clearwater River Subbasin.

LPM-13
Recreational fishing impacts to returning adults would not occur until the runs of chinook salmon have reestablished themselves in the Clearwater River Subbasin. Runs are expected in 15-20 years following program implementation. Prior to the onset of any recreational fishing for these returning salmon, the State of Idaho and the Nez Perce Tribe would set seasons and bag limits for each of the two runs of chinook salmon. The fish are expected to return to the Clearwater River Subbasin from June to November each year. Because it is not known what the sport fishery season and bag limits would be for these returning adult fish, if any, it would be premature at this time to attempt to identify what the impacts would be to the resource.

LPM-14
BPA does not currently have plans to be involved with the USFS in an Environmental Assessment for Eldorado Falls.

LPM-15
Comment noted.

LPM-16
Comment noted.

LPM-17
Comment noted.

LPM-18
Comment noted.
LPM-22
Needs the fish count between each dam.

LPM-23
How does ocean harvest effect the project?

LPM-24
How do I find out what the increase in cannery production is?

LPM-25
I'm definitely opposed to supplying the Indian commercial fishery down below with fish from a hatchery up here that rate payers will pay for.

LPM-26
I do believe there should be hatcheries built, but people who benefit from it should pay for it.

LPM-27
I think this book [EIS] is easy to read, not a lot of words that you can't understand.

LPM-28
Who will ultimately own these facilities?

LPM-29
Will they be turned over to the Indians?

LPM-30
What future tightening of controls on commercial fishing (in river and ocean) are necessary to insure success of a project like this?

LPM-19
NPTH fish would be released in June and should be through the system by July and August. The progeny of NPTH fish spawning in the wild would be negatively affected. Arnsberg and Statler (1995) determined that unseasonably high and cold Dworshak Dam releases (drawdowns) coinciding with early juvenile fall chinook salmon rearing in the lower Clearwater River may be influencing selective life history traits including growth, smolt development, outmigration timing, behavior, and could be directly affecting survival. During July 1994, discharges from Dworshak Dam increased from a baseline released of 1,300 cfs to a maximum release of 25,530 cfs with an overall temperature depression in the lower Clearwater River exceeding 10 degrees C (Arnsberg and Statler, 1995).

LPM-20
National Marine Fisheries Service (NMFS), Environmental and Technical Services Division, 911 NE 11 Avenue, Portland, Oregon, 97232; (503) 230-5400 can provide copies of the recovery plan.

LPM-21
Completion of ROD, August 1997
Predesign and Design of all Facilities, 1997-98
Construction of Acclimation Sites, begins late 1997
Cherrylane and Sweetwater Springs, summer 1998

LPM-22
The Corps of Engineers has information on the fish counts at each of the dams. That information is also available on many on-line home pages.

LPM-23
According to NMFS (1995), impacts on Snake River spring/summer chinook resulting from ocean fisheries cannot be determined precisely, but they are apparently quite small. Snake River fall chinook on the other hand, contribute to a variety of ocean fisheries. Approximately 66% of the Lyons Ferry fall chinook that were harvested were captured in the ocean fisheries. These include fisheries off the Washington, Oregon, California, Alaska, and Canadian coasts.
LPM-24
To our knowledge, no salmon canneries exist in the United States outside of the state of Alaska. According to the Idaho Department of Commerce, no fish canneries of any kind exist in Idaho (Twight, 1996). As to the question of whether any of the salmon that would emanate from the Clearwater River Subbasin i.e., as a result of the proposed supplementation program, would end up in the commercial catch in the North Pacific, it is not known at this time. Change in commercial cannery production is dependent on the harvest regulations determined by the U.S.-Canada Pacific Salmon Treaty, and is outside the scope of this document.

LPM-25
Comment noted.

LPM-26
Comment noted.

LPM-27
Thank you for your comment.

LPM-28
The Nez Perce Tribe would operate the proposed facilities with BPA providing the funding for operation and maintenance. No decision has been made as to the ownership of the facilities.

LPM-29
See response to LPM-28.

LPM-30
Commercial fishing regulations are decided in other forums.