



**PUBLIC UTILITY DISTRICT NO. 1 of CHELAN COUNTY**

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April 12, 2012

Mr. Steve Lewis  
U.S. Fish and Wildlife Service  
Central Washington Field Office  
215 Melody Lane, Suite 119  
Wenatchee, Washington 98801

Subject: Rocky Reach Hydroelectric Project, FERC No. 2145  
Bull Trout Monitoring Report - 2011

Dear Mr. Lewis:

On February 19, 2009, the Commission issued a new license for the Rocky Reach Project.<sup>1</sup> In accordance with Ordering Paragraph E, Article 4 of Appendix B, and the Reporting Requirements of Appendix D of the new license, Chelan PUD is required to submit subsequent annual reports (starting 2010) for the Rocky Reach Project to the U.S. Fish & Wildlife Service Central Washington Field Office in Wenatchee, Washington.

In accordance with above requirements, the Public Utility District No. 1 of Chelan County, Washington, respectfully submits the *2011 Annual Report – Observations of Bull Trout during Implementation of AFA/HCP Activities and the Bull Trout Management Plan and FERC License Activities for the Rocky Reach Project*. The report includes the number of bull trout observed, or incidentally taken if any, during implementation of activities specific to the Anadromous Fish Agreement and Habitat Conservation Plan or FERC license activities.

If you have any questions regarding this filing, please contact me at (509) 661-4180.

Sincerely,

Michelle Smith  
Licensing and Compliance Manager

cc: Jessie Gonzales, Jim Craig and R.D. Nelle, USFWS  
Joe Miller, Chelan PUD  
Steve Hemstrom, Chelan PUD

Attachment: 2011 Annual Report

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<sup>1</sup> 126 FERC ¶ 61,138 (2009)

**Observations of Bull Trout  
During Implementation of the  
AFA/HCP and Bull Trout Management Plan  
and  
FERC License Activities  
for the Rocky Reach Project**

**Annual Summary Report on 2011 Bull Trout Observations  
and Incidental Take at the Rocky Reach Project**

**ROCKY REACH HYDROELECTRIC PROJECT  
FERC Project No. 2145**

**Final  
March 28, 2012**



**Public Utility District No. 1 of Chelan County  
Wenatchee, Washington**

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**INTRODUCTION**

Under the current Rocky Reach Federal Energy Regulatory Commission operating license (FERC 2009), Public Utility District No.1 of Chelan County (Chelan PUD) prepares an annual report by April 15 each year specifying the number of bull trout observed or incidentally taken during activities associated with the Rocky Reach Hydroelectric Project (FERC No. 2145) (Project) which include the implementation of the Anadromous Fish Agreements and Anadromous Habitat Conservation Plan (collectively termed AFA/HCP), the Bull Trout Management Plan (BTMP), the Pacific Lamprey Management Plan, the White Sturgeon Management Plan, the Resident Fish Management Plan, and the Water Quality Management Plan. Additionally, Chelan PUD reports the number of bull trout using the adult fishway to pass Rocky Reach Dam each year, as verified by video monitoring. Information in this report satisfies license requirements for bull trout at Rocky Reach Project and the U.S Fish and Wildlife Service (USFWS) incidental take permit issued to Chelan PUD by the USFWS in its Biological Opinion for the Project.

**2011 ROCKY REACH ANADROMOUS HCP AND BTMP ACTIVITIES**

***Bull Trout Management Plan***

This report satisfies Incidental Take monitoring requirements for the Rocky Reach Project for BTMP and license activities conducted by Chelan PUD in 2011. Observations of bull trout in 2011 and any incidental take of fish during license implementation activities are contained in this report.

***Rocky Reach Juvenile Fish Bypass System***

Chelan PUD operated the Juvenile Fish Bypass System (JFBS) and the juvenile bypass sampling facility in 2011 as specified in the juvenile fish bypass biological evaluation study plan (Keller and Keesee 2011). In 2011, nine sub-adult bull trout were captured during daily sampling for juvenile salmon/steelhead at the Rocky Reach JFBS in the period April 1 through August 31 (Table 1). No de-scale or injury was observed on any bull trout and all fish were reported in good condition. None of the bull trout sampled in 2011 at the JFBS contained a PIT tag. All bull trout were released back to the river in good condition at the JFBS outfall pipe.

Table 1. Number of juvenile bull trout with estimated lengths captured during sampling at the Rocky Reach Juvenile Bypass Sampling Facility in 2011.

Month	# Captured	Lengths (mm)	Injuries	Mortalities	PIT Recaps
April	0		0	0	0
May	6	140, 134, 151, 164, 143, 150	0	0	0
June	3	176, 159, 198	0	0	0
July	0		0	0	0
August	0		0	0	0
<b>Total</b>	<b>9</b>		<b>0</b>	<b>0</b>	<b>0</b>

### **Adult Fishway Video Monitoring/Fish Counts**

Chelan PUD performs anadromous and resident fish counting at Rocky Reach Dam from April 14 – November 15 each year. Every adult and juvenile bull trout is counted and video photographed as it passes the counting window just before exiting the fishway into the forebay. In 2011, a total of 168 bull trout utilized the adult fishway at Rocky Reach Dam to pass upstream (Table 2). This number represents an increase of 35% above the bull trout count in 2010, and a 100% increase from the 2009 count (83 fish). Of these fish, 146 were visually estimated to be greater than 305 mm (12 inches) in length and 22 fish were estimated to be less than 305 mm in length. USFWS estimates that bull trout under 305 mm in length are juvenile and sub-adult fish. Markers on a backboard in the fish counting window are used to estimate fish lengths as they pass through the counting chamber (window). Bull trout were videotaped and counted (24-hour complete counts) from April 14 through November 15, 2011 during the normal fishway operation period at the Project. No bull trout mortalities or injuries were observed in the adult fishway at Rocky Reach Dam during fish counting operations or during the 2011-2012 fishway maintenance period.

Table 2. Counts of bull trout passing Rocky Reach Dam via the adult fishway with estimated fish lengths, 2011.

Month	Bull Trout ≤ 305 mm	Bull trout > 305 mm	Total	Mortality
April	0	1	1	0
May	2	24	26	0
June	17	78	95	0
July	0	22	22	0
August	1	10	11	0
September	0	2	2	0
October	0	3	3	
November	2	6	8	0
<b>Total</b>	<b>22</b>	<b>146</b>	<b>168</b>	<b>0</b>

### **2011-12 Rocky Reach Dam Adult Fishway Operation and Maintenance**

Chelan PUD also performs required maintenance work on the Rocky Reach adult fishway during off-season periods, December-February. The ladder is de-watered the first or second week of December. Following maintenance and pump work, the ladder is watered-up and put back in operation by March 1. During the 2011 dewatering process on December 8-10, no bull trout were observed and no fish were collected from the ladder at Rocky Reach (Thad Mosey, Chelan PUD, personal communication, 2011).

### **Dryden and Tumwater Fishway Broodstock and Adult Management**

The Tumwater and Dryden anadromous broodstock traps (Rocky Reach Project facilities) are located in the adult fishways of Tumwater Dam and the Dryden Weir. Fishways at both facilities are open year-around, except during very high river flow events and maintenance periods. The traps are operated by Washington Department of Fish and Wildlife (WDFW) for a portion of the year (February through December) to implement Hatchery Genetic Management Plans (HGMP), collect broodstock for

Chelan PUD HCP hatchery programs, and to conduct WDFW independent research programs funded by Bonneville Power Administration (BPA). WDFW utilized the trap in 2011 to conduct a fourth year of a spring Chinook reproductive study working under contract to BPA. WDFW reportedly has its own incidental take coverage for bull trout in this study. The Yakama Tribe operated the trap from September through November to capture broodstock for their coho program. The USFWS also utilizes the Tumwater fish trap operations to sort adult spring Chinook for their Leavenworth Fish Hatchery Program. In 2011, WDFW incidentally captured 101 bull trout during the Tumwater trapping operations and another 15 were observed passing but not trapped or handled (Nate Dietrich, WDFW fisheries technician, personal communication, 2012) (Table 3). Trapped fish are removed immediately from the trap via dip net and placed in the release container under the floor of the sampling room. This vessel is open to the forebay directly when the slide-gate is opened, allowing water-to-water fish transfer. This release method reduces potential for bull trout to re-contact the trap if fish were re-released into the ladder itself. In this manner, bull trout are not retained or anesthetized, and handled minimally to avoid increased effects. WDFW captured 4 bull trout at the Dryden weir trap in 2011 (Table 4) during the months of July and August (Chad Herring, WDFW fisheries technician, personal communication, 2012). No bull trout were observed by the Yakama Nation from September 1 through November 30 during their coho broodstock collection (Greg Robison, Yakama Nation Fisheries, personal communication 2012). No bull trout were injured or killed during 2011 operations at either the Tumwater or Dryden adult anadromous broodstock traps as reported by WDFW and the Yakama Nation.

Table 3. Number of bull trout trapped by WDFW at the Tumwater fishway broodstock trap during anadromous trapping operations in 2011.

Month	Bull trout trapped and released	Bull trout observed not trapped	Bull trout Mortality
February	0	0	0
March	0	0	0
April	1	0	0
May	1	0	0
June	6	1	0
July	92	10	0
August	0	4	0
September	0	0	0
October	1	0	0
November	0	0	0
December	0	0	0
<b>Total</b>	<b>101</b>	<b>15</b>	<b>0</b>

Table 4. Number of bull trapped by WDFW and the Yakama Nation at the Dryden fishway broodstock trap during anadromous trapping operations in 2011.

Month	Bull trout trapped and released	Bull trout mortalities
July	3	0
August	0	0
September	1	0
October	0	0
November	0	0
<b>Total</b>	<b>4</b>	<b>0</b>

**Predator Control Programs**

Chelan PUD removed 72,521 northern pikeminnow from the Rocky Reach Project using three control programs in 2011 (Table 5). Programs ran from March through October. No fishway trapping occurred for pikeminnow in 2011, and no bull trout were incidentally captured while carrying out the three other pikeminnow control programs in Rocky Reach Reservoir in 2011.

Table 5. Number of Northern pikeminnow harvested and the number of bull trout captured incidentally during pikeminnow predator control programs at the Rocky Reach Project in 2011.

Program	Pikeminnow Removed	Bull trout Incidental Captures	Bull trout Mortalities
USDA Hook & Line	36,401	0	0
Columbia Res Set Lining	32,846	0	0
Rotary Club Derby	3,274	0	0
<b>Total</b>	<b>72,521</b>	<b>0</b>	<b>0</b>

**ROCKY REACH LICENSE ACTIVITIES**

**Water Quality Management Plan**

In 2011, no bull trout were observed, captured, or handled during implementation of the Rocky Reach Water Quality Management Plan (WQM), as required under the 401 Water Quality Certification. Eurasian Milfoil control (mechanical cutting and harvest) took place in July and August at recreation sites and public access points in Rocky Reach Reservoir, but is not a WQM activity. Milfoil control is permitted through a Washington Department of Fish and Wildlife (WDFW) Hydraulic Project Approval (HPA) Permit issued to Chelan PUD. Chelan PUD has submitted a renewal application to WDFW for another 5-year HPA.

### ***Pacific Lamprey Management Plan***

No bull trout were observed, captured or handled during activities associated with implementation of the Rocky Reach Pacific Lamprey Management Plan in 2011. On November 14, 2011, biologists from the USFWS Fisheries Resources Office in Leavenworth, Washington assisted Chelan PUD to identify eight juvenile lamprey sampling locations in Rocky Reach Reservoir. On November 18, USFWS crews and a Chelan PUD biologist conducted electrofishing using a USFWS ABP-2 backpack electrofishing unit to sample shallow water areas at eight different sites to evaluate presence and relative abundance of lamprey ammocoetes. Lampreys were captured at only one site, but no juvenile or adult bull trout were incidentally captured or observed. USFWS personnel carried all necessary permits for this work.

During the Rocky Reach fishway maintenance/pump work period from December 2011 to March 1, 2012, a half-duplex PIT tag detection system was installed and tested in the ladder during the normal outage period in dry conditions. The PIT system was installed at the recommendation of the Rocky Reach Fish Forum in order to conduct future adult lamprey passage studies. This installation does not affect hydraulics or structures within the fishway (approved by NOAA fisheries and USFWS on the Rocky Reach Fish Forum). The installed antennas are expected to have no measurable effect on bull trout passage in the Rocky Reach fishway. No bull trout incidental take was observed during antenna installation as the fishway was in its normal outage period for maintenance.

### ***White Sturgeon Management Plan***

No bull trout were observed, captured, or handled during white sturgeon work associated with implementation of the Rocky Reach White Sturgeon Management Plan in 2011. In April 2011, approximately 6,500 PIT tagged juvenile white sturgeon were released by boat into upper Rocky Reach Reservoir to comply with license requirements in the White Sturgeon Management Plan. A subsample of 40 of these fish was acoustic tagged and monitored for downstream movement from April through June 2011 to determine residency time and movement in Rocky Reach Reservoir. No fish exited the reservoir during monitoring.

### ***Resident Fish Management Plan***

No field work occurred associated with the Resident Fish Management Plan occurred in 2011 and no bull trout were observed, captured, or handled in 2011. WDFW Large Lakes Research Team will begin sampling fish in Rocky Reach Reservoir in June 2012 for the Rocky Reach resident fish study. WDFW possesses all the necessary state collection permits and ESA federal incidental take permits necessary to conduct this work.

### ***Anadromous HCP Juvenile Salmon Survival Studies***

No bull trout were observed, captured, or handled during activities associated with the juvenile yearling Chinook salmon survival study at Rocky Reach in 2011. A yearling Chinook Project survival study took place from April 27 through June 9, 2011. HCP combined adult and juvenile survival standards were achieved for Spring Chinook in 2011 at Rocky Reach and no springtime survival studies will occur again until 2021.



**CONCLUSIONS**

In 2011, no mortality or incidental take of bull trout was observed during activities associated with Rocky Reach AFA/HCP, the Bull Trout Management Plan, or other License activities specified for reporting in Ordering Paragraph G, Appendix D of the Rocky Reach FERC License (Table 6.)

Table 6. Summary of Incidental Take for the Rock Reach AFA/HCP, Management Plans, and License activities for bull trout during 2011 implementation work.

<b>RR License Activity</b>	<b># Bull trout observed</b>	<b># Bull trout handled</b>	<b>Mortalities</b>
Bull Trout Management Plan	0	0	0
Rocky Reach Fish Bypass System	9	9	0
Rocky Reach Adult Fish Counting	168	0	0
Rocky Reach Fishways Operation/Maintenance	0	0	0
Tumwater and Dryden Broodstock Trapping	15	101	0
Predator Control Programs	0	0	0
Water Quality Management Plan	0	0	0
Pacific Lamprey Management Plan	0	0	0
White Sturgeon Management Plan	0	0	0
Resident Fish Management Plan	0	0	0

## **Literature Cited**

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Federal Energy Regulatory Commission. 2009. Order on offer of settlement and issuing new Rocky Reach license.

Herring, Chad. Washington Department of Fish and Wildlife. 2012. Personal communication and email containing the number of bull trout incidentally captured during broodstock trapping operations at the Dryden weir fishway.

Keller L. and B. G. Keese. 2011. Study Plan for the Biological Evaluation of Rocky Reach Juvenile Fish Bypass System, 2011. Public Utility District No. 1 of Chelan County. Wenatchee, WA. January 2011.

Mosey, Thad. Public Utility District No. 1 of Chelan County. 2012. Personal communication and email with the number of bull trout encountered in the Rocky Reach adult fishway in 2011 during ladder de-water, and condition of fish when re-released.

Robison, G. Yakama Nation Fisheries. 2012. Personal communication of bull trout observations during Coho broodstock trapping at Tumwater and Dryden fishway broodstock trap in 2011.