

121 FERC ¶ 62, 152  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Public Utility District No. 1 of  
Chelan County

Project No. 637 - 036

ORDER MODIFYING AND APPROVING OPERATIONS COMPLIANCE AND  
MONITORING PLAN, ARTICLE 405

(Issued November 30, 2007)

On May 4, 2007, Public Utility District No. 1 of Chelan County (licensee) filed its Operations Compliance and Monitoring Plan pursuant to Article 405 of the Order Issuing New License issued November 6, 2006<sup>1</sup> for the Lake Chelan Hydroelectric Project. The project is located on the Chelan River in Chelan County, Washington.

BACKGROUND AND LICENSE REQUIREMENTS

License Article 405 requires the licensee to file with the Commission, for approval, an Operations Compliance Monitoring Plan that describes how the licensee will comply with the instream flows, ramping rates, and tailrace flows as set forth in Article 7 of the Lake Chelan Settlement Agreement (SA) and Chapter 7 of the Comprehensive Plan attached to the SA; and the lake levels as set forth in Article 8 of the SA and Chapter 8 of the Comprehensive Plan. The plan is required to include, but not be limited to the following:

(a) a description of the exact location of any gages and/or measuring devices that would be used to monitor compliance, the method of calibration for each gage and/or measuring device, the frequency of recording for each gage and/or measuring device, and a monitoring schedule; a provision to electronically post recorded flows; provisions to notify the Commission no later than 48 hours after the licensee becomes aware of any deviation from the minimum flow requirements; and a provision for filing an annual report, beginning in the year in which the new release structure is installed that documents compliance with the instream flows, ramping rates, and tailrace security flows, including hourly and daily inflow records, as appropriate, to document compliance with the relevant project operating constraints;

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<sup>1</sup> 117 FERC & 62,129 (2006)

(b) a provision to file with the Commission within one year of the issuance date of the license, and annually thereafter, a report comparing monthly actual and target lake levels; and runoff volume forecasts and other factors influencing achievement of targeted lake levels; and

(c) an implementation schedule.

The licensee is required to prepare the plan after consultation with various State and Federal resource agencies, Tribes, and non-governmental organizations, which comprise the Chelan River Fisheries Forum (CRFF) and the Lake Chelan Recreation Forum (LCRF).

## LICENSEE'S PLAN

The licensee's plan reflects the present status of flow measurement and reporting for existing installations and the most current knowledge regarding flow measurement methods and instrumentation for new structures that will be constructed in order to meet the requirements of the new project license and associated SA. In order to provide minimum flows throughout the year, as required under the project license, the licensee will be installing a new low level outlet (LLO) structure at the dam in order to provide required minimum flows when the lake level is below the spillway crest. Additionally, the licensee will be installing a tailrace pump station below the project powerhouse to provide flows necessary to maintain flows equal to or greater than the flows required for fish habitat improvements in Reach 4 of the Chelan River.

The licensee plans to monitor flow into the Chelan River from the dam at the LLO and/or spillway. The corresponding ultrasonic flow meter or similar device would be installed during construction of the LLO. Flows from the pump station would also be measured with an ultrasonic flow meter or similar device, located within the conveyance structure and also installed during construction. The spillway flow would continue to be measured by calculating flow from the lake level readings and gate settings, for which rating tables exist. Lake levels are measured at an existing U.S. Geological Survey (USGS) gauging station located on the south shore of Lake Chelan. Flows discharged from the turbines into the tailrace would continue to be measured using an ultrasonic flow meter. Once the exact location of any gages and/or measuring devices for the LLO and pump station are determined, the licensee would provide those details in a future update to their plan following completion of the new project structures. The frequency of maintenance and re-calibration of the associated flow measurement devices and methods would follow manufacture's recommendations for the new flow meters and would be

done on an as-needed basis for the lake level gauge following maintenance or any observed malfunction. Comparison of spillway discharge, LLO flows and powerhouse discharge with USGS streamflow estimations would be conducted pursuant to USGS standards.

The powerhouse and spillway flows, as well as lake level and tailwater elevations, would continue to be monitored and recorded with the licensee's Supervisory Control and Data Acquisition (SCADA) system. The SCADA system would continue to provide data in real-time, with readings every second, as well as data recording. The flows and lake level elevation would continue to be recorded as the previous hour's average of the one-second readings. The tailwater elevation point value would continue to be recorded at the end of the hour.

The licensee plans to report hourly average and daily average instream flows as recorded from the LLO, pumping station, spillway and powerhouse. Additionally, the licensee plans to report hourly and daily lake level and tailwater elevation readings. The associated information would be provided in written form to the CRFF and posted electronically to the Lake Chelan implementation web page on a quarterly basis. Real-time flows, lake levels and tailwater levels would also be provided on the web page. In the event of a deviation from the minimum flow requirements, the licensee would notify the Commission and Washington Department of Ecology's (WDOE) Central Regional Office via email, within 48 hours of such an event.

Regarding ramping rates, the licensee states that ramping rates would initially be set at approximately two inches per hour during the period when fry may be present. The stated ramping rates would remain in effect until biological evaluations have determined, in consultation with the CRFF, the actual ramping rates necessary to prevent stranding of fish in the Chelan River. The licensee states that a study would be conducted to determine the operating criteria for changes in flow from the LLO, spillway and pump station, which would establish such ramping rate procedures. Compliance with ramping rates would be reported in terms of meeting the operating criteria (rates of decrease in hourly average flow releases from the LLO, spillway and pump station) developed in consultation with the CRFF for flow reductions into the Chelan River. The compliance reporting would consist of a summary of any deviations from the ramping criteria, including a description of the cause and corrective actions taken to prevent future deviations.

In order to protect salmon and steelhead eggs and alevins incubating within the constructed spawning habitat in the powerhouse tailrace from dewatering and low intragravel dissolved oxygen (DO), the licensee plans to develop powerhouse operating

criteria for either periodic flow releases or other methods if such adverse conditions are detected. These powerhouse operating criteria or other methods are described as flow security criteria and would be developed in consultation with the CRFF, if deemed necessary. Compliance with powerhouse tailrace security flows would be reported in terms of meeting the operating criteria, if needed, for periodic operation of the powerhouse to maintain favorable intragravel DO levels in the powerhouse tailrace. Reporting would consist of a summary of powerhouse operations during the incubation period of salmon and steelhead, with the duration of any powerhouse shutdowns and any periodic flow releases provided for the protection of eggs and alevins. In compliance with the SA and Lake Chelan Comprehensive Plan, the licensee would include the results of intragravel DO monitoring and incubation period determination from the associated biological monitoring, in their proposed flow compliance report during years 1-5 following the completion of fish spawning habitat construction in the powerhouse tailrace.

The licensee plans to file an Annual Flow Report with the Commission and WDOE by February 28 of the year following collection of data, beginning in the year in which the LLO is installed. However, the licensee plans to file their Annual Flow Report (absent minimum flow data) beginning in 2008. The report would be coordinated with the reporting of water quality data and biological evaluations required under the WDOE 401 Water Quality Certificate (WQC) and associated Quality Assurance Project Plan (QAPP) under license Article 401. The reporting of minimum instream flow compliance would be concurrent with the initiation of new minimum flow requirements in the Chelan River, which is required to occur no later than two years after the effective date of the new license. However, the licensee states that the initiation of new minimum flows in the Chelan River cannot proceed until the design of the LLO and habitat improvements in Reach 4 of the Chelan River have been approved by the Commission (Article 408) and construction has been completed. Further, the licensee states that the approval process and lengthy lead times for permitting and procurement of some components of the LLO may delay initiation of the minimum flows beyond the two-year anniversary of the license.

License Article 405(b) requires the licensee to file with the Commission within one year of the issuance date of the license, and annually thereafter, a report comparing monthly actual and target lake levels; and runoff volume forecasts and other factors influencing achievement of targeted lake levels. The licensee states that the new lake level management objectives in the project license include target lake levels for certain dates, which are intended to balance the needs of recreation and fish protection. The licensee plans to file their first Annual Lake Level Report by November 1, 2007, which

would be one year from the issuance date of the project license as required.<sup>2</sup> Thereafter, the licensee plans to file their Annual Lake Level Report with the Commission by February 28, beginning in 2009.

## AGENCY CONSULTATION

License Article 405 requires the licensee to prepare their plan after consultation with various State and Federal resource agencies, Tribes, and non-governmental organizations, which comprise the CRFF and LCRF. The licensee's filing included an extensive record of consultation with the CRFF and LCRF. The licensee states that their draft plan was provided to the required resource agencies, Tribes, and non-governmental organizations on March 15, 2007. All comments were incorporated into the licensee's filed plan.

## DISCUSSION AND CONCLUSIONS

The licensee states that the initiation of new minimum flows in the Chelan River cannot proceed until the design of the LLO and habitat improvements in Reach 4 of the Chelan River have been approved by the Commission (Article 408) and construction has been completed. Further, the licensee states that the approval process and lengthy lead times for permitting and procurement of some components of the LLO may delay initiation of the minimum flows beyond the two-year anniversary of the license. Thus, the licensee states that if following design, construction schedules necessitate a request for additional time, the licensee, in consultation with the CRFF, would file a request for extension of time for Commission approval. As a result, applicable flow data may not be included in the 2008 Annual Flow Report (to be filed with the Commission by February 28, 2009) as would be required. Therefore, the licensee should provide a status update regarding associated construction activities and applicable extension of time request(s) in their 2008 Annual Flow Report. Additionally, the report should be coordinated with the reporting of water quality data and biological evaluations required under their WQC Condition V.B and associated QAPP under license Article 401. Finally, the licensee should file their Annual Lake Level Report with the Commission by February 28, beginning in 2009, as proposed.

License Article 405(a) requires that the licensee's plan include a provision to notify the Commission no later than 48 hours after the licensee becomes aware of any

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<sup>2</sup> The licensee's first Annual Lake Level report was filed with the Commission on November 6, 2007.

deviation from the minimum flow requirements. The licensee states that they would notify the Commission and the WDOE via email within 48 hours of such an event. Although notification via email is acceptable to comply with the 48-hour notification requirement, it is the Commission's standard practice that any such deviation be filed formally with the Commission. Further, this would also apply to lake levels and ramping rates. Therefore, the licensee should file a report with the Commission within 30 days of any deviation from minimum flow requirements, lake levels or ramping rates. The report should, to the extent possible, identify the cause, severity, and duration of the incident, and any observed or reported adverse environmental impacts resulting from the incident. The report should also include: 1) operational data necessary to determine compliance with the respective license requirements regarding minimum flows, lake levels, and ramping rates, as appropriate; 2) 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 3) comments or correspondence, if any, received from the resource agencies regarding the incident. Based on the report and the Commission's evaluation of the incident, the Commission should reserve the right to require modifications to project facilities and operations to ensure future compliance.

The licensee's Operations Compliance and Monitoring Plan should ensure documentation of compliance with the instream flows, ramping rates, and tailrace security flows, including hourly and daily inflow records, as appropriate, to document compliance with the relevant project operating constraints.

The licensee's plan satisfies the requirements of license Article 405 of the Order Issuing New License issued November 6, 2006, for the Lake Chelan Hydroelectric Project. Therefore, the licensee's plan, as modified, should be approved.

The Director orders:

(A) The Operations Compliance and Monitoring Plan, filed May 4, 2007, under license Article 405 of the November 6, 2006 Order Issuing New License for the Lake Chelan Hydroelectric Project, as modified by paragraphs (B) through (D), is approved.

(B) The licensee shall file annually with the Commission by February 28, beginning 2008, their Annual Flow Report. If construction of the low level outlet is not completed as scheduled and corresponding flow data is not available for the 2008 Annual Flow Report (to be filed with the Commission by February 28, 2009), the licensee shall provide a status update regarding associated construction activities and applicable extension of time request(s) in their associated report. Additionally, the report shall be coordinated with the reporting of water quality data and biological evaluations required

under the Washington Department of Ecology's 401 Water Quality Certificate Condition V.B and associated Quality Assurance Project Plan under license Article 401. The licensee shall allow the resource agencies, Tribes and non-governmental organizations specified under Article 405, 30 days to provide comments and/or recommendations on their report before filing with the Commission. The filing shall include comments and/or recommendations from the consulted entities and the licensee's response to any comments. If the licensee does not adopt a recommendation, the report shall include the licensee's reasons, based on project-specific information. Based on review of the report, the Commission reserves the right to require changes to the project to ensure compliance with the license.

(C) The licensee shall file annually with the Commission by February 28, beginning in 2009, their Annual Lake Level Report. The licensee shall allow the resource agencies, Tribes and non-governmental organizations specified under Article 405, 30 days to provide comments and/or recommendations on their report before filing with the Commission. The filing shall include comments and/or recommendations from the consulted entities and the licensee's response to any comments. If the licensee does not adopt a recommendation, the report shall include the licensee's reasons, based on project-specific information. Based on review of the report, the Commission reserves the right to require changes to the project to ensure compliance with the license.

(D) The licensee shall file a report with the Commission within 30 days of any deviation from minimum flow requirements, lake levels or ramping rates. The report shall, to the extent possible, identify the cause, severity, and duration of the incident, and any observed or reported adverse environmental impacts resulting from the incident. The report shall also include: 1) operational data necessary to determine compliance with the respective license requirements regarding minimum flows, lake levels, and ramping rates, as appropriate; 2) 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 3) comments or correspondence, if any, received from the resource agencies and others regarding the incident. Based on the report and the Commission's evaluation of the incident, the Commission reserves the right to require modifications to project facilities and operations to ensure future compliance.

(E) The licensee shall file an original and seven copies of any filing required by this order with:

The Secretary  
Federal Energy Regulatory Commission

Project No. 637-036

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Mail Code: DHAC, PJ-12.3  
888 First Street, NE  
Washington, DC 20426

(F) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days from the date of issuance of this order, pursuant to 18 CFR ' 385.713.

George H. Taylor  
Chief, Biological Resources Branch  
Division of Hydropower Administration  
and Compliance