

# RECLAMATION

*Managing Water in the West*

## Record of Decision

### Cle Elum Dam Fish Passage Facilities and Fish Reintroduction Project

Storage Dams Fish Passage Study  
Yakima Project, Washington



U.S. Department of the Interior  
Bureau of Reclamation  
Pacific Northwest Region  
Columbia-Cascades Area Office  
Yakima, Washington

August 2011

## **Mission Statements**

The Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives and affiliated island communities.

The mission of the Bureau of Reclamation is to manage, develop and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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# Chapter 1: Introduction

This document constitutes the Record of Decision (ROD) of the Department of the Interior, Bureau of Reclamation, Pacific Northwest Region, regarding the alternative selected to provide upstream and downstream fish passage at Cle Elum Dam in Central Washington.

Cle Elum Dam was not equipped with fish passage facilities when it was constructed. The dam expanded a natural lake that historically supported populations of three species of salmon (sockeye, coho and spring Chinook), steelhead, Pacific lamprey, bull trout and other resident fish. Lack of passage at the dam blocked access to the lake and upstream habitat for anadromous salmonids and contributed to the extirpation of sockeye salmon runs in the Yakima River basin. The absence of passage has also isolated local populations of bull trout and may have prevented the recolonization of populations. The project's purpose and need is "to construct fish passage facilities and to maximize ecosystem integrity by restoring connectivity, biodiversity and natural production of anadromous salmonids."

Reclamation and Washington State Department of Ecology (Ecology) jointly prepared the *Final Environmental Impact Statement, Cle Elum Dam Fish Passage Facilities and Fish Reintroduction Project* (FEIS) (April 2011). The FEIS is a combined National Environmental Policy Act (NEPA) and State Environmental Policy Act (SEPA) EIS and meets the requirements of both NEPA and SEPA.

Reclamation filed a Notice of Intent to prepare a joint environmental impact statement on April 8, 2009. The FEIS (INT-FES-1102) was filed with the Environmental Protection Agency on April 13, 2011. The FEIS provides an analysis of the potential impacts to the environment related to the construction of permanent fish passage facilities at Cle Elum Dam and the fish reintroduction above the dam.

## Chapter 2: Alternatives Considered

### 2.1. Fish Passage Facilities

Three alternatives for the fish passage facilities were described and analyzed in the FEIS— Alternative 1, "No Action;" Alternative 2, "Right Bank Juvenile Passage with Left Bank Adult Passage with Fish Barrier Dam;" and Alternative 3, "Right Bank Juvenile Passage with Right Bank Adult Passage without Barrier Dam." The project's stated purpose and need were equally satisfied by Alternative 2 and Alternative 3; however, it was not met by Alternative 1.

#### 2.1.1 Alternative 1— No Action

Under the No Action Alternative, Reclamation would not modify Cle Elum Dam or its features to include fish passage facilities and the interim fish passage facility, which was

intended to be temporary,<sup>1</sup> would be removed. In accordance with the Mitigation Agreement, Reclamation would work with Washington Department of Fish and Wildlife (WDFW) to identify an as-yet-undetermined alternative to permanent fish facilities that might allow fish reintroduction.

### **2.1.2 Alternative 2— Right Bank Juvenile Passage with Left Bank Adult Passage with Barrier Dam**

Alternative 2 would provide facilities for both downstream and upstream fish passage. (Figure 1). The downstream fish passage facilities would consist of a multilevel intake structure with five gated openings that would operate between reservoir elevations 2,240 feet (full pool) to 2,190 feet. The intake structure would be located in the reservoir forebay and would be accessed by a bridge that extends out from the crest of the dam. A juvenile bypass conduit located on the right bank would be installed to carry passage flows from the upstream intake structure to discharge fish into the spillway stilling basin on the downstream side of the dam. The underground portion of the juvenile bypass conduit would be approximately 1,520 feet in length with a 7-foot inside diameter. The bypass conduit would rely on gravity flow with a maximum design open channel flow of about 400 cfs. The conduit would transition into an open rectangular flume above ground before exiting into the spillway stilling basin.

The trap-and-haul upstream adult fish passage facility would include a barrier dam, a fish ladder and a collection facility. The collection facility would be located about 150 feet downstream from the spillway stilling basin on the left bank. A barrier dam, about 300 feet long and controlled by overshot weir gates, would span the width of the Cle Elum River approximately 100 feet downstream from the spillway stilling basin and the juvenile bypass conduit outlet. The barrier dam would be angled at 55-degrees to the flow and would guide fish to the fish ladder entrance and provide attraction flow. A 12-step pool-and-weir fish ladder would extend from the river into the adult collection facility located on the left bank. Water to operate the fish ladder and adult facility would be supplied by a combination of gravity and pumped flow. The vertical head created by the barrier dam would supply gravity flow to the fish holding tank and to the fish ladder and a 17-horsepower pump would supply water to the fish lift and anesthetic/recovery tanks. Fish collected in the facility would be placed in a hatchery truck, transported above the dam and released into the reservoir.

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<sup>1</sup> In response to the fish passage issues that arose during repairs to Keechelus Dam, Reclamation and WDFW entered into a Mitigation Agreement in 2002 to investigate fish passage feasibility at each Yakima Project Dam. One of the items agreed to in the Mitigation Agreement was “where passage is determined to be practicable and desirable, provide interim passage (trap-and-haul) until permanent fish passage facilities are constructed.”

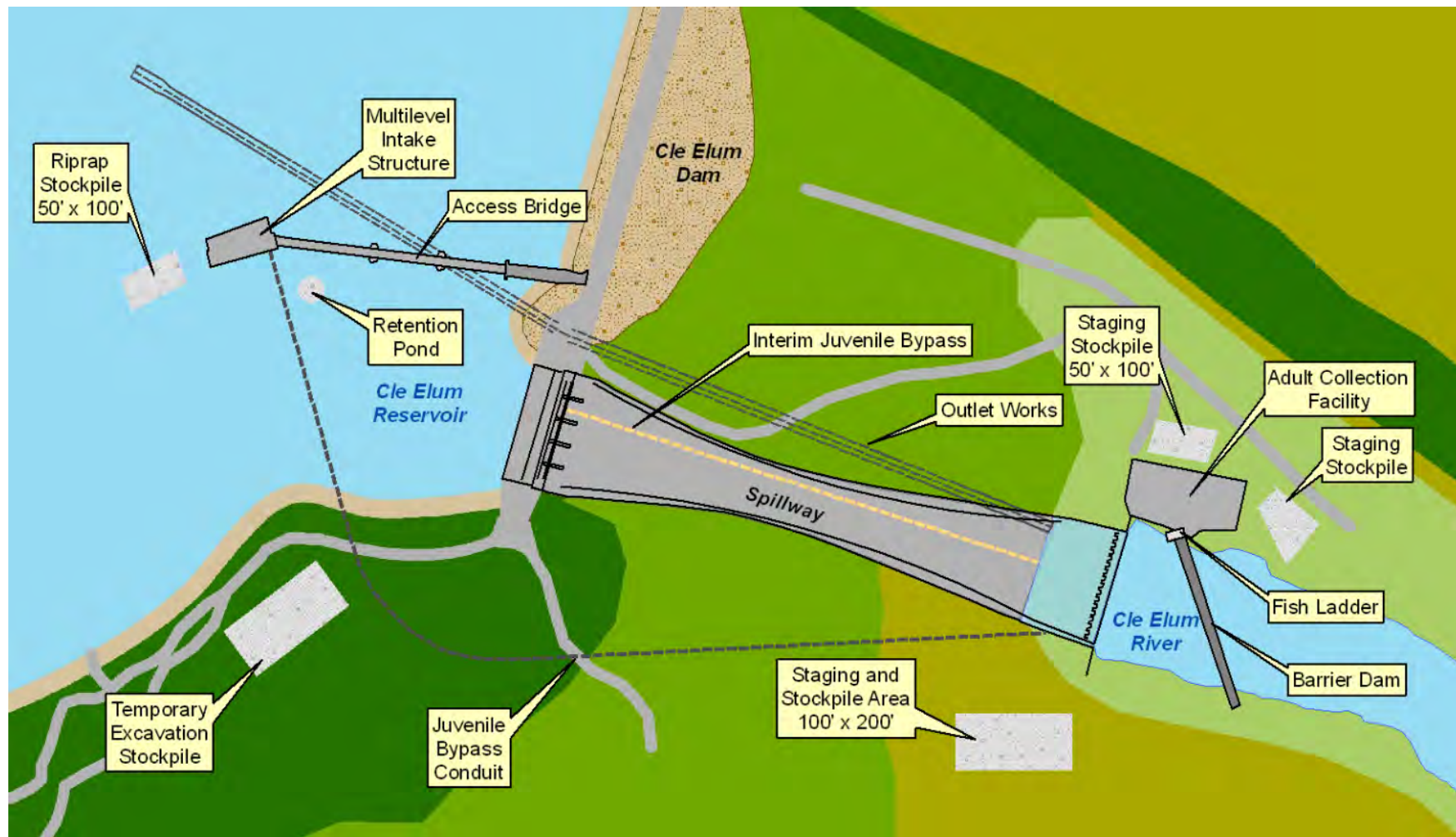


Figure 1. Alternative 2 - upstream and downstream fish passage facilities

### **2.1.3 Alternative 3— Right Bank Juvenile Passage with Right Bank Adult Passage without Barrier Dam (Preferred Alternative)**

Alternative 3 would provide facilities for both downstream and upstream fish passage (Figure 2). The downstream and upstream fish passage facilities would be the same as those described for Alternative 2, but with some differences to the location, length and required facilities. The downstream fish passage facility would consist of a multilevel intake structure with five gated openings that operates between reservoir elevations of 2,240 feet (full pool) to 2,190 feet. The intake structure would be located against the right bank abutment of the dam and would be accessed from the right abutment of the dam. A juvenile bypass conduit located on the right bank would be installed to carry passage flows from the upstream intake structure to discharge fish into the spillway stilling basin. The underground portion of the juvenile bypass conduit would be approximately 950 feet in length with a 7-foot inside diameter. The bypass conduit would rely on gravity flow with a maximum design open channel flow of about 400 cfs. The conduit would transition into an open rectangular flume above ground before exiting into the spillway stilling basin located immediately adjacent to the fish ladder entrance.

In contrast to Alternative 2, the trap-and-haul upstream adult fish passage facility for Alternative 3 would be located on the right bank and would include a fish ladder and a collection facility and would not include the barrier dam. The Technical Yakima Basin Storage Fish Passage Work Group (Core Team) evaluated locating the fish ladder entrance on the right bank, opposite the outlet works on the left bank that false attraction for up migrating fish and found that it would not be an issue. Therefore the need for the barrier dam to guide fish to the fish ladder entrance was eliminated.

A 12-step pool-and-weir fish ladder would extend from the spillway stilling basin into the adult collection facility. Water to operate the fish ladder and adult facility (i.e. holding tank, fish lift and anesthetic/recovery tanks) would be supplied by a 17-horsepower pump. Four 200 horsepower pumps would supply additional attraction flow as needed to supplement attraction flow that would also be provided by gravity flow from the juvenile bypass conduit. Fish collected in the facility would be placed in a hatchery truck, transported above the dam, and released into the reservoir.



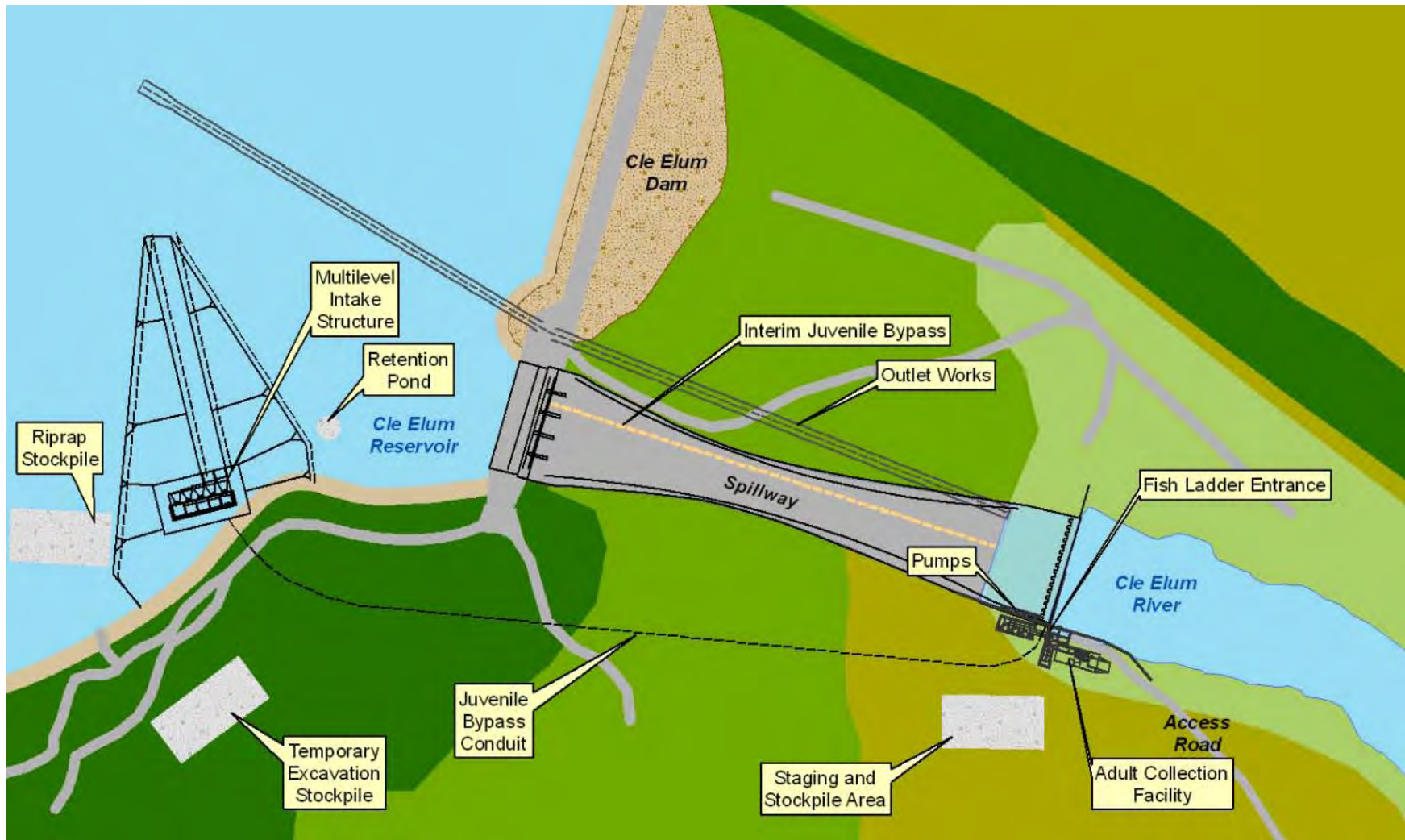


Figure 2. Alternative 3 - upstream and downstream fish passage facilities



## **2.2. Fish Reintroduction Project**

Two alternatives for the fish reintroduction project were described and analyzed in the FEIS— Alternative 1, “No Action;” Alternative 2, “Fish Reintroduction Project.”

Ecology, in collaboration with the Yakima basin fisheries co-managers, Yakama Nation and WDFW, developed a reintroduction plan for anadromous fish species for the Cle Elum Dam Fish Passage Facilities and Fish Reintroduction Project. The fish reintroduction plan includes sockeye salmon, coho salmon, spring Chinook salmon, summer steelhead, and Pacific lamprey. An additional objective of the plan is to provide two-way passage for resident bull trout. The Fish Reintroduction Project is dependent on fish passage facilities and would not be feasible if passage facilities are not constructed. The Yakima basin fisheries co-managers, WDFW and the Yakama Nation, have selected Alternative 2— Fish Reintroduction Project for implementation in the FEIS.

## **2.3. Environmentally Preferred Alternative**

### **2.3.1 Fish Passage Facilities**

The Environmentally Preferred Alternative for the Fish Passage Facilities is Alternative 3— “Right Bank Juvenile Passage with Right Bank Adult Passage without Barrier Dam” (Preferred Alternative). Alternative 3 would result in fewer adverse environmental impacts than Alternative 2.

Alternative 3 would eliminate the fish barrier dam downstream from the spillway stilling basin. Fish would be attracted to the fish ladder by a combination of flow from the downstream juvenile passage conduit and pumped attraction flows rather than being guided to the ladder by a barrier dam. This would reduce the construction footprint in fish habitat downstream of the dam and preserve access to the existing fish habitat in the stilling basin.

All of the passage facilities would be located on the right bank further reducing adverse environmental impacts. With the multilevel gated intake structure located against the right bank abutment, access would be from the shore which eliminates the need for an access bridge. The location of the intake structure reduces the length of the juvenile bypass conduit from 1,520 feet to 950 feet. Eliminating the access bridge also minimizes potential impacts to the historic dam structure. In addition, access roads would not be required on the left bank of the river since the adult passage facility would be located on the right bank. The road system constructed for installation and construction of the passage facilities would also serve as permanent access.

## **Chapter 3: Reclamation’s Decision**

### **3.1.1 Fish Passage Facilities Alternatives**

Reclamation’s decision is to implement Alternative 3—“Right Bank Juvenile Passage with Right Bank Adult Passage without Barrier Dam.” This alternative provides for upstream and downstream fish passage in accordance with the stated purpose and need of the project and is also the Environmentally Preferred Alternative.

## **Chapter 4: Summary of Environmental Impacts**

### **4.1. Fish Passage Facilities Alternatives**

Table A-1 (see Appendix A) compares the environmental impacts for the three fish passage facility alternatives. For the No Action Alternative, the primary impacts would be:

1. The continued lack of accessibility to historic habitat for anadromous and resident fish; and
2. The loss in benefits to the overall health of the ecosystem provided by the addition of marine-derived nutrients from salmon carcasses and the presence of juvenile and adult salmon and steelhead rearing and spawning in the upper Cle Elum subbasin.

The environmental impacts between Alternative 2 and Alternative 3 (Preferred Alternative) were similar. Because the access bridge and barrier dam would be eliminated in Alternative 3 and all facilities would be consolidated on the right bank, impacts to the Fish, Vegetation, Wildlife, Threatened and Endangered Species, Utilities and Visual resources would be less for Alternative 3.

## **Chapter 5: Public Involvement**

Public involvement is a process where interested and affected individuals, organizations, agencies, Tribes, and governmental entities are consulted and included in the decision-making process. In addition to providing information to the public regarding the EIS, Reclamation and Ecology solicited responses regarding the public’s needs, values and evaluations of the proposed alternatives. Both formal and informal input was encouraged and used.

## **5.1. Scoping**

On April 8, 2009, Reclamation published a Notice of Intent (NOI) to prepare an EIS in the *Federal Register*. Reclamation and Ecology issued a joint press release to local media on April 15, 2009, announcing a scoping meeting. A meeting notice was mailed to interested individuals, Tribes, groups and governmental agencies, which described the project, requested comments and provided information about the public scoping meeting.

The scoping meeting was held on April 30, 2009, in Ellensburg, Washington; 20 individuals attended. The alternatives being considered were presented and attendees were given the opportunity to comment and ask questions on the alternatives, NEPA/SEPA process and resources being evaluated in the EIS.

Reclamation and Ecology received 19 written comments during the scoping period which were used in the preparation of the DEIS. The following are some of those comments:

### **5.1.1.1. Fish Passage Facilities**

- This project must remain “water neutral” and should be coupled with increased storage to offset negative impacts to water storage in Cle Elum Reservoir and assurance that there would be no short-term or long-term effects to the total water supply available.
- The EIS should look at whether the proposed actions would create increased demand for releases of water from Cle Elum Reservoir or other reservoirs within the Yakima project and, if so, the EIS should consider the impact those increased releases would have on the Yakima Project operations and on the total water supply available.

### **5.1.2 Comments on the DEIS**

Reclamation and Ecology held a public comment period on the DEIS from February 3, 2010 to March 22, 2010. A public meeting was held in Cle Elum on February 18, 2010. Six people attended the public meeting and one person provided comments to the court reporter. Eighteen written comments were received from agencies and individuals. Responses to comment letters are provided in the in the FEIS.

## **Chapter 6: Consultation and Coordination**

Reclamation received comments on the DEIS from the Washington Department of Archaeology and Historic Preservation on the fish passage facilities. In conjunction with issuing the FEIS, Reclamation will submit a case study documenting the potential effects of the action alternatives, initiating consultation with the Washington State Historic Preservation Officer (SHPO) and the Yakama Nation. Upon issuance of the Record of Decision and prior to construction, Reclamation will conduct identification efforts within the area of potential effects of the selected alternative. Reclamation will consult with the Washington SHPO, the Yakama Nation and other interested parties to resolve any

adverse effects. No irreversible actions in connection with the selected alternative will occur until the adverse effects are resolved through consultation.

Reclamation has completed consultation with the U.S. Fish and Wildlife Service (Service) and National Marine Fisheries Service (NMFS). In October 2010, Reclamation received concurrence from the Service on the “may affect, not likely to adversely affect” determination for bull trout. In November 2010, NMFS concurred with the “may affect, not likely to adversely affect” MCR steelhead and its critical habitat. It issued a “likely to adversely affect” for Essential Fish Habitat (EFH). Reclamation will comply with the EFH Conservation Recommendations.

Additionally, Government-to-Government consultation with the Yakama Nation was initiated in October 2009. The Bureau of Indian Affairs (BIA) Yakima Office and the Yakama Nation Deputy Director of Natural Resources were contacted via letter and telephone to determine the potential presence of Indian Trust Assets (ITAs) within the project area. The letter requested that BIA and the Tribe identify ITAs or any other resources of concern within the area potentially impacted by the project. In addition to the formal consultation, Reclamation is developing the fish passage facilities project in collaboration with the Yakama Nation.

Reclamation and Ecology were lead agencies for developing this joint NEPA/SEPA FEIS, in collaboration with WDFW and the Yakama Nation. Though there are many agencies involved and interested, only the Bonneville Power Administration has assumed the role of cooperating agency in regard to this FEIS.

## **Chapter 7: Public Response to the FEIS**

A written comment letter on the FEIS was received from the Environmental Protection Agency (EPA). That letter, along with Reclamation’s response to it, is reproduced in Attachment B.

## **Chapter 8: Environmental Commitments in Implementing the Decision**

### **8.1. Fish Passage Facilities Alternatives**

This section lists the environmental commitments provided in the FEIS that would apply to implementation of the Preferred Alternative (Alternative 3).

#### **8.1.1 Water Resources**

Reclamation would apply for the following applications and permits, if deemed necessary:

- U.S. Army Corps of Engineers (Corps) Section 404 permit of the Clean Water Act.
- Appropriate Washington State construction stormwater permits.
- Section 401 water quality certification from Ecology (if needed).
- A WDFW Hydraulics Project Approval (HPA) application and any necessary stormwater discharge permits.
- Kittitas County Shoreline Permit.

#### **8.1.1.1. Mitigation Measures**

- Construct the downstream fish passage structures when the reservoir lakebed is dry.
- Construction activities downstream to the dam would be sequenced to avoid fish-use periods such as spring Chinook spawning which occurs downstream of Cle Elum Dam.
- Any seepage at construction sites would be pumped into a retention pond. Sediments retained would be disposed of using best management practices (BMPs) and the filtered water would be allowed to infiltrate the lakebed or riparian zone depending on the construction site location.
- To prevent soil erosion and sediments from entering the river, containment measures such as silt fences, sediment containment dams and over-the-bank infiltration galleries would be employed as needed at each construction site.
- Cofferdams would be built to isolate the reservoir and river from the construction sites to eliminate the adverse impacts that could result from direct contact with water from construction activities.
- Stockpile and staging areas would be isolated with a containment berm or physical structure to reduce erosion and sediment impacts to reservoir and river water quality.
- Implementation of Best Management Practices (BMPs) utilized for construction activities performed within or adjacent to water bodies would be employed during construction.
- All construction activities would comply with applicable EPA, Occupational Safety and Health Administration and Washington State requirements for quality and control of runoff from the construction site, sediment control, noise control and safety.
- Water quality monitoring would be performed on a frequent basis throughout the construction periods. Turbidity, dissolved oxygen, pH and water temperature would be monitored and adaptive management will be conducted in response to water quality exceedances.



- Fish passage facilities would be operated to ensure there are no impacts to existing water contracts, Total Water Supply Available (TWSA), or flood control operations.

### **8.1.2 Fish**

- Mitigation measures would be the same as those described for water resources.

### **8.1.3 Vegetation**

- Mitigation measures after construction is completed would consist of contouring, restoring and re-vegetating all disturbed areas using native vegetation. Restoration activities would begin the spring following each construction season.

### **8.1.4 Threatened and Endangered Species**

- Mitigation measures would consist of steelhead spawner surveys conducted in late spring to determine if steelhead are spawning or rearing in the areas that could potentially be affected by cofferdam installation and removal at construction sites downstream of the dam.
- Once the final construction design is completed, plant surveys would be conducted in proposed construction areas to determine if any special status plant species would be affected by the project. The plant surveys would be conducted during the growing season.
- The final engineering designs for both the fish ladder and the intake structure and fish bypass conduit would be approved by engineers from the NMFS to ensure that all facilities meet fish passage criteria wherever possible. If fish passage facilities cannot be designed to NMFS criteria, Reclamation will seek written approval of any alternative design by NMFS.

### **8.1.5 Air Quality**

- Mitigative measures would require the contractor to maintain roads utilized during construction and dust abatement efforts would be enforced.

### **8.1.6 Recreation**

- Mitigative measures would consist of informing recreation users of possible construction-related delays, traffic slowdowns associated with slow-moving construction equipment, increased dust and noise and potential road congestion through community media such as newspapers, local television and radio.

### **8.1.7 Land and Shoreline Use**

- Mitigative measures would consist of communicating closely with Kittitas County officials during final design of the project to ensure the project conforms to county ordinances regarding use of county bridges and roads.
- Reclamation would apply for a County shoreline permit.

## **8.1.8 Transportation**

- Mitigative measures would consist of restriction of public access to the construction site, borrow areas and staging areas; use of standard safety measures, such as reduced speed limits and signing; and the contractor would be required to maintain roads during hauling and to restore roads following completion of construction. Dust abatement efforts would also be enforced.

## **8.1.9 Cultural Resources**

### **8.1.9.1. Mitigation Measures**

- Initially, an intensive cultural resources survey of the area of potential effect (APE) would be conducted to identify any cultural resources that may be affected by the project.
- If an action is planned that could adversely affect a National Register of Historic Places (NRHP)-eligible archeological, historical, or traditional cultural property site, Reclamation would investigate options to avoid the site. If avoidance is not possible, protective or mitigation measures would be developed and considered.
- If mitigation is necessary, Reclamation, would coordinate with other involved agencies as necessary, such as the Yakama Nation, the Washington State Department of Archeology and Historic Preservation (DAHP) and the Advisory Council on Historic Preservation, to develop an agreement that would detail any requirements needed to mitigate and resolve adverse effects to eligible cultural resources that may result from the construction and operation of fish passage at Cle Elum Dam.
- Cle Elum Dam is eligible for inclusion to the NRHP. Reclamation would determine if there would be an adverse effect to the dam, and would comply with required mitigation. If it is determined that the historic Cle Elum Dam construction camp and/or *Aiyalim* (the Kittitas-Yakama seasonal salmon fishing camp) is eligible to the NRHP and the project would have an adverse effect upon the qualities that qualify for the register, mitigation such as archaeological data recovery and/or ethnohistorical documentation would be conducted.
- Reclamation would finish the Section 106 process.

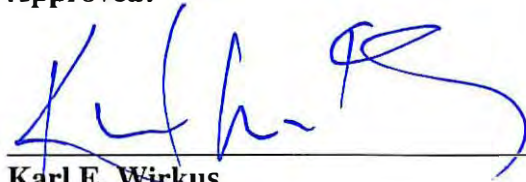
## Chapter 9: Decision

Reclamation and Ecology jointly prepared the FEIS; however, Reclamation was responsible for the Fish Passage Facilities portion of the document, and Ecology, in collaboration with the Yakama Nation and WDFW, was responsible for the Fish Reintroduction Project portion. For this document the selection decision for the Fish Passage Facilities alternative was made by Reclamation. The selection decision for the Fish Reintroduction Project was made by the Yakama Nation and WDFW and is documented in the FEIS.

Based upon the factors discussed above, Alternative 3 for the Fish Passage Facilities, as described in the FEIS and this ROD, including all Environmental Commitments contained in the FEIS and this ROD, is selected for implementation by Reclamation.

Alternative 3 meets the project purpose and need for fish passage in the most environmentally sensitive manner.

**Approved:**



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**Karl E. Wirkus**  
**Regional Director**  
**Pacific Northwest Region**

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8/12/2011

# **Appendix A**

## **Summary of Impacts**





**Table A-1. Comparison of impacts for Fish Passage Facilities Alternatives**

Resource	Alternative 1 – No Action	Alternative 2 – Right Bank Juvenile Passage with Left Bank Adult Passage with Barrier Dam	Alternative 3 (Preferred Alternative) – Right Bank Juvenile Passage with Right Bank Adult Passage without Barrier Dam
Water Resources	No impacts.	<p><u>Short-term:</u> Minor increases in turbidity and sedimentation during construction.</p> <p><u>Long-term:</u> None.</p>	Same as Alternative 2.
Fish	Historic habitat would continue to be blocked. Removal of interim facilities would stop fish reintroduction efforts.	<p><u>Short-term:</u> Potential disturbance during construction.</p> <p><u>Long-term:</u> Benefit to productivity/genetic diversity.</p>	Same as Alternative 2, but with fewer construction impacts.
Vegetation	No impacts.	<p><u>Short-term:</u> Removal of vegetation from construction areas.</p> <p><u>Long-term:</u> Some loss of permanent vegetation and loss of mature vegetation for approximately 50 years.</p>	Same as Alternative 2, but with approximately 3 acres less impact to vegetation and habitat.
Wildlife	No impacts.	<p><u>Short-term:</u> Minor disturbance near facilities during construction and operation activities.</p> <p><u>Long-term:</u> Loss of mature habitat for approximately 50 years.</p>	Same as Alternative 2, but with fewer construction impacts.
Threatened and Endangered Species			
Bull trout and Middle Columbia River (MCR) steelhead	Historic habitat would continue to be unavailable to steelhead and populations of bull trout would remain isolated from one another.	<p><u>Short-term:</u> Potential disturbance during construction.</p> <p><u>Long-term:</u> Beneficial effect with implementation of fish passage.</p>	Same as Alternative 2, but with fewer construction impacts.
MCR steelhead critical habitat	No impacts.	Permanent impacts to designated critical habitat as a result of barrier dam construction.	Permanent impacts to designated critical habitat as a result of pump construction (less impact than Alternative 2).
Bull trout critical habitat	Continued lack of connectivity between upstream and downstream populations.	<p><u>Short-term:</u> None.</p> <p><u>Long-term:</u> Beneficial effect to connectivity and migration.</p>	Same as Alternative 2.

**Table A-1. Comparison of impacts for Fish Passage Facilities Alternatives**

Resource	Alternative 1 – No Action	Alternative 2 – Right Bank Juvenile Passage with Left Bank Adult Passage with Barrier Dam	Alternative 3 (Preferred Alternative) – Right Bank Juvenile Passage with Right Bank Adult Passage without Barrier Dam
Grizzly bear Gray wolf Canada lynx	No impacts.	<u>Short-term:</u> If present, species likely to avoid area during construction. <u>Long-term:</u> Potential beneficial impact from increased prey.	Same as Alternative 2, but with fewer construction impacts.
Ute ladies'-tresses	No impacts.	<u>Short-term:</u> Potential habitat may be disturbed. <u>Long-term:</u> None.	Same as Alternative 2, but with fewer construction impacts.
Northern spotted owl	No impacts.	<u>Short-term:</u> Potential loss of nesting and foraging habitat. <u>Long-term:</u> Potential loss of nesting habitat until forest matures.	Same as Alternative 2, but with fewer construction impacts.
Visual Resources	Beneficial impact since interim passage facilities would be removed from dam.	<u>Short-term:</u> Construction equipment and activities would be visible. <u>Long-term:</u> Visible items in project area such as intake structure, access bridge, barrier dam.	Less impact than Alternative 2, as barrier dam and access bridge are eliminated from Alternative 3.
Air Quality	No impacts.	<u>Short-term:</u> Minor dust associated with construction and traffic. <u>Long-term:</u> None.	Same as Alternative 2.
Climate Change	No impacts.	<u>Short-term:</u> Minor increases in greenhouse gas emissions. <u>Long-term:</u> Access to historic habitat may help fish withstand climate change impacts.	Same as Alternative 2.
Noise	No impacts.	<u>Short-term:</u> Construction noise limited to daytime hours. <u>Long-term:</u> None.	Same as Alternative 2.
Recreation	No impacts.	<u>Short-term:</u> Noise, traffic delays. <u>Long-term:</u> None.	Same as Alternative 2.
Land and Shoreline Use	No impacts.	<u>Short-term:</u> Small amounts of land converted from forest to fish passage facilities. <u>Long-term:</u> Same as short-term.	Same as Alternative 2.

**Table A-1. Comparison of impacts for Fish Passage Facilities Alternatives**

Resource	Alternative 1 – No Action	Alternative 2 – Right Bank Juvenile Passage with Left Bank Adult Passage with Barrier Dam	Alternative 3 (Preferred Alternative) – Right Bank Juvenile Passage with Right Bank Adult Passage without Barrier Dam
Utilities	No impacts.	<u>Short-term:</u> None. <u>Long-term:</u> Minor increase in power demand for pumping.	Same as Alternative 2 except more power would be required for pump.
Transportation	No impacts.	<u>Short-term:</u> Noise, traffic delays. <u>Long-term:</u> None.	Same as Alternative 2.
Environmental Justice	No impacts.	No impacts.	No impacts.
Cultural Resources	No impacts. Removal of interim facilities would restore dam closer to historic appearance.	Potential adverse effects to dam, potential effects to prehistoric/historic resources.	Potential effects to prehistoric/historic resources.
Indian Sacred Sites	No impacts.	No impacts.	No impacts.
Indian Trust Assets	No impacts.	No impacts.	No impacts.
Socioeconomics	No impacts.	<u>Short-term:</u> Construction would generate sales, jobs and labor income in the region. <u>Long-term:</u> Small increase in sales, jobs and labor income. Benefit to Native American fisheries.	<u>Short-term:</u> Same as Alternative 2 except smaller increases. <u>Long-term:</u> Same as Alternative 2.



# **Appendix B**

## **Comments and Responses**





# Comment Letter



Received in Mailroom  
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 A INFORMATION Code : ENV-6.00  
 O 1148003  
 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
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 O.D. #: 11042036

May 16, 2011

OFFICE OF ECOSYSTEMS, TRIBAL AND RECLAMATION PUBLIC AFFAIRS SOCIAL & ECONOMIC

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Dave Kaumheimer  
 Environmental Program Manager  
 Columbia-Cascades Area Office  
 1917 Marsh Road  
 Yakima, Washington 98901

Re: EPA comments on Cle Elum Dam Fish Passage Facilities and Fish Reintroduction Project. Project Number: 09-014-BOR.

Dear Mr. Kaumheimer:

The U.S. Environmental Protection Agency (EPA) has reviewed the final Environmental Impact Statement (FEIS) regarding the Cle Elum Dam Fish Passage Facilities and Fish Reintroduction Project (FP/FR) near Cle Elum, Washington. Our review was conducted in accordance with our responsibilities under National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act.

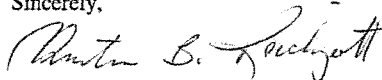
The FEIS was prepared in cooperation between the Bureau of Reclamation (BOR) and the Washington Department of Ecology (DOE) to analyze the proposal to construct fish passage facilities at the Cle Elum Dam, Washington and to reintroduce fish species above the dam to restore ecological connectivity and natural production of anadromous fish. The FEIS identifies Alternative 3 as the Preferred Alternative- Right bank juvenile passage with right bank adult passage without barrier dam. **The EIS did not identify a Preferred Alternative related to fish reintroduction.** Our comments on the draft EIS expressed concerns with impacts to water quality and we recommended additional detail regarding components of the project's design, mitigation, fish reintroduction, and cumulative impacts. 1

We appreciate the responses to our comments and additional information regarding project design, permits/approvals, ESA consultation, and mitigation. In response to our request for additional information regarding water quality, the FEIS states that predictions and compliance with state water quality standards would be determined during the permitting process (FEIS CR-46). We appreciate the characterization of current water quality and commitment that waters would not be further degraded; **however, because there is no detailed information regarding numerical or narrative predictions of potential impacts to water quality, we continue to have concerns.** We support coordinating with Washington Department of Ecology and other relevant agencies to ensure that the approved permits include the necessary limitations and required mitigation to protect water quality. 2

We also raised concerns with the lack of information about the fish reintroduction aspect of the proposal and associated cumulative impacts. Thank you for your response explaining that this EIS serves as a programmatic level evaluation for the fish reintroduction and that further analysis will occur when a proposal is developed. We appreciate the references to supporting technical documents. These were helpful to understand how reintroduction could be implemented<sup>1</sup> and what the production potential of coho and sockeye could be. We recommend that the tiered NEPA analysis fully disclose the supporting information on the success of fish reintroduction and discuss the long-term viability of habitat quality to support species in the basin. We look forward to future analyses as this aspect of the proposal develops.

Thank you for the opportunity to provide comments on this FEIS. Please feel free to contact myself at (206) 553-1601 or by electronic mail at [reichgott.christine@epa.gov](mailto:reichgott.christine@epa.gov), or contact Lynne McWhorter of my staff at (206) 553- 0205 or at [mewhorter.lynne@epa.gov](mailto:mewhorter.lynne@epa.gov) with any questions or to further discuss these comments.

Sincerely,



Christine B. Reichgott, Unit Manager  
Environmental Review and Sediment Management Unit

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<sup>1</sup> Bureau of Reclamation. 2005. Anadromous Fish Reintroduction Plan Storage Dam Fish Passage Study Yakima Project, Washington.

# Comment Responses

## Comment 1

Alternative 2, Fish Reintroduction Project, was identified as the preferred alternative by the fisheries co-managers, WDFW and the Yakama Nation, in the Executive Summary, page ES-xiv, of the Final Environmental Impact Statement. However, this may not have been obvious, since it was not specifically stated in the alternative description in section 3.4.

## Comment 2

The plan to reintroduce anadromous fishes above Cle Elum Dam is being developed by the Yakama Nation and WDFW. Specific details about the types of facilities, their locations, numbers of fish to be cultured for each species, and the seasonality of their fish culture activities have not as yet been clearly defined. Potential impacts to water quality will be addressed using an adaptive management strategy. When specific facilities and locations have been identified, the fishery co-managers, working in conjunction with Washington State Department of Ecology (Ecology), would develop a water quality monitoring plan for both before and after construction and during operation of any hatchery facilities. The fisheries co-managers and Ecology would collaborate on what specific water quality metrics need to be monitored. If water quality standards are exceeded, mitigation measures (treating effluent, reducing fish rearing densities by rearing less fish or increasing the number of rearing locations) would be employed. The fisheries co-managers have an interest in evaluating the limnological response of the reservoir with an increase in marine-derived nutrients as the number of spawner carcasses increases over time. This work will provide a means to monitor water quality in the reservoir and lower Cle Elum River.