

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Public Utility District No. 1 of Chelan County

Project No. 637-108

ORDER AMENDING MINIMUM PUMPED SPAWNING FLOW AND
RELATED LICENSE REQUIREMENTS

(December 7, 2017)

1. On March 14, 2017 and supplemented on November 29, 2017, Public Utility District No. 1 of Chelan County, Washington, licensee for the Lake Chelan Hydroelectric Project No. 637, filed a request to amend the project Reach 4 (habitat channel) pumped spawning flow requirements. Amending the pumped spawning flow requires four aspects of the license to be amended.¹ First, Appendix D, section III(A)(i) of the license which contains the Water Quality Certification (WQC) issued by Washington Department of Ecology (Ecology) must be amended. Second, Appendix A, article 7(b)(1) of the license referencing the spawning flows in the Settlement Agreement must be amended. In addition, since the spawning flows are also a part of the Operations Compliance Monitoring Plan, and the Threatened and Endangered Species Protection Plan, these plans must also be amended. The amendment request would reduce the minimum pumped flow to Reach 4 of the Chelan River bypass reach that is required by the license and plans.² The project is located on the Chelan River, near the City of Chelan, in Chelan County, Washington. The project occupies federal lands administered by the U.S. Forest Service (Forest Service) and the U.S. Department of the Interior, National Park Service (Park Service).³

¹ Order on Offer of Settlement and Issuing New License (117 FERC ¶ 62,129), issued November 6, 2006.

² The 3.9 mile section of the Chelan River that is bypassed by the project downstream of the diversion dam is divided into four reaches. Reach 4 is the furthest downstream portion of the bypass reach and often referred to as the Habitat Channel because of the spawning and rearing habitat modifications implemented in that reach as required by the license.

³ The federal lands are in the Wenatchee National Forest and the Lake Chelan National Recreation Area of the North Cascades National Park.

License Requirements

2. Appendix D of the license contains the WQC issued on April 23, 2003 for the project by the Ecology under section 401 of the Clean Water Act. Section III(A)(i) of the WQC sets forth the minimum instream flow requirements for the Chelan River as described in Table 7-3 of the Chelan River Biological Evaluation and Implementation Plan (revised April 18, 2003).

3. Appendix A of the project Settlement Agreement contains the requirements of the Chelan River Biological Evaluation and Implementation Plan (also referred to as the Chelan River Fishery Plan), and requires the implementation of the Plan to restore the fish and wildlife resources of the Chelan River, as described in Chapter 7 of the Plan. The Settlement Agreement articles were incorporated into license Appendix A. Article 7(b)(1), in part, references and requires the licensee to comply with the minimum flow provisions in section 2.6.5, table 7-3, of Chapter 7 of the Plan. Table 7-3 below sets forth the flow requirements as follows:

Reach	Dates	Dry year (cfs)	Average year (cfs)	Wet year (cfs)
1,2,&3 ¹	July 16- May 14	80 all months	80	80
	May 14		ramp up to 200	Ramp up to 320
	May 15- July 15		200	320
	July 16		ramp down to 80	ramp down to 80
4 ² Spawning flow	March 15- May 15; <i>and</i> Oct. 15- Nov. 30	80 + 240 pumped (320)	320 by combination of spill & pumping Incubation flow, as needed	320 by combination of spill & pumping Incubation flow, as needed

¹ Flows measured at the dam by calibrated gate rating.

² Flows measured at the dam or through calibrated pump discharge curves.

4. License Article 405 requires the licensee to file, for Commission approval, an Operations Compliance Monitoring Plan. The Plan is to include a series of elements specified in the article to satisfy the requirements of the Settlement Agreement, and incidental take terms and conditions stipulated by the National Marine Fisheries Service

(NMFS), which are attached to the license as Appendix E. The Commission approved the licensee’s plan by order issued November 30, 2007.⁴

5. License Article 408 requires the license to file, for Commission approval, a Threatened and Endangered Species Protection Plan. The Plan is to include a series of elements specified in the article to satisfy requirements of the Settlement Agreement, and incidental take terms and conditions stipulated by NMFS, which are attached to the license as Appendix E. The Commission approved the licensee’s plan by order issued November 28, 2007.⁵

6. Both the Operations Compliance Monitoring Plan and the Threatened and Endangered Species Protection Plan include the flow requirement in a modified table format (expressing the same requirements as the table in the Settlement Agreement). The table in these plans is as follows:

Table 1. Minimum Instream Flow Requirements for the Chelan River

Reach	Dry year (cfs)	Average year (cfs)	Wet year (cfs)
1,2,&3 ¹	80 all months	80 July 16-May 14	80 July 16-May 14
		May 14 ramp up to 200	May 14 Ramp up to 320
		200 May 15-July 15	320 May 15-July 15
		July 15 ramp down to 80	July 16 ramp down to 80
4 ² Spawning flow	80 + 240 pumped March 15 to May 15 and Oct. 15 to Nov. 30	320 by combination of spill & pumping March 15 to May 15 and Oct. 15 to Nov. 30 Incubation flow, as needed	320 by combination of spill & pumping March 15 to May 15 and Oct. 15 to Nov. 30 Incubation flow, as needed

¹ Flows measured at the dam by calibrated gate rating.

² Flows measured at the dam or through calibrated pump discharge curves.

⁴ Order Modifying and Approving Operations Compliance and Monitoring Plan, Article 405 (121 FERC ¶ 62, 152).

⁵ Order Approving Threatened and Endangered Species Plan Under Article 408 (121 FERC ¶ 62,143).

Background

7. The license and the approved Plans, in part, require the licensee to provide 80 cubic feet per second (cfs) minimum instream flow from the diversion dam into the bypass reach and to provide additional water pumped from the tailrace to Reach 4 at a minimum of 240 cfs for a total minimum flow of 320 cfs in Reach 4 during the March 15 through May 15 (spring) steelhead spawning periods and during the October 15 through November 30 (fall) Chinook salmon spawning period.

8. The licensee implemented the required flows beginning in 2009 using 5 pumps to provide the spawning flow from the tailrace to Reach 4 in addition to the 80 cfs minimum flow released into the bypass reach from the diversion dam. After several years of implementation of these flows during the spring and fall spawning seasons, the licensee, Ecology, and Washington Department of Fish and Wildlife (Washington DFW) observed that the water velocities in the habitat channel provided by the five pumps combined with the flow from the diversion dam appeared to be too high for the intended biological objective of providing spawning and rearing habitat for steelhead and Chinook salmon. In its consultation with the agencies and the Chelan River Fishery Forum (CRFF),⁶ it was decided to temporarily reduce the flow to the habitat channel by operating four rather than five pumps. From the results of biological monitoring conducted by the licensee, it appeared that spawning and rearing of steelhead and Chinook salmon responded better to a reduced flow. With annual notifications to the Commission, the licensee implemented the reduced flow regime during the 2013 and 2014 Chinook salmon spawning periods (October 15-November 30) and 2014, 2015 and 2016 steelhead spawning periods (March 15-May 15). This resulted in a pumped flow of approximately 180 cfs rather than the initial 240 cfs. The 180 cfs pumped flow combined with the 80 cfs minimum flow (total flow of 260 cfs) was determined to be a better flow regime creating more suitable habitat for spawning and rearing steelhead and Chinook salmon using the bypass reach.

9. Since it was apparent that the reduced flow was more suitable, and the resource agencies preferred this flow regime, Commission staff advised the licensee that it should request to amend the requirements within the license and approved Plans to provide the more suitable flow. As well, an amendment to the WQC by Ecology would also be necessary.

⁶ Members of the CRFF include the NMFS, Forest Service, Park Service, U.S. Fish and Wildlife Service (FWS), Ecology, Washington State Department of Fish and Wildlife, Confederated Tribes of the Colville Reservation, Yakima Indian Nation, Confederated Tribes of the Umatilla Indian Reservation, City of Chelan, and Lake Chelan Sportsman Association.

Licensee's Request

10. The licensee received an amended WQC requirement from Ecology on November 3, 2017, that required a reduced spawning flow to be implemented in Reach 4. The revision reduced the pumped flow into Reach 4 from 240 cfs to 180 cfs. Based on the amended flow table issued by Ecology, the licensee requests that the Commission amend the table in Appendix D, section III(A)(i) of the project license. Further, the licensee requests that section 2.1, Table 1 in the Operations Compliance Monitoring Plan; and section 2.1, Table 1 in the Threatened and Endangered Species Protection Plan be amended to include the revised table as follows (strike through and bold font used to highlight the changes).

Table 1. Minimum Instream Flow Requirements for the Chelan River

Reach	Dry year (cfs)	Average year (cfs)	Wet year (cfs)
1,2,&3 ¹	80 all months	80 July 16-May 14	80 July 16-May 14
		May 14 ramp up to 200	May 14 Ramp up to 320
		200 May 15-July 15	320 May 15-July 15
		July 15 ramp down to 80	July 16 ramp down to 80
4 ² Spawning flow	80 + 240 180 pumped March 15 to May 15 and Oct. 15 to Nov. 30	320 260 by combination of spill & pumping March 15 to May 15 and Oct. 15 to Nov. 30 Incubation flow, as needed	320 260 by combination of spill & pumping March 15 to May 15 and Oct. 15 to Nov. 30 Incubation flow, as needed

¹ Flows measured at the dam by calibrated gate rating.

² Flows measured at the dam or through calibrated pump discharge curves.

11. In addition, the licensee requests to amend the reference to the table in Appendix A, article 7(b)(1) by replacing the wording “section 2.6.5, Table 7-3,” **with** “section 2.1, Table 1 of the Operations Compliance and Monitoring Plan.”

12. These administrative changes to the table and references to the table within the license express the changes in the reduced spawning flow from a pumped flow from 240 cfs to 180 cfs and a combined total flow from 320 cfs to 260 cfs.

Consultation

13. Throughout the modified operation of providing reduced spawning flows to Reach 4 from 2013 through 2016, the licensee had consulted with the Ecology and Washington DFW as well as the CRFF. All entities agreed that the reduced flow in Reach 4 provided more preferable conditions for steelhead and Chinook salmon

spawning and rearing. Regarding the licensee's amendment request, on February 2, 2017 the licensee distributed its proposed amendment, including the modified table to the CRFF for review and comment. By email dated February 2, 2017, Ecology approved the licensee's request. By email dated February 7, 2017, Washington DFW also approved the amendment request. By two emails dated February 13, 2017, and email dated February 16, 2017, the FWS, Philip Archibald, and the Forest Service, respectively, as members of the CRFF, also approved the amendment request. No other comments were received.

14. On November 3, 2017, Ecology issued an amended WQC condition that requires the reduction pumped spawning flow to the habitat channel as set forth in section III(A)(i) of the WQC.

Discussion

15. The licensee's request to amend the spawning flows provided to Reach 4 of the Chelan River are based on the revised WQC requirement issued by Ecology on November 3, 2017. Temporary implementation of the reduced flows prior to the issuance of the amended WQC condition were recommended through the licensee's consultation with the CRFF and approved by the Commission during the 2013 and 2014 Chinook salmon spawning periods (October 15-November 30) and 2014, 2015 and 2016 steelhead spawning periods (March 15-May 15). The licensee's implementation of the reduced flows, in comparison to the implementation of the original flows required by the license, resulted in a higher biological response from fish using the Reach 4 habitat channel as documented by the licensee's evaluations of spawning activity within the reach during those years. Based on the amended flow table issued by Ecology on November 3, 2017, the licensee's request to amend the table in Appendix D, section III(A)(i) of the project license; proposed amendment to Appendix A, article 7(b)(1); proposed amendments to section 2.1, Table 1 in the Operations Compliance Monitoring Plan; and section 2.1, Table 1 in the Threatened and Endangered Species Protection Plan, filed on March 14, 2017 and supplemented on November 29, 2017, would incorporate the amendment to the minimum spawning flow requirements table and the references to that table in the project license requirements. The licensee's amendment request should therefore be approved.

The Director orders:

(A) Public Utility District No. 1 of Chelan County's (licensee) request, filed March 14, 2017, to amend the spawning flows in Reach 4 by providing 180 cubic feet per second (cfs) combined with the 80 cfs minimum flow from the diversion dam for a total spawning flow of 260 cfs, is approved.

(B) The revised Water Quality Certification condition issued by the Washington Department of Ecology on November 3, 2017 is incorporated into the license and

Appendix D, article III(A)(i) is amended by replacing the original table with the following:

Table 1. Minimum Instream Flow Requirements for the Chelan River

Reach	Dry year (cfs)	Average year (cfs)	Wet year (cfs)
1,2,&3 ¹	80 all months	80 July 16-May 14	80 July 16-May 14
		May 14 ramp up to 200	May 14 Ramp up to 320
		200 May 15-July 15	320 May 15-July 15
		July 15 ramp down to 80	July 16 ramp down to 80
4 ² Spawning flow	80 + 180 pumped March 15 to May 15 and Oct. 15 to Nov. 30	260 by combination of spill & pumping March 15 to May 15 and Oct. 15 to Nov. 30 Incubation flow, as needed	260 by combination of spill & pumping March 15 to May 15 and Oct. 15 to Nov. 30 Incubation flow, as needed

¹ Flows measured at the dam by calibrated gate rating.

² Flows measured at the dam or through calibrated pump discharge curves.

(C) Appendix A, article 7(b)(1) of the license is amended to replace the wording “section 2.6.5, Table 7-3,” with “section 2.1, Table 1 of the Operations Compliance and Monitoring Plan.”

(D) Section 2.1, Table 1 in the Operations Compliance Monitoring Plan; and section 2.1, Table 1 in the Threatened and Endangered Species Protection Plan are amended to include the revised table in ordering paragraph (B) above.

(E) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. § 825l (2012), and the Commission’s regulations at 18 C.F.R. § 385.713 (2017). The filing of a request for rehearing does not operate as a stay of the effective date of this order, or of any other date specified in this order. The licensee’s failure to file a request for rehearing shall constitute acceptance of this order.

Thomas J. Lovullo
 Chief, Aquatic Resources Branch
 Division of Hydropower Administration
 and Compliance