

PUBLIC UTILITY DISTRICT NO. 1 of CHELAN COUNTY
P.O. Box 1231, Wenatchee, WA 98807-1231 • 327 N. Wenatchee Ave., Wenatchee, WA 98801
(509) 663-8121 • Toll free 1-888-663-8121 • www.chelanpud.org

March 13, 2017

VIA ELECTRONIC MAILING

Kimberly D. Bose, Secretary
FEDERAL ENERGY REGULATORY COMMISSION
888 First Street, NE
Washington, DC 20426

Re: **Lake Chelan Hydroelectric Project No. 637**
Operations Compliance Monitoring Plan (License Article 405), Threatened and Endangered Species Protection Plan (License Article 408), and License Appendix A, Article 7(b)(1) – Request to Amend Minimum Pumped Spawning Flow Requirement to the Chelan River Habitat Channel

Dear Secretary Bose:

Public Utility District No. 1 of Chelan County (“Chelan PUD”) requests that the Federal Energy Regulatory Commission (the “Commission”) amend the *Operations Compliance Monitoring Plan*, Section 2.1, Table 1¹; the *Threatened and Endangered Species Protection Plan*, Section 2.1, Table 1²; and license Appendix A, Settlement Agreement License Article 7(b)(1) to change the minimum pumped flow. Chelan PUD and the Chelan River Fishery Forum (CRFF)³ have found that a reduced flow improves spawning habitat for Chinook salmon and steelhead. Chelan PUD seeks to amend the Project license to reflect reduced flows. Chelan PUD is filing simultaneously an application to make the same change to the 401 Water Quality Certification for the Project (the “Certification”) with the Washington State Department of Ecology (Attachment B).

Background and Reason for Amendment Request

For several spawning periods from 2013 to 2016, the CRFF recommended a temporary reduction to Chinook salmon and steelhead spawning flows in the Chelan River Habitat Channel by operating four rather than five pumps, which provides a total flow of approximately 280 to 290 cfs to the Habitat Channel. In accordance with CRFF recommendations, Chelan PUD implemented the reduced flow

¹ *Public Utility District No. 1 of Chelan County*, 121 FERC ¶ 62,152 (2007) (Order Modifying and Approving Operations Compliance and Monitoring Plan, Article 405).

² *Public Utility District No. 1 of Chelan County*, 121 FERC ¶ 62,143 (2007) (Order Approving Threatened and Endangered Species Plan Under Article 408).

³ The CRFF is comprised of the federal and state fishery agencies, Tribes, and local governments that are signatories to the Lake Chelan Comprehensive Settlement Agreement (SA) and assist Chelan PUD with implementing terms and conditions of the Lake Chelan Hydroelectric Project license associated with the Chelan River. The CRFF consists of the following entities: Washington Department of Fish and Wildlife, USDA Forest Service, National Park Service, NOAA Fisheries, U.S. Fish and Wildlife Service, Colville Confederated Tribes, Yakama Nation, Washington Department of Ecology, Chelan PUD, and city of Chelan.

regime, after notification to the Commission, during the 2013, 2014, and 2016 Chinook salmon spawning periods (October 15-November 30) and 2014, 2015, and 2016 steelhead spawning periods (March 15-May 15).

Per the 10-year adaptive management plan component of Section II.C. of the Certification, Chelan PUD has been monitoring effects of reduced flow on spawning steelhead and Chinook salmon by assessing redd number, location, extent of spawning, and spawning activity in the Habitat Channel. The CRFF used monitoring results to recommend implementing lower Chelan River spawning flows as part of the adaptive management process in order to provide greater opportunity to meet Biological Objectives contained in the license, Certification, and Settlement Agreement, Attachment B, Chapter 7, Section 5 Implementation Plan.

On November 20, 2016, Chelan PUD staff spoke with Commission staff, T.J. LoVullo, Aquatic Resources Branch Chief, in Washington D.C. regarding future notifications regarding future reductions of minimum flow from 320 cfs to 260 cfs, the equivalent of using four pumps versus five pumps, during steelhead and Chinook salmon spawning periods. Mr. LoVullo advised Chelan PUD to request an amendment to the license to reflect reduced pump flow rather than continuing the practice of providing the Commission with notices of temporary change.

On February 2, 2017, Chelan PUD sent an email to the CRFF requesting their concurrence to amend the license to reflect a minimum of 260 cfs total flow during spring and fall spawning periods. Support from the CRFF for amending license articles is included in Attachment A. Concurrent with this filing; Chelan PUD is filing a request (Attachment B) with Washington Department of Ecology (Ecology) to make an identical amendment to the corresponding minimum flow requirements in Section III.A.i of the Certification.

Specifically, the requested changes to the Chelan River flow requirements table are to provide a minimum pumped flow of 180 cfs, plus the minimum instream flow of 80 cfs, for a minimum total flow of 260 cfs, during the March 15 through May 15 (spring) steelhead and October 15 through November 30 (fall) Chinook salmon spawning periods beginning March 15, 2017 (Table 1).

Requested Amendments

Therefore, pursuant to the recommendation of the Chelan River Fishery Forum, Chelan PUD requests that the Commission amend license Article 405 *Operations Compliance Monitoring Plan*, Section 2.1, Table 1 and license Article 408 *Threatened and Endangered Species Protection Plan*, Section 2.1, Table 1 to reflect 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 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.

In addition, Chelan PUD requests that the Commission amend license Appendix A, Settlement Agreement License Article 7(b)(1) to replace the reference to the minimum flow table in the Chapter 7 of the Settlement Agreement. Specifically, Chelan PUD requests that the Commission revise Article 7(b)(1) to replace “section 2.6.5, table 7-3,” with “Section 2.1, Table 1 of the *Operations Compliance Monitoring Plan*.”⁴

Conclusion

Chelan PUD requests no amendment other than the above-described reduction of minimum flow and updated flow table reference. Chelan PUD will continue monitoring the effects of the reduced flow on spawning steelhead and Chinook salmon by assessing redd number, location, and extent of spawning and spawning activity in the Habitat Channel. Monitoring results will be reported in future Biological Objective Status Reports pursuant to Article 408.

Please contact me (509) 661-4176 regarding any questions or comments.

Sincerely,



Jeffrey G. Osborn
License Compliance Supervisor
jeff.osborn@chelanpud.org

cc: Erich Gaedeke, FERC Portland Regional Office
Breean Zimmerman, Washington Department of Ecology
Chelan River Fishery Forum

Attachment A: Consultation Documentation

Attachment B: Application to Amend 401 Water Quality Certification

⁴ The entire sentence in Article 7(b)(1) with this revision would read: “Chelan PUD shall comply with the minimum flows and ramping rates provisions set forth in Section 2.1, Table 1 of the *Operations Compliance Monitoring Plan* and section 3.2, table 7-6, respectively, of Chapter 7 of the Comprehensive Plan as soon as the structures needed to provide such flows are constructed, which shall occur no later than two years after the effective date of the New License.”

ATTACHMENT A CONSULTATION DOCUMENTATION

The table below identifies CRFF members and participants.

FORUM PARTICIPANTS	AGENCY
Mark Peterschmidt	Washington State Department of Ecology
Jim Pacheco	Washington State Department of Ecology
Breean Zimmerman	Washington State Department of Ecology
Jeffrey Korth	Washington State Department of Fish and Wildlife
Graham Simon	Washington State Department of Fish and Wildlife
Travis Maitland	Washington State Department of Fish and Wildlife
Kari Grover Wier	United States Department of Agriculture Forest Service
Paul Willard	United States Department of Agriculture Forest Service
Emily Johnson	United States Department of Agriculture Forest Service
Ashley Rawhouser	National Park Service
Hugh Anthony	National Park Service
Steve Lewis	United States Fish and Wildlife Service
Justin Yeager	National Marine Fisheries Services
Bill Towey	Confederated Tribes of the Colville Reservation
Bob Rose	Yakama Indian Nation
Carl Merkle	Confederated Tribes of the Umatilla Indian Reservation
Robert Cooney	City of Chelan
Phil Archibald	Senior Scientist/citizen
Keith Truscott	Public Utility District No. 1 of Chelan County
Michelle Smith	Public Utility District No. 1 of Chelan County
Steve Hays	Public Utility District No. 1 of Chelan County
Debby Bitterman	Public Utility District No. 1 of Chelan County
Marcie Steinmetz	Public Utility District No. 1 of Chelan County
Jeff Osborn	Public Utility District No. 1 of Chelan County

The email to the Chelan River Fishery Forum.

From: Osborn, Jeff

Sent: Thursday, February 02, 2017 10:17 AM

To: Ashley Rawhouser; Bill Towey; Bitterman, Deborah; Bob Rose; Breean Zimmerman; Carl Merkle; Clement, Marcie; Emily Johnson; Graham Simon; Hays, Steve; Hugh Anthony; Jeff Korth; Jim Pacheco; Justin Yeager; Kari Grover Wier; Mark Peterschmidt; Mike Cooney; Osborn, Jeff; Paul Willard; Phil Archibald; Smith, Michelle; Steve Lewis; Travis Maitland; Truscott, Keith

Subject: Request for Amending Spawning Flow to the Chelan River Habitat Channel

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

Jeff Osborn
License Compliance Supervisor
Public Utility District No. 1 of Chelan County
327 North Wenatchee Avenue
PO Box 1231
Wenatchee, WA 98807-1231
Phone: 509-661-4176
FAX: 509-661-8108
Email: jeff.osborn@chelanpud.org

From: Pacheco, James (ECY) [mailto:JPAC461@ECY.WA.GOV]

Sent: Thursday, February 02, 2017 1:40 PM

To: Osborn, Jeff; Ashley Rawhouser; Bill Towey; Bitterman, Deborah; Bob Rose; Zimmerman, Breean (ECY); Carl Merkle; Clement, Marcie; Emily Johnson; Simon, Graham A (DFW); Hays, Steve; Hugh Anthony; Korth, Jeff W (DFW); Justin Yeager; Kari Grover Wier; Peterschmidt, Mark F. (ECY); Mike Cooney; Paul Willard; Phil Archibald; Smith, Michelle; Steve Lewis; Maitland, Travis W (DFW); Truscott, Keith

Subject: RE: Request for Amending Spawning Flow to the Chelan River Habitat Channel

The Water Resources program at Ecology supports the flow table detailed below.

Jim

James Pacheco

Natural Resource Scientist (Instream Flows)

Water Resources Program

Washington Department of Ecology

James.Pacheco@ecy.wa.gov

(360) 407-7458

"There is but one straight course, and that is to seek truth and pursue it steadily." --George Washington

-----Original Message-----

From: Simon, Graham A (DFW) [mailto:Graham.Simon@dfw.wa.gov]

Sent: Tuesday, February 07, 2017 4:18 PM

To: Osborn, Jeff; Ashley Rawhouser; Bill Towey; Bitterman, Deborah; Bob Rose; Zimmerman, Breean (ECY); Carl Merkle; Clement, Marcie; Emily Johnson; Hays, Steve; Hugh Anthony; Korth, Jeff W (DFW); Pacheco, James (ECY); Justin Yeager; Kari Grover Wier; Peterschmidt, Mark F. (ECY); Mike Cooney; Paul Willard; Phil Archibald; Smith, Michelle; Steve Lewis; Maitland, Travis W (DFW); Truscott, Keith

Subject: RE: Request for Amending Spawning Flow to the Chelan River Habitat Channel

Jeff,

I've had the opportunity to review the existing documents, this email and spoke internally with the Fish Program about your request. WDFW supports the amendment as proposed below in red.

If you need to discuss please give me a call.

Regards,

Graham Simon
Fish & Wildlife Biologist
WDFW Habitat Program
509.670.0742

From: Lewis, Stephen [mailto:stephen_lewis@fws.gov]

Sent: Monday, February 13, 2017 2:05 PM

To: Osborn, Jeff

Subject: Re: Request for Amending Spawning Flow to the Chelan River Habitat Channel

The USFWS concurs with this action. Thanks for coordinating with us!

S-

From: Kim Lohse [<mailto:kim.l.lohse@gmail.com>]

Sent: Monday, February 13, 2017 3:06 PM

To: Osborn, Jeff

Subject: Re: Request for Amending Spawning Flow to the Chelan River Habitat Channel

Jeff, I have reviewed your discussion and summary table titled Flow Requirements for the Chelan River. I understand that this is a restatement of Chelan River flows in terms of volume of flow rather than number of pumps providing those flows. I support the license amendment as summarized in Table 1.
Philip Archibald, CRFF member.

Sent from my iPad

From: Johnson, Emily K -FS [mailto:ekjohnson@fs.fed.us]
Sent: Thursday, February 16, 2017 10:07 AM
To: Osborn, Jeff
Subject: RE: Request for Amending Spawning Flow to the Chelan River Habitat Channel

Chelan County PUD IT Warning:
Please use caution! This is an external email with links or attachments.

Hi Jeff,

Sorry for responding so late. The Forest Service would support this action as proposed since it continues to meet the minimum flow requirements within Reach 4 with the use of 4 pumps vs. 5 pumps.

Let me know if you need something more.

Thanks,

Emily



Emily Johnson
Zoned Fisheries Biologist

Forest Service
Okanogan-Wenatchee National Forest, Entiat and Chelan Ranger
Districts

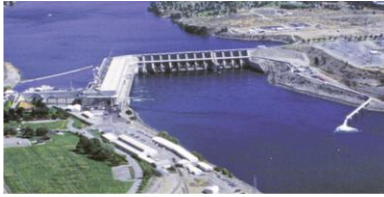
Phone Entiat: 509-784-4620
Fax Entiat: 509-784-9402
2108 Entiat Way
Entiat WA 98822

Phone Chelan: 509-682-4944
Fax Chelan: 509-682-9004
428 W. Woodin Ave.
Chelan, WA 98816

ekjohnson@fs.fed.us

www.fs.fed.us

**ATTACHMENT B
APPLICATION TO AMEND 401 WATER QUALITY
CERTIFICATION**



PUBLIC UTILITY DISTRICT NO. 1 of CHELAN COUNTY

P.O. Box 1231, Wenatchee, WA 98807-1231 • 327 N. Wenatchee Ave., Wenatchee, WA 98801

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March 13, 2017

David Bowen, Regional Manager
Water Quality Program - Central Region Office
Washington State Department of Ecology
15 West Yakima Ave, Suite 200
Yakima, WA 98902-3452

Re: Lake Chelan Hydroelectric Project No. 637
Request for Amendment to the 401 Water Quality Certification to Reduce Pumped Spawning Flows in the Chelan River Habitat Channel

Dear Mr. Bowen:

On behalf of Public Utility District No. 1 of Chelan County (Chelan PUD), I am writing to request an amendment to the Lake Chelan Project, FERC No. 637 (Project) section 401 water quality certification under the Clean Water Act (CWA), 33 U.S.C. §1341, set forth in Department of Ecology Order No. 1233 dated June 1, 2004. Chelan PUD requests amendment of Section III Instream Flows for Fish to allow and provide a minimum total flow of 260 cfs instead of a minimum total flow of 320 cfs, the equivalent of using four pumps versus five pumps, for providing steelhead and Chinook salmon spawning flows beginning March 15, 2017 for Chelan River habitat channel minimum instream flow rates.

Background and Reason for Amendment Request

For several spawning periods from 2013 to 2016, the CRFF has recommended a temporary reduction to Chinook salmon and steelhead spawning flows in the Chelan River Habitat Channel by operating four rather than five pumps, which provides a total flow of approximately 280 to 290 cfs to the Habitat Channel. In accordance with CRFF recommendations, Chelan PUD implemented the reduced flow regime, after notification to the Commission, during the 2013, 2014, and 2016 Chinook salmon spawning periods (October 15-November 30) and 2014, 2015, and 2016 steelhead spawning periods (March 15-May 15).

Per the 10-year adaptive management plan component of the Section II.C. of the Certification, Chelan PUD has been monitoring effects of reduced flow on spawning steelhead and Chinook salmon by assessing redd number, location,

and extent of spawning, and spawning activity in the Habitat Channel. The CRFF used monitoring results to recommend implementing lower Chelan River spawning flows as part of the adaptive management process in order to provide greater opportunity to meet Biological Objectives contained in the Project license, Certification, and Settlement Agreement, Attachment B, Chapter 7, Section 5 Implementation Plan.

On November 20, 2016, Chelan PUD staff spoke with Commission staff, T.J. LoVullo, Aquatic Resources Branch Chief, in Washington D.C. regarding future notifications regarding future reductions of minimum flow from 320 cfs to 260 cfs, the equivalent of using four pumps versus five pumps, during steelhead and Chinook salmon spawning periods. Mr. LoVullo advised Chelan PUD to request an amendment to the license to reflect reduced pump flow rather than continuing the practice of providing the Commission with notices of temporary change.

Specifically, the requested changes to the Chelan River flow requirements table are to provide a minimum pumped flow of 180 cfs, plus the minimum instream flow of 80 cfs, for a minimum total flow of 260 cfs, during the March 15 through May 15 (spring) steelhead and October 15 through November 30 (fall) Chinook salmon spawning periods beginning March 15, 2017 (Table 1).

In 2007, the Commission approved updated footnotes regarding flow measurement in *Operations Compliance Monitoring Plan*¹, Section 2.1 and *Threatened and Endangered Species Protection Plan*², Section 2.1 upon application of Chelan PUD after consultation with the CRFF. The footnotes in the Certification were not updated at that time. The table below includes the updated footnotes. The updated footnotes reflect current operations using ultrasonic flow meter, which is more accurate than calibrated gate reading. Chelan PUD seeks to conform the footnotes that were not updated at that time through this amendment.

Requested Amendment to Section III.A.i

Pursuant to the recommendation of the Chelan River Fishery Forum, Chelan PUD respectfully requests the Washington State Department of Ecology (Ecology) amend the table and associated two footnotes in Section III.A.i of the Certification to reflect the following:

¹ *Public Utility District No. 1 of Chelan County*, 121 FERC ¶ 62,152 (2007) (Order Modifying and Approving Operations Compliance and Monitoring Plan, Article 405).

² *Public Utility District No. 1 of Chelan County*, 121 FERC ¶ 62,143 (2007) (Order Approving Threatened and Endangered Species Plan Under Article 408).

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 + 240 180 pumped (320 260)	320 260 by combination of spill & pumping Incubation flow, as needed	320 260 by combination of spill & pumping Incubation flow, as needed

¹ Flows measured at the dam by ~~calibrated gate rating~~ ultrasonic flow meter.

² Flows measured at the dam ~~or through calibrated pump discharge curves~~ and at the pump station by ultrasonic flow meter.

Consultation and Environmental Review

On February 2, 2017, Chelan PUD sent an email to the CRFF requesting their concurrence to amend the license to reflect a minimum of 260 cfs total flow during spring and fall spawning periods. Support from the CRFF for amending license articles is included in concurrent filing to FERC (Attachment A).

If there are any questions regarding this request, please do not hesitate to contact me at (509) 661-4176.

Sincerely,

Jeffrey G. Osborn
Licensing Compliance Supervisor

cc: Mr. T.J. LoVullo, FERC
Washington State Department of Ecology, Mark Peterschmidt, and Breean Zimmerman
National Marine Fisheries Service, Justin Yeager
U.S. Fish and Wildlife Department, Steve Lewis
Washington State Department of Fish and Wildlife, Graham Simon

Attachment A: Letter dated March 13, 2017, to amend the *Operations Compliance Monitoring Plan*, Section 2.1, Table 1; the *Threatened and Endangered Species Protection Plan*, Section 2.1, Table 1; and license Appendix A, Settlement Agreement License Article 7(b)(1) to change the minimum pumped flow.