



**PUBLIC UTILITY DISTRICT NO. 1 of CHELAN COUNTY**

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August 15, 2008

P-637-WA NATDAM-WA00004

Mr. Patrick Regan, P.E., Regional Engineer  
Portland Regional Office  
Federal Energy Regulatory Commission  
805 SW Broadway, Suite 550  
Portland, OR 97205

Re: Chelan River Project Monthly Report

Dear Mr. Regan:

In accordance with your letter of June 19, 2008, enclosed herewith are an original and two copies of the initial monthly report for the Chelan River Project. In addition, a copy of this letter and the report will be sent to Mr. Mark Peterschmidt of Washington Department of Ecology.

If you would like to discuss this work or if additional information would be helpful, please call me at the number listed below, or call Michelle Smith, Licensing & Compliance Manager, at (509) 661-4180.

Sincerely,  
Engineering Services

M. Gene Yow, P.E.  
Dam Safety Manager  
(509) 661-4305  
[gene.yow@chelanpud.org](mailto:gene.yow@chelanpud.org)

Enclosures: Original and two copies

cc: Mark Peterschmidt, WaDOE

Chelan River Project – Monthly Report  
Lake Chelan Hydroelectric Project – FERC No. 637  
Public Utility District No. 1 of Chelan County

August 15, 2008

1. Progress of Work

The contractor, Goodfellow Brothers, Inc. (GBI) mobilized during May, 2008. Spill flow (consistent with normal operations) occurred during portions of June and July. The spill flow was as expected and did not disrupt construction operations. Prior to spill operations GBI constructed a temporary spill flow containment regime consisting of an earth berm and temporary bridge. These were completed prior to spilling and have been effective in isolating ongoing work from Chelan River spill flows. Spill flows for this year are substantially complete. Work on the new river channel habitat regime, pump station, conveyance canal, and hydraulic control structure (boulder weir) are actively in progress, and on schedule.

Progress on the site has included:

- Each of the 13 piers for the pump station foundation have been drilled, tested, and completed.
- Pump station equipment is arriving at the site on schedule.
- Placement of fill in the lower tailrace channel to create spawning and rearing habitat is substantially completed. Water quality monitoring was performed consistently throughout the operation; no deleterious incidents occurred. Upper tailrace channel habitat construction that is within the in-water work area, is ongoing, and is expected to be completed on schedule by Sept 30.
- Earthwork associated with the pumped water conveyance canal is complete.
- Shotcrete lining of the pumped water conveyance canal is ongoing, and roughly 30% complete.
- Excavation for the canal outlet structure foundation is complete; rebar and concrete form placement is underway.

2. Status of Construction

The original schedule called for completion of pier drilling in August. The pier drilling is now complete, ahead of schedule.

The lower tailrace habitat work began July 1, 2008, on schedule, and is now substantially complete.

Pumped water outlet structure excavation is complete and structural concrete forming is ongoing, on schedule

All other phases of the work are expected to start on schedule.

See attached overall project schedule.

3. Construction Difficulties

No unanticipated difficulties have been encountered thus far on the project.

4. Contract Status

Goodfellow Brothers, Inc. (GBI) of Wenatchee, WA, is the general contractor and is performing the majority of the work themselves.

Malcolm Drilling of Kent, WA, a specialty foundation contractor, installed the foundation piers to support the pump tubes and pumps.

Sharples Construction of Kent, WA is building the concrete outlet structure for the conveyance canal.

5. Critical Events and Dates

- May 5 Notice to Proceed
- May 12 Begin Mobilization
- May 27 Begin work on site
- June 5 Set temporary bridge across Reach 4 spill channel
- June 5 Lake Chelan spill begins
- July 1 In-water construction work window begins
- July 15 Delivery of pump station pumps

6. Reservoir Filling

N/A

7. Foundations

Drilling for pump station foundation piers did not encounter bedrock in any of the pier locations. This possibility was anticipated in the design so that an appropriate length for pier not reaching bedrock was calculated and shown on the design drawings. This length was used, as planned.

The foundation excavation for the conveyance canal outlet structure has been completed. The foundation material consists of alluvial boulders and cobbles in a matrix of gravel and sand. These are the conditions anticipated by the design.

#### 8. Sources of Major Construction Materials

Material for “fish mix” and “riffle mix”, two gradations of gravel used to construct the fish habitat, is being obtained from on-site sources. See drawing 0330-50GA-0028 (sheet R1) in the bid documents for borrow area locations.

Boulders will be obtained from both on-site and off-site sources. The boulders are generally from alluvial sources along the Columbia River Valley.

The required Large Woody Debris (LWD) has been delivered to the job site from various sources along the Columbia River Valley. The LWD includes 154 poplar trees for racking, 65 root balls, 85 conifer key logs, and approximately 100 conifer racking logs.

Concrete is being supplied by Chelan Concrete and Central Washington Concrete. The cement will be supplied by Lehigh Cement.

Gates and valves proposed for the Low-Level Outlet are from J&S Valve and HydroGate. Submittals for this equipment are undergoing review and acceptance.

Pumping equipment and controls are being provided under separate contract by ITT Flygt, Inc. The pumps and major components either have or are being delivered to the job site, on schedule.

#### 9. Materials Testing and Results

Structural concrete has been placed in the footings of the pumped water outlet structure, and within the pier casings for the pump station. Compressive strength test results show no exceptions to specified requirements. Structural embankment material has been placed within the conveyance canal, and density tests have been acceptable. Test results will be provided as appropriate in future reports. Canal shotcrete lining has been placed, and tested to verify conformance with the contract specifications. No exceptions have been noted.

## 10. Instrumentation

No instrumentation has been installed at this point in the project. Information will be provided as appropriate in future reports.

## 11. Photographs



This shows Reach 4 looking south, on August 14<sup>th</sup>, 2008. Shotcrete lining of the conveyance canal has begun.



Geo-membrane placement is underway in the canal, and shotcrete placement is beginning. August 12, 2008.



Placement of reinforcing steel and formwork is in progress for the canal outlet structure. August 12, 2008.



T-screens for the pump station intakes. August 12, 2008.





One of two modules of the pump station equipment building is being offloaded. August 15, 2008.

12. Erosion Control and Other Environmental Measures

A variety of steps have been taken thus far in the project to protect surface water and soil, in accordance with the project's approved Water Quality Protection Plan and Erosion & Sediment Control Plan. These include placement of silt fences and sediment curtains, and deployment of oil booms. Washington Department of Ecology staff has visited the project site on several occasions. No water quality violations have been cited.

A sediment curtain was installed in the powerhouse tailrace channel around the temporary earth berm at the pump station, prior to placement of the berm. The sediment curtain, along with an oil boom, remained in place during drilling for pier installation. The steps taken have been effective at limiting sedimentation to acceptable levels. The equipment remains in place for later use in protecting water quality during removal of the temporary earth foundation used for concrete pier construction staging.

An oil boom has been installed downstream of the confluence of the Chelan powerhouse tailrace channel and the new channel used to contain spill from Lake Chelan Dam.

13. Other Items of Interest

There are none to report at this time.