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Subject: Request for Amending Spawning Flow to the Chelan River Habitat Channel
Date: Thursday, February 02, 2017 10:17:15 AM

Dear Chelan River Fishery Forum: My sincerest apologies for resurrecting a topic that we all thought was dealt with previously: Amending spawning flow to the Chelan River Habitat Channel. I had not thought of all the process steps necessary when I sent out an email regarding this topic last fall. I neglected to consider that not only does license Article 405: *Operations Compliance Monitoring Plan* (OCMP), Article 408 *Threatened and Endangered Species Protection Plan* (TESPP), and the Lake Chelan Comprehensive Settlement Agreement, Attachment B, Chapter 7, Table 7-3 require amendment, but also the 401 water quality certification. Amending the 401 certification can be implemented only by request from Ecology to the Federal Energy Regulatory Commission (FERC). Breean Zimmerman had been wonderful investigating the Ecology process to amend the 401 and sharing that with me, while I have been doing the same through PUD files, researching previous amendment requests, and conversations with FERC staff. Steve Hays has been instrumental in reviewing past pump station and minimum flow levels so that we can request amending the spawning flows appropriately.

The recommended course of action is to amend the minimum Reach 4 spawning flow values contained in Table 7-3: Natural Resources Working Group Chelan River Flow Proposal located on page 7-19 in the Chelan River Biological Evaluation and Implementation Plan (CRBEIP) in the Lake Chelan Comprehensive Plan. This exact table is included also in the OCMP, TESPP, and 401 certification. Note that the flow levels are stated as minimums in cfs and not 4 pump versus 5 pump operation. The table below, which I copied from the CRBEIP, contains the proposed amended flow levels and will be included in the amendment letter to FERC. The new minimum flows for pumped flow in dry years and total flow in average and wet years are in red, with the original values in strikeout.

Table 1. 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 16- 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 ultrasonic flow meter.

² Flows measured at the dam and at the pump station by ultrasonic flow meter.

Source: Settlement Agreement, Attachment B, Chapter 7, Table 7-3; footnotes have been updated.

Steve Hays historic flow level research showed that at extreme low Lake Chelan Project tailwater elevations that 4 pumps were pumping slightly greater than 180 cfs. However, a vast majority of the time 4 pumps were producing near 200 cfs to 210 cfs, resulting from coincidental higher tailwater elevations. Therefore, historic flow provided by 4 pumps combined with the 80 cfs minimum instream flow contributed between 260 (minimum) and 280-290 cfs to Reach 4 during a vast majority of previous years spring and fall spawning periods. Based on the historic record, we will be able to meet a minimum flow requirement of 260 cfs at all tailwater elevations, and will be providing considerably more flow during most of the steelhead and Chinook salmon spawning periods, the same as what has been implemented in past years under 4 pump operation. I am hoping to file the amendment letter to FERC in the next week, so would request a concurrence email from you, again, as soon as possible supporting the amendment to include with the letter to FERC.

This has been more involved than thought originally. Thank you, very much, for your patience. Please feel free to contact me if you have any questions.

Jeff

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