Chapter 3: Comments on Draft EIS and Responses

In May 2003, BPA sent the Draft EIS to agencies, groups, individuals, and libraries for public review and comment on the Proposed Action and alternatives. BPA held four public meetings during the 45 day public review period, which ended on July 7, 2003. These public meetings were held in La Grande, Oregon (June 9, 2003); Enterprise, Oregon (June 10, 2003); Imnaha, Oregon (June 11, 2003); and Lostine, Oregon (June 12, 2003).

BPA recorded and numbered all written correspondence, including letters, comment sheets, electronic mail, and forms that were received during the public review period. BPA recorded and numbered all letters and other comments in the order in which they were received, starting with 001 and ending with 020. Within each comment letter, or record, BPA assigned a separate code (01, 02, 03, etc.) to each comment within the record to facilitate development and tracking of responses. This chapter contains the coded comment documents, presented in order of receipt, followed by responses to those comments.

The information presented in this Final EIS was developed, in part, as a result of these letters and comments.

JUN 1 3 2003

Kuehn, Ginny - DM-7

From: Fred Brockman [fred.brockman@gte.net]
Sent: Thursday, June 12, 2003 10:42 PM
To: BPA Public Involvement
Subject: Grande Ronde and Imnaha Spring Chinook Project

My wife and I are writing to express our concerns about the Grande Ronde and Imnaha Spring Chinook Project. We own property in the High Lostine subdivision, just above the location for the planned Lostine Hatchery. I have printed and read the draft EIS and the NE Oregon Hatchery Project, Spring Chinook Master Plan. I am responding by e-mail because I was not able to attend today's meeting in the Lower Lostine subdivision due to work commitments that interfered with my plan to attend the meeting. I am a supporter of the Nez Perce Tribe and a supporter of enhancing salmon in Wallowa County and the Northwest but have two grave concerns that I do not see addressed in these two documents.

1. Has the hydrology of the area been characterized to show removal of water by the Hatchery wells is from a shallower aquifer unconnected to the High Lostine subdivision well (and to the Lower Lostine subdivision). We have a groundwater permit from the State. Who will insure the huge amounts of groundwater that is pumped (relative to what we pump) will not impact the High Lostine's well? The Tribes, the State ODFW, federal agencies? Page 2-10 of the draft EIS says "Three new groundwater wells would provide up to 1200 gallons per minute to the facility". Page 3-71 of the same document says Production can apparently be sustained for long-term pumping without affecting nearby domestic wells." My hydrology PhD friends say this latter statement is misleading to possibly blatantly false unless a tracer test over weeks to months was performed concomitant with pumping of the new wells. Second, a pump test alone of a few hours or days will NOT say anything about the potential for long-term pumping to impact nearby dometic wells, unless the new wells and the domestic wells are intimately connected. I am strongly opposed to the Hatchery unless we have written and legally accepted assurance from the Nez Perce, the State, or BPA that either (a) provides strong scientific proof that our water source is not connected to or influence by withdrawals from the new wells, or (b) protects the productivity of our water source or agrees to replace it if it is substantially degraded. I am of the opinion that the tribes and agencies are being non-responsible and exploitive if they do not address this issue. 001-01
2. I am sure there are scientific reasons that this particular location on the South Fork was selected as the best location. However, I question the extent to which the sociological and public relation considerations entered the equation. I suspect noone or almost noone wants the hatchery in their backyard. But it is obvious that a location as little as one-half to ¾ mile further downriver would greatly minimize the number of directly affected people. It would also greatly minimize the number of visitors and local people and that have to see the weir, pond, intake structure, and fish ladder that will be in the direct foreground of the view from the Lostine River bridge. The paragraph at the 001-02

JUN 1 3 2003

bottom of page 3-105 of the draft EIS unfairly minimizes, in our view, the impact of the weir, pond, intake structure, and fish ladder on the river view from the bridge. Cars travel slowly over this bridge, people look upriver and downriver at the views, and sometimes stop to do so. While northbound travelers may see the structures "for a few seconds at the river crossing", a few seconds is all it takes to make a lasting impression and remembrance. Second, I disagree that "Except for a relatively brief glimpse, southbound travelers would not generally see the intake [structure]". Most would almost certainly see the structure and those that look at the river will certainly see the weir, the pond, and the fish ladder. Again, a glimpse it all it takes to make a lasting impression and remembrance. Wouldn't it make sense to have a somewhat less optimal scientifically-selected location that would greatly mitigate the number of directly affected people, and preserve the view of the river that only 1 mile further upstream is a Wild and Scenic River? Even though it has no such designation at the bridge, visitors want to see a river that looks like a Wild and Scenic River when they know it is designated as such one mile further upriver. In summary I see no evidence that sociological and public relation considerations for siting the hatchery entered the equation, and I strongly feel they should. 001-02 (con't.)

Until these concerns are addressed to my satisfaction I will not support the Lostine Hatchery. I understand these concerns may have been addressed and I do not have the documents or reports; please send me the documents or reports if they have been addressed. 001-03

Sincerely, Fred and Donna Brockman

1805 West 37th Avenue

Kennewick, WA 99337

RECEIVED

6/13/2003

001-01

As referenced in the Draft EIS (Section 3.6.1.1), several groundwater wells were drilled at the proposed Lostine Hatchery site – the Lostine North Well, Lostine South Well, Primary Production Well, and South Observation Well. Information from these wells, and other sources, was used to characterize the area's geology, hydrogeology, and aquifer characteristics through aquifer testing. The results of aquifer testing were summarized in the Draft EIS and presented in detail in two associated technical reports prepared by Montgomery Watson (Report of Lostine Site Production Wells Installation and Testing, February 1999, and Lostine Site Production Wells Supplemental Installation and Testing, February 2001). The purpose of the Montgomery Watson studies was to identify a sustainable supply of good quality, disease-free water for the proposed hatchery.

To determine well production potential and to measure the effect of proposed hatchery groundwater withdrawals, Montgomery Watson conducted aquifer pumping tests in 1999 and 2000/2001. Both sets of tests showed consistent results, although slightly different groups of wells were used. Both sets of tests consisted of standard, step-rate tests (pumping at different rates for short periods of time) to evaluate well efficiency and capacity and to determine optimal pumping rates for the longer, constant-rate tests. In January 1999, the Lostine South Well was pumped at a constant rate of about 400 gpm for 70 hours while water levels were measured in the Lostine South Well and in the Hayward's well in the Lostine subdivision (about 1,500 feet south of the Lostine South Well). Maximum drawdown measured in the Hayward Well was a few inches (0.20 feet) and the well water level recovered quickly after pumping of the Lostine South Well stopped (97 percent recovery in 160 minutes). Montgomery Watson calculated a "worse case" drawdown of about 0.6 feet in the Hayward Well after 2 years of continuous 400 gpm pumping of the Lostine South Well ("worse case" because continuous pumping of site wells is not proposed).

In January 2001, Montgomery Watson conducted a 25-hour constant-rate test in the Lostine North Well, and a 14-day constant-rate test in the hatchery site Primary Production Well. For each of the constant-rate tests, water levels were monitored in three other wells including the South Observation Well (installed near the Lostine subdivision). As in the 1999 test, drawdown in the observation well was minimal (a maximum of about 6 inches) and the water level recovered quickly after pumping stopped. Montgomery Watson calculated that, if all three site supply wells were pumped simultaneously at optimal flow rates, the combined drawdown in the nearest domestic well would be about 1.5 feet after 10 weeks of continuous pumping and approximately 2 feet after 2 years of continuous pumping (for comparison, measurements showed approximately 112 feet of standing water in the Hayward well). Continuous pumping was used to conservatively estimate drawdown because simultaneous, continuous pumping of the three wells would be required for only 2 to 3 months per year under normal hatchery operations and would typically occur during the months of May and June when river levels would be at their highest (FishPro/HDR 2004b), rather than in January when the aquifer pumping tests were conducted and river levels are relatively low. Montgomery Watson concluded that desired groundwater production levels for the hatchery could be sustained and regulated without affecting production in nearby domestic wells.

001-02

As stated in the Draft EIS (Section 2.3), Section 1.8 of the Final EIS, and the NEOH Master Plan (Ashe et al. 2000), several other potential sites in the Imnaha and Grande Ronde Subbasins were evaluated, but dropped from further consideration due to a variety of reasons, including inadequate water supply or quality, lack of available space, inadequate power supply, and/or unavailability for acquisition. One suitable site was identified on the Lostine River, downstream of the proposed Lostine River Hatchery site. This site, at the Strathearn Ranch (Grande Ronde Subbasin site 22, Draft EIS, Table 1-1), met the project requirements, but the owner ultimately decided not to make the property available. Project team members also investigated, and eliminated from further consideration, possible sites on the west side of the Lostine River. The one feasible west-side site was dropped from further consideration because it would require substantially more site development (road improvements, bridge replacement, a powerline across the river, and extensive site clearing and grading); have a potentially

greater impact to adjacent landowners (immediately adjacent to one residence and requiring several other residents to drive through hatchery facilities to access their property); and result in more disruption and potential impact to the natural environment (McMillen 2003, personal communication).

Section 3.9.3.3 of the Draft EIS discusses the consequences of the Proposed Action relative to visual quality issues at the Lostine River Hatchery. The intake structure would be visible to northbound travelers on the Lostine River Road for a few seconds at the river crossing. Southbound travelers may catch a glimpse of the intake structure, but for the most part, it would be screened by existing vegetation. These proposed structures would be located about 1 mile below the portion of the Lostine River designated as a Wild and Scenic River.

001-03

The file of supporting documentation for this project is quite extensive and includes thousands of pages and about 150 different documents and records (refer to the references cited in the Draft EIS, Chapter 7, and Final EIS, Chapter 2). Although summaries of the results and findings of most of these materials are incorporated into this EIS, all materials cited are available to the public through BPA. To acquire any of these documents, please contact BPA to request specific materials.

002

Wallowa County Public Works
619 Marr Pond Lane
Enterprise, Oregon 97828

JUN 2 0 2003

Solid Waste Department | Road Department | Vegetation Department | Parks Department

Russ McMartin
Director of Public Works

Telephone 541-426-3332
Fax 541-426-2074

Subject: Grande Ronde – Imnaha Spring Chinook Hatchery Project
Draft Environmental Impact Statement

Questions: I. Lostine River Hatchery

A. Burying a 24-inch and 18-inch pipeline alongside Lostine River Road (County Road 551)

1. Minimum depth of the top of pipe needs to be 48 inches below the bar pit.
2. Will this pipe be in county right way?
3. Will the pipeline disturb the existing road?
4. What is your plan to maintain traffic on the Lostine River Road during construction of the pipeline?
5. The hatchery will pay for any future road repairs due to the pipe line. 002-01
6. When the pipeline crosses the county road the asphalt will be damaged. After compaction and settling a full-width asphalt overlay patch will be put on to return the road to a smooth ride condition.
7. The edge of septic drain field is on the old channel gravel bar and within 100 ft. of the Lostine River. Will DEQ issue a permit for a drain field so close to the river?
8. May require our own construction inspector and compensation.

II. Imnaha Final Rearing Facility

A. Septic system below the berm at approximately river level. Will DEQ issue a septic permit for this? 002-02

B. House pasture well

1. Will this pipe be in the county right of way? Currently there is a telephone and fiber optic line in the right of way.
2. How will you maintain traffic on the county road during construction?
3. Minimum depth of the top of pipe will be 48 inches below the bar pit. 002-03
4. The hatchery will pay for any future road repairs due to the pipe line.
5. Will need an easement permit from the hatchery to the county road.
6. Need easement permit for new power line crossing county road.

7. County turn out area - design and construction to be approved by Director of Public Works.
8. May required our own construction inspector and compensation.

002-03 (con't.)

III. Imnaha Satellite Facility

A. Bringing a buried power line about six miles from substation.

1. County Road 727 extends to the Imnaha River Woods intersection.
2. Telephone and fiber optic lines already exist in right of way.
3. How will traffic be maintained?
4. There is about one mile of asphalt paving in this section. How will it be affected?
    a. If a trench is cut the repair will be a full-width overlay.
5. Depth of power line will be 48 inches below the bar pit.
6. Will you put a telephone line in the same trench?
7. Wallowa County and the Forest Service have an agreement that as soon as the Forest Service brings the section of road from Gumboot to Imnaha River Woods up to county standards the county will take over the maintenance of this section.
9. May require our own construction inspector and compensation.
10. Wallowa County has plowed the snow from the Pallette Place to the Imnaha Satellite Facility under a contract

002-04

Russ McMartin

002-01

Comment acknowledged; project infrastructure would be designed and built in compliance with all applicable local, state, and federal rules, regulations, and ordinances and at project cost. Although federal facilities are normally exempt from local standards, the project would be designed and built in accordance with County standards when feasible given project needs and budget. The pipeline would be within an existing County right-of-way and would not impact the traveled surface, except where the pipeline crosses the road. During construction, traffic would be managed by signs and/or flaggers, as needed. Pipeline work may be subject to inspection by the County. The site drain field would be designed and permitted in conformance with applicable local and state standards.

002-02

The Imnaha Final Rearing Facility is no longer proposed for construction (see Section 1.5 in the Final EIS). After further study, the project co-managers devised a way to use the other proposed facilities to accommodate the functions intended for the Imnaha Final Rearing Facility. The activity proposed at this site is limited to removal of an existing Acrow (steel panel) bridge and concrete bridge abutments. The bridge panels would be reinstalled at the Lostine Adult Collection Facility and the concrete bridge abutments would be hauled off-site for disposal.

002-03

See response to 002-02.

002-04

Bringing a buried powerline 6 miles from a substation to the Imnaha Satellite Facility is no longer part of the Northeast Oregon Hatchery Project. Power would continue to be provided by generators housed in existing buildings.

003

JUN 2 0 2003

GRANDE RONDE – IMNAHA SPRING CHINOOK PROJECT DEIS

Please mail your comments by July 7, 2003

COMMENTS:

On the adequacy of the Environmental Impact Statement:

On the merits of the different alternatives:

I live on Granger Road & would like to see the paved road done first, as we live very close to the road and already the dust is very bad. Thank you. D. Loebel 003-01

Preferred ways to mitigate concerns or effects:

Other:

I think Rick Jollman and the different entities that were at this meeting were Great. I thank them for being able to "hold their cool" while they were being attacked by the locals. 003-02

Name Donna Loebel

Address 64855 Granger Rd, Lostine

Phone/E-Mail Address (optional) dondie50@hotmail.com

003-01

Granger Road would be paved after construction activities to prolong the life of the paved surface. During construction, dust abatement on Granger Road would be accomplished with frequent watering. If watering should prove ineffective, other means of dust control would be considered.

003-02

Comment acknowledged; thank you. Several other attendees of the Lostine public meeting submitted written comments as well. See below. The issues expressed at the meeting appear to be contained within those written comments, and the project planning team has considered them and attempted to respond to them fairly and objectively.

JUN 2 7 2003

WALLOWA COUNTY PLANNING DEPARTMENT
WALLOWA COUNTY COURTHOUSE
101 S. River St. Rm. B-1
Enterprise, OR 97828
541-426-4543 x24, Fax: 541-426-6046, depplan@co.wallowa.or.us

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Comments on BPA's Draft EIS
for the
Grande Ronde - Imnaha Spring Chinook Hatchery Program

Overall Bonneville has done a good job of listening to the concerns expressed at its neighborhood meetings and has incorporated these concerns into its draft EIS. 004-01

Concerns expressed by the Planning department have been that the hatcheries be good neighbors and keep a low profile. This is especially important with the Lostine facility due to its proximity to Pat's South Fork Subdivision and Lostine River Acres. Both the Lostine and Imnaha Rivers are important County assets.

On page 3-98 the draft EIS addresses Plans and Policies Pertinent to Aesthetics such as protecting rural character and open space. On page 3-120and 2-11 the draft EIS addresses methods to reduce long term noise and noise produced by construction. 004-02

Larger buildings such as dwellings, bunkhouses, shops, etc will be wood sided with metal roofs and will use colors that will blend in with the surroundings. Lights will be non-glare, shielded and directed on site. Tree removal will be minimized. Additional trees will be planted. (pages 2-13, 3-105, 3-106)

And, as required by all Wallowa County Zone Permits, page 4-5 states that all buildings will comply with State Building Codes and all facilities will meet DEQ regulations. Additionally, the facilities will abide by established water rights as administered by the State of Oregon.

The draft EIS also recognizes the process required to permit the facilities in Wallowa County on page 4-4. Whereas the propagation, cultivation, maintenance and harvesting of aquatic species is an outright use in both Exclusive Farm Use and Timber/Grazing, the facilities, including dwellings, must be permitted. As the accessory dwellings called for in the draft EIS are conditional uses and would require a public hearing, Bonneville must apply for and receive conditional land use permit approval. The Planning Commission, at public hearing, will review the entire Wallowa County portion of the project (Lostine and Imnaha). The hearing will be preceded by a review of the project by the Wallowa County Natural Resources Technical Advisory Committee. The draft EIS, WCNRTAC review, and associated comments will be entered into the record. 004-03

cc: Bill Oliver, Planning Director
Mike Hayward, Chairman of the Board of Commissioners
Bruce Dunn, John Williams, Co-chair, Wallowa County Natural Resources Technical Advisory Committee
Mickey Carter, BPA Environmental Protection Specialist
BPA Hatchery file

C:\data\BPAHatcheries\CommentsOnDraftEIS062303.wpd

004-01

Comment acknowledged; thank you. BPA and project co-managers believe that public involvement in the environmental analysis process is crucial for making sound decisions.

004-02

Comment acknowledged; it is the intent of the project co-managers to be good neighbors within the community. The project design and operation would comply with applicable local, state, and federal rules, regulations, and ordinances.

004-03

Project co-managers would seek any applicable permits or approvals from Wallowa County prior to project implementation. Although federal facilities are normally exempt from local standards, the project would be designed and built in accordance with County standards when feasible given project needs and budget.

005

JUN 3 0 2003

GRANDE RONDE- IMNAHA SPRING CHINOOK PROJECT DEIS

COMMENTS:

On the adequacy of the Environmental Impact Statement:

A phase out of hatchery operations has not been adequately addressed. The duration of operations should be considered with prevention of genetic bottle necking emphasized. 005-01

Kendrick Moholt
67075 Lostine River Road
Lostine, OR 97857
(541) 569-2350

005-01

As discussed in Section 2.2 of the Final EIS, phase out of the hatchery facilities is not reasonably foreseeable. It is anticipated that spring/summer chinook would be collected yearly for approximately 20 to 25 years, or until adult replacement rates for the naturally spawned population suggest that the population is naturally sustainable (Master Plan, Ashe et al. 2000). The expected duration of the hatchery program would be dependent on changes outside of hatchery operations (i.e., the hatchery program may operate over a longer period of time if other factors limiting population recovery are not mitigated or otherwise controlled, or the hatchery program may operate over a shorter period of time if other limiting factors are reduced). In either case, analysis of hatchery removal would be a programmatic decision, depending on the success of the overall recovery effort, of which the Proposed Action is a component.

As discussed in Section 1.6 of the Draft EIS and Section 1.1 of the Final EIS that describes project scope, programmatic issues, such as management of genetic integrity, are outside the scope of this hatchery facility-related EIS. However, genetic considerations are integrated into the fish production program through measures that would be taken to assure genetic variety of populations, including: collecting broodstock from across the entire returning adult run using a sliding scale that incorporates both wild and hatchery fish as broodstock based on the total number of returning adults; selecting healthy broodstock irrespective of size (i.e. not selecting only the biggest fish); and allowing hatchery broodstock to spawn naturally above the weir, with the resulting offspring considered wild fish.

006

JUN 3 0 2003

GRANDE RONDE- IMNAHA SPRING CHINOOK PROJECT DEIS

COMMENTS:

On the adequacy of the Environmental Impact Statement:

Mitigation for the loss of wetlands and riparian vegetation due to the construction of a 300 foot levee along the west bank of the Lostine River at the Lostine Adult Collection Facility has not been adequately addressed. This three to five foot high levee is to be made of rock and soil. 006-01

Sedimentation problem due to adding loose soil to the bank have not been addressed. 006-02

The aesthetic impact of the 300 foot levee is not adequately addressed. A statement on page 3-90 of the DEIS claims traffic on the road is light. To the contrary, this road is the most heavily used access to the Eagle Cap Wilderness Area. It can be assumed that individuals visiting the wilderness area are concerned with the natural aesthetics of the wild and scenic river. 006-03

Kendrick Moholt
67075 Lostine River Road
Lostine, OR 97857
(541) 569-2350

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006-01

As described in Sections 4.5.2, 4.5.4 and 4.7.2 of the Draft EIS, the project includes a commitment to conduct formal wetland delineations at the proposed Lostine Adult Collection Facility and the Lostine River Hatchery and to implement any compensatory mitigation based on the outcome of the delineations and applicable regulations. Any necessary mitigation plan(s) would be developed for the loss of wetlands as part of the permitting process through the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act. Areas disturbed by construction, including riparian areas, would be revegetated by native species and managed to prevent the spread of non-native and weed species.

006-02

The potential for site-specific erosion and how to avoid it would be addressed in detailed facility design and erosion and sediment control specifications prepared as part of project construction documents during the final design phase of the project. The project design would include measures to avoid long-term erosion related to the placement of in-water structures as well as temporary, construction-related erosion. Best management practices specified in construction documents would be in accordance with Oregon Department of Transportation's Erosion and Sediment Control Specification 0280. Best management practices would, most likely, be included as conditions of the various permits required for the project. All permit conditions would be followed.

006-03

The text on page 3-90 of the Draft EIS was revised to clarify that the number of potentially affected viewers would be highest during the summer (during periods of the most tourist/recreational use). Although, vegetative screening would also be the greatest during the summer (see Final EIS, Chapter 2.2). Figure 3.9-6 in the Draft EIS shows the existing view from Lostine River Road and a visual simulation of the proposed facilities in the same location. Section 3.9.3.2 (page 3-105) of the Draft EIS explains that several of the new facilities would be screened from public view by the existing vegetation along the roadway and that passing motorists would only have a brief view when traveling northbound. Given the current facilities in the area, and the proposed changes and additions, the project would not substantially alter the area's existing visual character.

007

GRANDE RONDE – IMNAHA SPRING CHINOOK PROJECT DEIS JUL 1 4 2003

Please mail your comments by July 7, 2003

COMMENTS: Lostine River Hatchery

On the adequacy of the Environmental Impact Statement:

~~On the merits of the different alternatives~~:

We are very concerned about the possibillity of your wells lowering the water table and therefore loosing the water in our well We need some ~~[illegible]~~ guarantee that this won't happen. 007-01

~~Preferred ways to mitigate concerns or effects~~:

We are concerned about the erosion problems you say will accure down stream from your dam. In section 3.6.3.3 Lostine River Hatchery 007-02

Other:

You need to aquire a right of way from Ruth Shuman accross a piece of private property where Granger Rd joins the County Road 007-03

Name Ruth Shuman

Address P.O. Box 96 Lostine, OR 97857

Phone/E-Mail Address (optional)

007-01

As referenced in the Draft EIS (Section 3.6.1.1), several groundwater wells were drilled at the proposed Lostine Hatchery site – the Lostine North Well, Lostine South Well, Primary Production Well, and South Observation Well. Information from these wells, and other sources, was used to characterize the area's geology, hydrogeology, and aquifer characteristics through aquifer testing. The results of aquifer testing were summarized in the Draft EIS and presented in detail in two associated technical reports prepared by Montgomery Watson (Report of Lostine Site Production Wells Installation and Testing, February 1999, and Lostine Site Production Wells Supplemental Installation and Testing, February 2001). The purpose of the Montgomery Watson studies was to identify a sustainable supply of good quality, disease-free water for the proposed hatchery.

To determine well production potential and to measure the effect of proposed hatchery groundwater withdrawals, Montgomery Watson conducted aquifer pumping tests in 1999 and 2000/2001. Both sets of tests showed consistent results, although slightly different groups of wells were used. Both sets of tests consisted of standard, step-rate tests (pumping at different rates for short periods of time) to evaluate well efficiency and capacity and to determine optimal pumping rates for the longer, constant-rate tests. In January 1999, the Lostine South Well was pumped at a constant rate of about 400 gpm for 70 hours while water levels were measured in the Lostine South Well and in the Hayward's well in the Lostine subdivision (about 1,500 feet south of the Lostine South Well). Maximum drawdown measured in the Hayward Well was a few inches (0.20 feet) and the well water level recovered quickly after pumping of the Lostine South Well stopped (97 percent recovery in 160 minutes). Montgomery Watson calculated a "worse case" drawdown of about 0.6 feet in the Hayward Well after 2 years of continuous 400 gpm pumping of the Lostine South Well ("worse case" because continuous pumping of site wells is not proposed).

In January 2001, Montgomery Watson conducted a 25-hour constant-rate test in the Lostine North Well, and a 14-day constant-rate test in the hatchery site Primary Production Well. For each of the constant-rate tests, water levels were monitored in three other wells including the South Observation Well (installed near the Lostine subdivision). As in the 1999 test, drawdown in the observation well was minimal (a maximum of about 6 inches) and the water level recovered quickly after pumping stopped. Montgomery Watson calculated that, if all three site supply wells were pumped simultaneously at optimal flow rates, the combined drawdown in the nearest domestic well would be about 1.5 feet after 10 weeks of continuous pumping and approximately 2 feet after 2 years of continuous pumping (for comparison, measurements showed approximately 112 feet of standing water in the Hayward well). Continuous pumping was used to conservatively estimate drawdown because simultaneous, continuous pumping of the three wells would be required for only 2 to 3 months per year under normal hatchery operations and would typically occur during the months of May and June when river levels would be at their highest (FishPro/HDR 2004b), rather than in January when the aquifer pumping tests were conducted and river levels are relatively low. Montgomery Watson concluded that desired groundwater production levels for the hatchery could be sustained and regulated without affecting production in nearby domestic wells.

007-02

The potential for site-specific erosion and how to avoid it would be addressed in detailed facility design and erosion and sediment control specifications prepared as part of project construction documents during the final design phase of the project. The project design would include measures to avoid long-term erosion related to the placement of in-water structures as well as temporary, construction-related erosion. Some localized and increased bank erosion typically occurs when placing structures in an active river system. Proper project design and construction would reduce this erosion as much as possible. Therefore, project design documents would clearly show proper placement for hatchery structures; define areas of clearing and grubbing; specify locations of silt fences; and provide details for sedimentation ponds, access road preparation and maintenance, and any other permanent or temporary erosion control measures. Best management practices specified in construction documents would be in accordance with Oregon Department of Transportation's Erosion and Sediment Control

Specification 0280. Best management practices would, most likely, be included as conditions of the various permits required for the project. All permit conditions would be followed.

007-03

Thank you for the notification regarding site access. If the project proceeds to final design phase, access rights would be investigated and negotiated as necessary. Permission to access the site across private property would be sought if access via public right-of-way or easement is not possible.

008

JUL 1 4 2003

GRANDE RONDE – IMNAHA SPRING CHINOOK PROJECT DEIS

Please mail your comments by July 7, 2003

COMMENTS:

On the adequacy of the Environmental Impact Statement:

Impact to local residents has been minimized by the report and would have a greater impact than stated due to traffic, noise, dust, danger to animals (our dog was run over by a fish hatchery truck) – These elements would also affect local deer and other wild life – There is also local concern 008-01

On the merits of the different alternatives:

regarding water taken by wells that negatively impacts available water to land owners – Someone needs to address why McClain's land has dried out and reassure, with facts, that water availability will not be impacted 008-02

Preferred ways to mitigate concerns or effects:

Also – there are concerns about log jams at the water intake weir + coffer dam 008-03

The size of the water pipe taking water from the river is larger than the pipe to return the water to the river – (one person's concern) 008-04

Other:

We are generally in favor of the hatchery if it will, indeed, return native Salmon to the river – If the concerns of local residents are addressed openly and honestly than I believe it can be a positive experience – 008-05

Name Christina Geyer + Chris Geyer

Address 64705 Lostine River Rd

Phone/E-Mail Address (optional) ccgeyer@coni.com

008-01

Sections 3.2 through 3.17 of the Draft EIS describe the anticipated impacts to the natural and built environment as a result of the proposed project, including construction, operation, and cumulative effects on wildlife (Section 3.3), transportation (Section 3.10), air quality (Section 3.12), noise (Section 3.13), and public safety (Section 3.14). Although the proposed Lostine River Hatchery has the greatest potential to affect local residents given its proximity to homes and the current undeveloped nature of the site, it is the intent of the hatchery co-managers to be good neighbors within the community. Therefore, the proposed project includes use of best management practices, activities, and other measures such as shielding facility lights, planting of screening vegetation, controlling site dust, using building materials of colors and types to blend with existing structures, and limiting hours of construction to minimize impacts on people as well as the natural environment (plants, wildlife, water quality, etc.).

Section 3.10.3 of the Draft EIS, as revised for the Final EIS (Section 2.3), includes a discussion of the potential traffic impacts on nearby roads and residents. Traffic would increase at all sites temporarily during construction. At the Lostine River Hatchery, long-term impacts to traffic would be associated with the on-site residences, local employees, supply trips, and fish transport trips. For about 3 weeks in January, five to eight additional round-trips per day would be made by temporary workers employed at the hatchery (Zollman 2003, personnel communication). The number of trips to and from the hatchery and associated impacts on neighbors would be about the same whether the hatchery was located on the proposed site or across the river.

008-02

As referenced in the Draft EIS (Section 3.6.1.1), several groundwater wells were drilled at the proposed Lostine Hatchery site – the Lostine North Well, Lostine South Well, Primary Production Well, and South Observation Well. Information from these wells, and other sources, was used to characterize the area's geology, hydrogeology, and aquifer characteristics through aquifer testing. The results of aquifer testing were summarized in the Draft EIS and presented in detail in two associated technical reports prepared by Montgomery Watson (Report of Lostine Site Production Wells Installation and Testing, February 1999, and Lostine Site Production Wells Supplemental Installation and Testing, February 2001). The purpose of the Montgomery Watson studies was to identify a sustainable supply of good-quality, disease-free water for the proposed hatchery.

Montgomery Watson calculated that, if all three site supply wells were pumped simultaneously at optimal flow rates, the combined drawdown in the nearest domestic well would be about 1.5 feet after 10 weeks of continuous pumping and approximately 2 feet after 2 years of continuous pumping (for comparison, measurements showed approximately 112 feet of standing water in the Hayward well). Continuous pumping was used to conservatively estimate drawdown because simultaneous, continuous pumping of the three wells would be required for only 2 to 3 months per year under normal hatchery operations and would typically occur during the months of May and June when river levels would be at their highest (FishPro/HDR 2004b), rather than in January when the aquifer pumping tests were conducted and river levels are relatively low. Montgomery Watson concluded that desired groundwater production levels for the hatchery could be sustained and regulated without affecting production in nearby domestic wells.

The exact cause of the McClain's land drying out is not known. Contributing factors may include several years of drought and the drainage structures placed in the field directly below the pond, which now drain previously backed-up surface water (water that could have been "feeding" the pond). The three supply wells drilled at the proposed Lostine River Hatchery site (Lostine North Well, Lostine South Well, and the Primary Production Well) have not been pumped since aquifer testing was last performed in January 2001, and it is unlikely that these wells could be associated with any recent changes in surface water or groundwater levels or supply.

Future production from Lostine River Hatchery wells would have some impact on adjacent, hydraulically connected surface and groundwater during periods of pumping (McMillen 2004, personal communication).

However, if this project is approved for funding, the Northeast Oregon Hatchery co-managers would apply for water rights permits from the Oregon Water Resources Department for all surface water and groundwater withdrawals (see Table 4.7-1 in the Draft EIS), a process which includes public review of the application, and possible additional testing and assessment of effects of withdrawals on other nearby water users.

008-03

A log boom would be placed to protect the hatchery intake structure from logs and other debris. The pneumatically-controlled weir would minimize log build up and would be deflated when not in use. The weir would also deflate automatically if debris or high run-off caused surface water levels to rise to a predetermined level (set to avoid water backing up onto adjacent property). The weir would also be monitored for build up of debris, especially during periods of fish migration and, if necessary, hatchery operators would remove and properly dispose of such debris.

008-04

Although the return pipe would be smaller than the intake pipe, it would be capable of delivering the same volume of water back to the river.

008-05

Comment acknowledged; your support of the proposed project is appreciated. It is hoped that this environmental review process and future facility planning efforts would continue to foster mutual understanding and positive results for the project sponsors and the local community.

009

JUL 1 4 2003

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
500 NE Multnomah Street, Suite 356
Portland, Oregon 97232-2036

IN REPLY REFER TO:

ER03/486

July 3, 2003

Mr. Mickey Carter
Bonneville Power Administration
Communications - DM-7
P.O. Box 12999
Portland, Oregon 97212

Dear Mr. Carter,

The Department of the Interior (Department) has reviewed the Draft Environmental Impact Statement (DEIS) for the Bonneville Power Administration, Grande Ronde - Imnaha Spring Chinook Hatchery Project, Northeast Oregon, Wallowa and Union Counties, Oregon. The Department offers the following for use in developing the Final Environmental Impact Statement (FEIS):

Pages 3-74 and 3-75: The DEIS describes constrictions of the river channel resulting from implementation of the proposed action at the Lostine River Hatchery (page 3-74, paragraph 2) and at the Imnaha Final Rearing Facility (page 3-75, paragraph 4 and 5); however, the document describes increased flooding potential in a generalized and qualitative manner, and only in terms of impacts to facility structures. The Department recommends that the FEIS include a hydraulic analysis which quantitatively describes and/or maps the extent of potential flooding and addresses impacts to fishery structures and infrastructure, as well as impacts to the environment beyond the fishery boundaries. We also recommend the analysis include predicted height and extent of flood waters, and the potential for flooding to modify or damage the stream channel, or scour the supports for the small-vehicle bridge. Should you have any questions regarding this recommendation, please contact Mr. James Devine with the U.S. Geological Survey's National Center in Reston, Virginia, at (703)648-6832. 009-01

Assistance with consultation that may be necessary under Section 7 of the Endangered Species Act can be obtained through Mr. Gary Miller, U.S. Fish and Wildlife Service, LaGrande Field Office, LaGrande, Oregon, (541)962-8584.

We appreciate the opportunity to comment.

Sincerely,

for Preston Sleeger
Regional Environmental Officer

009-01

As shown in Figure 2-1 of the Final EIS (excerpted from a Federal Emergency Management Agency Map), most of the proposed Lostine River Hatchery facilities would be located outside the 100-year floodplain of the Lostine River. The intake, weir, and fish ladder would be located within the floodplain in a wide section of the river. Montgomery Watson conducted a preliminary hydraulic analysis of the river and proposed facilities in 2000 to determine water surface profiles through the project reach. The results of that analysis indicated that proposed hatchery facilities would not change the river cross section or cause flooding. A more refined hydraulic analysis would be conducted as part of the final hatchery design process (McMillen 2004, personal communication).

The Imnaha Final Rearing Facility is no longer proposed for construction (see Section 1.5 in the Final EIS). The activity proposed at this site is limited to removal of an existing Acrow (steel panel) bridge and concrete bridge abutments. The bridge panels would be reinstalled at the Lostine Adult Collection Facility and the concrete bridge abutments would be hauled off-site for disposal. Removing the bridge and its concrete abutments would slightly reduce channel constriction at this location.

010

JUNE 30, 2003

JUL 1 4 2003

GRANDE RONDE – IMNAHA SPRING CHINOOK PROJECT DEIS

Please mail your comments by July 7, 2003

COMMENTS:

On the adequacy of the Environmental Impact Statement:

I AM GREATLY CONCERNED ABOUT MY WATER BEING NEGATIVLY IMPACTED. 010-01

THE NOISE pollution — 010-02

THE Light pollution — 010-03

On the merits of the different alternatives:

LOCATE THIS PROJECT AWAY from ANY DENSELY SETTLED ~~DIST~~ AREA, & DO AWAY WITH OUR COLLECTIVE ANGER. 010-04

Preferred ways to mitigate concerns or effects:

RUN A TEST DRAWDOWN WHEN THE RIVER IS AT IT'S LOWEST AND PUT GAUGES ON ALL OUR WELLS/SPRINGS OVER A PERIOD of AT LEAST 2 OR 3 WEEKS. 010-05

Other: THIS TYPE of COMMERCIAL PROJECT SHOULD NEVER BE IN THE MIDDLE OF A — RESIDENTIAL AREA!! 010-06

THRU THE "POW WOW" & OTHER POSITIVE REPRESENTATION of THE NEZ PERCE WERE "ARE/WERE" MAKING INROADS TO UNDERSTANDING & ACCEPTING OUR INDIAN BROTHERS. NOW ALL I HEAR IS ANGER & PREJUDICE DIRECTED AGAINST "THE INDIANS" & THE PROPERTY OWNERS THAT ARE "COLLECTING THEIR 30 PIECES OF SILVER" – REMINDS ME OF THE "GOOD OLD DAYS" of THE DARK AGES 010-07

Name MARY KAY HOWEY

Address 64989 LOSTINE RIV. RD., LOSTINE, OR 97857

Phone/E-Mail Address (optional)

010-01

As referenced in the Draft EIS (Section 3.6.1.1), several groundwater wells were drilled at the proposed Lostine Hatchery site – the Lostine North Well, Lostine South Well, Primary Production Well, and South Observation Well. Information from these wells, and other sources, was used to characterize the area's geology, hydrogeology, and aquifer characteristics through aquifer testing. The results of aquifer testing were summarized in the Draft EIS and presented in detail in two associated technical reports prepared by Montgomery Watson (Report of Lostine Site Production Wells Installation and Testing, February 1999, and Lostine Site Production Wells Supplemental Installation and Testing, February 2001). The purpose of the Montgomery Watson studies was to identify a sustainable supply of good quality, disease-free water for the proposed hatchery.

To determine well production potential and to measure the effect of proposed hatchery groundwater withdrawals, Montgomery Watson conducted aquifer pumping tests in 1999 and 2000/2001. Both sets of tests showed consistent results, although slightly different groups of wells were used. Both sets of tests consisted of standard, step-rate tests (pumping at different rates for short periods of time) to evaluate well efficiency and capacity and to determine optimal pumping rates for the longer, constant-rate tests. In January 1999, the Lostine South Well was pumped at a constant rate of about 400 gpm for 70 hours while water levels were measured in the Lostine South Well and in the Hayward's well in the Lostine subdivision (about 1,500 feet south of the Lostine South Well). Maximum drawdown measured in the Hayward Well was a few inches (0.20 feet) and the well water level recovered quickly after pumping of the Lostine South Well stopped (97 percent recovery in 160 minutes). Montgomery Watson calculated a "worse case" drawdown of about 0.6 feet in the Hayward Well after 2 years of continuous 400 gpm pumping of the Lostine South Well ("worse case" because continuous pumping of site wells is not proposed).

In January 2001, Montgomery Watson conducted a 25-hour constant-rate test in the Lostine North Well, and a 14-day constant-rate test in the hatchery site Primary Production Well. For each of the constant-rate tests, water levels were monitored in three other wells including the South Observation Well (installed near the Lostine subdivision). As in the 1999 test, drawdown in the observation well was minimal (a maximum of about 6 inches) and the water level recovered quickly after pumping stopped. Montgomery Watson calculated that, if all three site supply wells were pumped simultaneously at optimal flow rates, the combined drawdown in the nearest domestic well would be about 1.5 feet after 10 weeks of continuous pumping and approximately 2 feet after 2 years of continuous pumping (for comparison, measurements showed approximately 112 feet of standing water in the Hayward well). Continuous pumping was used to conservatively estimate drawdown because simultaneous, continuous pumping of the three wells would be required for only 2 to 3 months per year under normal hatchery operations and would typically occur during the months of May and June when river levels would be at their highest (FishPro/HDR 2004b), rather than in January when the aquifer pumping tests were conducted and river levels are relatively low. Montgomery Watson concluded that desired groundwater production levels for the hatchery could be sustained and regulated without affecting production in nearby domestic wells.

010-02

Sections 3.2 through 3.17 of the Draft EIS describe the anticipated impacts to the natural and built environment as a result of the proposed project, including construction, operation, and cumulative effects of noise (Section 3.13). Although the proposed Lostine River Hatchery has the greatest potential to affect local residents given its proximity to homes and the current undeveloped nature of the site, it is the intent of hatchery co-managers to be good neighbors within the community. Therefore, the proposed project includes use of best management practices, activities, and other measures to avoid prolonged incidents of loud or excessive noise during construction and operation. During construction, noise-generating activities would be controlled by limiting the hours of construction. Measures to avoid loud or excessive noise during facility operations would include enclosing pumps and generators within buildings, and locating new facilities as far away as feasible from nearby residences.

010-03

See response 010-02. Section 3.9.3 of the Draft EIS presents a range of actions that would be taken to control light emitted from new facilities, including installation of downward directed, non-glare light fixtures and screening of new lighting with buildings and vegetation, where possible.

010-04

As discussed in Section 4.7.1 of the Draft EIS, both Union County and Wallowa County zoning allow for hatchery facilities in the areas proposed. All applicable permits for the proposed structures would be obtained prior to project construction.

As stated in the Draft EIS (Section 2.3), Section 1.8 of the Final EIS, and the NEOH Master Plan (Ashe et al. 2000), several other potential sites in the Imnaha and Grande Ronde Subbasins were evaluated, but dropped from further consideration due to a variety of reasons, including inadequate water supply or quality, lack of available space, inadequate power supply, and/or unavailability for acquisition. One suitable site was identified on the Lostine River, downstream of the proposed Lostine River Hatchery site. This site, at the Strathearn Ranch (Grande Ronde Subbasin site 22, Draft EIS, Table 1-1), met the project requirements, but the owner ultimately decided not to make the property available. Project team members also investigated, and eliminated from further consideration, possible sites on the west side of the Lostine River. The one feasible west-side site was dropped from further consideration because it would require substantially more site development (road improvements, bridge replacement, a powerline across the river, and extensive site clearing and grading); have a potentially greater impact to adjacent landowners (immediately adjacent to one residence and requiring several other residents to drive through hatchery facilities to access their property); and result in more disruption and potential impact to the natural environment (McMillen 2003, personal communication).

010-05

See response 010-01; aquifer pumping tests were conducted in January 1999, December 2000, and January 2001. According to U.S. Geological Survey stream gauging data, the lowest mean monthly streamflows in the Lostine River occur in January and February.

Also, if this project is approved for funding, the hatchery co-managers would apply for water rights permits from the Oregon Water Resources Department for all surface water and groundwater withdrawals (see Table 4.7-1 in the Draft EIS), a process which includes public review of the application, and possible additional testing and assessment of the potential effects of withdrawals on other nearby water users.

010-06

The Northeast Oregon Hatchery project is not a commercial project, that is, no direct economic benefit would come to any of the project's sponsors or hatchery co-managers. This project is intended to help in the conservation and recovery of an important and threatened salmon species. Although the facilities would have a few "industrial appearing" components (concrete raceways, cleaning basin, operations building, and pumping station), the Lostine River Hatchery and other proposed facilities would be constructed of materials consistent with other buildings in the vicinity and trees and vegetation would be used, where possible, to screen facilities from adjacent public and private properties (as described in Draft EIS Section 3.9.3). Also, please see response 010-04.

010-07

As described in Section 1.3 of the Final EIS, BPA is the lead agency for purposes of National Environmental Policy Act (NEPA) compliance, but several other agencies and tribes have worked closely with the BPA to develop the Proposed Action described in this EIS. The Nez Perce Tribe and the Confederated Tribes

of the Umatilla Indian Reservation are co-managers (along with the Oregon Department of Fish and Wildlife) of the spring/summer chinook conservation and recovery program in Northeast Oregon, and are the primary cooperating agencies for this EIS. The U.S. Fish and Wildlife Service, NOAA Fisheries, Forest Service, and other managers of habitat, fisheries, and hatcheries in Northeast Oregon were consulted during the development of the Proposed Action and this EIS. These tribes and agencies, as well as other local, state, and federal agencies and many local landowners are committed to working together to help in the protection, mitigation, conservation, and recovery of an important and threatened salmon species. It is unfortunate that, in light of the purpose and need for the project and the extensive cooperation involved in its planning, others may not support its intentions or its partners.

JUL 1 4 2003

Grande Ronde-Imnaha Spring Chinook Project DEIS
On the adequacy of the EIS: I believe the study on the water issue is biased. From the beginning, after the first well was drilled, I complained that a small pond on our property had been affected. On page 3-23 the EIS states "Operation of the prime production well may impact a nearby pond, a discharge stream channel and a side channel during low flows, but this channel is not used as spawning habitat. A seven day test of the prime production well has shown no drawdown from the Lostine River." On page 3-71 the EIS states "Production can apparently be sustained for long term pumping without affecting nearby domestic wells." Neither of those statements address my complaint of the ground water being affected. On page 3-62 the EIS states "about 3,000 - 5,000 square feet of wetland area would be lost at the outfall and primary production well locations." My concern is with the ground water table that has already been altered, overtime and the loss of the wetland our adjacent property will in time, also involve changes to plant composition. I believe the damage to the aquifer has already been done. On page 3-123 the EIS states "the Proposed action may yet result in adverse impacts to wetlands that cannot be avoided." I believe at the rate they expect to pump water for the hatchery, the water once fed by the subterranean

011-01

JUL 1 4 2003

could be lost forever. 011-01 (con't.)

At the "BPA" open house on June 12th 2003 local landowners outrage showed they do not feel like this is a suitable location for the Lostine River Hatchery. 011-02 A commercial enterprise will never be environmentally friendly in a rural residential area.

Jan E. McLain 6-27-03
PO Box 63
Lostine OR 97857

011-01

As referenced in the Draft EIS (Section 3.6.1.1), several groundwater wells were drilled at the proposed Lostine Hatchery site – the Lostine North Well, Lostine South Well, Primary Production Well, and South Observation Well. Information from these wells, and other sources, was used to characterize the area's geology, hydrogeology, and aquifer characteristics through aquifer testing. The results of aquifer testing were summarized in the Draft EIS and presented in detail in two associated technical reports prepared by Montgomery Watson (Report of Lostine Site Production Wells Installation and Testing, February 1999, and Lostine Site Production Wells Supplemental Installation and Testing, February 2001). The purpose of the Montgomery Watson studies was to identify a sustainable supply of good quality, disease-free water for the proposed hatchery.

To determine well production potential and to measure the effect of proposed hatchery groundwater withdrawals, Montgomery Watson conducted aquifer pumping tests in 1999 and 2000/2001. Both sets of tests showed consistent results, although slightly different groups of wells were used. Both sets of tests consisted of standard, step-rate tests (pumping at different rates for short periods of time) to evaluate well efficiency and capacity and to determine optimal pumping rates for the longer, constant-rate tests. In January 1999, the Lostine South Well was pumped at a constant rate of about 400 gpm for 70 hours while water levels were measured in the Lostine South Well and in the Hayward's well in the Lostine subdivision (about 1,500 feet south of the Lostine South Well). Maximum drawdown measured in the Hayward Well was a few inches (0.20 feet) and the well water level recovered quickly after pumping of the Lostine South Well stopped (97 percent recovery in 160 minutes). Montgomery Watson calculated a "worse case" drawdown of about 0.6 feet in the Hayward Well after 2 years of continuous 400 gpm pumping of the Lostine South Well ("worse case" because continuous pumping of site wells is not proposed).

In January 2001, Montgomery Watson conducted a 25-hour constant-rate test in the Lostine North Well, and a 14-day constant-rate test in the hatchery site Primary Production Well. For each of the constant-rate tests, water levels were monitored in three other wells including the South Observation Well (installed near the Lostine subdivision). As in the 1999 test, drawdown in the observation well was minimal (a maximum of about 6 inches) and the water level recovered quickly after pumping stopped. Montgomery Watson calculated that, if all three site supply wells were pumped simultaneously at optimal flow rates, the combined drawdown in the nearest domestic well would be about 1.5 feet after 10 weeks of continuous pumping and approximately 2 feet after 2 years of continuous pumping (for comparison, measurements showed approximately 112 feet of standing water in the Hayward well). Continuous pumping was used to conservatively estimate drawdown because simultaneous, continuous pumping of the three wells would be required for only 2 to 3 months per year under normal hatchery operations and would typically occur during the months of May and June when river levels would be at their highest (FishPro/HDR 2004b), rather than in January when the aquifer pumping tests were conducted and river levels are relatively low. Montgomery Watson concluded that desired groundwater production levels for the hatchery could be sustained and regulated without affecting production in nearby domestic wells.

Montgomery Watson studies also indicate that there is a hydraulic connection between the aquifer tapped by the site wells and the Lostine River and that water stage in the river has an influence on water levels in site wells. The final design phase of the project would likely include additional aquifer pumping tests across a range of river conditions to refine water withdrawal plans to be implemented during hatchery operations (McMillen 2004, personal communication).

Also, if this project is approved for funding, the hatchery co-managers would apply for water rights permits from the Oregon Water Resources Department for all surface water and groundwater withdrawals (see Table 4.7-1 in the Draft EIS), a process which includes public review of the application, and possible additional testing and assessment of the potential effects of withdrawals on other nearby water users.

What has happened with ground water levels at and around the Lostine River Hatchery site (the existing situation) was not a topic of specific investigation carried out in support of this EIS. Contributing factors may include (among others) several years of drought which affects river flow and ground water levels, and the placement of drainage structures in the field directly below the pond (i.e., these drainage structures now drain previously backed-up surface water that could have been "feeding" the pond). The three supply wells drilled at the proposed Lostine River Hatchery site (Lostine North Well, Lostine South Well, and the Primary Production Well) have not been pumped since aquifer testing was last performed in January 2001, and it is improbable that these wells could be associated with any recent changes in surface water or groundwater levels or supply. Although it is probable that pumping from the wells during times of low river flow (which could affect groundwater recharge rate) could impact groundwater levels, pumping is planned to occur during May and June when flows are typically at their highest (FishPro/HDR 2004b). So, no discernable affect to adjacent groundwater and dependent vegetation is anticipated to result from pumping the wells.

Plant communities do change with changes in site water availability or supply. The adverse impacts to wetlands referred to on page 3-123 of the Draft EIS, however, refer to losses due to direct disturbance during construction and facility placement, not due to any anticipated changes in site hydrology. As discussed in the Draft EIS (Section 3.4.3.3), wetlands at the proposed Lostine River Hatchery would be directly affected by construction of the outfall and access road and piping in the vicinity of the primary production well. As described in Sections 4.5.2, 4.5.4 and 4.7.2 of the Draft EIS, the project includes a commitment to conduct formal wetland delineations at the proposed Lostine Adult Collection Facility and the Lostine River Hatchery and to implement any compensatory mitigation based on the outcome of the delineations and applicable regulations. Any necessary mitigation plan(s) would be developed for the loss of wetlands as part of the permitting process through the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act.

011-02

The Northeast Oregon Hatchery project is not a commercial project, that is, no direct economic benefit would come to any of the project's sponsors or hatchery co-managers. This project is intended to help in the conservation and recovery of an important and threatened salmon species. As discussed in Section 4.7.1 of the Draft EIS, both Union County and Wallowa County zoning allow for hatchery facilities in the areas proposed. All applicable permits would be obtained for the project prior to construction.

As stated in the Draft EIS (Section 2.3), Section 1.8 of the Final EIS, and the NEOH Master Plan (Ashe et al. 2000), several other potential sites in the Imnaha and Grande Ronde Subbasins were evaluated, but dropped from further consideration due to a variety of reasons, including inadequate water supply or quality, lack of available space, inadequate power supply, and/or unavailability for acquisition. One suitable site was identified on the Lostine River, downstream of the proposed Lostine River Hatchery site. This site, at the Strathearn Ranch (Grande Ronde Subbasin site 22, Draft EIS, Table 1-1), met the project requirements, but the owner ultimately decided not to make the property available. Project team members also investigated, and eliminated from further consideration, possible sites on the west side of the Lostine River. The one feasible west-side site was dropped from further consideration because it would require substantially more site development (road improvements, bridge replacement, a powerline across the river, and extensive site clearing and grading); have a potentially greater impact to adjacent landowners (immediately adjacent to one residence and requiring several other residents to drive through hatchery facilities to access their property); and result in more disruption and potential impact to the natural environment (McMillen 2003, personal communication).

012

JUL 1 4 2003

United States Department of Agriculture
Forest Service
Pacific Northwest Region
333 SW First Avenue (97204)
PO Box 3623
Portland, OR 97208-3623
503-808-2468

File Code: 2350
Date: July 7, 2003

Ms. Therese B. Lamb
Acting Vice-President for Environment, Fish, Wildlife
Bonneville Power Administration
P.O. Box 3612
Portland, OR 97208-3621

Dear Ms. Lamb:

Thank you for the opportunity for my staff to discuss Forest Service participation in the Grande Ronde – Imnaha Spring Chinook Hatchery Project with Bonneville Power Administration (BPA) Fish and Wildlife staff, Nancy Weintraub, Mickey Carter and Kenneth Kirkman (June 26). As a result of this meeting, the Forest Service agreed to:

- Respond to the *Northeast Oregon Hatchery Program, Grande Ronde -- Imnaha Spring Chinook Hatchery Project, Draft Environmental Impact Statement* (May 2003) (NEOH DEIS) within the public comment period.
- Prepare a determination under Section 7(a) of the Wild and Scenic Rivers Act (WSRA) by August 11 for three affected wild and scenic rivers (WSR) -- Grande Ronde, Imnaha, and Lostine.

BPA agreed to:

- Make staff readily available to facilitate development of my determination.
- Address concerns identified by the Forest Service in response to the NEOH DEIS and through subsequent WSRA Section 7(a) determination in the Final Environmental Impact Statement and Record of Decision. 012-01

Although our request for funding for Forest Service participation is unresolved, resource specialists in my office have done sufficient review of the NEOH DEIS to more fully detail our principal concerns. These concerns were identified early in the planning process and have been consistently noted in informal and formal coordination between our agencies. As the federal river administrator for portions of the Grande Ronde, Lostine, and Imnaha WSRs I am responsible to protect and enhance their values, and to evaluate and determine the potential harmful effects of proposed water resources projects.

I describe my concerns in two parts, reflecting the applicable standard of Section 7(a):

- Direct and adverse effects to the values of the Imnaha WSR and,
- Invade or unreasonably diminish scenery, recreation, fish or wildlife values of the Grande Ronde and Lostine WSRs.

Direct and Adverse Effects Standard (Imnaha WSR)

The WSRA prohibits any federal agency from assisting in the construction of any water resources project located within a designated river corridor determined by the river-administering agency to have a direct and adverse effect on the values for which the river was added to the National System. These values are the river's free-flowing condition, water quality and its outstandingly remarkable values (ORVs). 012-01 (con't.)

Free-flowing is defined in Section 16(b) of the WSRA as "existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway." At the existing Satellite facility, proposed construction within the riverbed and its banks includes an additional water intake structure, new fish ladder, and modification of the existing weir, and riprap associated with each. At the new Final Rearing facility, in-channel construction includes intake and outfall structures and associated riprap, and relocation of an existing bridge. 012-02

In addition to potential effects to the river's free-flowing condition, I also have concerns relative to two of the river's ORVs -- scenery and fish. It appears that with proposed mitigation, and subsequent review by the Wallowa-Whitman National Forest Landscape Architect, the facilities can be designed to maintain the scenic integrity of the two sites. Relative to fish, my concerns are threefold: passage, habitat effects, and genetic/competitive interaction. 012-03

Fish Passage --- Information in the NEOH DEIS is inadequate to ascertain the extent of delay and handling of non-target fish and non-selected wild spring Chinook when the weir/trap is in operation. It is also unclear whether volitional passage is assured for all species at all life stages when the trap is not in operation. Flow diversion, particularly at the Imnaha Final Rearing facility, appears to create conditions impeding migration of adult bull trout, summer steelhead and other species/life stages under some flow conditions. Additional information is needed relative to monitoring of passage in the diversion reach and how flows will be augmented, if necessary. Therefore, the extent of impact on these at-risk populations cannot be determined. 012-04

Habitat Effects -- Riparian, floodplain and in-stream habitat features at several locations on both project areas will be altered by construction and subsequent channel adjustments due to created/removed structures and fill. The total extent of change to channel conditions is difficult to determine with the information provided. There appear to be opportunities to mitigate the localized impacts of aquatic and riparian habitat disturbance, simplification or loss on the project sites, but any additional habitat improvements integrated into project design are not apparent. 012-05

If valid State water rights are established for flow diversion to both projects, there remains a concern with the impacts of flow reduction on fish habitat. Seasonal removal of between 12-50 percent of flow along 1200 feet at the Final Rearing site and doubling of the existing flow diversion at the Satellite facility will reduce the quantity and quality of aquatic habitat in these reaches. The NEOH DEIS does not quantify impact or identify mitigative measures.

Genetic/Competitive Interactions -- Hatchery/supplementation programs pose risk to wild populations from both interbreeding and competitive interactions. These risks, plus 012-06

recommendations for addressing these risks, are thoroughly discussed in the Independent Scientific Advisory Board (ISAB) Review of Salmon and Steelhead Supplementation, June 2003. The report recommends "explicit experimental design" for supplementation projects, coupled with monitoring and assessment program. Details for risk management for the NEOH project as a whole, or specifically for the Imnaha, are not included in the DEIS. Clarification is needed on how all risks of supplementation identified by ISAB (Independent Science Advisory Board), ISRP (Independent Science Review Panel), NWPPC (Northwest Power Planning Council), and others, are addressed. Monitoring measures designed to ensure protection of wild populations needs to be more explicit. 012-06 (con't.)

Invade or Unreasonably Diminish Standard (Grande Ronde and Lostine WSRs)

Modifications are proposed to the existing Lookingglass Hatchery, located approximately two miles from the upper terminus of the Grande Ronde WSR. Two new facilities are proposed on the Lostine WSR -- a hatchery and adult collection facility, approximately one and five miles, respectively, below the lower terminus of the designated portion of the river. At neither of these sites are any project-related facilities proposed within the designated river corridors; therefore, they do not invade the designated river areas.

This standard also requires the Forest Service to consider whether there is any diminution to the scenery, recreation, fish or wildlife values within the designated rivers. I have not identified any effect from the Lookingglass facility and Lostine facilities to the scenery, recreation or wildlife within the designated rivers. These facilities have the potential to affect the fish resource in the designated portions of the rivers as described with my detailed concerns about the Imnaha facilities. 012-07

With additional information relative to my concerns, it may be possible for the Forest Service to recommend measures to eliminate adverse effects. The WSRA does not, however, allow for me to balance the perceived benefits of a water resources project with adverse effects. Congress has reserved that authority:

> "No department or agency of the United States shall recommend authorization of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration, or request appropriations to begin construction of any such project, whether heretofore or hereafter authorized, without advising the Secretary of the Interior or the Secretary of Agriculture, as the case may be, in writing of its intention to do so at least 60 days in advance, and without specifically reporting to the Congress in writing of its intention so to do at the time it makes its recommendation or request in what respect construction of such project would be in conflict with the purposes of the Act and would affect the component and the values to be protected by it under this Act."

To expedite a meaningful sharing of information, I encourage you to organize and facilitate an on-site meeting of key technical staff to discuss these concerns. An on-site meeting will clarify my interpretation of existing information and also identify additional information necessary for me to make my finding under Section 7(a), and for the Forest Supervisor to make her decision 012-08

relative to issuance of a new special-use permit for the modified Imnaha Satellite facility. I also intend to coordinate my review with other fish managing agencies and the tribes to more fully understand the project proposals. My agency's contacts continue to be Susan Sater (Regional Office, 503-808-2449) and Tom Glassford (Wallowa-Whitman National Forest, Eagle Cap Ranger District, 541-426-5537). Bob Rock is the contact regarding specific fisheries information (Wallowa-Whitman National Forest, 541-523-1242). I appreciate your interest in working together to best meet our mutual interests and protect the values of these WSRs. 012-08 (con't.)

Sincerely,

LINDA GOODMAN
Regional Forester

cc:
Dave Johnson, NezPerce Tribal Fisheries POB #365, Lapwai, ID 83540
Becky Ashe, NPT Project Leader NezPerce Tribe, POB #365, Lapwai, ID 83540
Dan Herrig, LSCRP Coordinator, USFWS, LSRCP Office, 1387 South Vinnell Way, Suite 343, Boise ID 83709
Deb Martin, NMFS Fishery Biologist, Hatchery, Snake River Office, 10215 West Emerald Street, Boise, ID 83709
Gary Miller, USFWS, La Grande Field Office, 3502 Highway 20, La Grande, WA 97805
Randy Tweton, USFWS, La Grande Field Office, 3502 Highway 20, La Grande, WA 97805
RLM - Susan Sater
NR - Jeff Uebel, Alan G Christensen
W-W NF/Eagle Cap RD - Tom Glassford
W-W NF - Robert W Rock

012-01

Comment acknowledged. BPA and the Forest Service will work to address Wild and Scenic River Act (WSRA) issues as the Forest Service reviews this EIS and prepares a WSRA Section 7(a) determination. Once BPA receives the WSRA Section 7 (a) determination, BPA will issue a Record of Decision documenting whether to proceed with final design and project implementation.

012-02

A new fish ladder is no longer proposed at the Imnaha Satellite Facility (see Section 1.6 in the Final EIS). After further study, co-managers developed a way to improve existing fish ladder function (by using additional attraction water), thereby reducing the amount of in-water work proposed at this facility.

The Imnaha Final Rearing Facility is no longer proposed for construction (see Section 1.5 in the Final EIS). After further study, the project co-managers devised a way to use the other proposed facilities to accommodate the functions intended for the Imnaha Final Rearing Facility. The activity proposed at this site is limited to removal of an existing Acrow (steel panel) bridge and concrete bridge abutments and restoration of areas affected by this activity. The bridge panels would be reinstalled at the Lostine Adult Collection Facility and the bridge abutments would be hauled off-site for disposal.

012-03

Since the Imnaha Final Rearing Facility is no longer proposed for construction, the activity proposed at this site is limited to removal of an existing Acrow panel bridge and concrete bridge abutments, and restoration of areas affected by this activity to a less developed and more natural appearing scenic condition.

Through its authority under the WSRA and its discretion to re-authorize the existing Special Use Permit for the Imnaha Satellite Facility, the Forest Service would decide if proposed changes would be congruent with the existing visual character of the site. A preliminary assessment provided in Forest Service comment 020-15 seems to suggest that proposed modifications would not be noticeable to most visitors.

Refer to responses 12-04, -05, and -06 relative to Forest Service concerns regarding fish passage, habitat effects, and genetic/competitive interaction.

012-04

As discussed in the Draft EIS Section 3.2.3.2 (as amended in the Final EIS Section 2.3) and Biological Assessment Section 4.2 (previously provided to the Forest Service), the proposed Imnaha Satellite Facility weir replacement would be designed to efficiently and safely accommodate migrating fish. The replacement weir would have a clear bar spacing of 1-1/4 inches, which would allow juvenile fish to pass directly through the weir when the weir is in operation (Grassel 2003). Also, when in operation, replacement weir panels could be lowered individually to allow downstream passage of steelhead kelts and bull trout (not possible with the existing weir at the site). When not in operation, the replacement weir would lie flat under the water to allow for easier downstream fish passage.

Replacement weir angle and the proposed increased attraction flow would lead migrating fish to the ladder (existing structure) entrance with minimal delay and would likely benefit target spring/summer chinook and other species through improved attraction to the fish ladder. Improved attraction would result in less migratory delay and a decreased likelihood of downstream spawning than under current conditions (due to insufficient attraction flow from the existing fish ladder, some chinook that would normally spawn farther upstream have spawned downstream of the existing facility). The final design of the replacement weir would be coordinated with NOAA Fisheries and U.S. Fish and Wildlife Service using published criteria.

As under current conditions, future operations would include daily monitoring and maintenance of the weir during the time the weir is being used to collect fish. During fish collection periods, staff would be stationed at the site 24 hours a day, 7 days a week. Non-target fish would be held on-site for no more than 24 hours. All non-target fish would be observed without anesthesia and allowed to pass above the weir.

The Imnaha Final Rearing Facility is no longer proposed for construction. See response 012-02.

012-05

Section 3.2.3.2 of the Draft EIS summarizes the consequences of the Proposed Action on riparian, floodplain, and instream habitat features and flow diversion. Potential project impacts on the river channel are discussed in detail in the project Biological Assessment for all project facilities (Biological Assessment, Section 4.2.2, Channel Alterations subsections, previously provided to the Forest Service). At the Imnaha Satellite Facility, erosion control methods such as rock placement and/or revegetation would be used to protect the river banks. The proposed project would maintain, as much as possible, the existing natural riparian zone of trees and shrubs along the bank of the Imnaha River, by containing construction and staging activities within identified work areas. Proposed instream structures would include an expanded surface water intake (with upgraded intake screens to meet NOAA Fisheries criteria) and a diffuser chamber and auxiliary water supply line to supplement attraction flow in the existing fish ladder. All instream work (including weir replacement) would require the use of a cofferdam and would be conducted during Oregon Department of Fish and Wildlife (ODFW) instream work windows. Prior to any project work, project proponents would consult with NOAA Fisheries and U.S. Fish and Wildlife Service, and these agencies must render a Biological Opinion on the likely impacts to ESA-listed species and their habitats which would include any reasonable and prudent measures necessary or appropriate to mitigate such impacts to their satisfaction.

Intake structure improvements would affect an area of river bed and bank about 30 feet long by 30 feet wide and require placement of about 100 cy of rock for bank stabilization. The auxiliary water supply line would be installed behind an existing concrete wall and require the placement of a small amount of rock to stabilize the pipeline entrance similar to the existing intake situation. Habitat disturbance would be minor, and suitable habitat for spawning and rearing occurs and would remain available in areas surrounding both of these sites.

As described in the project Biological Assessment (Section 4.2.2, pages 94-96), the habitat available for salmonids would be limited during periods of low river flow regardless of facility requirements. Even during periods of historic low flow, it appears that remaining instream habitat is adequate to support migration and chinook have been observed spawning successfully in 30 cfs and bull trout and steelhead can successfully migrate through 0.6 feet of water – conditions that would easily be maintained within the diversion reach, even during periods of extreme low flow (Zollman and Sankovich as cited in FishPro/HDR 2004a).

The Imnaha Final Rearing Facility is no longer proposed for construction. See response 012-02. After removal of the Acrow panel bridge, river banks would be revegetated where the bridge abutments were located and where any construction-related disturbance was evident.

012-06

The current chinook production program in the Imnaha River is authorized by NOAA Fisheries under Endangered Species Act (ESA) Section 10 Permit No. 1128. Details for risk management are not included in the scope of this EIS because this chinook production program is not a new undertaking. This EIS appropriately considers the anticipated effects associated with the modification of existing and proposed fish production facilities.

During the ESA Section 10 permit process, and prior to receiving Permit No. 1128, the production program received scientific scrutiny through NOAA Fisheries' peer and public review process. NOAA Fisheries determined that the direct take of these listed fish for hatchery broodstock, and the release of their progeny, would be beneficial to the Imnaha population (Delarm, NOAA Fisheries, personal communication, as cited in Ashe et al. 2000). Project performance standards were developed by hatchery co-managers and reviewed by the Northwest Power Planning and Conservation Council's Independent Scientific Review Panel and finalized as the Monitoring and Evaluation Plan for Northeast Oregon Hatchery Imnaha and Grande Ronde Subbasin Spring Chinook Salmon (Hesse and Harbeck 2004). Monitoring and evaluation elements of this plan would be applied to the production program and some may occur at the proposed facilities, and so they are incorporated by reference as supporting documentation for this EIS and Biological Assessment.

012-07

Comment acknowledged; as of the writing of this letter, the Forest Service believes that proposed facilities would not invade the areas of the Lostine or Grande Ronde Rivers designated under the Wild and Scenic Rivers Act and the Forest Service has not identified any effects to the scenery, recreation, or wildlife within the designated river reaches, but the Forest Service believes that potential effects to fisheries may remain. See Forest Service letter 020 and comments and responses 020-33 to 020-50 for further discussion on the topic of invade or unreasonably diminish standard of analysis for actions outside designated Wild and Scenic River corridors.

012-08

Since the Draft EIS was published in May 2003, numerous exchanges have occurred in writing, by e-mail, and on the telephone between the Forest Service, BPA, and hatchery co-managers (the Nez Perce Tribe particularly). In August 2003, BPA, the Nez Perce Tribe, and other agencies met with Forest Service representatives to tour the project sites and discuss Wild and Scenic River values. The Forest Service then compiled letter 020 which includes a preliminary WSRA report as further comment on the Draft EIS. An expanded group met at the Forest Service offices in Enterprise, Oregon, on November 17, 2003, for a more detailed exchange of information intended to address the perceived issues, uncertainties, and additional analysis needs identified in the preliminary WSRA report. The Forest Service is expected to issue a final WSRA Section 7(a) determination on this project upon review of this Final EIS, the Biological Assessment, and all other supplemental information made available prior to BPA issuing a Record of Decision whether to proceed with project final design and implementation.

JUL 1 4 2003

Kuehn, Ginny - DM-7

From: june davis [grassjune@hotmail.com]
Sent: Monday, July 07, 2003 11:50 PM
To: Carter, Mickey A - KEC-4
Subject: proposed lostine facilities

Good evening: I am commenting on the DEIS for the fish hatchery programs on the grande ronde.

My name is June Colony, owner operator of Cool Waters, a Native Plant Nursery which specializes in restoring damaged landscapes and designing ripaian restoration plantings. My nursery and home is located less than 1 mile below the Lostine Trout Farm.

My irrigation ditch for the nursery, has a head-gate located just below the private bridge that your plan indicated would be replaced with a steel bridge with footings out of the river.

For 20 years, I have taken my kids swimming in the old lostine city water/ fish ladders which your adult capture facilities would be located. 013-01

I had helped two families secure land through the planning commission and build thier dream homes on that property which is located emmidiately aabove the 6-mile bridge where you plan to locate a water intake setup[for the fish hatchery.

I have lived in Lostine for 30 years, and have seen some horrendous flooding and equally horrendous channelizing of the lostine river..I am a local ciatizen who would be directly affected by your plans.

I have the following comments:

1. The 6 mile bridge has one of the nicests views upstreams for enjoying the natural and inspiring wild and scenic rivers for any local, or tourist passing by. The land owners adjacent to that section of this river love that wild river as it is. I strongly protest the siting of the water capturing facilities to the upstream side of that bridge because it will drastically change the character of that viewshed, and I suggest that these intake structures should be placed further upstream....perhaps on usfs lands, and away form the vistas or homes. 013-02

2. The old Lostine City water and fish ladder facilities lie in a very visable area to the road. 013-03 The idea that there would be 300 feet of riprap and retaining wall is offensive. I have spent much of my past 10 years using a method called "Bioengineering" to place plant materials as integral components of "rip rap" and I suggest that the plant materials needed for bioengineering be incorporated at the time of wall contraction. 013-04 All lighting shall be down directed and subdued and motors shall be muted. 013-05

3. Special consideration to the Thalwag or main flow of the river below the new fish dam shall be a potential change for the usage of our irrigation ditch headgate. Because during low flow, we often have to build a pushup dam to redirect our water into the headgate,I hope that we can figure a way to keep water flowing into our ditch..perhaps with an upstream bar that would deflect low flows over to my side of the river and into our headgate. 013-06

ALl facilites for hatcheries can be cold and sterile...it is my hope that there will be a lovely and green facility at the lostine...Bring the salmon home! 013-07

June Colony

013-01

Comment acknowledged; as a long-time resident very familiar with the proposed Lostine River sites, your interest in and efforts to comment on the proposed project is appreciated.

013-02

Section 3.9.3.3 of the Draft EIS discusses the expected consequences of the Proposed Action on visual quality near the Lostine River Hatchery, including the intake structure upstream of the Lostine River Road bridge. The intake structure would be visible to northbound travelers on the Lostine River Road for a few seconds at the river crossing. Southbound travelers may catch a glimpse of the intake structure, but for the most part, it would be screened by existing vegetation. These proposed structures are located approximately 1 mile below (downstream of) the portion of the Lostine River designated as a Wild and Scenic River.

To locate the intake structure farther upstream (if a technically feasible site could be found), would involve obtaining the land or easements, rights-of-way, or other rights of access from all landowners along the pipeline route. As stated in the Draft EIS (Section 2.3), Section 1.8 of the Final EIS, and the NEOH Master Plan (Ashe et al. 2000), several other potential sites for hatchery facilities in both the Imnaha and Grande Ronde Subbasins were evaluated, but dropped from further consideration due to a variety of reasons, including inadequate water supply or quality, lack of available space, inadequate power supply, and/or unavailability for acquisition. One suitable site was identified on the Lostine River, downstream of the currently proposed Lostine River Hatchery site. This site, at the Strathearn Ranch (Grande Ronde Subbasin site 22, Draft EIS, Table 1-1), met the project requirements, but the owner ultimately decided not to make the property available. Sites on the west side of the Lostine River were also investigated, and one other feasible site was discovered. This west-side site was dropped from further consideration because it would require substantially more site development; have a potentially greater impact to adjacent landowners; and result in more disruption and potential impact to the natural environment (McMillen 2003, personal communication).

013-03

Figure 3.9-6 in the Draft EIS shows the existing view from Lostine River Road and a visual simulation of the proposed facilities in the same location. Section 3.9.3.2 of the Draft EIS explains that several of the new facilities would be screened from public view by the existing vegetation along the roadway and that passing motorists would only have a brief view when traveling northbound. Given the current facilities in the area, the proposed changes and additions are not expected to substantially alter the area's existing visual quality.

013-04

The current proposal includes using native plants to revegetate and enhance the visual appearance of all project sites (see Draft EIS Sections 3.4.3 and 3.9.3). Although incorporation of bioengineering into bank and flood protection measures may be structurally feasible (McMillen 2004, personal communication), final project design (including the levee and other bank and flood protection measures) would be subject to consultation and permitting requirements of several resource agencies. At a minimum, the levee would be designed, constructed and, where possible, vegetated to blend in with the existing environment.

013-05

Sections 3.2 through 3.17 of the Draft EIS describe the anticipated impacts to the natural and built environment as a result of the proposed project, including construction, operation, and cumulative effects of visual quality (Section 3.9) and noise (Section 3.13). All project lighting would be shielded and directed downward.

The proposed project includes use of best management practices, activities, and other measures to avoid prolonged incidents of loud or excessive noise during construction and operation. During construction, noise-generating activities at sites near residences would be controlled by limiting the hours of construction. Measures to avoid loud or excessive noise during facility operations would include muffling and/or enclosing pumps, generators, and other potentially noise equipment within buildings, and locating new facilities as far away as feasible from nearby residences.

013-06

The proposed spillway for the Lostine Adult Collection facility would function much like the exiting sills, in that flow would back up behind the structure and spill evenly across the channel. Downstream flow would continue in the main river channel and would be unchanged at the irrigation ditch headgate (McMillen 2004, personal communication).

013-07

Comment acknowledged; the design of the Lostine River Hatchery, and other proposed facilities, include shielding facility lights, planting native vegetation, and using building materials of colors and types to blend with existing structures to minimize visual impacts, while serving to help the conservation and recovery of an important salmon species.

JUL 1 4 2003

Kuehn, Ginny - DM-7

From: Curt Mattson [cmattson@oregontrail.net]
Sent: Monday, July 07, 2003 1:05 PM
To: BPA Public Involvement
Subject: Grande Ronde - Imnaha spring chinook hatchery program (DOE/EIS - 0340)

I would like to comment in support of the proposed hatchery program. It is currently imperative to pursue this program in order to meet the mandate to recover these endangered fish runs. The habitat recovery strategies have failed to recover the runs and have only succeeded in making some agencies and individuals feel good. There must be a strategy to actively increase the number of native fish returning to these streams. This program is really already in place and showing promising results. The fish are currently reared in several facilities, and must be transported from native waters to the facilities, then back. There is surely some rate of mortality with each move and these fish are much too valuable to be subjected to the risks associated with the current procedures. Placing the program into entirely native waters is the best alternative. 014-01

A hatchery program may not be the most desirable solution in the eyes of all involved, but until downstream survival is greatly enhanced these fish runs stand little chance of self-recovery. Without production assistance they will continue to dwindle, they do not have the luxury of time. There are volumes of data and countless dollars spent on habitat and land use restrictions with relatively little to show but pretty streams with no more returning salmon, it is time to try something that just might work.

The tribes should be commended on their leadership in pursuing this project, and their active strategies for recovering fish runs should be wholeheartedly supported and continued. They have perhaps made more progress in the short time they have been involved than agencies who had the lead in the past. 014-02

Curtis Mattson
Enterprise, OR

014-01

Comment acknowledged; thank you, your support of the proposed project is appreciated. Hatchery co-managers view this on-going fish production program as essential for conservation and recovery of spring/summer chinook populations in local, native waters of Northeastern Oregon.

014-02

Comment acknowledged; thank you. The Nez Perce Tribe and the Confederated Tribes of the Umatilla Indian Reservation have been instrumental in developing this project with the other partners.

015

JUL 1 4 2003

Oregon

Theodore R. Kulongoski, Governor

Department of Environmental Quality
Eastern Region
700 SE Emigrant
Suite 330
Pendleton, OR 97801
(541) 276-4063 Voice/TTY
FAX (541) 278-0168

July 7, 2003

Mickey Carter
Bonneville Power Administration
PO Box 3621, KEC-4
Portland, OR 97208-3621

Re: WQ-Wallowa County General File
Department Comments on the *Grande Ronde-Imnaha Spring Chinook Hatchery Project Draft Environmental Impact Statement*

Dear Mr. Carter:

The Department reviewed the *Grande Ronde-Imnaha Spring Chinook Hatchery Project Draft Environmental Impact Statement* with respect to water quality concerns. We submit the following comments on the draft document.

This is a timely discussion since the Department is currently developing water quality goals called Total Maximum Daily Loads (TMDLs) for the Lower Grande Ronde, Wallowa and Imnaha River subbasins. The Lower Grande Ronde, Imnaha and Wallowa subbasins are currently included on a list of Oregon surface waters that do not meet water quality standards. The pollutant parameters of concern in these subbasins are: temperature, sediment, bacteria, pH, and dissolved oxygen. The additional hatchery, acclimation facilities and upsizing of the Lookingglass hatchery are potential sources for increased temperature, solids, nutrients, pH, biochemical oxygen demand, and ammonia in down stream surface water. Of particular concern is temperature, the most widespread pollutant in these subbasins. The added acclimation and hatchery basins create new sources of unshaded water that when heated by solar radiation can contribute to increased water temperatures downstream of the facilities. It is important that these projects are constructed using appropriate treatment technologies and that they operate using best management practices to minimize their effects. 015-01

As the Draft Environmental Impact Statement indicates, the proposed facilities will need to acquire appropriate sanitary and process wastewater discharge permits. Some of the proposed facilities may not meet the fish-production criteria for a NPDES permit. This does not imply that these facilities lack the potential to impact water quality. 015-02

Thank you for the opportunity to comment. If you have any questions, please call me at 541-278-4623.

Sincerely,

Paul Daniello

Paul Daniello
Water Quality Specialist
Eastern Region

c Mitch Wolgamott, ODEQ-Pendleton
Elizabeth Hutchison, ODEQ-Pendleton (electronic copy)

DEQ/ER-101

015-01

Section 3.6.3 of the Draft EIS acknowledges that proposed facilities would employ best management practices and treatment technologies to meet regulatory requirements to protect water quality. Sections 3.2.3 and 3.6.3 of the Draft EIS (as revised in Section 2.3 of the Final EIS) also state that temperature changes due to facility operation would be minor and localized, and not expected to impact fish or exceed water quality standards. Other parameters of concern, discussed in more detail in Section 4.2.2 of the Biological Assessment (Water Quality subsections), are not expected to result in any exceedences of applicable water quality criteria as a result of project construction or operation.

015-02

Comment acknowledged; all applicable state, local, and/or federal permits would be acquired prior to project implementation. As discussed in the Draft EIS (Section 3.6), facility design and operations would include best management practices to protect water quality.

JUL 1 4 2003

WALLOWA COUNTY NATURAL RESOURCE ADVISORY COMMITTEE
Wallowa County Board of Commissioners
101 S. River Street * Enterprise, Oregon 97828
(541) 426-4543 Ext. 11 * (541) 426-0582 - fax

ADAPTIVE WATERSHED MANAGEMENT

Based on hope
Instead of fear

*

On solutions
Instead of conflict

*

On education
Instead of litigation

*

On science
Rather than emotion

*

On employing
Human resources rather
Than destroying them

July 7, 2003

To: Communications
Bonneville Power Administration-DM-7
Box 12999
Portland, OR 97212

Comment@BPA.gov

From: Bruce H. Dunn, Chairman
Wallowa County Natural Resources Advisory Committee
101 S River St
Enterprise, OR 97828

Subject:: Grande Ronde- Imnaha Spring Chinook Hatchery Project

The Wallowa County Natural Resource Advisory Committee, Wallowa County, Oregon requests that this information regarding the proposed EIS for Grande Ronde- Imnaha Spring Chinook Hatchery Project entered into the official record. As the appointed advisory committee for the elected representatives for a rural county in Oregon, our committee is extremely interested in the economic, social, and cultural well-being of the citizens of Wallowa County. Approximately 65 percent of our 2 million acre county is under public ownership. Therefore, all management decisions on natural resources affect the citizens of Wallowa County.

Wallowa County has a long history of proactive efforts to comply with the Endangered Species Act and subsequent listings of the Snake River Chinook, Snake River Steelhead and the Bull Trout. The Wallowa County Court and the Nez Perce Tribe had the foresight to recognize the need to engage the local community in habitat enhancement prior to the listing of the Chinook Salmon as threatened under the Endangered Species Act in 1992. Their solution was to take a pro-active approach in creating a plan that would result in resource management and use that would again stimulate our economy. The Wallowa County-Nez Perce Salmon Habitat Recovery Plan covers all lands in Wallowa County, Oregon. The Salmon Plan is a voluntary plan that offers, potential solutions to the identified problems in each watershed. The county has also created the Natural Resource Advisory Committee that meets regularly, including a technical committee that is available to all in Wallowa County. 016-01

In general we support the development of hatcheries to support the Salmon recovery program of the Lower Grande Ronde stocks of Spring/Summer Chinook Salmon. Upon studying the Environmental Impact Statement we have some concerns.

On page 2-10 "Water requirements for the Lostine River Hatchery" it states that three new ground water wells would provide up to 1200 gallons per minute to the facility..." 016-02

Comment: Since the test was only done for 48 hours what effect could the removal of this much water have on the underground aquifer and the domestic water supply in the Lostine area. 016-02 (con't.)

On page 2-10 "Water requirements for the Lostine River Hatchery" it states with average river conditions, no more than about 25% of the flow would be needed for the proposed hatchery."

Comment: What's the adjudicated water rights priority date for the hatchery water. We are concerned that this use not have any priority over existing water rights. 016-03

Please consider the suggested changes carefully, so that together we can continue the work necessary to preserve the custom, culture, and economic stability of Wallowa County and our natural resources.

If you have any questions or would like to discuss these comments further, please call the Wallowa County Natural Resource Advisory Committee 426-4588 or the OSU Extension Office 426-3143.

016-01

Comment acknowledged; the support of the Wallowa County Natural Resource Advisory Committee for the conservation and recovery of chinook is appreciated.

016-02

As referenced in the Draft EIS (Section 3.6.1.1), several groundwater wells were drilled at the proposed Lostine Hatchery site – the Lostine North Well, Lostine South Well, Primary Production Well, and South Observation Well. Information from these wells, and other sources, was used to characterize the area's geology, hydrogeology, and aquifer characteristics through aquifer testing. The results of aquifer testing were summarized in the Draft EIS and presented in detail in two associated technical reports prepared by Montgomery Watson (Report of Lostine Site Production Wells Installation and Testing, February 1999, and Lostine Site Production Wells Supplemental Installation and Testing, February 2001). The purpose of the Montgomery Watson studies was to identify a sustainable supply of good-quality, disease-free water for the proposed hatchery.

To determine well production potential and to measure the effect of proposed hatchery groundwater withdrawals, Montgomery Watson conducted aquifer pumping tests in 1999 and 2000/2001. Both sets of tests showed consistent results, although slightly different groups of wells were used. Both sets of tests consisted of standard, step-rate tests (pumping at different rates for short periods of time) to evaluate well efficiency and capacity and to determine optimal pumping rates for the longer, constant-rate tests. In January 1999, the Lostine South Well was pumped at a constant rate of about 400 gpm for 70 hours while water levels were measured in the Lostine South Well and in the Hayward's well in the Lostine subdivision (about 1,500 feet south of the Lostine South Well). Maximum drawdown measured in the Hayward Well was a few inches (0.20 feet) and the well water level recovered quickly after pumping of the Lostine South Well stopped (97 percent recovery in 160 minutes). Montgomery Watson calculated a "worse case" drawdown of about 0.6 feet in the Hayward Well after 2 years of continuous 400 gpm pumping of the Lostine South Well ("worse case" because continuous pumping of site wells is not proposed).

In January 2001, Montgomery Watson conducted a 25-hour constant-rate test in the Lostine North Well, and a 14-day constant-rate test in the hatchery site Primary Production Well. For each of the constant-rate tests, water levels were monitored in three other wells including the South Observation Well (installed near the Lostine subdivision). As in the 1999 test, drawdown in the observation well was minimal (a maximum of about 6 inches) and the water level recovered quickly after pumping stopped. Montgomery Watson calculated that, if all three site supply wells were pumped simultaneously at optimal flow rates, the combined drawdown in the nearest domestic well would be about 1.5 feet after 10 weeks of continuous pumping and approximately 2 feet after 2 years of continuous pumping (for comparison, measurements showed approximately 112 feet of standing water in the Hayward well). Continuous pumping was used to conservatively estimate drawdown because simultaneous, continuous pumping of the three wells would be required for only 2 to 3 months per year under normal hatchery operations and would typically occur during the months of May and June when river levels would be at their highest (FishPro/HDR 2004b), rather than in January when the aquifer pumping tests were conducted and river levels are relatively low. Montgomery Watson concluded that desired groundwater production levels for the hatchery could be sustained and regulated without affecting production in nearby domestic wells.

Note, also, that Draft EIS Sections 2.1.1.3 and 3.6.1.1 were revised in the Final EIS to state that new groundwater wells would provide up to 1,350 gpm to the proposed Lostine River Hatchery.

016-03

Currently, no water rights have been obtained for the proposed Lostine River Hatchery. If this project is approved for funding of final design and implementation, project co-managers would apply for water rights permits from the Oregon Water Resources Department for all proposed surface water and groundwater withdrawals (see Draft EIS, Table 4.7-1). Applications for water rights are subject to public review and appeal prior to approval by the State and, possibly, requirements for additional testing and assessment of the potential effects of proposed withdrawals on other water users.

017

GRANDE RONDE – IMNAHA SPRING CHINOOK PROJECT DEIS

Please mail your comments by July 7, 2003

COMMENTS:

On the adequacy of the Environmental Impact Statement:

TOO MUCH $ SPENT TO TRY + ESTABLISH A HATCHERY WHERE IT IS NOT WANTED OR NEEDED. 017-01

On the merits of the different alternatives:

GO ELSEWHERE

Preferred ways to mitigate concerns or effects:

GO DOWN STREAM ! LEAVE THE LOSTINE RIVER AND AREA AS IT IS ! 017-02

Other:

STRONGLY OPPOSED TO THIS PROPOSAL ON THE LOSTINE RIVER.
WE ARE PROPERTY OWNERS ON THIS RIVER AND DO NOT WANT THIS HATCHERY. PLS GO ELSEWHERE.

Name DOUGLAS M. BRAGG
Address 1903 LINDA LANE, LA GRANDE, OR 97850
Phone/E-Mail Address (optional) 541-962-8787

017-01

As discussed in Section 1.2 of the Final EIS, Purpose and Need for the Proposed Action, this project is intended to help in the protection, mitigation, and recovery of an important and threatened salmon species. Project planning, design, objectives, and funding continue to undergo close scrutiny by BPA, the Northwest Power and Conservation Council, and the Independent Science Review Panel relative to the potential gains/benefits to threatened chinook populations. Comments received on the Draft EIS are a part of that review. Although several comments from residents in the vicinity of the proposed Lostine River Hatchery indicate that the site is not their preference, others, including the landowner, favor the location. The site's biological, hydrological, and physical aspects contribute to its desirability for its intended function as well.

017-02

As stated in the Draft EIS (Section 2.3), Section 1.8 of the Final EIS, and the NEOH Master Plan (Ashe et al. 2000), several other potential sites in the Imnaha and Grande Ronde Subbasins were evaluated, but dropped from further consideration due to a variety of reasons, including inadequate water supply or quality, lack of available space, inadequate power supply, and/or unavailability for acquisition. One suitable site was identified on the Lostine River, downstream of the proposed Lostine River Hatchery site. This site, at the Strathearn Ranch (Grande Ronde Subbasin site 22, Draft EIS, Table 1-1), met the project requirements, but the owner ultimately decided not to make the property available. Project team members also investigated, and eliminated from further consideration, possible sites on the west side of the Lostine River. One feasible west-side site was identified, but dropped from further consideration because it would require substantially more site development (road improvements, bridge replacement, a powerline across the river, and extensive site clearing and grading); have a potentially greater impact to adjacent landowners (immediately adjacent to one residence and requiring several other residents to drive through hatchery facilities to access their property); and result in more disruption and potential impact to the natural environment (McMillen 2003, personal communication).

018

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

July 10, 2003

Reply To
Attn Of: ECO-088

01-085-BPA

Mickey Carter, Environmental Project Manager
Department of Energy
Bonneville Power Administration - DM-7
P.O. Box 12999
Portland, OR 97212

Dear Mr. Carter:

The U.S. Environmental Protection Agency (EPA) has reviewed the draft Environmental Impact Statement (EIS) for the proposed **Grande Ronde - Imnaha Spring Chinook Hatchery Project** (CEQ #030238) in accordance with our responsibilities under the National Environmental Policy Act and Section 309 of the Clean Air Act. The draft EIS proposes modifications to two existing hatcheries and the construction of three new hatchery facilities on Lookingglass Creek and the Lostine and Imnaha Rivers. In addition to the no action alternative, the EIS identifies one action alternative. 018-01

We have assigned a rating of LO (Lack of Objections) to the draft EIS. This rating and a summary of our comments will be published in the *Federal Register*. A copy of the rating system used in conducting our review is enclosed for your reference.

While we have no environmental concerns, U.S. EPA has identified additional information discussed below that we recommend be included in the final EIS.

Purpose and Need

The EIS states that the modernization and augmentation of hatchery facilities is needed to increase the success of mitigation efforts and to halt the decline of spring/summer chinook runs. The EIS states that the purposes for the project are:

- providing adequate, contemporary hatchery facilities in the Grande Ronde and Imnaha subbasins and thus, further the implementation of the Lower Snake River Compensation Plan's hatchery fish production program.
- coordinate operations at existing hatchery facilities with the Fish and Wildlife Program of the Northwest Power and Conservation Council, thereby aiding Bonneville Power Administration's (BPA) efforts to mitigate and recover anadromous fish affected by the Federal Colombia River Power System. 018-02
- Aid in BPA's fulfillment of mitigation and recovery goals outlined in the Biological Opinion from National Oceanographic and Atmospheric Administration (NOAA) Fisheries on operation of the Federal Columbia River Power System.

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- Achieve economic efficiencies by integration management of fish production programs and facilities.
- Be consistent with the requirements of pertinent federal laws, regulations and executive orders, and other relevant plans and programs.
- Support the Nez Perce Tribe's goal to restore anadromous fish populations and enhance the Tribe's opportunities to exercise treaty fishing rights.

Clearly, the overarching need for this project is the mitigation and recovery of the Snake River spring/summer chinook salmon stocks in the Grande Ronde and Imnaha Rivers. What is not made clear in the EIS is the actions taken and decisions that were made that led to the conclusion that this hatchery project is necessary for the mitigation and recovery of these salmon stocks. In particular, the EIS should address how the project meets BPA's responsibilities under the Northwest Power Act and the Federal Columbia River Power System Biological Opinion. In addition, the EIS should provide a detailed overview of the decisions that were made in the BPA's Business Plan, Lower Snake River Compensation Plan, Wildlife Mitigation Program, Watershed Management Program and Fish and Wildlife Program Implementation Plan that lead to the need for hatchery facilities in the Grande Ronde and Imnaha subbasins. This should include how this hatchery project will relate to efforts being taken to mitigate and recover Snake River spring/summer chinook salmon stocks through habitat restoration, harvest limitations, and hydroelectric power operations. 018-02 (con't.)

Cumulative Impacts

The Affected Environment and Environmental Consequences section of the EIS discusses the cumulative impacts the project will have on various environmental and social parameters. In most cases these discussions are limited to site specific impacts and in a few cases, impacts at the watershed scale. While the magnitude of some of the project's impacts makes it appropriate to limit the discussion to the site specific scale, other impacts can have watershed, subbasin and possibly basin scale impacts. Impacts as the result of removing riparian canopy, increasing impervious surface, and withdrawing water, can extend beyond the site specific scale. Therefore, the EIS should evaluate and discuss cumulative impacts at all the appropriate scales. In addition, when the discussion on cumulative impacts is limited to the site specific scale, the EIS should provide clear justification for doing so. 018-03

Broodstock Collection and Maintenance, Adult Holding and Spawning, Incubation and Rearing, Fish Health Management and Methods and Magnitude of Release

The EIS states that broodstock collection and maintenance, adult holding and spawning, incubation and rearing, fish health management and methods and magnitude of fish release will comply with Natural Rearing and Enhancement System (NATURES) criteria. The NATURES criteria provides for low-density rearing, natural photoperiods, limited human contact, automatic feeding with natural diet training, structures that mimic natural cover and flow regimes and volitional releases. NOAA's Conceptual Framework for Conservation Hatchery Strategies for Pacific Salmonids (1999) recommends similar criteria which are consistent with recommendations proposed in the National Marine Fisheries Service Snake River Salmon 018-04

Recovery Plan. The EIS should discuss how the NATURES criteria conform to the recommendations prescribed in NOAA's Conceptual Framework for Conservation Hatchery Strategies for Pacific Salmonids and provide justification for those instances where NOAA's criteria are not incorporated into the project's facilities development, maintenance and operation. 018-04 (con't.)

Measures of Success and Future Facilities' Plans

The proposed project has been designed to capitalize on the most current information available for the mitigation and recovery of the Snake River spring/summer chinook salmon stocks in the Grande Ronde and Imnaha Rivers. The EIS does not discuss what measures will be utilized to evaluate the project's success, what mechanisms will be implemented to improve success and what will happen if the facilities become obsolete because the Snake River spring/summer chinook salmon stocks in the Grande Ronde and Imnaha Rivers are restored to historic levels. The EIS should develop a process for evaluating the success of the project that includes mechanisms for improvements. In addition, the EIS should describe potential uses of the facilities or a plan for their removal if the project is successful in restoring spring/summer chinook salmon stocks. 018-05

Consultation with Native American Tribes

The Nez Perce Tribe and the Confederated Tribes of the Umatilla Indian Reservation are cooperating agencies for this EIS and are co-managers with the Oregon Department of Fish and Wildlife of the spring/summer chinook conservation and recovery program in Northeast Oregon. While the EIS describes some of the roles the Nez Perce Tribe and the Confederated Tribes of the Umatilla Indian Reservation play in this project, it does not provide any specifics regarding the consultation with these tribes. The EIS needs to assure that treaty rights, and privileges are addressed appropriately, consistent with Executive Order (EO) 13175 (*Consultation and Coordination with Indian Tribal Governments).* Documentation of these consultations should be included in the EIS. 018-06

If you have any questions or need additional information regarding these comments, please feel free to contact me at (206) 553-6911 or Mike Letourneau of my staff at (206) 553-6382.

Sincerely,

Judith Leckrone Lee

Judith Leckrone Lee, Manager
Geographic Unit

Enclosure

U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements Definitions and Follow-Up Action*

Environmental Impact of the Action

LO – Lack of Objections

The U.S. Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC – Environmental Concerns

EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO – Environmental Objections

EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU – Environmentally Unsatisfactory

EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 – Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 – Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 – Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

018-01

Comment acknowledged; the U.S. EPA has assigned a rating of LO (lack of objection) to the Draft EIS.

018-02

The Northeast Oregon Hatchery Master Plan (Ashe et al. 2000), incorporated by reference in this EIS, documents the process and rationale for using hatcheries to aid the conservation and recovery of chinook salmon in Northeast Oregon. Hatchery fish production programs have been operating in the area since 1984. Section 1.2 of the Final EIS summarizes the purpose and need for the program, which is generally, to help in the protection, mitigation, and recovery of a threatened salmon species. Table 1-2 of the Draft EIS also lists relevant laws, plans, treaties, and other guidance that the Proposed Action would serve to support, including the Nez Perce Tribe Treaty of 1855, Snake River Proposed Recovery Plan, Lower Snake River Fish and Wildlife Compensation Plan, Imnaha and Grande Ronde River Subbasin Plans, and the Interior Columbia Basin Ecosystem Management Program.

018-03

The majority of impacts expected to result from the Proposed Action would be limited in time (during project construction) and scale (localized to the immediate vicinity of the project). Final EIS text was added to clarify issues of scale (see Final EIS Section 1.11 and Table 1-4).

Due to the Forest Service management of the Lostine and Imnaha River corridors as Wild and Scenic Rivers, development and land use activities are limited and restricted within and around the corridors and the Proposed Action sites; and therefore, limited cumulative effects are expected. No change in water diversion, fish habitat or effluent discharge are expected from review of local county building permits granted for other activities in the vicinity of project sites (primarily for residential development), although on-going salmon/habitat recovery projects within the Grande Ronde Model Watershed Program in Union County may potentially result in cumulative benefits to listed species and their habitats. Similarly, projects in Wallow County to rehabilitate a poorly functioning dam at Wallow Lake, recover salmonids under the Wallow County/NPT Salmon Habitat Recovery and Multi-Species Strategy, and various watershed action plans are anticipated to have beneficial, cumulative impacts on listed species and critical habitats which would be enhanced by the Proposed Action.

018-04

See Final EIS (Sections 1.6 and 2.3) for clarification of how NATURES criteria are incorporated into the Proposed Action (and criteria conformance with the recommendations in NOAA's Conceptual Framework for Conservation Hatchery Strategies for Pacific Salmonids).

018-05

As discussed in Section 2.2 of the Final EIS, phase out of the hatchery facilities is not reasonably foreseeable. It is anticipated that spring/summer chinook would be collected yearly for approximately 20 to 25 years, or until adult replacement rates for the naturally spawned population suggest that the population is naturally sustainable (Ashe et al. 2000). The expected duration of the hatchery program would be dependent on changes outside of hatchery operations (i.e., the hatchery program may operate over a longer period of time if other factors limiting population recovery are not mitigated or otherwise controlled, or the hatchery program may operate over a shorter period of time if other limiting factors are reduced). In either case, analysis of hatchery removal would be a programmatic decision, depending on the success of the overall recovery effort, of which the Proposed Action is a component.

Overall production program success is a pre-existing goal under the Lower Snake River Compensation Plan and the conservation/recovery objectives of the ESA permitting program. Project-specific performance standards were developed by project co-managers and reviewed by the Independent Scientific Review Panel (ISRP) and finalized as the Monitoring and Evaluation Plan for Northeast Oregon Hatchery Imnaha and Grande Ronde Subbasin Spring Chinook Salmon (Hesse and Harbeck 2004). The ISRP completed its review of this plan on May 18, 2004 and responded "…that this document is an excellent working draft of a stand-alone M&E Plan for the NEOH hatchery Imnaha and Grande Ronde subbasin spring chinook salmon program." The ISRP also further complimented the authors "….for being among the first to bring the modern EMAP [Environmental Monitoring and Assessment Program] probabilistic sampling procedures into the Columbia Basin." Monitoring and evaluation elements of this plan would be applied to the proposed project and are incorporated into the Final EIS and Biological Assessment by reference.

018-06

The Nez Perce Tribe and the Confederated Tribes of the Umatilla Indian Reservation, along with the ODFW, are the co-managers of the fisheries resources in Northeast Oregon. Efforts to date have been primarily technical with fisheries staff from both Tribes elevating higher-level decisions to tribal leadership (Grassel 2004, personal communication). As part of the next round of project review (Step 2 submittal), the Northwest Power and Conservation Council has asked the co-managers to submit concurrence letters, which the Tribes have agreed to do (Zimmerman 2004, personnel communication). BPA is responsible for assuring compliance with Executive Order 13175, and text was added to the Final EIS (Section 2.4) to more clearly explain this. BPA has been consulting with the tribes in an on-going, iterative fashion from the beginning of the project and, therefore, has been fully consistent with Executive Order 13175.

Mary Kay Howey
64989 Lostine Riv. Rd.
Lostine, OR 97857

JUL 2 8 2003

Petition to Move Lostine River Fish Hatchery

We the undersigned believe that the proposed fish hatchery on the Lostine River should be moved to the west side of the river rather than keep it on the east side as it is now proposed.

The residents that live along Grainger Road and on the Lostine River Rd. would be negatively impacted by traffic and noise, and if the hatchery were established on the West side of the river this impact would be greatly deminished as there are fewer residents on that side. The west side is ideal for the purposes of a hatchery, whereas the east side is not. 019-01

Signature	Address	Phone
John J Dulin	First St 64870	569-2384
Timothy B. Dulin	64870 First St PO Box 145	569-2384
[illegible]	64801 Grainger Rd Lostine Or	569-2482
Mary L. White	65028 Grainger Rd	569-2405
Shannon Courtney	64801 Grainger Rd	569-2482
Cindy E White	65028 Grainger Rd	569-2405
Thomas Ellis	65028 Grainger Rd	569-2405
Mary T. Hayward	64859 Grainger Rd	541-569-2494
[illegible]	64860 Grainger Rd	541 564-9840
Lisa M [illegible]	64869 Grainger Rd.	541-564-9840
Mary G Bundy	65049 Leaning Tree Rd	541-569-2236
Lee H Bundy	" " " "	"
Barbara Halverson	64910 First Rd.	541-569-2457
Ruth Shuman	64732 Lostine River Rd Box 96	
Alden Shuman	64732 Lostine River Rd Box 96	
Lowell D Armen	64422 Tim Rd	
[illegible]	64422 Tamarack Rd	569-2428
Frank M. Cherry	66616 Lostine River Rd	569-2257

JUL 2 8 2003

Signature	Address	Phone
Randy Le Vaney	64846 Lostine River Rd Lostine Or	569-[illegible]
Chris Geyer	64705 Lostine River Rd	569-5190
Christina Geyer	64705 Lostine River Rd.	569-5190
Michael B. McLain	65080 Lostine River Rd	569-2235
Jan E. McLain	65080 Lostine River Rd PO Box 63	569-2235
Mary Kay Hanny	64989 L.R.R. 97857	569-2245
Corey Norton	65048 Lostine River Rd	569 2004
Ralph Simmons	65048 Lostine River Rd	569 2004
Bill Williams	65048 Lostine River RD.	969-7390
Betsy Williams	65048 Lostine River RD	969-7390
Lonnie J. Cannon	LOSTINE	
[illegible]	Lostine River Rd	503709 5466
Sharon Weishoff	Lostine River Rd	569-5156
Roger Weishoff	" " " " "	
Jack Rott	Tamarack Road	
Carrie Wirdzu	Tamarack Road	
Randy Le Vaneau	Tamarack Road Lostine Or.	569-2040
Sheila Le Vaneau	Tamarack Road - Lostine	569-2040
Doug Gross	Tamarack Road - Lostine	569-2040
George Ogg	64191 Tamarack Rd, Lostine	
[illegible]	Lostine River RD	Cell (503) 709-5466
Fred Cook	64443 Lostine River Rd	569 2484
Bert Cook	64443 Lostine River Rd	569-2484
Merrill Jones	PO Box 84 78688 Wenaha Ln Lostine, Or	569-2479
Larry Jones		

JUL 2 8 2003

Petition to Move Lostine River Fish Hatchery

We the undersigned believe that the proposed fish hatchery on the Lostine River should be moved to the west side of the river rather than keep it on the east side as it is now proposed.

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Signature	Address	Phone
Donna Loeb	64855 Grainger Rd	569-23[illegible]
[illegible] Cantant	64446 Lostine R Rd	569-[illegible]1[illegible]
Polly Cantant	64446 Lostine R Rd	569-2015

WITH THE EXCEPTION OF THREE PARTIES ALL PERSONS CONTACTED SIGNED THIS PETITION.

CC: WALLOWA COUNTY PLANNING DEPT
NEZ PERCE TRIBE, SUSAN GLOSSER
BONNEVILLE POWER ADMIN, MICKEY CARTER
NEPA, CAROL BORSTROM, DIRECTOR

CONTACT PERSONS: JOAN DULEN, JAN McLAIN, MARY KAY HO[illegible]

019-01

As stated in the Draft EIS (Section 2.3), Section 1.8 of the Final EIS, and the NEOH Master Plan (Ashe et al. 2000), several other potential sites in the Imnaha and Grande Ronde Subbasins were evaluated, but dropped from further consideration due to a variety of reasons, including inadequate water supply or quality, lack of available space, inadequate power supply, and/or unavailability for acquisition. One suitable site was identified on the Lostine River, downstream of the proposed Lostine River Hatchery site. This site, at the Strathearn Ranch (Grande Ronde Subbasin site 22, Draft EIS, Table 1-1), met the project requirements, but the owner ultimately decided not to make the property available. Project team members also investigated, and eliminated from further consideration, possible sites on the west side of the Lostine River. The one feasible west-side site was identified, but dropped from further consideration because it would require substantially more site development (road improvements, bridge replacement, a powerline across the river, and extensive site clearing and grading); have a potentially greater impact to adjacent landowners (immediately adjacent to one residence and requiring several other residents to drive through hatchery facilities to access their property); and result in more disruption and potential impact to the natural environment (McMillen 2003, personal communication).

Sections 3.2 through 3.17 of the Draft EIS describe the anticipated impacts to the natural and built environment as a result of the proposed project, including construction, operation, and cumulative effects of traffic (Section 3.10) and noise (Section 3.13). Section 3.10.3 of the Draft EIS, as revised for the Final EIS, includes a discussion of the potential traffic impacts on nearby roads and residents. Traffic would increase at all sites temporarily during construction. At the Lostine River Hatchery, long-term impacts to traffic would be associated with the on-site residences, local employees, supply trips, and fish transport trips. For about 3 weeks in January, five to eight additional round-trips per day would be made by temporary workers employed at the hatchery (Zollman 2003, personnel communication). The number of trips to and from the hatchery and associated impacts on neighbors would be about the same whether the hatchery was located on the proposed site or across the river.

Although the proposed Lostine River Hatchery has the greatest potential to affect local residents given its proximity to homes and the current undeveloped nature of the site, it is the intent of hatchery co-managers to be good neighbors within the community. Therefore, the proposed project includes use of best management practices, activities, and other measures to avoid prolonged incidents of loud or excessive noise during construction and operation. During construction, noise-generating activities would be controlled by limiting the hours of construction. Measures to avoid loud or excessive noise during facility operations would include enclosing pumps and generators within buildings, and locating new facilities as far away as feasible from nearby residences.

AUG 2 8 2003

United States Department of Agriculture | Forest Service | Pacific Northwest Region
333 SW First Avenue (97204)
PO Box 3623
Portland, OR 97208-3623
503-808-2468

File Code: 2350
Date: August 26, 2003

Ms. Therese B. Lamb
Acting Vice-President for Environment, Fish, Wildlife
Bonneville Power Administration
P.O. Box 3621
Portland, OR 97208-3621

Dear Ms. Lamb:

Enclosed is my determination under Section 7(a) of the Wild and Scenic Rivers Act (WSRA) for the Northeast Oregon Hatchery Project. My review is based on the *Draft Environmental Impact Statement Prepared for the Northeast Oregon Hatchery Project Grande Ronde Spring Chinook Project* (NEOH DEIS), May 2003. My determination presumes that water rights are secured for the Imnaha and other facilities. The WSRA Section 7 determination is preliminary, based on the information in the NEOH DEIS. I will make a final determination in response to the NEOH Final Environmental Impact Statement (NEOH FEIS).

Following the NEOH FEIS, the Forest Supervisor of the Wallowa-Whitman National Forest will make a separate decision on whether to issue a special use permit for the Imnaha Satellite Facility modifications, which are located on National Forest lands. 020-01

I evaluated proposed project facilities in the Imnaha Wild and Scenic River (WSR) as to whether their construction and/or operation resulted in "direct and adverse effects" on the river's free-flowing condition, water quality, and outstandingly remarkable values, as directed by the language of Section 7(a) of the WSRA. I considered the effects of proposed project facilities below the Lostine WSR and on Lookingglass Creek (tributary to Grande Ronde WSR) as to their effects within the designated river corridors and specific to scenery, recreation, fish or wildlife values, also as directed by language in Section 7(a) of the WSRA. I will not summarize my determination in this cover letter, but do want to draw attention to two significant concerns identified in my determination.

Based on information in the NEOH DEIS, my principal concern is the Imnaha Final Rearing Facility's effects to the river's free-flowing condition due to proposed in-channel structures and to in-channel effects resulting from floodplain protection fill. It is my preliminary finding that the free-flowing condition of the Imnaha WSR would be directly and adversely affected by the Imnaha Final Rearing Facility as proposed. The WSRA protection of free-flow is a fundamental protection afforded by the statute. New construction such as the Imnaha Final Rearing Facility in the floodplain of the river will be difficult to reconcile with protection of the Imnaha WSR's free-flow. Construction and water diversion from a new facility will also create entirely new impacts to in-stream and riparian fish habitat, and the new facility will increase transport and handling stress on juvenile fish. Although it may be possible to alter the facilities design and operation to avoid adverse effects, I also ask that you reconsider the need for this part of the NEOH proposal. 020-02

I am unable to make a finding regarding the effect of the proposed action on fish and fish habitat for the Imnaha and Lostine WSR's as part of my preliminary determination. This is because the NEOH DEIS provides insufficient information and analysis to complete my analysis of effects to fish and fish habitat. I also anticipate that the recent recommendations (June 2003) of the Independent Science Advisory Board will be incorporated into design and operation of the proposed facilities, and will be reflected in the NEOH FEIS. The specific additional information and analysis needed for my determination are summarized in my determination and are discussed in detail in the enclosed *Wild and Scenic Rivers Act Section 7(a) Report, NEOH DEIS.* The *Wild and Scenic Rivers Act Section 7(a) Report, NEOH DEIS*, also identifies other concerns and suggested mitigations to better protect the outstandingly remarkable values of the Imnaha WSR. Please consider this report as the Forest Service comment on the NEOH DEIS. 020-03

I appreciate your extension of time for my review of the NEOH DEIS. The NEOH DEIS goals for restoration of natural production of spring Chinook are also goals for stewardship of these WSR's. I am committed to efforts to restore natural production of spring Chinook in a manner that protects this species, nontarget fish species, other WSR-related values, and values of surrounding National Forest System lands. I look forward to collaboration with BPA, other Federal and state agencies, and the Nez Perce Tribe on these shared goals. 020-04

Sincerely,

/s/
LINDA GOODMAN
Regional Forester

Enclosures

cc: Dave Johnson, Nez Perce Tribal Fisheries, P.O. Box 365, Lapwai, ID 83540; Ken Kirkman, Fish and Wildlife Project Manager, Bonneville Power Administration, P.O. Box 3621, Portland, OR 97208; Mickey Carter, Environmental Protection Specialist, Bonneville Power Administration, P.O. Box 3621, Mail Stop KEC-4, Portland, OR 97208; Gary Miller and Randy Tweton, USFWS, 3502 Hwy 30, La Grande OR 97805; Phil Howell, USFS PNW Research Station, 1401 Gekeler Land, LaGrande, OR 97850; David Heller, Jeff Uebel, Susan Sater; Tom Glassford, Kendall Clark, Forest Supervisor, WAW NF; Jocelyn Somers, USDA Office of the General Council, 1220 SW 3rd Avenue, Room 1734, Portland, OR 97204

AUG 2 8 2003

Wild and Scenic Rivers Act
Section 7(a) Report
Draft Environmental Impact Statement
Prepared for the Northeast Oregon Hatchery Project
Grande Ronde Spring Chinook Project
August 26, 2003

This Section 7(a) report provides the basis for evaluation of the Northeast Oregon Hatchery project proposals within the Imnaha Wild and Scenic River (WSR) corridor under the "direct and adverse effects" standard and, for the portions of the project located proximate to the Lostine and Grande Ronde WSRs, under the "invade the area or unreasonably diminish" standard. It is presented in three parts:

- Projects Within the Imnaha WSR Corridor
- Projects Below the Lostine WSR
- Project Above the Grande Ronde WSR

020-05

The report is based on the description of the effects in the *Draft Environmental Impact Statement Prepared for the Northeast Oregon Hatchery Project Grande Ronde Spring Chinook Project* (NEOH DEIS) and Forest Service staff knowledge. The majority of the discussion relies on evaluation in the NEOH DEIS. Additional evaluation is provided by Forest Service specialists, based on local knowledge and other sources of information as parenthetically referenced.

AUG 2 8 2003

Projects Within the Imnaha WSR
Final Rearing Facility
Satellite Facility

Evaluation under the "Direct and Adverse Effects" Standard
Free-flowing Condition
Water Quality
Outstandingly Remarkable Values

Imnaha Final Rearing Facility

The following discussion is focused on those components of the Imnaha Final Rearing Facility that affect the river's free-flowing condition and are therefore water resources projects subject to Section 7(a). Project proposals are evaluated as to their effect on the river's free-flowing condition, water quality, and outstandingly remarkable values (ORV). A detailed project description is provided in the introduction of the *Wild and Scenic Rivers Act Preliminary Section 7 (a) Determination.*

Components of the Imnaha Final Rearing Facility that are or appear to be within the ordinary high water mark of the river include:

- A water intake structure, associated excavation of rock abutment, and 50 feet of the pipeline from the intake to the hatchery
- A fish bypass pipeline, outfall and riprap, and associated pool
- An outfall structure and 200 cubic yards of associated riprap
- Concrete abutments for a new bridge, associated riprap, and removal of old bridge abutments

The proposal also includes placement of flood-protection fill to keep the river from overtopping its west bank during high water events (NEOH DEIS 3-75). Fill placement is described as "upland of riparian vegetation" (NEOH DEIS 3-29). The extent (dimension) of this activity is unclear, as is its location relative to the river's bed and banks. However, based on the description provided in the NEOH DEIS, this fill will affect the river's ability to access its floodplain in the project area, and downstream from the project is likely to result in flooding, scour and erosion. It is considered in this analysis. 020-06

Refer to Figure 2.6 (NEOH DEIS page 2-12, also reproduced in *Wild and Scenic Rivers Act Preliminary Section 7(a) Determination*) for a detailed drawing of the proposal.

Description of Effects to Within-Channel Conditions

<u>Position of the proposed activity relative to streambed and stream banks</u>

Water intake, excavation of rock abutment, and associated pipeline:
"The intake structure would be located on the west bank of the river, about 1,200 feet upstream of the proposed outfall site. Installation of the structure would require the excavation of an existing rock abutment and the use of a fill cofferdam and two dewatering pumps. The pumps would discharge water through a sediment pond located within the upland meadow prior to being discharged back to the Imnaha River downstream of the construction area. The cofferdam is proposed for installation from the end of the existing irrigation channel and access road to about 50 feet upstream of the intake location. The river would be diverted to the east bank. Construction equipment would be driven across the pasture from the existing bridge to the cofferdam area via a temporary access road" (NEOH DEIS 3-29).

Note: The NEOH DEIS states the distance between intake and outfall at 1200 (DEIS 3-29) and 1900 feet (NEOH DEIS 3-84), respectively.

"The first section (about 50 feet) of the surface water diversion pipeline would be imbedded below the water surface into the west bank via trenching, then mortared with rocks to mimic natural substrate. The remaining sections of the pipeline would be installed within an existing irrigation ditch, requiring the removal of some non-riparian vegetation. Installation of this pipeline could result in temporary increases in sediment, but erosion control devices would be in place to minimize sedimentation and contain it within the cofferdam area" (NEOH DEIS 3-29). See also Figure 2-6 (NEOH DEIS 2-12).

Fish bypass pipeline, outfall and riprap, and associated pool:
"The intake fish screen would be placed on the upland portion of the site, about 600 feet downstream from the intake. Fish that entered the intake would be returned to the river via a fish bypass pipeline that originates at the screen site. A majority of the fish bypass pipeline construction would take place on the upland portion of the site. The outfall for the bypass line would be located on the west bank as close to the river surface as possible. To aid in returning fish to the river at the bypass outfall, a pool would be excavated at the base of the outfall. Fish may collect within this pool for short periods of time, but would eventually continue their migration" (NEOH DEIS 3-30). The fish bypass outfall "would have riprap flood protection on its upstream and downstream sides. The bypass outfall would be placed outside the main channel..." (NEOH DEIS 3-75). See also Figure 2-6.

020-06 (con't.)

Project outfall and riprap:
"The cast-in-place concrete outfall structure would be constructed concurrently with the intake. A small cofferdam and dewatering system would be used to install the outfall. The structure would require 200 cubic yards of riprap flood protection on the upstream and downstream sides of the bank" (NEOH DEIS 3-30). See also Figure 2-6 (NEOH DEIS 2-12).

Concrete abutments for a new bridge and removal of old bridge abutments:
"The existing bridge, which is located about three feet lower than the 100-year flood elevation, would be relocated upstream to an area above the 100-year floodplain. Concrete abutments would be placed bankside of the normal flow levels to minimize the need for dewatering. Abutments would likely impact a small amount of riparian vegetation and shading. Disturbed areas of the temporary bridge location would be revegetated" (NEOH DEIS 3-30). "The site is a low-lying, flat basalt bedrock shelf covered by alluvial sediments. The site is only partially flooded during extreme runoff events such as a 100- to 500-year flood" (NEOH DEIS 3-75). See also Figure 2-6.

Flood-protection fill:
"To protect the site from flooding, approximately three feet of fill would be placed on the upland side of riparian vegetation. Erosion control devices would be used during site raising to minimize sedimentation. The sites would be revegetated with native species, where appropriate, upon completion of construction" (NEOH DEIS 3-29). This fill will be placed "over the low side of the site to raise it above the current projected 100-year

floodplain. This would reduce flood potential by keeping most major flood events from overtopping the west bank and inundating the proposed facility. A 500-year flood event could potentially inundate the site, disrupt facility operations, overwhelm onsite drainage systems and damage vulnerable equipment (i.e. electric pumps, controllers, raceways, etc)" (NEOH DEIS 3-75).

Changes in active channel location, geometry, slope, and/or form

"The intake structure, although small, could slightly impede or alter natural river flows and thus is considered to be a minor adverse effect to free flow of the river. In addition, when water is taken through the facilities for hatchery operations, the flow in the river channel would be reduced between the intake and outfall, but the river would maintain its free flow appearance overall" (NEOH DEIS 3-84).

"The proposed fish bypass outfall would have riprap flood protection on its upstream and downstream sides. The bypass outfall would be placed outside the main channel and would not impede or alter the typical flow regime" (NEOH DEIS 3-75). The NEOH DEIS does not describe the size of the planned in-channel excavation for the fish bypass pool, how will it be maintained, or potential effects to the channel.

"The main hatchery outfall would be armored with riprap and would only disrupt flow in its immediate vicinity" (NEOH DEIS 3-75).

020-06 (con't.)

"The proposed action would remove the existing bridge abutments at the Imnaha Final Rearing Facility, which would eliminate a constriction to river flow. However, the installation of a replacement bridge upstream of the existing bridge would result in placing abutments that would also constrict the natural river flow. This constriction of the natural river flow would be slightly less than under current conditions. The final design of the replacement bridge would result in the bridge abutments being placed in locations that minimize effects on the free flow of the Imnaha River" (NEOH DEIS 3-84).

"While the new bridge abutments would slightly disrupt flow, they would be an improvement over the current situation" (NEOH DEIS 3-75). The NEOH DEIS is not specific as to where the new bridge abutments will be located relative to bankfull flows.

Relative to flood-protection fill, "fill placement on the site would restrict flows during temporary high water events, confining them to the active channel. This would result in higher water levels in the active channel and an increased potential for downstream flooding, scour, and erosion during more extreme events such as 100- to 500-year floods" (NEOH DEIS 3-75).

Relevant water quality parameters

"Instream construction, excavation and grading, bridge construction and placement of fill at the Imnaha Final Rearing Facility could introduce sediment or other construction-related contaminants to the Imnaha River over short periods of time resulting in localized temporary water quality effects. Flow would remain in the channel, but be directed away

from work areas. Pump discharge would be routed through a sediment basin prior to discharge back into the Imnaha River" (NEOH DEIS 3-76).

Operation of the facility will also result in less water in the project area (between intake and outfall). The amount varies on the water-year but is estimated at "less than 25 percent of the total river flow for periods of average low flow" ranging to up to 50 percent "during below-normal" years (NEOH DEIS 3-76). A permanent reduction of flow in the area between the intake and outfall will occur during the periods of diversion and increase temperature of the reach.

The NEOH DEIS (3-32) also mentions monitoring of the physical properties and chemical constituents in the hatchery effluent in order to insure compliance with water quality standards. No explanation is provided for how this will be done, or of how water quality standards will be met.

Navigation of the river

Above the town of Imnaha, including the project area, river flows are too low to accommodate boating.

Riparian, Floodplain and Upland Effects

020-06 (con't.)

Vegetation composition, age structure, quantity, or vigor

"Removal of riparian habitat is expected to be limited to the area of the intake pipeline, outfall and bridge abutments. The amount of riparian habitat affected by this removal is about 1600 square feet, which is negligible and would not affect total shading habitat available. Riparian zones would be replanted with native vegetation. The land use change from a cattle pasture would encourage the reestablishment of more diverse native riparian vegetation along the riverbank and decrease some sedimentation" (NEOH DEIS 3-30).

Relevant soil properties

"The upland infrastructure required to develop the site into a final rearing facility includes a headbox, raceways, water supply well, shop, residence, and ancillary support facilities. Construction of the proposed facilities would occur on undeveloped pastureland that is currently grazed by cattle. Construction would add about three acres of impervious surfaces to the site, which may lead to increased or rerouted runoff and sediment carried into the river. Increased runoff is expected to be temporary and is not anticipated to exceed a stream's ability to carry sediment away from the site. Associated best management practices to reduce sedimentation are part of the Proposed Action" (NEOH DEIS 3-29). Given the areas of newly created impervious surfaces, increased runoff would appear to be permanent.

Relevant floodplain properties

The armoring (riprap) associated with the fish bypass outfall and project outfall will accelerate the river's flow in a localized area, potentially decreasing bank stability and increasing erosion in areas of redirected flow. The flood-protection fill is designed to limit the river access to its floodplain during high water events and may, in such events, result in downstream scour or erosion.

Effects to Existing Hydrologic or Biologic Processes Due to Changes in On-Site Conditions

The project will affect the amount of water in the project area (between intake and outfall).

"The water budget has been designed to adjust the facilities water requirements based on instream flow from year to year, as shown in Table 3.2-11. The 'preferred NATURES' criteria provide an improved rearing/holding environment through the use of higher pond turnover (complete exchange of pond water) rates. The "acceptable NATURES" water strategy, provides an adequate rearing environment, but reduces the amount of water withdrawal and thus reduces turnover rates. The maximum flow required for rearing at the Imnaha Final Rearing Facility is about 23 cfs, based on the 'preferred' NATURES criteria flow scenario. This flow would be required for a short period of time (late February through March) during the transition period of rearing when smolts are on hand. Water use would be non-consumptive; all water withdrawn would be returned to the Imnaha River" (NEOH DEIS 3-31). 020-06 (con't.)

"In addition to the water required for rearing, about 10 cfs would be diverted through the intake to operate the fish screening and bypass pipeline. This diversion would take place over the first 600 feet of the total 1,200 feet of diversion from the intake to the outfall. The total diversion at peak usage, therefore, would be about 33 cfs (March) for about 600 feet, and about 23 cfs for the remaining 600 feet to the outfall. During critical low flow years, this water diversion scenario could negatively impact habitat use when the maximum diversion is desired at the facility. Implementation of the "acceptable" rearing criteria surface water withdrawals would then occur" (NEOH DEIS 3-31).

"Peak water diversion in February and March, and withdrawals during low-flow periods (September –October) may adversely affect fish passage through the diversion reach at the Imnaha Final Rearing Facility. The majority of migrating bull trout would be in cooler, upstream waters in September and would move downstream in the late fall when low flow would not impact outmigration. Rapid turn-around bull trout spawners may encounter low flow conditions, depending on water temperatures during each season. Steelhead do not occupy the mid-Imnaha in the fall and winter, but begin upstream migration in early spring (March – April). Early steelhead migrants may be present during the final stages of operation at the Imnaha Final Rearing Facility, when the maximum amount of surface water is diverted (about 33 cfs from intake to fish bypass; then about 23 cfs from bypass to outfall). Therefore, delays to migrating steelhead may

occur if flows are low during this period. Monitoring would be performed to determine the affect on passage of migrating salmonids. If passage problems are observed, program changes would occur. These may include reducing the required amount of water at facilities to allow for more instream flow, or physical passage of species upstream" (NEOH DEIS 3-32).

"The Imnaha Final Rearing Facility would begin operation during spring/summer Chinook spawning in September when water levels are low; however, most spawning occurs upstream of the facility. If spawning habitat is negatively impacted due to diversion during periods of low flow, modifications to the water management strategy would be implemented. The "acceptable" water strategy, which reduces the amount of water withdrawal could be used if impacts to spawners, caused by low flows, are observed" (NEOH DEIS 3-32).

"Rearing juvenile Chinook and resident fish may be affected by water diversion, but impacts would occur over a brief period of time and are not expected to affect long-term population trends or individual distribution" (NEOH DEIS 3-32).

"Hatchery water would flow constantly through the facility from September through March during final rearing of smolts, and so would not be subject to excessive heating or exacerbate the July to August normal heating which caused the Imnaha River to be listed as water quality limited by OR DEQ. Water temperature changes at the facility, if any, would be temporary, localized and minor. Any such changes are not anticipated to disrupt the behavior or distribution of individual fish adjacent to or downstream of the site" (NEOH DEIS 3-76). 020-06 (con't.)

Magnitude and Spatial Extent of Potential Off-Site Changes

Likely changes from this project proposal include scour and erosion from flood-protection fill and armoring of fish bypass outfall and project outfall. These effects will occur within the project area but are also predicted to occur downstream. The most significant changes are anticipated at high flow events, when the river's access to its floodplain is limited by flood-protection fill.

Duration of Effects

Effects from construction activities will be temporary and localized. Long-term project effects such as erosion from armored fish bypass outfall and project outfall, downstream flooding, scour and erosion resulting from flood-protection fill, and reduced water flow from intake to outfall during portions of the year will persist for the life of the project.

Effects to Outstandingly Remarkable Values

The Imnaha WSR's outstandingly remarkable values (ORV) are its scenery, recreation, fisheries, wildlife, vegetation/botany, history/prehistory, and traditional use/lifestyle adaptation. Each ORV is described through four subsections:

- ORV Description
- Management Goals from the Imnaha WSR Management Plan (Imnaha RMP)
- Discussion in NEOH DEIS
- Description of Project Effects

Scenery

ORV Description—The Imnaha River is recognized for its scenic qualities. The designated WSR traverses the climatic spectrum from glaciated mountains and alpine meadows at over 8,000 feet in elevation, to a rattlesnake and cactus environment at 1,000 feet in elevation at the mouth of the river. The Imnaha River corridor provides one of the greatest contrasts in landforms, vegetation, color, and climate of any WSR component in the inland Northwest. The pastoral setting of the predominately ranch-oriented middle section of the river evokes images of a classical western landscape.

Scenery Management Goals from the Imnaha RMP—The visual quality objective (VQO) within the wild river corridor is preservation; the recreational and scenic river corridor VQO is retention. The desired future condition is a natural appearing landscape with a minimum amount of nonconforming visual impacts. As riparian vegetation screening of altered areas increases, the scenic condition of the corridor should improve. New development will be designed to blend with the natural character of the landscape and will conform to the rustic nature of the area. The wild section should remain unchanged with native and natural vegetation predominating. The private land would retain its pastoral setting of western farms and ranches. 020-06 (con't.)

Discussion in NEOH DEIS (3-106)—"The Imnaha Final Rearing Facility would include three new buildings – a storage/shop building, a single-family residence, and a bunkhouse. These buildings would be wood-sided and located as far from the river as possible within the relatively level portion of the site. Additional facility components would include ten concrete raceways (long rectangular ponds), a concrete intake structure and a concrete outfall, and a cleaning waste basin. The existing access bridge across the Imnaha River would be relocated about 200 feet upstream. Project construction would involve clearing about six acres of pasture land and filling the northern section of the site up to three feet to raise the new facilities above the 100-year flood level. Most of the riparian vegetation would be retained and riparian vegetation would be replanted in the area where the existing bridge would be removed and where additional screening is desired."

Figure 3.9-9 in the NEOH DEIS (page 3-103) shows "before" and "after" views of the Imnaha Final Rearing Facility site as seen from Imnaha River Road looking south. As shown in the NEOH DEIS visual simulation, the storage building, fill bank, cleaning waste basin and relocation of the existing bridge would be partially visible from this viewpoint. The new facilities would generally be sited within the existing pasture and located to take advantage of screening provided by existing large woody vegetation. Due to vegetation screening, the facilities would be visible to the public intermittently and for a brief duration from limited sections of the roadway. The relocated bridge would be

visible from the road and would be similar to the existing bridge in appearance and degree of visibility."

"Although the site is located within a Wild and Scenic River corridor with a "retention" visual quality objective (VQO), the designation does not apply to privately owned lands (U.S. Forest Service 1993a). However, most of the on-site screening vegetation is being retained along the Imnaha River and an informal planting of native trees and shrubs would be strategically planted at the site, along the south side of the Imnaha River Road to screen facilities from roadway views. The buildings would exhibit a simple style, consistent with other buildings in the vicinity (*i.e.*, not starkly different). Exterior colors and materials would be chosen to blend with the surrounding natural landscape. All lighting would be directed on-site. Outdoor lighting would generally be directed downward." (NEOH DEIS 3-106)

"No inconsistencies with the Wallowa County Comprehensive Land Use Plan relative to visual quality are apparent. Adherence to Wallowa County Land Development Ordinance Development Standards relative to visual concerns would be controlled by building permits." (NEOH DEIS 3-106)

Description of Project Effects—The WSRA does not provide for direct regulation of scenic values on private land within the WSR corridor; however, regulation is possible through the Hells Canyon National Recreation Area (HCNRA) Private Land Use Regulations. The goal of the Imnaha RMP is to work cooperatively with private landowners to achieve conservation of scenic values. In this case, collaboration with BPA on design of the facilities would provide significant improvements. A primary goal of this collaboration would be to avoid an industrial appearance that is common with fish hatcheries. 020-06 (con't.)

The HCNRA Private Land Use Regulations govern the appearance of structures by requiring all new structures be screened and/or constructed of materials that blend with the natural environment. In addition, all new utility lines are to be placed underground. The regulations are part of the approval criteria used by the Wallowa County Planning Department in review of building permit applications.

The proposed facility affects a relatively small area (less than 10 acres), and it is largely screened from most viewpoints. The project does not dominate the scenery, and the area will generally retain its existing appearance. However, there are undesirable effects to scenery that could easily be mitigated to greatly improve the project. Specific improvements could include:

- Design the row of low buildings noticeable from the Imnaha River Road in an architectural style that blends with existing structures in the surrounding Imnaha Canyon
- Design the new bridge in a style similar to farmlands bridges in the area.
- Design structures such as fencing, gates, railings, signs, etc., to be similar to farmland structures of the same type in the area
- Place all new utility lines underground

Recreation

ORV Description—The Imnaha River is recognized nationally for its recreational opportunities. Opportunities to camp, fish, hunt, view wildlife, enjoy outstanding scenery and solitude, and have a pleasurable vacation are perhaps unsurpassed in the Inland Northwest. These recreational opportunities are enhanced as they are nestled between the beautiful Wallowa Mountains and the awe-inspiring Hells Canyon of the Snake River. Another important attribute of the Imnaha River is the year-round access and opportunities that are available.

Recreation Management Goals from the Imnaha RMP—The wild segment of the river is semi-primitive/nonmorotized recreation opportunity spectrum (ROS) class from Indian Crossing to the Eagle Cap Wilderness. The ROS class within the wilderness is primitive. The ROS class of the scenic segment of the river is a semi-primitive/motorized, with limited motorized use present as a limited exception to the class. The recreational segment is a combination of rural ROS class on private land and roaded natural ROS class on public lands. In general, the roaded natural ROS class ranges from a more developed setting (Pallette Ranch to approximately Ollokot Campground) and then changes to a less developed and more rustic roaded natural ROS as you leave the vicinity of Ollokot Campground and approach Indian Crossing. Generally, the Imnaha River provides a continuum of ROS classes from a rural setting and more developed roaded natural setting to a less developed and more rustic roaded natural setting, then to semi-primitive setting and finally to a primitive wilderness ROS class. 020-06 (con't.)

Discussion in NEOH DEIS (3-82)—"The proposed Imnaha Final Rearing Facility is on private land far from any dispersed or developed recreation site managed for the public. Public recreation is limited to sightseeing and photography from the Upper Imnaha River Road. The site of the Imnaha Final Rearing Facility is not known as a particularly unique sightseeing opportunity or popular photo point. The proposed facility's effect on sightseeing is discussed above under Scenic ORV."

Description of Project Effects—The project will have limited effects to recreation. The mitigation proposed in the discussion of scenery will protect the recreation setting of the river corridor. The construction of this facility may create recreation use by visitors traveling on the Imnaha River Road, a part of the Hells Canyon Scenic Byway. The BPA should consider the appropriateness of including interpretation at this site (e.g. interpretive signs, parking, restrooms).

Fisheries

ORV Description— Both fish populations and habitat are ORVs. Bull trout, which are indicators of high-quality, clean and cold-water habitat, are well represented in the Imnaha with a healthy population. The Imnaha River contains an unusual run of larger and older Snake River system spring Chinook salmon. The fact that both Imnaha salmon and steelhead production objectives (under fish population management plans by tribal, state, and federal co-managers) rely upon native stocks also makes this river system

uniquely important. The river habitat of the Imnaha has not been significantly affected by human use and therefore is probably not too dissimilar from what it was prior to historic settlement. Land and water uses have had a minimal impact on water quantity and quality. There is one major irrigation withdrawal from the Imnaha drainage in Big Sheep Creek where 162.6 cfs are removed from the system and diverted to the Wallowa Valley.

Fisheries Management Goals from the Imnaha WSR RMP—The goal is for stable streambanks, excellent water quality, habitat complexity, natural levels of woody debris, and increased woody debris amounts from Neil Creek to Evergreen Campground. The population of anadromous fish, bull trout, and other native fish will be at or near the carrying capacity of the habitat potential. Many elements of the desired future condition are present in the Imnaha River. Maintaining these conditions is the major task required to achieve the desired future condition.

On National Forest System (NFS) lands, a riparian habitat conservation zone has been established to meet PACFISH (USDA Forest Service, 1994b) direction. This management zone is intended to protect fish habitat and water quality. All ground disturbing or vegetation disturbing activities within the zone must be designed to have no adverse impact on fish habitat or water quality. Any maintenance or reconstruction of existing developments would have to apply this standard and guideline.

020-06 (con't.)

Discussion in NEOH DEIS—For a description of specific habitat impacts, refer to the description of project effects relative to free-flow (Within-Channel Conditions; Riparian, Floodplain and Upland Effects; Effects to Hydrologic or Biologic Processes Due to Changes in On-Site Conditions; Magnitude and Spatial Extent of Potential Off-Site Changes; and Duration of Effects), in addition to the following description.

Description of Project Effects to Fish Populations

Fish Populations—Resident and fluvial (migratory) forms of bull trout occur in the Imnaha Subbasin (USDA 2000). The Imnaha River bull trout population is considered at "low risk" of extinction (Buchanan et al. 1997). Annual escapement of naturally reproducing steelhead has declined in the past three decades, although recent estimates have increased, ranging from 300 to 1,000 adults (Bryson, et al. 2001). Spring/summer Chinook returns of naturally reproducing fish declined to less than 150 individuals in the early to late 1990s (Oregon Department of Fish and Wildlife (ODFW) 1998). This escapement data led to a determination to supplement the natural population of spring Chinook.

Facility Construction—The construction of this facility will temporarily displace fish, affect migration, and remove available habitat. Placement of cofferdams during construction of intake and project outfall will alter stream flow upstream and downstream of the structures and directly reduce instream habitat. Significant amounts of sediment will be added to the river, although the effects of this sediment will be short-term and are not expected to last much beyond the construction period. Associated best management

practices to reduce sedimentation are part of the Proposed Action; however, no specifics are provided.

Information in the NEOH DEIS is insufficient to evaluate the degree of impact to migrating and resident fish. Fluvial bull trout migration occurs from May through July (J. Harbeck, NPT, pers. comm. 8/11/03). Some fluvial bull trout are migrating toward the upper Imnaha during the instream work window (July 15 to August 15). The increased sediment, reduced available habitat, and the human presence and noise associated with construction activities will have a negative effect on individuals making this migration. Construction impacts could affect reproductive success for fluvial bull trout in the one-year construction period.

Monitoring during construction activities is mentioned in the NEOH DEIS (3-30), but is not explained in enough detail to understand what will be done or how changes in construction activities would be made based on the monitoring.

Facility Operation—Peak water diversions in February and March, and withdrawals during low-flow periods (September-October) may adversely affect fish passage through the diversion reach. Post-spawning downstream migration of some fluvial bull trout will likely be affected by low flow conditions in the 1900-foot section between the intake and project outfall. Early adult steelhead migrants may be present during the final stages of rearing operations, when the maximum amount of surface water is diverted (about 33 cfs from intake to fish bypass, and then about 23 cfs from bypass to project outfall). Delays to migrating steelhead may occur if flows are low during this period. Potential effects could lead to spawning failure of individuals in this at-risk population. 020-06 (con't.)

The NEOH DEIS states that monitoring would be performed to determine the affect on passage of migrating salmonids (3-32), and, if passage problems are observed, program changes would occur. The NEOH DEIS does not, however, specify how this monitoring will be done, the timing or recurrence of monitoring, or what specific responses would be employed if fish passage problems are detected.

Rearing juvenile salmonids will likely be negatively effected within the 1900-foot diversion section of the Imnaha River between the intake and project outfall due to seasonal reductions in stream flow. Habitat availability and utilization will be reduced in this reach for the life of the facility (see "Facility Operation" below). Some negative effects will also occur due to loss of rearing habitat resulting from construction of the intake and outfall structures and associated riprap.

Supplementation—Natural production of anadromous and resident salmonids is an inherent part of the fisheries ORV of the Imnaha and Lostine WSRs, and protection of natural production is provided in WSR management direction for both WSRs. Specifically, fisheries habitat management direction for these rivers reflects the goal of protecting and retaining natural production. This NEOH supplementation program is intended to conserve and recover the at-risk spring/summer Chinook populations in these two river systems. However, there are significant risks and concerns associated with

operation of this type of conservation hatchery/supplementation program. These risks/concerns have been outlined by the Northwest Power and Conservation Council Independent Science Advisory Board (ISAB) in their June 2003 "Review of Salmon and Steelhead Supplementation". One of the primary conclusions of the review is: "*Supplementation can reduce the natural spawning fitness component in the integrated populations and this reduction in natural spawning fitness will persist in the natural spawning populations for some number of generations after the termination of supplementation.*" Because of this uncertainty, the ISAB recommended the following research and monitoring steps:

- Establish and monitor performance standards for each project for natural-origin and hatchery-origin adult abundance and per capita production rates.
- Conduct all supplementation projects with explicit experimental designs to reduce uncertainty and contain supplementation risks. Establish reference populations, adequate monitoring and objective means to assess when supplementation should be terminated (due to either success or failure).

In its review of this NEOH project proposal, the Independent Scientific Review Panel (ISRP 2001-12C) found that "*The project still lacks a detailed or focused M&E plan...This is not a sound scientific approach and defers the importance of gathering information to evaluate benefit (or costs) to fish and wildlife of construction and operation of the proposed facilities for the Spring Chinook program. This program is inherently experimental and its actions potentially influence many other populations and interests in the region. It appears that the project proponents have made not significant progress in developing M&E plans. This response is inadequate and greater attention to assessment objective, experimental design, and data management is required...*" 020-06 (con't.)

There is little evidence in the NEOH DEIS that these monitoring and evaluation elements have been built into the NEOH project design. To demonstrate adequate protection of the natural-production of fish in these WSR, the NEOH FEIS and record of decision should clearly display how the recommendations of the ISAB and IASRP have been built into the NEOH project design and operations. Without an explicit plan for monitoring and evaluation of trends in natural production to demonstrate success or failure of the supplementation program to protect natural production and to identify any expected triggers for modification of the supplementation program, further risks to the already at-risk natural spawning population appears significant.

Description of Project Effects to Fish Habitat

Facility Construction—The construction of this facility will temporarily remove available habitat for migrating and rearing salmonids as more fully described above (*Summary of effects by species).*

Facility Operation—A loss of available rearing habitat is expected in the length of channel between the intake and project outfall. Lower flows will leave less available habitat. Loss of riparian vegetation is also likely in the 1900 feet between the intake and

project outfall due to the reduced flows in the summer growing season. This impact is especially important for juvenile salmonids that tend to stay in the margins of the river. Localized loss in available habitat and riparian vegetation will also occur where riprap replaces native bank materials and where the intake and project outfall structures are located.

Monitoring of Chinook spawning habitat during operation of the facility is implied (NEOH DEIS 3-32), stating that if spawning habitat is negatively impacted by water diversion, modifications to the water management strategy would be implemented. The monitoring is not defined, nor are possible changes to water management strategies.

Water quality may be affected by the project, and monitoring of water quality is not well described. Refer to previous discussion of *Relevant Water Quality Parameters.*

Summary of effects by species

Bull Trout—The Imnaha River bull trout population is healthy and considered at "low risk" of extinction (Buchanan, et al.1997). Resident and fluvial (migratory) bull trout occur in the Imnaha subbasin. There are no current estimates on size of the Imnaha River bull trout population. The primary effects from proposed construction and operation of NEOH facilities would be on the fluvial form of this population, which migrates past both the proposed Final Rearing Facility and the existing Satellite Facility enroute to spawning areas in the upper Imnaha River. Most migrating adults would be upstream of both facilities prior to the opening of the instream work window. Construction activities would have minimal and short-term effect on Imnaha bull trout. Facility operation of both facilities would have more impact. Decreased flows in the 1900 foot section affected by the withdrawals at the Final Rearing Facility could have some negative impact on migrating fish. However, since most bull trout would have migrated past the facility prior to low flows, this impact is not expected to be substantial. Operation of the Satellite Facility would have a far greater impact on migrating bull trout. The facility would start operations approximately a month earlier than it does currently. All bull trout passing through the facility would be kept in a holding pool until being hand-placed into a pipe leading back to the river. The affects to bull trout from the stresses of this procedure are hard to quantify, but the risk of pre-spawning mortality is increased significantly. Additional detail on monitoring of fish migration and the measures to ensure successful fish passage should be added to document that this issue has been adequately addressed at both facilities.

020-06 (con't.)

Steelhead—The Imnaha River steelhead population appears recovering. Based on spawning counts and counts at the Lower Granite dam, populations have been on an upward trend since 1995 (Brad Smith, ODFW, pers. comm.). Effects on steelhead in the Imnaha River from proposed construction and operation of NEOH facilities are expected to be limited on spawning adults. The timing and location of steelhead spawning does not coincide with the construction work or operation of proposed NEOH facilities. Returning adults migrate up the Imnaha River during high flows in early spring, prior to the instream work window. Spawning occurs primarily in the tributary streams. Kelts

returning downstream may encounter a delay in migration when the weir is in operation at the Satellite Facility. Panels of the weir can be lowered to allow downstream migrating adults to pass through, although it is not clear what monitoring would be in place to trigger this action or how monitoring would trigger this action. This delay would not have a significant impact on the Imnaha River steelhead population. The primary effect to Imnaha River steelhead would be on rearing juveniles. Although juvenile steelhead emerge and begin rearing within tributary streams, it is likely that some rearing takes place in the Imnaha River. Construction activities will displace rearing fish, and some habitat loss will result from placement of riprap. At low flows there will be a net loss in rearing habitat in the 1900 feet between the intake and outfall of the Final Rearing Facility, due to the effect of water withdrawals. The same habitat loss would occur, although to a lesser extent, at the Satellite Facility. There are approximately 397 miles of steelhead spawning and rearing habitat within the subbasin (USDA 2003). Construction and operation of the proposed facilities would decrease habitat quantity and quality within approximately 0.25% of the subbasin rearing habitat. Although the effect on steelhead is expected to be incremental, it is not consistent with WSR management direction for protection and maintenance of fish habitat or Northwest Power and Conservation Council (NPCC)/BPA tributary habitat restoration. There appears to be opportunities to build habitat enhancing features into the facility design. Measures should be incorporated to mitigate habitat loss and displayed in the DEOH FEIS.

020-06 (con't.)

Chinook—The Chinook salmon population within the Imnaha River has been on an improving trend since 1995 (Brad Smith, ODFW, pers. comm.). Although the hatchery facilities are designed to improve Chinook salmon populations within the Imnaha River, there are some negative effects to the wild population. Spring/summer Chinook are not known to spawn in the reach of the Imnaha River containing the proposed Final Rearing Facility (J. Harbeck, NPT, pers. comm.). However, spawning does take place below and above the Satellite Facility. All adults passing the Satellite Facility are held for a period up to 24 hours in the holding facility, anesthetized, weighed, and measured (R. Zollman, NPT, pers. comm.). Fish allowed to pass upstream of the facility are put into a pipe leading to a covered recovery pond, from which they can swim into the river once recovered. This process can have a negative effect on adult Chinook, and likely results in an increase in pre-spawning mortality. Juvenile Chinook rear in the Imnaha River and the lower reaches of major tributaries (USDA 2003). Proposed construction activities at both facilities would displace rearing fish, and some habitat loss will result from placement of riprap. At low flows there will be a net loss in rearing habitat in the 1900 feet between the intake and outfall of the Final Rearing Facility, due to the effect of water withdrawals. The same habitat loss would occur, although to a lesser extent, at the Satellite Facility. There is currently 130.6 miles of spring/summer Chinook salmon rearing habitat in the Imnaha Subbasin (USDA 2003). The proposed facilities would impact a portion of habitat within approximately 0.76% of the subbasin rearing habitat, an incremental impact, however this impact is not consistent with WSR management direction for protection and maintenance of fish habitat and should be mitigated (see steelhead discussion above). The overall effect to the Imnaha River spring/summer Chinook integrated population from the proposed facilities would be to increase it, however, negative effects are anticipated to naturally spawning wild individuals.

Indiscriminate release of excess hatchery broodstock, unmarked fry and presmolts may complicate monitoring and recovery of the independent populations identified by the Interior Columbia Basin Technical Recovery Team in the Imnaha and Grande Ronde (see http://www.nwfsc.noaa.gov/trt/trt_columbia.htm). Operational plans for maintenance of these independent populations (especially Imnaha/Big Sheep Creek stocks) should be included in the NEOH FEIS.

Wildlife

ORV Description—The wildlife habitat and population diversity of the Imnaha River canyon offers unparalleled opportunity for sport and viewing. The wildlife of the Imnaha is one of the contributing factors to the designation of the Hells Canyon National Recreation Area. Both wildlife populations and habitat are ORVs.

Wildlife Management Goals from the Imnaha RMP—The desired future is an increase and then stable population of bighorn sheep within the lower Imnaha River corridor. Over time, quality habitat is maintained or increased for all wildlife. No reduction in wildlife or proposed, endangered, threatened, or sensitive species habitat or population.

Discussion in NEOH DEIS (3-53, 3-54): "Prior to construction, up to three feet of rock fill would be placed on the lower end of the site. The vegetated riparian zone would be largely avoided. Construction of facilities would result in about three and one-half acres of new impervious surface at the six-acre facility." 020-06 (con't.)

"The existing bridge would be relocated about 200 feet upstream of its current location, to a stable rock bar. A small number of trees and at least one snag would be removed due to placement of the bridge abutments. Additional snags occur in close proximity to the proposed bridge location, however, and it is possible that one or more additional snags would be affected either directly by placement of the structure, or indirectly if adjacent snags (overhanging canopy) interfere with equipment operation for safe placement of the panel bridge. Removal of large, dominant trees (black cottonwood and ponderosa pine) may limit opportunities for bald eagle roosting in the immediate vicinity. However, removal of snags and potential perch trees would be restricted to this location, and many others are available off-site."

"Rock fracturing, drilling and excavation for installation of the intake structure and concrete cutting to dismantle the old bridge abutments would produce high, periodic noise levels that are likely to disturb wildlife within a mile or more of the site and alter normal behavior patterns. Temporary displacement of some individuals may occur. The highest noise level activities would primarily occur between July 15 and August 15, during the instream work window. Noise impacts to wintering bald eagles that may use the area would be avoided by this timing. No nesting territories are documented near the site (ONHP 2002). Disturbance levels resulting from remaining construction activities would likely be reduced, due to the lower noise levels generated, but may also cause temporary displacement of local wildlife."

"The ability of many Imnaha subbasin riparian zones to support wildlife and provide aquatic habitat has been reduced by roads and livestock grazing. Exclusion of cattle from the riparian zone and supplemental planting of native species at the proposed Imnaha Final Rearing Facility would, in the long-term, improve the functioning condition of the riparian habitat along this stream segment. Some long-term adverse wildlife impact is expected at this site from the loss of a small amount of riparian habitat where structures would be placed, increased human access and human-related disturbances, and disturbance to potential bald eagle roosting habitat outside of the critical wintering period."

Description of Project Effects—The project will not affect bighorn sheep, a particular concern for management within the river corridor, and will have little effect to the river's wildlife habitat.

The effects discussion in the NEOH DEIS is, however, unclear as to whether displaced species would find ample replacement habitat in the immediate area or if adjacent habitat is limited and dispersing species would encounter stresses such as predation. The NEOH DEIS effects discussion for listed species should be clarified. Without the information provided by consultation, it is difficult to make conclusions regarding effects to listed species.

020-06 (con't.)

Vegetation/Botany

ORV Description—The Imnaha River drainage contains no less than thirteen rare and/or endemic plant species. Unique plant communities are found within the lower reaches of the river as well as those upper reaches of the river where limestone is abundant. The Imnaha is unique in that all of the plant species or communities mentioned are found within this one drainage. This points to the great diversity of vegetation along the Imnaha and the range of elevation and geomorphologic features.

Vegetation/Botany Management Goals from the Imnaha RMP—The desired future condition of the botanical resource will emphasize the maintenance and enhancement of the numerous plant species and communities that are found in the river corridor. All species that currently exist will continue to thrive and the occurrence of nonnative plants that compete with and displace native species will be reduced or eliminated. Special attention will be placed on those plant species or communities that are endangered, threatened, sensitive or otherwise unique. In some instances, management activities that are not compatible with these goals may be modified or curtailed.

Discussion in NEOH DEIS (3-62, 3-63): "Most of the project activity is proposed in the center of the site, which currently lacks woody vegetation and is dominated by introduced pasture shrubs, grasses and weedy forbs. Removal of native vegetation is primarily limited to the intake structure and intake pipeline corridor (about 1000 feet, most of which is along an existing road), outfall structure (less than 20 feet) new bridge abutments (about 40 feet on each side of the river) and in the corridor for a new power line (about 300 feet). However, a small number of mature trees and at least one snag

would be removed from the proposed bridge relocation site. Additional snags occur in close proximity to the proposed bridge location, however, and it is possible that more than one snag would be removed for the structure or to allow for safe equipment operation during structure placement. Where possible, the riparian zone would be replanted with native vegetation."

"Exclusion of cattle from the riparian area and planting disturbed areas with native species would encourage more diverse riparian vegetation along the riverbank. Weed control at the project site would also encourage reestablishment of native vegetation."

Description of Project Effects—Most activities proposed at the Imnaha Final Rearing Facility will occur on sites already disturbed by grazing. Therefore, in most areas affected by the proposal, unique habitats and native plant species and communities are not likely to be affected. The proposed project also contains provisions for eliminating encroachment of nonnative plants, which is important in the river corridor.

However, some of the riparian areas affected by the project may be largely undisturbed. The Imnaha RMP emphasizes that special attention will be placed on those plant species or communities considered to be endangered, threatened, sensitive or otherwise unique. The NEOH DEIS is unclear about whether or not endangered, threatened, sensitive, or otherwise unique species and communities are present in riparian areas that will be disturbed by the proposal and is also unclear about effects to them. Although the WSR Act does not provide for regulatory control of private lands, collaboration with BPA could greatly improve effects to the vegetation/botany of the riparian areas disturbed in this project. It should be possible, for example, to determine if there are endangered, threatened, sensitive or otherwise unique riparian plant species or communities present, in riparian areas that will be disturbed by the proposal and, if so, to develop mitigation measures. 020-06 (con't.)

The NEOH DEIS states that "weed control" will occur at the project site; however, specific as to measures are not defined. Given the threat of invasive weeds to the vegetation/botany ORV, the final project proposal would be improved by ensuring that construction equipment and all other project-related vehicles are free of invasive weed seeds. Additionally there should be prompt revegetation of disturbed areas and an invasive weed control plan.

History/Prehistory

ORV Description—Portions of the Imnaha River corridor that have been inventoried contain a dense concentration of sites, with many more sites yet to be discovered. Extrapolating from the known sites that are either named or eligible to the National Register of Historic Places, it appears the Imnaha River canyon contains a unique concentration of both historic and prehistoric sites. Both historic and prehistoric cultural resources are ORVs.

History/Prehistory Management Goals from the Imnaha RMP—Sites are protected until management actions can be determined. These actions may include data collection, mitigation, interpretation, education, or preservation. Selected sites would be used for public education and interpretation. All activities would be in coordination and cooperation with the Nez Perce Tribe.

Discussion from NEOH DEIS (3-88): "Oregon Parks and Recreation Department records indicated only one cultural site in the area (35WA812), near the mouth of Dunlop and Thorn Creeks, located on the opposite side of the Imnaha River from the project area. No proposed new facilities (bridges, power lines, etc.) would be located near this site."

"During the on-site survey, an irrigation ditch was observed on the southwest edge of the project site within the area of potential effect (where site disturbance or construction is expected, Figure 2-6). In addition to the irrigation ditch, an old homestead and orchard are known to exist in the project vicinity outside of the area of potential effect. A site shovel-survey showed no indication of other cultural materials. Since the ditch, homestead and orchard would be avoided by project activities, no impacts to cultural resources are anticipated. However, construction activity would be monitored by a person knowledgeable about cultural resources. If evidence of cultural materials is found or if impacts to known materials occur, site work or activity would be halted until the site could be assessed. Notification of and consultation with the SHPO, NPT Cultural Resource Program and CTUIR would also occur as appropriate." 020-06 (con't.)

Description of Project Effects—Based on pre-disturbance surveys, project construction will avoid known sites. On-site construction monitoring will mitigate the potential to affect any unknown sites.

Traditional Use, Lifestyle Adaptation

ORV Description—The uniqueness of traditional uses, derived from the river related climatic and geographic conditions, has suspended in time a part of history. Adding to the uniqueness of this traditional use in the Imnaha Valley is the reality that similar areas have ceased to provide this important land use or have modernized to a point that no longer represents traditional uses. The Nez Perce and later the Euro-Amreicans adapted to what the river corridor had to offer. Although the Nez Perce lifestyle is not evident in the Imnaha River, except through historical and prehistorical sites, the Euro-American traditional lifestyle is still very visible. The values and uniqueness of both the Imnaha River Valley and the local lifestyles are recognized nationally.

Management Plan Goals for Private Land from the RMP—The goal is to work cooperatively with private landowners to achieve consistency with the following:

- Conservation and continuance of forest/grazing land for forest/grazing uses and farmland for farm uses, retaining the pastoral or natural setting upon which those uses take place
- Maintenance and protection of the free-flowing nature of the river

- Conservation of scenic, wilderness, cultural, scientific, and other values contributing to the public benefit
- Preservation of all features believed to be biologically unique
- Protection and maintenance of fish and wildlife habitat
- Protection of archaeological and paleontologic sites
- Preservation of historic sites associated with and typifying the economic and social history of the region and the American west
- Continuation of traditional and existing uses and developments in a manner compatible with the WSR Act, and river management plan
- Provision for outdoor recreation use in so far as it is compatible with traditional and existing uses and can be accommodated within pastoral or natural settings

Discussion in NEOH DEIS (3-112, 3-113, 3-115, 3-116): "The proposed Imnaha Final Rearing Facility would be a conditionally permitted land use under the Wallowa County zoning regulations and would be subject to the County's Hearing Review process. The proposed facility would be generally compatible with surrounding agricultural and residential uses and the adjacent Upper Imnaha River Road. The facility would be a new land use at this location and would convert pasture along the river to fish production. Once operational, the level of activity at the facility would be limited and compatible with the residence and road across the river. Much of the facility would be screened from view by existing riparian vegetation, which would be retained. Design considerations discussed under Section 3.9 of this EIS would enhance compatibility and maintain visual integrity." 020-06 (con't.)

"The Proposed Action would affect existing roadways and traffic levels by temporarily increasing traffic during construction and slightly increasing traffic once the Imnaha Final Rearing Facility becomes operational. The Imnaha Final Rearing Facility would generate a few daily trips associated with the residence and bunkhouse, but the number of trips would be similar to those generated by nearby residential and agricultural uses. Potential traffic hazards at the Imnaha Final Rearing Facility would be addressed by relocating the bridge and constructing a turning lane on the Upper Imnaha River Road to increase sight distance, allow passing and accommodate a wider turning radius for fish hauling trucks accessing the site. Given the low daily traffic volumes in the vicinity of the site, the short duration of construction, the low numbers of trips related to operations, and the planned road and bridge improvements, the Proposed Action would cause only limited transportation impacts."

"Implementing the Proposed Action would not result in any group of people in the area, including racial, ethnic or economic groups bearing a disproportionately high share of population or employment impacts, quality of living changes or environmental consequences. "

"The Proposed Action would not result in measurable short- or long-term impacts to local population conditions. Most of the new full-time, seasonal and temporary workers would likely come from the local area as would most construction contractors and employees. A few very specialized labor requirements may be met with workers from elsewhere. If

most contractors and workers came from outside the region, the increase to area population may be noticeable given the slow growth or decline in population over the past ten years."

"Implementation of the Proposed Action would result in some additional employment opportunities in Wallowa and Union Counties. The construction phase of the Proposed Action would provide temporary employment for several dozen construction workers most of which would probably come from the local labor pool. Operation of the various proposed hatchery facilities would result in about three additional full-time employees (possibly from outside the area) and about ten additional seasonal employees (probably from within the local area). This relatively small increase in full-time and seasonal employment would result in only minimal increase in demand for support industries or government services. City tax revenues or expenses are not expected to change noticeably nor would overall regional economic productivity or cost of living be measurably changed. The direct impacts, while small, are expected to be beneficial in terms some increased employment and increased demand for goods and services."

020-06 (con't.)

"Implementation of the Proposed Action would result in an increase in the importance of the fisheries sector within the local economies of Wallowa and Union Counties. This could result in a slight increase in recreation and tourist activity within the two county area, resulting in benefits to both social culture and regional economic productivity."

Description of Project Effects—The project does not affect traditional use, lifestyle adaptation, particularly if the recommendations discussed under scenery are implemented.

Imnaha Satellite Facility

The following discussion is focused on those components of the Imnaha Satellite Facility that affect the river's free-flowing condition and are therefore water resources projects subject to Section 7(a). Project proposals are evaluated as to their effect on the river's free-flowing condition, water quality and outstandingly remarkable values. A detailed project description is provided in the introduction of the *Wild and Scenic Rivers Act Preliminary Section 7 (a) Determination.*

Components of the Imnaha Satellite Facility proposal that are or appear to be within the ordinary high water mark of the river include:

- Modifications to the water intake structure and an associated 100 feet of riprap upstream and in the immediate area of the intake
- A new fish weir on the existing weir's base, but with new concrete abutments upstream and downstream of the new weir on both sides of the river
- A new fish ladder and associated riprap adjacent to the existing fish ladder

Refer to Figure 2.8 (NEOH DEIS 2-16) for a detailed drawing of the proposal.

Description of Effects to Within-Channel Conditions

<u>Position of the proposed activity relative to streambed and streambanks</u>

Modifications to the water intake structure:
"Expansion of the intake structure and upgrades to the existing screen would require the use of a cofferdam and dewatering pumps. Installation would require disturbance of about 900 square feet of bed and bank upstream of the existing intake. The submersible dewatering pumps would route water through the existing intake pipeline to the existing raceway (that would be used as an on-site sediment basin) and through the outfall pipe that discharges water at the current fish ladder entrance. The construction area would be limited to the riprap portion of the banks and would not disturb riparian vegetation" (NEOH DEIS 3-35).

"About 100 cubic yards of riprap would be placed at and upstream of the intake to stabilize it. Riprap would be placed stream-side of existing vegetation so as not to impact riparian vegetation or shading" (NEOH DEIS 3-35).

New weir:
"The proposed action would replace the existing weirs with a Chiwawa weir on the existing concrete sill. Installation would require the addition of concrete abutment walls on both riverbanks. Construction would take place within the area already impacted by the existing weir and concrete sill. Because spring/summer Chinook spawners could be present at the time of instream work, a portable picket weir would be installed slightly downstream to direct adults into the fish ladder for collection or upstream passage. Sandbags would be used to dewater the weir construction area, one side of the river at a time" (NEOH DEIS 3-36).

New fish ladder:
"A new fish ladder would be installed alongside the existing ladder coinciding with the weir installation. Riprap would stabilize the ladder at the river entrance, and a minor amount of riparian vegetation would be impacted. The existing ladder would remain to increase water flow and fish attraction to the new ladder" (NEOH DEIS 3-36).

Changes in active channel location, geometry, slope, and/or form

The armoring (riprap) associated with the modified intake and bridge abutments will accelerate the river's flow in a localized area, potentially decreasing bank stability and increasing erosion in areas of redirected flow. The new concrete abutments extend into the channel, resulting in slightly more constriction of flow. The construction at both of these sites, however, is generally within the footprint of existing facilities and stabilization measures (riprap). Resulting change in channel structure is anticipated to be minor. 020-07

Relevant water quality parameters

"Water temperature changes are not anticipated as a result of the Imnaha Satellite proposal. Cold water fish are identified as a beneficial use under Section 303d of the Clean Water Act. Water quality at the facility is appropriate for fish culture use, although a chiller may be necessary for incubation due to high river temperatures during July to late August. Chilled water would likely be cooler than the receiving river water, but would mix rapidly after release downstream of the facility. Temperature changes would be minor and localized, and not expected to impact water quality or fish" (NEOH DEIS 3-77).

Navigation of the river

Above the town of Imnaha, including the project area, river flows are too low to accommodate boating. 020-08

Riparian, Floodplain and Upland Effects

Vegetation composition, age structure, quantity, or vigor

"Installation of the power supply line and the additional surface water pipeline would not disturb riparian vegetation" (NEOH DEIS 3-34). The riprap associated with the modified intake structure "would be placed streamside of existing vegetation so as not to impact riparian vegetation of shading" (NEOH DEIS 3-35). "A new fish ladder would be installed alongside the existing ladder coinciding with the weir installation. Riprap would stabilize the ladder at the river entrance, and a minor amount of riparian vegetation would be impacted" (NEOH DEIS 3-36).

Relevant soil properties

Various construction activities will disturb ground "and add about one-quarter of an acre of impervious surface to the site, which may lead to increased or rerouted erosion and sediment carried into the river. Increased runoff during construction is expected to be short-lived" (NEOH DEIS 3-34). 020-09

Relevant floodplain properties

The riprap associated with the modified water intake and the expanded concrete abutments of existing fish weir will redirect flows and may result in small areas of localized bank instability and increasing erosion. 020-10

Effects to Existing Hydrologic or Biologic Processes Due to Changes in On-Site Conditions

"Combining existing and proposed surface water withdrawals, no more than about 21 cfs would be diverted from the river for juvenile acclimation and release (March – April) and adult collection, holding and spawning (May 15 – September 30)" (NEOH DEIS 3-36).

"An additional six cfs would be required during adult collection to operate the adult recovery by-pass pipeline system. During adult collection, a second separate intake is operated at a location about 800 feet downstream from the existing surface water intake (about 130 feet upstream from the existing picket fish barrier). This intake feeds a fish return channel with a maximum water right of six cfs and is operated only when adults are migrating. The intake diverts water into a channel with a 21-inch flow return pipe extending from the fish recovery area to a discharge location just upstream from the fish barrier" (NEOH DEIS 3-36).

"The existing intake structure would be enlarged to accommodate desired higher flow rates for the facility. The intake structure modification would add capacity to the current intake structure to provide the about 20 cfs needed for fish acclimation as described in Section 3.2.3.2 of this EIS. An additional 6 cfs diversion would be required during adult collection to operate the adult recovery by-pass pipeline system. During extremely low flow periods of early fall, these diversions could alter the river's natural flow regime in the immediate vicinity of the intake. However, since these diversions would be temporary and localized they are not expected to affect the overall flow of the river in the area" (NEOH DEIS 3-77).

Note: The NEOH DEIS states the existing and proposed water withdrawal at 21 (DEIS 3-36) and 26 cfs (NEOH DEIS 2-17), respectively. 020-11

"Riprap around the intake may slightly alter the hydrology of the river in the area, potentially causing very minor, localized modifications to habitat use. Preservation of natural meanders would occur, where possible. Disturbed soils may create minor short-term sedimentation in the river during cofferdam removal" (NEOH DEIS 3-35).

"The placement of sandbags and the temporary picket weir during construction of the new weir has the potential to create minor sedimentation and affect fish habitat if river hydraulics are influenced" (NEOH DEIS 3-36).

"Construction of the weir and ladder during the current ODFW instream work window may impact the passage of adult spring/summer Chinook, potentially stressing individuals. Monitoring by fisheries biologists during construction would take place to observe passage conditions and determine if additional physical passage upstream or downstream of the construction area is necessary. Also, during their monitoring fisheries biologists would consider the need to use any alternate instream work windows to lessen impacts to spring/summer Chinook" (NEOH DEIS 3-36).

Magnitude and Spatial Extent of Potential Off-Site Changes

Likely changes from this project proposal include scour and erosion from armoring of modified intake and new concrete abutments of existing weir. These effects are anticipated to be limited to localized effects near the structures and within the project area. 020-12

Duration of Effects

Effects from construction activities will be temporary and localized. Long-term project effects such as erosion from armored modified intake and concrete abutments of existing weir will vary little from the existing situation. The reduced flow from additional water withdrawal will persist for the life of the project. 020-13

Effects to Outstandingly Remarkable Values

The Imnaha WSR's ORVs are its scenery, recreation, fisheries, wildlife, vegetation/botany, history/prehistory, and traditional use/lifestyle adaptation. Each ORV is described through four subsections: 020-14

- Significance of value (ORV Description)
- Management Goals from the Imnaha RMP
- Discussion in NEOH DEIS
- Description of Project Effects

Refer to discussion of Imnaha Rearing Facility for *ORV Description* and *Management Goals*.

<u>Scenery</u>

Discussion from NEOH DEIS

NEOH DEIS (3-106, 3-107)—"The Imnaha Satellite Facility (Figure 2-7) modifications would include installing a new fish barrier across the river to replace an existing diversion weir, installing a new fish ladder next to the existing fish ladder, enlarging the

fish holding area, constructing a new settling basin, and modifying the existing intake structure. The existing spawning shelter would also be enlarged to accommodate a new incubation room. New powerlines would be buried in the Imnaha River Road."

"Figure 3.9-10 (page 3-103) shows a "before" and an "after" view of the Imnaha Satellite Facility site as seen from Imnaha River Road. As shown in the simulation, the new fish ladder and addition to the spawning shelter would be apparent but not particularly noticeable from the roadway. These effects would only be visible to the public from limited places along Imnaha River Road immediately adjacent to the site and from the visitor parking area. In general, as seen by the public, the facility's appearance with proposed changes would be very similar to its current appearance, except during and immediately after construction. Given the site's location within a Wild and Scenic River corridor and within a National Forest area with "retention" VQOs, the anticipated visual effects could represent an adverse visual effect. However, because views of the facility that would occur after that Proposed Action would not be substantially different from existing views, and because the existing facility is somewhat of a public attraction (it is open to visitors), the amount of change in visual quality is expected to be minor."

Description of Project Effects—The appearance of the Imnaha Satellite Facility will be little changed from the existing appearance; the modifications would not be noticeable to most visitors. 020-15

Recreation

Discussion from NEOH DEIS (3-82)—"Proposed modifications to this facility would not change any recreational opportunities around the site. However, if the existing diesel generator is replaced by the proposed underground power line (buried in the road right-of-way), the noise levels from the Satellite Facility would decrease, which would provide a better experience for nearby forest visitors. Also, the proposed new communication line to the facility could aid in emergency situations and overall area management."

Description of Project Effects—The facility will appear unchanged to the recreationist after the short-term construction period. There will be positive effects from reduced noise due to replacement of the diesel generator by electrical power and improved emergency communications. To minimize potential impact on recreation use of the Imnaha River Road, placing underground power should occur prior to Memorial Day or after Labor Day. 020-16

Fisheries

Discussion in NEOH DEIS— For a description of specific habitat impacts, refer to the description of project effects relative to free-flow (Within-Channel Conditions; Riparian, Floodplain and Upland Effects; Effects to Hydrologic or Biologic Processes Due to Changes in On-Site Conditions; Magnitude and Spatial Extent of Potential Off-Site Changes; and Duration of Effects), in addition to the following description.

Description of Project Effects to Fish Populations
Refer to Imnaha Rearing Facility discussion *(Description of Project Effects to Fish Populations).* 020-017

Facility Construction --The construction of this facility will temporarily displace fish, affect migration, and remove available habitat. Placement of cofferdams will alter stream flow upstream and downstream of the structure and directly reduce instream habitat. Significant amounts of sediment will be added to the river. The effects of this sediment will be short-term and are not expected to last long beyond the construction period. Associated best management practices to reduce sedimentation are part of the Proposed Action; however, no specifics are provided. 020-18

Information in the NEOH DEIS is insufficient to evaluate the degree of impact to migrating and resident fish. Some fluvial bull trout and Chinook salmon are migrating to the upper Imnaha River during the ODFW instream work window of July 15 to August 15. Sediment reduced available habitat and the human presence and noise associated with construction activities will have a negative effect on migrating adults, as well as juveniles near the construction site. The weir and fish ladder appear to be constructed simultaneously, which is of special concern. The amount of this instream work (especially spanning the width of the Imnaha River) may have a significant negative impact on upstream migration of these fish. The extent of this impact cannot be determined with the information provided in the NEOH DEIS.

During the construction of the new weir, a portable picket weir would be installed slightly downstream to direct adults into the fish ladder for collection or upstream passage (NEOH DEIS 2-36). It is not clear how this will work particularly with the new ladder being installed simultaneously with the new weir. If fish are to be collected and moved around the construction site, there is a risk of pre-spawning mortality from handling and handling stress. The NEOH DEIS states that monitoring by fisheries biologists will take place during construction to observe passage conditions and determine if additional physical passage upstream or downstream of the construction area is necessary (NEOH DEIS 3-36). It also states that during monitoring fisheries biologists would consider the need to use any alternate instream work windows to lessen impacts to spring/summer Chinook. Other species are not mentioned. How the monitoring would be accomplished, and how additional passage would be provided is not discussed (refer to *Summary of effects by species* in the Imnaha Final Rearing Facility discussion). 020-19

Facility Operation—The new weir will be operated from June to September. This is a longer season than the existing weir is able to operate. More migrating wild spring/summer Chinook salmon will be intercepted. More migrating bull trout will also be intercepted, impacting a larger number of these fluvial fish than the current operation. The NEOH DEIS states that holding and spawning of fish may result in pre-spawning stress and potential mortalities of Chinook or other species that enter the facility (NEOH DEIS 3-39). All bull trout will presumably be held and handled prior to resuming their upstream migration. The increase in potential for pre-spawning mortality within the Imnaha River bull trout population is implied. However, the extent of the effect on this 020-20

population cannot be determined without more information (refer to *Summary of effects by species* in the Imnaha Final Rearing Facility discussion). 020-20 (con't.)

Instream migration of juvenile salmonids is not discussed in any detail in the NEOH DEIS. The current facility has been a passage barrier or impediment to migrating juveniles. The new facility would be in place for a longer period of the year, lengthening the period where juvenile movement may be impeded. It is not clear if juveniles can pass downstream volitionally when the new weir is in operation. 020-21

It is not clear how downstream migration of adult bull trout or steelhead kelts will be facilitated. More information on how monitoring will take place and how downstream passage will be promoted will be needed to estimate effects to downstream migrants. The NEOH DEIS (3-38) states that vigilant monitoring of fish collection and instream structures would take place, especially during periods of low flow, to insure that listed species are not negatively impacted by the upgraded structures. It is not clear how this monitoring will be done, or what measures could be taken if listed species are negatively impacted.

Improved attraction to the new ladder should decrease adult salmonid migratory delays. The existing fish ladder would remain in place to increase water flow and fish attraction to the new ladder (NEOH DEIS 3-36). In addition, the new ladder will be equipped with about a 12-inch wide opening to allow for increased attraction flow near the new weir (NEOH DEIS 3-38). The NEOH DEIS also states that the ladder entrance is currently too far downstream and fish cannot locate the entrance to the ladder easily, causing fish to drop back downstream, where they often spawn (NEOH DEIS 3-36). It is not clear how the new facility will deal with this issue, since the new ladder and weir locations are not proposed to change. 020-22

Rearing juvenile salmonids will likely be negatively effected within the section of the Imnaha River between the intake and outfall due to seasonal reductions in stream flow. Habitat availability and utilization will be seasonally reduced in this reach for the life of the facility (see "Facility Operation" below). Some negative effects will also occur due to loss of rearing habitat resulting from the intake and outfall structures and associated riprap. 020-23

Description of Project Effects to Fish Habitat

Facility Construction—The construction of this facility will temporarily remove available habitat for migrating and rearing salmonids as described above.

The design of the proposed fish ladder, trap, temporary holding and bypass facilities are not discussed. Effects on non-target fish from the installation of the ladder and associated facilities cannot be determined without additional information about design. 020-24

Facility Operation—A loss of available rearing habitat is expected in the length of channel between the intake and outfall. Lower flows will leave less available habitat. A 020-25

loss of riparian vegetation associated with construction of the intake and outfall structures is expected. Additional riparian vegetation loss is also expected in the area between the intake and outfall due to lower seasonal flows. This will result in a negative effect on rearing habitat, especially for juvenile salmonids that tend to stay in the margins of the river. A small loss in available habitat will also be realized where riprap replaces native bank materials. 020-25 (con't.)

The NEOH DEIS mentions that habitat loss will occur, but no reference is made to possible habitat improvements that would compensate for this habitat loss. 020-26

The release of 490,000 smolts into the upper Imnaha River, when added to the number of smolts produced naturally, likely exceeds the productive capacity of this river. Smolt production within the Imnaha River has been estimated through several different methods. Carmichael and Boyce (1986) estimated 245,260 smolts were produced from the adult escapement in 1957 (the year of peak redd counts), and consider that the carrying capacity for the subbasin. The NPCC Smolt Density Model estimates that the smolt capacity from Gumboot Creek down to Big Sheep Creek is 435,289. The number of smolts to be released in the river under this plan exceeds either of those numbers by a considerable amount. The direct and indirect effects on naturally produced juvenile salmonids in the Imnaha River from these released smolts cannot be evaluated without more discussion in the NEOH DEIS on this subject. When survival rates are high, as they have been the last couple years, there are high returns of hatchery adults. There is a concern of "swamping" natural production, especially in high return years. Smolt release numbers are scaled to brood stock availability. In terms of effects on natural production, smolt releases appear to be scaled backwards. That is, in higher return years, when there is more potential natural production, hatchery production is increased up to the 490,000 ceiling. Smolt releases should be examined in terms of protection of natural production, and scaled appropriately. 020-27

Refer also to Imnaha Rearing Facility, *Sumary of project effects by species.* 020-28

Wildlife

Discussion from NEOH DEIS (3-54)—"Proposed site improvements would disturb ground and add a small amount (one-quarter acre) of new impervious surface to the site. Construction noise and activity disturbances may alter the behavior and individual distribution of certain wildlife within the area, but these impacts are short-lived and are not expected to affect long-term use, abundance and distribution of wildlife in the area. Construction would not occur in the bald eagle wintering period and no nesting territories have been documented in the vicinity."

"The site is currently developed as a hatchery and proposed improvements would not expand the developed area or greatly increase the long-term level of human disturbance or activity over existing conditions. No snags or mature trees would be removed and the overall quality of wildlife habitat at this location would remain essentially unchanged from existing conditions."

Description of Project Effects— The project will not affect bighorn sheep, a particular concern for management within the river corridor, and will have little effect to the river's wildlife habitat.

The effects discussion in the NEOH DEIS is, however, unclear as to whether displaced species would find ample replacement habitat in the immediate area or if adjacent habitat is limited and dispersing species would encounter stresses such as predation. The NEOH DEIS effects discussion for listed species should be clarified. Without the information provided by consultation, it is difficult to make conclusions regarding effects to listed species. 020-29

Vegetation/Botany

Discussion from NEOH DEIS (3-62, 3-63)—"Most construction activities at this existing facility would occur in areas devoid of native vegetation or in areas that are maintained as lawn and landscaping. For example, no vegetation would be removed to install a new power line in the existing roadbed. About seven young trees planted as ornamental landscaping would be removed. The new intake structure may result in minor incidental impacts to riparian vegetation as a result of brush clearing, excavation, and placement of structures and associated riprap. A minor amount of woody riparian vegetation may be removed or disturbed where the new fish ladder would be installed adjacent to the existing ladder. Riprap would be used at this location to stabilize the ladder at the river entrance."

"Only very minor impacts to native vegetation is expected at this location as the site is already operated and maintained as a hatchery facility, and proposed improvements would be confined to the existing facility area. Native plants would be encouraged through revegetation and continuing weed control efforts."

Description of Project Effects—The proposed activities are limited to sites already disturbed by the existing facility; therefore, new effects to vegetation/botany are limited. 020-30

History/Prehistory

Discussion from NEOH DEIS (3-88)—"The NPT Archeologist is conducting a cultural resource review for the proposed powerline to be located under or along the Upper Imnaha River Road connecting the site to the existing PacifiCorp substation about six miles to the north. Though no sites are expected in the road corridor, if any are discovered during survey or installation of the line, they would be avoided by rerouting the line underground or taking it overhead to avoid further disturbance of the ground. All other construction activity would be monitored and if evidence of cultural materials is found, site work or activity would be halted and the Oregon SHPO, NPT Cultural Resource Program and CTUIR would be notified and consulted regarding more detailed investigation. Since no cultural materials were detected during the site survey, and this is

an existing facility and modifications would occur within areas already developed, no new impacts to cultural resources are anticipated."

Description of Project Effects—Based on pre-disturbance surveys, project construction will avoid known sites. On-site construction monitoring will mitigate the potential to affect any unknown sites. The Wallowa-Whitman National Forest archaeologist must be consulted as well as tribal archaeologists and the SHPO. 020-31

Traditional Use, Lifestyle Adaptation

Discussion from NEOH DEIS (3-113)—"The existing Imnaha Satellite Facility is located on Forest Service land, within the boundaries of the Wallowa-Whitman National Forest and is subject to the goals and policies of the Forest Plan, the HCNRA Comprehensive Management Plan Draft EIS (U.S. Forest Service 1999), and the Imnaha River Wild and Scenic River Management Plan (U.S. Forest Service 1993a). The existing facility operates under a Special Use Permit from the Forest Service, which would be amended to allow the modifications in a manner consistent with the Forest Plan. A separate Special Use Permit would be required for the new powerline that would run underground about six miles along the Upper Imnaha River Road."

"With the exception of a temporary increase in traffic during construction, traffic is not expected to change noticeably at the Imnaha Satellite Facility. Because of snow, operation and access would likely continue to be seasonal. Given the low daily traffic volumes in the vicinity of the site, the short duration of construction, and the low numbers of trips related to hatchery operations, the Proposed Action would cause only limited transportation impacts."

"Implementing the Proposed Action would not result in any group of people in the area, including racial, ethnic or economic groups bearing a disproportionately high share of population or employment impacts, quality of living changes or environmental consequences. "

"The Proposed Action would not result in measurable short- or long-term impacts to local population conditions. Most of the new full-time, seasonal and temporary workers would likely come from the local area as would most construction contractors and employees. A few very specialized labor requirements may be met with workers from elsewhere. If most contractors and workers came from outside the region, the increase to area population may be noticeable given the slow growth or decline in population over the past ten years."

"Implementation of the Proposed Action would result in some additional employment opportunities in Wallowa and Union Counties. The construction phase of the Proposed Action would provide temporary employment for several dozen construction workers most of which would probably come from the local labor pool. Operation of the various proposed hatchery facilities would result in about three additional full-time employees (possibly from outside the area) and about ten additional seasonal employees (probably

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from within the local area). This relatively small increase in full-time and seasonal employment would result in only minimal increase in demand for support industries or government services. City tax revenues or expenses are not expected to change noticeably nor would overall regional economic productivity or cost of living be measurably changed. The direct impacts, while small, are expected to be beneficial in terms some increased employment and increased demand for goods and services."

"Implementation of the Proposed Action would result in an increase in the importance of the fisheries sector within the local economies of Wallowa and Union Counties. This could result in a slight increase in recreation and tourist activity within the two county area, resulting in benefits to both social culture and regional economic productivity."

Description of Project Effects—The project does not affect traditional use, lifestyle adaptation, particularly if the recommendations discussed under scenery are implemented. 020-32

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Projects Below the Lostine WSR
Hatchery
Adult Collection Facility

Evaluation under the "Invade ... or Unreasonably Diminish Standard"
Invade the Designated River Area
Unreasonably Diminish its Scenery, Recreation, Fish or Wildlife Values

Lostine Hatchery and Adult Collection Facilities

The following discussion is focused on the potential effects of the Lostine Hatchery and Adult Collection facilities to invade the Lostine WSR or diminish its scenery, recreation, fish or wildlife values. This standard applies to a project proposal below, above or on a stream tributary to a designated WSR. The lower terminus of the Lostine WSR is about one mile upstream of the hatchery and about five miles above the Adult Collection Facility.

Invade the Lostine WSR

Neither project facility has the potential to invade the Lostine WSR. 020-33

Diminish Scenery, Recreation or Wildlife Values of Lostine WSR

Given the location of the proposed facilities, neither will affect the scenery, recreation or wildlife values of the Lostine WSR. 020-34

Diminish Fish Value of Lostine WSR

Fish Populations and Trend

Lostine River bull trout are mostly fluvial, migrating between the Grande Ronde, Wallowa and Lostine systems. The Lostine River bull trout population, as well as most of the population, in the Grande Ronde River system, is considered at a "moderate risk" of extinction (Ratliff and Howell 1992, Buchanan et al. 1997).

Steelhead are distributed throughout the Lostine River watershed in nearly all accessible streams (Nowak and Eddy 2001). Spawning surveys suggest a decline in spawning in the basin between 1968 and 1979. The 1980s showed a rebound, but counts steadily declined from 1988 to 2000. Spawning counts have rebounded in the last three years. 020-35

The Lostine River is a major spring/summer Chinook producing stream within the Grande Ronde system. A major component of the historic run was eliminated in the Lostine with irrigation water withdrawal (Neely et al. 1994). Escapement levels through the 1990s indicated Grande Ronde River spring Chinook salmon are in immediate danger of extinction (Ashe, et al. 2000). An upward trend has been observed in Lostine and Grande Ronde River redd counts since 1995 (Brad Smith, ODFW, pers. comm.).

Effects to Fish Populations from Lostine Hatchery

Project Description—A detailed project description is provided in the introduction of the *Wild and Scenic Rivers Act Preliminary Section 7(a) Determination.* The remainder of this discussion focuses on in-channel construction and hatchery operations that alter fish habitat and may affect fish populations. These construction activities include (NEOH DEIS 2-7, 2-8):

- Installing a water supply intake about one-half mile upstream of the proposed hatchery, just above where the Lostine River Road (County Road 551) crosses the Lostine River. The intake would include a fish screen and trash rack meeting current NOAA Fisheries criteria for such structures, and would require: installing an Obermeyer gate to raise the surface water elevation to provide sufficient flow to the intake; and constructing a pool and weir fish ladder to provide upstream and downstream fish passage at the intake.
- Installing a pump station and 18-inch pipeline to return hatchery water back upstream to the fish ladder at the intake. This water, primarily river water with some ground water, would restore flows in the Lostine River and help attract fish to the ladder for moving upstream and downstream.
- Constructing a concrete outfall downstream of the hatchery. Water from the hatchery's final rearing raceways and cleaning basin would be conveyed via a 24-inch pipe and released into the river through the partially submerged outfall.

Discussion in NEOH DEIS—"Construction activities at the Lostine River Hatchery such as site grading and excavation, and road paving would potentially deliver above-normal concentrations of fine-grained sediment and other contaminants to the Lostine River. Installation of the instream structures upstream of the main hatchery facilities would potentially contribute short-term "excess" sediment in the immediate vicinity of the installation work. However, the Proposed Action includes best management practices, and work would be conducted during summer low flow months and over two instream work seasons, spanning a maximum of two months each year. During the first season, a portion of the riverbank would be removed and the river water intake and fish ladder would be constructed. During the second season, the Obermeyer gate and intake pipeline would be installed. These short-term activities include dewatering and are not expected to result in violations of applicable standards" (NEOH DEIS 3-74). The instream work period is July 1-31 (NEOH DEIS 3-21).

"Upstream and downstream fish passage would be maintained during the instream work. Less than one-half acre of in-stream work area would be involved" (NEOH DEIS 2-11).

"The proposed Lostine River Hatchery and its access would be constructed adjacent to the Lostine River within its active 50- to 100-year floodplain. Peak flows generated during spring runoff or a major 100-year+ storm event may be diverted or impacted by the presence of hatchery development which could change the flood dynamics at or below the site. The Lostine River reached its fifth highest flow on record in 1999 and resulted in massive flooding in the watershed (BPA 2001). The hatchery site reportedly did not flood during the 1999 event. Still, proposed placement of fill and construction of

the hatchery could alter flood flows and impede the natural movement of floodwaters during flood events larger than the one in 1999. Given past trends, excessive flooding of the site would likely be infrequent, but if it occurred, excessive flooding could cause localized erosion and sedimentation, alter large flood flows and change local morphology. Locating the facilities within the active floodplain would have an adverse impact, but past flood events at the proposed site indicate that the likelihood of increased flooding is low" (NEOH DEIS 3-74).

"Instream structures at the Lostine River Hatchery, such as the hatchery intake, would reduce natural channel area, impede flow, and disrupt the natural flow regime at the site. Changes to the natural flow could cause localized, continued bank erosion and occasional flooding. Installing the Obermeyer gate and intake structure would exacerbate the existing river constriction caused by the bridge abutments and further reduce the natural channel area. This would lead to increased flooding risks (i.e., flood height and frequency) just upstream from the intake structure. It would also result in more rapid bank erosion rates both upstream and downstream of the bridge. The proposed outfall structure would be installed downstream of the hatchery facility within a small side channel, so it would not likely impede or alter river flow" (NEOH DEIS 3-74).

"Hatchery water would come from the Lostine River and groundwater wells. Water use would be non-consumptive, meaning that all water used would be treated and returned to the Lostine River. Diversion of surface water from the intake to the outfall structure would take place over a linear distance of about 2,800 feet or about a half-mile reach of the river upstream from the outfall at the hatchery site. Average monthly flows on record (from 1912 to 1999) range from about 48 to 64 cfs between September and March and for April through August flows range from 90 to 800 cfs. For an average year, there appears to be adequate flow in the Lostine to accommodate hatchery demands, while leaving no less than 75 percent of the flow in the river. However, during dry and/or cold years, water demand of the hatchery may be 50 or 60 percent of the total flow in the river. IFIM studies have indicated that at low flow, summer conditions (September), the minimum hatchery flow requirement is 11.5 cfs, which represents about 22 percent of the average flow in September and 50 percent of the September low flow (Montgomery Watson Harza 2001a). This amount of diversion is necessary to support the hatchery during low flow periods. (Montgomery Watson Harza 2001b)" (NEOH DEIS 3-75).

"Fill and riprap would be placed upstream and downstream within an existing meander side channel to protect the hatchery from flooding events that may cause bank erosion. The riprap would be placed stream-side of existing vegetation. In-channel habitat would be slightly altered, but original meanders would be maintained and riprap placement is not expected to affect instream flow or habitat use. About 100 to 150 feet upstream and downstream of the river bank adjacent to the most northern well would be riprapped for flood protection and erosion control. This portion of the bank is prone to erosion and riprap would stabilize the channel at that section. Riprap would be placed on top of weedy herbaceous vegetation that does not currently function as shading habitat" (NEOH DEIS 3-21).

"With average river conditions, no more than about 25 percent of the flow would be needed to support the Lostine River Hatchery. A maximum of about 15.3 cfs would be needed in mid-September to meet NATURES preferred criteria for all fish at the hatchery. Three new groundwater wells would provide up to 1,200 gallons per minute (gpm) to the facility" (NEOH DEIS 2-10).

"Rearing juvenile anadromous salmonids, particularly steelhead and Chinook, and resident species may use the reach during low flow periods and may therefore be affected by withdrawals. It is not likely that anadromous adults would be migrating upstream or downstream during September (Sankovich 2002, pers. comm.). Although prime Chinook spawning habitat occurs just downstream of the proposed hatchery, where intake water would be returned to the river, local spawning habitat extends into the diversion reach (Zollman 2002b, personal communication; McMillen 2002, personal communication). Therefore, spawning Chinook and their redds could potentially be affected by low flow. Juvenile bull trout and rapid turnaround spawners may out-migrate in September, but would likely remain higher upstream until Lostine River temperatures drop. Adult steelhead would be in the Snake River or arriving in the lower Grande Ronde during September (for overwintering) and would not likely be in the Lostine during that low flow period" (NEOH DEIS 3-22).

"Low flows in the winter months are also a concern, since freezing temperatures and a lack of runoff can drop the river stage to 25 cfs or less. During these periods, water consumption at the hatchery can be reduced because fish activity and growth is near zero due to the cold water temperatures. To meet instream flow requirements for the bypass reach, the minimum water budget shown in Table 3.2-8 would be implemented in low flow years and/or hatchery effluent would be pumped back to the hatchery intake to supplement instream flows in the Lostine River. Freezing at this section of the Lostine River is an existing limiting factor for salmonid use during winter months" (NEOH DEIS 3-22).

"In order to minimize instream impacts during low flow conditions within the bypassed river reach, a pump station would be installed to pump the hatchery effluent back, along with supplemental well water, to the intake. The pumped flow would be introduced at the bottom of the fish ladder to return river water near the point of diversion. The pump station would be sized so that when low flow management strategies are implemented, the pump could transport the entire diverted flow back to the intake location" (NEOH DEIS 3-23).

"Because of the pumped return strategy, even during extreme conditions, impacts to flows would be short-term and limited to the one half mile reach of the river immediately upstream from the hatchery (Montgomery Watson Harza 2001b). Water temperature change is not anticipated under the Proposed Action" (NEOH DEIS 3-75).

Description of Project Effects from Facility Construction—The construction of this facility will temporarily displace fish, affect migration, and remove available habitat. Significant amounts of sediment will be added to the river during construction activities. 020-36

Fish will be displaced and some mortality may occur. The effects of this sediment will be short-term and are not expected to last long beyond each construction period.

Bull trout migrate up the river from May through August (J. Harbeck, NPT, pers. comm. 8/11/2003). Spawning begins in September and takes place primarily upstream of Silver Creek, a tributary entering the Lostine River upstream of the proposed hatchery facility (USFWS 2002). Spring/summer Chinook generally enter the river around the first week of June and spawn between mid-August to late-September. Fry emerge from March to May, depending on water temperature, and tend to remain near emergence sites (Brad Smith, ODFW, pers. comm.) Subadults and adults move downriver in the fall, after adults have spawned, depending on river conditions (Brad Smith, ODFW, pers comm.). 020-36 (con't.)

Information in the NEOH DEIS is insufficient to evaluate the degree of impact to migrating and resident fish. Fluvial bull trout and Chinook salmon are migrating to the upper Lostine River during the ODFW instream work window. While passage will be provided for all fish during construction activities, the increased sediment, reduced available habitat, and the human presence and noise associated with construction activities will have a negative effect on individuals making this migration, as well as juveniles near the construction site. 020-37

Instream structures (intake, pool and weir fish ladder, pump station, concrete outfall) will alter the river's hydrology. The riprap of the river bank adjacent to the most northern well, and fill placed within an existing meander side channel to protect the hatchery from flooding events, will result in a loss of rearing habitat. The NEOH DEIS is not clear whether this side channel contains existing rearing habitat for juvenile salmonids. More information is needed to estimate effects to fish habitat and populations from these activities. 020-38

Description of Project Effects from Facility Operation—The gate and fish ladder will be permanent structures. Behavioral modification and changes in distribution of individual fish may occur due to changes in upstream and downstream hydrology. 020-39

This facility is located just upstream of prime spring/summer Chinook spawning grounds. Rearing of approximately 740,000 smolts in this facility would create a significant amount of chemical and effluent waste and raises a concern about contamination and disease being passed to naturally reproducing fish. Bull trout also spawn below the proposed facility site. More information is needed as to how water quality standards will be achieved. 020-40

Diversion of surface water from the intake to the outfall structure would take place over a linear distance of 2,800 feet. The decrease of instream flows, especially at low flow periods will have negative effects on juvenile rearing and fish passage. Chinook and/or bull trout redds may be dewatered during low flow periods. It is difficult to determine the extent of this effect without further information. 020-41

A loss of available rearing habitat is expected in the length of channel between the intake and outfall. Lower flows will leave less available habitat. A loss of riparian vegetation associated with the construction of the intake and outfall structures is expected. Additional riparian vegetation loss is also expected in the area between the intake and outfall due to the lower seasonal flows. This will result in a negative effect on rearing habitat, especially for juvenile salmonids that tend to stay in the margins of the river. A small loss in available habitat will also be realized where riprap replaces native bank materials. 020-42

Effects to Fish Populations from Lostine Adult Collection Facility

Project Description—A detailed project description is provided in the introduction of the *Wild and Scenic Rivers Act Preliminary Section 7 (a) Determination.* The remainder of this discussion focuses on in-channel construction that will alter fish habitat and may affect fish populations. These construction activities include (NEOH DEIS 2-5):

- Decommissioning the existing, deteriorating concrete fish ladder. The highest sill would be entirely removed; the other sills would be partially removed to the extent needed, and allowed to fill with stream gravels.
- Constructing a new concrete fish ladder and installing a modern fish-friendly weir structure (termed a hydraulic velocity barrier) for adult fish passage and Chinook collection.
- Protecting the river's west bank from damage during high flow conditions by constructing a soil and rock levee, about three to five feet high, extending about 300 feet upstream of the exit of the fish ladder. Existing vegetation would be removed for levee construction.
- Protecting/stabilizing the river channel by placing riprap or a concrete retaining wall along both banks about 100 feet upstream of the new facility.

Discussion in NEOH DEIS—"Best management practices to reduce sedimentation from construction activities are incorporated into the Proposed Action. However, construction activities at the Lostine Adult Collection Facility may still result in a temporary increase in sediment and runoff to the Lostine River. The anticipated amount of sedimentation would not alter the channel configuration or exceed the river's ability to carry sediment" (NEOH DEIS 3-17).

"Partial demolition of the existing fish ladder and construction of the new fish ladder would employ best management practices including operating in the State's instream work window, dewatering the area under construction and implementing erosion control measures... Even with such practices, a short-term decrease in water quality through inadvertent releases of sediment to the river is likely. Rain events would increase the risk of water quality degradation due to erosion of soils and stormwater runoff containing gasoline and oil from construction equipment. Construction activities would have an adverse, though short-term, impact on water quality and are not expected to result in any violations of water quality standards, or to cause a water quality temperature change" (NEOH DEIS 3-74).

"During construction of the velocity barrier, most of the river water would be routed through the new fish ladder (during operation, the ladder would pass most water during low flow periods in August and September; water would flow instream during higher flows). The proposed levee and velocity barrier would not affect the overall river hydrograph. (NEOH DEIS 3-18)

"Cofferdam placement and use of the new fish ladder for passage would result in a temporary reduction in available habitat for fish that reside within the river or that are migrating upstream or downstream during the construction period of the Lostine Adult Collection Facility. Diverted flow is not expected to affect water temperatures. Adult steelhead over winter in the Snake and lower Grande Ronde and migrate up the Lostine in March and April, while juveniles emigrate in late spring (Sankovich 2002, pers. comm.). While most adult steelhead would therefore not be impacted, potential kelt downstream migrants may be affected by construction activities. Rearing juvenile steelhead move up and down the Lostine at all times of the year, with pulses occurring in spring, outside of the construction window. Both adult and juvenile Chinook use the Lostine during summer months when instream work would occur. Adult bull trout are known to migrate up the Lostine in June through August, during the proposed instream work window. Smolt emigration occurs in late fall, and would not be impacted by instream construction. Delays to Chinook and bull trout passage may occur both upstream and downstream of the site due to the presence of the cofferdam and rerouting of river flow. Daily monitoring during construction activities would determine if salmonid passage, both upstream and downstream of the cofferdam, is impacted by activities. If adverse impacts to passage are observed, fish biologists would consult with federal and state fisheries managers to determine an appropriate action to assist in the passage of individuals. This may include manual transfer of fish to areas upstream or downstream of the construction area. Impacts would be temporary and would be limited to one instream work window" (NEOH DEIS 3-18).

"The proposed levee, composed of fill and riprap, would be constructed on the west bank of the river to protect the bank and site from damage during high flows and to minimize erosion. Construction of the levee would isolate small side channels returning to the Lostine in this area. French drains would convey river and on-site spring water to the Lostine River, but habitat for juvenile Chinook (and potentially bull trout) would be lost. The amount of habitat loss would not impact the populations of listed species within the watershed" (NEOH DEIS 3-18). About 300 feet of riparian vegetation will be removed or disturbed for levee construction (NEOH DEIS 3-17).

"Levee construction and riprap placement for the proposed Lostine Adult Collection facility would have an adverse effect on the floodplain and on water quality by increasing flow velocities and changing the flow regime through this river segment, but only during floods. Such changes would cause limited increased erosion and sediment load during flood events. During high flows, the levee and bank could fail causing scour and additional sedimentation. In such cases, downstream deposition of eroded, fine-grained sediments would degrade water quality by increasing turbidity and altering water chemistry *(i.e.,* temperature, Biological Oxygen Demand and pH). Lateral bank

protection would reduce the amount of water and sediment deposited on the adjacent floodplain, decreasing soil-forming sediments and nutrients" (NEOH DEIS 3-73).

"During operation of the Lostine Adult Collection Facility, no Lostine River water would be permanently diverted. Water losses and gains would remain the same as existing conditions after installation of the new fish ladder, levee and flow velocity barrier. However, during periods of low flow (September, near the end of operation), most river water would be diverted through the fish ladder. This could potentially impact species use at the reach as usable habitat would be altered for a short river segment, extending approximately 150 feet from the centerline of the entrance to the centerline of the release channel" (NEOH DEIS 3-18, 3-19).

Description of Project Effects from Facility Construction—The construction of this facility will temporarily displace fish, affect migration, and remove available habitat. Placement of cofferdams during ladder construction will alter stream flow upstream and downstream of the structures and directly reduce instream habitat. Significant amounts of sediment will be added to the river during construction activities. Fish will be displaced and some mortality may occur. The effects of this sediment will be short-term and are not expected to last long beyond each construction period.

Construction of a retaining wall on both sides of the river for approximately 100 feet above the new facility and a soil and rock levee, about three to five feet high, extending about 300 feet upstream of the exit of the fish ladder will negatively affect all salmonid fish during construction. This amount of instream work will result in mortality of some juveniles and permanently alter about 400 feet of fish habitat at the river's edge. 020-43

The loss of riparian vegetation will negatively impact rearing habitat, especially for juvenile salmonids that tend to stay in the margins of the river.

Information in the NEOH DEIS is insufficient to evaluate the degree of impact to migrating and resident fish. Fluvial bull trout and Chinook salmon are migrating to the upper Lostine River during the ODFW instream work window. While passage will be provided for all fish during construction activities, the increased sediment, reduced available habitat, and the human presence and noise associated with construction activities will have a negative effect on individuals making this migration, as well as juveniles near the construction site. 020-44

Description of Project Effects from Facility Operation—The weir and fish ladder will be permanent structures. Behavioral modification and changes in distribution of individual fish may occur due to changes in upstream and downstream hydrology. 020-45

All migrating fish will be required to pass through the fish ladder during upstream and downstream migration. When the facility is in operation all migrating fish would swim into the trap. They would remain in the trap for up to 24 hours. The NEOH DEIS does not say whether or not all fish would be handled in the process of allowing them to move upstream. More information would be required to estimate the effects to migrating non-target Chinook and bull trout. 020-46

Supplementation—Refer to discussion on supplementation for the proposed Imnaha facilities. 020-47

Summary of effects by species

Bull Trout—The Lostine River bull trout population is considered at "moderate risk" of extinction (Buchanan, et al. 1997). There are no current estimates on size of the Lostine River bull trout population. The primary effects from proposed construction and operation of NEOH facilities would be to the fluvial form of this population, who migrate past both the Adult Collection Facility and the proposed Hatchery Facility enroute to spawning areas in the upper Lostine River. Most migrating adults would be upstream of both facilities prior to the opening of the instream work window. Construction activities would have minimal and short-term effect on Lostine River bull trout. Operation of both facilities may have more impact. Some bull trout may spawn below the proposed Hatchery Facility in the area heavily used by Chinook salmon. Unanticipated or accidental effects to water quality from operation of the proposed Hatchery Facility (effluent and/or chemicals) could have a significant effect on incubating eggs or juveniles in this area. Decreased flows in the section affected by the withdrawals at the proposed Hatchery Facility could impact migrating fish. However, since most bull trout would have migrated past the facility prior to low flows, this impact is not expected to be substantial. Operation of the Adult Collection Facility would have a far greater impact on migrating bull trout. All bull trout passing through the facility are kept in a holding tank up to 24 hours before being weighed, measured, and hand-placed into a pipe leading back to the river. The effects on bull trout from the stresses of this procedure are hard to quantify, but the likelihood of pre-spawning mortality is increased. Loss of individual Lostine River bull trout may be significant in this at-risk population. Monitoring of spawning distribution and of population trends is desirable to help track positive or negative effects of the facility on the population. 020-48

Steelhead—The Lostine River steelhead population appears healthy. Based on spawning counts and counts at the Lower Granite dam, populations have been on an upward trend since 1995 (Brad Smith, ODFW, pers. comm.). Effects to steelhead in the Lostine River from proposed construction and operation of NEOH facilities are expected to be limited on spawning adults. The timing and location of steelhead spawning does not coincide with the construction work or operation of proposed NEOH facilities. Returning adults migrate up the Lostine River during high flows in early spring, prior to the instream work window. Spawning occurs primarily in the tributary streams. Kelts returning downstream may encounter a delay in migration when the wier is in operation at the Adult Collection Facility. A fish ladder is intended to allow downstream migrating adults through. Any delay would not have a significant impact on the Lostine River steelhead population. The primary effect to Lostine River steelhead would be on rearing juveniles. Although juvenile steelhead emerge and begin rearing within tributary streams, it is likely that some rearing takes place in the Lostine River. Construction activities will displace rearing fish, and some habitat loss will result from placement of riprap. At low flows there will be a net loss in rearing habitat in the area between the intake and outfall of the proposed Hatchery Facility, due to the effect of water withdrawals. The same habitat loss

would occur, although to a lesser extent, at the Adult Collection Facility. There are approximately 29.8 miles of steelhead spawning and rearing habitat within the subbasin (USDA 1998). The proposed facilities would diminish a portion of habitat within less than 3% of the subbasin rearing habitat. Overall the effect on the Lostine River steelhead population is not expected to be substantial.

Chinook—The Chinook salmon population within the Lostine River has been on an improving trend since 1995 (Brad Smith, ODFW, pers. comm.). Although the hatchery facilities are designed to improve Chinook salmon populations within the Lostine River, there are some negative effects on the wild population. Spring/summer Chinook are not known to spawn in the reach of the Lostine River containing the proposed Adult Collection Facility (J. Harbeck, NPT, pers. comm.). All adults passing the Adult Collection Facility are held for a period up to 24 hours in the holding tank, anesthetized, weighed, and measured (J. Harbeck, NPT, pers. comm.). Fish allowed to pass upstream of the facility are put into a pipe leading to the river where they recover prior to swimming upstream. This process can have a negative effect on adult Chinook, and likely results in an increase in pre-spawning mortality. Spawning does take place below and above the proposed Hatchery Facility. There is a heavily used spawning area below the proposed Hatchery Facility. Unanticipated or accidental effects to water quality from operation of the proposed Hatchery Facility (effluent and/or chemicals) could have a significant effect on incubating Chinook eggs and emerging individuals in this area. Chinook salmon migrating to spawn above the Hatchery Facility should pass the facility prior to low flows. Juvenile Chinook rear in the Lostine River and the lower reaches of major tributaries (USDA 2003). Proposed construction activities at both facilities would displace rearing fish, and some habitat loss will result from placement of riprap, especially in the side channel being blocked at the proposed Hatchery Facility. At low flows there will be a net loss in rearing habitat in the approximately one-half mile distance between the intake and outfall of the proposed Hatchery Facility, due to the effect of water withdrawals. Habitat loss would also occur at the Adult Collection Facility with the extensive riprap proposed in the new construction at that facility. There is approximately 25.6 miles of spring/summer Chinook salmon rearing habitat in the Lostine River Watershed (USDA 1994). The proposed facilities would decrease habitat within approximately 3% of the watershed's rearing habitat in an area of relatively high quality. The effect to the Lostine River spring/summer Chinook integrated population from the proposed facilities would be an overall increase, however, negative effects are anticipated on naturally spawning wild individuals. Some of these effects may be mitigated by improvements in passage or handling of fish, and design of in-channel components to improve fish habitat conditions.

020-48 (con't.)

2003

Project Above the Grande Ronde WSR
Lookingglass Hatchery

Evaluation under the "Invade ... or Unreasonably Diminish Standard"
Invade the Designated River Area
Unreasonably Diminish its Scenery, Recreation, Fish or Wildlife Values

Lookingglass Hatchery

The following discussion is focused on the potential effects of the Lookingglas Hatchery to invade the Grande Ronde WSR or diminish its scenery, recreation, fish or wildlife values. This standard applies to a project proposal below, above or on a stream tributary to a designated WSR. The upper terminus of the Grande Ronde WSR is several miles downstream of the hatchery.

Invade the Grande Ronde WSR

020-49

Modifications of this hatchery will not invade the Grande Ronde WSR.

Diminish Scenery, Recreation, Fish, or Wildlife Values of Grande Ronde WSR

020-50

Given the location of the proposed facilities, it will not affect the scenery, recreation, fish or wildlife values of the Grande Ronde WSR.

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Zollman R. Nez Perce Tribal Fisheries Biologist, Enterprise, Oregon. 8/06/2003. Personal communication.

020-01

Comment acknowledged; the Forest Service will issue its final Wild and Scenic River Act determination after publication of this Final EIS, and the Wallowa-Whitman Forest Supervisor will make a separate decision whether or not to issue a special use permit for modifications of the Imnaha Satellite Facility located on National Forest lands.

020-02

The Imnaha Final Rearing Facility is no longer proposed for construction (see Section 1.2 in the Final EIS); see response 012-02. The activity proposed at this site is limited to removal of an existing Acrow (steel panel) bridge and concrete bridge abutments, and recovery of the affected ground to a more natural condition. The bridge panels would be reinstalled at the Lostine Adult Collection Facility and the concrete bridge abutments would be hauled off-site for disposal.

020-03

BPA believes that the information needed for the Forest Service to make a final determination under Section 7(a) of the WSRA is provided in this Final EIS, the Biological Assessment prepared for the project (previously provided to the Forest Service and incorporated by reference in its entirety into this EIS), other supporting documentation presented to the Forest Service, and in the responses to Forest Service comments 020-06 through 020-50 below.

020-04

Comment acknowledged; thank you. Forest Service collaboration in this effort for conservation and recovery of spring/summer chinook in Northeast Oregon is appreciated.

020-05

Comment noted; BPA acknowledges that the Forest Service report is based on the Draft EIS, knowledge of Forest Service staff, and other references as cited.

020-06

The Imnaha Final Rearing Facility is no longer proposed for construction (see responses 012-02 and 020-02). The Proposed Action should result in improvements to Wild and Scenic River values at this location of the Imnaha River.

020-07

Comment acknowledged; proposed modifications at the Imnaha Satellite Facility are anticipated to result in minor changes to channel structure.

020-08

Comment acknowledged; Imnaha River flows are too low for boating at proposed sites.

020-09

Comment acknowledged; construction of the Imnaha Satellite Facility would add about 0.12 acres of new impervious surface (see revised text in the Final EIS, Chapter 2) and increased runoff during construction of the facility is expected to be short-lived.

020-10

Comment acknowledged; construction of the Imnaha Satellite Facility could result in temporary, minor, and localized bank erosion.

020-11

Current facility withdrawals are about 6 cfs and occur from May through September. The Final EIS text has been revised (see Sections 1.6 and 2.3) to state that, under the proposed project, surface water withdrawals of 9.6 cfs would be diverted from the river annually for juvenile acclimation and release during March and April; about 6 cfs would be diverted for adult bypass (May through September); and an additional 20.3 cfs would be diverted during adult collection and holding (about June through September). No surface water withdrawals are anticipated from October through February.

020-12

Comment acknowledged; see response 020-10.

020-13

Comment acknowledged; see responses 020-10 and -11.

020-14

Comment acknowledged; Outstandingly Remarkable Values (ORVs) of the Imnaha Wild and Scenic River are addressed individually in the comments and responses that follow.

020-15

Comment acknowledged; modifications at the Imnaha Satellite Facility would not be noticeable to most visitors and the general appearance of the area would be little changed from existing conditions.

020-16

Bringing a buried powerline 6 miles from a substation to the Imnaha Satellite Facility is no longer part of the Proposed Action. Power would continue to be provided by existing on-site generators resulting in no change from the existing condition relative to noise or recreational opportunity.

020-17

Comment acknowledged. Among the purposes of the Proposed Action are conservation and recovery of ESA-listed spring/summer chinook.

Overall production program success is a pre-existing goal under the Lower Snake River Compensation Plan and the conservation/recovery objectives of the ESA permitting program. Project-specific performance standards were developed by project co-managers and reviewed by the Independent Scientific Review Panel (ISRP) and

finalized as the Monitoring and Evaluation Plan for Northeast Oregon Hatchery Imnaha and Grande Ronde Subbasin Spring Chinook Salmon (Hesse and Harbeck 2004). Monitoring and evaluation elements of this plan would be applied to the proposed project and are incorporated into the Final EIS and Biological Assessment by reference.

020-18

The potential for site-specific erosion and how to avoid it would be addressed in detailed facility design and erosion and sediment control specifications prepared as part of project construction documents during the final design phase of the project. The project design would include measures to avoid long-term erosion related to the placement of in-water structures as well as temporary, construction-related erosion (Draft EIS project description and Sections 3.2.3.2 and 3.5.3.5). Some localized and increased bank erosion typically occurs when placing structures in an active river system. Proper project design and construction would reduce this erosion as much as possible. Therefore, project design documents would clearly show proper placement for hatchery structures; define areas of clearing and grubbing; specify locations of silt fences; and provide details for sedimentation ponds, access road preparation and maintenance, and any other permanent or temporary erosion control measures. Best management practices specified in construction documents would be in accordance with Oregon Department of Transportation's Erosion and Sediment Control Specification 0280. Best management practices would, most likely, be included as conditions of the various permits required for the project. All permit conditions would be followed.

Construction noise and activities may alter the behavior and distribution of fish in the area (e.g., interrupt migration and spawning of those adult spring/summer chinook that are not needed for broodstock, impact juvenile chinook rearing, and delay bull trout migration), but these impacts are short-lived and are not expected to affect long-term use, passage, abundance, or distribution of fish (FishPro/HDR 2004a).

020-19

As described in this Final EIS (Section 1.6 and revisions to Draft EIS Section 3.2.3.2 in Chapter 2), instream work at the Imnaha Satellite Facility would include modifications of the surface water intake structure, installation of a replacement weir, and installation of a diffuser chamber an auxiliary water supply line. A new fish ladder is no longer proposed at this site. All instream work would take place behind a cofferdam and would be performed during instream work windows established by ODFW to minimize potential impacts, with primary consideration to threatened, endangered, and sensitive species. Instream work windows were established to avoid the most vulnerable life stages (typically juveniles). Therefore, limiting project work to the instream work window would minimize potential impacts to fish. Project permit applications would also be reviewed by NOAA Fisheries, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Oregon Department of State Lands, and ODFW to ensure compliance with federal and state guidelines for instream construction and fish passage during construction.

As described in detail in the project Biological Assessment (Sections 4.2 and 5), in-water construction could temporarily delay migrant fish passage, including bull trout and spring/summer chinook not collected at downstream facilities (i.e., fish that were passed upstream for natural spawning). Adult Imnaha steelhead are early spring spawners, and would not likely be affected by proposed in-water work. Fisheries biologists would perform daily discrete bank surveys to determine if migrants were being delayed or otherwise stressed during in-water work periods and consult with regulatory agencies, if necessary, to minimize adverse effects on fish (project Biological Assessment, page 94).

020-20

The replacement weir proposed for the existing Imnaha Satellite Facility was specifically designed to efficiently and safely accommodate migrating fish, including bull trout; see response 012-04. As under current operations, no non-target fish (including bull trout) would be held for more than 24 hours. Typically during fish trapping, monitoring would occur much more frequently than once per 24-hour period. All non-target fish would be allowed to pass above the weir. The replacement weir will facilitate downstream migration of bull trout and will be a slight improvement over the existing situation.

020-21

The replacement weir would have a clear bar spacing of 1-1/4 inches, which would allow juvenile fish to pass directly through it when it is in operation (Grassel 2003). The final design of the weir would be coordinated with and approved by NOAA Fisheries and U.S. Fish and Wildlife Service. Juvenile fish passage should be improved over existing conditions (Biological Assessment Section 4.2.2).

020-22

Refer to response 012-04 and to Section 1.10 of the Final EIS for a summary of all project mitigation and monitoring. As stated in the Draft EIS (Section 3.2.3.2) and discussed in the project Biological Assessment (Section 4.2.2), the replacement weir would be designed to allow operators to raise and lower the weir (or individual weir panels) to guide migrating adults into the fish ladder and holding facility and to allow migrating kelts, adult bull trout, or chinook to move downstream over the weir. Juvenile fish would be able to pass through the spacing on the weir pickets. An auxiliary water supply pipeline, intended to augment the attraction flow of the existing fish ladder, would be installed behind an existing concrete wall beside the ladder. Improved attraction would result in less migratory delay and a decreased likelihood of downstream spawning than under current conditions (due to insufficient attraction flow from the existing fish ladder, some chinook that would normally spawn farther upstream have spawned downstream of the existing facility). Construction timing would coincide with the weir installation. Because the supply line would be installed behind the concrete wall, the existing fish ladder would operate during construction. The modified fish ladder and expanded adult holding area were designed to provide operational flexibility, improve fish passage both upstream and downstream, improve fish attraction, and improve operator safety in comparison to existing facilities. These improvements were designed in accordance with NOAA Fisheries criteria for adult collection and holding facilities.

020-23

As described in the project Biological Assessment (Section 4.2.2, pages 94-96), the habitat available for salmonids would be limited during periods of low river flow (i.e., drought conditions) regardless of facility requirements.

Seasonally, facility operation may reduce fish habitat and utilization, particularly for juvenile chinook that are known to occur in the immediate vicinity of the facility. The increase in the amount of water diverted from the intake to the outfall compared to existing conditions is not expected to affect juvenile bull trout use because low flows occur in September, when bull trout are likely upstream of the Imnaha Satellite Facility in cooler headwaters. Younger steelhead juveniles may move upstream and downstream within the Imnaha and its tributaries during summer and fall and could use the diversion reach for rearing. However, ample rearing habitat is available for all species upstream and downstream of the existing diversion reach and juveniles may migrate there during periods of extreme low flows.

Intake structure improvements would disturb an area of river bed and bank about 30 feet long by 30 feet wide and require placement of about 100 cy of riprap. The auxiliary water supply line would be installed behind an existing concrete wall and require the placement of minor amounts of riprap to stabilize the pipeline entrance.

Habitat disturbance would be minor, and suitable habitat for spawning and rearing is available and occurs in areas surrounding and adjacent to both of these sites. Any compensatory requirements for habitat loss would be determined at the time of project permitting, including reauthorization of the Forest Service Special Use Permit to allow the proposed facility improvements.

020-24

A new fish ladder is no longer proposed for the Imnaha Satellite Facility. Most other proposed facilities (water supply pipeline, septic drainfield, rock sluiceway, improvements to the holding area, and water supply lines) would be constructed behind existing facility walls and/or on uplands; thereby, avoiding instream activities and habitat effects. The replacement weir, proposed diffuser box to be placed at the base of the fish ladder, and modified water intake would all involve in-water work conducted during ODFW's instream work window. The proposed modifications would be an improvement to the existing facility and facility operations. The potential effects of construction, operation, and maintenance of the proposed facilities on fish are discussed in detail in the project Biological Assessment (Section 4.2.2 under the Imnaha Sites subsection, pages 92-98). Also see response 012-04.

020-25

Refer to response 020-23.

020-26

Refer to response 020-23. The intake location is in low quality, previously altered habitat with limited vegetation or in-water structure for fish. Habitat at the weir and ladder sites is of similar (low) quality due to existing facility components. At both the weir and the intake locales, the pools would be maintained, which provide an element of habitat diversity themselves. Although no mitigation is proposed to compensate for habitat losses, proposed improvements to the fish ladder, including improved attraction from the proposed auxiliary water supply, will facilitate upstream and downstream fish migration. Additional attraction water should alleviate most of the existing difficulties that fish currently have in locating the ladder entrance.

Additionally, the proposed hydraulically operated weir would provide the flexibility to lower individual panels to allow downstream passage of steelhead kelts and bull trout. When not in operation, the new weir would lie flat under the water to allow downstream passage. A section on the left abutment would also be placed at a slightly lower elevation to support both upstream and downstream fish passage by providing a deeper channel for migration. Any compensatory requirements for habitat loss would be determined at the time of project permitting, including reauthorization of the Forest Service Special Use Permit to allow the proposed facility improvements.

020-27

The Imnaha Conservation/Recovery Program is an existing and on-going program authorized by NOAA Fisheries Section 10 Permit No. 1128. As part of the permit process, the program received scientific scrutiny through NOAA Fisheries peer and public review. NOAA Fisheries determined that the direct take of these listed fish for hatchery broodstock, and the release of their progeny, would be beneficial to the Imnaha population (Delarm, NOAA Fisheries, personal communication as cited in Ashe et al. 2000). Smolt release under the existing production program would be expected to continue, as it has in the past, in accordance with all applicable permits and in consultation with NOAA Fisheries regardless of whether the proposed improvements at the Imnaha Satellite Facility were implemented.

Though the co-managers are unaware of scientific, peer-reviewed documentation of hatchery fish "swamping natural production" in the Imnaha River, they have provided a contingency by "scaling" broodstock collection from across the entire returning adult run using a sliding scale that incorporates both wild and hatchery fish as broodstock based on the total number of returning adults. The program also allows hatchery broodstock to spawn naturally above the weir in their natural environments, with the resulting offspring considered wild fish. The adult sliding scale is based on the premise that at low population levels the greatest risk to persistence is demographic. But at higher population levels genetic concerns take priority. Therefore, with the sliding scale, fewer constraints are placed on the number of hatchery adults spawning in nature when the population is low. As population levels increase, demographic risks decrease and, in response, greater constraints are placed on hatchery adults spawning in nature. Details of the adult sliding scale are discussed in the Section 10 Permit Applications submitted to NOAA Fisheries (ODFW 1998a and 1998b).

020-28

Refer to responses 020-22, -23, -26, and -27. As stated in this EIS and the project Biological Assessment, operation of the attraction-improved fish ladder and replacement weir would benefit target and non-target species through improved attraction to the ladder (resulting in less migratory delay) and better downstream passage for steelhead kelts and bull trout (with the capacity to lower individual weir panels). As under current operations, with facility improvements, the Imnaha Satellite Facility would be staffed 24 hours a day, seven days a week during fish trapping. The trap would be checked for fish several times a day, including at first daylight (Grassel 2003). Bull trout would not be held in the trap for weighing nor would they be handled unnecessarily. The proposed trapping period (May – October 1) is not likely to result in increased trapping of bull trout, since adults move upstream past the facility in June through August (FishPro/HDR 2004a).

020-29

Section 3.3.3 of the Draft EIS states that no substantial changes to state or federally listed species, big game, or their habitats (including elimination, disturbance, or enhancement of designated critical habit or primary travel routes) would occur as a result of project implementation at the Imnaha Satellite Facility.

020-30

Comment acknowledged; effects to vegetation and botany are limited to sites of existing facilities.

020-31

Construction would be monitored, and the Wallowa-Whitman National Forest archaeologist, tribal archaeologist, and the State Historic Preservation Office consulted, as appropriate.

020-32

Comment acknowledged; the recommendations to protect scenic values have been incorporated into project design.

020-33

Comment acknowledged; Lostine facilities would not invade the Lostine Wild and Scenic River.

020-34

Comment acknowledged; Lostine facilities would not unreasonably diminish the scenery, recreation, or wildlife values of the Lostine Wild and Scenic River.

020-35

Comment acknowledged; this information appears to be consistent with that used in development of this EIS.

020-36

The Draft EIS (Section 3.6.3) states that construction of the Lostine River Hatchery could potentially result in temporary, above-baseline levels of sediments in the river, but that sediment levels would likely be controlled and maintained at below the level of significance (below the level of water quality violation and/or waste discharge violation) through the use of erosion control measures and other best management practices. Refer to response 020-18.

020-37

As stated in the Draft EIS (Section 3.2.3.1), instream construction would take place over two seasons and all instream work would be performed during work windows established by ODFW. Instream work periods were established to avoid vulnerable life stages of key species, including chinook and bull trout. Therefore, limiting project work to the instream work window would minimize potential impacts to fish. Project permit applications would also be reviewed by NOAA Fisheries, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Oregon Department of State Lands, and ODFW to ensure compliance with federal and state guidelines for instream construction and fish passage during construction.

The project Biological Assessment (Sections 4.2.2 and 5) provides additional detail on maintaining and monitoring fish passage during construction and which life stages would be expected to occur in the area during construction. As discussed in the Biological Assessment, passage of migrating adult bull trout and chinook may be temporarily delayed during instream work and fish that inhabit the local area would be temporarily displaced. Juvenile bull trout, however, would most likely be further upstream during site construction (avoiding the relatively warm water temperatures in this stretch of the river).

020-38

Potential project impacts on rearing habitat in the river channel are summarized in the Draft EIS (Section 3.2.3.1) and discussed in detail in the project Biological Assessment (Section 4.2.2, Channel Alterations subsections) for all project facilities. About 310 linear feet of fill and riprap would be placed stream-side of existing vegetation within the side channel floodproofing location. Although some herbaceous plants may be lost, the amount of riprap to be placed is relatively small.

Alteration of river hydrology due to placement of instream structures may occur, but on a very localized scale, and overall, only small amounts of fish habitat would be affected and river temperature, flow, and geomorphology would not be affected. Any modified fish behavior or distribution would be on an individual level (i.e., affected fish would likely relocate to areas adjacent to the site).

020-39

Comment acknowledged; see response 020-38.

020-40

Surface water quality issues are summarized in the Draft EIS (Section 3.2.3.1) and discussed in detail in the project Biological Assessment (Section 4.2.2, Water Quality subsections) for all project facilities. No change in water quality, other than potential temporary, construction-related impacts, would be associated with the Lostine facilities. Through the Environmental Protection Agency's NPDES permit process, Oregon has set limits for hatchery discharge water quality to ensure that receiving waters are not overloaded with potentially detrimental amounts of substances that may adversely affect the environment, including plants, animals, and water quality. Estimates of the concentration of total suspended solids in hatchery effluent were made based on the hatchery's preliminary production plan and this value was within the limitations of the general NPDES permit for aquaculture operations of the size of the proposed Lostine River Hatchery (Biological Assessment, Section 4.2.2). Once operational, the hatchery would be subject to NPDES monitoring and reporting requirements. Hatchery design includes a cleaning waste basin to settle, collect, and store solid wastes for proper disposal as well as best management practices for hatchery operations and chemical handling (Draft EIS, Sections 2.1.1.3 and 3.2.3.1).

020-41

Surface water requirements are summarized in the Draft EIS (Section 3.2.3.1) and discussed in detail in the project Biological Assessment (Section 4.2.2, Water Gains and Losses subsections) for all project facilities. Diversion of surface water from the intake to the outfall structure at the proposed Lostine River Hatchery would take place over a linear distance of about 3,200 feet (see Final EIS, Chapter 2). For an average year, there appears to be adequate flow in the Lostine River to accommodate all hatchery demands. Strategies that would be taken during drier and/or colder years to reduce or accommodate project water demand are discussed in the project Biological Assessment Section 4.2.2). These strategies were incorporated into project design to ensure that a flow of 12 cfs or 50 percent of the total river flow, whichever is higher, would be maintained through the diversion reach to provide adequate fish habitat and passage.

020-42

Refer to responses 020-40 and -41. As discussed in the Draft EIS (Section 3.2.3.1) and the project Biological Assessment (Section 4.2.2, Channel Alterations subsection), the amount of vegetation to be removed at the intake, outfall, and side-channel sites would be limited to the least extent possible. Riparian vegetation at the side channel floodproofing location is limited to low-growing shrubs and herbaceous vegetation, which do not provide significant shading benefits. About 310 linear feet of fill and riprap would be placed stream-side of existing vegetation within this side channel. Although some herbaceous plants may be lost, the amount of riprap to be placed is relatively small. At the intake and outfall locations, a limited number of trees may be removed. Reduction in shading or overhanging vegetation is anticipated to be minimal and fish would likely relocate to areas adjacent to the project site that have suitable riparian vegetation cover.

Also as discussed in the Draft EIS (Section 3.2.3.1) and the project Biological Assessment (Section 4.2.2, Water Gains and Losses subsection), for an average year, there appears to be adequate flow in the Lostine River to accommodate hatchery demands, while leaving no less than 65 percent of the flow in the river. To provide adequate fish habitat and passage, a minimum river depth of 0.8 feet would be maintained. Approximately 10 cfs is required (R2 Resources 2002) to achieve this depth, but to ensure passage, a 20 percent buffer would be added and a minimum flow of 12 cfs would be maintained. Section 4.2.2 of the Biological Assessment also explains that the water withdrawal would not adversely affect species on a watershed scale because only 14 percent of a small reach of spawning habitat would be affected for only 2 weeks each year. When average stream flows are at their lowest, no chinook, steelhead, or bull trout spawning occurs and juveniles, if present, would have sufficient water for rearing and migration.

020-43

The Draft EIS (Section 3.6.3) states that project construction could potentially result in temporary, above-baseline levels of sediments in the river, but that levels would likely be controlled and maintained to below the level of significance (below the level of water quality violation and/or waste discharge violation) through the use of erosion control measures and best management practices. Refer to response 020-18.

020-44

As discussed in the Draft EIS (Section 3.2.3.1) and the project Biological Assessment (Section 4.2.2, Channel Alterations subsection), the Lostine Adult Collection Facility would be constructed to maintain both upstream and downstream fish passage during construction and to improve fish passage conditions over the long term (i.e. provide better passage than under current conditions). The Oregon Department of State Lands and the U.S. Army Corps of Engineers would permit instream construction activities and all project work would be performed during instream work windows established by ODFW to minimize potential impacts to important fish, wildlife, and habitat, with primary consideration to threatened, endangered, or sensitive species. These instream work periods were established to avoid the vulnerable life stages of key species. Therefore, limiting work to the instream work window would minimize potential instream work impacts to fish at the population level.

020-45

Comment acknowledged; any modified fish behavior or distribution would be on an individual level (i.e., affected fish would likely relocate to areas adjacent to the site).

020-46

The replacement ladder and proposed weir for the existing Lostine Adult Collection Facility were specifically designed to efficiently and safely accommodate migrating fish, including bull trout. As summarized in the Draft EIS (Sections 2.1 and 3.2.3.1) and discussed in the project Biological Assessment (Section 4.2.2, Operation of Fish Traps, Ladders and Weirs subsection), construction of the ladder is anticipated to improve fish passage as compared to existing conditions. The Lostine Adult Collection Facility structures were designed to allow trapping of adult spring chinook broodstock during higher spring runoff conditions. The Lostine weir was specifically designed to efficiently and safely accommodate migrating fish and meet NOAA Fisheries design standards. Weir angle and attraction flow were designed to lead migrating fish into the trap with minimal delay. The fish ladder would be fitted with a removable trapping structure that would trap spring chinook salmon, steelhead, and larger trout; small fish (less than about 1-inch wide) would be able to swim volitionally through the ladder and move upstream from the weir. The spring chinook not selected for broodstock, and all non-target species, would be released from the trap and allowed to continue upstream within 24 hours of trapping. As under current operations, no non-target fish (including bull trout) would be held for more than 24 hours. Typically during fish trapping, monitoring would occur much more frequently than once per 24-hour period. All non-target fish would be allowed to pass above the weir. During non-trapping periods, the trapping structure would be removed from the fish ladder and the ladder would provide unrestricted fish passage.

020-47

Project performance standards were developed and reviewed by the Independent Scientific Review Panel and finalized as the Monitoring and Evaluation Plan for Northeast Oregon Hatchery Imnaha and Grande Ronde Subbasin Spring Chinook Salmon (Hesse and Harbeck 2004). The ISRP completed its review of this plan on May 18, 2004 and responded "…that this document is an excellent working draft of a stand-alone M&E Plan for the NEOH hatchery Imnaha and Grande Ronde subbasin spring chinook salmon program." The ISRP also further complimented the authors "….for being among the first to bring the modern EMAP [Environmental Monitoring and Assessment Program] probabilistic sampling procedures into the Columbia Basin." Monitoring and

evaluation elements of this plan would be applied to the currently permitted program and are incorporated into the Final EIS and Biological Assessment by reference as supporting documentation.

020-48

Comment acknowledged; refer to responses 020-40, -42, -44, and -46. As stated in the Draft EIS (Section 3.2.3.1) and project Biological Assessment (Section 4.2.2), reasonable and prudent measures to minimize harassment to species, and bull trout in particular, are taken (and would continue to be taken) at all existing and proposed NEOH facilities. These measures include minimal handling of bull trout, monitoring the trap, and observation of fish condition, particularly during trapping periods. As under current operations, if any bull trout appear to be injured or stressed, hatchery operators would continue to notify the Snake River Basin Office of the U.S. Fish and Wildlife Service. It is agreed that the overall affect on the Lostine River steelhead population is not expected to be substantial, but may be somewhat beneficial given proposed project improvements to fish passage. As documented in the project Biological Assessment, the minor amount of habitat lost is not anticipated to impact the populations of listed species, including spring/summer chinook, in the watershed.

020-49

Comment acknowledged; proposed work at the Lookingglass Hatchery would not invade the portion of the Grande Ronde River designated as Wild and Scenic. Also, the Bureau of Land Management was contacted (Kuck 2003, personnel communication) and concluded that they had no concerns related to this project and Wild and Scenic River status. The State of Oregon (Vergari 2004, personal communication) was also contacted and affirmed that Grande Ronde state-designated scenic waterway begins at the confluence with the Wallowa River and would not be affected by the proposed project.

020-50

Comment acknowledged; the proposed Lookingglass Hatchery improvements would not affect the scenery, recreation, fish, or wildlife values of the Grande Ronde Wild and Scenic River.