

PUBLIC UTILITY DISTRICT NO. 1 *of* CHELAN COUNTY
P.O. Box 1231, Wenatchee, WA 98807-1231 • 327 N. Wenatchee Ave., Wenatchee, WA 98801
(509) 663-8121 • Toll free 1-888-663-8121 • www.chelanpud.org

August 12, 2010

VIA ELECTRONIC MAILING

Honorable Kimberly D. Bose, Secretary, and
Nathaniel J. Davis, Sr., Deputy Secretary
FEDERAL ENERGY REGULATORY COMMISSION
888 First Street, NE
Washington, DC 20426

and

Mr. Dale Bambrick, Branch Chief
National Marine Fisheries Service
304 S Water Street, Suite 201
Ellensburg, WA 98926

Re: **Lake Chelan Hydroelectric Project No. 637**
Article 408: Chelan River Implementation Monitoring Report pursuant to Appendix E of the new license, Section u.

Dear Secretary Bose, Deputy Secretary Davis and Mr. Bambrick:

The Public Utility District No. 1 of Chelan County, Washington (Chelan PUD or Licensee) hereby files the Chelan River Project Implementation Monitoring Report for the Lake Chelan Hydroelectric Project (Project).

Section u. of Appendix E of the new license, the National Marine Fisheries Service (NMFS) Construction Practices, requires that Chelan PUD submit to the Federal Energy Regulatory Commission (Commission) and NMFS an implementation monitoring report to be completed within 120 days of project completion describing the success in meeting the RPMs, and associated terms and conditions of the Opinion. The report includes project identification, photo documentation and other data, as appropriate, for the improvements in the Chelan River designed to increase usable spawning and rearing habitat for Chinook salmon and steelhead.

Please contact me or Jeff Osborn at (509) 661-4176 of my office regarding any questions or comments regarding this request.

Sincerely,

Michelle Smith
Licensing and Compliance Manager
michelle.smith@chelanpud.org
(509) 661-4180

cc: Erich Gaedeke, FERC Portland Regional Office

CHELAN RIVER PROJECT IMPLEMENTATION MONITORING REPORT

Final

August 10, 2010

Prepared by:
Public Utility District No. 1 of Chelan County
Wenatchee, Washington

IMPLEMENTATION MONITORING REPORT
CHELAN RIVER PROJECT

August 10, 2010

In accordance with the National Marine Fisheries Service (NMFS) Construction Practices for the Lake Chelan Project, as filed with the Biological Opinion on October 20, 2005 (pp. 8-5 to 8-13), Chelan PUD is required to submit a monitoring report to the Federal Energy Regulatory Commission (FERC) and NMFS within 120 days of project completion describing the success in meeting the Reasonable and Prudent Measures (RPMs), and associated terms and conditions of the Opinion. The contents of the Implementation Monitoring Report are specified in the construction practices document.

1. Project identification
   a. Project implementer: Public Utility District No. 1 of Chelan County (CPUD)

      Project name: Chelan River Project (CRP)

      Detailed description of the project:

The Project was constructed to meet the new Lake Chelan Hydroelectric Project license order to "supply the coldest water available from Lake Chelan" and introduce that water to "approximately 2 acres of useable spawning and rearing habitat..." The Chelan River Project (CRP) does that by withdrawing cold lake water from a new low level outlet constructed at the dam and by construction of a new pumping station within the powerhouse tailrace. The pumped tailrace water is valuable because it is as cold as feasible since it travels the approximately four miles from the lake to the habitat within a tunnel; the tunnel remains relatively cold during the spring and fall periods when the pump station is operated to provide higher flows within the new habitat areas. The minimum of approximately 3.5 acres of salmon and steelhead trout spawning habitat for the CRP is provided within portions of the project's tailrace and within the new habitat channel. The habitat was constructed from imported river gravels with a size distribution and depth range meeting criteria established by the design team and approved by the Chelan River Fishery Forum (CRFF). The habitat channel was constructed with depth, substrate, large woody debris, and channel sinuosity provided by the design team and approved by the CRFF. The tailrace spawning and rearing habitat area is a minimum of approximately 1.5 acres. The habitat channel spawning and rearing habitat is a minimum of approximately 2.0 acres.

   b. Project location by 5th or 6th field HUC and by latitude and longitude as determined from the appropriate USGS 7-minute quadrangle map.

The project location by HUC is the "Lake Chelan Basin." By coordinates it is: latitude 47.8343, longitude 120.0125698

c. Starting and ending dates for the work completed.

The work commenced in May, 2008 and was completed in December, 2009

2. Photo documentation. Photo documentation of habitat conditions at the project site before, during, and after project completion.
   a. Include general views and close-ups showing details of the project and project area, including pre- and post-construction.

   b. Label each photo with date, time, project name, photographer's name, and documentation of the subject activity.

See Appendix A.

3. Other data. Additional project-specific data, as appropriate, for individual projects.
   a. Work cessation. Dates work ceased because of high flows, if any. (N/A)

   b. Fish screen. Compliance with NMFS' fish screen criteria.

The pump intake screens were designed and fabricated to meet the NMFS' fish screen criteria. The diffusion gratings on the canal outlet were designed and fabricated to meet NMFS' criteria for avoiding attraction of adult salmon and steelhead.

c. Pollution and Erosion Control Plan. A summary of pollution and erosion control inspections, including any erosion control failures, contaminant releases, and correction efforts.

No erosion control failures or contaminant releases occurred in-water. The contractor(s) performing the work were required to have Certified Erosion and Sediment Control Lead training, and inspections were conducted at least monthly by Washington Department of Ecology Water Quality staff.

d. Description of site preparation.

The site's "pre-construction" condition consisted of a large outwash plain that was almost always dry and was occupied by predominantly large cobbles and boulders at the surface, underlain by a few to several feet of sands and gravels. Consequently, site preparation consisted primarily of moving the existing earth materials as required to achieve the general "post-construction" grades and elevations, and by sorting excess materials specified for incorporation into the constructed project (e.g. stock piling large boulders; cobbles, and riffle mix), and construction of temporary haul and access roadways.

e. Isolation of in-water work area, capture, and release.

All construction work for the Reach 4 habitat channel was conducted in the dry. Therefore, no stream areas required isolation and no fish were required to be captured and removed from the construction area. In-water work did occur during tailrace habitat

construction and during construction of the earthen pad for the pump station. Construction was accomplished using best management practices for controlling erosion and sedimentation, proper use of chemicals, oil and chemical spill prevention and response, and control and clean up of surplus construction supplies and other solid wastes. Containment booms, berms and silt fencing were used to isolate the work area. Heavy equipment was stored with containment and outside 200 feet of any water source. Spill response equipment including booms and pads was available at all times in the work area.

i. Supervisory fish biologist's name and address.

Steve Hays, Public Utility District No. 1 of Chelan County, PO Box 1231, Wenatchee, WA 98807-1231

ii. Methods of work area isolation and take minimization. (N/A)

iii. Stream conditions before, during, and within one week after completion of work area isolation. (N/A)

iv. Means of fish capture. (N/A)

v. Number of fish captured by species. (N/A)

vi. Location and condition of all fish released. (N/A)

vii. Any incidence of observed injury or mortality of listed species. (N/A)

f. Streambank protection
   i. Type and amount of materials used.

The primary bank stabilization material used was Riffle Mix, consisting of cobble size ranging from 1 inch to 30 inches in diameter. Planting riparian vegetation was included as part of the initial project design. Riparian plantings along both stream banks consisted of black cottonwood, red osier dogwood, and Coyote, Scouler, and Pacific willow. Planting occurred during fall 2009.

ii. Project size - one bank or two, width, and linear feet.

Dimensions of the Reach 4 habitat channel are as follows: two banks; width ranging from 30 to 80 feet; length is approximately 2,000 linear feet.

See Appendix A.

g. Site rehabilitation. Photo or other documentation that site rehabilitation performance standards were met.

See Appendix B

Appendix A

Tailrace Habitat

Photo: Chelan PUD, July 2008

Photo: Chelan PUD, July 2008

Photo: Chelan PUD, July 2008

Photo: Chelan PUD, July 2008

Reach 4 Habitat Channel

Photo: Chelan PUD, 2004

Photo: Chelan PUD, November 2008

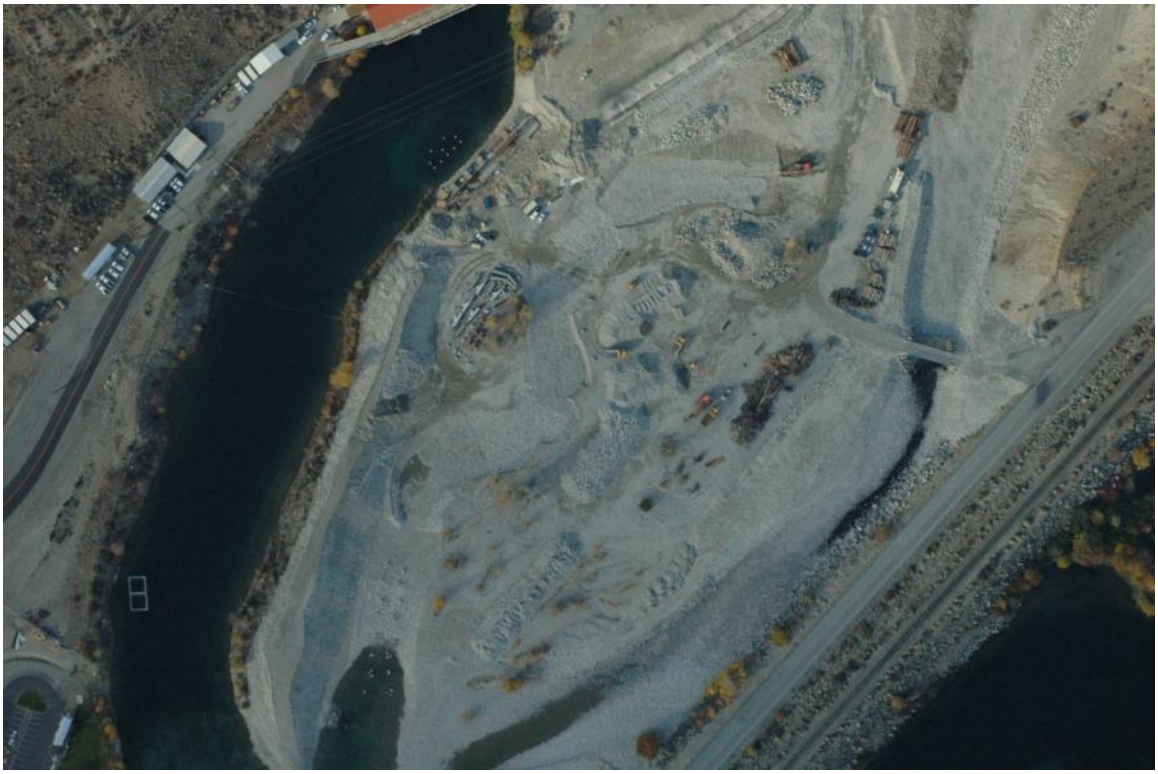

Photo: Chelan PUD, November 2008

Photo: Chelan PUD, November 2008

Photo: Chelan PUD, November 2008

Photo: Chelan PUD, July 2008

Photo: Chelan PUD, July 2008

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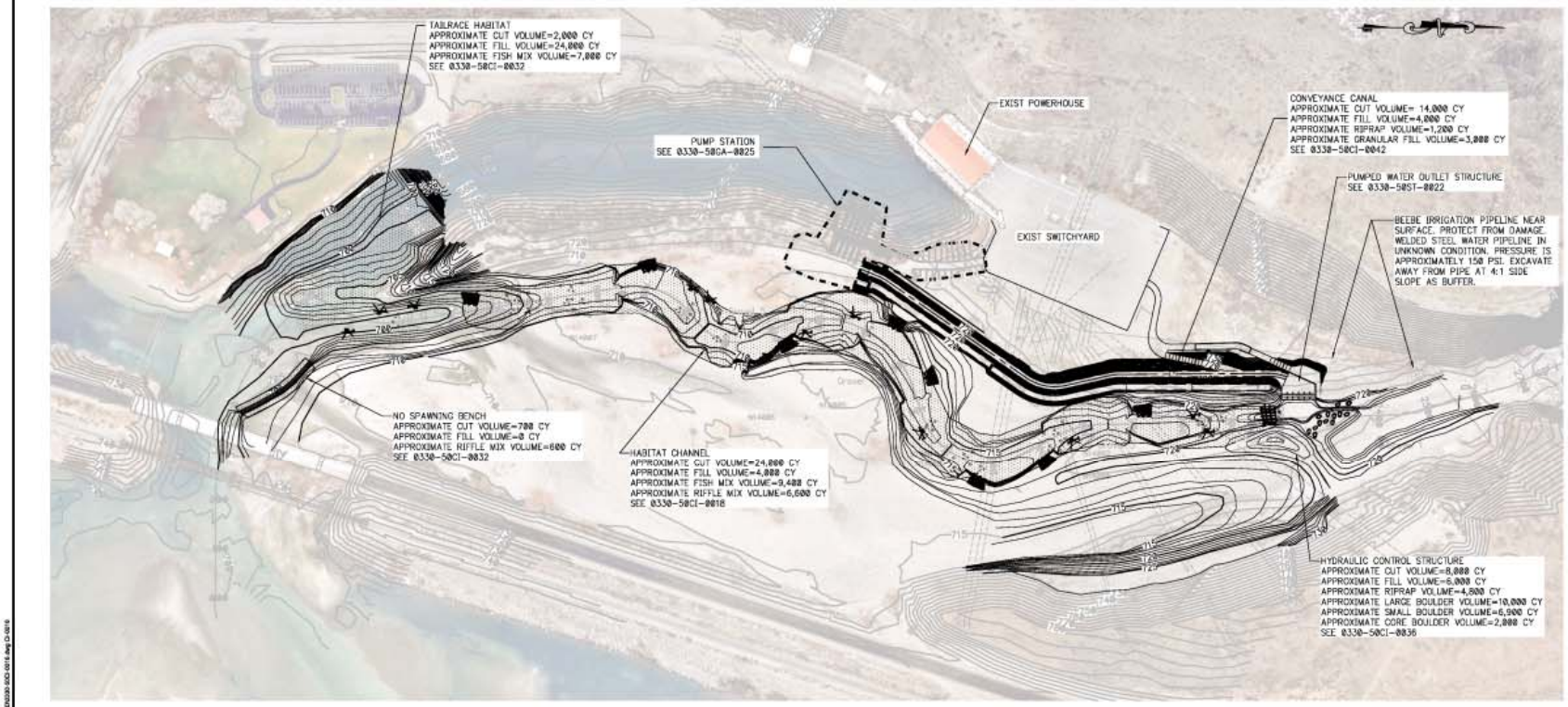
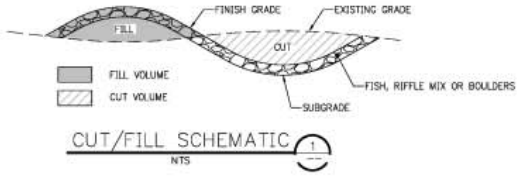


LEGEND

- LOG JAM
- V-LOG JAMS
- BOULDERS
- TEST PIT LOCATION
- GRAVEL PAINT TEST LOCATIONS

NOTES:

1. SURVEY BASE TOPOGRAPHY PROVIDED BY CHELAN PUD
   HORIZONTAL DATUM: NAD 83 SP WA NORTH
   VERTICAL DATUM: NGVD-29
2. CUT AND FILL VOLUMES ARE APPROXIMATE
3. CUT VOLUMES ARE BASED ON EXISTING VERSUS FINISHED SURFACES AND DO NOT INCLUDE FISH MIX, RIFFLE MIX, OR BOULDER VOLUMES ABOVE SUBGRADE. SEE SCHEMATIC AT RIGHT.
4. FILL VOLUMES ARE BASED ON EXISTING VERSUS FINISHED SURFACES AND INCLUDE FISH MIX, RIFFLE MIX, OR BOULDER VOLUMES ABOVE SUBGRADE. SEE SCHEMATIC AT RIGHT.
5. SUBGRADE EQUALS FINISHED GRADE MINUS DEPTH OF FISH MIX, RIFFLE MIX, OR BOULDERS.



CUT/FILL SCHEMATIC
NTS

ORIGINAL SIGNED BY: JAY S. KIDDER, P.E.
DATE ORIGINAL SIGNED:
DOCUMENTS STORED AT PUD NO. 1 OF CHELAN COUNTY, WENATCHEE, WA.

CONSULTANT	PRIN. ENG. J. KIDDER	CHELAN PUD NO.1	SCALE 1" = 100'	BAR IS ONE INCH ON ORIGINAL DRAWING. VERIFY SCALE 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	PUBLIC UTILITY DISTRICT NO. 1 OF CHELAN COUNTY WENATCHEE, WASHINGTON	CHELAN RIVER PROJECT
	2ND ENG. P. POWERS	PRIM. ENG.				SITE PLAN AND HABITAT IMPROVEMENTS
	DESIGNER C. REYNOLDS	2ND ENG.	0 FEB 6, 2008			BID 08-01
	APPROVAL J. KIDDER	PROJ. MGR: V. CHAMBERLAIN	REV. DATE	REVISION	REQ. BY DRFT	

SHEET R2 OF R50
REVISION 0
DATE FEB 6, 2008
DWG 0330-50CI-0016
ORIG. DRAWN
ORIG. DATE FEB 6, 2008

DOCUMENT CLASS: ID: ORIGINAL DWG. #:

Project size - one bank or two, width, and linear feet.

Dimensions of the Reach 4 habitat channel are as follows: two banks; width ranging from 30 to 80 feet; length is approximately 2,000 linear feet.

Appendix B

Post Reach 4 Habitat Channel Construction

Photo: Steve Kaminoff, October 2009

Photo: Steve Kaminoff, October 2009

Photo: Steve Kaminoff, October 2009

Photo: Steve Kaminoff, October 2009

Photo: Steve Kaminoff, October 2009

Photo: Steve Kaminoff, October 2009

Post Tailrace Habitat Construction

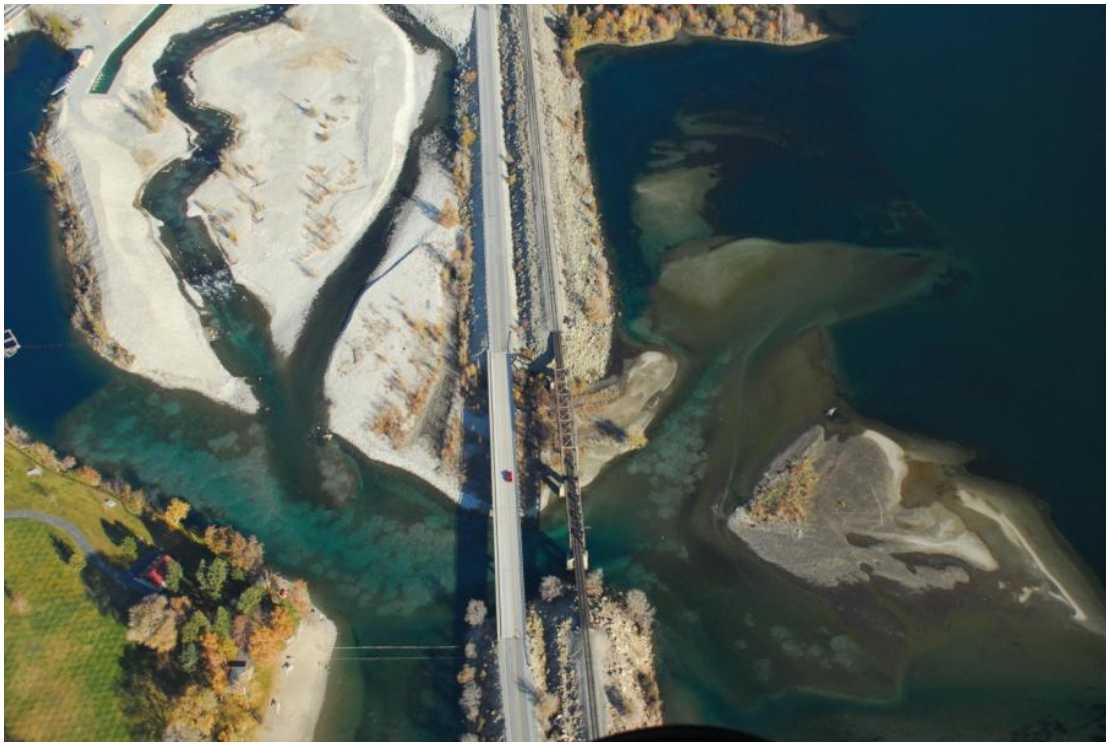


Photo: Steve Kaminoff, October 2009 Chinook salmon redds 2009

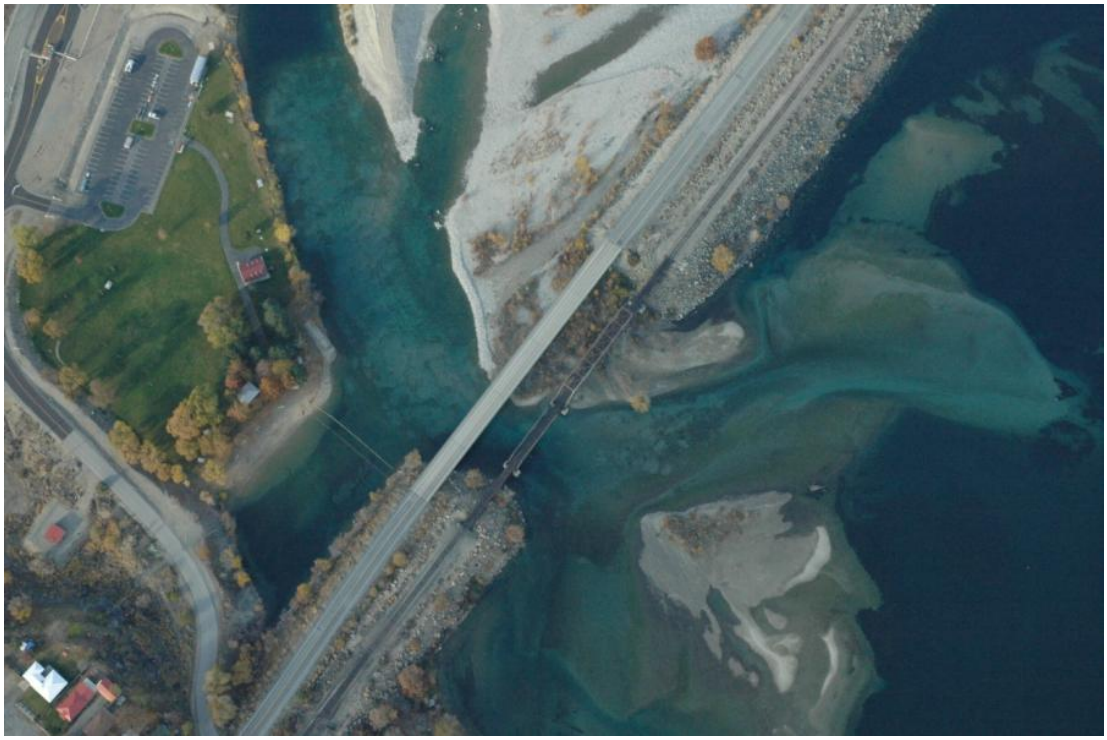


Photo: Chelan PUD, November 2008 Chinook salmon redds 2008

All Features

Photo: Steve Kaminoff, October 2009

Photo: Steve Kaminoff, October 2009

Photo: Steve Kaminoff, October 2009

Photo: Steve Kaminoff, October 2009

Photo: Steve Kaminoff, October 2009