



PUBLIC UTILITY DISTRICT NO. 1 of CHELAN COUNTY
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February 8, 2017

VIA ELECTRONIC FILING

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

RE: Lake Chelan Hydroelectric Project No. 637 (Project)
Report on December 5, 2016 Chelan River Minimum Instream Flow Deviation

Dear Secretary Bose and Deputy Secretary Davis:

This letter is to provide you both notification and reporting regarding a minimum flow deviation that occurred at the Public Utility District No. 1 of Chelan County's (Chelan PUD) Lake Chelan Hydroelectric Project, FERC No. 637 on December 5, 2016. As explained below, Chelan PUD is providing late notification due to delayed communication between operations staff and the Compliance Department regarding the minimum instream flow deviation incident.

License Requirement

Article 405 requires Chelan PUD to implement the instream flows, ramping rates, and tailrace flows as set forth in Article 7 of the Lake Chelan Settlement Agreement and Chapter 7 of the Comprehensive Plan attached to the Settlement Agreement. The specific Chelan River instream flow requirement that is the subject of this deviation report is to maintain a minimum flow of 80 cfs in the Chelan River.

In accordance with FERC's Order Modifying and Approving Operations Compliance and Monitoring Plan, Article 405, issued November 30, 2007, when a minimum instream flow deviation occurs, Chelan PUD is required to notify the Federal Energy Regulatory Commission (Commission) and the Washington Department of Ecology (Ecology) of the deviation within 48 hours of the time that Chelan PUD became aware of the deviation. Following the initial notification, Chelan PUD is required to file a report with the Commission within 30 days of any deviation from minimum flow requirements, lake levels, or ramping rate requirements. The report must, to the extent possible, identify the cause, severity, and duration of the incident, any observed or reported adverse environmental impacts resulting from the incident, a description of

any corrective measures implemented at the time of occurrence and the measures implemented or proposed to ensure that similar incidents do not recur; and comments or correspondence, if any, received from the resource agencies and others regarding the incident.

Summary of Deviation and Review of Environmental Effects

Chelan PUD is required to provide a minimum instream flow of 80 cfs in the Chelan River. As standard procedure, the instream flow is released from the low level outlet (LLO). A flow of approximately 84 cfs had been provided for several days prior to the incident.

The deviation occurred on December 5, 2016 between 1355 hours and 1600 hours. Flow readings from the flow meter on the LLO dropped below 80 cfs on 5 minute reading intervals between the hours identified previously, except for readings taken at 1505, 1510, and 1515 hours, where these readings were above 80 cfs. The lowest flow, 76.39 cfs, occurred at 1405 hours. Flows during the two-hour period ranged from 76.39 cfs to 78.58 cfs. All flow prior to 1355 hours on December 5 and after 1600 hours on December 5 have been above the 80 cfs minimum flow requirement. Chelan PUD compliance staff were notified of the flow deviations on January 16, 2016.

The suspected cause of the flow deviation is that the LLO flow control gate was stuck in a position higher than the gate stem setting due to water pressure from Lake Chelan on the back side of the control gate. Declining lake levels from to generation at the Lake Chelan powerhouse allowed the gate to release and drop due to reduction of water pressure. The linkage controlling the gate has been observed to have some play in the attachment that likely caused the gate to shift slightly.

Due to the short duration and slight deviation in flow, this incident is unlikely to have caused any ecological damage to the Chelan River, particularly to fish inhabiting the river. Water temperatures in the Chelan River were quite cold, so fish would be exhibiting overwinter behavior by hiding in the substrate. Water levels recorded at the USGS gage downstream of the LLO showed only a one inch drop in elevation at the lowest point during the incident compared to the average water level prior to the incident. Because water surface elevations in the Chelan River Habitat Channel did not drop significantly, Chinook salmon eggs and alevins incubating in redds constructed in the channel during the fall spawning period would have not been affected.

Remedial Action

Chelan PUD compliance and operations staff have investigated the cause of the incident and reason for delayed communication. The following improvements are being implemented:

1. Perform gate linkage improvements to eliminate play in linkage to prevent unintended gate movements in the future;
2. Develop clear protocols for automatic deviation alerts for operations staff; and
3. Reinforce with operating personnel the importance of immediate deviation notifications to compliance staff to ensure timely reaction and Commission notification.

*Ms. Kimberly D. Bose, Secretary
Mr. Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission*

Chelan PUD is concurrently providing this letter to the Chelan River Fishery Forum and will provide any comments received to the Commission. Please contact me should you have any questions regarding this incident.

Thank you,



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cc: FERC, Doug Johnson and Erich Gaedeke
Washington Department of Ecology, Breean Zimmerman
Chelan River Fishery Forum