

REPORT SUPPORTING ENDORSEMENT AS A LOW-IMPACT HYDROELECTRIC POWER FACILITY

BUFFALO RIVER HYDROELECTRIC PROJECT (FERC No. 1413)



Prepared for:

**Fall River Rural Electric Cooperative, Inc
Ashton, Idaho**

Prepared by:

Kleinschmidt

Pittsfield, Maine
www.KleinschmidtGroup.com

November 2016

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FALL RIVER RURAL ELECTRIC COOPERATIVE, INC

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October 24, 2016

Low Impact Hydropower Institute
PO Box 194
Harrington Park, New Jersey 07640

RE: LIHI Application for Certification
Buffalo Hydroelectric Project
FERC No. P-1413

To Whom It May Concern:

As part of our application for Low Impact Hydropower Institute (LIHI) certification, I hereby attest the following:

The material presented in the application is true and complete. I acknowledge the Institute may suspend or revoke the certification should the impacts of the project cause non-compliance with the certification criteria.

I understand the primary goal of LIHI's certification program is public benefit. The Governing Board and its agents are not responsible for financial or other private consequences of its certification decisions. The undersigned Applicant agrees to hold LIHI, the Governing Board, and its agents harmless for any decision rendered on this or other applications or on any other action pursuant to the Low Impact Hydropower Institute's certification program.

Thank you, and please contact me at mark.chandler@fallriverelectric.com or at 208-652-7431 with any questions.

Sincerely,



Mark Chandler
Hydro Supervisor

mc/rh

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FALL RIVER RURAL ELECTRIC COOPERATIVE, INC

1.0 INTRODUCTION

The Buffalo River Hydroelectric Project is owned and operated by the Fall River Rural Electric Cooperative, Inc (FRREC). This report is submitted as documentation that the Buffalo River Hydroelectric Project (FERC No. 1413) qualifies as a Low-impact Hydroelectric Power Facility with the Low Impact Hydropower Institute (LIHI). This report is organized to correspond to the April 2014 LIHI Certification Questionnaire. Attached to this application you will additionally find Exhibit A containing a Project Contact Information Form for the Buffalo River Project.

1.1 BACKGROUND INFORMATION

1. The name of the facility is the Buffalo River Hydroelectric Project (FERC No. 1413).
2. The Project owner and applicant's name is:
Fall River Rural Electric Cooperative, Inc.
Mark Chandler, Hydro Supervisor
1150 North 3400 East
Ashton, Idaho 83420
(208) 652-7051
Mark.Chandler@FallRiverElectric.com
3. The Buffalo River Project is located on the Buffalo River at river mile (RM) 1, approximately 200 meters upstream of the Buffalo River's confluence with the Henry's Fork River, and approximately 39 miles north of Ashton, in Fremont County, Idaho. The Project is located within the Targhee National Forest where the reservoir surface area covers less than 5 acres and has a drainage area of 36.7 square miles. The Buffalo River Project is the only dam located on the Buffalo River and the approximate location of the Project is Latitude: 44°24'52.48"N and Longitude: 111°23'33.58"W (Photo 1-1; Figure 1-1).



PHOTO 1-1 BUFFALO RIVER HYDROELECTRIC PROJECT

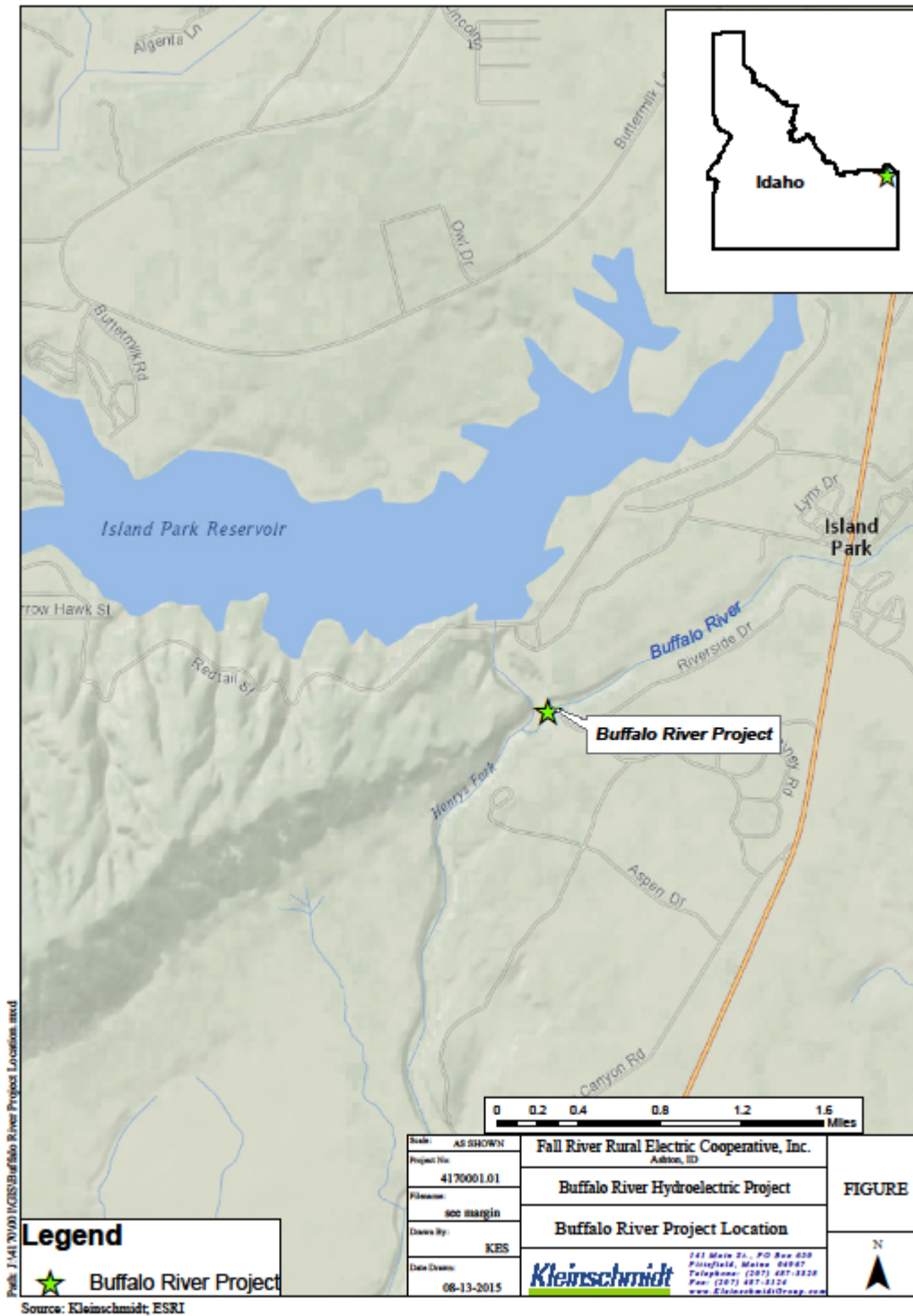


FIGURE 1-1 BUFFALO RIVER HYDROELECTRIC PROJECT LOCATION

4. The Project was reconstructed in 1994 after it was destroyed by a fire in the 1970s and currently has an installed capacity of 250 kW.
5. The Project's average annual generation for 2013-2014 was 1,647,360 kWh.
6. The Buffalo River Hydroelectric Project (FERC No. 1413) is operated under a license issued by the Federal Energy Regulatory Commission (FERC) on November 5, 2004 (Appendix A). Article 402 of the 2004 FERC license was additionally amended August 10, 2005 (Appendix A) to better define the facility's run-of-river operation. The current FERC license is issued for a period of 40 years and will expire October 31, 2044. The Project also operates under a U.S. Forest Service (USFS) Special Use Permit (Appendix A). The Project receives a yearly review for compliance with the U.S. Forest Service Special Use Permit. The 2014 & 2015 review and approval of Project compliance with the Special Use Permit is included in Appendix A. The Project has not experienced any out of compliance or licensing issues since its most recent relicensing.
7. When operating at normal maximum operating level, the Project reservoir has a surface area of approximately 1.9 acres. The Project operates as a run-of-river facility and has very negligible storage volume/ capacity.
8. The Project's primary features include the dam, spillway, intake structure, penstock, powerhouse, and fishway. The project boundary occupied by primary project features, not including the reservoir, is 0.1 acre of United States land within the Targhee National Forest. The dam is a 142-foot-long by 12-foot-high timber-faced rock-filled diversion dam with a 40-foot-long by 3-foot-high concrete slab spillway with stop logs. The concrete intake structure contains a 5-foot steel slide gate. The penstock is 52-foot-long by 5-foot-diameter concrete encased steel pipe. The masonry block powerhouse is 34-foot-long by 22-foot-high. The fishway is 270-feet-long with a 45 degree angle.
9. At full elevation, the reservoir has a surface area of approximately 4.6 acres.
10. There are approximately 9 acres included in a 200-foot zone extending around the entire Buffalo River Reservoir. These lands are federally owned.
11. Please find attached in Appendix B, a list of contacts for the relevant resource agencies and non-governmental organizations that have been involved in proceedings involving the operations of the Facility either during the licensing process or thereafter.
12. Please find attached in Appendix C, a description of the Project, its mode of operation, and photographs, plans, maps, and diagrams of the Project.

1.2 QUESTIONS FOR "NEW" FACILITIES ONLY

13. N/A
14. N/A
15. N/A
16. N/A
17. N/A
18. N/A

2.0 FLOWS

- 1) *Is the Facility in Compliance with Resource Agency Recommendations issued after December 31, 1986 regarding flow conditions for fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations) for both the reach below the tailrace and all bypassed reaches?*

Yes. Amended Article 402 of the FERC license requires the Project to operate in a run-of-river mode for the protection of aquatic resources in the Buffalo River and Henry's Fork River. The Licensee at all times acts to minimize the fluctuation of the reservoir surface elevation by maintaining a discharge from the Project so that flows as measured immediately downstream from the Project dam and tailrace, when combined, approximate the sum of inflows to the reservoir. Typical stream flow at the Project varies between 175 and 250 cfs except during snowmelt when flows can exceed 400 cfs. This run-of-river facility diverts a constant 100 cfs for power generation while the remaining flow (between 45-65%) stays in the natural stream course via a fish ladder and spillway.

During the Project licensing Idaho Department of Fish and Game (IDFG) recommended that if future changes occur to the hydrology of the Buffalo River, then FRREC should provide a minimum flow of at least 50 cfs to the bypassed reach. FERC concluded, though, that including a requirement for a minimum flow based on an uncertain future event was premature. However, this license includes Standard Article 11, which is the Commission's reservation of authority to reopen the license to modify project structures and operations for the conservation and development of fish and wildlife resources in response to future events. In an email dated July 6, 2016 (Appendix D), the IDEQ states that it concurs with the IDFG recommendation and supports the continued current operations of the facility.

Project operational compliance is ensured with the Operational Compliance Monitoring Plan developed in partnership with resource agencies, as required by license Article 403. A copy of the Project's 2006 Operational Compliance Monitoring Plan, the 2007 FERC Order Modifying and Approving Operational Compliance Monitoring Plan, the 2010 Environmental Inspection Report, and USFS letters confirming project compliance with the terms and conditions of the Special Use Permit are included in Appendix D. Additionally a July 6, 2016 email from IDEQ

confirming Project flow recommendations are the most recent agency recommendations, and confirming the Project's compliance with Article 402 is included within Appendix D.

- 2) *If there is no flow condition recommended by any Resource Agency for the Facility, or if the recommendation was issued prior to January 1, 1987, is the Facility in Compliance with a flow release schedule, both below the tailrace and in all bypassed reaches, that at a minimum meets Aquatic Base Flow standards or "good" habitat flow standards calculated using the Montana-Tennant method?*

N/A

- 3) *If the Facility is unable to meet the flow standards in A.2., has the Applicant demonstrated, and obtained a letter from the relevant Resource Agency confirming that demonstration, that the flow conditions at the Facility are appropriately protective of fish, wildlife, and water quality?*

N/A

3.0 WATER QUALITY

1) *Is the Facility either:*

a) *In Compliance with all conditions issued pursuant to a Clean Water Act Section 401 water quality certification issued for the Facility after December 31, 1986? Or*

b) *In Compliance with the quantitative water quality standards established by the state that support designated uses pursuant to the federal Clean Water Act in the Facility area and in the downstream reach?*

a) **N/A**

b) **Yes**, FRREC applied for a state water quality certificate pursuant to Section 401 of the Clean Water Act for the Buffalo River Project on November 26, 2002. On November 28, 2003 the Idaho Department of Environmental Quality (IDEQ) issued a water quality certificate with no conditions for the Project, however, because the IDEQ failed to act within one year of Fall River's request for certification, FERC considers the certification to be deemed waived. Within the Certificate, the IDEQ certifies, pursuant to Section 401 of the Clean Water Act, that there is reasonable assurance that the Project complies with applicable requirements of Section 301, 302, 303, 306, and 307 of the Federal Clean Water Act, 33 U.S.C. § 1251 et seq., as amended and Idaho Water Quality Standards.

The IDEQ classifies the Buffalo River as a Category 3, "Unassessed Water" (IDEQ 2014). Idaho Category 3 Waters are defined as those waters with insufficient data and information to determine if beneficial uses are being attained. Operating as a run-of-river facility, there is reasonable assurance to believe the Buffalo River Hydroelectric Project facility is operating in compliance with quantitative water quality standards established by Idaho. In an email dated July 6, 2016 (Appendix D), the IDEQ stated that it cannot confirm compliance with numeric standards due to the lack of data; however, IDEQ is confident that Project is not adding common pollutants such as sediment solar load (temperature) by the current operations.

Please see Appendix E for a copy of the 2003 IDEQ water quality certification, and a list of links to applicable websites depicting Idaho water quality ratings/standards.

- 2) *Is the Facility area or the downstream reach currently identified by the state as not meeting water quality standards (including narrative and numeric criteria and designated uses) pursuant to Section 303(d) of the Clean Water Act?*

No. There are no waters within or downstream of the Buffalo River Hydroelectric Project that are classified as impaired under Section 303 (d) of the Clean Water Act. Under *Idaho's 2012 Integrated Report* (<https://www.deq.idaho.gov/media/1117323/integrated-report-2012-final-entire.pdf>), the Buffalo River was not assessed for impairment (IDEQ 2014). Please see Appendix E to view the U.S. EPA's 2012 Water Body Report generated for the Buffalo River and a list of links to applicable websites depicting water quality ratings/standards.

- 3) *If the answer to question B.2 is yes, has there been a determination that the Facility does not cause, or contribute to, the violation?*

N/A

4.0 FISH PASSAGE AND PROTECTION

- 1) *Are anadromous and/or catadromous fish present in the Facility area or are they known to have been present historically?*

No.

- 2) *Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and downstream passage of anadromous and catadromous fish issued by Resource Agencies after December 31, 1986?*

N/A

- 3) *Are there historic records of anadromous and/or catadromous fish movement through the Facility area, but anadromous and/or catadromous fish do not presently move through the Facility area (e.g., because passage is blocked at a downstream dam or the fish no longer have a migratory run)?*

N/A

- a) *If the fish are extinct or extirpated from the Facility area or downstream reach, has the Applicant demonstrated that the extinction or extirpation was not due in whole or part to the Facility?*

N/A

- b) *If a Resource Agency Recommended adoption of upstream and/or downstream fish passage measures at a specific future date, or when a triggering event occurs (such as completion of passage through a downstream obstruction or the completion of a specified process), has the Facility owner/operator made a legally enforceable commitment to provide such passage?*

N/A

- 4) *If, since December 31, 1986:*

- a) *Resource Agencies have had the opportunity to issue, and considered issuing, a Mandatory Fish Passage Prescription for upstream and/or downstream passage of anadromous or catadromous fish (including delayed installation as described in C.3.a above), and*

N/A

- b) *The Resource Agencies declined to issue a Mandatory Fish Passage Prescription,*

N/A

- c) *Was a reason for the Resource Agencies' declining to issue a Mandatory Fish Passage Prescription one of the following: (1) the technological infeasibility of passage, (2) the absence of habitat upstream of the Facility due at least in part to inundation by the Facility impoundment, or (3) the anadromous or catadromous fish are no longer present in the Facility area and/or downstream reach due in whole or part to the presence of the Facility?*

N/A

- 5) *If C4 was not applicable:*

- a) *Are upstream and downstream fish passage survival rates for anadromous and catadromous fish at the dam each documented at greater than 95% over 80% of the run using a generally accepted monitoring methodology? Or*
- b) *If the Facility is unable to meet the fish passage standards in 5.a, has the Applicant either i) demonstrated, and obtained a letter from the U.S. Fish and Wildlife Service or National Marine Fisheries Service confirming that demonstration, that the upstream and downstream fish passage measures (if any) at the Facility are appropriately protective of the fishery resource, or ii) committed to the provision of fish passage measures in the future and obtained a letter from the U.S. Fish and Wildlife Service or the National Marine Fisheries Service indicating that passage measures are not currently warranted?*

N/A

- 6) *Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and/or downstream passage of Riverine fish?*

No mandatory fish passage prescriptions were recommended to the Buffalo River Project, however, recommendations from the U.S. Fish and Wildlife Service (USFWS) and Idaho Fish and Game (IDFG) were taken into account and adopted into the FERC license as Article 405, *Continuous Operation of Upstream Fishway*, Article 407, *Fishway Effectiveness Monitoring and Evaluation Plan*, and Article 408, *Fishway Construction Restrictions*.

The Licensee has completed a FERC approved 270-foot fishway to provide upstream passage for all life history stages of rainbow trout (at least 100 mm total length). The fishway is monitored under the FERC approved Fishway and Fish Screen Monitoring Plan. Please see Appendix F to view the 2005 FERC approval of Fishway and Fish Screen Monitoring Plan, 2006 FERC approval of as built fishway and fish screen drawings, 2012 Fishway and Fish Screen Monitoring Plan Report, FERC Letter Approving the 2012 Fishway and Fish Screen Monitoring Report, the 2016 Buffalo River Fish Ladder 2006-2016 Comprehensive Report, and IDFG comments on Project compliance with FERC License articles.

7) *Is the Facility in Compliance with Resource Agency Recommendations for Riverine, anadromous and catadromous fish entrainment protection, such as tailrace barriers?*

Yes, The Licensee is in compliance with license Article 407, *Fishway Effectiveness Monitoring and Evaluation Plan* recommended by USFWS and IDFG and the U.S. Forest Service Condition No. 14, *Fish Screen for Diversion Structure*.

The Licensee has completed the recommended Project intake and fish screen requirements. The Project fish screen is located on the intake structure of the penstock to prevent entrainment of salmonid fingerlings into the conduit and penstock systems. Screen designs meet license requirements as screen openings are no more than 0.25 inches and approach velocities do not exceed 0.80 feet per second. The Licensee provides frequent removal of debris and trash from the installed screen to maintain proper approach velocities. The Licensee additionally filed within 6 months of license issuance design drawings and construction/operation scheduling. Please see Appendix F to view 2005 FERC fish screen design and schedule approval, 2006 FERC approval of as built fishway and fish screen drawings.

As required under the license, the intake and fish screen are monitored under the FERC approved Fishway and Fish Screen Monitoring Plan. Please see Appendix F to view the 2005 FERC approval of Fishway and Fish Screen Monitoring Plan, 2012 Fishway and Fish Screen Monitoring Plan Report, FERC Letter Approving the 2012 Fishway and Fish Screen Monitoring Report. Appendix F additionally includes a May 12, 2016 email from the USFS and a September 16, 2015 response from IDFG confirming Project compliance with fish protection conditions. Emails documenting efforts to gain review and feedback from the USFWS are included in Appendix F.

5.0 WATERSHED PROTECTION

- 1) *Is there a buffer zone dedicated for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low-impact recreation) extending 200 feet from the average annual high water line for at least 50% of the shoreline, including all of the undeveloped shoreline?*

N/A

- 2) *Has the Facility owner/operator established an approved watershed enhancement fund that: 1) could achieve within the project's watershed the ecological and recreational equivalent of land protection in D.1, and 2) has the agreement of appropriate stakeholders and state and federal resource agencies?*

N/A

- 3) *Has the Facility owner/operator established through a settlement agreement with appropriate stakeholders, with state and federal resource agencies agreement, an appropriate shoreland buffer or equivalent watershed land protection plan for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low impact recreation)?*

N/A

- 4) *Is the facility in compliance with both state and federal resource agencies recommendations in a license approved shoreland management plan regarding protection, mitigation or enhancement of shorelands surrounding the project?*

N/A. Although there is no prescribed shoreland management plan for this Project, the Licensee is in compliance with the related U.S. Forest Service Condition No. 17, *Vegetation Management Plan*. The Vegetation Management Plan is prescribed to prevent the movement of invasive weeds into the project area during construction activities, prevent the spread of weeds within disturbed areas, and re-establish native plant species in potentially disturbed areas to control soil erosion. The Project has developed a FERC approved Vegetation Management Plan. Please see Appendix G to view the 2005 Vegetation Management Plan and 2005 FERC Approval of Vegetation Monitoring Plan.

6.0 THREATENED AND ENDANGERED SPECIES PROTECTION

- 1) *Are threatened or endangered species listed under state or federal Endangered Species Acts present in the Facility area and/or downstream reach?*

Yes, there is potential for listed species to occur within the Project area and/or downstream reach. Below is a list of federal and state-listed endangered and threatened species that may be found within Fermont County, ID. This list of species and their corresponding federal and state classifications are derived from the September 22, 2016 USFWS IPAC Project Planning Report (Appendix H), the Sept 22, 2016 USFWS Species by County Report (Appendix H) and from a July 7, 2016 email from IDFG (Appendix H).

Grizzly Bear is listed as a federal and state threatened species. Grizzly activity is documented in northern and western Canada and down to upper Washington and Idaho. Bear presence is possible in the Project area but is not considered frequent.

Canada Lynx is listed as a federal and state threatened species. Lynx live in mixed structural class forests and prefer downed logs and windfalls for denning sites and protection. The presence of Canada Lynx in the Project area is speculative.

Ute Ladie's Tresses orchid is listed as a federal and state threatened species. The orchid is often found in alluvial areas near springs, lakes, or perennial streams. The species has a recorded presence adjacent to the Henry's Fork River- over 25 miles from the Project area (letter from Deb Mignogno, Supervisor, Eastern Idaho Sub-Office, U.S. Fish and Wildlife Service, Chubbuck, Idaho, December 9, 2002). Ute Ladie's Tresses has not been encountered in the Project vicinity.

Please additionally see the 2004 FERC Environmental Assessment for Hydropower License (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=4217760), and Appendix H for the 2005 Biological Evaluation/Assessment for Threatened, Endangered, and Sensitive Species, and 2005 FERC Approval of Biological Evaluation/Assessment for Threatened, Endangered, and Sensitive Species and Assessment.

- 2) *If a recovery plan has been adopted for the threatened or endangered species pursuant to Section 4(f) of the Endangered Species Act or similar state provision, is the Facility in Compliance with all recommendations in the plan relevant to the Facility?*

Yes, a Grizzly Bear Recovery Plan was originally approved in 1982 and was updated in 1993

(http://www.nps.gov/noca/upload/Grizzly_bear_recovery_plan.pdf). A Draft Revised

Supplement was approved in 2013 ([http://www.fws.gov/mountain-](http://www.fws.gov/mountain-prairie/species/mammals/grizzly/Grizzly_Bear_Recovery_Plan_March2013.pdf)

[prairie/species/mammals/grizzly/Grizzly_Bear_Recovery_Plan_March2013.pdf](http://www.fws.gov/mountain-prairie/species/mammals/grizzly/Grizzly_Bear_Recovery_Plan_March2013.pdf)). Operating as a

run-of-river facility, the Project operates in compliance with recommendations and goals included within the Plan.

An interim strategy document was developed for the Canada Lynx

([http://www.fws.gov/mountain-](http://www.fws.gov/mountain-prairie/species/mammals/lynx/final%20lynx%20recoveryoutline9-05.pdf)

[prairie/species/mammals/lynx/final%20lynx%20recoveryoutline9-05.pdf](http://www.fws.gov/mountain-prairie/species/mammals/lynx/final%20lynx%20recoveryoutline9-05.pdf)) but a complete

recovery plan has not been developed for the species. It is anticipated that the USFWS will

complete a recovery plan for the Canada Lynx in early 2018 (ISEC 2015). The Buffalo River

Project currently operated in compliance with recommendations currently made for the Canada

Lynx.

A draft recovery plan for the Ute Ladie's Tesses was developed in 1995 but was never finalized

(https://ecos.fws.gov/docs/recovery_plan/950921.pdf).

- 3) *If the Facility has received authorization to incidentally Take a listed species through: (i) Having a relevant agency complete consultation pursuant to ESA Section 7 resulting in a biological opinion, a habitat recovery plan, and/or (if needed) an incidental Take statement; (ii) Obtaining an incidental Take permit pursuant to ESA Section 10; or (iii) For species listed by a state and not by the federal government, obtaining authorization pursuant to similar state procedures; is the Facility in Compliance with conditions pursuant to that authorization?*

N/A

- 4) *If a biological opinion applicable to the Facility for the threatened or endangered species has been issued, can the Applicant demonstrate that:*
- a) *The biological opinion was accompanied by a FERC license or exemption or a habitat conservation plan? Or*
- b) *The biological opinion was issued pursuant to or consistent with a recovery plan for the endangered or threatened species? Or*

- c) *There is no recovery plan for the threatened or endangered species under active development by the relevant Resource Agency? Or*
- d) *The recovery plan under active development will have no material effect on the Facility's operations?*

N/A

- 5) *If E.2 and E.3 are not applicable, has the Applicant demonstrated that the Facility and Facility operations do not negatively affect listed species?*

Yes, the 2004 FERC Environmental Assessment for Hydropower License and 2005 Biological Evaluation/Assessment for Threatened, Endangered, and Sensitive Species demonstrate that the Project and Project operations do not negatively affect listed species. During normal operations, the Buffalo River Project has very minimal, if no impact on listed species subject to utilize the area:

Grizzly Bear: Due to the infrequency of Grizzly Bears in the Project area, operation of this Project is not expected to affect bear activity.

Canada Lynx: The presence of Canada Lynx in the Project area is speculative. There are no anticipated effects of Project operation on the lynx population.

Ute Ladie's Tresses: The Buffalo River Project area was surveyed for the presence Ute Ladie's Tresses in 2005. Ute Ladie's Tresses were not encountered in the Project area and no effects of Project operation are expected to occur.

Please see the 2004 FERC Environmental Assessment confirming the Project does not negatively affect listed species (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=4217760).

Please also see Appendix H which includes two separate email reviews provided by IDFG, on September 16, 2015 and July 7, 2016, stating that the Project does not negatively affect any state or listed threatened and endangered species. Emails documenting efforts to gain review and feedback from the USFWS are included in Appendix H.

7.0 CULTURAL RESOURCE PROTECTION

- 1) *If FERC-regulated, is the Facility in Compliance with all requirements regarding Cultural Resource protection, mitigation or enhancement included in the FERC license or exemption?*

Yes. The Project is in compliance with U.S. Forest Service Condition No. 12, *Heritage Resource Protection*, regarding cultural resource protection, mitigation or enhancement. As required, the Licensee developed a 2005 Heritage Resource Protection Plan that outlines procedures for the Licensee in relation to cultural resources. It ensures that the Licensee will: stop all work in an affected area if a culturally sensitive item is found, call/notify the USFS and the Commission of the item, and wait for written approval from the USFS before continuing work in the affected area. Please see Appendix I to view the 2005 Heritage Resource Protection Plan, 2005 FERC Approval of the Heritage Resource Protection Plan, as well as a May 12, 2016 email from USFS confirming condition compliance.

- 2) *If not FERC-regulated, does the Facility owner/operator have in place (and is in Compliance with) a plan for the protection, mitigation or enhancement of impacts to Cultural Resources approved by the relevant state or federal agency or Native American Tribe, or a letter from a senior officer of the relevant agency or Tribe that no plan is needed because Cultural Resources are not negatively affected by the Facility?*

N/A

8.0 RECREATION

- 1) *If FERC-regulated, is the Facility in Compliance with the recreational access, accommodation (including recreational flow releases) and facilities conditions in its FERC license or exemption?*

Yes. The Project is in compliance with U.S. Forest Service Condition No. 10, *Recreation Plan*. This condition holds the Licensee responsible for construction and operation of recreation facilities and sites on National Forest System lands, accommodations for the Americans with Disabilities Act in the existing parking area and turn around, and planning for future development or rehabilitation of recreation facilities or sites. The Licensee is responsible for providing recreational access sites within the Project vicinity while the USFS is responsible for maintaining the recreation sites.

In 2005-2006 the Licensee, in accordance with its FERC approved Recreation Management Plan, upgraded the public parking area and turnaround area and improved the short trail connecting the parking/turnaround area to Box Canyon Trailhead. The Licensee additionally installed an interpretative Project description sign, a trail to the interpretative sign, and a 4-foot by 6-foot sign board for the Box Canyon Trailhead.

Please see Appendix J to view a map of Project recreation sites, the 2005 Recreation Management Plan, 2006 FERC Approval of Recreation Management Plan, as-built plan drawing, 2007 FERC letter approving as-built drawings, 2010 Environmental Inspection Report, as well as a May 12, 2016 email from USFS confirming condition compliance.

- 2) *If not FERC-regulated, does the Facility provide recreational access, accommodation (including recreational flow releases) and facilities, as Recommended by Resource Agencies or other agencies responsible for recreation?*

N/A

- 3) *Does the Facility allow access to the reservoir and downstream reaches without fees or charges?*

Yes. The Licensee provides free public access to the reservoir and downstream reaches through a public parking facility and connecting trail leading to the dam spillway area (see answer to question number 1 above as well as the 2005 Recreation Management Plan in Appendix J).

Recreational use is considered an essential element to the Buffalo River Project by the USFS. Free access is also provided with a railroad right of way trail that crosses the river, through access from Highway 20 with approaches to the south and north sides of the river, a universally accessible fishing dock, two cross country ski trails, as well as the southern access road (Riverside Drive) which provides a parking area and turnaround.

Please refer to Appendix J to view the 2005 Recreational Management Plan for additional access area descriptions.

9.0 FACILITIES RECOMMENDED FOR REMOVAL

1) *Is there a Resource Agency Recommendation for removal of the dam associated with the Facility?*

No. The Project is operating under a 2004 FERC license and has not been recommended for removal.

10.0 REFERENCES

- Endangered Species Information Network (EISN). 2007. Idaho. Pacific Biodiversity Institute. Available online at: <http://www.pacificbio.org/initiatives/ESIN/index.html> [Accessed August 6, 2015].
- Henry's Fork Foundation. 2014. About Wild Trout. Available online at: <http://henrysfork.org/about-wild-trout> [Accessed August 13, 2015].
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APPENDIX A

**2004 PROJECT LICENSE, 2005 LICENSE AMENDMENT, U.S. FOREST SERVICE
SPECIAL USE PERMIT**

UNITED STATES OF AMERICA 109 FERC ¶62,077
FEDERAL ENERGY REGULATORY COMMISSION

Fall River Rural Electric Cooperative, Inc.

Project No. 1413-032

ORDER ISSUING SUBSEQUENT LICENSE
Minor Project

(Issued: November 5, 2004)

INTRODUCTION

1. Pursuant to Part I of the Federal Power Act (FPA),¹ the Fall River Rural Electric Cooperative, Inc. (Fall River), filed an application on October 30, 2002, for a subsequent minor license to continue to operate the existing 250-kilowatt (kW) Buffalo River Hydroelectric Project (project).² The run-of-river project is located on the Buffalo River near its confluence with the Henry's Fork River, north of Ashton, in Fremont County, Idaho. The project occupies about 9.8 acres of land within the Targhee National Forest, administered by the U.S. Forest Service (Forest Service).³ For the reasons stated below, I am issuing a subsequent license for the project.

BACKGROUND

2. The Commission issued the existing license for the project on March 14, 1980. That license expires on October 31, 2004.

3. On January 16, 2003, the Commission issued a public notice accepting the application for filing and soliciting interventions and protests. Timely motions to intervene were filed by the State of Idaho, on behalf of: (1) Idaho Department of Fish and Game (IDFG); (2) Idaho Department of Parks and Recreation (IDPR); (3) Idaho Department of Environmental Quality (IDEQ); (4) Idaho Water Resources Board; and (5) the Idaho State Board of Land Commissioners. Also, timely motions to intervene were

¹ 16 U.S.C. §§ 791a - 825r.

² As requested by Fall River, we are changing the name of this project from Ponds Lodge No. 1413 to Buffalo River Hydroelectric Project No. 1413.

³ FPA section 23(d)(1), 16 U.S.C. 817 (1), requires the project to be licensed because of its location on federal lands.

filed by the Forest Service, the Henry's Fork Foundation, and Idaho Rivers United. No party opposes licensing this project.

4. On November 18, 2003, the Commission issued a public notice, indicating that the license application was ready for environmental analysis (REA) and soliciting comments, recommendations, terms and conditions and prescriptions. Comments were received in response to the REA notice from the U.S. Department of the Interior, State of Idaho Agencies, and Idaho Rivers United. All of their comments were addressed in the environmental assessment that was issued on July 2, 2004.

5. The motions to intervene and comments filed by the agencies and Fall River have been fully considered and addressed in this order in determining whether, and under what conditions, to issue this license.

PROJECT DESCRIPTION

6. The existing project consists of: (1) a 142-foot-long by 12-foot-high timber-faced rock-filled diversion dam; (2) a 40-foot-long by 3-foot-high concrete slab spillway with stop logs; (3) a fish passage structure; (4) a concrete intake structure with a 5-foot steel slide gate; (5) a trash rack; (6) a 52-foot-long by 5-foot-diameter concrete encased steel penstock; (7) a 34-foot-long by 22-foot-high masonry block powerhouse containing a 250-kilowatt Bouvier Kaplan inclined shaft turbine; (8) a 1,800-foot-long underground transmission line; and (9) other appurtenant facilities.

7. Fall River proposes to modify the project by sealing the upstream face of the dam, constructing a new concrete intake structure, installing a fish screen, and constructing a fishway. The Buffalo River's typical stream flow at the project varies between 175 to 250 cubic feet per second (cfs) except during spring snowmelt when flows can exceed 400 cfs. The run-of-river project diverts a constant 100 cfs for power generation with the remaining flow staying in the natural stream course via a fish ladder release and a surface outlet spillway.

APPLICANT'S PLANS AND CAPABILITIES

8. Fall River owns and operates the project, which is classified in accordance with Commission standards as having a low hazard potential rating. It is subject to Part 12 of the Commission's regulations concerning project safety.

9. Staff reviewed Fall River's record of management, operation, and maintenance of the project and concludes that the dam and other project works are safe, and that Fall River has the ability to manage, operate, and maintain the project safely for future

operation. Based on the results of this review, I conclude that the project would pose no threat to public safety if operated according to the regulations governing hydroelectric licenses.

NEED FOR POWER

10. The project, with a rated capacity of 250 kW, historically has generated an annual average of 1,679 megawatt hours (MWh), which Fall River uses to help meet its system load requirements. Fall River purchases the majority of its power from the Bonneville Power Administration (BPA) and relies on BPA for all reserve margin.

11. In addition to Fall River's need for power, staff looked at the regional need for power. The project is located in the Northwest Power Pool (NWPP) area of the Western Electricity Coordinating Council (WECC) region. The NWPP area includes all or major portions of the states of Washington, Oregon, Idaho, Wyoming, Montana, Nevada, and Utah; a small portion of northern California; and the Canadian provinces of British Columbia and Alberta. For the period 2003 through 2012, WECC anticipates peak demand and annual energy requirements in the NWPP area to grow at annual compound rates of 2.5 and 2.3 percent, respectively. Resource capacity margins for this winter-peaking area range between 30.5 and 42.1 percent of firm peak demand over this 10-year period, assuming planned additions totaling about 12,000 megawatts (MW) are constructed on schedule. For the WECC region as a whole, the summer reliability margin is projected to fall below the recommended minimum of 14 to 15 percent by about 2010 without the new capacity additions that were uncommitted as of the December, 2003, date of the WECC's 10-Year Coordinated Plan Summary.⁴

12. If relicensed, the project would continue to contribute to Fall River's power needs as well as meeting a small portion of the local need for power. In the short and long term, the capacity supplied by relicensing the project would help to maintain sufficient capacity to meet regional demand, while maintaining resource diversification and displacing fossil-fueled power generation used by some of the regional utilities. The project would also continue to displace emissions from fossil-fueled power generation.

COMPLIANCE HISTORY AND ABILITY TO COMPLY WITH THE SUBSEQUENT LICENSE

13. Staff reviewed Fall River's record of compliance with the previous license in an effort to judge its ability to comply with the articles, terms, and conditions of a new

⁴ Western Electricity Coordinating Council, 10-Year Coordinated Plan Summary, December 2003.

license. Fall River's compliance record indicates that it has in the past complied in a good faith manner with all articles, terms, and conditions of its current license. Based on the results of this review, I believe Fall River has the capability to comply with the conditions of this subsequent license.

WATER QUALITY CERTIFICATION

14. Under section 401(a) of the Clean Water Act (CWA),⁵ the Commission may not issue a license for a hydroelectric project unless the state certifying agency has either issued water quality certification for the project or has waived certification by failing to act on a request for certification within a reasonable period of time, not to exceed one year. Section 401(d) of the CWA provides that the certification shall become a condition on any federal license or permit that is issued.⁶

15. Fall River applied for a water quality certificate (WQC) for the project on November 26, 2002. IDEQ, the certifying agency for Idaho, received the request on the same date. On November 28, 2003, IDEQ issued a WQC with no conditions for the project; however, because IDEQ failed to act within one year of Fall River's request, the certification is deemed waived.⁷

THREATENED AND ENDANGERED SPECIES

16. Section 7(a)(2) of the Endangered Species Act of 1973 (ESA),⁸ requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species, or result in the destruction or adverse modifications of designated critical habit. That section further requires that formal consultation with the FWS and the National Marine Fisheries Service (NOAA Fisheries), as appropriate, be initiated if the proposed agency action is likely to affect the listed species, unless through informal consultation the action agency and services determine that there will not likely be an adverse effect.⁹ By letter dated July 7, 2004, the

⁵33 U.S.C. • 1341(a)(1).

⁶ 33 U.S.C. § 1341(d).

⁷ See 18 C.F.R. § 5.23(b)(2) (2004).

⁸ 16 U.S.C. § 1536(a)(2).

⁹ In this instance, no federally listed species falling under the jurisdiction of NOAA Fisheries are found in the project area.

Commission staff requested the concurrence from the FWS on the staff's determination that issuance of a subsequent license would not be likely to adversely affect the bald eagle, Canada lynx, and grizzly bear, and would not jeopardize the experimental, nonessential population of the grey wolf. The FWS provided its concurrence with the staff's findings by letter dated July 28, 2004.

SECTION 4(e) FINDINGS AND CONDITIONS

17. Section 4(e) of the FPA, 16 U.S.C. § 797(e), states that the Commission may issue a license for a project on a reservation only if it finds that the license will not interfere or be inconsistent with the purpose for which such reservation was created or acquired. The project is located fully on lands within the Targhee National Forest, which is under the supervision of the Forest Service. Section 3(2) of the FPA¹⁰ defines reservation as including national forests. We conclude that the project's occupancy of the National Forest does not interfere, and is not inconsistent, with the uses of the Forest lands.

18. Under section 4(e), the Commission must include in any license for a project located within a federal reservation all conditions that the managing agency shall deem necessary for the adequate protection and utilization of that reservation. The Forest Service filed its final section 4(e) conditions on July 29, 2004. The final terms and conditions are set forth in Appendix A of this order and incorporated into this license and summarized below.

19. The Forest Service 4(e) conditions require Fall River to: (1) obtain prior written approval of the Forest Service for all final design plans for project components which the Forest Service deems as affecting or potentially affecting National Forest System lands; (2) obtain written approval of the Forest Service prior to making any changes in any constructed project features or facilities, or in the uses of project lands and waters that may affect National Forest System lands; (3) consult with the Forest Service 60 days preceding the anniversary of the license with regard to measures needed to ensure protection and utilization of the National Forest System lands and resources affected by the project; (4) prior to any surrender or transfer of this license restore National Forest System lands to a condition satisfactory to the Forest Service; (5) obtain a Forest Service special-use authorization for occupancy and use of National Forest System lands; (6) develop a Hazardous Substance Plan; (7) develop an Public Safety Plan; (8) obtain a Road Use Permit and develop a Road Use Plan; (9) maintain all the National Forest System lands occupied by the project to standards acceptable to the Forest Service; (10) develop a Recreation Plan; (11) develop an Interpretive Display Plan; (12) develop a

¹⁰ 18 C.F.R. § 796(2) (2004).

Heritage Resource Protection Plan; (13) develop a Scenery Management Plan; (14) install a fish screen on the diversion intake structure; (15) develop a Diversion Operation Plan; (16) develop an Erosion Control Plan; (17) develop a Vegetation Management Plan; (18) develop a Threatened, Endangered, and Proposed for Listing Species Plan to protect federally listed or proposed species and their critical habitat; and (19) develop a Biological Evaluation for sensitive species.

SECTION 18 FISHWAY PRESCRIPTIONS

20. Section 18 of the FPA¹¹ provides that the Commission shall require the construction, operation, and maintenance by a licensee of such fishways as the Secretaries of Commerce or the Interior may prescribe. Interior timely asked the Commission to reserve its authority to prescribe fishways.¹² It is the Commission's policy to include in a license, on request of Interior or Commerce, an article reserving the Commission's authority to require the licensee to construct, operate, and maintain such fishways as the agencies might prescribe in the future. Article 409 of the license contains this reservation.

RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES

A. Recommendations Pursuant to Section 10(j) of the FPA

21. Section 10(j)(1) of the FPA, 16 U.S.C. § 803(j)(1), requires the Commission, when issuing a license, to include conditions based on recommendations of federal and state fish and wildlife agencies submitted pursuant to the Fish and Wildlife Coordination Act¹³ to "adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat) affected by" a project.

22. FWS and IDFG submitted seven recommendations that fall within the scope of section 10(j).¹⁴ The license contains conditions consistent with all of these recommendations. These adopted measures require the licensee to: (a) construct and

¹¹ 16 U.S.C. § 811.

¹² See Interior's letter to the Commission dated January 20, 2004.

¹³ 16 U.S.C. § 661 *et seq.*

¹⁴ Three of the recommendations were submitted by the FWS and four were submitted by IDFG.

continuously operate an upstream fishway (Article 405); (b) install a fish screen (Article 406 and Condition No. 14 of Appendix A); (c) develop and implement a fishway effectiveness monitoring and evaluation plan (Article 407 and Condition No. 14 of Appendix A); and (d) restrict fishway construction to between August and October (Article 408).

B. Recommendations Pursuant to Section 10(a)(1) of the FPA

23. IDFG made recommendations that are not specific measures to protect, mitigate damages to, or enhance fish and wildlife; consequently, we do not consider these recommendations under section 10(j) of the FPA. Instead, we consider these recommendations under the broad public-interest standard of FPA section 10(a)(1), 16 U.S.C. § 803(a)(1).¹⁵

24. IDFG recommended that if future changes occur to the hydrology of the Buffalo River, then Fall River should provide a minimum flow of at least 50 cubic feet per second to the bypassed reach. Including a requirement for a minimum flow based on an uncertain future event is premature; however, this license includes, in standard Article 11, the Commission's reservation of authority to reopen the license to modify project structures and operations for the conservation and development of fish and wildlife resources in response to future events.

25. IDFG recommended that in order for the fish and wildlife agencies to track Fall River's progress with implementing the measures required by the license, Fall River should file an annual status report, including disclosure of whether the measures are being implemented in accordance with required schedules. The Commission has an established compliance and administration program, which includes a computer tracking system and routine compliance audits; therefore, this license does not impose a redundant condition on the licensee requiring it to send compliance status reports and disclosure statements to the fish and wildlife agencies. The Commission, however, often requires licensees to evaluate the effectiveness of specific enhancement measures and provide agencies with gaging and project operation and generation data, which we do here in Articles 403 and 407.

¹⁵ Section 10(a)(1) requires that any project for which the Commission issues a license shall be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce; for the improvement and utilization of waterpower development; for the adequate protection, mitigation, and enhancement of fish and wildlife; and for other beneficial public uses, including irrigation, flood control, water supply, recreation, and other purposes.

26. IDFG recommended that the license establish an adaptive management process for the implementation of the license requirements. As previously noted, the license includes a reopener provision in standard Article 11, requires monitoring and evaluation of fishway effectiveness (Article 407), and reserves the Commission's authority to require Fall River to construct, operate, and maintain fishways prescribed by Interior under section 18 of the FPA (Article 409).

OTHER ISSUES

A. Administrative Conditions

27. Section 10(e) of the FPA¹⁶ provides that the Commission shall assess licensees' annual charges to reimburse the United States' cost of administering Part I of the FPA, and to reimburse the United States for the occupancy and use of any federal lands. Article 201 provides for the collection of such funds.

28. The Commission requires licensees to file sets of approved drawings on microfilm with Form FERC-587, three sets of the revised exhibit drawings in electronic format, and three sets of project boundary data in a geo-referenced electronic format. Article 202 provides for the filing of these drawings.

29. Some projects directly benefited from headwater improvements that were constructed by other licensees, the United States, or permittees. Article 203 requires the licensee to reimburse such entities for these benefits if they were not previously assessed and reimbursed.

B. Review of Final Plans and Specifications

30. Article 301 requires the licensee to provide the Commission's Division of Dam Safety and Inspection Portland Regional Office (D2SI-PRO) with final contract drawings and specifications—together with a supporting design report consistent with the Commission's engineering guidelines.

31. Article 302 requires the licensee to provide the Commission's D2SI-PRO with the plan for a quality control and inspection program.

32. Article 303 requires the licensee to provide the Commission's D2SI-PRO with cofferdam construction drawings.

¹⁶ 16 U.S.C. § 803(e).

33. Article 304 requires the licensee to provide the Commission's D2SI-PRO with a temporary emergency action plan.

34. Where new construction or modifications to the project are involved, the Commission requires licensees to file revised drawings of project features as-built. Article 305 provides for the filing of these drawings.

C. Consultation for Resource Plans

35. In Appendix A there are certain 4(e) conditions: approval of final designs; approval of changes after initial construction; a public safety plan; a road use permit; a recreation plan; an interpretive display; a heritage resource protection plan; a scenery management plan; an erosion control plan; a vegetation management plan; a protection of threatened and endangered species plan; and a sensitive species biological evaluation that require the licensee to file plans with the Commission after the plans have been approved by the Forest Service; however, the conditions do not provide for consultation with the FWS or IDFG or other agencies during plan development. Therefore, Article 401 requires the licensee to consult with the other agencies during plan development and to file the plans with the Commission for approval.

D. Use and Occupancy of Project Lands and Waters

36. Requiring a licensee to obtain prior Commission approval for every use or occupancy of project land would be unduly burdensome. Therefore, Article 411 allows Fall River to grant permission, without prior Commission approval, for the use and occupancy of project lands for such minor activities as landscape plantings. Such uses must be consistent with the purpose of protecting and enhancing the scenic, recreational, and environmental values of the project.

E. Hazardous Substances Plan

37. Article 404 requires the licensee to develop and implement a Hazardous Substances Plan that includes provisions specified by Condition 6 of Appendix A as well as additional provisions for: (1) Storage, handling, and transfer of hazardous substances; (2) Notification of spills to the state and federal agencies and Commission; and (3) Implementation of the plan.

F. Project Operation

38. Article 402 requires the licensee to continue operating the project run-of-river for the protection of aquatic resources in the Buffalo River and Henry's Fork River in the project area.

G. Diversion Operation Plan

39. Article 410 requires the licensee to develop and implement a Diversion Operation Plan that includes provisions specified by Condition 15 of Appendix A and an implementation schedule. The purpose of the plan is for channel maintenance in the Buffalo River project area, including the passage of large woody debris past the project.

STATE AND FEDERAL COMPREHENSIVE PLANS

40. Section 10(a)(2) of the FPA¹⁷ requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project.¹⁸ Accordingly, federal and state agencies filed a total of 6 comprehensive plans that address various resources relevant to the project. I conclude, that with the inclusion of our recommended measures, the proposed project would not conflict with any of these plans.¹⁹

¹⁷ 16 U.S.C. § 803(a)(2)(A).

¹⁸ Comprehensive plans for this purpose are defined at 18 C.F.R § 2.19 (2004).

¹⁹ (1) Forest Service. 1997. Targhee National Forest Revised Forest Plan, including the Final environmental impact statement. Department of Agriculture, Idaho Falls, Idaho. April 1997; (2) Idaho Department of Fish and Game. 2001. Idaho fisheries management plan, 2001-2006. Boise, Idaho; (3) Idaho Department of Fish and Game. Bonneville Power Administration. 1986. Pacific Northwest rivers study. Final report: Idaho. Boise, Idaho. 12 pp. and appendices; (4) Idaho Department of Health and Welfare. Division of Environment. 1985. Idaho water quality standards and wastewater treatment requirements. Boise, Idaho. January 1985. 72 pp. and appendices; (5) Northwest Power Planning Council. 1994. Columbia River Basin fish and wildlife program. Portland, Oregon. December 14, 1994. 409 pp. and appendices; (6) Fish and Wildlife Service. Undated. Fisheries USA: the recreational fisheries policy of the U.S. Fish and Wildlife Service. Washington, D.C. 11 pp.

COMPREHENSIVE DEVELOPMENT

41. Sections 4(e) and 10(a)(1) of the FPA²⁰ require the Commission, in acting on applications for license, to give equal consideration to all the power and development purposes and to the purposes of energy conservation; the protection, mitigation of damage to, and enhancement of fish and wildlife; the protection of recreational opportunities; and the preservation of other aspects of environmental quality. Any license issued shall be in the Commission's judgment best adapted to a comprehensive plan for improving or developing a waterway for all beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflect such consideration.

42. In determining whether a proposed project will be best adapted to a comprehensive plan for developing a waterway for beneficial public purposes, the Commission considers a number of public interest factors, including the economic benefit of the project power. As was articulated in Mead Corporation, Publishing Paper Division,²¹ the Commission employs an analysis that uses current costs to compare the costs of the project and likely alternative power, with no forecasts concerning potential future inflation, escalation, or deflation beyond the license issuance date. The basic purpose of the analysis is to provide general estimates of the potential power benefits and costs of a project, and reasonable alternatives to project power.

43. Under the no-action alternative, the project generates 1,679 MWh of energy annually. The current annual value of this power is \$53,700 (\$32.00/MWh), and the current annual cost is \$11,400 (\$6.79/MWh), resulting in a net annual benefit of \$42,300 (\$25.21/MWh).²²

44. To determine whether the proposed project is currently economically beneficial, we subtract the cost of project power as licensed from the cost of the most likely source of alternative power. When licensed in accordance with the conditions adopted herein, the project would produce an average of about 1,679 MWh of energy annually at an annual cost of \$65,800, or \$12,100 more than the \$53,700 cost to obtain the same amount of power in the market. Although the cost of project power currently exceeds the cost using alternative generation resources, it is the licensee's responsibility to determine

²⁰16 U.S.C. §§ 797(e) and 803(a)(1).

²¹72 FERC ¶ 61,027 (1995).

²² All generation and cost information is taken from the Commission's EA.

whether or not continued operation of an existing project under these conditions is a prudent decision.

LICENSE TERM

45. Section 15(e) of the FPA²³ states that licenses under Part I of the FPA shall be issued for a period not to exceed 50 years. The Commission's policy establishes 30-year terms for those projects that propose little or no redevelopment, new construction, new capacity, or enhancement; 40-year terms for those projects that propose a moderate amount of redevelopment, new construction, new capacity or enhancement; and 50-year terms for those projects that propose extensive redevelopment, new construction, new capacity or enhancement. Because this license requires a moderate amount of new construction including: (1) sealing the upstream face of the dam; (2) constructing a new concrete intake structure; (3) constructing a new fish screen with a mechanical screen cleaner; (4) installing a new 5-foot gate at the penstock intake; and (5) constructing a fishway, I am providing a license term of 40 years for the project.

46. This license is subject to the conditions submitted by the Forest Service, under section 4(e) of the FPA, as those conditions are set forth in Appendix A of this order to the extent those conditions apply to project lands and facilities located on Targhee National Forest lands. The Commission reserves the right to amend this license as appropriate in light of the Forest Service's ultimate disposition of any appeals of, or modifications to, the mandatory section 4(e) conditions that might arise.

47. The EA contains background information, analysis of impacts, support for related license articles, and the basis for a finding that licensing the project would not constitute a major federal action significantly affecting the quality of the human environment. The design of this project is consistent with the engineering standards governing dam safety. The project will be safe if operated and maintained in accordance with the requirements of this license.

48. Based on a review of agency and public comments filed on the project, and Commission staff's independent analysis pursuant to sections 4(e), 10(a)(1), and 10(a)(2) of the FPA, I conclude that issuing a license for the Buffalo River Hydroelectric Project No. 1413, with the required environmental measures and other special license conditions, will be best adapted to the comprehensive development of Buffalo River for all beneficial public uses.

²³16 U.S.C. • 808 (e).

The Director orders:

(A) This license is issued to Fall River Rural Electric Cooperative, Inc. (licensee) for a period of 40 years effective November 1, 2004. This license is subject to the terms and conditions of the Federal Power Act (FPA), which is incorporated by reference as part of this license, and to the regulations the Commission issues under the provisions of the FPA.

(B) The project consists of:

(1) All lands, to the extent of the licensee’s interest in those lands, enclosed by the project boundary shown by Exhibit G, filed October 30, 2002, as revised in this order:

Description	FERC Drawing No 1413-
Special Use Permit Exhibit, Fall River Rural Electric Co-Op, Inc., Buffalo River Power Plant Site	1001

(2) Project works consisting of: (1) a 142-foot-long by 12-foot-high timber-faced rock-filled diversion dam; (2) a 40-foot-long by 3-foot-high concrete slab spillway with stop logs; (3) a fish passage structure; (4) a concrete intake structure with a 5-foot steel slide gate; (5) a trash rack; (6) a 52-foot-long by 5-foot-diameter concrete encased steel penstock; (7) a 34-foot-long by 22-foot-high masonry block powerhouse containing a 250-kilowatt Bouvier Kaplan inclined shaft turbine; (8) a 1,800-foot-long underground transmission line; and (9) appurtenant facilities.

The project works generally described above are more specifically shown and described by those portions of Exhibits A and F shown below:

Exhibit A: Pages 16 and 17 filed on October 30, 2002.

Exhibit F: The following Exhibit F of the license application filed on October 30, 2002:

Description	FERC Drawing No.1413
Existing Site Plan	1002
Powerhouse Elevation and Dam Section	1003
Powerhouse Plan and Section View	1004
Proposed Site Plan	1005

(3) All of the structures, fixtures, equipment, or facilities used to operate or maintain the project, all portable property that may be employed in connection with the project, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) Exhibits A and F, as designated in ordering paragraph (B) above, are approved and made a part of this license. Exhibit F shall be refiled in the Commission's electronic file format as specified in Article 202.

(D) Within 45 days of license issuance, the licensee shall submit a revised Exhibit G with the Commission for approval and in accordance with the format described in Article 202. The revised Exhibit G shall identify all federal lands within the project boundary as directed in 18CFR § 4.41(h) of the Commission regulations.

(E) The following sections of the FPA are waived and excluded from the license for this minor project:

Section 4(b), except the second sentence; section 4(e), insofar as it relates to approval of plans by the Chief of Engineers and the Secretary of the Army; section 6, insofar as it relates to public notice and to the acceptance and expression in the license of terms and conditions of the FPA that are waived here; section 10(c), insofar as it relates to depreciation reserves; sections 10(d); 10(f); and 14, except insofar as the power of condemnation is reserved; and sections 15; 16; 19; 20; and 22.

(F) This license is subject to the conditions submitted by the Forest Service under section 4(e) of the FPA, as set forth in Appendix A to this order.

(G) This license is subject to the articles set forth in Form L-16 (October 1975), entitled "TERMS AND CONDITIONS OF LICENSE FOR CONSTRUCTED MINOR PROJECT AFFECTING LANDS OF THE UNITED STATES", 54 F.P.C 1792, 1888-1896, and the following additional articles:

Article 201. Annual Charges. The licensee shall pay the United States the following annual charges, effective as of the first day of the month in which this license is issued:

(a) For the purposes of reimbursing the United States for the Commission's administrative costs, pursuant to Part I of the Federal Power Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 250-kilowatts.

Under the regulations currently in effect, projects with authorized installed capacity of less than or equal to 1,500 kilowatts will not be assessed annual charges.

(b) Recompensing the United States for the use, occupancy and enjoyment of 9.8 acres of its lands, other than for transmission line right-of-way, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time.

Article 202. Aperture Cards and Exhibit Drawings. Within 45 days of the date of issuance of the license, the licensee shall file exhibit drawings F and G described in ordering paragraph (C) and (D) in aperture card and electronic formats.

(1) Four sets of the approved exhibit drawings shall be reproduced on silver or gelatin 35mm microfilm. All microfilm shall be mounted on type D (3-1/4" X 7-3/8") aperture cards. Prior to microfilming, the FERC Drawing Number (e.g., P-1413-1001 through P- 1413-####) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number shall be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (e.g., F-1, G-1, etc.), Drawing Title, and date of this license shall be typed on the upper left corner of each aperture card.

Two of the sets of aperture cards along with form FERC-587 shall be filed with the Secretary of the Commission, ATTN: OEP/DHAC. The third set shall be filed with the Commission's Division of Dam Safety and Inspections Portland Regional Office. The remaining set of aperture cards and a copy of Form FERC-587 shall be filed with the Bureau of Land Management office at the following address:

State Director
Bureau of Land Management
Land Services Section (ID-943-A)
1387 S. Vinnell Way
Boise, ID 83709-1657
ATTN: FERC Withdrawal Recordation

(2) The licensee shall file two separate sets of exhibit drawings in electronic format with the Secretary of the Commission, ATTN: OEP/DHAC. A third set shall be filed with the Commission's Division of Dam Safety and Inspections Portland Regional Office (D2SI-PRO). The drawings must be identified as **(CEII) material under 18 CFR §388.113(c)**. Each drawing must be a separate electronic file, and the file name shall include: FERC Project-Drawing Number, FERC Exhibit, Drawing Title, date of this

license, and file extension [e.g., P-1413-####, G-1, Project Boundary, MM-DD-YYYY.TIF]. Electronic drawings shall meet the following format specification:

IMAGERY - black & white raster file
FILE TYPE – Tagged Image File Format, (TIFF) CCITT Group 4
RESOLUTION – 300 dpi desired, (200 dpi min)
DRAWING SIZE FORMAT – 24” X 36” (min), 28” X 40” (max)
FILE SIZE – less than 1 MB desired

Each Exhibit G drawing that includes the project boundary must contain a minimum of three known reference points, arranged in a triangular format. The latitude and longitude coordinates, or state plane coordinates, of each reference point must be shown and identified on the drawing.

(3) The licensee shall file three separate sets of the project boundary data in a geo-referenced vector electronic file format (such as ArcView shape files, GeoMedia files, MapInfo files, or any similar format) with the Secretary of the Commission, ATTN: OEP/DHAC. The file name shall include: FERC Project Number, data description, date of this license, and file extension [e.g., P-1413, boundary vector data, MM-DD-YYYY. SHP]. The geo-referenced electronic boundary data file must be positionally accurate to ± 40 feet in order to comply with National Map Accuracy Standards for maps at a 1:24,000 scale. A single electronic boundary data file is preferred and must contain all reference points shown on the individual project boundary drawings. The latitude and longitude coordinates, or state plane coordinates, of each reference point must be shown. The data must be accompanied by a separate text file describing the map projection used (i.e., UTM, State Plane, Decimal Degrees, etc.), the map datum (i.e., North American 27, North American 83, etc.), and the units of measurement (i.e., feet, meters, miles, etc.). The text file name shall include: FERC Project Number, data description, date of this license, and file extension [e.g., P-1413, project boundary metadata, MM-DD-YYYY.TXT].

Article 203. Headwater Benefits. If the licensee's project was directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement during the term of the original license (including extensions of that term by annual licenses), and if those headwater benefits were not previously assessed and reimbursed to the owner of the headwater improvement, the licensee shall reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed, in the same manner as for benefits received during the term of this new license.

Article 301. *Contract Plans and Specifications.* At least 60 days before starting any license-related construction activities, the licensee shall submit one copy to the Division of Dam Safety and Inspections – Portland Regional Engineer and two copies to the Commission (one of these shall be a courtesy copy to the Director, Division of Dam Safety and Inspections), of a supporting design report and final contract plans and specifications. The Commission may require changes to the plans and specifications to ensure the work is completed in a safe and environmentally sound manner. Construction may not commence until authorized by the Regional Engineer.

Article 302. *Quality Control and Inspection Program.* At least 60 days before starting any license-related construction or ground disturbance activities, the licensee shall submit one copy to the Division of Dam Safety and Inspections – Portland Regional Engineer and two copies to the Commission (one of these shall be a courtesy copy to the Director, Division of Dam Safety and Inspections), of the Quality Control and Inspection Program (QCIP) for the Commission's review and approval. The QCIP shall include a sediment and erosion control plan.

Article 303. *Cofferdam Construction Drawings.* Before starting any license-related construction activities, the licensee shall review and approve the design of contractor-designed cofferdams. At least 30 days before starting construction of the cofferdams, the licensee shall submit one copy to the Division of Dam Safety and Inspections – Portland Regional Engineer and two copies to the Commission (one of these copies shall be a courtesy copy to the Director, Division of Dam Safety and Inspections), of the approved cofferdam construction drawings and specifications and the letters of approval.

Article 304. *Temporary Emergency Action Plan.* At least 60 days before starting any license-related construction activities, the licensee shall submit one copy to the Division of Dam Safety and Inspections – Portland Regional Engineer and two copies to the Commission (one of these shall be a courtesy copy to the Director, Division of Dam Safety and Inspections), of the Temporary Emergency Action Plan (TEAP) for the Commission's review and approval. The TEAP shall describe emergency procedures in case failure of a cofferdam, large sediment control structure, or any other water retaining structure that could endanger construction workers or the public. The TEAP shall include a notification list of emergency response agencies, a plan drawing of the proposed cofferdam arrangement, the location of safety devices and escape routes, and a brief description of testing procedures.

Article 305. *As Built Drawings.* Within 90 days of completion of construction of the facilities authorized by any article of this license (e.g., sealing of face of dam, construction of an intake structure, fish screen, and fishway, installation of gate at

penstock intake), the licensee shall file for Commission approval revised Exhibits A, F, and G, as applicable, to describe and show those project facilities as built. A courtesy copy shall be filed with the Commission's Division of Dam Safety and Inspection – Portland Regional Office (D2SI-PRO); the Director, D2SI; and the Director, Division of Hydropower Administration and Compliance.

Article 401. Commission Approval and Reporting. Certain conditions found in Appendix A require the licensee to file plans with the Commission after the plans have been approved by the U.S. Forest Service (Forest Service). The conditions do not provide for consultation with the Idaho Department of Fish and Game (IDFG), U.S. Fish and Wildlife Service (FWS), Idaho Department of Environmental Quality (IDEQ), Idaho Department of Park and Recreation (IDPR), and the Henry's Fork Foundation (HFF) during plan development. Each such plan identified below, with a reference to a source of its requirement, shall also be submitted to the Commission for approval by the due date specified in the table and must be approved by the Commission before being implemented by the licensee.

4(e) Condition No.	Description	Due Date
1	Approval of Final Design	Prior to any new construction
2	Approval of Changes after Initial Construction	Prior to any changes
7	Public Safety Plan	Within 6 months of license issuance
8	Road Use Permit	Prior to any new construction
10	Recreation Plan	Within one year of license issuance
11	Interpretive Display	Within one year of license issuance
12	Heritage Resource Protection Plan	If items of potential cultural, historical, archeological, or paleontological are reported or discovered
13	Scenery Management Plan	Within one year of license issuance
16	Erosion Control Plan	90 days prior to any ground-disturbing activities

17	Vegetation Management Plan	90 days prior to any ground-disturbing activities
18	Threatened and Endangered Species Plan	90 days prior to any ground-disturbing activities
19	Forest Service Sensitive Species Biological Evaluation	90 days prior to implementing any activity that may affect Forest Service species and their habitat

In addition to consultation with the Forest Service, the licensee shall prepare the above plans after consultation with IDFG, FWS, IDEQ, and IDPR. The licensee shall include with the plans documentation of consultation, copies of comments and recommendations on the completed plans after the plans have been prepared and provided to the agencies, and specific descriptions of how agencies' comments are accommodated by the plans. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plans with the Commission. If the licensee does not adopt a recommendation, the filings shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to make changes to any plan submitted. Upon Commission approval, the plan becomes a requirement of the license, and the licensee shall implement the plan or changes in the project operations or facilities, including any changes required by the Commission.

Article 402. Project Operation. The licensee shall operate the project in a run-of-river mode for the protection of aquatic resources in the Buffalo River and Henry's Fork River in the project area. The licensee shall at all times act to minimize the fluctuation of the reservoir surface elevation by maintaining a discharge from the project so that, at any point in time, flows, as measured immediately downstream from the project dam and tailrace, when combined approximate the sum of inflows to the reservoir.

Run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement among the licensee, Idaho Department of Fish and Game, and U.S. Forest Service. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 403. Operational Compliance Monitoring Plan. Within six months of the effective date of this license, the licensee shall file for Commission approval an operational compliance monitoring plan.

The plan shall include at a minimum:

- (1) a description of the exact location of each gage or measuring device, the method of calibration for each gage or measuring device, the frequency of recording for each gage or measuring device, and a monitoring schedule;
- (2) a description of how the project would maintain compliance with the operational requirement of Article 402;
- (3) a provision for maintaining a log of project operation and generation;
- (4) a provision for providing the gaging and project operation and generation data to the Idaho Department of Fish and Game (IDFG), U.S. Forest Service (Forest Service), U.S. Fish and Wildlife Service (FWS), and Idaho Department of Environmental Quality (IDEQ) within 30 days of the date of the agency's request for the data; and
- (5) an implementation schedule for the plan.

The licensee shall prepare the plan after consultation with the U.S. Geological Survey, IDFG, Forest Service, FWS, and IDEQ. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

A courtesy copy of the plan shall be filed with the Commission's D2SI-PRO and the Director, D2SI.

The Commission reserves the right to require changes to the plan. Implementation of the plan shall not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 404. Hazardous Substances Plan. Within six months of license issuance, the licensee shall file for Commission approval, a Hazardous Substances Plan to protect fish and wildlife resources from adverse effects associated with fuel and hazardous substance spills at the project.

In addition to the provisions specified in Condition No. 6 of Appendix A, the plan shall include, at a minimum:

- (1) a description of the procedures for storage, transfer, and handling of fuel and hazardous substances;
- (2) a description of the procedures that will be followed in the event of a fuel or hazardous substances spill, including cleanup and notification of the Forest Service, the Fish and Wildlife Service, the Idaho Department of Fish and Game, the Idaho Department of Environmental Quality, and the Commission should fuel or hazardous substances at the project spill into or adjacent to any water body within or below the project; and
- (3) an implementation schedule.

The licensee shall prepare the plan after consultation with the IDFG, Forest Service, FWS, and IDEQ. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

A courtesy copy of the plan shall be filed with the Commission's D2SI-PRO and the Director, D2SI.

The Commission reserves the right to require changes to the plan. Implementation of the plan shall not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 405. Upstream Fishway. Within one year of license issuance, the licensee shall file for Commission approval detailed design drawings of the licensee's proposed upstream fishway together with a schedule to construct or install, operate, and maintain the fishway. The fishway shall be operated continuously and be designed to pass all life history stages of rainbow trout of at least 100 millimeters total length and together with

the new sluiceway maintain the wetted area at the base of the west end of the dam. The design for the fishway must be filed with the project plans and specifications required by Article 301.

The licensee shall prepare the drawings and schedule after consultation with the Idaho Department of Fish and Game, U.S. Forest Service, U.S. Fish and Wildlife Service, and Henry's Fork Foundation (Foundation). The licensee shall include with the drawings and schedule documentation of consultation, copies of comments and recommendations on the drawings and schedule after they have been prepared and provided to the agencies and Foundation, and specific descriptions of how the agencies' and Foundation's comments are accommodated by the licensee's plan. The licensee shall allow a minimum of 30 days for the agencies and Foundation to comment and to make recommendations before filing the drawings and schedule with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons based on project-specific information.

A courtesy copy of the plan shall be filed with the Commission's D2SI-PRO and the Director, D2SI. The Commission reserves the right to require changes to the proposed fishway and schedule. Construction or installation of the fishway shall not begin until the licensee is notified by the Commission that the filing is approved and D2SI-PRO authorizes start of construction. Upon Commission approval, the licensee shall implement the proposal, including any changes required by the Commission.

Article 406. Fish Screen. Within six months of license issuance, the licensee shall file for Commission approval detailed design drawings of the fish screen required by Condition No. 14 of Appendix A together with a schedule to construct or install, operate, and maintain the fish screen. The design for the fish screen must be filed with the project plans and specifications required by Article 301.

The licensee shall prepare the drawings and schedule after consultation with the Idaho Department of Fish and Game, U.S. Forest Service, U.S. Fish and Wildlife Service, and Henry's Fork Foundation (Foundation). The licensee shall include with the drawings and schedule documentation of consultation, copies of comments and recommendations on the drawings and schedule after they have been prepared and provided to the agencies and Foundation, and specific descriptions of how the agencies' and Foundation's comments are accommodated by the licensee's plan. The licensee shall allow a minimum of 30 days for the agencies and Foundation to comment and to make recommendations before filing the drawings and schedule with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons based on project-specific information.

A courtesy copy of the plan shall be filed with the Commission's D2SI-PRO and Director, D2SI. The Commission reserves the right to require changes to the proposed fishway and schedule. Construction or installation of the fishway shall not begin until the licensee is notified by the Commission that the filing is approved and D2SI-PRO authorizes start of construction. Upon Commission approval, the licensee shall implement the proposal, including any changes required by the Commission.

Article 407. Fishway and Fish Screen Effectiveness Monitoring, Evaluation, and Maintenance. Within one year of licensee issuance, the licensee shall file for Commission approval a plan for conducting post-construction monitoring and evaluation of the fishway and fish screen required by Articles 405 and 406 for a period of 3 years and every third year thereafter for the term of the license. In addition to the monitoring provision specified in Condition No. 14 of Appendix A, the plan shall include, at a minimum, a provision for monitoring and documenting fishway use and effectiveness; recording the species, length, and quantity of fish found impinged on the fish screen; a description of the procedures for maintenance of the fishway and fish screen; and a schedule for:

- (1) implementation;
- (2) consultation with the Idaho Department of Fish and Game (IDFG), U.S. Forest Service (Forest Service), U.S. Fish and Wildlife Service (FWS), and Henry's Fork Foundation (Foundation) concerning the results of the monitoring and evaluation; and
- (3) filing the monitoring and evaluation results, the agencies' and Foundation's comments, and the licensee's response to the agencies' and Foundation's comments with the Commission in years when monitoring takes place.

The licensee shall prepare the plan after consultation with the IDFG, Forest Service, FWS, and Foundation. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies and Foundation, and specific descriptions of how the agencies' and Foundation's comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies and Foundation to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

A courtesy copy of the plan shall be filed with the Commission's D2SI-PRO and the Director, D2SI. The Commission reserves the right to require changes to the plan. Implementation of the plan shall not begin until the licensee is notified by the

Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

The Commission reserves the right to direct the licensee to modify project structures or operations if the results of the monitoring indicate that changes in project structures or operations are necessary to protect fishery resources.

Article 408. Upstream Fishway Construction Scheduling. At least six months before the start of the fishway construction/installation required by Article 405, the licensee shall file for Commission approval a construction/installation plan and schedule that includes a provision for conducting fishway construction/installation activities only during the months of August through October in order avoid disturbance to rainbow trout spawning movements and rearing of newly hatched rainbow trout fry and displacement of wintering trumpeter swans.

The plan shall include, at a minimum:

- (1) identification of all land-disturbing and land-clearing activities associated with construction or installation of the fishway; and
- (2) a specific implementation schedule.

The licensee shall prepare the plan after consultation with the Idaho Department of Fish and Game, U.S. Forest Service, U.S. Fish and Wildlife Service, and Henry's Fork Foundation (Foundation). The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies and Foundation, and specific descriptions of how the agencies' and Foundation's comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies and Foundation to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

A courtesy copy of the plan shall be filed with the Commission's D2SI-PRO and the Director, D2SI.

The Commission reserves the right to require changes to the plan. Implementation of the plan shall not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 409. Reservation of Authority - Fishways. Authority is reserved by the Commission to require the licensee to construct, operate, and maintain, or to provide for the construction, operation, and maintenance of, such fishways as may be prescribed by the Secretary of the Interior under section 18 of the Federal Power Act.

Article 410. Diversion Operation Plan. Within one year of license issuance, the licensee shall file for Commission approval, a Diversion Operation Plan to maintain the Buffalo River channel in the project area and pass large woody debris past the project.

In addition to the provisions specified in Condition No. 15 of Appendix A, the plan shall include, at a minimum, an implementation schedule.

The licensee shall prepare the plan after consultation with the Idaho Department of Fish and Game, U.S. Forest Service, and U.S. Fish and Wildlife Service. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

A courtesy copy of the plan shall be filed with the Commission's D2SI-PRO and the Director, D2SI.

The Commission reserves the right to require changes to the plan. Implementation of the plan shall not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 411. Use and Occupancy. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article.

If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, such action includes, as necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The type of use and occupancy of project lands and water for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where said facility is intended to serve single-family type dwellings; (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline; and (4) food plots and other wildlife enhancement.

To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements.

Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction; (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site; and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline.

To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges or roads where all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor

access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir.

No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile (measured over project waters) from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from project waters at normal surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year.

At least 60 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director, Office of Energy Projects, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraph (c) or (d) of this article: (1) before conveying the interest, the licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and

the State Historic Preservation Officer; (2) before conveying the interest, the licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved Exhibit R or approved report on recreational resources of an Exhibit E; or, if the project does not have an approved Exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value; (3) the instrument of conveyance must include the following covenants running with the land: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project; and (iii) the grantee shall not unduly restrict public access to project waters; and (4) the Commission reserves the right to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised Exhibit G or K drawings would be filed for approval for other purposes.

(H) The licensee shall serve copies of any Commission filing required by this order on any entity specified in this order to be consulted on matters related to the filing. Proof of service on these entities must accompany the filing with the Commission.

(I) This order is issued under authority delegated to the Director and is final unless a request for rehearing is filed within 30 days from the date of its issuance, as provided in section 313(a) of the FPA. The filing of a request for rehearing does not operate as a stay of the effective date of this license or of any other date specified in this order, except as specifically ordered by the Commission. The licensee's failure to file a request for rehearing of this order shall constitute acceptance of this license.

J. Mark Robinson
Director
Office of Energy Projects

APPENDIX A**Forest Service's****Final Section 4(e) Terms and Conditions****Condition No. 1 - Forest Service Approval of Final Design**

Prior to undertaking activities on National Forest System lands, the Licensee shall obtain written approval from the Forest Service for all final design plans for project components that the Forest Service deems as affecting or potentially affecting National Forest System lands and resources. As part of such prior written approval, the Forest Service may require adjustments in final design plans and facility locations to preclude or mitigate impacts and to assure that the project is compatible with on-the-ground conditions. Should the Forest Service, the Commission, or the Licensee determine that necessary changes are a substantial change, the Licensee shall follow the procedures of Article 2 of the license. Any changes to the license made for any reason pursuant to Article 2 or Article 3 shall be made subject to any new terms and conditions the Secretary of Agriculture may make pursuant to section 4(e) of the Federal Power Act.

Condition No. 2 - Approval of Changes After Initial Construction

Notwithstanding any license authorization to make changes to the project, the Licensee shall obtain written approval from the Forest Service prior to making any changes in any constructed project features or facilities, or in the uses of project lands and waters the Forest Service deems as affecting or potentially affecting National Forest System lands and resources. Following receipt of such approval from the Forest Service, and a minimum of 60-days prior to initiating any such changes, the Licensee shall file a report with the Commission describing the changes, the reasons for the changes, and showing the approval of the Forest Service for such changes. The Licensee shall file an exact copy of this report with the Forest Service at the same time it is filed with the Commission. This article does not relieve the Licensee from the requirement for license amendment or other requirements of Article 2 or Article 3 of this license. Any changes to the license made for any reason pursuant to Article 2 or Article 3 shall be made subject to any new terms and conditions the Secretary of Agriculture may make pursuant to section 4(e) of the Federal Power Act.

Condition No. 3 – Consultation

Each year during the 60-days preceding the anniversary of this license, or as arranged with the Forest Service, the Licensee shall consult with the Forest Service with

regard to measures needed to ensure protection and utilization of the National Forest System lands and resources affected by the Project. Within 60-days following such consultation, the Licensee shall file with the Commission evidence of the consultation with any recommendations made by the Forest Service. The Forest Service reserves the right, after notice and opportunity for comment and administrative review, to require changes in the project and its operation through revision of the 4(e) conditions that require measures necessary to accomplish protection and utilization of National Forest lands and resources.

Condition No. 4 - Surrender of License or Transfer of Ownership

Prior to any surrender of this license, the Licensee shall restore National Forest System lands to a condition satisfactory to the Forest Service. At least 1 year in advance of the proposed application for license surrender, the Licensee shall file with the Commission a restoration plan approved by the Forest Service. The restoration plan shall identify improvements to be removed, restoration measures, and time frames for implementation and estimated restoration costs. In addition, the Licensee shall pay for an independent audit to assist the Forest Service in determining whether the Licensee has the financial ability to fund the surrender and restoration work specified in the plan.

As a condition of any transfer of the license or sale of the project, the Licensee shall require the proposed transferee to demonstrate, in a manner satisfactory to the Forest Service, that it has the financial ability to provide for the costs of surrender and restoration of the project.

Condition No. 5 - Requirement to Obtain a Forest Service Special-Use Authorization

The Licensee shall obtain a special-use authorization from the Forest Service for the occupancy and use of National Forest System lands. The licensee shall obtain the executed authorization before beginning ground-disturbing activities on National Forest System lands or within six months of license issuance if no construction or reconstruction was proposed in the application for license.

The Licensee may commence ground-disturbing activities authorized by the License and special-use authorization no sooner than 60 days following the date the licensee files the Forest Service special-use authorization with the Commission, unless the Commission prescribes a different commencement schedule.

In the event there is a conflict between any provisions of the license and Forest Service special-use authorization, the special-use authorization shall prevail to the extent

that the Forest Service, in consultation with the Commission, deems necessary to protect and utilize National Forest System resources.

Condition No. 6 - Hazardous Substances Plan

During planning for and prior to any new construction or maintenance, the Licensee shall file with Commission, a Hazardous Substances Plan approved by the Forest Service for oil and hazardous substances storage and spill prevention and cleanup. At a minimum, the Licensee shall:

- Outline the Licensee's procedures for reporting and responding to releases of hazardous substances, including names and phone numbers of all emergency response personnel and their assigned responsibilities,
- Maintain in the project area, a cache of spill cleanup equipment suitable to contain any spill from the project,
- Semi-annually inform the Forest Service of the location of the spill cleanup equipment on National Forest System lands and of the location, type, and quantity of oil and hazardous substances stored in the project area; and,
- Inform the Forest Service immediately of the nature, time, date, location, and action taken for any spill affecting National Forest System lands and Licensee adjoining fee title property.

Condition No. 7 – Public Safety Plan

Within 6 months of the license issuance, the Licensee shall file with the Commission a Public Safety Plan approved by the Forest Service. This plan will identify potential hazardous situations, evaluate all project facilities for conformance with the International Building Code, and identify measures necessary to bring project facilities in conformance with the Code, and shall include a schedule for completion of any hazard abatement measures. The plan will also identify how the project complies with FERC's Guidelines for Public Safety at Hydropower Projects (March 1992).

The Licensee shall perform daily (or on a schedule otherwise agreed to by the Forest Service) inspections of Licensee's construction operations on National Forest System lands while construction is in progress. The Licensee shall document these inspections (informal writing sufficient) and shall deliver such documentation to the Forest Service on a schedule agreed to by the Forest Service. The inspections must

include fire plan compliance, measures to provide for public safety, and environmental protection. The Licensee shall act immediately to correct any items found to need correction.

Condition No. 8 - Road Use

The Licensee shall confine all project vehicles, including but not limited to administrative and transportation vehicles and construction and inspection equipment, to roads or specifically designed access routes. The Forest Service reserves the right to close any and all such routes where damage is occurring to the soil or vegetation, or, if requested by Licensee, to require reconstruction/construction by the Licensee to the extent needed to accommodate the Licensee's use.

The Licensee shall obtain a Road Use Permit (FS-7700-41) for all roads needed for project construction activities. This permit shall be applied for and obtained from the Forest Service prior to any use of any Forest development road for construction purposes. An Operation and Maintenance Plan will become part of any road use permit granted by the Forest Service.

Condition No. 9 - Maintenance of Improvements

The Licensee shall maintain all its improvements and premises on National Forest System lands to standards of repair, orderliness, neatness, sanitation, and safety acceptable to the Forest Service. The Licensee shall comply with all applicable Federal, State, and local laws, regulations, including but not limited to, the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., the Resources Conservation and Recovery Act, 42 U.S.C. 6901 et seq., the Comprehensive Environmental Response, Control, and Liability Act, 42 U.S.C. 9601 et seq., and other relevant environmental laws, as well as public health and safety laws and other laws relating to the citing, construction, operation, maintenance of any facility, improvement, or equipment.

Condition No. 10 - Recreation Plan

Within 1 year of license issuance the Licensee shall file with the Commission a Recreation Plan that is approved by the Forest Service. The Plan shall, as appropriate, include:

- Licensee responsibility for construction, operation and maintenance of recreation facilities and sites on National Forest System lands,

- Specific mitigation measures for existing recreation facilities and sites, including compliance with the Americans with Disabilities Act. The plan should include accommodations for the existing parking area and turn-around at the end of Forest Road #80136, Riverside Drive.
- Planning for future development or rehabilitation of recreation facilities or sites. Future development or rehabilitation of recreation sites shall include the parking area, the short trail connecting parking area to Box Canyon Trailhead and turn around on the south side of the Buffalo River, access via Forest Road 80136, Riverside Drive. Other future recreation developments should include interpretive signing for hydropower facilities and the Box Canyon trail along the Henry's Fork River. A site plan should be provided at a scale of one inch equals 30, 40 or 50 feet and approved by the Forest Service prior to construction activities.

Condition No. 11 - Interpretive Display

Within 1 year of license issuance the Licensee shall file with the Commission an Interpretive Display Plan that is approved by the Forest Service. The Plan will provide a history of the hydropower facility, describe its operation and benefits and measures taken to mitigate environmental effects and for the Forest Service to provide general information about recreation opportunities and other information of interest to the public.

Condition No. 12 - Heritage Resource Protection

If during ground-disturbing activities or as a result of project operations, items of potential cultural, historical, archeological, or paleontological value are reported or discovered, or a known deposit of such items is disturbed on National Forest System lands the Licensee shall immediately cease work in the area so affected. The Licensee shall then notify the Forest Service and the Commission and shall not resume work on ground-disturbing activity until it receives written approval from the Forest Service.

If it deems it necessary, the Forest Service may require the Licensee to perform recovery, excavation, and preservation of the site and its artifacts at the Licensee's expense through provisions of an Archaeological Resources Protection Act permit issued by the Forest Service.

Condition No. 13 - Scenery Management

Within 1 year of license issuance the Licensee shall file with the Commission a Scenery Management Plan that is approved by the Forest Service. At a minimum, the Plan shall address:

- Clearings, spoil piles, and project facilities including diversion structures, penstocks, pipes, ditches, powerhouses, other buildings, transmission line corridors, fish ladders and access roads,
- Facility configurations, alignments, building materials, colors, landscaping, and screening,
- Proposed mitigation and implementation schedules necessary to bring project facilities into compliance with Targhee National Forest Land and Resource Management Plan direction and provide protection of scenic value, one of the outstanding and remarkable values (ORV's) of the eligible Wild Henry's Fork and Buffalo Rivers. The plan will include measures to protect visual resources during construction that involve ground disturbance and vegetation removal.

Mitigation measures shall include, but are not limited to:

- Surface materials and colors of the exterior of the powerhouse,
- Use of native plant materials to screen facilities from view,
- Surface treatment colors and use of native rock on new concrete exposures,
- Use of barrier rocks around parking area,
- Reshaping and revegetating disturbed areas

Condition No. 14 - Fish Screen for Diversion Structure

The Licensee shall install a screen device on the intake structure of the penstock to prevent entrainment of salmonid fingerlings into the conduit and penstock systems. The intake shall be screened with openings no greater than 0.25 inches. Screen design shall be such that approach velocities do not exceed 0.80 feet per second. The licensee shall provide for the frequent removal of debris and trash in order to constantly maintain proper approach velocities. The fish screen design and a plan for monitoring fish mortality associated with the fish screen will be developed in consultation with the USDA Forest Service, Idaho Fish and Game, and US Fish and Wildlife Service.

Within six months of license issuance the Licensee shall file with the Commission functional drawings for the design of the screen and the plan for monitoring fish mortality that have been approved by the USDA Forest Service, Idaho Fish and Game, and US Fish and Wildlife Service. The Commission may require modifications to the design. All facilities should be constructed by year two and fully operational to meet the approved design by year three of the license.

Condition No. 15 - Diversion Operation Plan

Within 1 year of license issuance the Licensee shall file with the Commission a Diversion Operation Plan that is approved by the Forest Service. At a minimum the Plan shall address:

- A policy and methodology for passing large woody debris fully intact over the dam as mentioned in license application,
- Methods for sediment flushing or removal,
- Procedures for flood conditions, methods of erosion prevention in the diversion area and spillway channel,
- Trash and debris removal, and
- An implementation schedule and maintenance program.

Upon Commission approval, the licensee shall implement the plan. The Commission may require changes to the plan to ensure adequate protection of the environmental, scenic and cultural values of the project area.

Condition No. 16 - Erosion Control Measures Plan

At least 90-days prior to any ground-disturbing activity, the Licensee shall file with the Commission an Erosion Control Measures Plan that is approved by the Forest Service. The Plan shall include measures to control erosion, stream sedimentation, dust, and soil mass movement. Upon approval, the Licensee shall implement the plan.

Condition No. 17 - Vegetation Management Plan

Prior to any ground-disturbing activity, the Licensee shall file with the Commission a Vegetation Management Plan that is approved by the Forest Service. At a minimum the Plan shall:

- Identify and prioritize (into high, moderate and low priority sites) all inadequately vegetated areas to be re-vegetated or rehabilitated along with an implementation schedule,

- List the species to be used along with planting locations, methods, and densities (emphasis shall be given to use of native species),
- Identify site preparation, irrigation, mulch, fertilizer, and herbivore protection requirements for plant establishment,
- Identify methods for prevention and control of noxious weeds. Treatment of existing infestations of highest priority weeds shall be initiated immediately upon approval of the vegetation management plan by the Commission,
- Identify all vegetation control methods the Licensee proposes to use at or along all project facilities,
- Explain re-vegetation and vegetation control methods and materials meet objectives for integrated noxious weed management, erosion control, wildlife habitat and other management direction,
- Develop a monitoring program to evaluate the effectiveness of re-vegetation, vegetation control, and noxious weed control measures, and
- Develop procedures for identification of additional measures that the licensee shall implement if monitoring reveals that re-vegetation and vegetation control is not successful or does not meet intended objectives.

Condition No. 18 - Protection of Threatened and Endangered Species Plan

Within 90-days prior to any ground-disturbing activity that may affect a federally listed or proposed species and their critical habitat, the Licensee shall file with the Commission a Threatened, Endangered, and Proposed for Listing Species Plan that is approved by the Forest Service in consultation with appropriate Federal and State agencies. This Plan shall describe how the Licensee shall coordinate, consult, and prepare a biological assessment evaluating the potential impact that any action may have on listed and proposed species and their habitat. At a minimum the plan shall:

- Develop procedures to minimize adverse effects to listed species,
- Ensure project-related activities shall meet restrictions included in site management plans for listed species,
- Develop implementation and effectiveness monitoring of measures taken or employed to reduce effects to listed species,
- Identify required elements contained within a biological assessment.
- All construction shall be timed to avoid conflicts with sensitive species.

Condition No. 19 – Forest Service Sensitive Species Biological Evaluation

Within 90-days prior to implementing any activity that may affect a Forest Service sensitive species and their habitat, the Licensee shall file with the Commission a biological evaluation (BE) for Sensitive Species that is approved by the Forest Service. At a minimum incorporate the following mitigation in the BE:

- Develop procedures to minimize adverse effects to sensitive species.
- Develop implementation and effectiveness monitoring of measures taken or employed to reduce effects to sensitive species.
- All construction shall be timed to avoid conflicts with sensitive species.

112 FERC ¶ 62,119
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Fall River Rural Electric Cooperative, Inc.

Project No. 1413-034

ORDER AMENDING ARTICLE 402

(Issued August 10, 2005)

On February 22, 2005, Northwest Power Services, Inc. (NPSI), on behalf of the Fall River Rural Electric Cooperative, Inc. (licensee), filed an application for amendment to articles 402 and 403 of the license¹ for the Buffalo River Hydroelectric Project, FERC No. 1413. The Buffalo River Project is located on the Buffalo River near its confluence with the Henry's Fork River, north of Ashton, in Fremont County, Idaho.

REQUIREMENTS

Articles 402 and 403 of the license currently read as follows:

Article 402. Project Operation. The licensee shall operate the project in a run-of-river mode for the protection of aquatic resources in the Buffalo River and Henry's Fork River in the project area. The licensee shall at all times act to minimize the fluctuation of the reservoir surface elevation by maintaining a discharge from the project so that, at any point in time, flows, as measured immediately downstream from the project dam and tailrace, when combined approximate the sum of inflows to the reservoir.

Run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement among the licensee, Idaho Department of Fish and Game, and U.S. Forest Service. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 403. Operational Compliance Monitoring Plan. Within six months of the effective date of this license, the licensee shall file for Commission approval an operational compliance monitoring plan.

The plan shall include at a minimum:

¹ 109 FERC ¶ 62,077 (2004).

- (1) a description of the exact location of each gage or measuring device, the method of calibration for each gage or measuring device, the frequency of recording for each gage or measuring device, and a monitoring schedule;
- (2) a description of how the project would maintain compliance with the operational requirement of Article 402;
- (3) a provision for maintaining a log of project operation and generation;
- (4) a provision for providing the gaging and project operation and generation data to the Idaho Department of Fish and Game (IDFG), U.S. Forest Service (Forest Service), U.S. Fish and Wildlife Service (FWS), and Idaho Department of Environmental Quality (IDEQ) within 30 days of the date of the agency's request for the data; and
- (5) an implementation schedule for the plan.

The licensee shall prepare the plan after consultation with the U.S. Geological Survey, IDFG, Forest Service, FWS, and IDEQ. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

A courtesy copy of the plan shall be filed with the Commission's D2SI-PRO and the Director, D2SI.

The Commission reserves the right to require changes to the plan. Implementation of the plan shall not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

PROPOSAL

NPSI proposes a minor modification to article 402. The second sentence of the first paragraph is proposed to read as follows:

The licensee shall at all times act to minimize the fluctuation of the reservoir surface elevation by maintaining a discharge from the project so that flows immediately downstream from the project dam and tailrace, when combined approximate the sum of inflows to the reservoir.

NPSI also proposes a modification to article 403. Paragraph (1) of the article is proposed to read as follows:

(1) a description of the exact location of each gage, or measuring device, located upstream of the project at the bridge on State Highway 20, the method and frequency of calibration for the gage or measuring device, the frequency of recording data for the gage or measuring device, and the schedule for providing the data to the Idaho Department of Fish and Game (IDFG), U.S. Forest Service (Forest Service), U.S. Fish and Wildlife Service (FWS), and Idaho Department of Environmental Quality (IDEQ);

DISCUSSION

The proposed modification to article 402 consists of the deletion of two phrases, “at any point in time” and “as measured”. The deletion of the phrase “at any point in time” would have the effect of relaxing the flow requirement somewhat. Currently, the licensee must meet the flow requirement at all times in order to satisfy the requirement “at any point in time”. However, NPSI states that the project is not equipped with automated gates to provide automatic flow transfer on shutdown. Consequently there is a short delay of approximately 20 to 30 minutes after plant shutdown for the forebay elevation to rise sufficiently so that flows over the spillway approximate the inflow to the reservoir. During this 20 to 30 minute period, the licensee could be found to be in non-compliance with the flow requirement of article 402. The deletion of the phrase “as measured” does not alter the definition of the minimum flow, although it may remove an implication that flows should be measured by gages in the tailrace and downstream of the dam.

NPSI provided copies of the proposed amendments to various resource agencies and stakeholder organizations. In summary, all of the organizations that provided comments support the proposed amendments. The Idaho Department of Fish and Game specifically commented that the proposed amendments will have no effects on the run-of-river status for operating the hydropower facility, nor on biota or ecology of the river within the project area. The Idaho Department of Environmental Quality specifically commented that the proposed amendments will not result in any actual changes in water quality, and that the amendments will not negatively impact fisheries resources. The

Henry's Fork Foundation specifically commented that the minor exception to run-of-river mode when the project goes off-line will result in little to no biological effect on fish. The proposed modification to article 402 would allow the licensee to remain compliant with the flow requirement by allowing flows to be measured and averaged over a longer period of time instead of measured at a single point in time. We concur. However, we believe the text "as measured" should not be deleted as we do not otherwise see how run-of-river operation could be verified (if not measured). If the licensee believes that the interpretation of that article requirement requires it to have a gage in both the tailrace and below the dam, it can address that when it files the Operational Compliance Monitoring Plan under article 403.

The proposed modification to article 403 consists of the addition of language specifying a gage at the bridge on State Highway 20, and including a schedule for providing data to the IDFG, Forest Service, FWS, and IDEQ. The proposed modification alters the references for "each gage" to "the gage". The proposed modification also alters the reference for a "monitoring schedule" to a "schedule for providing data."

Article 403 requires the licensee to file an Operational Compliance Monitoring Plan (Plan), with the plan requirements defined by the article paragraphs. Within the current requirements as defined by paragraph (1) of article 403, the licensee is free, and in fact is required, to specify the location of the gage as being at the bridge on State Highway 20 in the Operational Compliance Monitoring Plan. We see no need to amend the article to include this specification. Similarly, paragraph (4) of article 403 requires the Plan to include a provision for providing gaging data to the IDFG, Forest Service, FWS, and the IDEQ, and we see no need to amend the article to include this requirement in paragraph (1). Furthermore, the licensee should still be required to indicate a monitoring schedule in the Plan. Therefore, the proposed modifications to article 403 should not be approved.

The Director Orders:

- (A) The first paragraph of article 402 is amended to read:

Article 402. Project Operation. The licensee shall operate the project in a run-of-river mode for the protection of aquatic resources in the Buffalo River and Henry's Fork River in the project area. The licensee shall at all times act to minimize the fluctuation of the reservoir surface elevation by maintaining a discharge from the project so that flows as measured immediately downstream

from the project dam and tailrace, when combined approximate the sum of inflows to the reservoir.

(B) The proposed amendment to article 403 is denied.

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

William Guey-Lee
Chief, Engineering and Jurisdiction Branch
Division of Hydropower Administration
and Compliance

ORIGINAL



Northwest Power Services, Inc.

FILED
OFFICE OF THE
SECRETARY

2005 JUL 28 P 1:37

FEDERAL ENERGY
REGULATORY COMMISSION

July 27, 2005

Ms. Magalie R Salas, Secretary
Federal Energy Regulatory Commission
Mail Code: DHAC, PJ-12
888 First Street, NE
Washington, DC 20426

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Ms. Salas,

Please find enclosed a copy of the Forest Service Special-use authorization (USFS Condition #5) and the Road Use Permit (USFS Condition #8) for the Buffalo River Hydroelectric Project, FERC Project #1413.

-047

If you have any questions or need additional information please contact me at (208) 745-0834 or e-mail me at bsmith@nwpservices.com.

Sincerely,

NORTHWEST POWER SERVICES, INC.

Brent L. Smith

Brent L. Smith
President

cc: Mr. Dec Reynolds, Fall River Electric



United States
Department of
Agriculture

Forest
Service

Ashton/Island Park
Ranger
District

P.O. Box 858
Ashton, ID 83420

File Code: 2770

Date: July 22, 2005

Brent Smith
Northwest Power Services Inc.
P. O. Box 535
Rigby, ID 83442

FILED THE
OFFICE OF THE
SECRETARY
2005 JUL 28 P 1:37
FEDERAL ENERGY
REGULATORY COMMISSION

Dear Brent,

Enclosed please find a signed copy of the Special Use Authorization for the Operation and Maintenance of the Buffalo River Hydroelectric Project. This authorization is valid for the term of the license for the project. This copy is for your records.

Bill Davis met with you on the site to discuss the trees that would have to be removed to facilitate the construction that will occur. As Bill discussed with it is our desire to remove the least amount of trees as possible.

Also enclosed you will find copies of the road use agreements for the Riverside Road and BOR Road. The Riverside Road is the road you will be using for the construction phase of the project. As Bill discussed with the permit identifies some improvements that will be required to be completed prior to the start of construction. The permit for the BOR road also identifies improvements that will be required for that road to be used for ongoing operation and maintenance over the life of the project.

It is our understanding that you anticipate starting construction August 1 pending a start work order from FERC. We would anticipate hearing from you prior to then on more specifics related to the start of construction. We look forward to working with you during this next phase of the project.

If you have any questions please contact Lee Mabey or Bill Davis.

Sincerely,

for ADRIENNE K. KELLER
District Ranger

Cc: Lee Mabey



Authorization ID:
Contact ID: BUFFALO RIVER HYDRO
Expiration Date: 10/31/2044
Use Code: 611

FS-2700-4 (05/03)
OMB 0596-0082

U.S. DEPARTMENT OF AGRICULTURE
Forest Service
SPECIAL USE PERMIT
AUTHORITY:
FEDERAL LAND POLICY AND MGMT ACT, AS AMENDED October 21, 1976

Fall River Rural Electric Cooperative, Inc. of C/O Northwest Power Services, Inc., BRENT L. SMITH, PRESIDENT, 4110 EAST 300 NORTH, RIGBY, ID 83442 (hereinafter called the Holder) is hereby authorized to use or occupy National Forest System lands, to use subject to the conditions set out below, on the Ashton/Island Park Ranger District of the Caribou-Targhee National Forest System.

This permit covers 9.8 acres, and is described as the Buffalo River Hydroelectric Project. The facilities include: 1) One generating unit with 250 Kw capacity; 2) Inclined tubular, fixed blade propeller hydraulic turbine; 3) Timber-faced, rock-filled dam, 12-foot-high by 142-foot-long, including a fish ladder; 4) A 40-foot-long stop log gated, flat concrete spillway; 5) A concrete intake structure with 5-foot slide gate and trash screen with two inch wide openings; 6) A 5-foot-diameter concrete encased steel pipe penstock which is 52 feet in length; 7) A 34-foot-long by 22-foot-high concrete/masonry powerhouse building; 8) A 12.5 KV underground transmission power line which is 1,080 feet long to utility inter-tie; for the purpose of: Operating and Maintaining the Buffalo River Hydroelectric Facility for power production.

The above described or defined area shall be referred to herein as the "permit area". See Exhibit A for map.

In addition the following documents are attached to and made a part of this authorization:
Exhibit B – Fire Plan
Exhibit C – Site Plan
Exhibit D – Construction Plan

TERMS AND CONDITIONS

I. AUTHORITY AND GENERAL TERMS OF THE PERMIT

- A. Authority. This permit is issued pursuant to the authorities enumerated at Title 36, Code of Federal Regulations, Section 251 Subpart B, as amended. This permit, and the activities or use authorized, shall be subject to the terms and conditions of the Secretary's regulations and any subsequent amendment to them.
- B. Authorized Officer. The authorized officer is the Forest Supervisor or a delegated subordinate officer.
- C. License. This permit is a license for the use of federally owned land and does not grant any permanent, possessory interest in real property, nor shall this permit constitute a contract for purposes of the Contract Disputes Act of 1978 (41 U.S.C. 611). Loss of the privileges granted by this permit by revocation, termination, or suspension is not compensable to the holder.
- D. Amendment. This permit may be amended in whole or in part by the Forest Service when, at the discretion of the authorized officer, such action is deemed necessary or desirable to incorporate new terms, conditions, and stipulations as may be required by law, regulation, land management plans, or other management decisions.
- E. Existing Rights. This permit is subject to all valid rights and claims of third parties. The United States is not liable to the holder for the exercise of any such right or claim.
- F. Nonexclusive Use and Public Access. Unless expressly provided for in additional terms, use of the permit area is not exclusive. The Forest Service reserves the right to use or allow others to use any part of the permit area, including roads, for any purpose, provided, such use does not materially interfere with the holder's authorized use. A final determination of conflicting uses is reserved to the Forest Service.

area, including roads, for any purpose, provided, such use does not materially interfere with the holder's authorized use. A final determination of conflicting uses is reserved to the Forest Service.

G. Forest Service Right of Entry and Inspection. The Forest Service has the right of unrestricted access of the permitted area or facility to ensure compliance with laws, regulations, and ordinances and the terms and conditions of this permit.

H. Assignability. This permit is not assignable or transferable. If the holder through death, voluntary sale or transfer, enforcement of contract, foreclosure, or other valid legal proceeding ceases to be the owner of the improvements, this permit shall terminate.

I. Permit Limitations. Nothing in this permit allows or implies permission to build or maintain any structure or facility, or to conduct any activity unless specifically provided for in this permit. Any use not specifically identified in this permit must be approved by the authorized officer in the form of a new permit or permit amendment.

II. TENURE AND ISSUANCE OF A NEW PERMIT

A. Expiration at the End of the Authorized Period. This permit will expire at midnight on 10/31/2044. Expiration shall occur by operation of law and shall not require notice, any decision document, or any environmental analysis or other documentation.

B. Minimum Use or Occupancy of the Permit Area. Use or occupancy of the permit area shall be exercised at least N/A days each year, unless otherwise authorized in writing under additional terms of this permit.

C. Notification to Authorized Officer. If the holder desires issuance of a new permit after expiration, the holder shall notify the authorized officer in writing not less than six (6) months prior to the expiration date of this permit.

D. Conditions for Issuance of a New Permit. At the expiration or termination of an existing permit, a new permit may be issued to the holder of the previous permit or to a new holder subject to the following conditions:

1. The authorized use is compatible with the land use allocation in the Forest Land and Resource Management Plan.
2. The permit area is being used for the purposes previously authorized.
3. The permit area is being operated and maintained in accordance with the provisions of the permit.
4. The holder has shown previous good faith compliance with the terms and conditions of all prior or other existing permits, and has not engaged in any activity or transaction contrary to Federal contracts, permits laws, or regulations.

E. Discretion of Forest Service. Notwithstanding any provisions of any prior or other permit, the authorized officer may prescribe new terms, conditions, and stipulations when a new permit is issued. The decision whether to issue a new permit to a holder or successor in interest is at the absolute discretion of the Forest Service.

F. Construction. Any construction authorized by this permit may commence by 8/1/05 and shall be completed by 10/31/06. If construction is not completed within the prescribed time, this permit may be revoked or suspended.

III. RESPONSIBILITIES OF THE HOLDER

A. Compliance with Laws, Regulations, and other Legal Requirements. The holder shall comply with all applicable Federal, State, and local laws, regulations, and standards, including but not limited to, the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., the Resource Conservation and Recovery Act, 42 U.S.C. 6901 et seq., the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. 9601 et seq., and other relevant environmental laws, as well as public health and safety laws and other laws relating to the siting, construction, operation, and maintenance of any facility, improvement, or equipment on the property.

B. Plans. Plans for development, layout, construction, reconstruction, or alteration of improvements on the permit area, as well as revisions of such plans, must be prepared by a qualified individual acceptable to the authorized officer and shall be approved in writing prior to commencement of work. The holder may be required to furnish as-built plans, maps, or surveys, or other similar information, upon completion of construction.

C. Maintenance. The holder shall maintain the improvements and permit area to standards of repair, orderliness, neatness, sanitation, and safety acceptable to the authorized officer and consistent with other provisions of this authorization. If requested, the holder shall comply with inspection requirements deemed appropriate by the authorized officer.

D. Hazard Analysis. The holder has a continuing responsibility to identify all hazardous conditions on the permit area, which would affect the improvements, resources, or pose a risk of injury to individuals. Any non-emergency actions to abate such hazards shall be performed after consultation with the authorized officer. In emergency situations, the holder shall notify the authorized officer of its actions as soon as possible, but not more than 48 hours, after such actions have been taken.

E. Change of Address. The holder shall immediately notify the authorized officer of a change in address.

F. Change in Ownership. This permit is not assignable and terminates upon change of ownership of the improvements or control of the business entity. The holder shall immediately notify the authorized officer when a change in ownership or control of business entity is pending. Notification by the present holder and potential owner shall be executed using Form SF-299 Application for Transportation and Utility Systems and Facilities of Federal Lands, or Form FS-2700-3a, Holder Initiated Revocation of Existing Authorization, Request for a Special Use Permit. Upon receipt of the proper documentation, the authorized officer may issue a permit to the party who acquires ownership of, or a controlling interest in, the improvements or business entity.

IV. LIABILITY

For purposes of this section, "holder" includes the holder's heirs, assigns, agents, employees, and contractors.

A. The holder assumes all risk of loss to the authorized improvements.

B. The holder shall indemnify, defend, and hold the United States harmless for any violations incurred under any such laws and regulations or for judgments, claims, or demands assessed against the United States in connection with the holder's use or occupancy of the property. The holder's indemnification of the United States shall include any loss by personal injury, loss of life or damage to property in connection with the occupancy or use of the property during the term of this permit. Indemnification shall include, but is not limited to, the value of resources damaged or destroyed; the costs of restoration, cleanup, or other mitigation; fire suppression or other types of abatement costs; third party claims and judgments; and all administrative, interest, and other legal costs. This paragraph shall survive the termination or revocation of this authorization, regardless of cause.

C. The holder has an affirmative duty to protect from damage the land, property, and interests of the United States.

The holder shall maintain \$1 million worth of insurance coverage, naming the United States additionally insured on the policy(ies), to partially fund the indemnification obligations of the holder for any and all losses due to personal injury, loss of life, or property damage, including fire suppression and hazardous waste costs. The holder shall furnish proof of insurance (such as a surety bond, or certificate of insurance) to the authorized officer prior to execution of this permit and verify annually, and in writing, the insurance obligation to the authorized officer. The authorized officer may allow the holder to replace, repair, restore, or otherwise undertake necessary curative actions, to the satisfaction of the authorized officer, in order to mitigate damages in addition to or as an alternative to monetary indemnification.

The holder shall be strictly liable (liability without proof of negligence) to the United States for any injury, loss, or damage arising under this authorization. Such strict liability shall be in the amount of \$1 million unless the Forest Supervisor determines at the time of issuance of this authorization that a lesser amount of strict liability is appropriate based upon a risk assessment for the use authorized by this instrument. Liability for injury, loss, or damage to the United States in excess of the prescribed amount of strict liability shall be determined under the general law of negligence.

D. In the event of any breach of the conditions of this authorization by the holder, the authorized officer may, on reasonable notice, cure the breach for the account at the expense of the holder. If the Forest Service at any time pays any sum of money or does any act which will require payment of money, or incurs any expense, including reasonable attorney's fees, in instituting, prosecuting, and/or defending any action or proceeding to enforce the

United States rights hereunder, the sum or sums so paid by the United States, with all interests, costs and damages shall, at the election of the Forest Service, be deemed to be additional fees hereunder and shall be due from the holder to the Forest Service on the first day of the month following such election.

E. With respect to roads, the holder shall be proportionally liable for damages to all roads and trails of the United States open to public use caused by the holder's use to the same extent as provided above, except that liability shall not include reasonable and ordinary wear and tear.

F. The Forest Service has no duty to inspect the permit area or to warn of hazards and, if the Forest Service does inspect the permit area, it shall incur no additional duty nor liability for identified or non-identified hazards. This covenant may be enforced by the United States in a court of competent jurisdiction.

V. TERMINATION, REVOCATION, AND SUSPENSION

A. General. For purposes of this permit, "termination", "revocation", and "suspension" refer to the cessation of uses and privileges under the permit.

"Termination" refers to the cessation of the permit under its own terms without the necessity for any decision or action by the authorized officer. Termination occurs automatically when, by the terms of the permit, a fixed or agreed upon condition, event, or time occurs. For example, the permit terminates at expiration. Terminations are not appealable.

"Revocation" refers to an action by the authorized officer to end the permit because of noncompliance with any of the prescribed terms, or for reasons in the public interest. Revocations are appealable.

"Suspension" refers to a revocation, which is temporary, and the privileges may be restored upon the occurrence of prescribed actions or conditions. Suspensions are appealable.

B. Revocation or Suspension. The Forest Service may suspend or revoke this permit in whole or part for:

1. Noncompliance with Federal, State, or local laws and regulations.
2. Noncompliance with the terms and conditions of this permit.
3. Reasons in the public interest.
4. Abandonment or other failure of the holder to otherwise exercise the privileges granted.

C. Opportunity to Take Corrective Action. Prior to revocation or suspension for cause pursuant to Section V (B), the authorized officer shall give the holder written notice of the grounds for each action and a reasonable time, not to exceed 90 days, to complete the corrective action prescribed by the authorized officer.

D. Removal of Improvements. Prior to abandonment of the improvements or within a reasonable time following revocation or termination of this authorization, the holder shall prepare, for approval by the authorized officer, an abandonment plan for the permit area. The abandonment plan shall address removal of improvements and restoration of the permit area and prescribed time frames for these actions. If the holder fails to remove the improvements or restore the site within the prescribed time period, they become the property of the United States and may be sold, destroyed or otherwise disposed of without any liability to the United States. However, the holder shall remain liable for all cost associated with their removal, including costs of sale and impoundment, cleanup, and restoration of the site.

VI. FEES

A. Termination for Nonpayment. This permit shall automatically terminate without the necessity of prior notice when land use rental fees are 90 calendar days from the due date in arrears.

B. Fees, Licensed Projects (K31). The holder shall pay annually, in advance, a sum determined by the Forest Service to be the fair market value of the use rights granted by this permit. As long as the holder makes payments, in accordance with Section 10(e) of the Federal Power Act, to the Federal Energy Regulatory Commission (FERC) for the use of this land in an amount determined to be the approximate fair market rental of the lands, the fee for this permit is waived in its entirety pursuant to 36 CFR 251.57, or revisions thereto, and direction in FSH 2709.11, Chapter 30. In the event the Forest Service determines that payments to FERC are

significantly less than fair market rental or if the holder discontinues such payments, the Forest Service reserves the right to establish an appropriate fee and appropriate conditions of payment. Any fees paid by the holder to FERC shall be credited toward the fee due from the holder for this permit.

C. Payment Due Date. The payment due date shall be the close of business on r/a of each calendar year payment is due. Payments due the United States for this use shall be deposited at USDA - FS, File 71652, P.O. Box 60000, San Francisco, CA 94160-1652, in the form of a check, draft, or money order payable to "Forest Service, USDA." Payments shall be credited on the date received by the designated Forest Service collection officer or deposit location. If the due date for the fee or fee calculation statement falls on a non-workday, the charges shall not apply until the close of business on the next workday.

D. Late Payment Interest, Administrative Costs and Penalties Pursuant to 31 U.S.C. 3717, *et seq.*, interest shall be charged on any fee amount not paid within 30 days from the date the fee or fee calculation financial statement specified in this authorization becomes due. The rate of interest assessed shall be the higher of the rate of the current value of funds to the U.S. Treasury (i.e., Treasury tax and loan account rate), as prescribed and published by the Secretary of the Treasury in the Federal Register and the Treasury Fiscal Requirements Manual Bulletins annually or quarterly or at the Prompt Payment Act rate. Interest on the principal shall accrue from the date the fee or fee calculation financial statement is due.

In the event the account becomes delinquent, administrative costs to cover processing and handling of the delinquency will be assessed.

A penalty of 6 percent per annum shall be assessed on the total amount delinquent in excess of 90 days and shall accrue from the same date on which interest charges begin to accrue.

Payments will be credited on the date received by the designated collection officer or deposit location. If the due date for the fee or fee calculation statement falls on a non-workday, the charges shall not apply until the close of business on the next workday.

Disputed fees are due and payable by the due date. No appeal of fees will be considered by the Forest Service without full payment of the disputed amount. Adjustments, if necessary, will be made in accordance with settlement terms or the appeal decision.

If the fees become delinquent, the Forest Service will:

Liquidate any security or collateral provided by the authorization.

If no security or collateral is provided, the authorization will terminate and the holder will be responsible for delinquent fees as well as any other costs of restoring the site to its original condition including hazardous waste cleanup.

Upon termination or revocation of the authorization, delinquent fees and other charges associated with the authorization will be subject to all rights and remedies afforded the United States pursuant to 31 U.S.C. 3711 *et seq.* Delinquencies may be subject to any or all of the following conditions:

Administrative offset of payments due the holder from the Forest Service.

Delinquencies in excess of 60 days shall be referred to United States Department of Treasury for appropriate collection action as provided by 31 U.S.C. 3711 (g), (1).

The Secretary of the Treasury may offset an amount due the debtor for any delinquency as provided by 31 U.S.C. 3720, *et seq.*)

VII. OTHER PROVISIONS

A. Members of Congress. No Member of or Delegate to Congress or Resident Commissioner shall benefit from this permit either directly or indirectly, except when the authorized use provides a general benefit to a corporation.

- B. Appeals and Remedies. Any discretionary decisions or determinations by the authorized officer are subject to the appeal regulations at 36 CFR 251, Subpart C, or revisions thereto.
- C. Superior Clauses. In the event of any conflict between any of the preceding printed clauses or any provision thereof and any of the following clauses or any provision thereof, the preceding printed clauses shall control.
- D. Fire Plan Part of Authorization (K1). A project fire plan describing the holder's responsibilities for prevention and suppression of fires, developed by the holder, and subject to Forest Service approval, shall become part of this authorization, as Exhibit B to be attached hereto. The holder shall obtain Forest Service approval for said plan before beginning any on-the-ground construction and shall strictly follow its terms.
- E. Designation of Construction Manager (K2). The holder shall designate a construction manager for project construction. This individual shall be qualified to represent the holder and shall be present or have a qualified acting representative present at all times while project construction activities are taking place. This individual shall be the person who receives the on-the-ground approvals and directions from the designated Forest Service representative(s).
- F. Construction inspection by Holder (K3). The holder shall perform daily (or on a schedule otherwise agreed to by the Forest Service in writing) inspections of holder's operations while they are proceeding. The holder shall document these inspections (informal writing sufficient) and shall deliver such documentation to the Forest Service on a weekly basis. The inspections must specifically include fire plan compliance, public safety, and environmental protection. The holder shall act immediately to correct any items found to need correction.
- G. Revised Permit Boundary (K4). Within one year of completion of construction, the holder shall provide Forest Service with as-built plans showing right-of-way limits and facility locations of all permitted facilities.
- H. Protection of Wildlife and Plant Species (K5). If threatened, endangered, or sensitive (as defined in the Forest Service manual) wildlife and plant species are found during use under this authorization, the holder shall notify the Forest Service and shall take immediate measures to protect said species as directed by the Forest Service.
- I. Additional Threatened, Endangered and Sensitive Species Documentation
Where additional Forest Service authorization is required to implement activities subsequent to issuance of the license, the Holder shall provide a biological assessment (BA) in accordance with Forest Service direction for any activity that may affect species listed or proposed for listing under the Endangered Species Act (ESA, Pub.L. 93-205, 12-28-73), or its critical habitat as a condition of obtaining Forest Service authorization. Likewise, as a condition of obtaining Forest Service authorization for any activity which may impact species determined by the Forest Service to be sensitive, or its habitat, the Holder shall provide a biological evaluation (BE) in accordance with Forest Service direction. Any Holder-provided BA or BE shall be subject to Forest Service approval.
- J. Esthetics (K6). The holder shall conserve the scenic and esthetic values of the area under this permit during construction, operation, and maintenance of the project improvements.
- K. Surveys, Land Corners (K7). The holder shall protect, in place, all public land survey monuments, private property corners, and forest boundary markers. In the event that any such land markers or monuments are destroyed in the exercise of the privileges authorized by this authorization, depending on the type of monument destroyed, the holder shall reestablish or reference same in accordance with (1) the procedures outlined in the "Manual of Instruction for the Survey of the Public Land of the United States," (2) the specifications of the County Surveyor, or (3) the specifications of the Forest Service. Further, the holder shall ensure that any official survey records affected are amended as provided by law.
- L. Traffic Safety (K8). When construction is in progress adjacent to or on Forest Service controlled roads open to public travel, the holder shall furnish, install, and maintain temporary traffic controls to provide the public with adequate warning and protection from hazardous or potentially hazardous conditions associated with the holder's operations. Devices must be appropriate to current conditions and must be covered or removed when not needed. Except as otherwise agreed, flagmen and devices must be as specified in the "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD).

M. Signs (K11). The holder shall erect no signs or advertising devices on the area covered by this permit without prior approval of the Forest Service as to location, design, size, color, and message. The holder shall maintain or renew erected signs as necessary to neat and presentable standards.

N. Project Safety (K13). The holder shall carry out all operations in a skillful manner, having due regard for the safety of employees and the public, and shall safeguard unsafe areas. The holder shall regularly inspect its facilities and provide further effective safety measures as needed for safety protection.

O. Timber Cutting by Holder (K17). The holder agrees, as directed by the Forest Service, to cut into commercially usable lengths and deck for disposal by the Forest Service any and all merchantable timber, not purchased by the holder, which is cut from the National Forest lands occupied hereunder. The Forest Service shall dispose of this material, provided that the Forest Service may sell or otherwise dispose of standing merchantable timber to third parties when it is possible to fell and remove such timber without undue interference with the operations of the holder. Unmerchantable material, including tops and branches, shall be disposed of by the holder by removing from site.

P. Pollution (K19). The holder shall discharge no waste or byproduct if it contains any substances in concentrations that would result in violation of water quality standards set forth by the State; would impair present or future beneficial uses of water; would cause pollution, nuisance, or contamination; or would unreasonably degrade the quality of any waters. During the construction and operation of the project, the holder shall protect project water quality by using the existing best management practices mutually agreed to by the Forest Service and the State.

Q. Erosion Control, Topsoil Revegetation (K20). The holder shall be responsible for the prevention and control of soil erosion, caused either directly or indirectly by construction or operation of the project, and shall provide preventive and control measures as required by the Forest Service.

The holder shall strip topsoil from construction areas and deposit it in storage piles apart from other excavated material. After removing the desired amount of material, the holder shall evenly spread the stored topsoil over exposed subsoil in appropriate areas to the extent practicable, and shall revegetate the area disturbed.

To the extent practicable on National Forest System lands, the holder shall establish a vegetative cover on all cut and fill slopes, borrow areas, and other disturbed areas capable of growing a vegetative cover of grasses or other suitable vegetation, as required by the Forest Service. The holder shall seed or plant at a time of the year, in a manner, and with species that the Forest Service considers offers the best chance of success. The holder shall repeat such seeding and planting regularly, as conditions allow, until such areas are accepted in writing by the Forest Service as satisfactorily revegetated and stabilized.

The holder shall install erosion control measures for adverse weather conditions by _____, each year and keep them current with the operation until the Forest Service notifies the holder that the adverse conditions of that season are over.

R. Pesticides-Use Restrictions (K23). Pesticides may not be used to control undesirable woody and herbaceous vegetation, aquatic plants, insects, rodents, trash fish, and so forth, without the prior written approval of the Forest Service. The holder shall submit a request for approval of planned uses of pesticides. The report must cover annual planned use and be updated as required by the Forest Service. The holder shall provide information essential for review in the form specified. Exceptions to this schedule may be allowed only when unexpected outbreaks of pests require control measures that were not anticipated at the time the report was submitted. In such an instance, an emergency request and approval may be made.

On National Forest System lands, the holder shall use only those materials registered by the U. S. Environmental Protection Agency for the specific purpose planned. The holder must strictly follow label instructions in the preparation and application of pesticides and disposal of excess materials and containers.

S. Plans, Part of Authorization (K24). The holder shall prepare the following plans in consultation with Forest Service and other appropriate agencies: Site Plan, Construction Plan

The holder shall submit these plans for Forest Service approval by 8/1/2005. Said plans shall be attached hereto and marked as Exhibits, C & D respectively.

T. Suspension/Revocation (K27). The Forest Service may temporarily suspend construction/reconstruction and/or terminate the special-use authorization without administrative proceedings upon breach of any of the condition herein.

U. Water Rights (K28). This authorization confers no ownership of the water to the holder. Construction may begin after the holder provides the authorized officer with a sufficient showing that the holder has right to use the water.

V. Improvement Relocation (K29). The Forest Service grants this permit with the express understanding that should future location of government improvements or road rights-of-way require the relocation or adjustment of the holder's linear-type improvements (such as transmission lines, penstocks, pipelines, ditches, or roads), the holder shall relocate at the holder's expense within 180 days following written request to relocate.

W. Permit Term, Licensed Project (K32). Unless sooner canceled or terminated by the authorized officer, in accordance with the provisions of the permit, the term of this permit shall be concurrent with the Federal Energy Regulatory Commission (FERC) license No. P-1413 and become void on 12/31/2044; but the Forest Service may grant a new permit to occupy and use the same National Forest System land, provided that FERC grants a new license under the Federal Power Act. The new permit must comply with the laws and regulations governing the occupancy and use of National Forest System lands at that time.

X. Hazard Analysis (K33). Avalanches, rising waters, high winds, falling limbs or trees, and other hazards are natural phenomena in the forest that present risks to the holders property that the holder hereby assumes. The holder is responsible for inspecting its site, right-of-way, and the immediate adjoining area for dangerous conditions, hanging limbs, and other evidence of hazardous conditions and, after securing permission from the Forest Service, is responsible for removing such hazards.

Y. Use of Explosives (K37).

- a. The holder shall use only electronic detonators for blasting, except near high-voltage powerlines. The Forest Service may allow specific exceptions when in the public interest.
- b. In the use of explosives, the holder shall exercise the utmost care not to endanger life or property and shall comply with the requirements of the Forest Service. The holder shall be responsible for any and all damages resulting from the use of explosives and shall adopt precautions to prevent damage to surrounding objects. The holder shall furnish and erect special signs to warn the public of the holder's blasting operations. The holder shall place and maintain signs so they are clearly evident to the public during all critical periods of the blasting operations, and shall ensure that they include a warning statement to have radio transmitters turned off.
- c. The holder shall store all explosives in a secure manner, in compliance with State and local laws and ordinances, and shall mark all such storage places "Dangerous - Explosives." Where no local laws or ordinances apply; the holder shall provide storage that is satisfactory to the authorized officer and in general not closer than 1,000 feet from the road or from any building or camping area.
- d. When using explosives, the holder shall adopt precautions to prevent damage to landscape features and other surrounding objects. When directed by the authorized officer, the holder shall leave trees within an area designated to be cleared as a protective screen for surrounding vegetation during blasting operations. The holder shall remove and dispose of trees so left when blasting is complete. When necessary, and at any point of special danger, the holder shall use suitable mats or some other approved method to smother blasts.

Z. Road Use by Government (K38). The United States shall have unrestricted use of the said right-of-way and any road constructed thereon for all purposes deemed necessary or desirable in connection with the protection, administration, management, and utilization of Federal lands or resources and alone shall have the right to extend rights and privileges for use of the right-of-way and road thereon to States and local subdivisions thereof, as well as to other users, including members of the public, except contractors, agents, and employees of the holder; provided, that the agency having jurisdiction shall control such use so as not unreasonably to interfere with use of

the road by the holder or cause the holder to bear a share of the cost of maintenance greater than the holder's use bears to all use of the road.

AA. Unattended Construction Equipment (K39). The holder shall not place construction equipment on National Forest land prior to actual use or allow it to remain on National Forest land subsequent to actual use. The holder shall remove equipment from National Forest System land unless a permit is issued for equipment storage.

BB. Nondiscrimination in Employment (K42). In connection with the performance of work under this permit, including construction, maintenance, and operation of the facility, the holder shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, age, or handicap in accordance with the Civil Rights Act of 1964, as amended.

CC. Permit Amendment, Licensed Project (K44). The Regional Forester may review the terms and conditions of this permit upon any modification of project facilities or after 30 years from the date of issuance. At such time, the Regional Forester may incorporate in the permit such new terms, conditions, and stipulations as existing or prospective conditions may warrant; provided, that such modification shall not unreasonably reduce the use herein authorized.

DD. Archaeological-Paleontological Discoveries (X17). The holder shall immediately notify the authorized officer of any and all antiquities or other objects of historic or scientific interest. These include, but are not limited to, historic or prehistoric ruins, fossils, or artifacts discovered as the result of operations under this authorization, and shall leave such discoveries intact until authorized to proceed by the authorized officer. Protective and mitigative measures specified by the authorized officer shall be the responsibility of the holder.

EE. Access (X-19). The holder agrees to permit the free and unrestricted access to and upon the premises at all times for all lawful and proper purposes not inconsistent with the intent of the permit or with the reasonable exercise and enjoyment by the holder of the privileges thereof.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0506-0082.

This information is needed by the Forest Service to evaluate requests to use National Forest System lands and manage those lands to protect natural resources, administer the use, and ensure public health and safety. This information is required to obtain or retain a benefit. The authority for that requirement is provided by the Organic Act of 1897 and the Federal Land Policy and Management Act of 1976, which authorize the Secretary of Agriculture to promulgate rules and regulations for authorizing and managing National Forest System lands. These statutes, along with the Term Permit Act, National Forest Ski Area Permit Act, Granger-Thye Act, Mineral Leasing Act, Alaska Term Permit Act, Act of September 3, 1954, Wilderness Act, National Forest Roads and Trails Act, Act of November 16, 1973, Archaeological Resources Protection Act, and Alaska National Interest Lands Conservation Act, authorize the Secretary of Agriculture to issue authorizations for the use and occupancy of National Forest System lands. The Secretary of Agriculture's regulations at 36 CFR Part 251, Subpart B, establish procedures for issuing those authorizations.

The Privacy Act of 1974 (5 U.S.C. 552a) and the Freedom of Information Act (5 U.S.C. 552) govern the confidentiality to be provided for information received by the Forest Service Public reporting burden for collection of information, if requested, is estimated to average 1 hour per response for annual financial information; average 1 hour per response to prepare or update operation and/or maintenance plan; average 1 hour per response for inspection reports; and an average of 1 hour for each request that may include such things as reports, logs, facility and user information, sublease information, and other similar miscellaneous information requests. This includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

This permit is accepted subject to the conditions set out above.

Date 7-20-05 FALL RIVER RURAL ELECTRIC COOPERATIVE, INC.

(CORPORATE SEAL)

By *[Signature]*
(Vice) President *General Manager/CEO*

ATTEST:

(Assistant) Secretary

The following certificate shall be executed by the Secretary or Assistant Secretary of the Corporation:

I _____ certify that I am the _____ Secretary of the Corporation that executed the above permit; that who signed said permit on behalf of said Corporation was then _____ of said Corporation; that I know his/her signature on said permit is genuine; and that said permit was duly signed, sealed, and attested to for and on behalf of said Corporation by authority of its governing body

(CORPORATE SEAL)

(Assistant Secretary)

U. S. DEPARTMENT OF AGRICULTURE
Forest Service

By *[Signature]*
(Authorized Officer Signature)

ES
(Title)
7/21/05
(Date)

LARGE-FORMAT IMAGES

One or more large-format images (over 8½" X 11") go here. These images are available in E-Library at:

For Large-Format(s):

Accession No.: 20050729-0196

Security/Availability:

- PUBLIC
- NIP
- CEII
- NON-PUBLIC/PRIVILEGED

File Date: 7-28-05 Docket No.: P-1413

Parent Accession No.: 20050729-0195

Set No.: 1 of 1

Number of page(s) in set: 1

EXHIBIT B

Buffalo River Hydroelectric Project

FERC Project #1413

Fire Plan



Prepared for:

Fall River Rural Electric Cooperative, Inc.
Ashton, Idaho

Prepared by:

Northwest Power Services, Inc.
Rigby, Idaho

June 2005

Buffalo River Hydroelectric Project

FERC Project No. 1413

Fire Plan

Prepared for:

**Fall River Rural Electric Cooperative, Inc.
1150 North 3400 East
Ashton, Idaho 83420**

Prepared by:

**Northwest Power Services, Inc.
PO Box 535
Rigby, Idaho 83442**

Fire Plan

1.0 Existing Conditions

The 250-kilowatt (kW) run-of-river Buffalo River Hydroelectric Project is located on the Buffalo River near its confluence with the Henry's Fork of the Snake River, north of Ashton, in Fremont County, Idaho. The powerhouse is built of concrete blocks with a metal roof and concrete foundation. The power line is buried or in conduit to the Pond's Substation.

2.0 Fire Hazards

The powerhouse, equipment inside the powerhouse, and the buried transmission line are not considered fire hazards. The rest of the project materials are either steel or concrete and therefore are not considered a fire hazard.

3.0 Fire Prevention

A fire extinguisher will be located inside the powerhouse, onsite operating personnel will observe the local surroundings for any sign of fire caused by lightning or any other circumstances.

4.0 Procedure in case of a Fire

In case of fire, onsite personnel will contact the Forest Service immediately. Attached as Exhibit A is an emergency contact list in the event of fire or any other emergency event that may effect Forest Service Lands.

EXHIBIT A
COMMUNICATIONS LIST

**OPERATION AND MAINTENANCE ADDENDUM – EXHIBIT A
FACILITY AND EMERGENCY TELEPHONE NUMBERS**

REVISION DATE 7-20-2005

Facility Operations:

- Buffalo River Hydroelectric Project – (208) 558-9272
- Island Park Hydroelectric Project – (208) 558-9183
- Northwest Power Services, Inc. "Brent Smith"- (208) 745-0834
- Fall River Rural Electric Co-op – (208) 652-7431

Emergency Events:

Fall River Rural Electric Co-op during office hour's use above list.

- Northwest Power Services, Inc. "Brent Smith" – (208) 745-0834
- Fall River Rural Electric Co-op- (208) 652-7431
after hours – 1-800-541-5188
- Brent Smith Mobile – (208) 521-2473
- Doug Cutler Mobile – (208) 521-6270
- Adrienne Keller-District Ranger- (208) 558-7301
- Ralph Davis- County Sheriff - (208) 624-4482
- Eastern Idaho Interagency Fire Dispatch - (208) 524-7600

Additional Contacts:

- Federal Energy Regulatory Commission – (503) 944-6700
- Harry T. Hall – (503) 552-2700
- Pat Regan – (503) 522-2741

EXHIBIT C

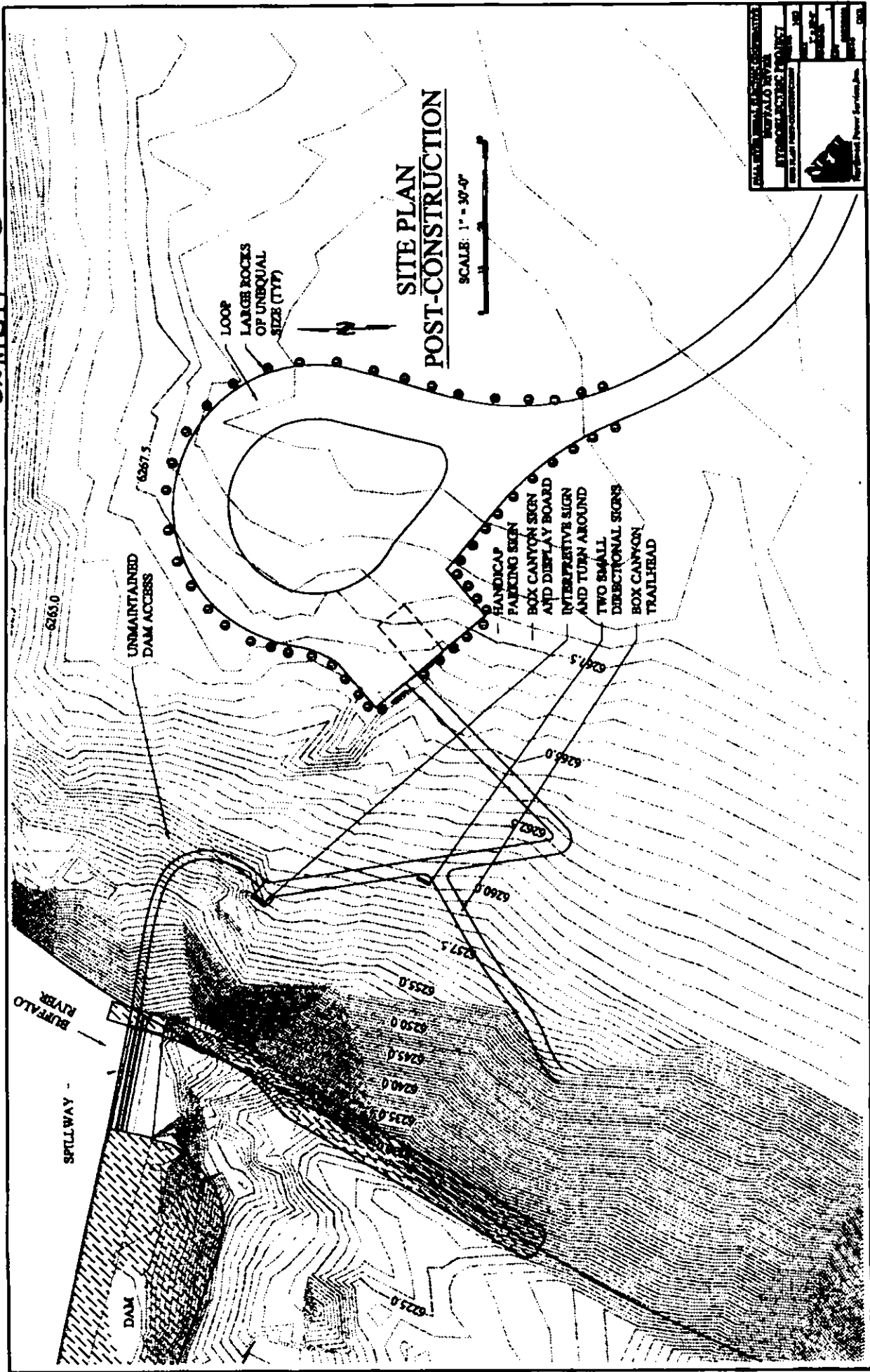


Figure 3

USDA Forest Service

FS-7700-41 (10/73)

ROAD USE PERMIT
(Ref: FSM 7770)

Authority: Acts of 6/30/14, 4/24/50, 6/12/60, and 10/14/64;
(16 U.S.C. 498, 572, 530, and 532-38 and
43 U.S.C. 1702, 1761, 1764, and 1765)

Fall River Rural Electric Cooperative
(Name)

of 1150N 3400E
Ashton, ID 83420
(Address and ZIP Code)

(hereafter called the permittee) is hereby granted use of the following road(s) or road segments:

Riverside Drive

on the Caribou-Targhee National Forest, subject to the provisions of this permit including clauses

1 through 20, on page(s) _____ through _____ for the purpose of hauling
equipment and construction material to Buffalo River Hydroelectric Project.

The exercise of any of the privileges granted in this permit constitutes acceptance of all the conditions of the permit.

1. **INVESTMENT SHARING RATES.** The rate for sharing under this permit is n/a.
Permittee's share of investment will be met as provided for in clause 2. (Per traffic unit, MBF, cu. yd., other - Specify)

Rate for sharing maintenance is shown in clause 9.

2-1. **WORK REQUIRED TO ACCOMMODATE PERMITTED USE.** In accordance with this use, the permittee shall perform the work described below and in accordance with plans and specifications attached hereto:

- Spot Surfacing
- Blading
- Dust Abatement using magnesium chloride
- Signing
- (See attached list for specific locations and requirements)

WORK PERFORMANCE SCHEDULE.

(Construction of required improvements or reconstruction will be completed within n/a months and before hauling commences.) *
Work shall be performed in accordance with the attached schedule. In no case will haul be allowed to exceed the value of completed work.) *

Credit will be allowed in the total of \$ n/a, which is the engineering estimate for the cost of work, to be credited to the share to be borne by this permitted use. In the event that permitted use will exceed the value of required work performed, the difference between the value of permitted use and work performed will be deposited in cash as provided in clause 2-3.

2-2. **COOPERATIVE WORK.** Although not required to accommodate the use herein permitted, it is desirable to the Forest Service and the permittee to have certain construction or reconstruction work accomplished coincident to use of the road. The permittee shall perform the work described below in accordance with plans and specifications attached hereto.

n/a

Upon satisfactory performance, credit will be allowed in the total of \$ n/a to the share to be borne by the permittee.

2-3. **CASH DEPOSITS REQUIRED IN LIEU OF WORK PERFORMANCE.** The permittee will deposit \$n/a with the Forest Service on or before n/a. The amount deposited will be credited to the share to be borne by the permittee.

2-4. **COST RECOVERY.** In consideration for this use, the permittee shall deposit with the Forest Service the sum of \$ n/a (and thereafter in individual deposits, equivalent to estimated charges before next payment is made, as called for by the Forest Service in advance of current road use). * When preferred by a permittee, a payment guarantee may be furnished in lieu of advance deposits.

This permit is accepted subject to all of its terms and conditions.

ACCEPTED	Permittee (Name and Signature) <i>[Signature]</i>		Date (mm/dd/yyyy) <u>July 20, 2005</u>
APPROVED	Issuing Officer (Name and Signature) <i>[Signature]</i>	Title <u>District Ranger</u>	Date (mm/dd/yyyy) <u>07/22/05</u>

* Delete if not applicable.

(over)

PAYMENT GUARANTEE. Notwithstanding the provisions of clause 1, if the permittee furnishes and maintains an acceptable payment bond in a penal sum of not less than \$ n/a guaranteeing payment for road use up to this amount, or in lieu thereof deposits in a Federal depository, through the Regional Fiscal Agent, and maintains therein negotiable securities of the United States having a market value in like sum and agreement authorizing the bond approving officer to sell or collect such securities if payment is not made within n/a (n/a) days of request therefor, the Forest Service shall permit road use in advance of cash payment up to the penal sum of such bond, or market value at time of deposit of negotiable securities; *provided*, that regardless of the penal sum of such payment bond, or the value of such deposited securities, the permittee shall pay cash within n/a (n/a) days of request therefor, for all performed road use. If any payment is not received within n/a (n/a) days of request therefor, the Forest Service may suspend all hauling under this permit until payments due are received, and may take such action as is necessary to collect such payments from the payment guarantee surety, or by sale or collection of securities guaranteeing payments. In the event the permittee fails to make payment and collection is obtained from the surety, or from the sale or collection of the deposited securities, the Forest Service may thereafter require the permittee to make payments in advance of road use.

3. USE PLANS. Prior to 6/15 each year this permit is in effect, permittee shall notify the District Ranger in writing of the approximate time when such use will commence, the anticipated duration of such use, the names and addresses of permittee's contractors or agents who will use the road on behalf of permittee, the estimated extent of use, and such other information relative to permittee's anticipated use as the Forest Service may from time to time reasonably request. If and when during the year there is any significant change with respect to the information so supplied by the permittee, the permittee will notify the District Ranger promptly in writing of such change. Plans and changes will be approved by the District Ranger before use may commence.

4. USE RECORDS. The permittee shall annually, or at other Forest Service approved intervals when the permittee is hauling over this road, furnish the District Ranger scale records, or other records satisfactory to the District Ranger which give the volume of road use in terms related to rates in clause 1 under the authority of this permit.

5. COMPLIANCE WITH LAWS AND REGULATIONS. The permittee, in exercising the privileges granted by this permit, shall comply with the regulations of the Department of Agriculture and all Federal, State, county and municipal laws, ordinances or regulations which are applicable to the area or operations covered by this permit.

6. USE NONEXCLUSIVE. The privileges granted in this permit to use this road are not exclusive. The Forest Service may use this road and authorize others to use it at any and all times. The permittee shall use said road in such manner as will not unreasonably or unnecessarily interfere with the use thereof by other authorized persons, including Forest Service.

7. RULES GOVERNING USE. The permittee, its agents, employees, contractors or employees of contractors, shall comply with all reasonable rules prescribed by the Forest Service for control and safety in the use of this road and to avoid undue damage to the road. Such rules will include:

- (1) Upon reasonable notice, closing the road or restricting its use when, due to weather conditions, or the making of alterations or repairs, unrestricted use would in Forest Service judgement, cause extensive damage, or create hazardous conditions;
- (2) Upon reasonable notice, closing the road during periods when, in Forest Service judgement, there is extraordinary fire danger;
- (3) Traffic controls, which in Forest Service judgement, are required for safe and effective use of the road by authorized users thereof;
- (4) Prohibition upon the loading of logs on trucks which such trucks are standing on the roadway surface, except to recover lost logs; and
- (5) Prohibition on the operation on this road of any vehicles or equipment having cleats or other tracks which will injure the the surface thereof;

(6) Prohibition on the operation of log-hauling vehicles (of a width in excess of n/a and with a gross weight of vehicles and load in excess of n/a) * (in excess of legal highway loads in the State. *

If purchaser acquires a special permit from the State and adds a sixth tag axle to a five axle truck, the following restrictions will apply: The weight limit can be increased to 88,000 lbs. provided that the length is extended to a minimum of 57 feet. This length is measured from the center of the front axle to the center of the last axle. The maximum length of any vehicle using Forest Development roads is 75 feet in total length including cargo, unless a Forest Service permit authorizes additional length.

(7) Regulation of the number of vehicles so as to prevent undue congestion of this road.

(8) The Permittee shall not use an "active ingredient" as defined in Section 2 of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (86 Stat. 973), in violation of said act on the land described in this permit.

(9) Other - Specify (Optional) n/a

8. **INSURANCE.** Permittee or his contractors and assigns shall be required to carry public liability and property damage insurance for the operation of vehicles, in the amounts established by applicable State laws, cooperative agreements, or easements issued on the subject road or roads. In any event, the permittee must carry liability insurance and property damage insurance of not less than \$100,000 for injury or death to one person, \$300,000 for injury or death to two or more persons, and \$100,000 for damage to property. The permittee itself shall be responsible for furnishing to the District Ranger proof of satisfactory insurance when said insurance is to be furnished by other than the permittee. Proof of satisfactory insurance may be required by the District Ranger prior to hauling over the road(s) and will be for the duration of the permit and such insurance policy shall bear an endorsement requiring the issuing company to give 10 days prior written notice to the District Ranger of cancellation or material change.

9. **MAINTENANCE.** The permittee shall bear the expense of maintenance proportionate to his use. This expense will be borne by Fall River Rural Electric

When deposits or payments are required in lieu of performance of maintenance the rate will be n/a which is agreed to be the cost of such works; the deposits or payments to be made at such times and in such amounts as requested by the n/a. Provided, however, that the rate shall be revised upward or downward on n/a of each year hereafter, based on estimated costs and uses anticipated; Provided further, that payment shall not relieve the permittee from liability for repair of damages due to carelessness or negligence on its part or on the part of its contractors or agents.

Maintenance shall be performed in accordance with Forest Service specifications or requirements for maintenance as hereinafter listed, or as may be mutually agreed upon from time to time and shall consist of (1) current maintenance as necessary to preserve, repair, and protect the roadbed, surface and all structures and appurtenances, and (2) resurfacing equivalent in extent to the wear and loss of surfacing caused by operations authorized by this permit.

9a. **MAINTENANCE AND RESURFACING REQUIREMENTS AND SPECIFICATIONS.** (Specify)
Grading
Spot Surfacing

10. **PERFORMANCE BOND.** In the event the permittee is to perform his proportionate share of road maintenance, road resurfacing, or betterment, as determined and within time periods established by the Forest Supervisor, the Forest Service may require as a further guarantee of the faithful performance of such work that the permittee furnish and maintain a surety bond satisfactory to the Forest Service in the sum of n/a dollars (\$ n/a), or in lieu of a surety bond, deposit into a Federal depository, as directed by the Forest Service, and maintain therein cash in the sum of n/a dollars (\$ n/a), or negotiable securities of the United States having market value at time of deposit of not less than n/a (\$ n/a). As soon as security for the performance of road maintenance (and betterment) requirements or the settlement of claims incident thereto is completed, unencumbered cash guarantees or negotiable securities deposited in lieu of surety bond will be returned to the permittee.

Delete inapplicable clause.

11. **FIRE PREVENTION AND SUPPRESSION.** The permittee shall take all reasonable precautions to prevent and suppress Forest fires. No material shall be disposed of by burning in open fires during the closed season established by law or regulation without a written permit from the Forest Service.

12. **DAMAGES.** The permittee shall exercise diligence in protecting from damage the land and property of the United States covered by and used in connection with this permit, and promptly upon demand shall pay the United States for any damage resulting from negligence, or from violation of the terms of this permit or of any law or regulation applicable to the National Forests, by the permittee, or by his agents, contractors, or employees of the permittee acting within the scope of their agency, contract, or employment.

13. **OFFICIALS NOT TO BENEFIT.** No member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this agreement or to any benefit that may arise herefrom unless it is made with a corporation for its general benefit.

14. **OUTSTANDING RIGHTS.** This permit is subject to all outstanding rights.

15. **SUSPENSION.** Upon the failure of the permittee, its agents, employees or contractors to comply with any of the requirements of this permit, the officer issuing the permit may suspend operations in pursuance of this permit.

16. **TERMINATION.** This permit shall terminate on 12/31/06 unless extended in writing by the Forest Service. It may be terminated upon breach of any conditions herein.

17. In the event of any conflict between any of the preceding printed clauses or any provision thereof and any of the following clauses or any provisions thereof, the following clauses will control.

18. **SAFETY.** Unless otherwise agreed in writing, when Permittee's Operations are in progress adjacent to or on Forest Service controlled roads and trails open to public travel, Permittee shall provide the use with adequate warning of hazardous or potentially hazardous conditions associated with Permittee's Operation. A specific traffic control plan for each individual project shall be agreed to by Permittee and Forest Service prior to commencing operations. Devices shall be appropriate to current conditions and shall be covered or removed when not needed. Except as otherwise agreed, flagger and devices shall be specified in the "Manual on Uniform Traffic Control Devices for Streets and Highways" (*MUTCD*), and in specifications attached hereto.

19. Drivers of all vehicles hauling logs shall have a copy of page 1 of this agreement in their possession. This agreement will be presented, on request, to any Forest Officer.

20. **SNOW REMOVAL.** Snow removal shall be done in a manner to preserve and protect the roads, to the extent necessary to insure safe and efficient transportation of materials, and to prevent excessive erosion damage to roads, streams, and adjacent lands.

REQUIREMENTS

Snow Removal work by permittee shall include:

20.1 Removal of snow from entire road surface width including turnouts.

20.2 Removal of snow slides, earth slides, fallen timber, and boulders that obstruct normal road surface width

20.3 Removal of snow, ice, and debris from culverts so that the drainage system will function efficiently at all times.

20.4 All items of snow removal shall be done currently as necessary to insure safe, efficient transportation. Work shall be done in accordance with the following minimum standards of performance:

20.5 Removal of material. All debris, except snow and ice, that is removed from the road surface and ditches shall be deposited away from stream channels at agreed locations.

- 20.6 During snow removal operations, banks shall not be undercut nor shall gravel or other selected surfacing material be bladed off the roadway surface.
- 20.7 Ditches and culverts shall be kept functional during and following roadway use.
- 20.8 Snow berms shall not be left on the road surface. Berms left on the shoulder of road shall be removed and/or drainage holes shall be opened and maintained. Drainage holes shall be spaced as required to obtain satisfactory surface drainage without discharge on erodible fills.
- 20.9 Dozers shall not be used to plow snow on system roads without written approval of Forest Service.
- 20.10 Snow must not be removed to the road surface. A minimum two-inch depth must be left to protect the roadway.
- 20.11 Permittee's damage from, or as a result of, snow removal shall be restored in a timely manner.

FS-7700-41 Road Use Permit

Forest Road 80136 Riverside Drive

2-1 Work Items Required to Accommodate Permitted Use

MP	Description
0.0	Intersection with Hwy 20 Install "Heavy Truck Traffic" sign Begin blade and shape of existing road Begin dust abatement 16 ft wide
0.1	Protect gate
0.15	Add surfacing as flagged for 50 feet (estimate = 20 cy)
0.2	Add surfacing as flagged for 100 feet (estimate = 40 cy)
0.6	Add surfacing as flagged for 200 feet (estimate = 80 cy)
0.9	Intersection with Lodgepole Drive – Left Install additional signs each direction – "Heavy Truck Traffic"
1.1	End of road – beginning of turnaround End blade and shape of existing road End dust abatement

Notes:

Surfacing

Surfacing to be ¾" road base to meet state specifications.

Dust Abatement

Dust abatement will include an application of MgCl solution on the 1.1 miles of the road. MgCl brine to be 28 to 35% MgCl by weight and will be spread at the rate of 0.5 Gal/SY. Road will be prepared by blading and watering prior to application.

Traffic Control - Signs

"Heavy Truck Traffic" Signs 24 x 24 Black on Orange to be installed as necessary to warn public of increased truck traffic. As a minimum signs to be installed as noted above.

USDA Forest Service

FS-7700-41 (10/73)

ROAD USE PERMIT
(Ref: FSM 7770)

Authority: Acts of 6/30/14, 4/24/50, 6/12/60, and 10/14/64;
(16 U.S.C. 498, 572, 530, and 532-38 and
43 U.S.C. 1702, 1761, 1764, and 1765)

Fall River Rural Electric Cooperative
(Name)

of 1150N 3400E
Ashton, ID 83420
(Address and ZIP Code)

(hereafter called the permittee) is hereby granted use of the following road(s) or road segments:

BOR Site - Road # 414

on the Caribou-Targhee National Forest, subject to the provisions of this permit including clauses

1 through 20, on page(s) 1 through 5 for the purpose of: Providing for access to the Buffalo River Hydroelectric Project for operation and maintenance of the hydroelectric facility.

The exercise of any of the privileges granted in this permit constitutes acceptance of all the conditions of the permit.

1. **INVESTMENT SHARING RATES.** The rate for sharing under this permit is n/a.
Permittee's share of investment will be met as provided for in clause 2 (Per traffic unit, MBF, cu. yd., other - Specify)

Rate for sharing maintenance is shown in clause 9.

2-1. **WORK REQUIRED TO ACCOMMODATE PERMITTED USE.** In accordance with this use, the permittee shall perform the work described below and in accordance with plans and specifications attached hereto:

- Gravel Surfacing of approximately 600 feet of road from Jct. of Road 223 An Road 414 to turn around at end of road.
- Construction of parking area at end of road to facilitate 4 parking spaces.
- Placing rock barriers at parking area to close last 75 foot of existing road.
- Rehabilitation of "two track" roads in areas where more than one road exists.

WORK PERFORMANCE SCHEDULE.

(Construction of required improvements or reconstruction will be completed within n/a months and before hauling commences.) *

Work shall be performed in accordance with the attached schedule. In no case will haul be allowed to exceed the value of completed work.) *

Credit will be allowed in the total of \$ n/a, which is the engineering estimate for the cost of work, to be credited to the share to be borne by this permitted use. In the event that permitted use will exceed the value of required work performed, the difference between the value of permitted use and work performed will be deposited in cash as provided in clause 2-3.

2-2. **COOPERATIVE WORK.** Although not required to accommodate the use herein permitted, it is desirable to the Forest Service and the permittee to have certain construction or reconstruction work accomplished coincident to use of the road. The permittee shall perform the work described below in accordance with plans and specifications attached hereto.

n/a

Upon satisfactory performance, credit will be allowed in the total of \$ n/a to the share to be borne by the permittee.

2-3. **CASH DEPOSITS REQUIRED IN LIEU OF WORK PERFORMANCE.** The permittee will deposit \$n/a with the Forest Service on or before n/a. The amount deposited will be credited to the share to be borne by the permittee.

2-4. **COST RECOVERY.** In consideration for this use, the permittee shall deposit with the Forest Service the sum of \$ n/a (and thereafter in individual deposits, equivalent to estimated charges before next payment is made, as called for by the Forest Service in advance of current road use). * When preferred by a permittee, a payment guarantee may be furnished in lieu of advance deposits.

This permit is accepted subject to all of its terms and conditions.

ACCEPTED	Permittee (Name and Signature) <u>[Signature]</u>	Date (mm/dd/yyyy) <u>July 20, 2005</u>
APPROVED	Issuing Officer (Name and Signature) <u>Adrienne K. Keller</u>	Title <u>District Ranger</u>
	(over)	Date (mm/dd/yyyy) <u>07/22/05</u>

* Delete if not applicable.

PAYMENT GUARANTEE. Notwithstanding the provisions of clause 1, if the permittee furnishes and maintains an acceptable payment bond in a penal sum of not less than \$ n/a guaranteeing payment for road use up to this amount, or in lieu thereof deposits in a Federal depository, through the Regional Fiscal Agent, and maintains therein negotiable securities of the United States having a market value in like sum and agreement authorizing the bond approving officer to sell or collect such securities if payment is not made within n/a (n/a) days of request therefor, the Forest Service shall permit road use in advance of cash payment up to the penal sum of such bond, or market value at time of deposit of negotiable securities;

provided, that regardless of the penal sum of such payment bond, or the value of such deposited securities, the permittee shall pay cash within n/a (n/a) days of request therefor, for all performed road use. If any payment is not received within n/a (n/a) days of request therefor, the Forest Service may suspend all hauling under this permit until payments due are received, and may take such action as is necessary to collect such payments from the payment guarantee surety, or by sale or collection of securities guaranteeing payments. In the event the permittee fails to make payment and collection is obtained from the surety, or from the sale or collection of the deposited securities, the Forest Service may thereafter require the permittee to make payments in advance of road use.

3. USE PLANS. Prior to 6/15 each year this permit is in effect, permittee shall notify the District Ranger in writing of the approximate time when such use will commence, the anticipated duration of such use, the names and addresses of permittee's contractors or agents who will use the road on behalf of permittee, the estimated extent of use, and such other information relative to permittee's anticipated use as the Forest Service may from time to time reasonably request. If and when during the year there is any significant change with respect to the information so supplied by the permittee, the permittee will notify the District Ranger promptly in writing of such change. Plans and changes will be approved by the District Ranger before use may commence.

4. USE RECORDS. The permittee shall annually, or at other Forest Service approved intervals when the permittee is hauling over this road, furnish the District Ranger scale records, or other records satisfactory to the District Ranger which give the volume of road use in terms related to rates in clause 1 under the authority of this permit.

5. COMPLIANCE WITH LAWS AND REGULATIONS. The permittee, in exercising the privileges granted by this permit, shall comply with the regulations of the Department of Agriculture and all Federal, State, county and municipal laws, ordinances or regulations which are applicable to the area or operations covered by this permit.

6. USE NONEXCLUSIVE. The privileges granted in this permit to use this road are not exclusive. The Forest Service may use this road and authorize others to use it at any and all times. The permittee shall use said road in such manner as will not unreasonably or unnecessarily interfere with the use thereof by other authorized persons, including Forest Service.

7. RULES GOVERNING USE. The permittee, its agents, employees, contractors or employees of contractors, shall comply with all reasonable rules prescribed by the Forest Service for control and safety in the use of this road and to avoid undue damage to the road. Such rules will include:

- (1) Upon reasonable notice, closing the road or restricting its use when, due to weather conditions, or the making of alterations or repairs, unrestricted use would in Forest Service judgement, cause extensive damage, or create hazardous conditions;
- (2) Upon reasonable notice, closing the road during periods when, in Forest Service judgement, there is extraordinary fire danger;
- (3) Traffic controls, which in Forest Service judgement, are required for safe and effective use of the road by authorized users thereof;
- (4) Prohibition upon the loading of logs on trucks which such trucks are standing on the roadway surface, except to recover lost logs; and
- (5) Prohibition on the operation on this road of any vehicles or equipment having cleats or other tracks which will injure the the surface thereof;

- (6) Prohibition on the operation of log-hauling vehicles (of a width in excess of n/a and with a gross weight of vehicles and load in excess of n/a) * (in excess of legal highway loads in the State. *

If purchaser acquires a special permit from the State and adds a sixth tag axle to a five axle truck, the following restrictions will apply: The weight limit can be increased to 88,000 lbs. provided that the length is extended to a minimum of 57 feet. This length is measured from the center of the front axle to the center of the last axle. The maximum length of any vehicle using Forest Development roads is 75 feet in total length including cargo, unless a Forest Service permit authorizes additional length.

- (7) Regulation of the number of vehicles so as to prevent undue congestion of this road.
- (8) The Permittee shall not use an "active ingredient" as defined in Section 2 of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (86 Stat. 973), in violation of said act on the land described in this permit.
- (9) Other - Specify (Optional) n/a

8. **INSURANCE.** Permittee or his contractors and assigns shall be required to carry public liability and property damage insurance for the operation of vehicles, in the amounts established by applicable State laws, cooperative agreements, or easements issued on the subject road or roads. In any event, the permittee must carry liability insurance and property damage insurance of not less than \$100,000 for injury or death to one person, \$300,000 for injury or death to two or more persons, and \$100,000 for damage to property. The permittee itself shall be responsible for furnishing to the District Ranger proof of satisfactory insurance when said insurance is to be furnished by other than the permittee. Proof of satisfactory insurance may be required by the District Ranger prior to hauling over the road(s) and will be for the duration of the permit and such insurance policy shall bear an endorsement requiring the issuing company to give 10 days prior written notice to the District Ranger , of cancellation or material change.

9. **MAINTENANCE.** The permittee shall bear the expense of maintenance proportionate to his use. This expense will be borne by Fall River Rural Electric

When deposits or payments are required in lieu of performance of maintenance the rate will be n/a which is agreed to be the cost of such works; the deposits or payments to be made at such times and in such amounts as requested by the n/a *Provided*, however, that the rate shall be revised upward or downward on n/a of each year hereafter, based on estimated costs and uses anticipated; *Provided* further, that payment shall not relieve the permittee from liability for repair of damages due to carelessness or negligence on its part or on the part of its contractors or agents.

Maintenance shall be performed in accordance with Forest Service specifications or requirements for maintenance as hereinafter listed, or as may be mutually agreed upon from time to time and shall consist of (1) current maintenance as necessary to preserve, repair, and protect the roadbed, surface and all structures and appurtenances, and (2) resurfacing equivalent in extent to the wear and loss of surfacing caused by operations authorized by this permit.

9a. **MAINTENANCE AND RESURFACING REQUIREMENTS AND SPECIFICATIONS.** (Specify)
Blading
Spot Surfacing

10. **PERFORMANCE BOND.** In the event the permittee is to perform his proportionate share of road maintenance, road resurfacing, or betterment, as determined and within time periods established by the Forest Supervisor, the Forest Service may require as a further guarantee of the faithful performance of such work that the permittee furnish and maintain a surety bond satisfactory to the Forest Service in the sum of n/a dollars (\$ n/a), or in lieu of a surety bond, deposit into a Federal depository, as directed by the Forest Service, and maintain therein cash in the sum of n/a dollars (\$ n/a), or negotiable securities of the United States having market value at time of deposit of not less than n/a (\$ n/a). As soon as security for the performance of road maintenance (and betterment) requirements or the settlement of claims incident thereto is completed, unencumbered cash guarantees or negotiable securities deposited in lieu of surety bond will be returned to the permittee.

* Delete inapplicable clause.

11. FIRE PREVENTION AND SUPPRESSION. The permittee shall take all reasonable precautions to prevent and suppress Forest fires. No material shall be disposed of by burning in open fires during the closed season established by law or regulation without a written permit from the Forest Service.

12. DAMAGES. The permittee shall exercise diligence in protecting from damage the land and property of the United States covered by and used in connection with this permit, and promptly upon demand shall pay the United States for any damage resulting from negligence, or from violation of the terms of this permit or of any law or regulation applicable to the National Forests, by the permittee, or by his agents, contractors, or employees of the permittee acting within the scope of their agency, contract, or employment.

13. OFFICIALS NOT TO BENEFIT. No member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this agreement or to any benefit that may arise herefrom unless it is made with a corporation for its general benefit.

14. OUTSTANDING RIGHTS. This permit is subject to all outstanding rights.

15. SUSPENSION. Upon the failure of the permittee, its agents, employees or contractors to comply with any of the requirements of this permit, the officer issuing the permit may suspend operations in pursuance of this permit.

16. TERMINATION. This permit shall terminate on 10/31/2044 unless extended in writing by the Forest Service. It may be terminated upon breach of any conditions herein.

17. In the event of any conflict between any of the preceding printed clauses or any provision thereof and any of the following clauses or any provisions thereof, the following clauses will control.

18. SAFETY. Unless otherwise agreed in writing, when Permittee's Operations are in progress adjacent to or on Forest Service controlled roads and trails open to public travel, Permittee shall provide the use with adequate warning of hazardous or potentially hazardous conditions associated with Permittee's Operation. A specific traffic control plan for each individual project shall be agreed to by Permittee and Forest Service prior to commencing operations. Devices shall be appropriate to current conditions and shall be covered or removed when not needed. Except as otherwise agreed, flagger and devices shall be specified in the "Manual on Uniform Traffic Control Devices for Streets and Highways" (*MUTCD*), and in specifications attached hereto.

19. Drivers of all vehicles hauling logs shall have a copy of page 1 of this agreement in their possession. This agreement will be presented, on request, to any Forest Officer.

20. SNOW REMOVAL. Snow removal shall be done in a manner to preserve and protect the roads, to the extent necessary to insure safe and efficient transportation of materials, and to prevent excessive erosion damage to roads, streams, and adjacent lands.

REQUIREMENTS

Snow Removal work by permittee shall include:

20.1 Removal of snow from entire road surface width including turnouts.

20.2 Removal of snow slides, earth slides, fallen timber, and boulders that obstruct normal road surface width

20.3 Removal of snow, ice, and debris from culverts so that the drainage system will function efficiently at all times.

20.4 All items of snow removal shall be done currently as necessary to insure safe, efficient transportation. Work shall be done in accordance with the following minimum standards of performance:

20.5 Removal of material. All debris, except snow and ice, that is removed from the road surface and ditches shall be deposited away from stream channels at agreed locations.

- 20.6 During snow removal operations, banks shall not be undercut nor shall gravel or other selected surfacing material be bladed off the roadway surface.
- 20.7 Ditches and culverts shall be kept functional during and following roadway use.
- 20.8 *Snow berms shall not be left on the road surface. Berms left on the shoulder of road shall be removed and/or drainage holes shall be opened and maintained. Drainage holes shall be spaced as required to obtain satisfactory surface drainage without discharge on erodible fills.*
- 20.9 Dozers shall not be used to plow snow on system roads without written approval of Forest Service.
- 20.10 Snow must not be removed to the road surface. A minimum two-inch depth must be left to protect the roadway.
- 20.11 Permittee's damage from, or as a result of, snow removal shall be restored in a timely manner.



Northwest Power Services, Inc.

November 5, 2014

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 1st Street, N.E.
Washington, DC 20426

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Ms. Bose,

In compliance to the license for the Buffalo River Hydroelectric Project, FERC Project #1413, we submit the following information for your approval:

Please find attached a copy of the correspondence received from the U.S. Forest Service in regards to the inspection and compliance to the terms and conditions of our Special Use Permit. The U.S. Forest Service finds the operation of the Buffalo River Hydroelectric Project to be in compliance with the terms and conditions of the Special Use Permit (condition #3) and of the License with no recommended changes to the current operating procedures.

If you have any questions or need additional information please contact Corey Smith at (208) 745-0834 or e-mail me at csmith@nwpwrservices.com.

Sincerely,

NORTHWEST POWER SERVICES, INC.

A handwritten signature in blue ink that reads "Brent L. Smith". The signature is written in a cursive, slightly slanted style.

Brent L. Smith
President



United States
Department of
Agriculture

Forest
Service

Caribou-Targhee National Forest
Ashton/Island Park
Ranger District

P.O. Box 858
Ashton, ID 83420
208-652-7442

File Code: 2720

Date: October 23, 2014

Brent Smith
Northwest Power Service, Inc.
P.O. Box 535
Rigby, ID 83442

Dear Brent;

The Buffalo River Hydroelectric Facility was inspected for compliance on October 20, 2014.

The Facility was found to be in compliance with the terms and conditions of the Special Use Permit and the 4(e) condition required by the Forest Service and the FERC License.

This constitutes our annual review of the facility and its operation as specified in the Forest Service Manual, Section 2770 and the Article 104 in the FERC project license.

Sincerely,

ELIZABETH DAVY
District Ranger

cc: Fall River Electric, 1150 North 3400 East, Ashton, ID 83420



Document Content(s)

2014 consultation Buff.PDF.....1-2



United States
Department of
Agriculture

Forest
Service

Ashton/Island Park Ranger District

46 South Highway 20
P.O. Box 858
Ashton, ID 83420
208-652-7442
FAX: 208-652-7863

File Code: 2720
Date: October 27, 2015

Nicholas E. Josten
Geo Sense
2742 St. Charles Ave
Idaho Falls, ID 83404

Dear Nick,

The Island Park Hydroelectric facilities at Island Park Dam and Buffalo River Dam were inspected for compliance on September 25, 2015.

The facilities were found to be in compliance with the terms and conditions of the Special Use Permit and the 4(e) condition required by the Forest Service and the FERC License.

This constitutes our annual review of the facility and its operation as specified in the Forest Service manual Section 2770 and Article 104 of the FERC project license.

Sincerely,

ELIZABETH DAVY
District Ranger

cc: Fall River Electric 1150 North 3400 East, Ashton, ID 83420



APPENDIX B
LIST OF CONTACTS

Contact Name	Organization	Position	Street Address	Street Address 2	Town	State	Zipcode	Phone	Email	Last Date of Contact	Nature of Discussion	Assessment of Ongoing Working Relationships
Troy Saffle	Idaho Division of Environmental Quality	Water Quality Manager	900 N. Skyline Drive	Suite B	Idaho Falls	ID	83402	208-528-2650	troy.saffle@deq.idaho.gov	7/6/2016	Compliance Review Request for LIHI Certification Application	Good working relationship.
Michael Morse	US Fish & Wildlife Service	Federal Activities	4425 Burley Drive	Suite A	Chubbuck	ID	83202	208-378-5261	michael_morse@fws.gov	9/22/2016	Compliance Review Request for LIHI Certification Application	Good working relationship.
Tom Bassista	Idaho Department of Fish and Game	Staff Biologist	4279 Commerce Circle		Idaho Falls	ID	83401	208-525-7290	thomas.bassista@idfg.idaho.gov	7/15/2016	Compliance Review Request for LIHI Certification Application	Good working relationship.
Dan Garren	Idaho Department of Fish and Game	Regional Fisheries Manager	4279 Commerce Circle		Idaho Falls	ID	83401	208-525-7290	dan.garren@idfg.idaho.gov	8/8/2016	Article 407 Fishway Report	Good working relationship.
Elizabeth Davy	U.S. Forest Service	District Ranger	P.O. Box 858		Ashton	ID	83420	208-652-7442	edavy@fs.fed.us	5/12/2016	Compliance Review	Good working relationship.
Mark Bingman	U.S. Forest Service	Natural Resource Specialist	P.O. Box 858		Ashton	ID	83420	208-652-1228	mbingman@fs.fed.us	5/12/2016	Compliance Review	Good working relationship.
Ethan Morton	Idaho State Historical Society	Idaho State Historic Preservation Officer	210 Main Street		Boise	ID	83702	208-334-3847	ethan.morton@ishs.idaho.gov	5/13/2005	HRMP Filing	Good working relationship.
Gary Vecellio	Idaho Department of Fish and Game	Natural Resource Program Coordinator	4279 Commerce Circle		Idaho Falls	ID	83401	208-525-7290	gary.vecellio@idfg.idaho.gov	9/15/2015	Compliance Review	Good working relationship.
Rob Van Kirk	Henry's Fork Foundation	Senior Scientist	PO Box 550	512 Main Street	Ashton	ID	83420	208-652-3567	rob@henrysfork.org	8/8/2016	Article 407 Fishway Report	Good working relationship.
Cary Myler	US Fish & Wildlife Service	Partners Biologist	4425 Burley Drive	Suite A	Chubbuck	ID	83202	208-237-6975	cary_myler@fws.gov	8/8/2016	Article 407 Fishway Report	Good working relationship.

APPENDIX C

PROJECT DESCRIPTION

DESCRIPTION OF FACILITY AND MODE OF OPERATION:

The Buffalo River Project facilities include: a 142-foot-long by 12-foot-high timber-faced rock-filled diversion dam; a 40-foot-long by 3-foot-high concrete slab spillway with stop logs and a small auxiliary spillway; a 270-foot-long fish passage structure; a concrete intake with a 5-foot steel slide gate; a trashrack; a 52-foot-long by 5-foot diameter concrete encased steel penstock; a 34-foot by 22-foot masonry block powerhouse; a 250 kW Bouvier Kaplan inclined shaft turbine; a 1,800-foot-long underground transmission line; and appurtenant facilities.

The Buffalo River Project operates as a run-of-river facility where a constant flow of 100 cubic feet per second (cfs) is diverted for power generation while the remaining flow stays in the natural stream course via the fish ladder and spillway. Water used for generation is released directly into Henry's Fork River, just upstream of the confluence of the Buffalo River. The Licensee at all times acts to minimize the fluctuation of the reservoir surface elevation by maintaining a discharge from the Project so that flows as measured immediately downstream from the Project dam and tailrace, when combined approximate the sum of inflows to the reservoir.

Typical stream flow at the Project varies between 175 and 250 cfs except during snowmelt when flows can exceed 400 cfs. This run-of-river facility diverts a constant 100 cfs for power generation while the remaining flow (between 45-65%) stays in the natural stream course via a fish ladder and spillway.

FACILITY PHOTOGRAPHS



PHOTO 1 BUFFALO RIVER HYDROELECTRIC PROJECT OVERVIEW

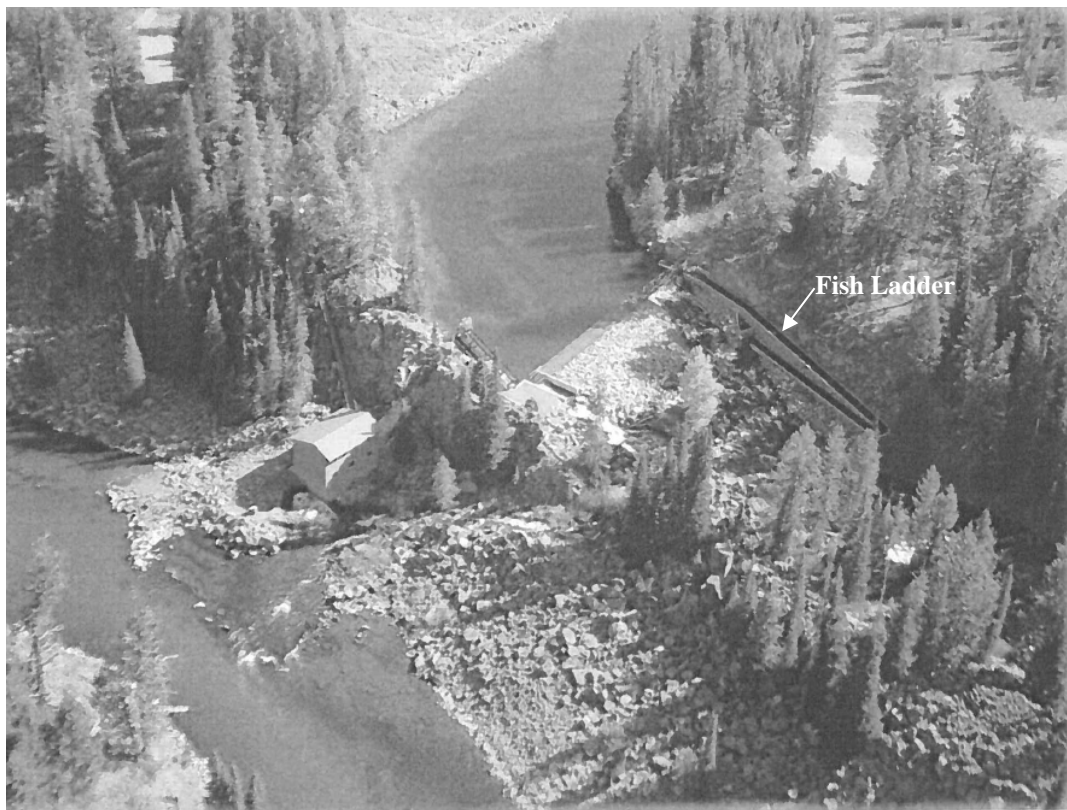


PHOTO 2 BUFFALO RIVER HYDROELECTRIC PROJECT OVERVIEW II



**PHOTO 3 DOWNSTREAM VIEW FROM RESERVOIR INCLUDING TRASHRACK AND
AUTOMATED RAKE TO RIGHT**



PHOTO 4 UPSTREAM VIEW OF SPILLWAY INCLUDING THE PROJECT FISHWAY (RIGHT)



PHOTO 5 **DOWNSTREAM VIEW OF PROJECT FISH LADDER**



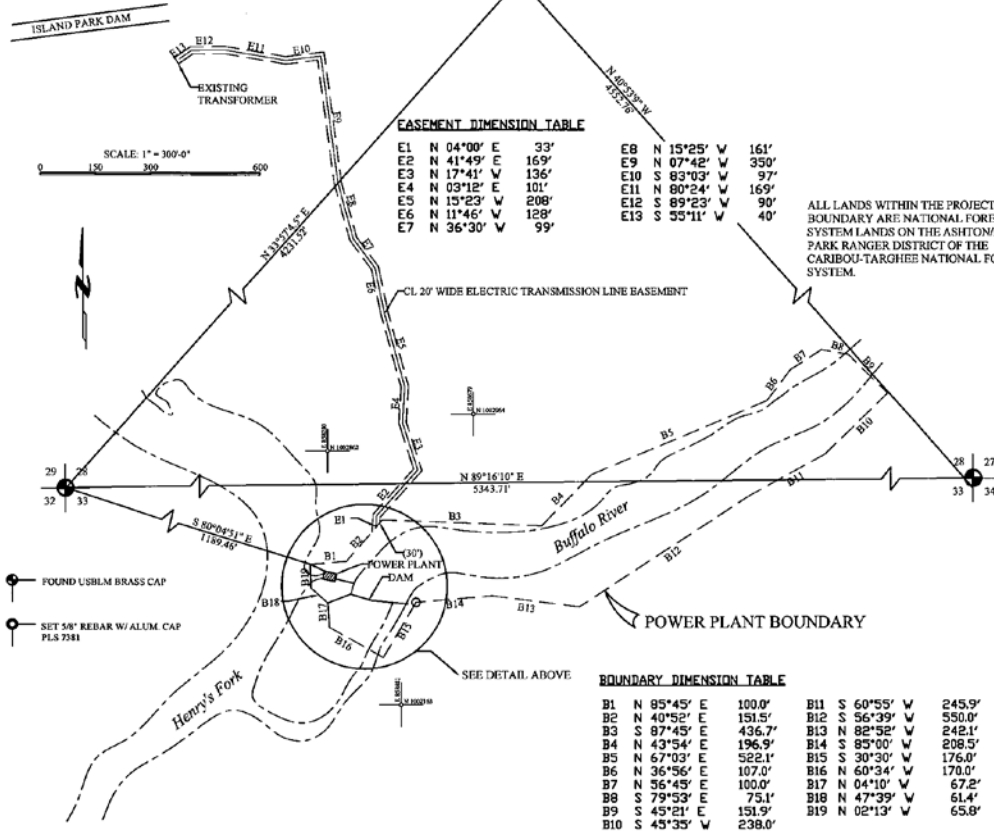
PHOTO 6 **PROJECT PENSTOCK AND POWERHOUSE**

FACILITY PLANS AND DIAGRAMS

SPECIAL USE PERMIT EXHIBIT
Fall River Rural Electric Cooperative, Inc.
Buffalo River Power Plant Site

IN SECTIONS 28 & 33, T 13 N, R 43 E B.M.
 Fremont County, Idaho

NOS STATION 'ISLAND PARK' IDAHO STATE
 PLANE COORDINATES (EAST ZONE), US SURVEY
 FEET, N. 1,006,264.722 E. 859,423.250



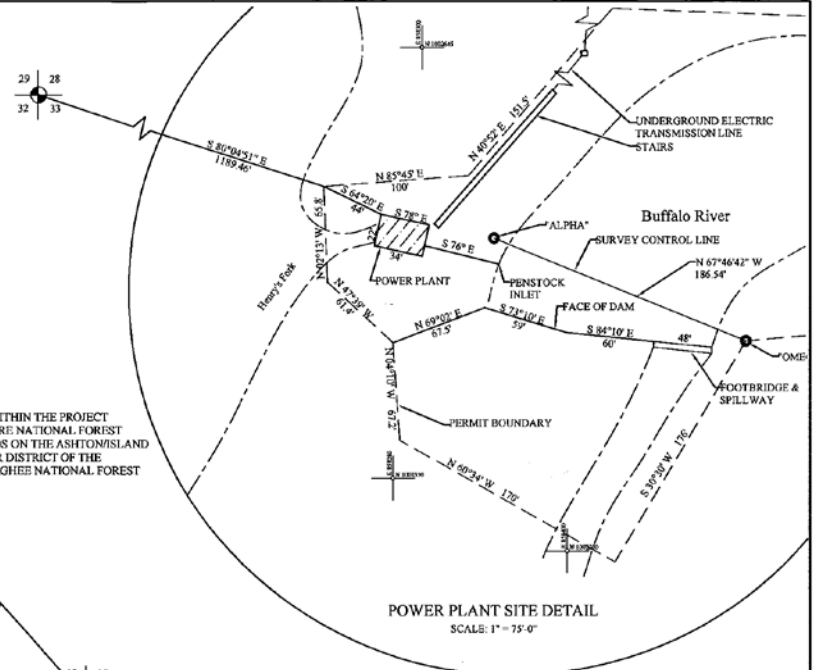
EASEMENT DIMENSION TABLE

E1	N 04°00' E	33'	E8	N 15°25' W	161'
E2	N 41°49' E	169'	E9	N 07°42' W	330'
E3	N 17°41' W	136'	E10	S 83°03' W	97'
E4	N 03°12' E	101'	E11	N 80°24' W	169'
E5	N 15°23' W	208'	E12	S 89°23' W	90'
E6	N 11°46' W	128'	E13	S 55°11' W	40'
E7	N 36°30' W	99'			

ALL LANDS WITHIN THE PROJECT
 BOUNDARY ARE NATIONAL FOREST
 SYSTEM LANDS ON THE ASHTON/ISLAND
 PARK RANGER DISTRICT OF THE
 CARIBOU-TARGHEE NATIONAL FOREST
 SYSTEM.

BOUNDARY DIMENSION TABLE

B1	N 85°45' E	100.0'	B11	S 60°55' W	245.9'
B2	N 40°52' E	151.5'	B12	S 56°39' W	550.0'
B3	S 87°45' E	436.7'	B13	N 82°52' W	242.1'
B4	N 43°54' E	196.9'	B14	S 85°00' W	208.5'
B5	N 67°03' E	522.1'	B15	S 30°30' W	176.0'
B6	S 36°56' E	107.0'	B16	N 60°34' W	170.0'
B7	S 36°45' E	100.0'	B17	N 04°10' W	67.2'
B8	S 79°53' E	75.1'	B18	N 47°39' W	61.4'
B9	S 45°21' E	151.9'	B19	N 02°13' W	65.8'
B10	S 45°35' W	238.0'			



POWER PLANT SITE DETAIL
 SCALE: 1" = 75'-0"

I, RICHARD B. BYREM, BEING A DULY LICENSED PROFESSIONAL LAND SURVEYOR
 IN THE STATE OF IDAHO, DO HEREBY CERTIFY THAT THIS SURVEY AND DRAWING
 WERE PREPARED BY ME AND UNDER MY DIRECT SUPERVISION.

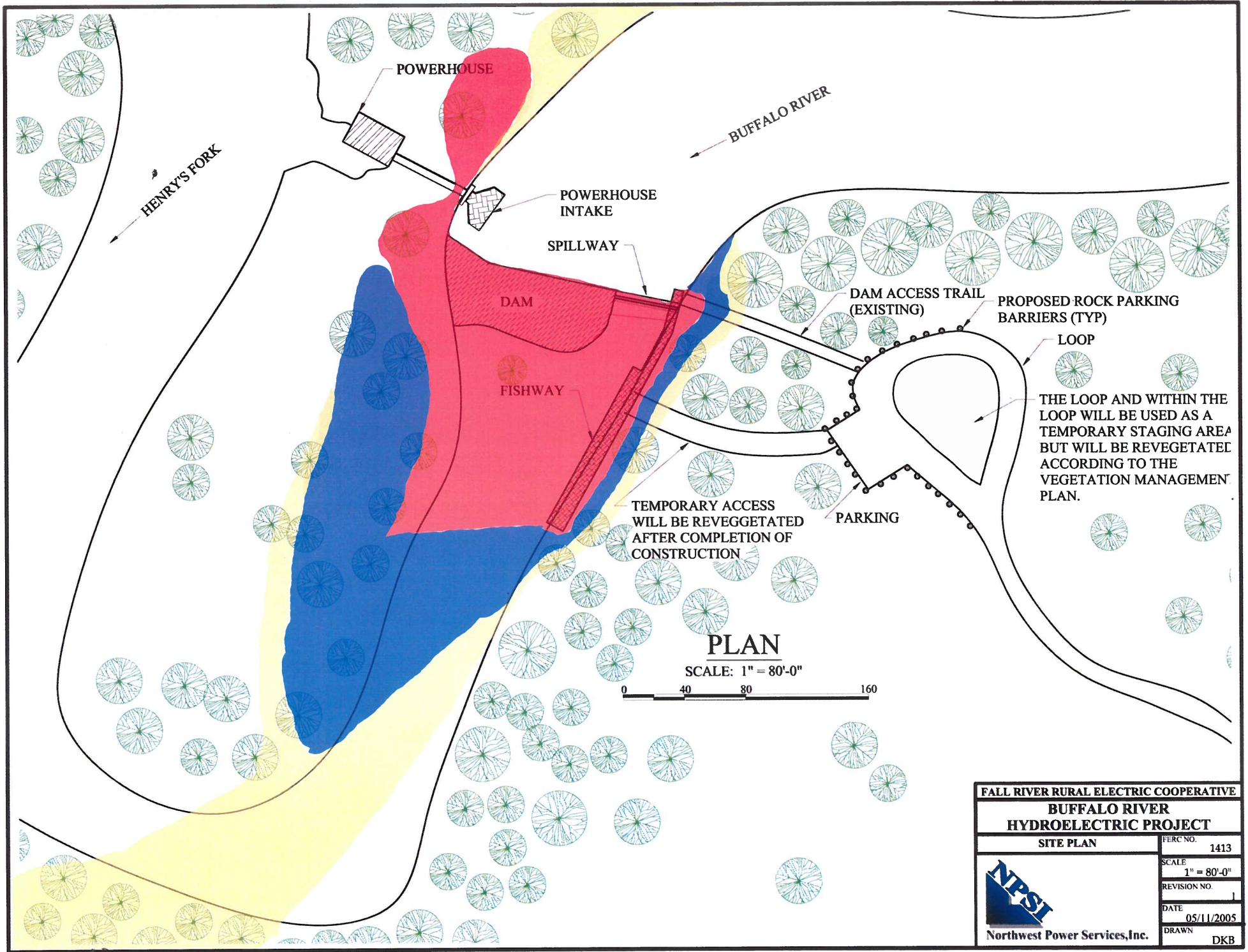
[Signature]
 RICHARD B. BYREM
 IDAHO PLS NO. 7381




**BUFFALO RIVER HYDROELECTRIC
 PROJECT - FERC PROJECT #1413**

Exhibit G

This drawing is part of the application for
 license made by the undersigned this 28
 day of October, 2002. At the Commission's
 request this Exhibit G has been revised on
 February 23, 2005.



FALL RIVER RURAL ELECTRIC COOPERATIVE	
BUFFALO RIVER	
HYDROELECTRIC PROJECT	
SITE PLAN	FERC NO. 1413
 Northwest Power Services, Inc.	SCALE 1" = 80'-0"
	REVISION NO. 1
	DATE 05/11/2005
	DRAWN DKB

APPENDIX D

FLOW



Northwest Power Services, Inc.

Filed Electronically

December 19, 2006

Ms. Magalie R Salas, Secretary
Federal Energy Regulatory Commission
Mail Code: DHAC, PJ-12
888 First Street, NE
Washington, DC 20426

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Ms. Salas,

Please find attached the Operational Compliance Monitoring Plan, as required by the FERC's October 10, 2006 letter. We apologize that this information is being submitted later than the date requested. Please also find enclosed within the plan the agreement between the licensee and the USGS dated December 14, 2006. This plan will be sent to the agencies for their comments, any comments received will be forwarded to the FERC with the licensee's response.

If you have any questions or need additional information please contact me at (208) 745-0834 or e-mail me at bsmith@nwpwrservices.com.

Sincerely,

NORTHWEST POWER SERVICES, INC.

A handwritten signature in blue ink that reads "Brent L. Smith".

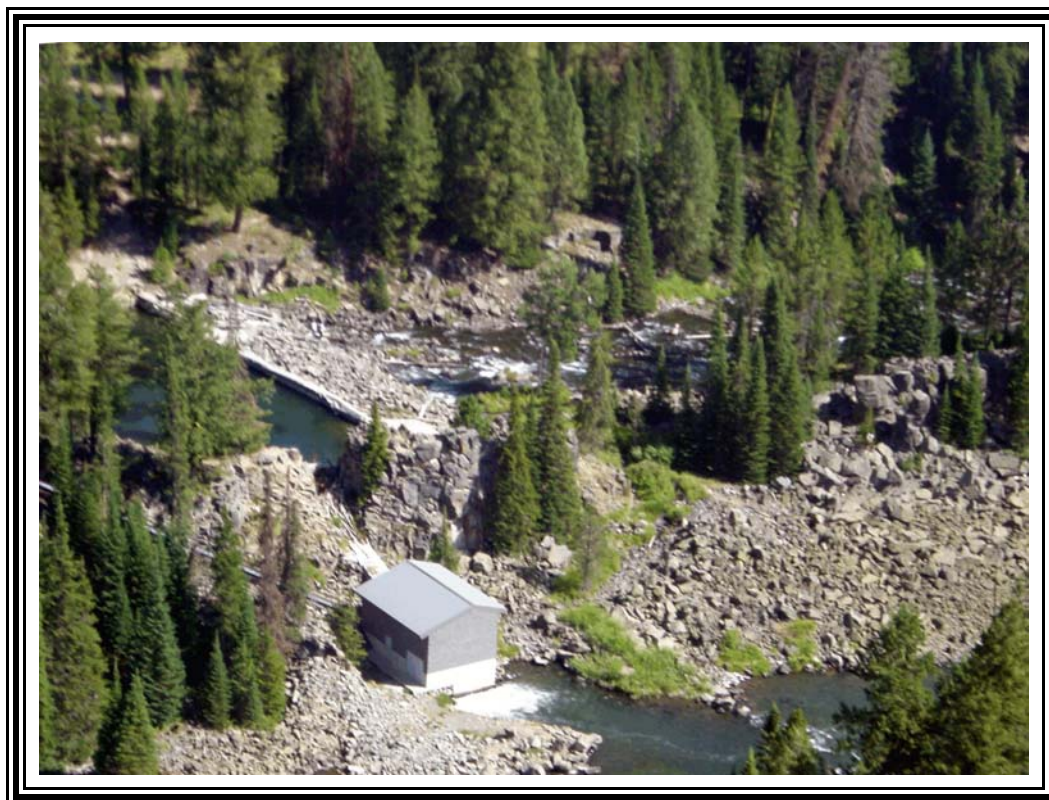
Brent L. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric
Gary Vecellio, Environmental Staff Biologist, Idaho Department of Fish & Game
Jim De Rito, Conseration Director, Henry's Fork Foundation
Adrienne Keller, US Forest Service
Deb Mignogno, US Fish & Wildlife Service
Troy Saffle, Idaho DEQ
USGS

Buffalo River Hydroelectric Project

FERC Project #1413

Operational Compliance Monitoring Plan



Prepared for:

Fall River Rural Electric Cooperative, Inc.
Ashton, Idaho

Prepared by:

Northwest Power Services, Inc.
Rigby, Idaho

Ecosystems Research Institute, Inc.
Logan, Utah

December 2006

Buffalo River Hydroelectric Project

FERC Project No. 1413

Operational Compliance Monitoring Plan

Prepared for:

Fall River Rural Electric Cooperative, Inc.
1150 North 3400 East
Ashton, Idaho 83420

Prepared by:

Northwest Power Services, Inc.
PO Box 535
Rigby, Idaho 83442

Ecosystems Research Institute, Inc.
975 South State Highway
Logan, Utah

Operational Compliance Monitoring Plan

1.0 Introduction

A license was issued to Fall River Rural Electric Cooperative, Inc. (Fall River) in November of 2004 by the Federal Energy Regulatory Commission (Commission) for the alteration and continued operation of the Buffalo River Hydroelectric Project. The 250-kilowatt (kW) run-of-river project is located on the Buffalo River near its confluence with the Henry's Fork of the Snake River, north of Ashton, in Fremont County, Idaho. The license stipulates several terms and conditions which must be met with approval from various resource agencies. The purpose of this document is to describe the site specific operational compliance monitoring plan of this project. It has been developed in response to Article #402 and 403 of the license, as amended, which states:

Article 402. Project Operation. The licensee shall operate the project in a run-of-river mode for the protection of aquatic resources in the Buffalo River and Henry's Fork River in the project area. The licensee shall at all times act to minimize the fluctuation of the reservoir surface elevation by maintaining a discharge from the project so that flows as measured immediately downstream from the project dam and tailrace, when combined approximate the sum of inflows to the reservoir.

Run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement among the licensee, Idaho Department of Fish and Game, and U.S. Forest Service. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 403. Operational Compliance Monitoring Plan. Within six months of the effective date of this license, the licensee shall file for Commission approval an operational compliance monitoring plan.

The plan shall include at a minimum:

- (1) a description of the exact location of each gage or measuring device, the method of calibration for each gage or measuring device, the frequency of recording for each gage or measuring device, and a monitoring schedule;***
- (2) a description of how the project would maintain***

compliance with the operational requirement of Article 402;

(3) a provision for maintaining a log of project operation and generation;

(4) a provision for providing the gauging and project operation and generation data to the Idaho Department of Fish and Game (IDFG), U.S. Forest Service (Forest Service), U.S. Fish and Wildlife Service (FWS), and Idaho Department of Environmental Quality (IDEQ) within 30 days of the date of the agency's request for the data; and

(5) an implementation schedule for the plan.

The licensee shall prepare the plan after consultation with the U.S. Geological Survey, IDFG, Forest Service, FWS, and IDEQ. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project specific information.

A courtesy copy of the plan shall be filed with the Commission's D2SI-PRO and the Director, D2SI.

The Commission reserves the right to require changes to the plan. Implementation of the plan shall not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

PROPOSED PLAN

2.0 Background

Buffalo River description from the License Application

Flows within the Buffalo River immediately above the project facilities have been quantified a number of times by the USGS (Station No. 13043000) as well as various resource agencies. The most recent data (over the past 5 years) has been collected by Fall River Rural Electric, the project owner/licensee. The pattern of flows in the Buffalo River at the project site are characterized by moderate and stable summer and winter base flows varying between 175 and 250 cfs. The spring snow melt (which occurs between May and June) can increase this base flow value to flows exceeding 400 cfs. The project removes a constant 100 cfs from the Buffalo River. The remaining flows are bypassed into the natural stream course via a fish ladder release and over a surface outlet spillway. Flows of approximately 50 cfs are currently leaking from under the rock face of the diversion structure

Inspection of the baseline data over a 60-year period indicates that the winter base flows (characteristically the lowest flow period) has significantly increased over time. This analysis can be seen in the following three figures. In Figure 2-1, the daily flows of the Buffalo River at the USGS gauging station from 1936 to 1941 are shown. It should be noted that the Island Park Reservoir, located immediately upgradient of the site was just completed and filling for the first time at the start of hydrologic monitoring (1936-1941). The second most current data is shown for the same gauging site for 2001-2002 (Figure 2-2). As can be seen from this data, the temporal patterns of flows (snow melt runoff and summer/winter base flows) are the same. However, the most striking difference is the magnitude of winter base flows currently being experienced at the site. This difference is shown in Figure 2-3 and reflected in the flow exceedence curves for the two time periods (Figure 2-4). It is believed that the cause of these increased flows is the hydrologic connection via groundwater recharge from the Island Park Reservoir. Because the Buffalo River channel above the project drains the downgradient toe of the reservoir basin, this seems to be a reasonable assumption.

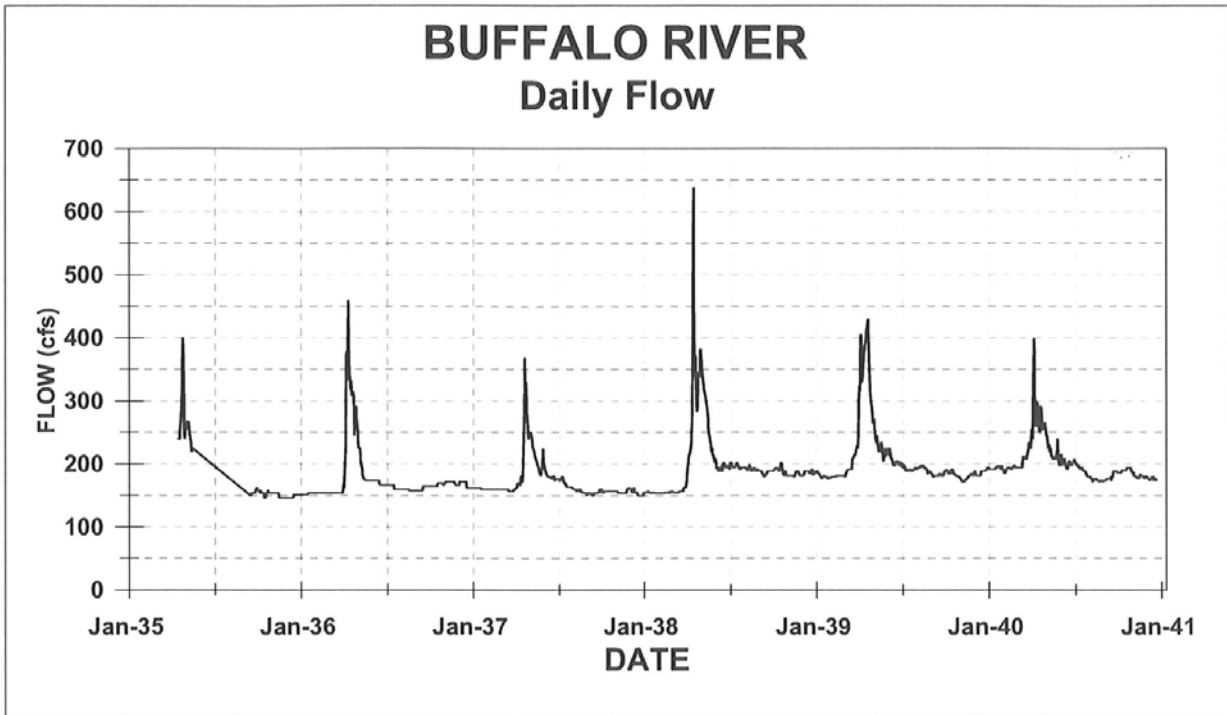


Figure 2-1. The historical flows at the USGS Station No. 13043000, for the time period 1936-1941.

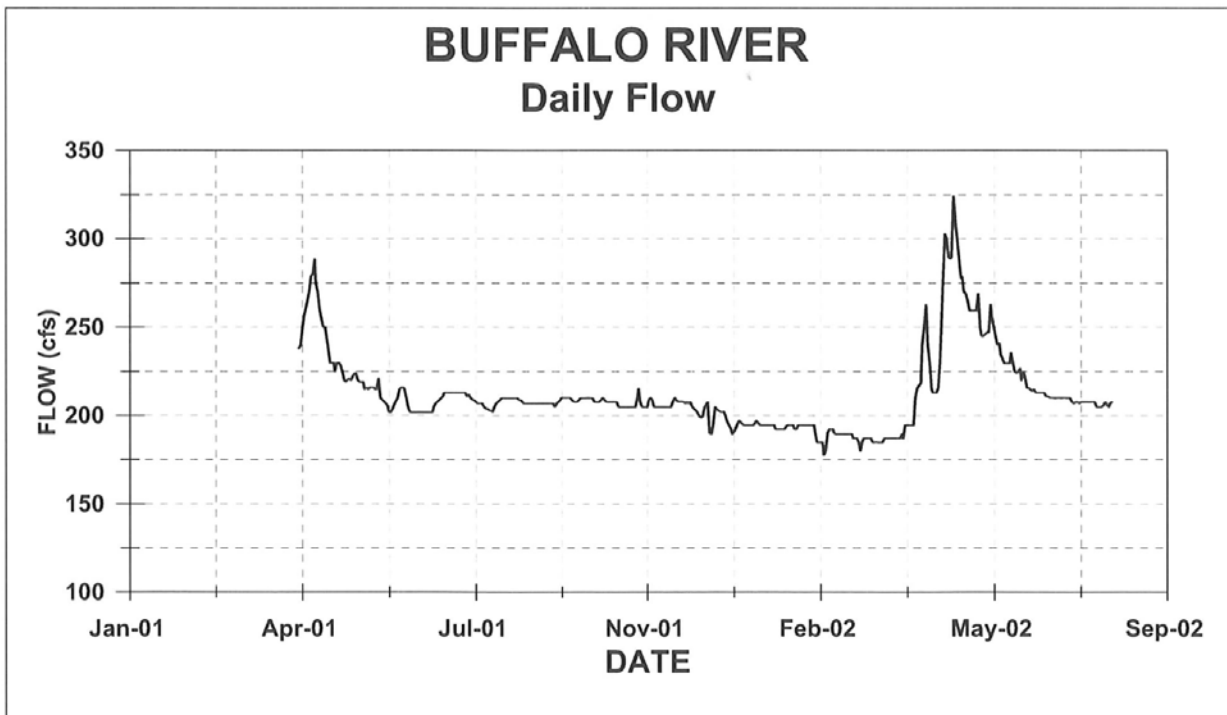


Figure 2-2. The current flows at the USGS Station No. 13043000, for the time period 2001-2002

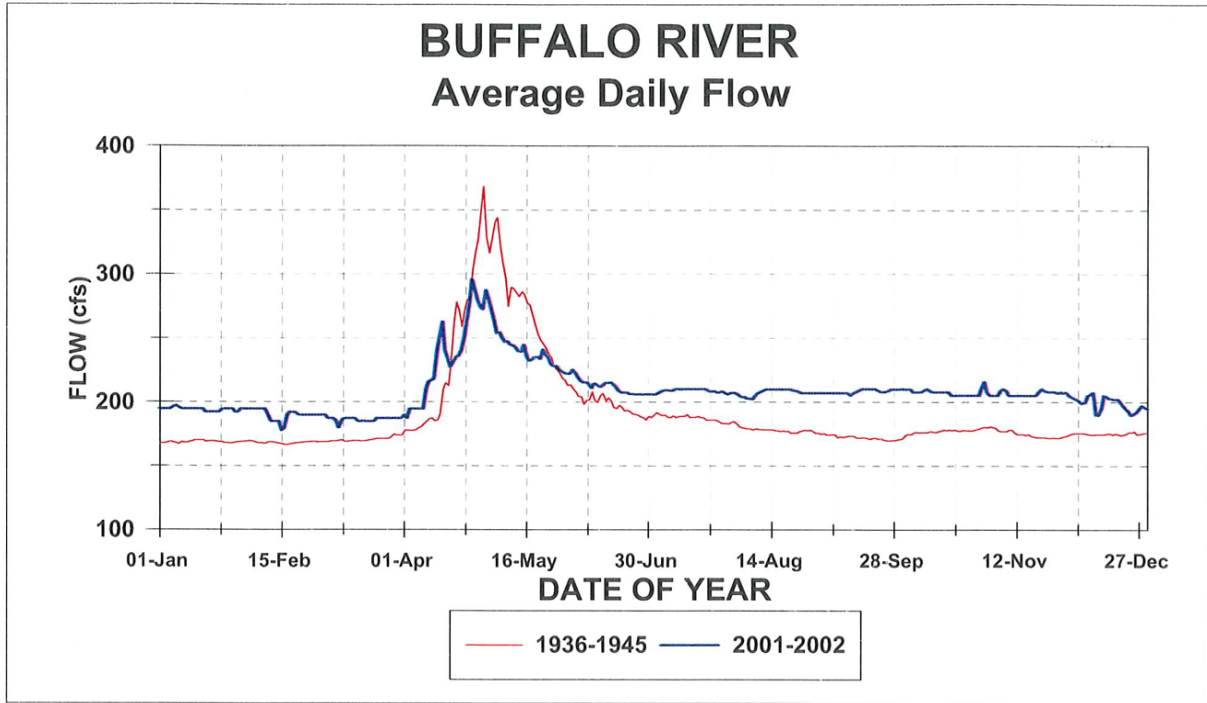


Figure 2-3. The average daily flows of the Buffalo River for two time periods at the USGS Station No. 13043000.

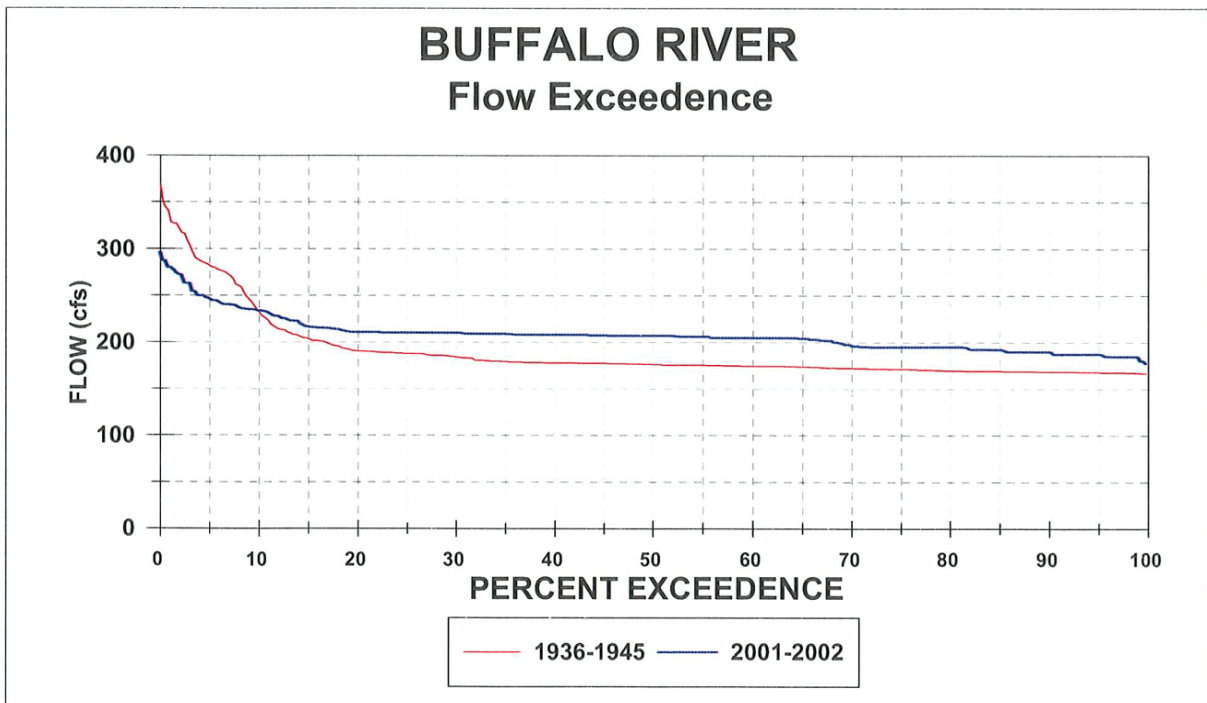


Figure 2-4. The flow exceedence curves for the Buffalo River for two separate time periods at the USGS gaging Station No. 13043000.

Description of Plant Operation

The Buffalo River Hydroelectric Project operates with a constant flow of 100 cfs, with no possibility of increasing or decreasing the flow through the plant. The plant discharges the flow into the Henry's Fork River just upstream from where the Buffalo River enters the Henry's Fork River.

When the power plant is operating approximately 100 cfs is left in the Buffalo River. From that 100 cfs left in the River 10 cfs will go through the new fishway and the majority of the resultant flow (approximately 90 cfs) will flow over the spillway. Although sealing of the dam is being done during the fall of 2005 it is believed that some leakage will continue. A small portion of the water will also be used through a sluiceway on the west side of the dam. The amount of water through this sluiceway will depend on how much water is needed to keep areas downstream of the dam watered.

Effects on the Buffalo River during Start-up and Shut-down of the Plant

The Buffalo River Hydroelectric Project operates with a constant flow of 100 cfs. The dam does not store water for project operation, only keeps the forbay at a useable elevation(head). When the plant shuts down the water that did go through the plant is rerouted through the dam over the spillway. As this is done the forbay elevation increases a few inches. When the plant is restarted the forbay is returned to it's original elevation.

Current Measuring Devices

The Buffalo River has a USGS gauging station (Station No. 13043000) approximately 1 mile upstream of the dam. Data was collected from 1936 to 1941 by USGS, the licensee started collecting data from the station once a day approximately three to five times a week starting in 2001.

3.0 Plan Description

(1) a description of the exact location of each gage or measuring device the method of calibration for each gage or measuring device, the frequency of recording for each gage or measuring device, and a monitoring schedule;

Current Gauge USGS 13043000 BUFFALO RIVER AT ISLAND PARK ID

Site Description

LOCATION

Latitude 44°25'20.35", Longitude 111°22'19.21" NAD83,
Fremont County, Idaho, Hydrologic Unit 17040202

DRAINAGE AREA

36.70 square miles; Contributing drainage area 36.7 square miles,

GAGE

Datum of gage is 6,250. feet above sea level NGVD29.

SITE TYPE:

Stream or River

The Licensee has been taking one reading per day (with operating personnel) approximately 3 to 5 days per week. It is proposed to increase reading the gage to 7 days per week once per day. Due to the fact that the Buffalo river is spring feed there is little change in the volumetric flow rate throughout the year with exception to spring runoff. For this reason a reading once per day will provide the volumetric flow rate within the degree of accuracy of the rating curve.

The Licensee has consulted with the USGS pertaining to updating the current gauge. An agreement (attached in appendix A) was entered into with the USGS December 14, 2006 to update the gauge rating curve. To update the rating curve the USGS will need to make at least three visits to the site during different flow conditions to take measurements. Once the rating curve has been updated the USGS will need to return to the site approximately twice annually to take measurements and adjust the rating curve as needed. The Licensee has agreed to reimburse the USGS for this work. The Licensee will take stage measurements of the water elevation with the current measuring gauge. This stage measurement together with an updated rating curve will result in a volumetric flow rate.

(2) a description of how the Project would maintain compliance with the operational requirement of Article 402;

The project will be operated as a run-of-river powerplant, which in this case means that there will be no storage of water in the reservoir for power production. The Licensee will not use the powerplant for "peaking", in other words no stop logs will be used to raise the reservoir to provide more water at times of greater power needs in the area. The turbine-generator unit can not increase or decrease the flow through it, therefore it is unable to be used as a "peaking" powerplant. All water that flows down the Buffalo River will flow through the powerplant or the dam. At times when the powerplant is off for maintenance all the flow will go through the dam. The dam has no outlets other than the fishway, sluiceway and spillway; the spillway is the major outlet. At those times when the flows are transferred to the dam the forbay increases a few inches. This is a natural effect cause by more water trying to use the spillway. After a few minutes the forbay elevation stabilizes as all of the river flows through the spillway.

(3) a provision for maintaining a log of project operation and generation;

The licensee will maintain a log of the river flow recordings made daily. Other information will include: stage height measurement, volumetric flow rate, correction factor (provided by the USGS if needed), corrected volumetric flow rate, day and time, and the name of the person who took the measurement. The log will be kept in a spreadsheet format and hard copy as well. An example of the log is provided in Appendix B.

(4) a provision for providing the gauging and project operation and generation data to the Idaho Department of Fish and Game (IDFG), U.S. Forest Service (Forest Service), U.S. Fish and Wildlife Service (FWS), and Idaho Department of Environmental Quality (IDEQ) within 30 days of the date of the agency's request for the data; and

The data will be kept in a spreadsheet format and available to agencies as requested within 30 days of request. The USGS is also included in the list of agencies.

(5) an implementation schedule for the plan.

The plan will begin within 30 days of approval from the FERC.

4.0 Agencies' Comments

USGS Oct 4, 2005 Comment 1:

Discharge records maintained by the USGS (United States Geological Survey, Water Resource Division) indicate the Buffalo River daily flows fluctuate between 150 and 460 cfs.

Licensee Response:

The Licensee is in agreement.

USGS Oct 4, 2005 Comment 2:

You cite references to USGS data acquired during operation of a gauging station on the Buffalo River (13043000) from 1936 to 1941, and data obtained during 2001-2002. Actually, the gauging station was only in place and operational during the 1936-1941 time period. Since that time, there has been no gauging station as indicated in your description, but only a wire-weight reference gage. We, the USGS, make occasional low-flow measurements at this site, but no rating analysis is performed. Comparisons drawn from 60 year old + data causes concern.

Licensee Response:

The Licensee agrees that the USGS operated the gauging station from 1936 to 1941. The Licensee has collected data from 2001 to the present using the USGS gauging charts in use in 1941. The plan propose that the Licensee work with the USGS to calibrate the gage at least once per year or as the USGS recommends.

USGS Oct 4, 2005 Comment 3:

In your 3.0 Proposed Plan, you indicate that the site is a current gauging site, which it is not. You also indicate that the record is maintained by the USGS Idaho Water Science Center, when there is actually no current record.

Licensee Response:

The Licensee agrees that the USGS operated the gauging station from 1936 to 1941 and that the USGS is not currently operating the gauging station. The data collected from 1936 to 1941 is maintained by the USGS.

USGS Oct 4, 2005 Comment 4:

The USGS has not checked the veracity of the datum of the wire-weight gage for over 30 years and cannot assume that the datum has remained unchanged.

Licensee Response:

The Licensee has collected data from 2001 to the present using the USGS gauging charts in use in 1941. The plan propose that the Licensee work with the USGS to calibrate the gage at least once per year or as the USGS recommends.

USGS Oct 4, 2005 Comment 5:

The gage height-discharge relation has not been analyzed since 1941, and channel conditions have most likely been altered since then.

Licensee Response:

The Licensee has collected data from 2001 to the present using the USGS gauging charts in use in 1941. The plan propose that the Licensee work with the USGS to calibrate the gage at least once per year or as the USGS recommends.

USGS Oct 4, 2005 Comment 6:

The USGS requests to be included with the list of agencies to whom gauging and project operation and generation data are sent.

Licensee Response:

The USGS has been added to the list of agencies in the plan.

USGS Oct 4, 2005 Comment 7:

The USGS recommends establishing a continuous and real-time data collection station at the location of the wire-weight reference gage to aid in monitoring river flows and establishing a current stage-discharge relation.

Licensee Response:

The Licensee would also like to see the USGS reestablish the gauging station.

USGS Oct 4, 2005 Comment 7:

To provide the most beneficial or useful discharge data a continuous real-time data collection station ran by the USGS would be most desirable. However, if this is not economically feasible a once daily reading would provide some benefit.

A once daily reading of the calibrated gage would provide a simple point in time

that would not accurately reflect mean daily flows or peak flows. It would be useful to have the USGS analyze the existing gage data to see if there is some relation between time of day and flows that may indicate the best time period to take readings to capture the mean daily flow. Reading of the gage should then be limited to those times which would most accurately reflect mean daily flows.

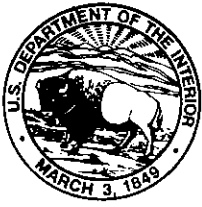
Licensee Response:

Since the Buffalo River is spring feed very little change is expected, however, the license will consult with the USGS regarding the best time period to take the reading and will report that time to the USFS within the next year.

5.0 Agency Correspondence

Appendix C contains all comments received from the agencies and a copy of the letters sent to the agencies requesting their review and comments. An additional comments received after the mailing of this report will be forwarded on to the FERC.

Appendix A



ORIGINAL

United States Department of the Interior

U.S. GEOLOGICAL SURVEY
IDAHO WATER SCIENCE CENTER
230 Collins Road
Boise, Idaho 83702-4520

December 14, 2006

Brent Smith
Northwest Power Service, Inc.
P.O. Box 535
Rigby, Idaho 83442

Dear Mr. Smith:

This agreement pertains to the work that is planned for the Buffalo River Hydrologic Project at Island Park, Idaho (USGS station 13043000). The work to be performed includes running levels at the U.S. Geological Survey (USGS) wire-weight gage to verify the existing datum, and 3 stream discharge measurements to verify the accuracy of the existing rating curve. The total cost for this work during fiscal year (FY) 2007 December 1, 2006 – September 30, 2007) will be \$4,456.00. The USGS Water Resources Program operates under the authority of Statue 16 USC 791 which allows us to perform this work.

The following information is incorporated into this agreement per U.S. Geological Survey (USGS) requirements:

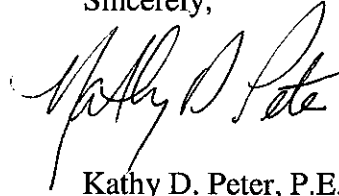
USGS Agreement Number: 07W49697148AC
Northwest Power Service DUNS Number: 820117758
USGS Cost Center Number: 9697
USGS DUNS Number: 01-454-1879

The costs are based on the average station costs within our network. The results of all work under this agreement will be available for publication by the U.S. Geological Survey. The agreement will terminate on [September 30, 2007], but may be amended at any time by mutual consent of the parties. Any party may terminate this agreement by providing [60] day's written notice to the other party. When an accepted agreement is cancelled by the buyer, the seller is authorized to collect costs incurred prior to cancellation of the agreement plus any termination costs.

If this agreement meets with your approval, please sign both of the originals and return one to us. The other original is for your records.

If you have any questions regarding this work or the data provided please call Jake Jacobson at our Idaho Falls Field Office, at (208) 529-4287. Questions related to the financial arrangement should be directed to Gary Kunz, our Administrative Officer, at (208) 387-1336.

Sincerely,



Kathy D. Peter, P.E.
Director, IWSC

ACCEPTED BY:

Brent L. Smith
Northwest Power Services, Inc.

12-18-06
Date

Copy to: Tom Brennan, USGS, Boise
Greg Clark, USGS, Boise
Jake Jacobson, USGS, Idaho Falls
Gary Kunz, USGS, Boise

Appendix B

Buffalo River

MONTH: _____

DATE	Time	DISCHARGE:		CORRECTION	CORRECTED FLOW IN CFS.	OPERATOR
		STAGE HT.	FLOW CFS.			
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Appendix C



United States Department of the Interior



GEOLOGICAL SURVEY

Water Resources Division
366 D Street
P.O. Box 51099
Idaho Falls, Idaho 83405-1099

October 4, 2005

Brent L. Smith
President
Northwest Power Services, Inc.
P.O. Box 535
Rigby, ID 83442

RE: Buffalo River Hydroelectric Project, FERC Project #1413

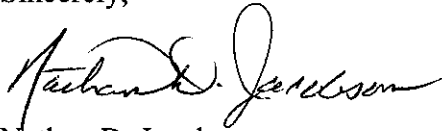
Dear Mr. Smith:

Thank you for sending the Operational Compliance Monitoring Plan for my review. My comments and concerns are as follows:

- Discharge records maintained by the USGS (United States Geological Survey, Water Resource Division) indicate the Buffalo River daily flows fluctuate between 150 and 460 cfs.
- You cite references to USGS data acquired during operation of a gaging station on the Buffalo River (13043000) from 1936 to 1941, and data obtained during 2001-2002. Actually, the gaging station was only in place and operational during the 1936-1941 time period. Since that time, there has been no gaging station as indicated in your description, but only a wire-weight reference gage. We, the USGS, make occasional low-flow measurements at this site, but no rating analysis is performed. Comparisons drawn from 60 year old + data causes concern.
- In your 3.0 Proposed Plan, you indicate that the site is a current gaging site, which it is not. You also indicate that the record is maintained by the USGS Idaho Water Science Center, when there is actually no current record.
- The USGS has not checked the veracity of the datum of the wire-weight gage for over 30 years and cannot assume that the datum has remained unchanged.
- The gage height-discharge relation has not been analyzed since 1941, and channel conditions have most likely been altered since then.
- The USGS requests to be included with the list of agencies to whom gauging and project operation and generation data are sent.
- The USGS recommends establishing a continuous and real-time data collection station at the location of the wire-weight reference gage to aid in monitoring river flows and establishing a current stage-discharge relation.

We support your efforts to develop the Buffalo River Hydroelectric Project, to provide discharge data, and to comply with the Federal Regulatory Commission regulations. We desire to aid and assist you in these efforts.

Sincerely,

A handwritten signature in cursive script that reads "Nathan D. Jacobson". The signature is written in black ink and is positioned above the printed name.

Nathan D. Jacobson,
Field Office Chief, US Geological Survey, WRD

cc. Mr. Dee Reynolds, Fall River Electric



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Snake River Fish and Wildlife Office
1387 S. Vinnell Way, Room 368
Boise, Idaho 83709
Telephone (208) 378-5243
<http://IdahoES.fws.gov>



OCT 17 2005

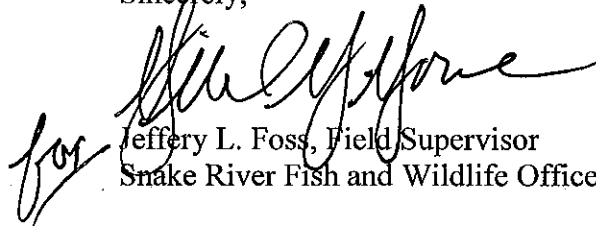
Brent L. Smith
President
Northwest Power Services, Inc.
P.O. Box 535
Rigby, Idaho 83442

Subject: Operational Compliance Monitoring Plan, Buffalo River Hydroelectric Project, Fremont County, Idaho – Comments
File FERC #1413 06-0066

Dear Mr. Smith:

The Fish and Wildlife Service (Service) is writing to inform you that we have no objections or recommended changes to the Operational Compliance Monitoring Plan (Plan) dated September 30, 2005, submitted for the Buffalo River Hydroelectric Project (Project). You submitted the Plan and requested comments to fulfill a requirement of the License issued for the Project by the Federal Energy Regulatory Commission in November 2004. We do not have any further comments on the Plan. If you have any questions, please contact Kendra Womack at (208) 866-5247.

Sincerely,


Jeffery L. Foss, Field Supervisor
Snake River Fish and Wildlife Office



Northwest Power Services, Inc.

September 30, 2005

Gary Vecellio
Environmental Staff Biologist
Idaho Department of Fish & Game
4279 Commerce Circle
Idaho Falls, ID 83401

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Mr. Vecellio,

The Federal Energy Regulatory Commission (FERC) issued a subsequent License on November 5, 2004 for the Buffalo River Hydroelectric Project, FERC Project #1413. Please find attached Operational Compliance Monitoring Plan, as required by the License, for your review and comment.

Please provide your comments within 30 days from the date of this letter. If you have any questions or need additional information please contact me at (208) 745-0834 or e-mail me at bsmith@nwpwrservices.com.

Sincerely,

NORTHWEST POWER SERVICES, INC.

A handwritten signature in cursive script that reads "Brent L. Smith".

Brent L. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric



Northwest Power Services, Inc.

September 30, 2005

Gerrish Willis
Regional Hydropower Coordinator
8236 Federal Building
125 South State
Salt Lake City, UT 84138

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Mr. Willis,

The Federal Energy Regulatory Commission (FERC) issued a subsequent License on November 5, 2004 for the Buffalo River Hydroelectric Project, FERC Project #1413. Please find attached Operational Compliance Monitoring Plan, as required by the License, for your review and comment.

Please provide your comments within 30 days from the date of this letter. If you have any questions or need additional information please contact me at (208) 745-0834 or e-mail me at bsmith@nwpwrservices.com.

Sincerely,

NORTHWEST POWER SERVICES, INC.

A handwritten signature in cursive script that reads "Brent L. Smith".

Brent L. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric



Northwest Power Services, Inc.

September 30, 2005

Jim De Rito
Conseration Director
Henry's Fork Foundation
PO Box 550
Ashton, ID 83420

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Mr. De Rito,

The Federal Energy Regulatory Commission (FERC) issued a subsequent License on November 5, 2004 for the Buffalo River Hydroelectric Project, FERC Project #1413. Please find attached Operational Compliance Monitoring Plan, as required by the License, for your review and comment.

Please provide your comments within 30 days from the date of this letter. If you have any questions or need additional information please contact me at (208) 745-0834 or e-mail me at bsmith@nwpwrservices.com.

Sincerely,

NORTHWEST POWER SERVICES, INC.

A handwritten signature in cursive script that reads "Brent L. Smith".

Brent L. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric



Northwest Power Services, Inc.

September 30, 2005

Steve Trafton
Executive Director
Henry's Fork Foundation
PO Box 550
Ashton, ID 83420

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Mr. Trafton,

The Federal Energy Regulatory Commission (FERC) issued a subsequent License on November 5, 2004 for the Buffalo River Hydroelectric Project, FERC Project #1413. Please find attached Operational Compliance Monitoring Plan, as required by the License, for your review and comment.

Please provide your comments within 30 days from the date of this letter. If you have any questions or need additional information please contact me at (208) 745-0834 or e-mail me at bsmith@nwpwrservices.com.

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NORTHWEST POWER SERVICES, INC.

A handwritten signature in cursive script that reads "Brent L. Smith".

Brent L. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric



Northwest Power Services, Inc.

September 30, 2005

Lee Mabey
US Forest Service
1405 Hollipark Drive
Idaho Falls, ID 83401

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Mr. Mabey,

The Federal Energy Regulatory Commission (FERC) issued a subsequent License on November 5, 2004 for the Buffalo River Hydroelectric Project, FERC Project #1413. Please find attached Operational Compliance Monitoring Plan, as required by the License, for your review and comment.

Please provide your comments within 30 days from the date of this letter. If you have any questions or need additional information please contact me at (208) 745-0834 or e-mail me at bsmith@nwpwrservices.com.

Sincerely,

NORTHWEST POWER SERVICES, INC.

A handwritten signature in cursive script that reads "Brent L. Smith".

Brent L. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric



Northwest Power Services, Inc.

September 30, 2005

Adrienne Keller
US Forest Service
PO Box 858
Ashton, ID 83402

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Ms. Keller,

The Federal Energy Regulatory Commission (FERC) issued a subsequent License on November 5, 2004 for the Buffalo River Hydroelectric Project, FERC Project #1413. Please find attached Operational Compliance Monitoring Plan, as required by the License, for your review and comment.

Please provide your comments within 30 days from the date of this letter. If you have any questions or need additional information please contact me at (208) 745-0834 or e-mail me at bsmith@nwpwtservices.com.

Sincerely,

NORTHWEST POWER SERVICES, INC.

A handwritten signature in cursive script, appearing to read "Brent L. Smith".

Brent L. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric



Northwest Power Services, Inc.

September 30, 2005

Deb Mignogno
US Fish & Wildlife Service
4425 Burley Drive, Suite A
Chubbuck, ID 83202

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Ms. Mignogno,

The Federal Energy Regulatory Commission (FERC) issued a subsequent License on November 5, 2004 for the Buffalo River Hydroelectric Project, FERC Project #1413. Please find attached Operational Compliance Monitoring Plan, as required by the License, for your review and comment.

Please provide your comments within 30 days from the date of this letter. If you have any questions or need additional information please contact me at (208) 745-0834 or e-mail me at bsmith@nwpwrservices.com.

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NORTHWEST POWER SERVICES, INC.

A handwritten signature in cursive script that reads "Brent L. Smith".

Brent L. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric



Northwest Power Services, Inc.

September 30, 2005

Jim Esch
US Fish & Wildlife Service
1387 S. Vinnell Way, Room 368
Boise, ID 83709

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Mr. Esch,

The Federal Energy Regulatory Commission (FERC) issued a subsequent License on November 5, 2004 for the Buffalo River Hydroelectric Project, FERC Project #1413. Please find attached Operational Compliance Monitoring Plan, as required by the License, for your review and comment.

Please provide your comments within 30 days from the date of this letter. If you have any questions or need additional information please contact me at (208) 745-0834 or e-mail me at bsmith@nwpwrservices.com.

Sincerely,

NORTHWEST POWER SERVICES, INC.

A handwritten signature in cursive script that reads "Brent L. Smith".

Brent L. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric



Northwest Power Services, Inc.

September 30, 2005

Scott, A. Grunder
Fishery Program Coordinator
Idaho Department of Fish & Game
PO Box 25
Boise, ID 83707

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Mr. Grunder,

The Federal Energy Regulatory Commission (FERC) issued a subsequent License on November 5, 2004 for the Buffalo River Hydroelectric Project, FERC Project #1413. Please find attached Operational Compliance Monitoring Plan, as required by the License, for your review and comment.

Please provide your comments within 30 days from the date of this letter. If you have any questions or need additional information please contact me at (208) 745-0834 or e-mail me at bsmith@nwpwrservices.com.

Sincerely,

NORTHWEST POWER SERVICES, INC.

A handwritten signature in cursive script that reads "Brent L. Smith".

Brent L. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric



Northwest Power Services, Inc.

September 30, 2005

Troy Saffle
Idaho DEQ
900 North Skyline
Idaho Falls, ID 83402

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Mr. Saffle,

The Federal Energy Regulatory Commission (FERC) issued a subsequent License on November 5, 2004 for the Buffalo River Hydroelectric Project, FERC Project #1413. Please find attached Operational Compliance Monitoring Plan, as required by the License, for your review and comment.

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Brent L. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric



Northwest Power Services, Inc.

September 30, 2005

Keith Hobbs
Idaho Department of Parks & Recreation
HC66 Box 500
Island Park, ID 83429

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Mr. Hobbs,

The Federal Energy Regulatory Commission (FERC) issued a subsequent License on November 5, 2004 for the Buffalo River Hydroelectric Project, FERC Project #1413. Please find attached Operational Compliance Monitoring Plan, as required by the License, for your review and comment.

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NORTHWEST POWER SERVICES, INC.

A handwritten signature in cursive script that reads "Brent L. Smith".

Brent L. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric



Northwest Power Services, Inc.

September 30, 2005

Nathan Jacobson
FIELD OFFICE CHIEF
U.S. GEOLOGICAL SURVEY
P.O. Box 51099
366 D Street
Idaho Falls, ID 83405-1099

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Mr. Jacobson,

The Federal Energy Regulatory Commission (FERC) issued a subsequent License on November 5, 2004 for the Buffalo River Hydroelectric Project, FERC Project #1413. Please find attached Operational Compliance Monitoring Plan, as required by the License, for your review and comment.

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Sincerely,

NORTHWEST POWER SERVICES, INC.

A handwritten signature in cursive script, appearing to read 'Brent L. Smith', is written in black ink.

Brent L. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric



Northwest Power Services, Inc.

December 19, 2006

Gary Vecellio
Idaho Department of Fish & Game
4279 Commerce Circle
Idaho Falls, ID 83401

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Mr. Vecellio,

Please find attached the revised Operational Compliance Monitoring Plan for your approval for the Buffalo River Hydroelectric Project. Please provide your comments within 30 days of this letter.

If you have any questions or need additional information please contact me at (208) 745-0834 or e-mail me at bsmith@nwpwrservices.com.

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A handwritten signature in blue ink that reads "Brent L. Smith". The signature is written in a cursive style.

Brent L. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric



Northwest Power Services, Inc.

December 19, 2006

Jim De Rito
Henry's Fork Foundation
PO Box 550
Ashton, ID 83420

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President

cc: Mr. Dee Reynolds, Fall River Electric



Northwest Power Services, Inc.

December 19, 2006

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US Forest Service
PO Box 858
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Northwest Power Services, Inc.

December 19, 2006

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US Fish & Wildlife Service
4425 Burley Drive, Suite A
Chubbuck, ID 83202

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Brent L. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric



Northwest Power Services, Inc.

December 19, 2006

Troy Saffle
Idaho DEQ
900 North Skyline
Idaho Falls, ID 83402

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Sincerely,

NORTHWEST POWER SERVICES, INC.

A handwritten signature in blue ink that reads "Brent L. Smith". The signature is written in a cursive, slightly slanted style.

Brent L. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric



Northwest Power Services, Inc.

December 19, 2006

Nathan Jacobson
U.S. GEOLOGICAL SURVEY
P.O. Box 51099
366 D Street
Idaho Falls, ID 83405-1099

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Brent L. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric

Submission Contents

The operational compliance monitoring plan document 20061219_p1413_402_403.pdf.....	1-41
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UNITED STATES OF AMERICA 118 FERC ¶ 62, 164
FEDERAL ENERGY REGULATORY COMMISSION

Fall River Rural Electric Cooperative, Inc.

Project No. 1413-056

ORDER MODIFYING AND APPROVING OPERATIONAL COMPLIANCE
MONITORING PLAN PURSUANT TO ARTICLE 403

(Issued March 2, 2007)

On December 19, 2006, Northwest Power Services, Inc. (NPSI), on behalf of the Fall River Rural Electric Cooperative, Inc. (licensee), filed an Operational Compliance Monitoring Plan (Plan) pursuant to Article 403 of the license¹ for the Buffalo River Hydroelectric Project, FERC No. 1413. NPSI supplemented the filing on February 16, 2007, with comment letters from the Forest Service, and the Henry's Fork Foundation. The Buffalo River Project is located on the Buffalo River near its confluence with the Henry's Fork of the Snake River, north of Ashton, in Fremont County, Idaho.

REQUIREMENTS

Article 403 of the license requires the licensee to file for Commission approval an operational compliance monitoring plan. The plan shall include at a minimum:

- (1) a description of the exact location of each gage or measuring device, the method of calibration for each gage or measuring device, the frequency of recording for each gage or measuring device, and a monitoring schedule;
- (2) a description of how the project would maintain compliance with the operational requirement of Article 402;
- (3) a provision for maintaining a log of project operation and generation;
- (4) a provision for providing the gaging and project operation and generation data to the Idaho Department of Fish and Game (IDFG), U.S. Forest Service (Forest Service), U.S. Fish and Wildlife Service (FWS), and Idaho Department of Environmental Quality (IDEQ) within 30 days of the date of the agency's request for the data; and

¹ 109 FERC ¶ 62,077 (2004).

Project No.1413-056

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- (5) an implementation schedule for the plan.

The licensee shall prepare the plan after consultation with the U.S. Geological Survey (USGS), IDFG, Forest Service, FWS, and IDEQ. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

A courtesy copy of the plan shall be filed with the Commission's D2SI-PRO and the Director, D2SI.

The Commission reserves the right to require changes to the plan. Implementation of the plan shall not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

LICENSEE'S PLAN

NPSI proposes to use a gauging site approximately 1 mile upstream of the dam. The site is described as USGS Gauging Station No. 13043000 – Buffalo River at Island Park, ID. The site was a USGS gauging station from 1936 to 1941, but is no longer in operation. NPSI proposes to work with the USGS on reestablishing the gauging site and updating the rating curve for measurements taken at the site. NPSI entered into an agreement with the USGS in December 2006 to verify the existing gauge datum and verify the accuracy of the existing rating curve. The USGS will also have to return to the site approximately twice annually to take measurements and adjust the rating curve as needed. The licensee has agreed to reimburse the USGS for such work. NPSI also proposes reading the gauge once per day, 7 days per week.

The Plan indicates that the project will be operated as a run-of-river powerplant, and that the dam does not store water for power production, but only keeps the forebay at a useable elevation. The project operates with a constant flow of 100 cubic feet per second, with no possibility of increasing or decreasing the flow through the plant. Flow not going through the plant will go through a fishway or over the spillway. When the powerplant is off, all flow is rerouted through the dam, principally over the spillway.

Project No.1413-056

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The Plan states that the licensee will maintain a log of the river flow recordings made daily. The log will contain: stage height measurement, volumetric flow rate, correction factor (provided by the USGS if needed), corrected volumetric flow rate, day and time, and the name of the person who took the measurement. The log will be kept in a spreadsheet format as well as hard copy, and will be available to agencies within 30 days of request.

NPSI proposes to implement the Plan within 30 days of approval from the Commission.

DISCUSSION

The licensee included documentation of consultation with the IDFG, Forest Service, FWS, IDEQ, and USGS, as well as the Henry's Fork Foundation, and the Idaho Department of Parks & Recreation. The USGS provided comments on a draft plan on October 4, 2005. The comments related principally to the use of the gauging site and data that has not been maintained since 1941. The Plan included responses from the licensee, generally agreeing with the USGS' comments, and indicating that the licensee would work with the USGS to calibrate the gauge.

The Forest Service provided comments on a previous version of the Plan on May 24, 2006, which were included with a prior filing, but not included with the December 19th filing. The Forest Service's comments were included in Section 4 of the Plan, although they were attributed to the USGS' October 4, 2005 letter. The Forest Service commented that a continuous real-time data station run by the USGS would provide the most beneficial or useful discharge data, but a once daily reading would also provide some benefit. The Forest Service subsequently commented in a January 10, 2007 letter that the licensee's revised Plan is sufficient to meet the Forest Service's needs, and that a once daily reading will provide a beneficial measure of flows. The Forest Service also commented that the licensee's agreement with the USGS provides for reestablishing the rating curve in 2007, but does not provide for twice annually visits by the USGS for the term of the license.

The Henry's Fork Foundation provided comments in a letter dated January 23, 2007, also pointing out that the agreement between the licensee and the USGS ends on September 30, 2007, and requested information on how frequently the gauge will be recalibrated after the agreement ends. In the cover letter submitting the agency comment letters to the Commission, NPSI states that it is the intention of the

Project No.1413-056

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licensee for the agreement to continue through the term of the license, and that the licensee will report to the Commission and the agencies by the end of 2007 on the continuing relationship between the licensee and the USGS.

We find the Plan, with the above modification, meets the requirements of Article 403 of the license, and should be approved.

The Director Orders:

(A) The Operational Compliance Monitoring Plan, filed December 19, 2006, for the Buffalo River Hydroelectric Project No. 1413, as modified by Paragraph (B) below, is approved.

(B) The licensee shall report to the Commission, by December 31 of each year, the status of negotiations with the USGS for performing calibration and maintenance of the Buffalo River at Island Park, ID gauge.

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

The Secretary
Federal Energy Regulatory Commission
Mail Code: DHAC, PJ-12.2
888 First Street, N.E.
Washington, DC 20426

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

William Guey-Lee
Chief, Engineering and Jurisdiction Branch
Division of Hydropower Administration
and Compliance

**ENVIRONMENTAL INSPECTION REPORT
(ELECTRONICALLY SUBMITTED)
FEDERAL ENERGY REGULATORY COMMISSION**

PORTLAND REGIONAL OFFICE

	Date of Inspection	<u>July 27, 2010</u>	
Name	<u>Buffalo River</u>	Project No.	<u>1413</u>
Licensee/Exemptee	<u>Fall River Rural Electric Coop., Inc.</u>	License Type	<u>Minor</u>
License Issued	<u>November 1, 2004</u>	License Expires	<u>October 21, 2044</u>
Location	<u>Buffalo River</u>		<u>Targhee National Forest</u>
	Waterway		Reservation
	<u>Freemont</u>		<u>Idaho</u>
	County		State
Inspector	<u>Blake Condo</u>	Date	<u>August 27, 2010</u>
Licensee Representatives	<u>Mr. Brent Smith</u>		
Other Participants	<u>None</u>		

Summary of Findings

This report covers conditions observed on the day of the inspection and the availability of recreational facilities, public safety signage and devices, and compliance with the environmental license requirements for the Buffalo River Hydroelectric Project.

Flow information: 100 cubic feet per second (cfs) diverted for power generation;
Approximately 190 cfs in Buffalo River

The licensee was able to demonstrate overall compliance with relevant articles through the examination of records, testing of works, and visual inspection of facilities with the exception of three follow-up action items that were noted during the inspection of the project:

- 1) The posted Part 8 sign does not meet all the requirements set forth in Section 8.2 (a) of the Federal Power Act;

FERC Project No. 1413

- 2) Removal of an old section of trashrack located adjacent to the stairwell to the powerhouse; and
- 3) Installation of an oil separator or other method of oil capture on the sump pump line in the powerhouse that feeds directly into the Buffalo River tailrace.

The licensee was informed of the follow-up items during the inspection and again by letter dated August 19, 2010.

Submitted August 27, 2010

Blake Condo
Senior Environmental Scientist

FERC Project No. 1413

A. PROJECT PROFILE

The Buffalo River Hydroelectric Project is owned and operated by Fall River Rural Electric Cooperative, Inc. The run-of-river project is located on the Buffalo River near its confluence with the Henry's Fork River, north of Ashton, in Fremont County, Idaho. The project occupies almost 10 acres of land within the Targhee National Forest, administered by the U.S. Department of Agriculture, Forest Service (Forest Service). The project continuously diverts 100 cfs for power generation while the excess remains in the natural stream course via a fish ladder release and a surface outlet spillway.

The project consist of: (1) a 142-foot-long by 12-foot-high timber-faced rock-filled diversion dam; (2) a 40-foot-long by 3-foot-high concrete slab spillway with stop logs; (3) a 270-foot-long fish passage structure; (4) a concrete intake structure with a 5-foot steel slide gate; (5) a trashrack; (6) a 52-foot-long by 5-foot-diameter concrete encased steel penstock; (7) a 34-foot-long by 22-foot-high masonry block powerhouse containing a 250-kW Bouvier Kaplan inclined shaft turbine; (8) a 1,800-foot-long underground transmission line; and (9) other appurtenant facilities.

The previous Environmental Inspection was conducted on August 16, 2006. All environmental and public use aspects of the project were found satisfactory and no follow-up actions were required.

B. INSPECTION FINDINGS

Requirements	Date of Requirement	Follow-Up Needed	Photo Nos.
FISH AND WILDLIFE RESOURCES			
Standard Article 6 requires the licensee to install and thereafter maintain gages and stream gaging stations for the purpose of determining the stage and flow of the stream on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works.	O: 11/5/04	No	--
Standard Article 11 requires the licensee to construct, maintain, and operate facilities for the conservation and development of fish and wildlife resources.	O: 11/5/04	No	2, 4
Article 402 requires the licensee to operate the project in a run-of-river mode for the protection of aquatic resources in the Buffalo River and Henry's Fork River in the project area.	O: 11/5/04 F: 11/7/05 AP: 8/10/05	No	--

FERC Project No. 1413

Requirements	Date of Requirement	Follow-Up Needed	Photo Nos.
<p>Article 403 requires the license after consultation with the U.S. Geological Survey (USGS), Idaho Department of Fish and Game (IDFG), Forest Service, and U.S. Fish and Wildlife Service (FWS), and Idaho Department of Environmental Quality (IDEQ) to develop an operational compliance monitoring plan.</p> <p>Operational Compliance Plan filed by the licensee.</p> <p>Plan approved by the Commission.</p>	<p>O: 11/5/04 F: 12/19/06 AP: 3/2/07</p>	No	--
<p>Article 404 requires the licensee after consultation with IDFG, Forest Service, FWS, and IDEQ to create a Hazardous Substances Plan to protect fish and wildlife resources from adverse effects associated with fuel and hazardous substance spills at the project.</p> <p>Hazardous Substances Plan filed by the licensee.</p> <p>Plan approved by the Commission.</p>	<p>O: 11/5/04 F: 5/11/05 AP: 5/31/05</p>	No	--
<p>Article 405 requires the licensee to construct or install, operate, and maintain a fishway.</p>	<p>O: 11/5/04</p>	No	2, 4
<p>Article 406 requires the licensee to construct or install, operate, and maintain a fish screen.</p>	<p>O: 11/5/04</p>	No	2, 4
<p>Article 407 requires the licensee to develop a plan of conducting post-construction monitoring and evaluation of the fishway and fish screen required by articles 405 and 406 for a period of 3 years and every third year thereafter for the term of the license.</p> <p>Most recent monitoring report filed by the licensee.</p> <p>Report received and approved by the Commission.</p>	<p>O: 11/5/04 F: 5/17/10 AP: 8/23/10</p>	No	--
<p>Article 408 requires that at least six months before the start of fishway construction/installation required by license article 405, the licensee shall file a construction/installation plan and schedule that includes a provision for conducting a fishway construction activities only during the months of August through October in order to avoid disturbance to rainbow trout spawning movements and rearing of newly hatched rainbow trout fry and displacement of wintering trumpeter swans.</p>	<p>O: 11/5/04</p>	No	--
<p>Article 409 requires the license to construct, operate, and maintain, or to provide for the construction, operation and maintenance of such fishways as may be prescribed by the Secretary of the Interior under Section 18 of the Federal Power Act.</p>	<p>O: 11/5/04</p>	No	--
RECREATION RESOURCES			
<p>Standard Article 10 requires on the application of any person, association, corporation, federal agency, state or municipality, the licensee to permit such reasonable use of its reservoir or other project properties.</p>	<p>O: 11/5/04</p>	No	--
<p>Standard Article 13 requires the licensee to allow free public access, to a reasonable extent, to project waters and adjacent project lands.</p>	<p>O: 11/5/04</p>	No	9
<p>18 CFR, Part 8 requirements: Recreation signage and posting.</p>	<p>O: 11/5/04</p>	Yes	--

FERC Project No. 1413

Requirements	Date of Requirement	Follow-Up Needed	Photo Nos.
<p>Article 401 requires the licensee to develop a recreation plan within a year of license issuance.</p> <p>Recreation plan filed by the licensee.</p> <p>Recreation plan approved by the Commission.</p> <p>As-built drawings of recreation enhancements/improvements filed.</p> <p>As-built drawings approved by the Commission.</p>	<p>O: 11/5/04 F: 7/22/05 AP: 2/28/06 F: 9/4/07 AP: 10/30/07</p>	No	5, 9
CULTURAL RESOURCES			
<p>Article 401 requires the licensee to develop a Heritage Resource Protection Plan (HRPP) if items of potential cultural, historical, archeological, or paleontological value are reported or discovered at the project area.</p>	<p>O: 11/5/04 F: 5/11/05 AP: 6/8/05</p>	No	--
<p>Article 411 requires the licensee to consult with the State Historic Preservation Officer (SHPO) before starting any future land-clearing or land-disturbing activities.</p>	<p>O: 11/5/04</p>	No	--
PUBLIC SAFETY			
<p>Article 401 requires the licensee to develop a public safety plan within 6 months of license issuance.</p>	<p>O: 11/5/04 F: 5/13/05</p>	No	7
<p>18 CFR, Part 12: requires facilities and measures to ensure public safety.</p>	<p>O: 11/5/04</p>	No	7
OTHER ENVIRONMENTAL RESOURCES			
<p>Standard Article 14 requires the licensee to take measures to prevent soil erosion, stream sedimentation, and any form of water or air pollution.</p>	<p>O: 11/5/04</p>	Yes	--
<p>Standard Article 15 requires the licensee to clear and keep clear all lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which result from maintenance, operation, or alteration of project works.</p>	<p>O: 11/5/04</p>	Yes	8
<p>Standard Article 22 requires the licensee to make a provision for avoiding inductive interference between any project transmission line or other project facility and any radio installation, telephone line, or other communication facility installed or constructed before or after construction of such project transmission line or other project facility and owned, operated, or used by such agency of the United States in administering the lands under its jurisdiction.</p>	<p>O: 11/5/04</p>	No	--
<p>Standard Article 23 requires the licensee to keep the transmission line right of ways clear of new growth, all refuse, and inflammable materials.</p>	<p>O: 11/5/04</p>	No	--
<p>Article 401 requires the licensee to develop plans such as a public safety plan; a road use permit; a recreation plan; an interpretive display; a heritage resource protection plan; a scenery management plan; an erosion control plan; a vegetation management plan; a protection of threatened and endangered species plan; and a sensitive species biological evaluation.</p>	<p>O: 11/5/04 F: 5/11/05 F: 7/22/05 AP: 2/28/06</p>	No	5, 7, 9

FERC Project No. 1413

Requirements	Date of Requirement	Follow-Up Needed	Photo Nos.
Article 410 requires the licensee, after consultation with IDFG, Forest Service, and FWS, to develop a Diversion Operation Plan to maintain the Buffalo River channel in the project area and pass large woody debris past the project.	O: 11/5/04 F: 5/11/05	No	--

O: Order; 18 CFR: Title 18 Code of Federal Regulations; AP: Approved; AM: Amended; F: Filed; Form L-16 Standard Articles for Constructed minor project affecting lands of the United States (October 1975).

Note: Form 80 exempted 3/98

C. COMMENTS AND FOLLOW-UP

Based on file reviews, discussions, and field observations made during the inspection, no items of noncompliance were found with the exception of three follow up items discussed below. The licensee was informed of the follow-up items on the day of the inspection and again by letter dated August 19, 2010. The following comments and observations are included:

(1) Fish and Wildlife Resources: The licensee maintains a manual gage upstream of the dam on a bridge over the Buffalo River. The trashrack and fish screen at the project intake is cleaned anywhere from once a day to few times a week depending on the need. The trashrack has a new automated rake which was placed into service in 2005, along with expanded sidewalk and decking. The licensee has constructed a new fish ladder that is being monitored using a fish trap to determine the ladder's effectiveness. The licensee filed the 2009 fishway and fish screen monitoring reports on May 17, 2010, pursuant to the Order Modifying and Approving Fishway and Fish Screen Monitoring Plan (article 407). The 2009 report states that operating personnel monitored the fish screen and that during this effort, no fish were found on the project intake screen. In addition, operating personnel reported 1,009 fish using the fishway as monitored by the trap. The next report is due March 1, 2013.

(2) Recreation Resources: The licensee filed as-built drawings of the recently installed recreation enhancements and improvements at the project on September 4, 2007. The Commission approved the drawings on October 30, 2007. The public access area is located to east of the dam and includes a parking area with a handicapped parking spot at the Box Canyon trailhead, an access trail with overlook, vehicle turn-around area, and interpretive and directional signage (photos 5 and 9).

Signage for the project did not include all the requirements for recreational signage (see 18 CFR Chapter 1, Part 8.2 (a)). Possible revision or replacement of the existing sign that would meet the Part 8 requirements to include all the necessary missing language was discussed with the licensee during the inspection and in the August 19, 2010 follow up letter.

(3) Cultural Resources: Article 401 requires the licensee to develop a Heritage Resource Protection Plan (HRMP), in consultation with the Forest Service, to mitigate

FERC Project No. 1413

the project's effect on items of potential cultural, historical, archeological, or paleontological value discovered or reported during ground-disturbing activities or as a result of project operations. On May 13, 2005, the licensee filed its HRMP pursuant to article 401 of the license and Forest Service Condition No. 12. The plan, which included revisions from the Forest Service, was approved by the Commission on June 8, 2005. The licensee appears to be in compliance with cultural resource requirements.

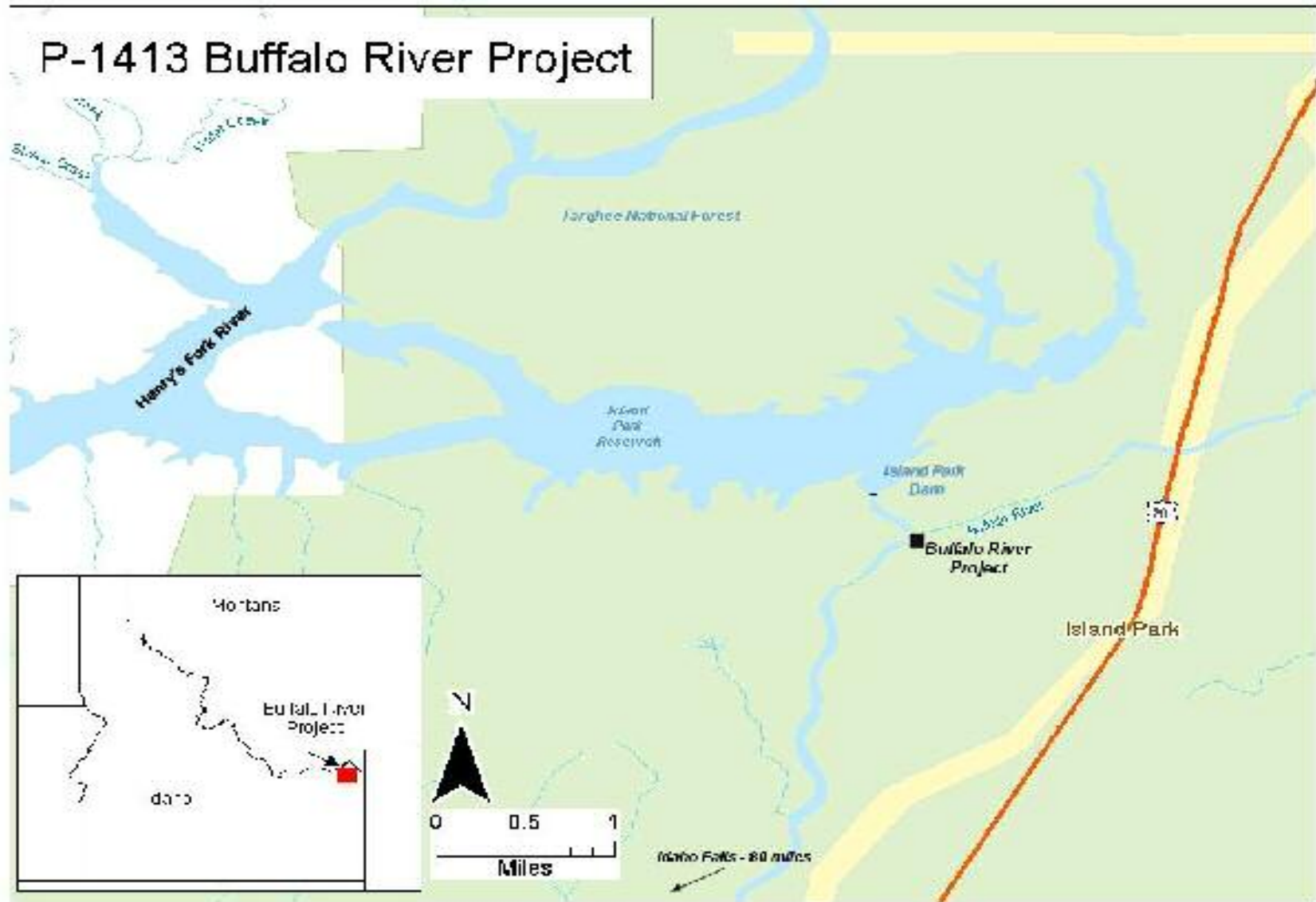
(4) Public Safety: The licensee filed a public safety plan on May 13, 2005 in accordance with article 401 of the license. The project facilities were secured and warning signs notifying users of potential hazards were prominently displayed throughout the project area.

An old section of trashrack (photo 8) and woody debris located adjacent to the powerhouse stairwell was confirmed as rubbish during the inspection. The trashrack may pose a safety hazard and should be removed and disposed of properly. No other public safety concerns were observed at the project.

(5) Other Environmental Resources: No new or on-going erosion problems currently exist at the project. It was observed that your pumps for the sump pit return line drain directly into the Buffalo River tailrace. In order to ensure protection of water quality and to avoid contamination, it was discussed onsite that an oil separator or other method of oil capture needs to be installed in the return line to extract any petroleum products that may drain into the sump. This is a follow up item.

D. EXHIBITS AND PHOTOGRAPHS

The following are provided to show the location of the project and to illustrate project features: project location map, photo location map, and 9 photographs.



Project location map for the Buffalo River Project, FERC No. 1413.

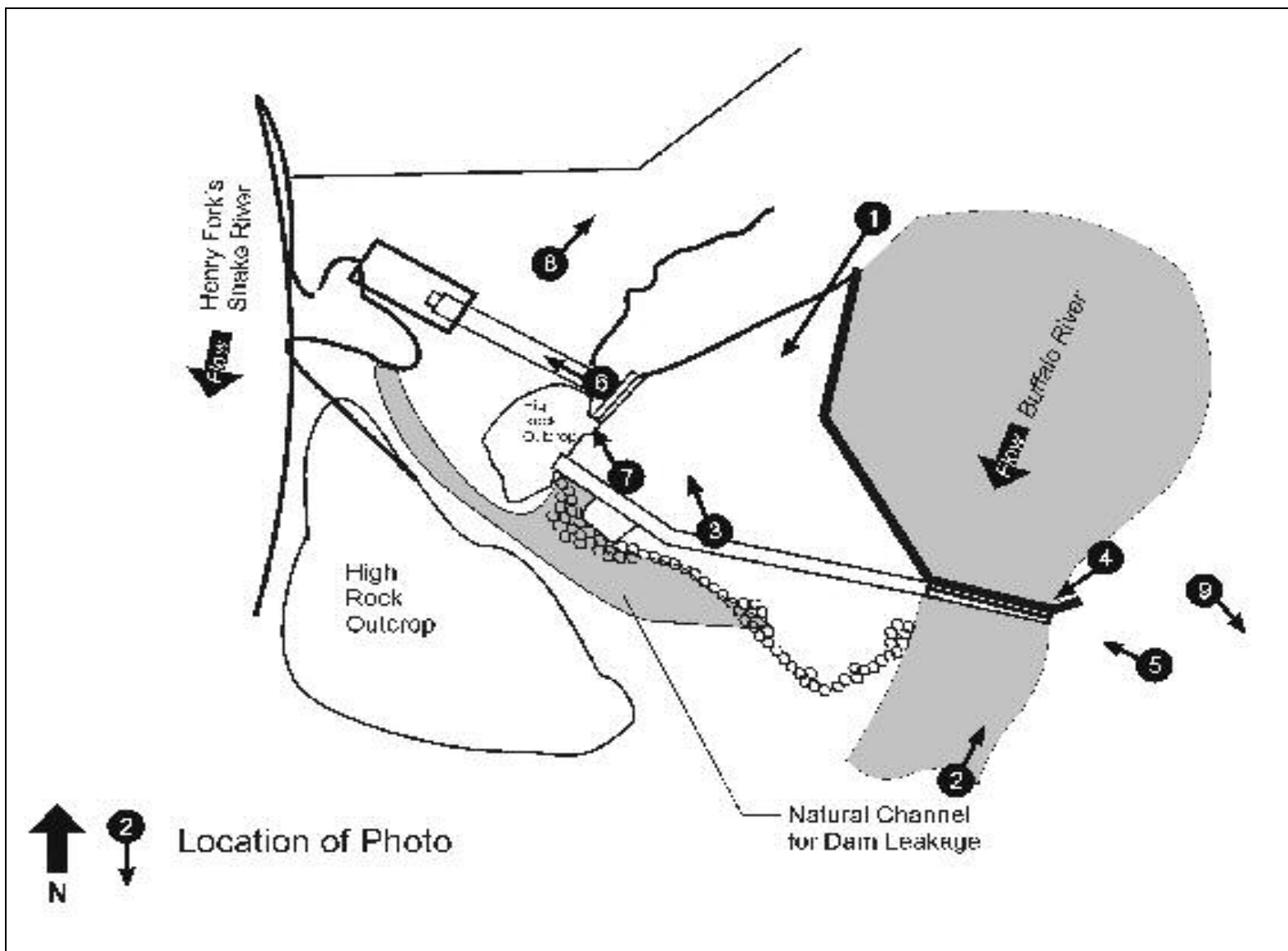


Photo location map for the Buffalo River Project, FERC No. 1413.

FERC Project No. 1413



Photo 1: View looking south from the reservoir looking at the trashrack and automated rake on the right. The fishway is located in the background.



Photo 2: View looking north from downstream showing the spillway. The fishway is located along the right shoreline.

FERC Project No. 1413



Photo 3: View looking north at the cleaned section of the intake trashrack.



Photo 4: View looking west at the fishway intake.

FERC Project No. 1413



Photo 5: A view of the descriptive signage with the project in the background, from the scenic overlook, just down from the public access parking area.



Photo 6: View looking west at the penstock towards the powerhouse. Henry's Fork River is in the background.

FERC Project No. 1413



Photo 7: Warning sign located near the intake posted on the outcropping.



Photo 8: Photo of the discarded trashrack and debris located adjacent to the stairs to the powerhouse that needs to be removed. This is a follow up item.

FERC Project No. 1413



Photo 9: New recreational access area located to the east of the dam. Facilities include a parking area with a handicapped parking spot at the Box Canyon trailhead, and dam access trail, vehicle turn-around area, and interpretive and directional signage.

Document Content(s)

p-1413 2010 Environmental Inspection Report.DOC.....1-14



Northwest Power Services, Inc.

November 5, 2014

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 1st Street, N.E.
Washington, DC 20426

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Ms. Bose,

In compliance to the license for the Buffalo River Hydroelectric Project, FERC Project #1413, we submit the following information for your approval:

Please find attached a copy of the correspondence received from the U.S. Forest Service in regards to the inspection and compliance to the terms and conditions of our Special Use Permit. The U.S. Forest Service finds the operation of the Buffalo River Hydroelectric Project to be in compliance with the terms and conditions of the Special Use Permit (condition #3) and of the License with no recommended changes to the current operating procedures.

If you have any questions or need additional information please contact Corey Smith at (208) 745-0834 or e-mail me at csmith@nwpwrservices.com.

Sincerely,

NORTHWEST POWER SERVICES, INC.

A handwritten signature in blue ink that reads "Brent L. Smith". The signature is written in a cursive, slightly slanted style.

Brent L. Smith
President



United States
Department of
Agriculture

Forest
Service

Caribou-Targhee National Forest
Ashton/Island Park
Ranger District

P.O. Box 858
Ashton, ID 83420
208-652-7442

File Code: 2720

Date: October 23, 2014

Brent Smith
Northwest Power Service, Inc.
P.O. Box 535
Rigby, ID 83442

Dear Brent;

The Buffalo River Hydroelectric Facility was inspected for compliance on October 20, 2014.

The Facility was found to be in compliance with the terms and conditions of the Special Use Permit and the 4(e) condition required by the Forest Service and the FERC License.

This constitutes our annual review of the facility and its operation as specified in the Forest Service Manual, Section 2770 and the Article 104 in the FERC project license.

Sincerely,

ELIZABETH DAVY
District Ranger

cc: Fall River Electric, 1150 North 3400 East, Ashton, ID 83420



Document Content(s)

2014 consultation Buff.PDF.....1-2

ORIGINAL



Northwest Power Services, Inc.

March 14, 2013

Filed Date
March 18, 2013

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 1st Street, N.E.
Washington, DC 20426

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Ms. Bose,

In compliance to the license for the Buffalo River Hydroelectric Project, FERC Project #1413, we submit the following information for your approval:

Please find attached a copy of the correspondence received from the U.S. Forest Service in regards to the inspection and compliance to the terms and conditions of our Special Use Permit. The U.S. Forest Service finds the operation of the Buffalo River Hydroelectric Project to be in compliance with the terms and conditions of the Special Use Permit (condition #3) and of the License with no recommended changes to the current operating procedures.

If you have any questions or need additional information, feel free to contact Corey Smith at (208) 745-0834 or email at csmith@nwpwrservices.com

Sincerely,

Northwest Power Services, INC.

A handwritten signature in black ink that reads "Brent L. Smith". The signature is written in a cursive, slightly slanted style.

Brent L. Smith
President

cc: Mr. Bryan Case, Fall River Electric



United States
Department of
Agriculture

Forest
Service

Caribou-Targhee National Forest
Ashton/Island Park
Ranger District

P.O. Box 858
Ashton, ID 83420
208-652-7442

File Code: 2770

Date: December 24, 2012

Brent Smith
Northwest Power Services
P.O. Box 535
Rigby, ID 83442

Dear Brent;

The Buffalo River Hydroelectric Facility was inspected for compliance on September 27, 2012.

Trees and shrubs were planted at the site over the last year as required by the Vegetation Management Plan for the site. At this time, it is unlikely that there would be any benefit provided to the site by additional planting. In order to protect the existing vegetation, it is agreed that a sign be placed at the site that would direct people to use the designated trail for access. It was further agreed that Northwest Power Services would purchase and install the sign. Please coordinate with this office on specific wording for the sign and where it will be placed.

The facility was found to be in compliance with the terms and conditions of the Special Use Permit and 4(e) conditions required by the Forest Service and the FERC license. It was also determined that the current 4(e) conditions were found to be adequate for protection and utilization of the natural resources affected by the project. This constitutes our annual review of the facility and its operations as specified in Forest Service Manual, Section 2770 and Appendix A, condition #3 in the FERC project license.

Sincerely,

ELIZABETH DAVY
District Ranger

cc: Fall River Electric



Document Content(s)

13207843.tif.....1-2

From: Katie Sellers
To: ["Troy.Saffle@deq.idaho.gov"](mailto:Troy.Saffle@deq.idaho.gov)
Cc: [Laura Cowan](#)
Subject: RE: LIHI Certification - Request for IDEQ Feedback
Date: Wednesday, July 06, 2016 1:37:00 PM
Attachments: [image002.png](#)

Thank you Troy for the Buffalo River feedback, it is much appreciated.

Best!
Katie

Katie Sellers
Regulatory Coordinator
Kleinschmidt
Office: 207-416-1218
www.KleinschmidtGroup.com



From: Troy.Saffle@deq.idaho.gov [mailto:Troy.Saffle@deq.idaho.gov]
Sent: Wednesday, July 06, 2016 1:24 PM
To: Katie Sellers <Katie.Sellers@KleinschmidtGroup.com>
Subject: RE: LIHI Certification - Request for IDEQ Feedback

Hi Katie: Please allow this email to serve as DEQ's response to the questions posed in your email below, dated April 13, 2016. DEQ responses are in **bold**. Please feel free to contact me with further questions or concerns. Thanks.

Confirm that IDEQ flow recommendations from the Project's 2004 FERC relicensing process are still valid and are the most recent recommendations.

DEQ does not have any suggested changes to the flow operating recommendations for the Project.

-Confirm Project compliance with 2004 FERC License Article 402 (Run-of-River Project Operation).
To the best of our knowledge, the project is regularly compliant with Article 402.

-Comment on the status of the bypass conservation flow discussion noted in the 2004 FERC relicensing process: "During the Project licensing, Idaho Department of Fish and Game (IDFG) recommended that if future changes occur to the hydrology of the Buffalo River, then Fall River

should provide a minimum flow of at least 50 cfs to the bypassed reach.”

DEQ concurs with the IDFG recommendation and supports the continued current operations.

- The Buffalo River is classified as a Category 3, Unassessed Water due to a lack of data to determine use support – Is there reasonable assurance that the waters in the Project area and in the downstream reach are in compliance with the state’s quantitative water quality standards based on available data, river characteristics, permitted waste loads, project operating constraints, and other relevant data?

DEQ can’t confirm compliance with numeric standards due to the lack of data; however, DEQ is confident the Project is not adding common pollutants such as sediment solar load (temperature) by the current operations.

Troy Saffle
Regional Manager
Dept of Environmental Quality
900 N Skyline, Suite B
Idaho Falls, ID 83402

208.528.2650 (o)
208.521.5913 (c)

From: Katie Sellers [<mailto:Katie.Sellers@KleinschmidtGroup.com>]
Sent: Wednesday, April 13, 2016 8:34 AM
To: Troy Saffle
Cc: Laura Cowan
Subject: RE: LIHI Certification - Request for IDEQ Feedback

Dear Mr. Saffle,

As afore noted, Kleinschmidt Associates is assisting Fall River Rural Electric Cooperative, Inc. (Fall River) with applying for certifications from the Low Impact Hydropower Institute (LIHI) for the Buffalo River Hydroelectric Project (FERC No. 1413) (Project). LIHI is a non-profit organization dedicated to reducing the impacts of hydropower generation through the certification of hydropower projects that have avoided or reduced their environmental impacts pursuant to LIHI criteria. LIHI has taken a first review of the Buffalo River LIHI certification application and has asked, before the submission of a final certification application, that we follow-up with you to confer the following Buffalo River Project compliance information:

-Confirm that IDEQ flow recommendations from the Project’s 2004 FERC relicensing process are still valid and are the most recent recommendations.

-Confirm Project compliance with 2004 FERC License Article 402 (Run-of-River Project Operation).

-Comment on the status of the bypass conservation flow discussion noted in the 2004 FERC relicensing process: “During the Project licensing, Idaho Department of Fish and Game (IDFG) recommended that if future changes occur to the hydrology of the Buffalo River, then Fall River should provide a minimum flow of at least 50 cfs to the bypassed reach.”

- The Buffalo River is classified as a Category 3, Unassessed Water due to a lack of data to determine use support – Is there reasonable assurance that the waters in the Project area and in the downstream reach are in compliance with the state’s quantitative water quality standards based on available data, river characteristics, permitted waste loads, project operating constraints, and other relevant data?

Please do let me know if I can provide you with any further information for this review.

Thank you in advance for your time,
Katie

Katie Sellers

Regulatory Coordinator

Kleinschmidt

Office: 207-416-1218

www.KleinschmidtGroup.com



From: Katie Sellers

Sent: Friday, September 18, 2015 4:27 PM

To: 'troy.saffle@deq.idaho.gov' <troy.saffle@deq.idaho.gov>

Cc: Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>

Subject: RE: LIHI Certification - Request for IDEQ Feedback

Dear Mr. Saffle,

Please let me know if you have any questions during your review of both Buffalo River Hydroelectric Project and Island Park Hydroelectric Project compliance with relevant prescriptions and/or license articles listed in the previously provided questionnaires.

Best,
Katie Sellers

Katie Sellers

Regulatory Coordinator

Kleinschmidt

Office: 207-416-1218

www.KleinschmidtGroup.com

From: Katie Sellers
Sent: Tuesday, September 08, 2015 1:43 PM
To: 'troy.saffle@deq.idaho.gov' <troy.saffle@deq.idaho.gov>
Cc: Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>
Subject: RE: LIHI Certification - Request for IDEQ Feedback

Dear Mr. Saffle,

Please let me know if you have any questions while reviewing both Buffalo River Hydroelectric Project and Island Park Hydroelectric Project compliance with relevant prescriptions and/or license articles listed in the provided questionnaires.

Thank you for your help with the LIHI Certification process and I look forward to your responses.

Best,
Katie Sellers

Katie Sellers

Regulatory Coordinator

Kleinschmidt

Office: 207-416-1218

www.KleinschmidtGroup.com

From: Katie Sellers
Sent: Tuesday, August 25, 2015 4:21 PM
To: 'troy.saffle@deq.idaho.gov' <troy.saffle@deq.idaho.gov>
Cc: Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>
Subject: LIHI Certification - Request for IDEQ Feedback

Dear Mr. Saffle,

Kleinschmidt Associates is assisting Fall River Rural Electric Cooperative, Inc. (Fall River) with applying for certifications from the Low Impact Hydropower Institute (LIHI) for the Buffalo River Hydroelectric Project (FERC No. 1413) and the Island Park Hydroelectric Project (FERC No. 2973). LIHI is a non-profit organization dedicated to reducing the impacts of hydropower generation through the certification of hydropower projects that have avoided or reduced their environmental impacts pursuant to LIHI criteria.

As part of the application process, LIHI requests correspondence from relevant resource agencies to confirm that projects are in compliance with prescriptions and license articles. To that end, Kleinschmidt is requesting feedback from regulatory agencies to confirm validity and compliance with relevant prescriptions and/or articles.

Attached, you will find questionnaires for Buffalo River Hydroelectric Project and Island Park Hydroelectric Project. If you could please complete each of the enclosed questionnaires and return to the attention of Laura Cowan by email (laura.cowan@kleinschmidtgroup.com) within 15 days of receipt, it would be much appreciated.

Thank you in advance for your time,

Katie Sellers

Katie Sellers

Regulatory Coordinator

Kleinschmidt

Office: 207-416-1218

www.KleinschmidtGroup.com

APPENDIX E
WATER QUALITY



Northwest Power Services, Inc.

ORIGINAL

FILED
OFFICE OF THE
SECRETARY
2003 DEC -3 P 2:18
FEDERAL ENERGY
REGULATORY COMMISSION

November 28, 2003

Ms. Magalie R. Salas, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Ms. Salas,

Please find enclosed a copy of the State of Idaho 401 Water Quality Certification which has been received from the Idaho Department of Environmental Quality.

If you have any questions or need additional information, feel free to contact me at (208) 745-0834 or e-mail me at bsmith@nwpwrservices.com.

Sincerely,

NORTHWEST POWER SERVICES, INC.

Brent L. Smith
President

cc: Mr. Dee M. Reynolds, Fall River Rural Electric Cooperative, Inc.



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

900 North Skyline, Suite B • Idaho Falls, Idaho 83402-1718 • (208) 528-2850

Dirk Kempthorne, Governor
C. Stephen Allred, Director

**WATER QUALITY CERTIFICATION for FERC NO. 1413
For (Buffalo River) Ponds Lodge Hydroelectric Project
November 28, 2003**

ISSUED TO: Fall River Rural Electric Cooperative, Inc.
1150 North 3400 East
Ashton, Idaho 83402
Attention: Dee M. Reynolds

Description of Certified Project:

This project consists of the FERC license renewal and minor improvements to construct a new concrete intake structure, which will include the installation of fish screens. The new intake structure will include a mechanical screen cleaner and a 5-foot gate on the penstock intake. The work will also include the sealing of the upstream face of the existing timber faced rock filled dam to reduce leakage through the dam.

Certification:

This water quality certification is issued under the authority of Section 401 of the Federal Water Pollution Control Act and its Amendments (Clean Water Act) and IDAPA 58.01.02. This certification is in response to the Fall River Rural Electric Cooperative's request for certification dated November 27, 2002. DEQ has reviewed the application submitted to FERC for the license renewal and hereby certifies pursuant to section 401 of the clean water act that, provided the facility operates as described in the application, there is a reasonable assurance the proposed project will comply with applicable requirements of section 301, 302, 303,306 and 307 of the Clean Water Act and the Idaho Water Quality Standards.

This § 401-certification decision may be appealed pursuant to the Idaho Environmental Protection and Health Act, Idaho Code § 39-107(5) and the Idaho Administrative Procedure Act. Such an appeal is a prerequisite to any district court action and must be initiated by filing a petition for a contested case in accordance with the Rules of Administrative Procedure before the Department of Environmental Quality (DEQ) Board (IDAPA 58.01.23) within thirty-five (35) days of the date of DEQ's decision regarding the 401 certification.

CERTIFICATION APPROVED



Regional Administrator

Date: 11/10/03

IFRO

cc: U.S. Army Corps of Engineers IFRO
Steve Allred, Director
Doug Conde, Deputy Attorney General
Brent Smith, Northwest Power Services, Inc. Rigby ID.

16154



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**IDAPA 58
TITLE 01
CHAPTER 02**

58.01.02 - WATER QUALITY STANDARDS

000. LEGAL AUTHORITY.

Pursuant to Sections 39-105 and 39-3601 et seq., Idaho Code, the Director is directed to formulate and recommend to the Board, such rules and regulations and standards as may be necessary to deal with the problems related to personal health and water pollution. The Director is further charged with the supervision and administration of a system to safeguard the quality of the waters of the state including the enforcement of standards relating to the discharge of effluent into the waters of the state. Authority to adopt rules, regulations and standards as are necessary and feasible to protect the environment and health of the citizens of the state is vested in the Board pursuant to Section 39-107, Idaho Code. (3-20-97)

001. TITLE AND SCOPE.

01. Title. These rules shall be cited as Rules of the Department of Environmental Quality, IDAPA 58.01.02, "Water Quality Standards." (4-11-06)

02. Scope. These rules designate uses which are to be protected in and of the waters of the state and establish standards of water quality protective of those uses. Restrictions are placed on the discharge of wastewaters and on human activities which may adversely affect public health and water quality in the waters of the state. In addition, unique and outstanding waters of the state are recognized. These rules do not provide any legal basis for an additional permit system, nor can they be construed as granting to the Department any authority not identified in the Idaho Code. (4-2-03)

002. WRITTEN INTERPRETATIONS.

As described in Section 67-5201(19)(b)(iv), Idaho Code, the Department of Environmental Quality may have written statements which pertain to the interpretation of these rules. If available, such written statements can be inspected and copied at cost at the Department of Environmental Quality, 1410 N. Hilton, Boise, Idaho 83706-1255. (4-11-06)

003. ADMINISTRATIVE PROVISIONS.

Persons may be entitled to appeal agency actions authorized under these rules pursuant to IDAPA 58.01.23, "Rules of Administrative Procedure Before the Board of Environmental Quality." (3-15-02)

004. INCORPORATION BY REFERENCE.

Codes, standards and regulations may be incorporated by reference in these rules pursuant to Section 67-5229, Idaho Code. Such incorporation by reference shall constitute full adoption by reference, including any notes or appendices therein, unless expressly provided otherwise in these rules. Copies of the codes, standards or regulations adopted by reference throughout these rules are available in the following locations: (8-24-94)

01. Department. Idaho Department of Environmental Quality, 1410 N. Hilton, Boise, Idaho 83706-1255, www.deq.idaho.gov; (4-5-00)

02. Law Library. State Law Library, 451 W. State Street, Boise, Idaho 83720. (7-1-93)

03. Federal Documents. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. (4-11-06)

005. OFFICE HOURS -- MAILING ADDRESS AND STREET ADDRESS.

The state office of the Department of Environmental Quality and the office of the Board of Environmental Quality are located at 1410 N. Hilton, Boise, Idaho 83706-1255, telephone number (208) 373-0502. The office hours are 8 a.m. to 5 p.m. Monday through Friday. (4-11-06)

006. CONFIDENTIALITY OF RECORDS.

Information obtained by the Department under these rules is subject to public disclosure pursuant to the provisions of Chapter 1, Title 74, Idaho Code. Information submitted under a trade secret claim may be entitled to confidential

treatment by the Department as provided in Section 74-114, Idaho Code, and the Rules of the Department of Environmental Quality, IDAPA 58.01.21, "Use and Disclosure of Records in the Possession of the Department of Environmental Quality." (4-5-00)

007. -- 009. (RESERVED)

010. DEFINITIONS.

For the purpose of the rules contained in IDAPA 58.01.02, "Water Quality Standards," the following definitions apply: (4-11-06)

01. Activity. For purposes of antidegradation review, an activity that causes a discharge to a water subject to the jurisdiction of the Clean Water Act. (3-18-11)

02. Acute. A stimulus severe enough to induce a rapid response. In aquatic toxicity tests, acute refers to a single or short-term (i.e., ninety-six (96) hours or less) exposure to a concentration of a toxic substance or effluent which results in death to fifty percent (50%) of the test organisms. When referring to human health, an acute effect is not always measured in terms of lethality. (3-30-07)

03. Acute Criteria. Unless otherwise specified in these rules, the maximum instantaneous or one (1) hour average concentration of a toxic substance or effluent which ensures adequate protection of sensitive species of aquatic organisms from acute toxicity due to exposure to the toxic substance or effluent. Acute criteria are expected to adequately protect the designated aquatic life use if not exceeded more than once every three (3) years. This is also known as the Criterion Maximum Concentration (CMC). There are no specific acute criteria for human health; however, the human health criteria are based on chronic health effects and are expected to adequately protect against acute effects. (3-30-07)

04. Aquatic Species. Any plant or animal that lives at least part of its life in the water column or benthic portion of waters of the state. (8-24-94)

05. Assigned Criteria. Criteria associated with beneficial uses from Section 100 of these rules. (3-18-11)

06. Background. The biological, chemical or physical condition of waters measured at a point immediately upstream (up-gradient) of the influence of an individual point or nonpoint source discharge. If several discharges to the water exist or if an adequate upstream point of measurement is absent, the Department will determine where background conditions should be measured. (8-24-94)

07. Basin Advisory Group. No less than one (1) advisory group named by the Director, in consultation with the designated agencies, for each of the state's six (6) major river basins which shall generally advise the Director on water quality objectives for each basin, work in a cooperative manner with the Director to achieve these objectives, and provide general coordination of the water quality programs of all public agencies pertinent to each basin. Each basin advisory group named by the Director shall reflect a balanced representation of the interests in the basin and shall, where appropriate, include representatives from each of the following: agriculture, mining, nonmunicipal point source discharge permittees, forest products, local government, livestock, Indian tribes (for areas within reservation boundaries), water-based recreation, and environmental interests. (3-20-97)

08. Beneficial Use. Any of the various uses which may be made of the water of Idaho, including, but not limited to, domestic water supplies, industrial water supplies, agricultural water supplies, navigation, recreation in and on the water, wildlife habitat, and aesthetics. The beneficial use is dependent upon actual use, the ability of the water to support a non-existing use either now or in the future, and its likelihood of being used in a given manner. The use of water for the purpose of wastewater dilution or as a receiving water for a waste treatment facility effluent is not a beneficial use. (8-24-94)

09. Best Management Practice. A practice or combination of practices, techniques or measures developed, or identified, by the designated agency and identified in the state water quality management plan which are determined to be the cost-effective and practicable means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality goals. (3-20-97)

- 10. Bioaccumulation.** The process by which a compound is taken up by, and accumulated in the tissues of an aquatic organism from the environment, both from water and through food. (8-24-94)
- 11. Bioaccumulative Pollutants.** A compound with a bioaccumulation factor of greater than one thousand (1,000) or a bioconcentration factor of greater than one thousand (1,000). (4-11-15)
- 12. Biological Monitoring or Biomonitoring.** The use of a biological entity as a detector and its response as a measure to determine environmental conditions. Toxicity tests and biological surveys, including habitat monitoring, are common biomonitoring methods. (8-24-94)
- 13. Board.** The Idaho Board of Environmental Quality. (7-1-93)
- 14. Chronic.** A stimulus that persists or continues for a long period of time relative to the life span of an organism. In aquatic toxicity tests, chronic refers to continuous exposure to a concentration of a toxic substance or effluent which results in mortality, injury, reduced growth, impaired reproduction, or other adverse effect to aquatic organisms. The test duration is long enough that sub-lethal effects can be reliably measured. When referring to human health, a chronic effect is usually measured in terms of estimated changes in rates (# of cases/ 1000 persons) of illness over a lifetime of exposure. (3-30-07)
- 15. Chronic Criteria.** Unless otherwise specified in these rules, the four (4) day average concentration of a toxic substance or effluent which ensures adequate protection of sensitive species of aquatic organisms from chronic toxicity due to exposure to the toxic substance or effluent. Chronic criteria are expected to adequately protect the designated aquatic life use if not exceeded more than once every three (3) years. This is also known as the Criterion Continuous Concentration (CCC). Human health chronic criteria are based on lifetime exposure. (3-30-07)
- 16. Compliance Schedule or Schedule Of Compliance.** A schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an effluent limitation, other limitation, prohibition, or standard. (8-24-94)
- 17. Cost-Effective and Reasonable Best Management Practices (BMPs) for Nonpoint Sources.** All approved BMPs specified in Subsections 350.03 and 055.07 of these rules. BMPs for activities not specified are, in accordance with Section 350, determined on a case-by-case basis. (3-18-11)
- 18. Daily Maximum (Minimum).** The highest (lowest) value measured during one (1) calendar day or a twenty-four (24) hour period, as appropriate. For ambient monitoring of dissolved oxygen, pH, and temperature, multiple measurements should be obtained at intervals short enough that the difference between consecutive measurements around the daily maximum (minimum) is less than zero point two (0.2) ppm for dissolved oxygen, zero point one (0.1) SU for pH, or zero point five (0.5) degree C for temperature. (3-30-07)
- 19. Daily Mean.** The average of at least two (2) appropriately spaced measurements, acceptable to the Department, calculated over a period of one (1) day: (3-20-97)
- a.** Confidence bounds around the point estimate of the mean may be required to determine the sample size necessary to calculate a daily mean; (8-24-94)
 - b.** If any measurement is greater or less than five-tenths (0.5) times the average, additional measurements over the one-day period may be needed to obtain a more representative average; (3-20-97)
 - c.** In calculating the daily mean for dissolved oxygen, values used in the calculation shall not exceed the dissolved oxygen saturation value. If a measured value exceeds the dissolved oxygen saturation value, then the dissolved oxygen saturation value will be used in calculating the daily mean. (8-24-94)
 - d.** For ambient monitoring of temperature, the daily mean should be calculated from equally spaced measurements, at intervals such that the difference between any two (2) consecutive measurements does not exceed one point zero (1.0) degree C. (3-30-07)

- 20. Degradation or Lower Water Quality.** “Degradation” or “lower water quality” means, for purposes of antidegradation review, a change in a pollutant that is adverse to designated or existing uses, as calculated for a new point source, and based upon monitoring or calculated information for an existing point source increasing its discharge. Such degradation shall be calculated or measured after appropriate mixing of the discharge and receiving water body. (3-29-12)
- 21. Deleterious Material.** Any nontoxic substance which may cause the tainting of edible species of fish, taste and odors in drinking water supplies, or the reduction of the usability of water without causing physical injury to water users or aquatic and terrestrial organisms. (8-24-94)
- 22. Department.** The Idaho Department of Environmental Quality. (7-1-93)
- 23. Design Flow.** The critical flow used for steady-state wasteload allocation modeling. (8-24-94)
- 24. Designated Agency.** The department of lands for timber harvest activities, oil and gas exploration and development, and mining activities; the soil conservation commission for grazing and agricultural activities; the transportation department for public road construction; the department of agriculture for aquaculture; and the Department’s division of environmental quality for all other activities. (3-20-97)
- 25. Designated Beneficial Use or Designated Use.** Those beneficial uses assigned to identified waters in Idaho Department of Environmental Quality Rules, IDAPA 58.01.02, “Water Quality Standards and Wastewater Treatment Requirements,” Sections 110 through 160, whether or not the uses are being attained. (4-5-00)
- 26. Desirable Species.** Species indigenous to the area or those introduced species identified as desirable by the Idaho Department of Fish and Game. (3-15-02)
- 27. Director.** The Director of the Idaho Department of Environmental Quality or his authorized agent. (7-1-93)
- 28. Discharge.** When used without qualification, any spilling, leaking, emitting, escaping, leaching, or disposing of a pollutant into the waters of the state. For purposes of antidegradation review, means “discharge” as used in Section 401 of the Clean Water Act. (3-18-11)
- 29. Dissolved Oxygen (DO).** The measure of the amount of oxygen dissolved in the water, usually expressed in mg/l. (7-1-93)
- 30. Dissolved Product.** Petroleum product constituents found in solution with water. (8-24-94)
- 31. Dynamic Model.** A computer simulation model that uses real or derived time series data to predict a time series of observed or derived receiving water concentrations. Dynamic modeling methods include continuous simulation, Monte Carlo simulations, lognormal probability modeling, or other similar statistical or deterministic techniques. (8-24-94)
- 32. E. coli (Escherichia coli).** A common fecal and intestinal organism of the coliform group of bacteria found in warm-blooded animals. (4-5-00)
- 33. Effluent.** Any wastewater discharged from a treatment facility. (7-1-93)
- 34. Effluent Biomonitoring.** The measurement of the biological effects of effluents (e.g., toxicity, biostimulation, bioaccumulation, etc.). (8-24-94)
- 35. EPA.** The United States Environmental Protection Agency. (7-1-93)
- 36. Ephemeral Waters.** A stream, reach, or water body that flows naturally only in direct response to precipitation in the immediate watershed and whose channel is at all times above the water table. (4-11-06)
- 37. Existing Activity or Discharge.** An activity or discharge that has been previously authorized or

did not previously require authorization. (3-18-11)

38. Existing Beneficial Use Or Existing Use. Those beneficial uses actually attained in waters on or after November 28, 1975, whether or not they are designated for those waters in Idaho Department of Environmental Quality Rules, IDAPA 58.01.02, "Water Quality Standards." (4-11-06)

39. Facility. As used in Section 850 only, any building, structure, installation, equipment, pipe or pipeline, well pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock or aircraft, area, place or property from which an unauthorized release of hazardous materials has occurred. (8-24-94)

40. Four Day Average. The average of all measurements within a period of ninety-six (96) consecutive hours. While a minimum of one (1) measurement per each twenty-four (24) hours is preferred, for toxic chemicals in Section 210, any number of data points is acceptable. (3-30-07)

41. Free Product. A petroleum product that is present as a nonaqueous phase liquid. Free product includes the presence of petroleum greater than one-tenth (0.1) inch as measured on the water surface for surface water or the water table for ground water. (7-1-93)

42. Full Protection, Full Support, or Full Maintenance of Designated Beneficial Uses of Water. Compliance with those levels of water quality criteria listed in Sections 200, 210, 250, 251, 252, 253, and 275 (if applicable) or where no major biological group such as fish, macroinvertebrates, or algae has been modified by human activities significantly beyond the natural range of the reference streams or conditions approved by the Director in consultation with the appropriate basin advisory group. (3-15-02)

43. General Permit. An NPDES permit issued by the U.S. Environmental Protection Agency authorizing a category of discharges under the federal Clean Water Act or a nationwide or regional permit issued by the U.S. Army Corps of Engineers under the federal Clean Water Act. (3-29-12)

44. Geometric Mean. The geometric mean of "n" quantities is the "nth" root of the product of the quantities. (7-1-93)

45. Ground Water. Any water of the state which occurs beneath the surface of the earth in a saturated geological formation of rock or soil. (3-30-07)

46. Harmonic Mean. The number of daily measurements divided by the sum of the reciprocals of the measurements (i.e., the reciprocal of the mean of reciprocals). (3-25-16)

47. Hazardous Material. A material or combination of materials which, when discharged in any quantity into state waters, presents a substantial present or potential hazard to human health, the public health, or the environment. Unless otherwise specified, published guides such as Quality Criteria for Water (1976) by EPA, Water Quality Criteria (Second Edition, 1963) by the state of California Water Quality Control Board, their subsequent revisions, and more recent research papers, regulations and guidelines will be used in identifying individual and specific materials and in evaluating the tolerances of the identified materials for the beneficial uses indicated. (7-1-93)

48. Highest Statutory and Regulatory Requirements for Point Sources. All applicable effluent limits required by the Clean Water Act and other permit conditions. It also includes any compliance schedules or consent orders requiring measures to achieve applicable effluent limits and other permit conditions required by the Clean Water Act. (3-18-11)

49. Hydrologic Unit Code (HUC). A unique eight (8) digit number identifying a subbasin. A subbasin is a United States Geological Survey cataloging unit comprised of water body units. (4-5-00)

50. Hydrologically-Based Design Flow. A statistically derived receiving water design flow based on the selection and identification of an extreme value (e.g., 1Q10, 7Q10). The underlying assumption is that the design flow will occur X number of times in Y years, and limits the number of years in which one (1) or more excursions below the design flow can occur. (8-24-94)

- 51. Hypolimnion.** The bottom layer in a thermally-stratified body of water. It is fairly uniform in temperature and lays beneath a zone of water which exhibits a rapid temperature drop with depth such that mixing with overlying water is inhibited. (3-30-07)
- 52. Integrated Report.** Refers to the consolidated listing and reporting of the state's water quality status pursuant to Sections 303(d), 305(b), and 314 of the Clean Water Act. (3-18-11)
- 53. Inter-Departmental Coordination.** Consultation with those agencies responsible for enforcing or administering the practices listed as approved best management practices in Subsection 350.03. (7-1-93)
- 54. Intermittent Waters.** A stream, reach, or water body which naturally has a period of zero (0) flow for at least one (1) week during most years. Where flow records are available, a stream with a 7Q2 hydrologically-based unregulated flow of less than one-tenth (0.1) cubic feet per second (cfs) is considered intermittent. Streams with natural perennial pools containing significant aquatic life uses are not intermittent. (4-11-06)
- 55. Load Allocation (LA).** The portion of a receiving water's loading capacity that is attributed either to one (1) of its existing or future nonpoint sources of pollution or to natural background sources. (8-24-94)
- 56. Loading Capacity.** The greatest amount of pollutant loading that a water can receive without violating water quality standards. (8-24-94)
- 57. Lowest Observed Effect Concentration (LOEC).** The lowest concentration of a toxic substance or an effluent that results in observable adverse effects in the aquatic test population. (3-30-07)
- 58. Man-Made Waterways.** Canals, flumes, ditches, wasteways, drains, laterals, and/or associated features, constructed for the purpose of water conveyance. This may include channels modified for such purposes prior to November 28, 1975. These waterways may have uniform and rectangular cross-sections, straight channels, follow rather than cross topographic contours, be lined to reduce water loss, and be operated or maintained to promote water conveyance. (3-30-07)
- 59. Maximum Weekly Maximum Temperature (MWMT).** The weekly maximum temperature (WMT) is the mean of daily maximum temperatures measured over a consecutive seven (7) day period ending on the day of calculation. When used seasonally, e.g., spawning periods, the first applicable WMT occurs on the seventh day into the time period. The MWMT is the single highest WMT that occurs during a given year or other period of interest, e.g., a spawning period. (3-30-07)
- 60. Milligrams Per Liter (mg/l).** Milligrams of solute per liter of solution, equivalent to parts per million, assuming unit density. (7-1-93)
- 61. Mixing Zone.** A defined area or volume of the receiving water surrounding or adjacent to a wastewater discharge where the receiving water, as a result of the discharge, may not meet all applicable water quality criteria or standards. It is considered a place where wastewater mixes with receiving water and not as a place where effluents are treated. (7-1-93)
- 62. National Pollutant Discharge Elimination System (NPDES).** Point source permitting program established pursuant to Section 402 of the federal Clean Water Act. (8-24-94)
- 63. Natural Background Conditions.** The physical, chemical, biological, or radiological conditions existing in a water body without human sources of pollution within the watershed. Natural disturbances including, but not limited to, wildfire, geologic disturbance, diseased vegetation, or flow extremes that affect the physical, chemical, and biological integrity of the water are part of natural background conditions. Natural background conditions should be described and evaluated taking into account this inherent variability with time and place. (3-30-07)
- 64. Nephelometric Turbidity Units (NTU).** A measure of turbidity based on a comparison of the intensity of the light scattered by the sample under defined conditions with the intensity of the light scattered by a standard reference suspension under the same conditions. (8-24-94)

65. New Activity or Discharge. An activity or discharge that has not been previously authorized. Existing activities or discharges not currently permitted or licensed will be presumed to be new unless the Director determines to the contrary based on review of available evidence. An activity or discharge that has previously taken place without need for a license or permit is not a new activity or discharge when first licensed or permitted. (3-18-11)

66. Nonpoint Source Activities. Activities on a geographical area on which pollutants are deposited or dissolved or suspended in water applied to or incident on that area, the resultant mixture being discharged into the waters of the state. Nonpoint source activities on ORWs do not include issuance of water rights permits or licenses, allocation of water rights, operation of diversions, or impoundments. Nonpoint sources activities include, but are not limited to: (3-20-97)

- a.** Irrigated and nonirrigated lands used for: (7-1-93)
 - i.** Grazing; (7-1-93)
 - ii.** Crop production; (7-1-93)
 - iii.** Silviculture; (7-1-93)
- b.** Log storage or rafting; (7-1-93)
- c.** Construction sites; (7-1-93)
- d.** Recreation sites; (3-20-97)
- e.** Septic tank disposal fields. (8-24-94)
- f.** Mining; (3-20-97)
- g.** Runoff from storms or other weather related events; and (3-20-97)
- h.** Other activities not subject to regulation under the federal national pollutant discharge elimination system. (3-20-97)

67. Nuisance. Anything which is injurious to the public health or an obstruction to the free use, in the customary manner, of any waters of the state. (7-1-93)

68. Nutrients. The major substances necessary for the growth and reproduction of aquatic plant life, consisting of nitrogen, phosphorus, and carbon compounds. (7-1-93)

69. One Day Minimum. The lowest daily instantaneous value measured. (3-20-97)

70. One Hour Average. The mean of at least two (2) appropriately spaced measurements, as determined by the Department, calculated over a period of one (1) hour. When three (3) or more measurements have been taken, and if any measurement is greater or less than five-tenths (0.5) times the mean, additional measurements over the one-hour period may be needed to obtain a more representative mean. (3-20-97)

71. Operator. For purposes of Sections 851 and 852, any person presently or who was at any time during a release in control of, or having responsibility for, the daily operation of the petroleum storage tank (PST) system. (4-2-03)

72. Outstanding Resource Water (ORW). A high quality water, such as water of national and state parks and wildlife refuges and water of exceptional recreational or ecological significance, which has been designated by the legislature and subsequently listed in this chapter. ORW constitutes an outstanding national or state resource that requires protection from point and nonpoint source activities that may lower water quality. (3-20-97)

73. Owner. For purposes of Sections 851 and 852, any person who owns or owned a petroleum storage tank (PST) system any time during a release and the current owner of the property where the PST system is or was located. (3-2-03)

74. Permit or License. A permit or license for an activity that is subject to certification by the state under Section 401 of the Clean Water Act, including, for example, NPDES permits, dredge and fill permits, and FERC licenses. (3-18-11)

75. Person. An individual, public or private corporation, partnership, association, firm, joint stock company, joint venture, trust, estate, state, municipality, commission, political subdivision of the state, state or federal agency, department or instrumentality, special district, interstate body or any legal entity, which is recognized by law as the subject of rights and duties. (3-20-97)

76. Petroleum Products. Products derived from petroleum through various refining processes. (7-1-93)

77. Petroleum Storage Tank (PST) System. Any one (1) or combination of storage tanks or other containers, including pipes connected thereto, dispensing equipment, and other connected ancillary equipment, and stationary or mobile equipment, that contains petroleum or a mixture of petroleum with de minimis quantities of other regulated substances. (7-1-93)

78. Point Source. Any discernible, confined, and discrete conveyance, including, but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are, or may be, discharged. This term does not include return flows from irrigated agriculture, discharges from dams and hydroelectric generating facilities or any source or activity considered a nonpoint source by definition. (7-1-93)

79. Pollutant. Dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical waste, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, silt, cellar dirt; and industrial, municipal and agricultural waste, gases entrained in water; or other materials which, when discharged to water in excessive quantities, cause or contribute to water pollution. Provided however, biological materials shall not include live or occasional dead fish that may accidentally escape into the waters of the state from aquaculture facilities. (3-20-97)

80. Project Plans. Documents which describe actions to be taken under a proposed activity. These documents include environmental impact statements, environmental assessments, and other land use or resource management plans. (7-1-93)

81. Public Swimming Beaches. Areas indicated by features such as signs, swimming docks, diving boards, slides, or the like, boater exclusion zones, map legends, collection of a fee for beach use, or any other unambiguous invitation to public swimming. Privately owned swimming docks or the like which are not open to the general public are not included in this definition. (4-11-06)

82. Receiving Waters. Those waters which receive pollutants from point or nonpoint sources. (7-1-93)

83. Reference Stream or Condition. A water body which represents the minimum conditions necessary to fully support the applicable designated beneficial uses as further specified in these rules, or natural conditions with few impacts from human activities and which are representative of the highest level of support attainable in the basin. In highly mineralized areas or in the absence of such reference streams or water bodies, the Director, in consultation with the basin advisory group and the technical advisors to it, may define appropriate hypothetical reference conditions or may use monitoring data specific to the site in question to determine conditions in which the beneficial uses are fully supported. (3-20-97)

84. Release. Any unauthorized spilling, leaking, emitting, discharging, escaping, leaching, or disposing into soil, ground water, or surface water. (8-24-94)

- 85. Resident Species.** Those species that commonly occur in a site including those that occur only seasonally or intermittently. This includes the species, genera, families, orders, classes, and phyla that: (8-24-94)
- a.** Are usually present at the site; (8-24-94)
 - b.** Are present only seasonally due to migration; (8-24-94)
 - c.** Are present intermittently because they periodically return or extend their ranges into the site; (8-24-94)
 - d.** Were present at the site in the past but are not currently due to degraded conditions, and are expected to be present at the site when conditions improve; and (8-24-94)
 - e.** Are present in nearby bodies of water but are not currently present at the site due to degraded conditions, and are expected to be present at the site when conditions improve. (8-24-94)
- 86. Responsible Persons in Charge.** Any person who: (8-24-94)
- a.** By any acts or omissions, caused, contributed to or exacerbated an unauthorized release of hazardous materials; (8-24-94)
 - b.** Owns or owned the facility from which the unauthorized release occurred and the current owner of the property where the facility is or was located; or (8-24-94)
 - c.** Presently or who was at any time during an unauthorized release in control of, or had responsibility for, the daily operation of the facility from which an unauthorized release occurred. (8-24-94)
- 87. Sediment.** Undissolved inorganic matter. (3-30-07)
- 88. Seven Day Mean.** The average of the daily mean values calculated over a period of seven (7) consecutive days. (3-20-97)
- 89. Sewage.** The water-carried human or animal waste from residences, buildings, industrial establishments or other places, together with such ground water infiltration and surface water as may be present. (8-24-94)
- 90. Short-Term or Temporary Activity.** An activity which is as short as possible but lasts for no more than one (1) year, is limited in scope and is expected to have only minimal impact on water quality as determined by the Director. Short-term or temporary activities include, but are not limited to, those activities described in Subsection 080.02. (3-30-07)
- 91. Silviculture.** Those activities associated with the regeneration, growing and harvesting of trees and timber including, but not limited to, disposal of logging slash, preparing sites for new stands of trees to be either planted or allowed to regenerate through natural means, road construction and road maintenance, drainage of surface water which inhibits tree growth or logging operations, fertilization, application of herbicides or pesticides, all logging operations, and all forest management techniques employed to enhance the growth of stands of trees or timber. (3-20-97)
- 92. Sludge.** The semi-liquid mass produced by partial dewatering of potable or spent process waters or wastewater. (7-1-93)
- 93. Specialized Best Management Practices.** Those practices designed with consideration of geology, land type, soil type, erosion hazard, climate and cumulative effects in order to fully protect the beneficial uses of water, and to prevent or reduce the pollution generated by nonpoint sources. (3-3-87)
- 94. State.** The state of Idaho. (7-1-93)

- 95. State Water Quality Management Plan.** The state management plan developed and updated by the Department in accordance with Sections 205, 208, and 303 of the Clean Water Act. (3-20-97)
- 96. Suspended Sediment.** The undissolved inorganic fraction of matter suspended in surface water. (3-30-07)
- 97. Suspended Solids.** The undissolved organic and inorganic matter suspended in surface water. (3-30-07)
- 98. Technology-Based Effluent Limitation.** Treatment requirements under Section 301(b) of the Clean Water Act that represent the minimum level of control that must be imposed in a permit issued under Section 402 of the Clean Water Act. (8-24-94)
- 99. Thermal Shock.** A rapid temperature change that causes aquatic life to become disoriented or more susceptible to predation or disease. (4-11-15)
- 100. Total Maximum Daily Load (TMDL).** The sum of the individual wasteload allocations (WLAs) for point sources, load allocations (LAs) for nonpoint sources, and natural background. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. (8-24-94)
- 101. Toxicity Test.** A procedure used to determine the toxicity of a chemical or an effluent using living organisms. A toxicity test measures the degree of response of an exposed test organism to a specific chemical or effluent. (8-24-94)
- 102. Toxic Substance.** Any substance, material or disease-causing agent, or a combination thereof, which after discharge to waters of the State and upon exposure, ingestion, inhalation or assimilation into any organism (including humans), either directly from the environment or indirectly by ingestion through food chains, will cause death, disease, behavioral abnormalities, malignancy, genetic mutation, physiological abnormalities (including malfunctions in reproduction) or physical deformations in affected organisms or their offspring. Toxic substances include, but are not limited to, the one hundred twenty-six (126) priority pollutants identified by EPA pursuant to Section 307(a) of the federal Clean Water Act. (8-24-94)
- 103. Treatment.** A process or activity conducted for the purpose of removing pollutants from wastewater. (7-1-93)
- 104. Treatment System.** Any physical facility or land area for the purpose of collecting, treating, neutralizing or stabilizing pollutants including treatment by disposal plants, the necessary intercepting, outfall and outlet sewers, pumping stations integral to such plants or sewers, equipment and furnishing thereof and their appurtenances. A treatment system may also be known as a treatment facility. (4-11-06)
- 105. Twenty-Four Hour Average.** The mean of at least two (2) appropriately spaced measurements, as determined by the Department, calculated over a period of twenty-four (24) consecutive hours. When three (3) or more measurements have been taken, and if any measurement is greater or less than five-tenths (0.5) times the mean, additional measurements over the twenty-four (24)-hour period may be needed to obtain a more representative mean. (3-20-97)
- 106. Unique Ecological Significance.** The attribute of any stream or water body which is inhabited or supports an endangered or threatened species of plant or animal or a species of special concern identified by the Idaho Department of Fish and Game, which provides anadromous fish passage, or which provides spawning or rearing habitat for anadromous or desirable species of lake dwelling fishes. (8-24-94)
- 107. Use Attainability Analysis.** A structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological, and economic factors as described in Subsection 102.02.a. (3-25-16)

108. Wasteload Allocation (WLA). The portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. (8-24-94)

109. Wastewater. Unless otherwise specified, sewage, industrial waste, agricultural waste, and associated solids or combinations of these, whether treated or untreated, together with such water as is present. (7-1-93)

110. Water Body Unit. Includes all named and unnamed tributaries within a drainage and is considered a single unit unless designated otherwise. (4-5-00)

111. Water Pollution. Any alteration of the physical, thermal, chemical, biological, or radioactive properties of any waters of the state, or the discharge of any pollutant into the waters of the state, which will or is likely to create a nuisance or to render such waters harmful, detrimental or injurious to public health, safety or welfare, or to fish and wildlife, or to domestic, commercial, industrial, recreational, aesthetic, or other beneficial uses. (8-24-94)

112. Water Quality-Based Effluent Limitation. An effluent limitation that refers to specific levels of water quality that are expected to render a body of water suitable for its designated or existing beneficial uses. (8-24-94)

113. Water Quality Limited Water Body. After monitoring, evaluation of required pollution controls, and consultation with the appropriate basin and watershed advisory groups, a water body identified by the Department, which does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards after the application of required pollution controls. A water body identified as water quality limited shall require the development of a TMDL or other equivalent process in accordance with Section 303 of the Clean Water Act and Sections 39-3601 et seq., Idaho Code. (3-20-97)

114. Waters and Waters Of The State. All the accumulations of water, surface and underground, natural and artificial, public and private, or parts thereof which are wholly or partially within, which flow through or border upon the state. (7-1-93)

115. Watershed. The land area from which water flows into a stream or other body of water which drains the area. (3-20-97)

116. Watershed Advisory Group. An advisory group appointed by the Director, with the advice of the appropriate Basin Advisory Group, which will recommend to the Department those specific actions needed to control point and nonpoint sources of pollution affecting water quality limited water bodies within the watershed. Members of each watershed advisory group shall be representative of the industries and interests affected by the management of that watershed, along with representatives of local government and the land managing or regulatory agencies with an interest in the management of that watershed and the quality of the water bodies within it. (3-20-97)

117. Whole-Effluent Toxicity. The aggregate toxic effect of an effluent measured directly with a toxicity test. (8-24-94)

118. Zone of Initial Dilution (ZID). An area within a Department authorized mixing zone where acute criteria may be exceeded. This area shall be no larger than necessary and shall be sized to prevent lethality to swimming or drifting organisms by ensuring that organisms are not exposed to concentrations exceeding acute criteria for more than one (1) hour more than once in three (3) years. The actual size of the ZID will be determined by the Department for a discharge on a case-by-case basis, taking into consideration mixing zone modeling and associated size recommendations and any other pertinent chemical, physical, and biological data available. (4-11-15)

011. -- 049. (RESERVED)

050. ADMINISTRATIVE POLICY.

01. Apportionment of Water. The adoption of water quality standards and the enforcement of such standards is not intended to conflict with the apportionment of water to the state through any of the interstate

compacts or court decrees, or to interfere with the rights of Idaho appropriators, either now or in the future, in the utilization of the water appropriations which have been granted to them under the statutory procedure, or to interfere with water quality criteria established by mutual agreement of the participants in interstate water pollution control enforcement procedures. (7-1-93)

02. Protection of Waters of the State. (7-1-93)

a. Wherever attainable, surface waters of the state shall be protected for beneficial uses which for surface waters includes all recreational use in and on the water surface and the preservation and propagation of desirable species of aquatic life; (4-5-00)

b. In all cases, existing beneficial uses of the waters of the state will be protected. (7-1-93)

03. Annual Program. To fully achieve and maintain water quality in the state, it is the intent of the Department to develop and implement a Continuing Planning Process that describes the on-going planning requirements of the State's Water Quality Management Plan. The Department's planned programs for water pollution control comprise the State's Water Quality Management Plan. (4-5-00)

04. Program Integration. Whenever an activity or class of activities is subject to provisions of these rules, as well as other regulations or standards of either this Department or other Governmental agency, the Department will seek and employ those methods necessary and practicable to integrate the implementation, administration and enforcement of all applicable regulations through a single program. Integration will not, however, be affected to the extent that applicable provisions of these rules would fail to be achieved or maintained unless the Department's role in these cases is limited by state statute or federal law. (7-1-93)

05. Revisions. These rules are subject to amendment as technical data, surveillance programs, and technological advances require. Any revisions made to these rules shall be in accordance with Sections 39-101, et seq., and 67-5201, et seq., Idaho Code. (8-24-94)

051. ANTIDEGRADATION POLICY.

01. Maintenance of Existing Uses for All Waters (Tier I Protection). The existing in stream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected. (3-18-11)

02. High Quality Waters (Tier II Protection). Where the quality of the waters exceeds levels necessary to support propagation of fish, shellfish and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the Department finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the Department's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the Department shall assure water quality adequate to protect existing uses fully. Further, the Department shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and cost-effective and reasonable best management practices for nonpoint source control. In providing such assurance, the Department may enter together into an agreement with other state of Idaho or federal agencies in accordance with Sections 67-2326 through 67-2333, Idaho Code. (3-18-11)

03. Outstanding Resource Waters (Tier III Protection). Where an outstanding resource water has been designated by the legislature, that water quality shall be maintained and protected from the impacts of point and nonpoint source activities. (3-29-12)

04. Thermal Discharges. In those cases where potential water quality impairment associated with a thermal discharge is involved, antidegradation shall be implemented consistent with Section 316 of the Clean Water Act. (3-18-11)

05. Waters Subject to the Antidegradation Policy. Idaho's antidegradation policy only applies to waters subject to the jurisdiction of the Clean Water Act. (3-18-11)

052. ANTIDegradation Implementation.

The antidegradation policy shall be implemented as follows: (3-18-11)

01. Waters Protected. All waters receive Tier I protection. Waters receiving Tier II protection will be identified using a water body by water body approach during the antidegradation review. Waters given Tier III protection are designated in law. (3-18-11)

02. Restoration Projects. Changes in water quality may be allowed by the Department without an antidegradation review where determined necessary to secure long-term water quality improvement through restoration projects designed to trend toward natural characteristics and associated uses to a water body where those characteristics and uses have been lost or diminished. Restoration projects shall implement best management practices. (3-18-11)

03. General Permits. For general permits issued on or after July 1, 2011, the Department will conduct an antidegradation review, including any required Tier II analysis, at the time at which general permits are certified. For general permits that the Department determines adequately address antidegradation, review of individual applications for coverage will not be required unless it is required by the general permit. For general permits that the Department determines do not adequately address antidegradation, the Department may conclude that other conditions, such as the submittal of additional information or individual certification at the time an application is submitted for coverage under a general permit, may be necessary in the general permit to provide reasonable assurance of compliance with the antidegradation policy. If supported by the permit record, the Department may also presume that discharges authorized under a general permit are insignificant or that the pollution controls required in the general permit are the least degrading alternative as specified in Subsection 052.08.c. (3-29-12)

04. Initiation of Antidegradation Review. Review of degradation potential and application of the appropriate level of protection from degradation will be triggered by an application for a new or reissued permit or license. (3-18-11)

05. Identification of Tier II Waters. The Department will utilize a water body by water body approach in determining where Tier II protection is appropriate in addition to Tier I protection. This approach shall be based on an assessment of the chemical, physical, biological and other information regarding the water body. The most recent federally approved Integrated Report and supporting data will be used to determine the appropriate level of protection as follows: (3-29-12)

a. Water bodies identified in the Integrated Report as fully supporting assessed uses will be provided Tier II protection. (3-29-12)

b. Water bodies identified in the Integrated Report as not assessed will be provided an appropriate level of protection on a case-by-case basis using information available at the time of a proposal for a new or reissued permit or license. (3-29-12)

c. Water bodies identified in the Integrated Report as not fully supporting assessed uses will receive Tier I protection for the impaired aquatic life or recreational use, except as follows: (3-29-12)

i. For aquatic life uses identified as impaired for dissolved oxygen, pH or temperature, if biological or aquatic habitat parameters show a healthy, balanced biological community is present, as described in the "Water Body Assessment Guidance" published by the Idaho Department of Environmental Quality, then the water body shall receive Tier II protection for aquatic life uses. (3-29-12)

ii. For recreational uses, if water quality data show compliance with those levels of water quality criteria listed in Sections 200, 210, 251, and 275 (where applicable), then the water body shall receive Tier II protection for recreational uses. (3-29-12)

06. Evaluation of Effect of an Activity or Discharge on Water Quality. The Department will evaluate the effect on water quality for each pollutant. The Department will determine whether an activity or discharge results in an improvement, no change, or degradation of water quality. (3-18-11)

a. Effect on water quality will be based on the calculated change in concentration in the receiving water as a result of a new or reissued permit or license. With respect to a discharge, this calculation will take into account dilution using appropriate mixing of the receiving water under critical conditions coupled with the design flow of the discharge. For a reissued permit or license, the calculated change will be the difference in water quality that would result from the activity or discharge as authorized in the current permit or license and the water quality that would result from the activity or discharge as proposed in the reissued permit or license. For a new permit or license, the calculated change will be the difference between the existing receiving water quality and water quality that would result from the activity or discharge as proposed in the new permit or license. (3-18-11)

i. Current Discharge Quality. For pollutants that are currently limited, current discharge quality shall be based on limits in the current permit or license. For pollutants not currently limited, current discharge quality shall be based on available discharge quality data collected within five years of the application for a permit or license or other relevant information. (3-18-11)

ii. Proposed Quality for an Existing Discharge. Future discharge quality shall be based on proposed permit limits. For pollutants not limited in the proposed permit or license, future discharge quality will be estimated from available discharge quality data since the last permit or license was issued accounting for any changes in production, treatment or operation. For the proposed discharge of a new pollutant or a proposed increased discharge of a pollutant, future discharge quality will be estimated based on information provided by the applicant or other relevant information. (3-18-11)

iii. New Permit Limits for an Existing Discharge. When new permit limits are proposed for the first time for a pollutant in an existing discharge, then for purposes of calculating the change in water quality, any statistical procedures used to derive the proposed new limits will be applied to past discharge quality as well, where appropriate. (3-18-11)

iv. Proposed Quality for a New Discharge. Future discharge quality shall be based on proposed permit limits. For pollutants not limited in the proposed permit or license, future discharge quality will be based on information provided by the applicant or other relevant information. (3-18-11)

b. Receiving water quality will be the quality measured, or modeled as appropriate, immediately above the discharge for flowing waters and outside any Department authorized mixing zone for lakes and reservoirs. (3-18-11)

c. Offsets. In determining the effect of an activity or discharge on water quality of Tier II or Tier III waters, the Department may take into account reductions in pollution from other sources that are tied to the proposed activity or discharge. These offsets in pollution must be upstream of the degradation in water quality due to the proposed activity or discharge and occur before the activity or discharge is allowed to begin. The applicant seeking a permit or license for an activity or discharge based on offsets will be held responsible for assuring offsets are achieved and maintained as a condition of their permit or license. (3-18-11)

07. Tier I Review. Tier I review will be performed for all new or reissued permits or licenses. Existing uses and the water quality necessary to protect the existing uses must always be maintained and protected. No degradation or lowering of water quality may be allowed that would cause or contribute to violation of water quality criteria as calculated after authorized mixing of the discharge with the receiving water. Identification of existing uses and the water quality necessary for their protection will be based on all available information, including any water quality related data and information submitted during the public comment period for the permit or license. (3-18-11)

08. Tier II Analysis. A Tier II analysis will only be conducted for activities or discharges, subject to a permit or a license, that cause degradation. The Department may allow significant degradation of surface water quality that is better than assigned criteria only if it is determined to be necessary to accommodate important economic or social development in the area in which the waters are located. The process and standard for this determination are set forth below. (3-18-11)

a. Insignificant Degradation. If the Department determines an activity or discharge will cause degradation, then the Department shall determine whether the degradation is insignificant. (4-11-15)

i. A cumulative decrease in assimilative capacity of more than ten percent (10%), from conditions as of July 1, 2011, shall constitute significant degradation. If the cumulative decrease in assimilative capacity from conditions as of July 1, 2011, is equal to or less than ten percent (10%), then, taking into consideration the size and character of the activity or discharge and the magnitude of its effect on the receiving stream, the Department may determine that the degradation is insignificant. (4-11-15)

ii. The Department may request additional information from the applicant as needed to determine the significance of the degradation. (4-11-15)

iii. If degradation is determined to be insignificant, then no further Tier II analysis for other source controls (Subsection 052.08.b.), alternatives analysis (Subsection 052.08.c.), or socioeconomic justification (Subsection 052.08.d.) is required. (4-11-15)

b. Other Source Controls. In allowing any degradation of high water quality, the Department must assure that there shall be achieved in the watershed the highest statutory and regulatory requirements for all new and existing point sources and cost-effective and reasonable best management practices for all nonpoint source controls. In providing such assurance, the Department may enter together into an agreement with other State of Idaho or federal agencies in accordance with Sections 67-2326 through 67-2333, Idaho Code. (3-18-11)

c. Alternatives Analysis. Degradation will be deemed necessary only if there are no reasonable alternatives to discharging at the levels proposed. The applicant seeking authorization to degrade high water quality must provide an analysis of alternatives aimed at selecting the best combination of site, structural, managerial and treatment approaches that can be reasonably implemented to avoid or minimize the degradation of water quality. To identify the least degrading alternative that is reasonable, the following principles shall be followed: (3-18-11)

i. Controls to avoid or minimize degradation should be considered at the earliest possible stage of project design. (3-18-11)

ii. Alternatives that must be evaluated as appropriate, are: (3-18-11)

(1) Relocation or configuration of outfall or diffuser; (3-18-11)

(2) Process changes/improved efficiency that reduces pollutant discharge; (3-18-11)

(3) Seasonal discharge to avoid critical time periods for water quality; (3-18-11)

(4) Non-discharge alternatives such as land application; and (3-18-11)

(5) Offsets to the activity or discharge's effect on water quality. (3-18-11)

iii. The Department retains the discretion to require the applicant to examine specific alternatives or provide additional information to conduct the analysis. (3-18-11)

iv. In selecting the preferred alternative the applicant shall: (3-18-11)

(1) Evaluate economic impacts (total cost effectiveness, incremental cost effectiveness) of all technologically feasible alternatives; (3-18-11)

(2) Rank all technologically feasible treatment alternatives by their cost effectiveness at pollutant reduction; (3-18-11)

(3) Consider the environmental costs and benefits across media and between pollutants; and (3-18-11)

(4) Select the least degrading option or show that a more degrading alternative is justified based on Subsections 052.08.c.iv.(1), 052.08.c.iv.(2), or 052.08.c.iv.(3) above. (3-29-12)

d. Socioeconomic Justification. Degradation of water quality deemed necessary must also be

determined by the Department to accommodate important economic or social development. Therefore, the applicant seeking authorization to degrade water quality must at a minimum identify the important economic or social development for which lowering water quality is necessary and should use the following steps to demonstrate this: (3-18-11)

- i. Identify the affected community; (3-18-11)
- ii. Describe the important social or economic development associated with the activity which can include cleanup/restoration of a closed facility; (3-18-11)
- iii. Identify the relevant social, economic and environmental health benefits and costs associated with the proposed degradation in water quality for the preferred alternative. Benefits and costs that must be analyzed include, but are not limited to: (3-18-11)
 - (1) Economic benefits to the community such as changes in employment, household incomes and tax base; (3-18-11)
 - (2) Provision of necessary services to the community; (3-18-11)
 - (3) Potential health impacts related to the proposed activity; (3-18-11)
 - (4) Impacts to direct and indirect uses associated with high quality water, e.g., fishing, recreation, and tourism; and (3-18-11)
 - (5) Retention of assimilative capacity for future activities or discharges. (3-18-11)
- iv. Factors identified in the socioeconomic justification should be quantified whenever possible but for those factors that cannot be quantified a qualitative description of the impacts may be accepted; and (3-18-11)
- v. If the Department determines that more information is required, then the Department may require the applicant to provide further information or seek additional sources of information. (3-18-11)
- e. Process. (3-18-11)
 - i. Analysis. The Department in cooperation with State of Idaho designated management agencies and/or federal agencies will collect information regarding the other source controls specified in Subsection 052.08.b. The applicant for a new or reissued permit or license is responsible for providing information pertinent to determining significance/insignificance of proposed changes in water quality and completing an alternatives analysis and socioeconomic justification as appropriate and submitting them to the Department for review. (3-29-12)
 - ii. Departmental review. The Department shall review all pertinent information and, after intergovernmental coordination, public notice and input, make a determination as to whether there is assurance that the other source controls specified in Subsection 052.08.b. shall be achieved, and whether degradation of water quality is necessary to accommodate important economic or social development. (3-29-12)
 - iii. Public Involvement. The Department will satisfy the public participation provisions of Idaho's continuing planning process. Public notice and review of antidegradation will be coordinated with existing 401 certification notices for public review. (3-18-11)

09. Tier III - Outstanding Resource Waters (ORWs). ORWs are designated by the legislature. Subsection 052.09 describes the nomination, public notice and comment, public hearing, and board review process for directing the Department to develop legislation designating ORWs. Only the legislature may designate ORWs. Once designated by the legislature, the ORWs are listed in these rules. (3-18-11)

a. Nominations. Any person may request, in writing to the board, that a stream segment be considered for designation as an Outstanding Resource Water. To be considered for ORW designation, nominations must be received by the board by April 1 or ten (10) days after the adjournment sine die of that year's regular session of the

legislature, whichever is later, for consideration during the next regular session of the legislature. All nominations shall be addressed to:

Idaho Board of Environmental Quality
Department of Environmental Quality
Outstanding Resource Water Nomination
1410 N. Hilton
Boise, Idaho 83706-1255

The nomination shall include the following information: (3-18-11)

- i. The name, description and location of the stream segment; (3-18-11)
- ii. The boundaries upstream and downstream of the stream segment; (3-18-11)
- iii. An explanation of what makes the segment a candidate for the designation; (3-18-11)
- iv. A description of the existing water quality and any technical data upon which the description is based as can be found in the most current basin status reports; (3-18-11)
- v. A discussion of the types of nonpoint source activities currently being conducted that may lower water quality, together with those activities that are anticipated during the next two (2) years, as described in the most current basin status reports; and (3-18-11)
- vi. Any additional evidence to substantiate such a designation. (3-18-11)

b. Public Notice and Public Comment. The board will give public notice that one (1) or more stream segments are being considered for recommendation to the legislature as outstanding resource waters. Public notice will also be given if a public hearing is being held. Public comments regarding possible designation will be accepted by the board for a period of at least forty-five (45) days. Public comments may include, but are not limited to, discussion of socioeconomic considerations; fish, wildlife or recreational values; and other beneficial uses. (3-18-11)

c. Public Hearing. A public hearing(s) may be held at the board's discretion on any stream segment nominated for ORW designation. Public notice will be given if a hearing is held. The decision to hold a hearing may be based on the following criteria: (3-18-11)

- i. One (1) or more requests contain supporting documentation and valid reasons for designation; (3-18-11)
- ii. A stream segment is generally recognized as constituting an outstanding national resource, such as waters of national and state parks, and wildlife refuges; (3-18-11)
- iii. A stream segment is generally recognized as waters of exceptional recreational or ecological significance; (3-18-11)
- iv. The board shall give special consideration to holding a hearing and to recommending for designation by the legislature, waters which meet criteria found in Subsections 052.09.c.ii. and 052.09.c.iii.; (3-29-12)

v. Requests for a hearing will be given due consideration by the board. Public hearings may be held at the board's discretion. (3-18-11)

d. Board Review. The board shall review the stream segments nominated for ORW designation and based on the hearing or other written record, determine the segments to recommend as ORWs to the legislature. The board shall submit a report for each stream segment it recommends for ORW designation. The report shall contain the information specified in Subsection 052.09.a. and information from the hearing record or other written record concerning the impacts the designation would have on socioeconomic conditions; fish, wildlife and recreational

values; and other beneficial uses. The Department shall then prepare legislation for each segment that will be recommended to the legislature as an ORW. The legislation shall provide for the listing of designated segments in these rules without the need for formal rulemaking procedures, pursuant to Sections 67-5201, et seq., Idaho Code.

(3-29-12)

e. Designated Waters. Those stream segments designated by the legislature as ORWs are listed in Sections 110 through 160.

(3-18-11)

f. Restriction of Nonpoint Source Activities on ORWs. Nonpoint source activities on ORWs shall be restricted as follows:

(3-18-11)

i. The water quality of ORWs shall be maintained and protected. After the legislature has designated a stream segment as an outstanding resource water, no person shall conduct a new or substantially modify an existing nonpoint source activity that can reasonably be expected to lower the water quality of that ORW, except for conducting short term or temporary nonpoint source activities which do not alter the essential character or special uses of a segment, allocation of water rights, or operation of water diversions or impoundments. Stream segments not designated as ORWs that discharge directly into an ORW shall not be subject to the same restrictions as an ORW, nor shall the ORW mixing zone be subject to the same restrictions as an ORW. A person may conduct a new or substantially modify an existing nonpoint source activity that can reasonably be expected to lower the water quality of a tributary or stream segment, which discharges directly into an ORW or an ORW mixing zone, provided that the water quality of that ORW below the mixing zone shall not be lowered.

(3-18-11)

ii. After the legislature has designated a stream segment as an outstanding resource water as outlined in Subsection 052.09.e., existing nonpoint source activities may continue and shall be conducted in a manner that maintains and protects the current water quality of an ORW. The provisions of this section shall not affect short term or temporary activities that do not alter the essential character or special uses of a segment, allocation of water rights, or operations of water diversions or impoundments, provided that such activities shall be conducted in conformance with applicable laws and regulations.

(3-29-12)

g. Restriction of Point Source Discharges to ORWs. The water quality of ORWs shall be maintained and protected. Point source discharges that may cause degradation to ORWs may be allowed only if they are offset by reductions in other discharges per Subsection 052.06.c.

(3-29-12)

053. PUBLIC PARTICIPATION.

In providing general coordination of water quality programs within each basin, in carrying out the duties of the Basin Advisory Groups as assigned, and in carrying out the provisions of Sections 39-3601, et seq., Idaho Code, the Director and the Basin Advisory Groups shall employ all means of public involvement deemed necessary, including the public involvement required under Section 67-2340 through Section 67-2347, Idaho Code, Section 051 of this rule or required in Chapter 52, Title 67, Idaho Code, and shall cooperate fully with the public involvement or planning processes of other appropriate public agencies.

(3-20-97)

054. BENEFICIAL USE SUPPORT STATUS.

In determining whether a water body fully supports designated and existing beneficial uses, the Department shall determine whether all of the applicable water quality standards are being achieved, including any criteria developed pursuant to these rules, and whether a healthy, balanced biological community is present. The Department shall utilize biological and aquatic habitat parameters listed below and in the current version of the "Water Body Assessment Guidance," as published by the Idaho Department of Environmental Quality, as a guide to assist in the assessment of beneficial use status. Revisions to this guidance will be made after notice and an opportunity for public comment. These parameters are not to be considered or treated as individual water quality criteria or otherwise interpreted or applied as water quality standards. The Department shall employ a weight of evidence approach in evaluating a combination of water quality data types (including, but not limited to, aquatic habitat and biological parameters), when such a combination of data are available, in making its final use support determination. (3-30-07)

01. Aquatic Habitat Parameters. These parameters may include, but are not limited to, stream width, stream depth, stream shade, measurements of sediment impacts, bank stability, water flows, and other physical characteristics of the stream that affect habitat for fish, macroinvertebrates or other aquatic life.

(3-30-07)

02. Biological Parameters. These parameters may include, but are not limited to, evaluation of aquatic macroinvertebrates including Ephemeroptera, Plecoptera and Trichoptera (EPT), Hilsenhoff Biotic Index, measures of functional feeding groups, and the variety and number of fish or other aquatic life to determine biological community diversity and functionality. (3-20-97)

03. Use of Data Regarding pH, Turbidity, Dissolved Oxygen, and Temperature. In making use support determinations, the Department may give less weight to departures from criteria in Section 250 for pH, turbidity, dissolved oxygen, and temperature that are infrequent, brief, and small if aquatic habitat and biological data indicate to the assessor that aquatic life beneficial uses are otherwise supported. Unless otherwise determined by the Department, “infrequent” means less than ten percent (10%) of valid, applicable, representative measurements when continuous data are available; “brief” means two (2) hours or less; and “small” means conditions that avoid acute effects. Subsection 054.03 only applies to use of this data for determination of beneficial use support status. Subsection 054.03 does not apply to or affect the application of criteria for any other regulatory purpose including, but not limited to, determining whether a particular discharge or activity violates water quality standards. (3-18-11)

04. Natural Conditions. There is no impairment of beneficial uses or violation of water quality standards where natural background conditions exceed any applicable water quality criteria as determined by the Department, and such natural background conditions shall not, alone, be the basis for placing a water body on the list of water quality limited water bodies described in Section 055. (3-18-11)

05. Rigor, Quality and Relevance of Data. In making any use support determination, the Department shall consider the scientific rigor associated with the collection of samples or data (e.g., the scientific methods used to collect samples or data); the quality of measurements and/or analysis of the samples (e.g., methodology, instrumentation, accuracy, precision, and limits of detection where applicable); and the relevance of the data (e.g., the relationship to a water quality standard, beneficial use or cause of impairment, and how representative the samples or data are of the water body in question). (3-30-07)

055. WATER QUALITY LIMITED WATERS AND TMDLS.

Note: Temporary rule submitted to EPA on July 8, 2014 (docket 58-0102-1301 - final rule effective April 11, 2015). This revision addresses the treatment of water bodies that do not support designated beneficial uses. This revision is consistent with changes in the Idaho Code and other sections of the water quality standards that have been adopted since the adoption of IDAPA 58.01.02.055. Until EPA approves this change, the previous standards, located at <http://www.deq.idaho.gov/epa-actions-on-proposed-standards>, continue to apply and are effective for federal Clean Water Act purposes.

01. Reporting Water Body Use Support Status. After using the provisions in Section 054, and after consultation with the appropriate basin and watershed advisory groups, the Department shall identify water bodies in the appropriate category in the Integrated Report. The Integrated Report shall be published periodically by the Department in accordance with the applicable provisions of the Clean Water Act and shall be subject to public review and comment prior to submission to EPA for approval. (4-11-15)

02. Water Bodies Needing Development of a Total Maximum Daily Load (TMDL). (4-11-15)

a. The Department shall develop TMDLs or other equivalent processes, as required under Section 303(d)(1) of the Clean Water Act, for those water bodies identified in the Integrated Report as not fully supporting designated or existing beneficial uses and not meeting applicable water quality standards despite the application of required pollution controls. (4-11-15)

b. Informational TMDLs may be developed for water bodies fully supporting beneficial uses as described under Section 303(d)(3) of the Clean Water Act, however, they will not be subject to the provisions of this Section. (3-18-11)

c. TMDLs do not need to be developed for water bodies where other pollutant control requirements are expected to achieve full support of uses and compliance with water quality standards in a reasonable period of

time. Such water bodies shall be identified as Category 4(b) waters in the Integrated Report. (4-11-15)

03. Priority of TMDL Development. The priority of TMDL development for water quality limited water bodies identified in the Integrated Report shall be determined by the Director depending upon the severity of pollution and the uses of the water body, including those of unique ecological significance. In determining the severity of pollution and the effect on uses, the Director shall apply the factors set forth in Section 39-3609, Idaho Code. Water bodies identified as a high priority through this process will be the first to be targeted for development of a TMDL or equivalent process. (4-11-15)

04. Protection of Uses Prior to Completion of TMDLs. Prior to the completion of a TMDL or equivalent process for water quality limited water bodies, the Department shall take those actions required by the antidegradation policy (Section 051), the antidegradation implementation procedures (Section 052), and the provisions in Section 39-3610, Idaho Code. Nothing in this section shall be interpreted as requiring best management practices for agricultural operations which are not adopted on a voluntary basis. (4-11-15)

05. Consistency with TMDLs. Once a TMDL or equivalent process is completed, discharges of causative pollutants shall be consistent with the allocations in the TMDL. Nothing in this section shall be interpreted as requiring best management practices for agricultural operations which are not adopted on a voluntary basis. (4-11-15)

06. Pollutant Trading. Development of TMDLs or equivalent processes or interim changes under these rules may include pollutant trading with the goal of restoring water quality limited water bodies to compliance with water quality standards. (3-20-97)

07. Idaho Agriculture Pollution Abatement Plan. Use of best management practices by agricultural activities is strongly encouraged in high, medium and low priority watersheds. The Idaho Agriculture Pollution Abatement Plan is the source for best management practices for the control of nonpoint sources of pollution for agriculture. (3-20-97)

056. -- 059. (RESERVED)

060. MIXING ZONE POLICY.

01. Mixing Zones for Point Source Discharges. Whether a mixing zone is authorized, and its size, configuration and location, is determined by the Department on a case-by-case basis. This determination is made in accordance with the provisions of Section 060 at the time a permit is issued, renewed, or materially modified and is in effect as long as the permit remains in effect. Such an authorization is required before a mixing zone can be used to determine the need for, or level of, effluent limits for a particular pollutant. (4-11-15)

a. Mixing zones shall not be authorized for a given pollutant when the receiving water does not meet water quality criteria for that pollutant; provided, however, the Department may authorize a mixing zone when the permitted discharge is consistent with an approved TMDL allocation or other applicable plans or analyses (such as 4b implementation plans, watershed loading analyses, or facility-specific water quality pollutant management plans) that demonstrate that there is available assimilative capacity and authorizing a mixing zone is consistent with achieving compliance with water quality standards in the receiving water. (4-11-15)

b. Water quality within an authorized mixing zone is allowed to exceed chronic water quality criteria for those parameters approved by the Department. If approved by the Department, acute water quality criteria for one (1) or more parameters may be exceeded within the zone of initial dilution inside the mixing zone. Narrative criteria in Subsections 200.03 and 200.05 apply within the mixing zone. All water quality criteria must be met at the boundary of any mixing zone under its design conditions. (4-11-15)

c. The size of mixing zone(s) and the concentration of pollutant(s) present shall be evaluated based on the permitted design flow. The Department shall not authorize a mixing zone that is determined to be larger than is necessary considering siting, technological, and managerial options available to the discharger. (4-11-15)

d. Mixing zones, individually or in combination with other mixing zones, shall not cause

unreasonable interference with, or danger to, beneficial uses. Unreasonable interference with, or danger to, beneficial uses includes, but is not limited to, the following: (4-11-15)

i. Impairment to the integrity of the aquatic community, including interfering with successful spawning, egg incubation, rearing, or passage of aquatic life. (4-11-15)

ii. Heat in the discharge that causes thermal shock, lethality, or loss of cold water refugia. (4-11-15)

iii. Bioaccumulation of pollutants (as defined in Section 010) resulting in tissue levels in aquatic organisms that exceed levels protective of human health or aquatic life. (4-11-15)

iv. Lethality to aquatic life passing through the mixing zone. (4-11-15)

v. Concentrations of pollutants that exceed Maximum Contaminant Levels at drinking water intake structures. (4-11-15)

vi. Conditions which impede or prohibit recreation in or on the water body. Mixing zones shall not be authorized for E. coli. (4-11-15)

e. Multiple nested mixing zones may be established for a single point of discharge, each being specific for one (1) or more pollutants contained within the discharge. (4-11-15)

f. Multiple mixing zones may be established for a single activity with multiple points of discharge. When these individual mixing zones overlap or merge, their combined area and volume shall not exceed that which would be allowed if there was a single point of discharge. When these individual mixing zones do not overlap or merge, they may be authorized as individual mixing zones. (4-11-15)

g. Adjacent mixing zones of independent activities shall not overlap. (4-11-15)

h. Mixing zones shall meet the following restrictions; provided, however, that the Department may authorize mixing zones that vary from the restrictions under the circumstances set forth in Subsection 060.01.i. below: (4-11-15)

i. For flowing waters: (4-11-15)

(1) The width of a mixing zone is not to exceed twenty-five percent (25%) of the stream width; and (4-11-15)

(2) The mixing zone shall not include more than twenty-five percent (25%) of the low flow design discharge conditions as set forth in Subsection 210.03.b. of these rules. (4-11-15)

ii. For all new discharges to nonflowing waters authorized after July 1, 2015: (4-11-15)

(1) The size of the mixing zone is not to exceed five percent (5%) of the total open surface area of the water body or one hundred (100) meters from the point of discharge, whichever is smaller; (4-11-15)

(2) Shore-hugging plumes are not allowed; and (4-11-15)

(3) Diffusers shall be used. (4-11-15)

iii. For all existing discharges to nonflowing waters authorized prior to July 1, 2015, the total horizontal area allocated to the mixing zone is not to exceed ten percent (10%) of the surface area of the lake. (4-11-15)

iv. Lakes and reservoirs with a mean detention time of fifteen (15) days or greater shall be considered nonflowing waters for this purpose. Detention time will be calculated as the mean annual storage volume divided by the mean annual flow rate out of the reservoir for the same time period. (4-11-15)

i. The Department may authorize a mixing zone that varies from the limits in Subsection 060.01.h. if it is established that: (4-11-15)

i. A smaller mixing zone is needed to avoid an unreasonable interference with, or danger to, beneficial uses as described in Subsection 060.01.d., and the mixing zone meets the other requirements set forth in Section 060; or (4-11-15)

ii. A larger mixing zone is needed by the discharger and does not cause an unreasonable interference with, or danger to, beneficial uses as described in Subsection 060.01.d., and the mixing zone meets the other requirements set forth in Section 060. The discharger shall provide to the Department an analysis that demonstrates a larger mixing zone is needed given siting, technological, and managerial options. (4-11-15)

j. The following elements shall be considered when designing an outfall: (4-11-15)

i. Encourage rapid mixing to the extent possible. This may be done through careful location and design of the outfall; and (4-11-15)

ii. Avoid shore-hugging plumes in those water bodies where the littoral zone is a major supply of food and cover for migrating fish and other aquatic life or where recreational activities are impacted by the plume. (4-11-15)

02. Points of Compliance as Alternatives to Mixing Zones. Specification of mixing zones for some 404 dredge and fill activities, stormwater, and nonpoint source discharges may not be practicable due to the generally intermittent and diffuse nature of these discharges. Rather, the Department may allow limited dilution of the discharge by establishing points for monitoring compliance with ambient water quality criteria. These alternatives to a mixing zone are still subject to requirements outlined in Subsections 060.01.a., 060.01.d., 200.03, and 200.05. (4-11-15)

061. -- 069. (RESERVED)

070. APPLICATION OF STANDARDS.

01. Multiple Criteria. In the application of the use designation, the most stringent criterion of a multiple criteria applies. (4-5-00)

02. Application of Standards to Nonpoint Source Activities. The application of water quality standards to nonpoint source activities shall be in accordance with Section 350. (7-1-93)

03. Application of Standards to Point Source Discharges. The application of water quality standards to point source discharges shall be in accordance with Sections 400 and 401. (4-11-06)

04. Applicability of Gas Supersaturation Standard. The application of gas supersaturation standard shall be in accordance with Section 300. (4-5-00)

05. Mixing Zones. The application of water quality standards to mixing zones shall be in accordance with Section 060. (7-1-93)

06. Application of Standards to Intermittent Waters. Numeric water quality standards only apply to intermittent waters during optimum flow periods sufficient to support the uses for which the water body is designated. For recreation, optimum flow is equal to or greater than five (5) cubic feet per second (cfs). For aquatic life uses, optimum flow is equal to or greater than one (1) cfs. (3-30-01)

07. Temperature Criteria. In the application of temperature criteria, the Director may, at his discretion, waive or raise the temperature criteria as they pertain to a specific water body. Any such determination shall be made consistent with 40 CFR 131.11 and shall be based on a finding that the designated aquatic life use is not an existing use in such water body or would be fully supported at a higher temperature criteria. For any

determination, the Director shall, prior to making a determination, provide for public notice and comment on the proposed determination. For any such proposed determination, the Director shall prepare and make available to the public a technical support document addressing the proposed modification. (4-5-00)

08. Protection of Downstream Water Quality. All waters shall maintain a level of water quality at their pour point into downstream waters that provides for the attainment and maintenance of the water quality standards of those downstream waters, including waters of another state or tribe. (3-25-16)

071. -- 079. (RESERVED)

080. VIOLATION OF WATER QUALITY STANDARDS.

01. Discharges Which Result in Water Quality Standards Violation. No pollutant shall be discharged from a single source or in combination with pollutants discharged from other sources in concentrations or in a manner that: (7-1-93)

- a.** Will or can be expected to result in violation of the water quality standards applicable to the receiving water body or downstream waters; or (7-1-93)
- b.** Will injure designated or existing beneficial uses; or (8-24-94)
- c.** Is not authorized by the appropriate authorizing agency for those discharges that require authorization. (8-24-94)

02. Short Term Activity Exemption. The Department or the Board can authorize, with whatever conditions deemed necessary, short term activities even though such activities can result in a violation of these rules; (8-24-94)

- a.** No activity can be authorized by the provisions of Subsection 080.02 unless: (7-1-93)
 - i.** The activity is essential to the protection or promotion of public interest; (7-1-93)
 - ii.** No permanent or long term injury of beneficial uses is likely as a result of the activity. (7-1-93)
- b.** Activities eligible for authorization by Subsection 080.02 include, but are not limited to: (7-1-93)
 - i.** Wastewater treatment facility maintenance; (7-1-93)
 - ii.** Fish eradication projects; (7-1-93)
 - iii.** Mosquito abatement projects; (7-1-93)
 - iv.** Algae and weed control projects; (7-1-93)
 - v.** Dredge and fill activities; (3-20-97)
 - vi.** Maintenance of existing structures; (3-20-97)
 - vii.** Limited road and trail reconstruction; (3-20-97)
 - viii.** Soil stabilization measures; (3-20-97)
 - ix.** Habitat enhancement structures; and (3-20-97)
 - x.** Activities which result in overall enhancement or maintenance of beneficial uses. (7-1-93)

03. Temperature Exemption. Exceeding the temperature criteria in Section 250 will not be considered

a water quality standard violation when the air temperature of a given day exceeds the ninetieth percentile of a yearly series of the maximum weekly maximum air temperature (MWMAT) calculated over the historic record measured at the nearest weather reporting station. (3-15-02)

081. -- 089. (RESERVED)

090. ANALYTICAL PROCEDURES.

These procedures are available for review at the Idaho Department of Environmental Quality, or may be obtained from the U.S. Environmental Protection Agency or U.S. Government Printing Office. (8-24-94)

01. Chemical and Physical Procedures. Sample collection, preservation and analytical procedures to determine compliance with these standards shall conform with the guidelines of the Environmental Protection Agency, 40 CFR, Part 136, or other methods accepted by the scientific community and deemed appropriate by the Department. (8-24-94)

02. Metals Procedures. For the purposes of NPDES permitting, sample collection, preservation and analytical procedures for metals should conform to clean or ultra-clean techniques as described in: (8-24-94)

- a. "Guidance Document on Clean Analytical Techniques and Monitoring," EPA, October 1993; or (8-24-94)
- b. "Interim Guidance on Determination and Use of Water-Effect Ratios for Metals," EPA, February 1994; or (8-24-94)
- c. Other scientifically valid methods deemed appropriate by the Department. (8-24-94)

03. Biological Procedures. Biological tests to determine compliance with these standards should be based on methods as outlined in: (8-24-94)

- a. "Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms," Fourth Edition, EPA, 1991; or (8-24-94)
- b. "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," Second Edition, EPA 1989; or (8-24-94)
- c. "Rapid Bioassessment Protocols for Use in Streams and Rivers," EPA, 1989; or (8-24-94)
- d. Other scientifically valid methods deemed appropriate by the Department. (7-1-93)

091. -- 099. (RESERVED)

100. SURFACE WATER USE DESIGNATIONS.

Waterbodies are designated in Idaho to protect water quality for existing or designated uses. The designated use of a waterbody does not imply any rights to access or ability to conduct any activity related to the use designation, nor does it imply that an activity is safe. For example, a designation of primary or secondary contact recreation may occur in areas where it is unsafe to enter the water due to water flows, depth or other hazardous conditions. Another example is that aquatic life uses may be designated in areas that are closed to fishing or access is not allowed by property owners. Wherever attainable, the designated beneficial uses for which the surface waters of the state are to be protected include: (3-15-02)

01. Aquatic Life. (7-1-93)

- a. Cold water (COLD): water quality appropriate for the protection and maintenance of a viable aquatic life community for cold water species. (4-5-00)
- b. Salmonid spawning (SS): waters which provide or could provide a habitat for active self-propagating populations of salmonid fishes. (3-30-07)

c. Seasonal cold water (SC): water quality appropriate for the protection and maintenance of a viable aquatic life community of cool and cold water species, where cold water aquatic life may be absent during, or tolerant of, seasonally warm temperatures. (4-5-00)

d. Warm water (WARM): water quality appropriate for the protection and maintenance of a viable aquatic life community for warm water species. (4-5-00)

e. Modified (MOD): water quality appropriate for an aquatic life community that is limited due to one (1) or more conditions set forth in [40 CFR 131.10\(g\)](#) which preclude attainment of reference streams or conditions. (4-5-00)

02. Recreation. (7-1-93)

a. Primary contact recreation (PCR): water quality appropriate for prolonged and intimate contact by humans or for recreational activities when the ingestion of small quantities of water is likely to occur. Such activities include, but are not restricted to, those used for swimming, water skiing, or skin diving. (4-5-00)

b. Secondary contact recreation (SCR): water quality appropriate for recreational uses on or about the water and which are not included in the primary contact category. These activities may include fishing, boating, wading, infrequent swimming, and other activities where ingestion of raw water is not likely to occur. (4-5-00)

03. Water Supply. (7-1-93)

a. Domestic (DWS): water quality appropriate for drinking water supplies. (4-5-00)

b. Agricultural: water quality appropriate for the irrigation of crops or as drinking water for livestock. This use applies to all surface waters of the state. (4-5-00)

c. Industrial: water quality appropriate for industrial water supplies. This use applies to all surface waters of the state. (4-5-00)

04. Wildlife Habitats. Water quality appropriate for wildlife habitats. This use applies to all surface waters of the state. (4-5-00)

05. Aesthetics. This use applies to all surface waters of the state. (7-1-93)

101. NONDESIGNATED SURFACE WATERS.

01. Undesignated Surface Waters. Surface waters not designated in Sections 110 through 160 shall be designated according to Section 39-3604, Idaho Code, taking into consideration the use of the surface water and such physical, geological, chemical, and biological measures as may affect the surface water. Prior to designation, undesignated waters shall be protected for beneficial uses, which includes all recreational use in and on the water and the protection and propagation of fish, shellfish, and wildlife, wherever attainable. (3-23-98)

a. Because the Department presumes most waters in the state will support cold water aquatic life and primary or secondary contact recreation beneficial uses, the Department will apply cold water aquatic life and primary or secondary contact recreation criteria to undesignated waters unless Sections 101.01.b and 101.01.c. are followed. (4-5-00)

b. During the review of any new or existing activity on an undesignated water, the Department may examine all relevant data or may require the gathering of relevant data on beneficial uses; pending determination in Section 101.01.c. existing activities will be allowed to continue. (3-23-98)

c. If, after review and public notice of relevant data, it is determined that beneficial uses in addition to or other than cold water aquatic life and primary or secondary contact recreation are appropriate, then the Department will: (4-5-00)

i. Complete the review and compliance determination of the activity in context with the new information on beneficial uses, and (3-23-98)

ii. Initiate rulemaking necessary to designate the undesignated water, including providing all necessary data and information to support the proposed designation. (3-23-98)

02. Man-Made Waterways. Unless designated in Sections 110 through 160, man-made waterways are to be protected for the use for which they were developed. (7-1-93)

03. Private Waters. Unless designated in Sections 110 through 160, lakes, ponds, pools, streams and springs outside public lands but located wholly and entirely upon a person's land are not protected specifically or generally for any beneficial use. (7-1-93)

102. DESIGNATION AND REVISION OF BENEFICIAL USES.

When designating or revising beneficial uses for a water body, the Department shall consult with the basin advisory group and the watershed advisory group with the responsibilities for the water body described in Chapter 36, Title 39, Idaho Code. After consultation, the Director shall identify the designated beneficial uses of each water body in these rules pursuant to the rulemaking and public participation provisions of Chapter 52, Title 67, Idaho Code. (3-25-16)

01. Designation of Beneficial Uses. Beneficial uses shall be designated in accordance with Section 39-3604, Idaho Code, taking into consideration the uses set forth in Section 100, and such physical, geological, chemical, and biological measures as may affect the surface water. Beneficial uses are designated according to water body unit unless designated otherwise. Use designations are made for each water body or segment whether or not they are being attained or are fully supported at the time of designation. (3-25-16)

a. In designating beneficial uses, which a water body can reasonably be expected to attain, the Department shall consider: (3-25-16)

i. Existing uses of the water body; (3-25-16)

ii. The physical, geological, hydrological, atmospheric, chemical and biological measures that affect the water body; (3-25-16)

iii. The beneficial use attainability measures identified in Section 39-3607, Idaho Code; (3-25-16)

iv. The economic impact of the designation and the economic costs required to fully support the beneficial uses; (3-25-16)

v. The attainment and maintenance of the water quality standards of downstream waters, including the waters of downstream states; (3-25-16)

vi. Adopting subcategories of a beneficial use and setting the appropriate criteria to reflect varying needs of such subcategories of beneficial uses, for instance, to differentiate between cold water and warm water fisheries; (3-25-16)

vii. At a minimum, that beneficial uses are deemed attainable if they can be achieved by the imposition of effluent limits required under sections 301(b) and 306 of the federal Clean Water Act and cost-effective and reasonable best management practices for nonpoint source control; and (3-25-16)

viii. Designating seasonal beneficial uses as an alternative to reclassifying a water body or segment thereof to uses requiring less stringent water quality criteria. If seasonal beneficial uses are adopted, water quality criteria may be adjusted to reflect the timing of the beneficial use, e.g., salmonid spawning. However, seasonal beneficial uses and their criteria shall not preclude the attainment and maintenance of a more protective beneficial use at other times. (3-25-16)

b. In no case shall waste transport or waste assimilation be a designated beneficial use for a water

body. (3-25-16)

02. Revision of Beneficial Uses. (3-25-16)

a. Designated beneficial uses shall be reviewed and revised when such physical, geological, hydrological, atmospheric, chemical or biological measures indicate the need to do so. Designated beneficial uses may be revised or removed if the designated beneficial use is not an existing use, and it is demonstrated that attaining the designated beneficial use is not feasible due to one of the following factors: (3-25-16)

i. Naturally occurring pollutant concentrations prevent the attainment of the use; (3-25-16)

ii. Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating state water conservation requirements to enable uses to be met; (3-25-16)

iii. Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; (3-25-16)

iv. Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; (3-25-16)

v. Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or (3-25-16)

vi. Controls more stringent than those required by sections 301(b) and 306 of the federal Clean Water Act would result in substantial and widespread economic and social impact. (3-25-16)

b. Designated beneficial uses may not be removed if: (3-25-16)

i. They are existing uses unless a use requiring more stringent criteria is added; or (3-25-16)

ii. Such uses can be attained by implementing effluent limits required under sections 301(b) and 306 of the federal Clean Water Act and by implementing cost-effective and reasonable best management practices for nonpoint source control. (3-25-16)

c. Where existing water quality standards specify designated uses less than those which are presently being attained, the Department shall revise its standards to reflect the uses actually being attained. (3-25-16)

d. A use attainability analysis is a structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological, and economic factors as described in Subsection 102.02.a. A use attainability analysis must be conducted whenever: (3-25-16)

i. The Department designates uses for a water body that do not include the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water; or (3-25-16)

ii. The Department acts to remove a designated use which provides for protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water; to remove a subcategory of such uses; or to designate subcategories of such uses which require less stringent criteria than previously applicable. (3-25-16)

e. A use attainability analysis is not required under this rule whenever: (3-25-16)

i. The Department designates beneficial uses which include protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water; or (3-25-16)

ii. The Department removes a beneficial use that does not include the protection and propagation of

fish, shellfish, and wildlife and provides for recreation in and on the water. (3-25-16)

103. -- 108. (RESERVED)

109. HUC INDEX AND ABBREVIATIONS FOR SECTIONS 110, 120, 130, 140, 150, AND 160.

01. Map. The following map depicts the hydrologic units and basins described here in. (4-5-00)

02. Table. The following table describes the hydrologic unit code (HUC), associated subbasin name, and the rule section describing the water bodies within the subbasin.

HUC	SUBBASIN	RULE SECTION	HUC	SUBBASIN	RULE SECTION
16010102	Central Bear	160.01	16010201	Bear Lake	160.02
16010202	Middle Bear	160.03	16010203	Little Bear-Logan	160.04
16010204	Lower Bear-Malad	160.05	16020309	Curlew Valley	160.06
17010101	Upper Kootenai	110.01	17010104	Lower Kootenai	110.02
17010105	Moyie	110.03	17010213	Lower Clark Fork	110.04
17010214	Pend Oreille Lake	110.05	17010215	Priest	110.06
17010216	Pend Oreille	110.07	17010301	Upper Coeur d'Alene	110.08
17010302	South Fork Coeur d'Alene	110.09	17010303	Coeur d'Alene Lake	110.10
17010304	St. Joe	110.11	17010305	Upper Spokane	110.12
17010306	Hangman	110.13	17010308	Little Spokane	110.14
17040104	Palisades	150.01	17040105	Salt	150.02
17040201	Idaho Falls	150.03	17040202	Upper Henrys	150.04
17040203	Lower Henrys	150.05	17040204	Teton	150.06
17040205	Willow	150.07	17040206	American Falls	150.08
17040207	Blackfoot	150.09	17040208	Portneuf	150.10
17040209	Lake Walcott	150.11	17040210	Raft	150.12
17040211	Goose	150.13	17040212	Upper Snake-Rock	150.14
17040213	Salmon Falls	150.15	17040214	Beaver-Camas	150.16
17040215	Medicine Lodge	150.17	17040216	Birch	150.18
17040217	Little Lost	150.19	17040218	Big Lost	150.20
17040219	Big Wood	150.21	17040220	Camas	150.22
17040221	Little Wood	150.23	17050101	C.J. Strike Reservoir	140.01
17050102	Bruneau	140.02	17050103	Middle Snake-Succor	140.03
17050104	Upper Owyhee	140.04	17050105	South Fork Owyhee	140.05
17050106	East Little Owyhee	140.06	17050107	Middle Owyhee	140.07
17050108	Jordan	140.08	17050111	North/Middle Fork Boise	140.09
17050112	Boise-Mores	140.10	17050113	South Fork Boise	140.11
17050114	Lower Boise	140.12	17050115	Middle Snake-Payette	140.13
17050120	South Fork Payette	140.14	17050121	Middle Fork Payette	140.15
17050122	Payette	140.16	17050123	North Fork Payette	140.17
17050124	Weiser	140.18	17050201	Brownlee Reservoir	140.19

HUC	SUBBASIN	RULE SECTION	HUC	SUBBASIN	RULE SECTION
17060101	Hells Canyon	130.01	17060103	Lower Snake-Asotin	130.02
17060108	Palouse	120.01	17060109	Rock	120.02
17060201	Upper Salmon	130.03	17060202	Pahsimeroi	130.04
17060203	Middle Salmon-Panther	130.05	17060204	Lemhi	130.06
17060205	U. Middle Fork Salmon	130.07	17060206	L. Middle Fork Salmon	130.08
17060207	Mid. Salmon-Chamberlain	130.09	17060208	South Fork Salmon	130.10
17060209	Lower Salmon	130.11	17060210	Little Salmon	130.12
17060301	Upper Selway	120.03	17060302	Lower Selway	120.04
17060303	Lochsa	120.05	17060304	Middle Fork Clearwater	120.06
17060305	South Fork Clearwater	120.07	17060306	Clearwater	120.08
17060307	U. North Fork Clearwater	120.09	17060308	L. North Fork Clearwater	120.10

(4-5-00)

- 03. Abbreviations.** (4-5-00)
- a. COLD -- Cold Water Communities. (4-5-00)
 - b. SS -- Salmonid Spawning. (4-5-00)
 - c. SC -- Seasonal Cold Water Communities. (4-5-00)
 - d. WARM -- Warm Water Communities. (4-5-00)
 - e. MOD -- Modified Communities. (4-5-00)
 - f. PCR -- Primary Contact Recreation. (4-5-00)
 - g. SCR -- Secondary Contact Recreation. (4-5-00)
 - h. DWS -- Domestic Water Supply. (4-5-00)
 - i. NONE -- Use Unattainable. (4-5-00)
 - j. No entry in the Aquatic Life or Recreation columns -- nondesignated waters for those uses. (3-15-02)

110. PANHANDLE BASIN.

Surface waters found within the Panhandle basin total fourteen (14) subbasins and are designated as follows: (4-5-00)

01. Upper Kootenai Subbasin. The Upper Kootenai Subbasin, HUC 17010101, is comprised of six (6) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
P-1	Star Creek - source to Idaho/Montana border	COLD SS	PCR	
P-2	North Callahan Creek - source to Idaho/Montana border	COLD SS	PCR	
P-3	South Callahan Creek - Glad Creek to Idaho/Montana border	COLD SS	PCR	
P-4	South Callahan Creek - source to Glad Creek	COLD SS	PCR	
P-5	Glad Creek - source to mouth	COLD SS	PCR	
P-6	Keeler Creek - source to Idaho/Montana border	COLD SS	PCR	

(3-30-01)

02. Lower Kootenai Subbasin. The Lower Kootenai Subbasin, HUC 17010104, is comprised of forty (40) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
P-1	Kootenai River - Shorty's Island to the Idaho/Canadian border	COLD SS	PCR	DWS
P-2	Boundary Creek - Idaho/Canadian border to mouth	COLD SS	PCR	
P-3	Grass Creek - source to Idaho/Canadian border	COLD SS	PCR	
P-4	Blue Joe Creek - source to Idaho/Canadian border	COLD SS	PCR	
P-5	Smith Creek - Cow Creek to mouth	COLD SS	PCR	
P-6	Cow Creek - source to mouth	COLD SS	PCR	
P-7	Smith Creek - source to Cow Creek	COLD SS	PCR	
P-8	Long Canyon Creek - source to mouth	COLD SS	PCR	
P-9	Parker Creek - source to mouth	COLD SS	PCR	
P-10	Trout Creek - source to mouth	COLD SS	PCR	

Unit	Waters	Aquatic Life	Recreation	Other
P-11	Ball Creek - source to mouth	COLD SS	PCR	
P-12	Kootenai River - Deep Creek to and including Shorty's Island	COLD SS	PCR	DWS
P-13	Myrtle Creek - source to mouth	COLD SS	PCR	
P-14	Cascade Creek - source to mouth	COLD SS	PCR	
P-15	Deep Creek - Snow Creek to mouth	COLD SS	PCR	DWS
P-16	Snow Creek - source to mouth	COLD SS	PCR	
P-17	Caribou Creek - source to mouth	COLD SS	PCR	
P-18	Deep Creek - Brown Creek to Snow Creek	COLD SS	PCR	DWS
P-19	Deep Creek - Trail Creek to Brown Creek	COLD SS	PCR	DWS
P-20	Ruby Creek - source to mouth	COLD SS	PCR	
P-21	Fall Creek - source to mouth	COLD SS	PCR	
P-22	Deep Creek - McArthur Lake to Trail Creek	COLD SS	PCR	DWS
P-23	McArthur Lake	COLD		
P-24	Dodge Creek - source to mouth	COLD SS	SCR	
P-25	Deep Creek - source to McArthur Lake	COLD SS	PCR	
P-26	Trail Creek - source to mouth	COLD SS	PCR	
P-27	Brown Creek - source to mouth	COLD SS	PCR	
P-28	Twentymile Creek - source to mouth	COLD SS	PCR	
P-29	Kootenai River - Moyie River to Deep Creek	COLD SS	PCR	DWS
P-30	Cow Creek - source to mouth	COLD SS	SCR	

Unit	Waters	Aquatic Life	Recreation	Other
P-31	Kootenai River - Idaho/Montana to Moyie River	COLD SS	PCR	DWS
P-32	Boulder Creek - East Fork Boulder Creek to mouth	COLD SS	PCR	
P-33	Boulder Creek - source to East Fork Boulder Creek	COLD SS	PCR	
P-34	East Fork Boulder Creek - source to mouth	COLD SS	PCR	
P-35	Curley Creek - source to mouth	COLD SS	SCR	
P-36	Flemming Creek - source to mouth	COLD SS	SCR	
P-37	Rock Creek - source to mouth	COLD SS	SCR	
P-38	Mission Creek - Brush Creek to mouth	COLD SS	PCR	
P-39	Brush Creek - source to mouth	COLD SS	SCR	
P-40	Mission Creek - Idaho/Canadian border to Brush Creek	COLD SS	SCR	

(3-29-12)

03. Moyie Subbasin. The Moyie Subbasin, HUC 17010105, is comprised of twelve (12) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
P-1	Moyie River - Moyie Falls Dam to mouth	COLD SS	PCR	DWS
P-2	Moyie River - Meadow Creek to Moyie Falls Dam	COLD SS	PCR	DWS
P-3	Skin Creek - Idaho/Montana border to mouth	COLD SS	PCR	
P-4	Deer Creek - source to mouth	COLD SS	PCR	
P-5	Moyie River - Round Prairie Creek to Meadow Creek	COLD SS	PCR	DWS
P-6	Moyie River - Idaho/Canadian border to Round Prairie Creek	COLD SS	PCR	DWS

Unit	Waters	Aquatic Life	Recreation	Other
P-7	Canuck Creek - Idaho/Montana border to Idaho/Canadian border	COLD SS	SCR	
P-8	Round Prairie Creek - Gillon Creek to mouth	COLD SS	PCR	
P-9	Gillon Creek - Idaho/Canadian border to mouth	COLD SS	PCR	
P-10	Round Prairie Creek - source to Gillon Creek	COLD SS	PCR	
P-11	Miller Creek - source to mouth	COLD SS	PCR	
P-12	Meadow Creek - source to mouth	COLD SS	PCR	

(3-29-12)

04. Lower Clark Fork Subbasin. The Lower Clark Fork Subbasin, HUC 17010213, is comprised of twenty-one (21) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
P-1	Clark Fork River Delta - Mosquito Creek to Pend Oreille Lake	COLD SS	PCR	DWS
P-2	Johnson Creek - source to mouth			
P-3	Clark Fork River - Cabinet Gorge Dam to Mosquito Creek	COLD SS	PCR	DWS
P-4	Dry Creek - source to mouth			
P-5	Clark Fork River - Idaho/Montana border to Cabinet Gorge Dam	COLD SS	PCR	DWS
P-6	West Fork Elk Creek - source to Idaho/Montana border			
P-7	West Fork Blue Creek - source to Idaho/Montana border			
P-8	Gold Creek - source to Idaho/Montana border			
P-9	Mosquito Creek - source to mouth			
P-10	Lightning Creek - Spring Creek to mouth	COLD SS	PCR	DWS
P-11	Lightning Creek - Cascade Creek to Spring Creek	COLD SS	PCR	DWS
P-12	Cascade Creek - source to mouth			
P-13	Lightning Creek - East Fork Creek to Cascade Creek	COLD SS	PCR	DWS
P-14	East Fork Creek - Idaho/Montana border to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
P-15	Savage Creek - Idaho/Montana border to mouth			
P-16	Lightning Creek - Wellington Creek to East Fork Creek	COLD SS	PCR	DWS
P-17	Lightning Creek - Rattle Creek to Wellington Creek	COLD SS	PCR	DWS
P-18	Rattle Creek - source to mouth			
P-19	Lightning Creek - source to Rattle Creek	COLD SS	PCR	DWS
P-20	Wellington Creek - source to mouth			
P-21	Spring Creek - source to mouth			

(3-29-12)

05. Pend Oreille Lake Subbasin. The Pend Oreille Lake Subbasin, HUC 17010214, is comprised of sixty-one (61) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
P-1	Pend Oreille River - Priest River to Albeni Falls Dam	COLD	PCR	DWS
P-2	Pend Oreille River - Pend Oreille Lake to Priest River	COLD	PCR	DWS
P-3	Hoodoo Creek - source to mouth			
P-4	Kelso Lake and outlet	COLD SS	PCR	DWS
P-5	Granite Lake			
P-6	Beaver Lake			
P-7	Spirit Creek - source to mouth			
P-8	Blanchard Lake			
P-9	Spirit Lake	COLD SS	PCR	DWS
P-10	Brickel Creek - Idaho/Washington border to mouth			
P-11	Jewell Lake			
P-12	Cocolalla Creek - Cocolalla Lake to mouth	COLD	PCR	DWS
P-13	Cocolalla Lake	COLD	PCR	DWS
P-14	Cocolalla Creek - source to Cocolalla Lake			
P-15	Fish Creek - source to mouth			
P-16	Fry Creek - source to mouth			
P-17	Shepard Lake			

Unit	Waters	Aquatic Life	Recreation	Other
P-18	Pend Oreille Lake	COLD SS	PCR	DWS
P-19	Gamble Lake			
P-20	Mirror Lake			
P-21	Gold Creek - West Gold Creek to mouth			
P-22	West Gold Creek- source to mouth			
P-23	Gold Creek - source to West Gold Creek			
P-24	Chloride Creek - source to mouth			
P-25	North Gold Creek - source to mouth			
P-26	Cedar Creek - source to mouth			
P-27	Granite Creek - source to mouth	COLD SS	SCR	
P-28	Riser Creek - source to mouth			
P-29	Strong Creek - source to mouth			
P-30	Trestle Creek - source to mouth	COLD SS	SCR	
P-31	Lower Pack River - Sand Creek to mouth	COLD SS	PCR	DWS
P-32	Trout Creek - source to mouth			
P-33	Rapid Lightning Creek - source to mouth			
P-34	Gold Creek - source to mouth			
P-35	Grouse Creek - North Fork Grouse Creek to mouth			
P-36	Grouse Creek - source to North Fork Grouse Creek			
P-37	North Fork Grouse Creek - source to mouth			
P-38	Sand Creek - source to mouth			
P-39	Upper Pack River - Lindsey Creek to Sand Creek	COLD SS	PCR	DWS
P-40	Walsh Lake			
P-41	Upper Pack River - source to and including Lindsey Creek	COLD SS	PCR	DWS
P-42	McCormick Creek - source to mouth			
P-43	Jeru Creek - source to mouth			
P-44	Hellroaring Creek - source to mouth			
P-45	Caribou Creek - source to mouth			
P-46	Berry Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
P-47	Colburn Creek - source to mouth			
P-48	Sand Creek - Schweitzer Creek to mouth			
P-49	Sand Creek - source to Schweitzer Creek			
P-50	Spring Jack Creek - source to mouth			
P-51	Swede Creek - source to mouth			
P-52	Schweitzer Creek - source to mouth			
P-53	Little Sand Creek - source to mouth			
P-54	Syringa Creek - source to mouth			
P-55	Carr Creek - source to mouth			
P-56	Hornby Creek - source to mouth			
P-57	Smith Creek - source to mouth			
P-58	Johnson Creek - source to mouth			
P-59	Riley Creek - source to mouth			
P-60	Manley Creek - source to mouth			
P-61	Strong Creek - source to mouth			

(3-29-12)

06. Priest Subbasin. The Priest Subbasin, HUC 17010215, is comprised of thirty-one (31) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
P-1	Lower Priest River - Upper West Branch Priest River to mouth	COLD	PCR	DWS
P-2	Big Creek - source to mouth			
P-3	Middle Fork East River - source to mouth			
P-4	North Fork East River - source to mouth			
P-5	Lower Priest River - Priest Lake to Upper West Branch Priest River	COLD	PCR	DWS
P-6	Priest Lake	COLD SS	PCR	DWS
P-7	Chase Lake			
P-8	Soldier Creek - source to mouth			
P-9	Hunt Creek - source to mouth			
P-10	Indian Creek - source to mouth			
P-11	Bear Creek - source to mouth			
P-12	Two Mouth Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
P-13	Lion Creek - source to mouth			
P-14	Priest Lake Thorofare - Upper Priest Lake to Priest Lake	COLD SS	PCR	DWS
P-15	Caribou Creek - source to mouth			
P-16	Upper Priest Lake	COLD SS	PCR	DWS
P-17	Trapper Creek - source to mouth			
P-18	Upper Priest River - Idaho/Canadian border to mouth	COLD SS	PCR	DWS
P-19	Hughes Fork - source to mouth			
P-20	Beaver Creek - source to mouth			
P-21	Tango Creek - source to mouth			
P-22	Granite Creek - Idaho/Washington border to mouth			
P-23	Reeder Creek - source to mouth			
P-24	Kalispell Creek - Idaho/Washington border to mouth			
P-25	Lamb Creek - Idaho/Washington border to mouth			
P-26	Binarch Creek - Idaho/Washington border to mouth			
P-27	Upper West Branch Priest River - Idaho/Washington border to mouth			
P-28	Goose Creek - Idaho/Washington border to mouth			
P-29	Quartz Creek - source to mouth			
P-30	Lower West Branch Priest River - Idaho/Washington border to mouth			
P-31	Moore's Creek - source to mouth			

(3-29-12)

07. Pend Oreille Subbasin. The Pend Oreille Subbasin, HUC 17010216, is comprised of two (2) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
P-1	South Salmo River - source to Idaho/Washington border			
P-2	Pend Oreille River - Albeni Falls Dam to Idaho/Washington border	COLD	PCR	DWS

(4-5-00)

08. Upper Coeur d'Alene Subbasin. The Upper Coeur d'Alene Subbasin, HUC 17010301, is comprised of thirty-nine (39) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
P-1	North Fork Coeur d'Alene River - Yellow Dog Creek to mouth	COLD SS	PCR	DWS
P-2	Graham Creek - source to mouth			
P-3	Beaver Creek - source to mouth			
P-4	Prichard Creek - Butte Creek to mouth	COLD SS	PCR	
P-5	Prichard Creek - source to Butte Creek	COLD SS	PCR	DWS
P-6	Butte Creek - source to mouth			
P-7	Eagle Creek - source to mouth			
P-8	West Fork Eagle Creek - source to mouth			
P-9	Lost Creek - source to mouth			
P-10	Shoshone Creek - Falls Creek to mouth			
P-11	Falls Creek - source to mouth			
P-12	Shoshone Creek - source to Falls Creek			
P-13	North Fork Coeur d'Alene River - Jordan Creek to Yellow Dog Creek	COLD SS	PCR	DWS
P-14	Jordan Creek - source to mouth			
P-15	North Fork Coeur d'Alene River - source to Jordan Creek	COLD SS	PCR	DWS
P-16	Cataract Creek - source to mouth			
P-17	Tepee Creek - confluence of Trail Creek and Big Elk Creek to mouth			
P-18	Independence Creek - source to mouth			
P-19	Trail Creek - source to mouth			
P-20	Big Elk Creek - source to mouth			
P-21	Brett Creek - source to mouth			
P-22	Miners Creek - source to mouth			
P-23	Flat Creek - source to mouth			
P-24	Yellow Dog Creek - source to mouth			
P-25	Downey Creek - source to mouth			
P-26	Brown Creek - source to mouth			
P-27	Grizzly Creek - source to mouth			
P-28	Steamboat Creek - source to mouth			
P-29	Cougar Gulch - source to mouth			
P-30	Little North Fork Coeur d'Alene River - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
P-31	Bumblebee Creek - source to mouth			
P-32	Laverne Creek - source to mouth			
P-33	Leiberg Creek - source to mouth			
P-34	Bootjack Creek - source to mouth			
P-35	Iron Creek - source to mouth			
P-36	Burnt Cabin Creek - source to mouth			
P-37	Deception Creek - source to mouth			
P-38	Skookum Creek - source to mouth			
P-39	Copper Creek - source to mouth			

(3-29-12)

09. South Fork Coeur d’Alene Subbasin. The South Fork Coeur d’Alene Subbasin, HUC 17010302, is comprised of twenty (20) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
P-1	South Fork Coeur d’Alene River - Canyon Creek to mouth	COLD	SCR	
P-2	Pine Creek - East Fork Pine Creek to mouth	COLD SS	SCR	
P-3	Pine Creek - source to East Fork Pine Creek	COLD SS	PCR	DWS
P-4	East Fork Pine Creek - source to mouth			
P-5	Hunter Creek - source to mouth			
P-6	Government Gulch - source to mouth	COLD SS	SCR	
P-7a	Big Creek - source to mining impact area	COLD SS	PCR	DWS
P-7b	Big Creek - mining impact area to mouth	COLD SS	SCR	
P-8a	Shields Gulch - source to mining impact area	COLD SS	PCR	DWS
P-8b	Shields Gulch - mining impact area to mouth		SCR	
P-9a	Lake Creek - source to mining impact area	COLD SS	PCR	DWS
P-9b	Lake Creek - mining impact area to mouth	COLD SS	SCR	
P-10	Placer Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
P-11	South Fork Coeur d'Alene River - from and including Daisy Gulch to Canyon Creek	COLD	SCR	
P-12	Willow Creek - source to mouth			
P-13	South Fork Coeur d'Alene River - source to Daisy Gulch	COLD SS	PCR	DWS
P-14	Canyon Creek - from and including Gorge Gulch to mouth	COLD	SCR	
P-15	Canyon Creek - source to Gorge Gulch	COLD SS	PCR	DWS
P-16	Ninemile Creek - from and including East Fork Ninemile Creek to mouth	COLD SS	SCR	
P-17	Ninemile Creek - source to East Fork Ninemile Creek	COLD SS	PCR	DWS
P-18	Moon Creek - source to mouth			
P-19	West Fork Moon Creek - source to mouth			
P-20	Bear Creek - source to mouth	COLD SS	PCR	DWS

(3-15-02)

10. Coeur d'Alene Lake Subbasin. The Coeur d'Alene Lake Subbasin, HUC 17010303, is comprised of thirty-four (34) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
P-1	Coeur d'Alene Lake	COLD SS	PCR	DWS
P-2	Cougar Creek - source to mouth			
P-3	Kid Creek - source to mouth			
P-4	Mica Creek - source to mouth			
P-5	Fighting Creek - source to mouth			
P-6	Lake Creek - Idaho/Washington border to mouth			
P-7	Coeur d'Alene River - Latour Creek to mouth	COLD	PCR	
P-8	Anderson Lake			
P-9	Black Lake			
P-10	Medicine Lake			
P-11	Willow Creek - source to mouth			
P-12	Evans Creek - source to mouth			
P-13	Robinson Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
P-14	Bull Run Lake			
P-15	Latour Creek - source to mouth			
P-16	Coeur d'Alene River - South Fork Coeur d'Alene River to Latour Creek	COLD	PCR	
P-17	Skeel and Cataldo Creeks - source to mouth			
P-18	French Gulch - source to mouth			
P-19	Hardy and Hayden Gulch and Whitman Draw Creeks Complex - source to mouth			
P-20	Fourth of July Creek - source to mouth			
P-21	Rose Lake			
P-22	Killarney Lake			
P-23	Swan Lake			
P-24	Blue Lake			
P-25	Thompson Lake			
P-26	Carlin Creek - source to mouth			
P-27	Turner Creek - source to mouth			
P-28	Beauty Creek - source to mouth			
P-29	Wolf Lodge Creek - source to mouth	COLD SS	PCR	DWS
P-30	Cedar Creek - source to mouth			
P-31	Marie Creek - source to mouth			
P-32	Fernan Creek - Fernan Lake to mouth	COLD SS	PCR	DWS
P-33	Fernan Lake	COLD SS	PCR	DWS
P-34	Fernan Creek - source to Fernan Lake			

(3-29-12)

11. St. Joe Subbasin. The St. Joe Subbasin, HUC 17010304, is comprised of sixty-nine (69) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
P-1	Chatcolet Lake			
P-2	Plummer Creek - source to mouth	COLD SS	SCR	
P-3	Pedee Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
P-4	Benewah Creek - source to mouth			
P-5	St. Joe River - St. Maries River to mouth	COLD	PCR	
P-6	Cherry Creek - source to mouth			
P-7	St. Maries River - Santa Creek to mouth	COLD	PCR	
P-8	Alder Creek - source to mouth			
P-9	John Creek - source to mouth			
P-10	Santa Creek - source to mouth	COLD SS	PCR	
P-11	Charlie Creek - source to mouth			
P-12	St. Maries River - Carpenter Creek to Santa Creek	COLD	PCR	
P-13	Tyson Creek - source to mouth			
P-14	Carpenter Creek - source to mouth			
P-15	St. Maries River - confluence of West Fork and Middle Fork St. Maries Rivers to Carpenter Creek	COLD	PCR	DWS
P-16	Emerald Creek - source to mouth			
P-17	West Fork St. Maries River - source to mouth			
P-18	Middle Fork St. Maries River - source to mouth			
P-19	Gold Center Creek - source to mouth			
P-20	Merry Creek - source to mouth			
P-21	Childs Creek - source to mouth			
P-22	Olson Creek - source to mouth			
P-23	Crystal Creek - source to mouth			
P-24	Renfro Creek - source to mouth			
P-25	Beaver Creek - source to mouth			
P-26	Thorn Creek - source to mouth			
P-27	St. Joe River - North Fork St. Joe River to St. Maries River	COLD SS	PCR	DWS
P-28	Bond Creek - source to mouth			
P-29	Hugus Creek- source to mouth			
P-30	Mica Creek - source to mouth			
P-31	Marble Creek - Hobo Creek to mouth			
P-32	Eagle Creek - source to mouth			
P-33	Bussel Creek - source to mouth			
P-34	Hobo Creek - source to mouth			
P-35	Marble Creek - source to Hobo Creek			

Unit	Waters	Aquatic Life	Recreation	Other
P-36	Homestead Creek - source to mouth			
P-37	Daveggio Creek - source to mouth			
P-38	Boulder Creek - source to mouth			
P-39	Fishhook Creek - source to mouth			
P-40	Siwash Creek - source to mouth			
P-41	St. Joe River - source to North Fork St. Joe River	COLD SS	PCR	DWS
P-42	Sisters Creek - source to mouth			
P-43	Prospector Creek - source to mouth			
P-44	Nugget Creek - source to mouth			
P-45	Bluff Creek - source to mouth			
P-46	Mosquito Creek - source to mouth			
P-47	Fly Creek - source to mouth			
P-48	Beaver Creek - source to mouth			
P-49	Copper Creek - source to mouth			
P-50	Timber Creek - source to mouth			
P-51	Red Ives Creek - source to mouth			
P-52	Simmons Creek - source to mouth			
P-53	Gold Creek - source to mouth			
P-54	Bruin Creek - source to mouth			
P-55	Quartz Creek - source to mouth			
P-56	Eagle Creek - source to mouth			
P-57	Bird Creek - source to mouth			
P-58	Skookum Creek - source to mouth			
P-59	North Fork St. Joe River - Loop Creek to mouth			
P-60	Loop Creek - source to mouth			
P-61	North Fork St. Joe River - source to Loop Creek			
P-62	Slate Creek - source to mouth			
P-63	Big Creek - source to mouth			
P-64	Trout Creek - source to mouth			
P-65	Falls Creek - source to mouth			
P-66	Reeds Gulch Creek - source to mouth			
P-67	Rochat Creek - source to mouth			
P-68	Street Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
P-69	Deep Creek - source to mouth			

(3-29-12)

12. Upper Spokane Subbasin. The Upper Spokane Subbasin, HUC 17010305, is comprised of eighteen (18) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
P-1	Liberty Creek - source to Idaho/Washington border			
P-2	Cable Creek - source to Idaho/Washington border			
P-3	Spokane River - Post Falls Dam to Idaho/Washington border	COLD SS	PCR	DWS
P-4	Spokane River - Coeur d'Alene Lake to Post Falls Dam	COLD SS	PCR	DWS
P-5	Hayden Lake	COLD SS	PCR	DWS
P-6	Yellowbank Creek - source to mouth			
P-7	Jim Creek - source to mouth			
P-8	Mokins Creek - source to mouth			
P-9	Nilsen Creek - source to mouth			
P-10	Hayden Creek -source to mouth			
P-11	Sage Creek and Lewellen Creek - source to mouth			
P-12	Rathdrum Creek - Twin Lakes to mouth			
P-13	Twin Lakes	COLD	PCR	DWS
P-14	Fish Creek - Idaho/Washington border to Twin Lakes			
P-15	Hauser Lake outlet - Hauser Lake to mouth			
P-16	Hauser Lake	COLD	PCR	DWS
P-17	Lost Lake, Howell, and Lost Creeks - source to mouth			
P-18	Hauser Creek - source to mouth			

(3-29-12)

13. Hangman Subbasin. The Hangman Subbasin, HUC 17010306, is comprised of five (5) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
P-1	Hangman Creek - source to Idaho/Washington border	COLD	SCR	
P-2	Little Hangman Creek - source to Idaho/Washington border			

Unit	Waters	Aquatic Life	Recreation	Other
P-3	Rock Creek - source to Idaho/Washington border		SCR	
P-4	Middle Fork Rock Creek - source to Idaho/Washington border			
P-5	North Fork Rock Creek - source to Idaho/Washington border			

(4-5-00)

14. Little Spokane Subbasin. The Little Spokane Subbasin, HUC 17010308, is comprised of one (1) water body unit.

Unit	Waters	Aquatic Life	Recreation	Other
P-1	McDonald Creek - source to mouth			

(4-5-00)

111. -- 119. (RESERVED)

120. CLEARWATER BASIN.

Surface waters found within the Clearwater basin total ten (10) subbasins and are designated as follows: (4-5-00)

01. Palouse Subbasin. The Palouse Subbasin, HUC 17060108, is comprised of thirty-three (33) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
C-1	Cow Creek - source to Idaho/Washington border	COLD	SCR	
C-2	South Fork Palouse River - Gnat Creek to Idaho/Washington border	COLD SS	SCR	
C-3	South Fork Palouse River - source to Gnat Creek	COLD SS	SCR	
C-4a	Gnat Creek - source to T40N, R05W, Sec. 26	COLD	SCR	
C-4b	Gnat Creek - T40N, R05W, Sec. 26 to mouth	COLD	SCR	
C-5	Paradise Creek - source to Idaho/Washington border	COLD	SCR	
C-6a	Missouri Flat Creek - source to T40N, R5W, Sec. 17	COLD	SCR	
C-6b	Missouri Flat Creek-T40N, R5W, Sec. 17 to Idaho/Washington border	COLD	SCR	
C-7a	Fourmile Creek - source to T40N, R5W, Sec. 5	COLD	SCR	
C-7b	Fourmile Creek - T40N, R5W, Sec. 5 to Idaho/Washington border	COLD	SCR	
C-8a	Silver Creek - source to T43, R5W, Sec. 29	COLD	SCR	
C-8b	Silver Creek - T43, R5W, Sec. 29 to Idaho/Washington border	COLD	SCR	
C-9	Palouse River - Deep Creek to Idaho/Washington border	COLD	SCR	
C-10	Palouse River - Hatter Creek to Deep Creek	COLD	SCR	

Unit	Waters	Aquatic Life	Recreation	Other
C-11a	Flannigan Creek - source to T41N, R05W, Sec. 23	COLD	SCR	
C-11b	Flannigan Creek - T41N, R05W, Sec. 23 to mouth	COLD	SCR	
C-12	Rock Creek - confluence of West and East Fork Rock Creeks to mouth	COLD	SCR	
C-13a	West Fork Rock Creek - source to T41N, R04W, Sec. 30	COLD	SCR	
C-13b	West Fork Rock Creek - T41N, R04W, Sec. 30 to mouth	COLD	SCR	
C-14a	East Fork Rock Creek - source to T41N, R 04W, Sec. 29	COLD	SCR	
C-14b	East Fork Rock Creek - T41N, R 04W, Sec. 29 to mouth	COLD	SCR	
C-15a	Hatter Creek - source to T40N, R04W, Sec. 3	COLD	SCR	
C-15b	Hatter Creek - T40N, R04W, Sec. 3 to mouth	COLD	SCR	
C-16	Palouse River - Strychnine Creek to Hatter Creek	COLD SS	PCR	DWS
C-17	Flat Creek - source to mouth	COLD	SCR	
C-18	Palouse River - source to Strychnine Creek	COLD SS	PCR	DWS
C-19	Little Sand Creek - source to mouth	COLD SS	SCR	
C-20	Big Sand Creek - source to mouth	COLD SS	SCR	
C-21	North Fork Palouse River - source to mouth	COLD SS	SCR	
C-22	Strychnine Creek - source to mouth	COLD SS	SCR	
C-23	Meadow Creek - East Fork Meadow Creek to mouth	COLD	SCR	
C-24	East Fork Meadow Creek - source to mouth	COLD SS	SCR	
C-25	Meadow Creek - source to East Fork Meadow Creek	COLD SS	SCR	
C-26	White Pine Creek - source to mouth	COLD SS	SCR	
C-27a	Big Creek - source to T42N, R03W, Sec. 08	COLD SS	SCR	
C-27b	Big Creek - T42N, R03W, Sec. 08 to mouth	COLD	SCR	
C-28	Jerome Creek - source to mouth	COLD SS	SCR	
C-29	Gold Creek - T42N, R04W, Sec. 28 to mouth	COLD	SCR	
C-30	Gold Creek - source to T42N, R04W, Sec. 28	COLD SS	SCR	

Unit	Waters	Aquatic Life	Recreation	Other
C-31a	Crane Creek - source to T42N, 04W, Sec. 28	COLD	SCR	
C-31b	Crane Creek - T42N, 04W, Sec. 08 to mouth	COLD	SCR	
C-32a	Deep Creek - source to T42, R05, Sec. 02	COLD	SCR	
C-32b	Deep Creek - T42, R05, Sec. 02 to mouth	COLD	SCR	
C-33a	Cedar Creek - source to T43N, R05W, Sec. 28	COLD	SCR	
C-33b	Cedar Creek - T43N, R05W, Sec. 28 to Idaho/Washington border	COLD	SCR	

(5-3-03)

02. Rock Subbasin. The Rock Subbasin, HUC 17060109, is comprised of three (3) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
C-1	South Fork Pine Creek - source to Idaho/Washington border	COLD	SCR	
C-2	North Fork Pine Creek - source to Idaho/Washington border	COLD	SCR	
C-3	Unnamed Tributaries - source to Idaho/Washington border (T44N, R05W, Sec.31 / T43N, R05W, Sec. 6)	COLD	SCR	

(5-3-03)

03. Upper Selway Subbasin. The Upper Selway Subbasin, HUC 17060301, is comprised of fifty-eight (58) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
C-1	Selway River - Bear Creek to Moose Creek	COLD SS	PCR	DWS
C-2	Magpie Creek - source to mouth			
C-3	Bitch Creek - source to mouth			
C-4	Selway River - White Cap Creek to Bear Creek	COLD SS	PCR	DWS
C-5	Ditch Creek - source to mouth			
C-6	Elk Creek - source to mouth			
C-7	Goat Creek - source to mouth			
C-8	Running Creek - Lynx Creek to mouth			
C-9	Running Creek - source to Lynx Creek			
C-10	South Fork Running Creek - source to mouth			
C-11	Lynx Creek - source to mouth			
C-12	Eagle Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
C-13	Crooked Creek - source to mouth			
C-14	Selway River - Deep Creek to White Cap Creek	COLD SS	PCR	DWS
C-15	Little Clearwater River- Flat Creek to mouth			
C-16	Short Creek - source to mouth			
C-17	Little Clearwater River - source to Flat Creek			
C-18	Burnt Knob Creek - source to mouth			
C-19	Salamander Creek - source to mouth			
C-20	Flat Creek - source to mouth			
C-21	Magruder Creek - source to mouth			
C-22	Selway River - confluence of Hidden and Surprise Creeks to Deep Creek	COLD SS	PCR	DWS
C-23	Three Lakes Creek - source to mouth			
C-24	Swet Creek - source to mouth			
C-25	Stripe Creek - source to mouth			
C-26	Hidden Creek - source to mouth			
C-27	Surprise Creek - source to mouth			
C-28	Wilkerson Creek - Storm Creek to mouth			
C-29	Wilkerson Creek - source to Storm Creek			
C-30	Storm Creek - source to mouth			
C-31	Deep Creek - source to mouth			
C-32	Vance Creek - source to mouth			
C-33	Lazy Creek - source to mouth			
C-34	Pete Creek - source to mouth			
C-35	Cayuse Creek - source to mouth			
C-36	Indian Creek - source to mouth			
C-37	Schofield Creek - source to mouth			
C-38	Snake Creek - source to mouth			
C-39	White Cap Creek - Canyon Creek to mouth			
C-40	Canyon Creek - source to mouth			
C-41	Cooper Creek - source to mouth			
C-42	White Cap Creek - source to Canyon Creek			
C-43	Paloma Creek - source to mouth			
C-44	Bad Luck Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
C-45	Gardner Creek - source to mouth			
C-46	North Star Creek - source to mouth			
C-47	Bear Creek - Cub Creek to mouth			
C-48	Cub Creek - Brushy Fork Creek to mouth			
C-49	Brushy Fork Creek - source to mouth			
C-50	Cub Creek - source to Brushy Fork Creek			
C-51	Paradise Creek - source to mouth			
C-52	Bear Creek - Wahoo Creek to Cub Creek			
C-53	Bear Creek - source to Wahoo Creek			
C-54	Granite Creek - source to mouth			
C-55	Wahoo Creek - source to mouth			
C-56	Pettibone Creek - source to mouth			
C-57	Cow Creek - source to mouth			
C-58	Dog Creek - source to mouth			

(3-29-12)

04. Lower Selway Subbasin. The Lower Selway Subbasin, HUC 17060302, is comprised of fifty-five (55) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
C-1	Selway River - O'Hara Creek to mouth	COLD SS	PCR	DWS
C-2	Goddard Creek - source to mouth	COLD SS	SCR	
C-3	O'Hara Creek - confluence of West and East Fork O'Hara Creeks to mouth	COLD SS	SCR	
C-4	West Fork O'Hara Creek - source to mouth			
C-5	East Fork O'Hara Creek - source to mouth			
C-6	Selway River - Meadow Creek to O'Hara Creek	COLD SS	PCR	DWS
C-7	Falls Creek - source to mouth	COLD SS	SCR	
C-8	Meadow Creek - Buck Lake Creek to mouth	COLD SS	SCR	
C-9	Horse Creek - source to mouth			
C-10	Fivemile Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
C-11	Little Boulder Creek - source to mouth			
C-12	Meadow Creek - East Fork Meadow Creek to Buck Lake Creek	COLD SS	SCR	
C-13	Butte Creek - source to mouth	COLD SS	SCR	
C-14	Sable Creek - source to mouth	COLD SS	SCR	
C-15	Simmons Creek - source to mouth	COLD SS	SCR	
C-16	Meadow Creek - source to East Fork Meadow Creek			
C-17	Butter Creek - source to mouth			
C-18	Three Prong Creek - source to mouth			
C-19	East Fork Meadow Creek - source to mouth			
C-20	Schwar Creek - source to mouth			
C-21	Buck Lake Creek - source to mouth			
C-22	Selway River - Moose Creek to Meadow Creek	COLD SS	PCR	DWS
C-23	Otter Creek - source to mouth			
C-24	Mink Creek - source to mouth			
C-25	Marten Creek - source to mouth			
C-26	Trout Creek - source to mouth			
C-27	Moose Creek - East Fork Moose Creek to mouth			
C-28	East Fork Moose Creek - Cedar Creek to Moose Creek			
C-29	Freeman Creek - source to mouth			
C-30	Monument Creek - source to mouth			
C-31	Elbow Creek - source to mouth			
C-32	Battle Creek - source to mouth			
C-33	East Fork Moose Creek - source to Cedar Creek			
C-34	Chute Creek - source to mouth			
C-35	Dead Elk Creek - source to mouth			
C-36	Cedar Creek - source to mouth			
C-37	Maple Creek - source to mouth			
C-38	Double Creek - source to mouth			
C-39	Fitting Creek - source to mouth			
C-40	North Fork Moose Creek - Rhoda Creek to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
C-41	North Fork Moose Creek - West Moose Creek to Rhoda Creek			
C-42	North Fork Moose Creek - source to West Fork Moose Creek			
C-43	West Fork Moose Creek - source to mouth			
C-44	Rhoda Creek - Wounded Doe Creek to mouth			
C-45	Wounded Doe Creek - source to mouth			
C-46	Rhoda Creek - source to Wounded Doe Creek			
C-47	Lizard Creek - Lizard Lakes to mouth			
C-48	Meeker Creek - source to mouth			
C-49	Three Links Creek - source to mouth			
C-50	Gedney Creek - West Fork Gedney Creek to mouth			
C-51	Gedney Creek - source to West Fork Gedney Creek			
C-52	West Fork Gedney Creek - source to mouth			
C-53	Glover Creek - source to mouth	COLD SS	SCR	
C-54	Boyd Creek - source to mouth	COLD SS	SCR	
C-55	Rackliff Creek - source to mouth	COLD SS	SCR	

(3-29-12)

05. Lochsa Subbasin. The Lochsa Subbasin, HUC 17060303, is comprised of sixty-five (65) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
C-1	Lochsa River - Deadman Creek to mouth	COLD SS	PCR	DWS
C-2	Kerr Creek - source to mouth			
C-3	Lochsa River - Old Man Creek to Deadman Creek	COLD SS	PCR	DWS
C-4	Coolwater Creek - source to mouth			
C-5	Fire Creek - source to mouth			
C-6	Split Creek - source to mouth			
C-7	Old Man Creek - source to mouth			
C-8	Lochsa River - Fish Creek to Old Man Creek	COLD SS	PCR	DWS

Unit	Waters	Aquatic Life	Recreation	Other
C-9	Lochsa River - Indian Grave Creek to Fish Creek	COLD SS	PCR	DWS
C-10	Boulder Creek - source to mouth			
C-11	Stanley Creek - source to mouth			
C-12	Eagle Mountain Creek - source to mouth			
C-13	Lochsa River- Warm Springs Creek to Indian Grave Creek	COLD SS	PCR	DWS
C-14	Sponge Creek - Fish Lake Creek to mouth			
C-15	Sponge Creek - source to Fish Lake Creek			
C-16	Fish Lake Creek - source to mouth			
C-17	Warm Springs Creek - Wind Lakes Creek to mouth			
C-18	Warm Springs Creek - source to Wind Lakes Creek			
C-19	Wind Lakes Creek - source to mouth			
C-20	Lochsa River - confluence of Crooked Fork, White Sand Creek, and Walton Creek to Warm Springs Creek	COLD SS	PCR	DWS
C-21	Jay Creek - source to mouth			
C-22	Cliff Creek - source to mouth			
C-23	Walton Creek - source to mouth			
C-24	White Sand Creek - Storm Creek to mouth			
C-25	White Sand Creek - source to Storm Creek			
C-26	Colt Creek - source to mouth			
C-27	Big Sand Creek - Hidden Creek to mouth			
C-28	Swamp Creek - source to mouth			
C-29	Big Sand Creek - source to Hidden Creek			
C-30	Hidden Creek - source to mouth			
C-31	Big Flat Creek - source to mouth			
C-32	Storm Creek - source to mouth			
C-33	Beaver Creek - source to mouth			
C-34	Crooked Fork - Brushy Fork to mouth			
C-35	Brushy Fork - Spruce Creek to mouth			
C-36	Spruce Creek - source to mouth			
C-37	Brushy Fork - source to Spruce Creek			
C-38	Crooked Fork - source to Brushy Fork			
C-39	Hopeful Creek - source to mouth			
C-40	Boulder Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
C-41	Papoose Creek - source to mouth			
C-42	Parachute Creek - source to mouth			
C-43	Wendover Creek - source to mouth			
C-44	Badger Creek - source to mouth			
C-45	Squaw Creek - source to mouth			
C-46	West Fork Squaw Creek - source to mouth			
C-47	Doe Creek - source to mouth			
C-48	Postoffice Creek - source to mouth			
C-49	Weir Creek - source to mouth			
C-50	Indian Grave Creek - source to mouth			
C-51	Bald Mountain Creek - source to mouth			
C-52	Fish Creek - Hungery Creek to mouth			
C-53	Willow Creek - source to mouth			
C-54	Hungery Creek - Obia Creek to mouth			
C-55	Obia Creek - source to mouth			
C-56	Hungery Creek - source to Obia Creek			
C-57	Fish Creek - source to Hungery Creek			
C-58	Bimerick Creek - source to mouth			
C-59	Deadman Creek - East Fork Deadman Creek to mouth			
C-60	East Fork Deadman Creek - source to mouth			
C-61	Deadman Creek - source to East Fork Deadman Creek			
C-62	Canyon Creek - source to mouth			
C-63	Pete King Creek - Walde Creek to mouth			
C-64	Walde Creek - source to mouth			
C-65	Pete King Creek - source to Walde Creek			

(3-29-12)

06. Middle Fork Clearwater Subbasin. The Middle Fork Clearwater Subbasin, HUC 17060304, is comprised of eleven (11) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
C-1	Middle Fork Clearwater River - confluence of Lochsa and Selway River to mouth	COLD SS	PCR	DWS
C-2	Clear Creek - South Fork Clear Creek to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
C-3	West Fork Clear Creek - source to mouth			
C-4	South Fork Clear Creek - source to mouth			
C-5	Kay Creek - source to mouth			
C-6	Clear Creek - source to South Fork Clear Creek	COLD SS	SCR	
C-7	Middle Fork Clear Creek - source to mouth			
C-8	Browns Spring Creek - source to mouth	COLD SS	SCR	
C-9	Pine Knob Creek - source to mouth	COLD SS	SCR	
C-10	Lodge Creek - source to mouth	COLD SS	SCR	
C-11	Maggie Creek - source to mouth			

(3-29-12)

07. South Fork Clearwater Subbasin. The South Fork Clearwater Subbasin, HUC 17060305, is comprised of eighty-two (82) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
C-1	South Fork Clearwater River - Butcher Creek to mouth	COLD SS	PCR	
C-2	Cottonwood Creek - Cottonwood Creek waterfall (9.0 miles upstream) to mouth	COLD SS	PCR	
C-3	Cottonwood Creek - source to Cottonwood Creek waterfall (9.0 miles upstream)	COLD SS	PCR	
C-4	Red Rock Creek - Red Rock Creek waterfall (3.6 miles upstream) to mouth			
C-5	Red Rock Creek - source to Red Rock Creek waterfall (3.6 miles upstream)			
C-6	Stockney Creek - source to mouth			
C-7	Shebang Creek - source to mouth			
C-8	South Fork Cottonwood Creek - source to mouth			
C-9	Long Haul Creek - source to mouth			
C-10	Threemile Creek - source to mouth	COLD SS	SCR	
C-11a	Butcher Creek - unnamed tributary (4.5 miles above mouth) in T30N, R03E, Sec. 1 to mouth	COLD SS	SCR	

Unit	Waters	Aquatic Life	Recreation	Other
C-11b	Butcher Creek - source to unnamed tributary (4.5 miles above mouth) in T30N, R03E, Sec. 1	COLD	SCR	
C-12	South Fork Clearwater River - Johns Creek to Butcher Creek	COLD SS	PCR	
C-13	Mill Creek - source to mouth			
C-14	Johns Creek - Gospel Creek to mouth	COLD SS	SCR	
C-15	Gospel Creek - source to mouth	COLD SS	SCR	
C-16	West Fork Gospel Creek - source to mouth	COLD SS	SCR	
C-17	Johns Creek - Moores Creek to Gospel Creek	COLD SS	SCR	
C-18	Johns Creek - source to Moores Creek	COLD SS	SCR	
C-19	Moores Creek - source to mouth	COLD SS	SCR	
C-20	Square Mountain Creek - source to mouth	COLD SS	SCR	
C-21	Hagen Creek - source to mouth	COLD SS	SCR	
C-22	South Fork Clearwater River - Tenmile Creek to Johns Creek	COLD SS	PCR	
C-23	Wing Creek - source to mouth	COLD SS	SCR	
C-24	Twentymile Creek - source to mouth			
C-25	Tenmile Creek - Sixmile Creek to mouth			
C-26	Tenmile Creek - Williams Creek to Sixmile Creek	COLD SS	SCR	
C-27	Tenmile Creek - source to Williams Creek	COLD SS	SCR	
C-28	Williams Creek - source to mouth	COLD SS	SCR	
C-29	Sixmile Creek - source to mouth			
C-30	South Fork Clearwater River - Crooked River to Tenmile Creek	COLD SS	PCR	
C-31	Crooked River - Relief Creek to mouth	COLD SS	SCR	

Unit	Waters	Aquatic Life	Recreation	Other
C-32	Crooked River - confluence of West and East Fork Crooked Rivers to Relief Creek	COLD SS	SCR	
C-33	West Fork Crooked River - source to mouth			
C-34	East Fork Crooked River - source to mouth			
C-35	Relief Creek - source to mouth			
C-36	South Fork Clearwater River - confluence of American River and Red River to Crooked River	COLD SS	PCR	
C-37	Red River- Siegel Creek to mouth	COLD SS	PCR	DWS
C-38	Red River - South Fork Red River to Siegel Creek	COLD SS	PCR	DWS
C-39	Moose Butte Creek - source to mouth			
C-40	South Fork Red River - Trapper Creek to mouth	COLD SS	SCR	
C-41	South Fork Red River - West Fork Red River to Trapper Creek	COLD SS	SCR	
C-42	West Fork Red River - source to mouth	COLD SS	SCR	
C-43	South Fork Red River - source to West Fork Red River	COLD SS	SCR	
C-44	Trapper Creek - source to mouth	COLD SS	SCR	
C-45	Red River - source to South Fork Red River	COLD SS	SCR	DWS
C-46	Soda Creek - source to mouth	COLD SS	SCR	
C-47	Bridge Creek - source to mouth	COLD SS	SCR	
C-48	Otterson Creek - source to mouth	COLD SS	SCR	
C-49	Trail Creek - source to mouth	COLD SS	SCR	
C-50	Siegel Creek - source to mouth	COLD SS	SCR	
C-51	Red Horse Creek - source to mouth			
C-52	American River - East Fork American River to mouth	COLD SS	PCR	DWS
C-53	Kirks Fork - source to mouth			
C-54	East Fork American River - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
C-55	American River - source to East Fork American River	COLD SS	PCR	DWS
C-56	Elk Creek - confluence of Big Elk and Little Elk Creeks to mouth			
C-57	Little Elk Creek - source to mouth	COLD SS	SCR	
C-58	Big Elk Creek - source to mouth	COLD SS	SCR	
C-59	Buffalo Gulch - source to mouth			
C-60	Whiskey Creek - source to mouth	COLD SS	SCR	
C-61	Maurice Creek - source to mouth			
C-62	Newsome Creek - Beaver Creek to mouth			
C-63	Bear Creek - source to mouth			
C-64	Nugget Creek - source to mouth			
C-65	Beaver Creek - source to mouth			
C-66	Newsome Creek - Mule Creek to Beaver Creek			
C-67	Mule Creek - source to mouth	COLD SS	SCR	
C-68	Newsome Creek - source to Mule Creek			
C-69	Haysfork Creek - source to mouth			
C-70	Baldy Creek - source to mouth	COLD SS	SCR	
C-71	Pilot Creek - source to mouth			
C-72	Sawmill Creek - source to mouth			
C-73	Sing Lee Creek - source to mouth			
C-74	West Fork Newsome Creek - source to mouth			
C-75	Leggett Creek - source to mouth			
C-76	Fall Creek - source to mouth			
C-77	Silver Creek - source to mouth	COLD SS	SCR	
C-78	Peasley Creek - source to mouth			
C-79	Cougar Creek - source to mouth			
C-80	Meadow Creek - source to mouth			
C-81	Sally Ann Creek - source to mouth			
C-82	Rabbit Creek - source to mouth			

(3-29-12)

08. Clearwater Subbasin. The Clearwater Subbasin, HUC 17060306, is comprised of sixty-seven (67) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
C-1	Lower Granite Dam pool	COLD	PCR	DWS
C-2	Clearwater River - Potlatch River to Lower Granite Dam pool	COLD SS	PCR	DWS
C-3	Lindsay Creek - source to mouth	COLD	SCR	
C-4	Lapwai Creek - Sweetwater Creek to mouth	COLD	PCR	
C-5	Sweetwater Creek - Webb Creek to mouth			
C-6	Sweetwater Creek - source to Webb Creek			
C-7	Webb Creek - source to mouth			
C-8	Lapwai Creek - Winchester Lake to Sweetwater Creek	COLD	PCR	
C-9	Winchester Lake	COLD	PCR	DWS
C-10	Lapwai Creek - source to Winchester Lake	COLD SS	PCR	DWS
C-11	Mission Creek - source to mouth			
C-12	Tom Beall Creek - source to mouth			
C-13	Clearwater River - North Fork Clearwater River to mouth	COLD SS	PCR	DWS
C-14	Cottonwood Creek - source to mouth	COLD SS	SCR	
C-15	Jacks Creek - source to mouth			
C-16	Big Canyon Creek - source to mouth	COLD SS	PCR	
C-17	Cold Springs Creek - source to mouth			
C-18	Little Canyon Creek - confluence of Holes and Long Hollow Creeks to mouth			
C-19	Holes Creek - source to mouth			
C-20	Long Hollow Creek - source to mouth			
C-21	Clearwater River - Lolo Creek to North Fork Clearwater River	COLD SS	PCR	DWS
C-22	Clearwater River - confluence of South and Middle Fork Clearwater Rivers to Lolo Creek	COLD SS	PCR	DWS
C-23	Sixmile Creek - source to mouth			
C-24	Lawyer Creek - source to mouth	COLD SS	PCR	
C-25	Sevenmile Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
C-26	Lolo Creek - Yakus Creek to mouth			
C-27	Yakus Creek - source to mouth			
C-28	Lolo Creek - source to Yakus Creek			
C-29	Eldorado Creek - source to mouth			
C-30	Yoosa Creek - source to mouth			
C-31	Jim Brown Creek - source to mouth			
C-32	Musselshell Creek - source to mouth			
C-33	Big Creek - source to mouth			
C-34	Jim Ford Creek - Jim Ford Creek waterfall (12.5 miles upstream) to mouth	COLD	PCR	
C-35	Jim Ford Creek - source to Jim Ford Creek waterfall (12.5 miles upstream)	COLD	PCR	
C-36	Grasshopper Creek - source to mouth	COLD	PCR	DWS
C-37	Winter Creek - Winter Creek waterfall (3.4 miles upstream) to mouth			
C-38	Winter Creek - source to Winter Creek waterfall (3.4 miles upstream)			
C-39	Orofino Creek - source to mouth	COLD SS	PCR	
C-40	Whiskey Creek - source to mouth			
C-41	Bedrock Creek - source to mouth			
C-42	Louse Creek - source to mouth			
C-43	Pine Creek - source to mouth			
C-44	Potlatch River - Big Bear Creek to mouth	COLD SS	PCR	DWS
C-45	Potlatch River - Corral Creek to Big Bear Creek	COLD SS	PCR	DWS
C-46	Cedar Creek - source to mouth			
C-47	Boulder Creek - source to mouth			
C-48	Potlatch River - Moose Creek to Corral Creek	COLD SS	PCR	DWS
C-49	Potlatch River - source to Moose Creek	COLD SS	PCR	DWS
C-50	Little Boulder Creek - source to mouth			
C-51	East Fork Potlatch River - source to mouth			
C-52	Ruby Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
C-53	Moose Creek - source to mouth			
C-54	Corral Creek - source to mouth			
C-55	Pine Creek - source to mouth			
C-56	Big Bear Creek - confluence of West and East Fork Big Bear Creeks to mouth			
C-57	East Fork Big Bear Creek - source to mouth			
C-58	West Fork Big Bear Creek - source to mouth			
C-59	Dry Creek - source to mouth			
C-60	Little Bear Creek - source to mouth	COLD SS	SCR	
C-61	West Fork Little Bear Creek - source to mouth			
C-62	Middle Potlatch Creek - source to mouth	COLD	SCR	
C-63	Bethel Canyon - source to mouth			
C-64	Little Potlatch Creek - source to mouth	COLD	SCR	
C-65	Howard Gulch - source to mouth			
C-66	Catholic Creek - source to mouth			
C-67	Hatwai Creek - source to mouth			

(3-29-12)

09. Upper North Fork Clearwater Subbasin. The Upper North Fork Clearwater Subbasin, HUC 17060307, is comprised of forty-nine (49) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
C-1	North Fork Clearwater River - Skull Creek to Aquarius Campground (T40N, R07E, Sec. 05)	COLD SS	PCR	DWS
C-2	North Fork Clearwater River- Washington Creek to Skull Creek	COLD SS	PCR	DWS
C-3	Washington Creek - source to mouth	COLD SS	SCR	
C-4	North Fork Clearwater River - Orogrande Creek to Washington Creek	COLD SS	PCR	DWS
C-5	Orogrande Creek - French Creek to mouth			
C-6	Orogrande Creek - source to French Creek			
C-7	French Creek - source to mouth	COLD	SCR	
C-8	North Fork Clearwater River - Weitas Creek to Orogrande Creek	COLD SS	PCR	DWS

Unit	Waters	Aquatic Life	Recreation	Other
C-9	Weitas Creek - Hemlock Creek to mouth			
C-10	Hemlock Creek - source to mouth			
C-11	Weitas Creek - Windy Creek to Hemlock Creek			
C-12	Middle Creek - source to mouth	COLD SS	SCR	
C-13	Little Weitas Creek - source to mouth	COLD	SCR	
C-14	Weitas Creek - source to Windy Creek	COLD SS	SCR	
C-15	Windy Creek - source to mouth	COLD	SCR	
C-16	North Fork Clearwater River - Kelly Creek to Weitas Creek	COLD SS	PCR	DWS
C-17	Fourth of July Creek - source to mouth			
C-18	Kelly Creek - Cayuse Creek to mouth			
C-19	Cayuse Creek - Gravey Creek to mouth			
C-20	Monroe Creek - source to mouth	COLD SS	SCR	
C-21	Gravey Creek - source to mouth	COLD SS	SCR	
C-22	Cayuse Creek - source to Gravey Creek			
C-23	Toboggan Creek - source to mouth	COLD	SCR	
C-24	Kelly Creek - confluence of North and Middle Fork Kelly Creek to Cayuse Creek			
C-25	South Fork Kelly Creek - source to mouth			
C-26	Middle Fork Kelly Creek - source to mouth			
C-27	North Fork Kelly Creek - source to mouth			
C-28	Moose Creek - Osier Creek to mouth			
C-29	Little Moose Creek - source to mouth			
C-30	Osier Creek - source to mouth	COLD SS	SCR	
C-31	Moose Creek - source to Osier Creek			
C-32	North Fork Clearwater River - Lake Creek to Kelly Creek	COLD SS	PCR	DWS
C-33	Lake Creek - source to mouth	COLD SS	SCR	
C-34	North Fork Clearwater River - Vanderbilt Gulch to Lake Creek	COLD SS	PCR	DWS

Unit	Waters	Aquatic Life	Recreation	Other
C-35	Long Creek - source to mouth	COLD SS	SCR	
C-36	North Fork Clearwater River - source to Vanderbilt Gulch	COLD SS	PCR	DWS
C-37	Vanderbilt Gulch - source to mouth			
C-38	Meadow Creek - source to mouth			
C-39	Elizabeth Creek - source to mouth	COLD SS	SCR	
C-40	Cold Springs Creek - source to mouth	COLD SS	SCR	
C-41	Sprague Creek - source to mouth			
C-42	Larson Creek - source to mouth	COLD	SCR	
C-43	Rock Creek - source to mouth	COLD SS	SCR	
C-44	Quartz Creek - source to mouth			
C-45	Cougar Creek - source to mouth			
C-46	Skull Creek - Collins Creek to mouth	COLD	SCR	
C-47	Skull Creek - source to Collins Creek			
C-48	Collins Creek - source to mouth	COLD SS	SCR	

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10. Lower North Fork Clearwater Subbasin. The Lower North Fork Clearwater Subbasin, HUC 17060308, is comprised of thirty-four (34) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
C-1	North Fork Clearwater River - Dworshak Reservoir Dam to mouth	COLD SS	PCR	DWS
C-2	Dworshak Reservoir	COLD SS	PCR	DWS
C-3	Reeds Creek - Alder Creek to Dworshak Reservoir	COLD SS	PCR	DWS
C-4	Reeds Creek - source to Alder Creek	COLD SS	PCR	DWS
C-5	Alder Creek - source to mouth			
C-6	Silver Creek - source to Dworshak Reservoir			
C-7	Benton Creek - source to Dworshak Reservoir			

Unit	Waters	Aquatic Life	Recreation	Other
C-8	North Fork Clearwater River - Aquarius Campground (T40N, R07E, Sec. 05) to Dworshak Reservoir	COLD SS	PCR	DWS
C-9	Beaver Creek - source to mouth	COLD SS	SCR	
C-10	Isabella Creek - source to mouth			
C-11	Little North Fork Clearwater River - Foehl Creek to Dworshak Reservoir			
C-12	Little North Fork Clearwater River - Spotted Louis Creek to Foehl Creek			
C-13	Sawtooth Creek - source to mouth			
C-14	Canyon Creek - source to mouth			
C-15	Spotted Louis Creek - source to mouth			
C-16	Little North Fork Clearwater River - Rutledge Creek to Spotted Louis Creek			
C-17	Rutledge Creek - source to mouth			
C-18	Little North Fork Clearwater River - source to Rutledge Creek			
C-19	Foehl Creek - source to mouth			
C-20	Stoney Creek - Glover Creek to Dworshak Reservoir			
C-21	Floodwood Creek - source to mouth			
C-22	Glover Creek - source to mouth			
C-23	Stoney Creek - source to Glover Creek	COLD SS	SCR	
C-24	Isabella Creek - source to mouth			
C-25	Breakfast Creek - source to mouth			
C-26	Gold Creek - source to Dworshak Reservoir			
C-27	Weitas Creek - source to Dworshak Reservoir			
C-28	Swamp Creek - source to Dworshak Reservoir			
C-29	Cranberry Creek - source to Dworshak Reservoir			
C-30	Elk Creek - source to Dworshak Reservoir	COLD SS	PCR	DWS
C-31	Bull Run Creek - confluence of Squaw and Shattuck Creeks to mouth			
C-32	Shattuck Creek - source to mouth			
C-33	Squaw Creek - source to mouth			
C-34	Long Meadow Creek - source to Dworshak Reservoir			
C-35	Dicks Creek - source to Dworshak Reservoir			

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121. -- 129. (RESERVED)

130. SALMON BASIN.

Surface waters found within the Salmon basin total twelve (12) subbasins and are designated as follows: (4-5-00)

01. Hells Canyon Subbasin. The Hells Canyon Subbasin, HUC 17060101, is comprised of twenty-eight (28) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
S-1	Snake River - Wolf Creek to Salmon River	COLD SS	PCR	DWS
S-2	Snake River - Sheep Creek to Wolf Creek	COLD SS	PCR	DWS
S-3	Snake River - Hells Canyon Dam to Sheep Creek	COLD SS	PCR	DWS
S-4	Deep Creek - source to mouth			
S-5	Brush Creek - source to mouth			
S-6	Granite Creek - source to mouth			
S-7	Little Granite Creek - source to mouth			
S-8	Bernard Creek - source to mouth			
S-9	Sheep Creek - confluence of West and East Fork Sheep Creeks to mouth			
S-10	West Fork Sheep Creek - source to mouth			
S-11	East Fork Sheep Creek - source to mouth			
S-12	Clarks Fork - source to mouth			
S-13	Caribou Creek - source to mouth			
S-14	Kirkwood Creek - source to mouth			
S-15	Kirby Creek - source to mouth			
S-16	Corral Creek - source to mouth			
S-17	Klopton Creek - source to mouth			
S-18	Kurry Creek - source to mouth			
S-19	West Creek - source to mouth			
S-20	Big Canyon Creek - source to mouth			
S-21	Jones Creek - source to mouth			
S-22	Highrange Creek - source to mouth			
S-23	Getta Creek - source to mouth			
S-24	Wolf Creek - Basin Creek to mouth			
S-25	Wolf Creek - source to Basin Creek			

Unit	Waters	Aquatic Life	Recreation	Other
S-26	Basin Creek - source to mouth			
S-27	Dry Creek - source to mouth			
S-28	Divide Creek - source to mouth			

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02. Lower Snake-Asotin Subbasin. The Lower Snake-Asotin Subbasin, HUC 17060103, is comprised of sixteen (16) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
S-1	Snake River - Asotin River (Idaho/Oregon border) to Lower Granite Dam pool	COLD	PCR	DWS
S-2	Snake River - Captain John Creek to Asotin River (Idaho/Oregon border)	COLD	PCR	DWS
S-3	Snake River - Cottonwood Creek to Captain John Creek	COLD	PCR	DWS
S-4	Snake River - Salmon River to Cottonwood Creek	COLD	PCR	DWS
S-5	Cottonwood Creek - source to mouth			
S-6	Cave Gulch - source to mouth	COLD	SCR	
S-7	Corral Creek - source to mouth			
S-8	Middle Creek - source to mouth	COLD	SCR	
S-9	Dough Creek - source to mouth	COLD	SCR	
S-10	Billy Creek - source to mouth			
S-11	Captain John Creek - source to mouth			
S-12	Redbird Creek - source to mouth	COLD	SCR	
S-13	Tenmile Canyon - source to mouth	COLD	SCR	
S-14	Tammany Creek - Unnamed Tributary (T34N, R05W, Sec. 24) to mouth	COLD	SCR	
S-15	Unnamed Tributary - source to mouth (T34N, R05W, Sec. 24)	COLD	SCR	
S-16	Tammany Creek - source to Unnamed Tributary (T34N, R05W, Sec. 24)	COLD	SCR	

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03. Upper Salmon Subbasin. The Upper Salmon Subbasin, HUC 17060201, is comprised of one hundred thirty-two (132) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
S-1	Salmon River - Pennal Gulch to Pashsimeroi River	COLD SS	PCR	DWS
S-2	Morgan Creek - West Creek to mouth			
S-3	Morgan Creek - source to West Creek			
S-4	West Creek - Blowfly Creek to mouth			
S-5	Blowfly Creek - source to mouth			
S-6	West Creek - source to Blowfly Creek			
S-7	Challis Creek - Darling Creek to mouth			
S-8	Darling Creek - source to mouth			
S-9	Challis Creek - Bear Creek to Darling Creek			
S-10	Eddy Creek - source to mouth			
S-11	Bear Creek - source to mouth			
S-12	Challis Creek - source to Bear Creek			
S-13	Mill Creek - source to mouth			
S-14	Salmon River - Garden Creek to Pennal Gulch	COLD SS	PCR	DWS
S-15	Garden Creek - source to mouth			
S-16	Salmon River - East Fork Salmon River to Garden Creek	COLD SS	PCR	DWS
S-17	Bayhorse Creek - source to mouth			
S-18	Lyon Creek - source to mouth			
S-19	Salmon River - Squaw Creek to East Fork Salmon River	COLD SS	PCR	DWS
S-20	Kinnikinic Creek - source to mouth			
S-21	Squaw Creek - Cash Creek to mouth	COLD SS	SCR	
S-22	Cash Creek - source to mouth			
S-23	Squaw Creek - confluence of Aspen and Cinnabar Creeks to Cash Creek	COLD SS	SCR	
S-24	Aspen Creek - source to mouth			
S-25	Cinnabar Creek - source to mouth			
S-26	Bruno Creek - source to mouth			
S-27	Salmon River - Thompson Creek to Squaw Creek	COLD SS	PCR	DWS

Unit	Waters	Aquatic Life	Recreation	Other
S-28	Thompson Creek - source to mouth	COLD SS	SCR	
S-29	Pat Hughes Creek -source to mouth			
S-30	Buckskin Creek - source to mouth			
S-31	Salmon River - Yankee Fork Creek to Thompson Creek	COLD SS	PCR	DWS
S-32	Yankee Fork Creek - Jordan Creek to mouth	COLD SS	PCR	DWS
S-33	Ramey Creek - source to mouth			
S-34	Yankee Fork Creek - source to Jordan Creek	COLD SS	PCR	DWS
S-35	Fivemile Creek - source to mouth			
S-36	Elevenmile Creek - source to mouth			
S-37	McKay Creek - source to mouth			
S-38	Twentymile Creek - source to mouth			
S-39	Tenmile Creek - source to mouth			
S-40	Eightmile Creek - source to mouth			
S-41	Jordan Creek - from and including Unnamed Tributary (T13N, R15E, Sec. 29) to mouth			
S-42	Jordan Creek - source to Unnamed Tributary (T13N, R15E, Sec. 29)			
S-43	West Fork Yankee Fork Creek - Lightning Creek to mouth			
S-44	Lightning Creek - source to mouth			
S-45	West Fork Yankee Fork Creek - source to Lightning Creek			
S-46	Cabin Creek - source to mouth			
S-47	Salmon River - Valley Creek to Yankee Fork Creek	COLD SS	PCR	DWS
S-48	Basin Creek - East Basin Creek to mouth			
S-49	East Basin Creek - source to mouth			
S-50	Basin Creek - source to East Basin Creek			
S-51	Valley Creek - Trap Creek to mouth			
S-52	Stanley Creek - source to mouth			
S-53	Valley Creek - source to Trap Creek			
S-54	Trap Creek - Meadow Creek to mouth			
S-55	Trap Creek - source to Meadow Creek			
S-56	Meadow Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
S-57	Elk Creek - source to mouth			
S-58	Stanley Creek - source to mouth			
S-59	Crooked Creek - source to mouth			
S-60	Iron Creek - source to mouth			
S-61	Goat Creek - source to mouth			
S-62	Meadow Creek - source to mouth			
S-63	Salmon River - Redfish Lake Creek to Valley Creek	COLD SS	PCR	DWS
S-64	Redfish Lake Creek - Redfish Lake to mouth			
S-65	Fishhook Creek - source to mouth			
S-66	Redfish Lake			
S-67	Redfish Lake Creek - source to Redfish Lake			
S-68	Salmon River - Unnamed Tributary (T19N, R13E, Sec. 25) to Redfish Lake Creek	COLD SS	PCR	DWS
S-69	Decker Creek - Huckleberry Creek to mouth			
S-70	Decker Creek - source to Huckleberry Creek			
S-71	Huckleberry Creek - source to mouth			
S-72	Salmon River - Fisher Creek to Decker Creek	COLD SS	PCR	DWS
S-73	Salmon River - Alturas Lake Creek to Fisher Creek	COLD SS	PCR	DWS
S-74	Hell Roaring Creek - source to mouth			
S-75	Alturas Lake Creek - Alturas Lake to mouth			
S-76	Toxaway/Farley Lake - source to mouth			
S-77	Pettit Lake			
S-78	Alturas Lake			
S-79	Alturas Lake Creek - source to Alturas Lake			
S-80	Alpine Creek - source to mouth			
S-81	Salmon River - source to Alturas Lake Creek	COLD SS	PCR	DWS
S-82	Beaver Creek - source to mouth			
S-83	Smiley Creek - source to mouth			
S-84	Frenchman Creek - source to mouth			
S-85	Pole Creek - source to mouth			
S-86	Champion Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
S-87	Fourth of July Creek - source to mouth			
S-88	Fisher Creek - source to mouth			
S-89	Williams Creek - source to mouth			
S-90	Gold Creek - source to mouth			
S-91	Little Casino Creek - source to mouth			
S-92	Big Casino Creek - source to mouth			
S-93	Rough Creek - source to mouth			
S-94	Warm Springs Creek - Swimm Creek to mouth			
S-95	Warm Springs Creek - Pigtail Creek to Swimm Creek			
S-96	Pigtail Creek - source to mouth			
S-97	Warm Springs Creek - source to Pigtail Creek			
S-98	Swimm Creek - source to mouth			
S-99	Slate Creek - source to mouth			
S-100	Holman Creek - source to mouth			
S-101	Sullivan Creek - source to mouth			
S-102	East Fork Salmon River - Herd Creek to mouth	COLD SS	PCR	DWS
S-103	East Fork Salmon River - Germania Creek to Herd Creek	COLD SS	PCR	DWS
S-104	Big Lake Creek - source to mouth			
S-105	Big Boulder Creek - source to mouth			
S-106	Little Boulder Creek - source to mouth			
S-107	Germania Creek - Chamberlain Creek to mouth			
S-108	Chamberlain Creek - source to mouth			
S-109	Germania Creek - source to Chamberlain Creek			
S-110	East Fork Salmon River - confluence of South and West Fork Salmon Rivers to Germania	COLD SS	PCR	DWS
S-111	West Fork East Fork Salmon River - source to mouth			
S-112	South Fork East Fork Salmon River - source to mouth			
S-113	Ibex Creek - source to mouth			
S-114	West Pass Creek - source to mouth			
S-115	Bowery Creek - source to mouth			
S-116	Pine Creek - source to mouth			
S-117	McDonald Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
S-118	Herd Creek - confluence of West Fork Herd Creek and East Pass Creek to mouth			
S-119	East Pass Creek - source to mouth			
S-120	Taylor Creek - source to mouth			
S-121	West Fork Herd Creek - source to mouth			
S-122	East Fork Herd Creek - source to mouth			
S-123	Lake Creek - source to mouth			
S-124	Road Creek - Corral Basin Creek to mouth			
S-125	Road Creek - source to Corral Basin Creek			
S-126	Mosquito Creek - source to mouth			
S-127	Corral Basin Creek - source to mouth			
S-128	Horse Basin Creek - source to mouth			
S-129	Spar Canyon Creek - source to mouth			
S-130	Bradshaw Gulch - source to mouth			
S-131	Warm Spring Creek - Hole-in-Rock Creek to mouth			
S-132	Warm Spring Creek - source to Hole-in-Rock Creek			
S-133	Broken Wagon Creek - source to mouth			
S-134	Hole-in-Rock Creek - source to mouth			
S-135	Pennal Gulch - source to mouth			

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04. Pahsimeroi Subbasin. The Pahsimeroi Subbasin, HUC 17060202, is comprised of thirty-nine (39) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
S-1	Pahsimeroi River - Patterson Creek to mouth	COLD SS	PCR	DWS
S-2	Pahsimeroi River - Meadow Creek to Patterson Creek	COLD SS	PCR	DWS
S-3	Lawson Creek - confluence of North and South Fork Lawson Creeks to mouth			
S-4	North Fork Lawson Creek - source to mouth			
S-5	South Fork Lawson Creek - source to mouth			
S-6	Meadow Creek - source to mouth			
S-7	Pahsimeroi River - Furley Road (T15S, R22E) to Meadow Creek	COLD SS	PCR	DWS

Unit	Waters	Aquatic Life	Recreation	Other
S-8	Pahsimeroi River - Big Creek to Furley Road (T15S, R22E)	COLD SS	PCR	DWS
S-9	Grouse Creek - source to mouth			
S-10	Pahsimeroi River - Goldberg Creek to Big Creek	COLD SS	PCR	DWS
S-11	Pahsimeroi River - Unnamed Tributary (T12N, R23E, Sec. 22) to Goldberg Creek	COLD SS	PCR	DWS
S-12	Unnamed Tributary - source to mouth (T12N, R23E, Sec. 22)			
S-13	Doublespring Creek - Christian Gulch to mouth			
S-14	Christian Gulch - source to mouth			
S-15	Doublespring Creek - source to Christian Gulch			
S-16	Mud Spring Canyon Complex			
S-17	Pahsimeroi River - Burnt Creek to Unnamed Tributary (T12N, R23E, Sec. 22)	COLD SS	PCR	DWS
S-18	Pahsimeroi River - Mahogany Creek to Burnt Creek	COLD SS	PCR	DWS
S-19	Mahogany Creek - source to mouth			
S-20	Pahsimeroi River - confluence of Rock Creek and East Fork Pahsimeroi River to Mahogany Creek	COLD SS	PCR	DWS
S-21	Rock Creek - source to mouth			
S-22	East Fork Pahsimeroi River - source to mouth			
S-23	Burnt Creek - Long Creek to mouth			
S-24	Burnt Creek - source to Long Creek			
S-25	Long Creek - Short Creek to mouth			
S-26	Short Creek - source to mouth			
S-27	Long Creek - source to Short Creek			
S-28	Goldburg Creek - Donkey Creek to mouth			
S-29	Donkey Creek -source to mouth			
S-30	Goldburg Creek - source to Donkey Creek			
S-31	Big Creek - confluence of North and South Fork Big Creeks to mouth			
S-32	South Fork Big Creek - source to mouth			
S-33	North Fork Big Creek - source to mouth			
S-34	Patterson Creek - Inyo Creek to mouth			
S-35	Patterson Creek - source to and including Inyo Creek			
S-36	Falls Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
S-37	Morse Creek - Irrigation junction to mouth			
S-38	Morse Creek - source to Irrigation junction (T15S, R23E)			
S-39	Morgan Creek - source to mouth			

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05. Middle Salmon-Panther Subbasin. The Middle Salmon-Panther Subbasin, HUC 17060203, is comprised of eighty-eight (88) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
S-1	Salmon River - Panther Creek to Middle Fork Salmon River	COLD SS	PCR	DWS
S-2	Panther Creek - Big Deer Creek to mouth	COLD SS	SCR	
S-3	Garden Creek - source to mouth			
S-4	Clear Creek - source to mouth			
S-5	Big Deer Creek - South Fork Big Deer Creek to mouth			
S-6	Big Deer Creek - source to South Fork Big Deer Creek			
S-7	South Fork Big Deer Creek - Bucktail Creek to mouth			
S-8	South Fork Big Deer Creek -source to Bucktail Creek			
S-9	Bucktail Creek - source to mouth	NONE	NONE	
S-10	Panther Creek - Napias Creek to Big Deer Creek	COLD SS	SCR	
S-11	Panther Creek - Blackbird Creek to Napias Creek	COLD SS	SCR	
S-12a	Blackbird Creek - source to Blackbird Reservoir Dam	COLD SS	SCR	
S-12b	Blackbird Creek - Blackbird Reservoir Dam to mouth	NONE	SCR	
S-13a	West Fork Blackbird Creek - source to concrete channel	COLD SS	SCR	
S-13b	West Fork Blackbird Creek - concrete channel to mouth only	NONE	SCR	
S-14	Panther Creek - Porphyry Creek to Blackbird Creek	COLD SS	PCR	DWS
S-15	Musgrove Creek - source to mouth			
S-16	Porphyry Creek - source to mouth			
S-17	Panther Creek - source to Porphyry Creek	COLD SS	PCR	DWS
S-18	Moyer Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
S-19	Woodtick Creek - source to mouth			
S-20	Deep Creek - Little Deep Creek to mouth			
S-21	Little Deep Creek - source to mouth			
S-22	Deep Creek - source to Little Deep Creek			
S-23	Napias Creek - Moccasin Creek to mouth			
S-24	Napias Creek - Arnett Creek to and including Moccasin Creek			
S-25	Napias Creek - source to Arnett Creek			
S-26	Arnett Creek - source to mouth			
S-27	Trail Creek - source to mouth			
S-28	Beaver Creek - source to mouth			
S-29	Salmon River - Indian Creek to Panther Creek	COLD SS	PCR	DWS
S-30	Pine Creek - source to mouth			
S-31	East Boulder Creek - source to mouth			
S-32	Salmon River - North Fork Sheep Creek to Indian Creek	COLD SS	PCR	DWS
S-33	Moose Creek - Little Moose Creek to mouth			
S-34	Little Moose Creek - source to mouth			
S-35	Moose Creek - Dolly Creek to Little Moose Creek			
S-36	Moose Creek - source to Dolly Creek			
S-37	Dolly Creek - source to mouth			
S-38	Dump Creek - Moose Creek to mouth			
S-39	Salmon River - Carmen Creek to North Fork Salmon River	COLD SS	PCR	DWS
S-40	Wallace Creek - source to mouth			
S-41	Salmon River - Pollard Creek to Carmen Creek	COLD SS	PCR	DWS
S-42	Salmon River - Williams Creek to Pollard Creek	COLD SS	PCR	DWS
S-43	Williams Creek - confluence of North and South Fork Williams Creek to mouth			
S-44	North Fork Williams Creek - source to mouth			
S-45	South Fork Williams Creek - source to mouth			
S-46	Salmon River - Twelvemile Creek to Williams Creek	COLD SS	PCR	DWS

Unit	Waters	Aquatic Life	Recreation	Other
S-47	Salmon River - Iron Creek to Twelvemile Creek	COLD SS	PCR	DWS
S-48	Iron Creek - North Fork Iron Creek to mouth			
S-49	North Fork Iron Creek - source to mouth			
S-50	Iron Creek - source to North Fork Iron Creek			
S-51	West Fork Iron Creek - source to mouth			
S-52	South Fork Iron Creek - source to mouth			
S-53	Salmon River - Pahsimeroi River to Iron Creek	COLD SS	PCR	DWS
S-54	Hot Creek - source to mouth			
S-55	Cow Creek - source to mouth			
S-56	Allison Creek - source to mouth			
S-57	McKim Creek - source to mouth			
S-58	Poison Creek - source to mouth			
S-59	Warm Springs Creek - source to mouth			
S-60	Twelvemile Creek - source to mouth			
S-61	Carmen Creek - Freeman Creek to mouth			
S-62	Freeman Creek - source to mouth			
S-63	Carmen Creek - source to Freeman Creek			
S-64	Tower Creek - source to mouth			
S-65	Fourth of July Creek - Little Fourth of July Creek to mouth			
S-66	Fourth of July Creek - source to Little Fourth of July Creek			
S-67	Little Fourth of July Creek - source to mouth			
S-68	North Fork Salmon River - Hughes Creek to mouth	COLD SS	PCR	DWS
S-69	Big Silverlead Creek - source to mouth			
S-70	North Fork Salmon River - Sheep Creek to Hughes Creek	COLD SS	PCR	DWS
S-71	Sheep Creek - source to mouth			
S-72	North Fork Salmon River - Dahlonaga Creek to Sheep Creek	COLD SS	PCR	DWS
S-73	Dahlonaga Creek - Nez Perce Creek to mouth			
S-74	Dahlonaga Creek - source to Nez Perce Creek			
S-75	Nez Perce Creek - source to mouth			
S-76	Anderson Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
S-77	North Fork Salmon River - Twin Creek to Dahlonge Creek	COLD SS	PCR	DWS
S-78	North Fork Salmon River - source to Twin Creek	COLD SS	PCR	DWS
S-79	Pierce Creek - source to mouth			
S-80	Twin Creek - source to mouth			
S-81	Hughes Creek - source to mouth			
S-82	Hull Creek - source to mouth			
S-83	Indian Creek - source to mouth			
S-84	Squaw Creek - source to mouth			
S-85	Spring Creek - source to mouth			
S-86	Boulder Creek - source to mouth			
S-87	Owl Creek - East Fork Owl Creek to mouth			
S-88	East Fork Owl Creek - source to mouth			
S-89	Owl Creek - source to East Fork Owl Creek			
S-90	Colson Creek - source to mouth			

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06. Lemhi Subbasin. The Lemhi Subbasin, HUC 17060204, is comprised of sixty-six (66) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
S-1	Lemhi River - Kenney Creek to mouth	COLD SS	PCR	DWS
S-2	Mulkey Creek - source to mouth			
S-3a	Withington Creek - diversion (T20N, R23E, Sec. 09) to mouth			
S-3b	Withington Creek - source to diversion (T20N, R23E, Sec. 09)	COLD SS	SCR	
S-4	Haynes Creek - source to mouth			
S-5	Lemhi River - Hayden Creek to Kenney Creek	COLD SS	PCR	DWS
S-6	Baldy Creek - source to mouth			
S-7a	McDevitt Creek - diversion (T19N, R23E, Sec. 36) to mouth			
S-7b	McDevitt Creek - source to diversion (T19N, R23E, Sec. 36)	COLD SS	SCR	
S-8	Muddy Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
S-9	Hayden Creek - Basin Creek to mouth	COLD SS	SCR	
S-10	Basin Creek - Lake Creek to mouth	COLD SS	SCR	
S-11	Basin Creek - confluence of McNutt Creek and Trail Creek to Lake Creek	COLD SS	SCR	
S-12	Trail Creek - source mouth			
S-13	McNutt Creek - source to mouth			
S-14	Lake Creek - source to mouth			
S-15	Hayden Creek - Bear Valley Creek to Basin Creek	COLD SS	SCR	
S-16	Bear Valley Creek -Wright Creek to mouth	COLD SS	SCR	
S-17	Bear Valley Creek - source to Wright Creek	COLD SS	SCR	
S-18	Wright Creek - source to mouth			
S-19	Kadletz Creek - source to mouth			
S-20	Hayden Creek -West Fork Hayden Creek to Bear Valley Creek	COLD SS	SCR	
S-21	Hayden Creek - source to West Fork Hayden Creek	COLD SS	SCR	
S-22	West Fork Hayden Creek - source to mouth			
S-23	East Fork Hayden Creek - source to mouth	COLD SS	SCR	
S-24	Lemhi River - Peterson Creek to Hayden Creek	COLD SS	PCR	DWS
S-25	Lemhi River - confluence of Big and Little Eightmile Creeks to Peterson Creek	COLD SS	PCR	DWS
S-26a	Mill Creek - diversion (T16N, R24E, Sec. 22) to mouth			
S-26b	Mill Creek - source to diversion (T16N, R24E, Sec. 22)	COLD SS	SCR	
S-27	Walter Creek - source to mouth			
S-28	Lee Creek - source to mouth			
S-29a	Big Eightmile Creek - diversion (T16N, R25E, Sec. 21) to mouth			
S-29b	Big Eightmile Creek - source to diversion (T16N, R25E, Sec. 21)	COLD SS	SCR	
S-30	Lemhi River - confluence of Eighteenmile Creek and Texas Creek to the confluence of Big and Little Eightmile Creeks	COLD SS	PCR	DWS

Unit	Waters	Aquatic Life	Recreation	Other
S-31	Big Timber Creek - Little Timber Creek to mouth			
S-32a	Little Timber Creek - diversion (T15N, R25E, Sec. 24) to mouth			
S-32b	Little Timber Creek - source to diversion (T15N, R25E, Sec. 24)	COLD SS	SCR	
S-33	Big Timber Creek - Rocky Creek to Little Timber Creek	COLD SS	SCR	
S-34	Rocky Creek - source to mouth			
S-35	Big Timber Creek - source to Rocky Creek	COLD SS	SCR	
S-36	Texas Creek - Deer Creek to mouth			
S-37	Deer Creek - source to mouth			
S-38	Texas Creek - Meadow Creek to Deer Creek			
S-39	Meadow Lake Creek - source to mouth			
S-40	Texas Creek - source to Meadow Lake Creek			
S-41	Eighteenmile Creek - Hawley Creek to mouth			
S-42	Eighteenmile Creek - Clear Creek to Hawley Creek			
S-43	Eighteenmile Creek - Divide Creek to Hawley Creek	COLD	SCR	
S-44	Divide Creek - source to mouth			
S-45	Eighteenmile Creek - source to Divide Creek	COLD SS	SCR	
S-46	Clear Creek - source to mouth			
S-47	Tenmile Creek - Powderhorn Gulch to mouth			
S-48	Tenmile Creek - source to Powderhorn Gulch			
S-49	Powderhorn Gulch - source to mouth			
S-50a	Hawley Creek - diversion (T15N, R27E, Sec. 03) to mouth			
S-50b	Hawley Creek - source to diversion (T15N, R27E, Sec. 03)			
S-51a	Canyon Creek - diversion (T16N, R26E, Sec.22) to mouth			
S-51b	Canyon Creek - source to diversion (T16N, R26E, Sec.22)	COLD SS	SCR	
S-52a	Little Eightmile Creek - diversion (T16N, R25E, Sec. 02) to mouth			
S-52b	Little Eightmile Creek - source to diversion (T16N, R25E, Sec. 02)	COLD SS	SCR	
S-53	Peterson Creek - source to mouth			
S-54	Reese Creek - source to mouth			
S-55a	Yearian Creek - diversion (T17N, R24E, Sec. 03) to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
S-55b	Yearian Creek - source to diversion (T17N, R24E, Sec. 03)	COLD SS	SCR	
S-56a	Agency Creek - diversion (T19N, R24E, Sec. 28) to mouth			
S-56b	Agency Creek - Cow Creek to diversion (T19N, R24E, Sec. 28)	COLD SS	SCR	
S-57	Cow Creek - source to mouth	COLD SS	SCR	
S-58	Agency Creek - source to Cow Creek	COLD SS	SCR	
S-59a	Pattee Creek - diversion (T19N, R24E, Sec. 16) to mouth			
S-59b	Pattee Creek - source to diversion (T19N, R24E, Sec. 16)	COLD SS	SCR	
S-60a	Pratt Creek - diversion (T20N, R23E, Sec. 11) to mouth			
S-60b	Pratt Creek - source to diversion (T20N, R23E, Sec. 11)	COLD SS	SCR	
S-61	Kenney Creek - source to mouth	COLD SS	SCR	
S-62a	Sandy Creek - diversion (T20N, R24E, Sec. 17) to mouth			
S-62b	Sandy Creek - source to diversion (T20N, R24E, Sec. 17)	COLD SS	SCR	
S-63	Wimpey Creek - source to mouth	COLD SS	SCR	
S-64a	Bohannon Creek - diversion (T21N, R23E, Sec. 22) to mouth			
S-64b	Bohannon Creek - source to diversion (T21N, R23E, Sec. 22)	COLD SS	SCR	
S-65a	Geertson Creek - diversion (T21N, R23E, Sec. 20) to mouth			
S-65b	Geertson Creek - source to diversion (T21N, R23E, Sec. 20)	COLD SS	SCR	
S-66a	Kirtley Creek - diversion (T21N, R22E, Sec. 02) to mouth			
S-66b	Kirtley Creek - source to diversion (T21N, R22E, Sec. 02)	COLD SS	SCR	

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07. Upper Middle Fork Salmon Subbasin. The Upper Middle Fork Salmon Subbasin, HUC 17060205, is comprised of seventy (70) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
S-1	Middle Fork Salmon River - confluence of Bear Valley Creek and Marsh Creek to Loon Creek	COLD SS	PCR	DWS
S-2	Marble Creek - source to mouth			
S-3	Trail Creek - source to mouth			
S-4	Big Cottonwood Creek - source to mouth			
S-5	Dynamite Creek - source to mouth			
S-6	Indian Creek - source to mouth			
S-7	Pistol Creek - source to mouth			
S-8	Elkhorn Creek - source to mouth			
S-9	Sulphur Creek - source to mouth			
S-10	Boundary Creek - source to mouth			
S-11	Dagger Creek - source to mouth			
S-12	Bear Valley Creek - source to mouth			
S-13	Elk Creek - source to mouth			
S-14	Sheep Trail Creek - source to mouth			
S-15	Cub Creek - source to mouth			
S-16	Cache Creek - source to mouth			
S-17	Fir Creek - source to mouth			
S-18	Marsh Creek - Beaver Creek to mouth			
S-19	Marsh Creek - Knapp Creek to Beaver Creek			
S-20	Cape Horn Creek - Banner Creek to mouth			
S-21	Cape Horn Creek - source to Banner Creek			
S-22	Banner Creek - source to mouth			
S-23	Swamp Creek - source to mouth			
S-24	Marsh Creek - source to Knapp Creek			
S-25	Knapp Creek - source to mouth			
S-26	Asher Creek - source to mouth			
S-27	Unnamed Tributary - source to mouth (T12N, R11E, Sec. 11)			
S-28	Beaver Creek - Bear Creek to mouth			
S-29	Beaver Creek - Winnemucca Creek to Bear Creek			
S-30	Winnemucca Creek - source to mouth			
S-31	Beaver Creek - source to Winnemucca Creek			
S-32	Bear Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
S-33	Soldier Creek - source to mouth			
S-34	Greyhound Creek - source to mouth			
S-35	Rapid River - Bell Creek to mouth			
S-36	Bell Creek - source to mouth			
S-37	Rapid River - Lucinda Creek to Bell Creek			
S-38	Rapid River - Float Creek to Lucinda Creek			
S-39	Float Creek - source to mouth			
S-40	Rapid River - Vanity Creek to Float Creek			
S-41	Vanity Creek - source to mouth			
S-42	Rapid River - source to Vanity Creek			
S-43	Lucinda Creek - source to mouth			
S-44	Sheep Creek - confluence of North and South Fork Sheep Creek to mouth			
S-45	South Fork Sheep Creek - source to mouth			
S-46	North Fork Sheep Creek - source to mouth			
S-47	Little Loon Creek - source to mouth			
S-48	Loon Creek - Cabin Creek to mouth			
S-49	Loon Creek - Warm Springs Creek to Cabin Creek			
S-50	Loon Creek - Cottonwood Creek to Warm Springs Creek			
S-51	Loon Creek - Shell Creek to Cottonwood Creek			
S-52	Shell Creek - source to mouth			
S-53	Loon Creek - Grouse Creek to Shell Creek			
S-54	Grouse Creek - source to mouth			
S-55	Loon Creek - Canyon Creek to Grouse Creek			
S-56	Canyon Creek - source to mouth			
S-57	Loon Creek - Pioneer Creek to Canyon Creek			
S-58	Trail Creek - source to mouth			
S-59	Loon Creek - source to Pioneer Creek			
S-60	Pioneer Creek - source to mouth			
S-61	No Name Creek - source to mouth			
S-62	Mayfield Creek - confluence of East and West Fork Mayfield Creek to mouth			
S-63	West Fork Mayfield Creek - source to mouth			
S-64	East Fork Mayfield Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
S-65	Cottonwood Creek - source to mouth			
S-66	South Fork Cottonwood Creek - source to mouth			
S-67	Warm Springs Creek - Trapper Creek to mouth			
S-68	Trapper Creek - source to mouth			
S-69	Warm Springs Creek - source to Trapper Creek			
S-70	Cabin Creek - source to mouth			

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08. Lower Middle Fork Salmon Subbasin. The Lower Middle Fork Salmon Subbasin, HUC 17060206, is comprised of fifty (50) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
S-1	Middle Fork Salmon River - Loon Creek to mouth	COLD SS	PCR	DWS
S-2	Papoose Creek - source to mouth			
S-3	Big Creek - source to mouth	COLD SS	PCR	DWS
S-4	Cabin Creek - source to mouth			
S-5	Cave Creek - source to mouth			
S-6	Crooked Creek - source to mouth			
S-7	Big Ramey Creek - source to mouth			
S-8	Beaver Creek - source to mouth			
S-9	Smith Creek - source to mouth			
S-10	Logan Creek - source to mouth			
S-11	Little Marble Creek - source to mouth			
S-12	Monumental Creek - source to mouth	COLD SS	PCR	DWS
S-13	Snowslide Creek - source to mouth			
S-14	West Fork Monumental Creek - source to mouth			
S-15	Rush Creek - source to mouth			
S-16	Two Point Creek - source to mouth			
S-17	Soldier Creek - source to mouth			
S-18	Brush Creek - source to mouth			
S-19	Sheep Creek - source to mouth			
S-20	Camas Creek - Yellowjacket Creek to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
S-21	Camas Creek - Forge Creek to Yellowjacket Creek			
S-22	Camas Creek - Duck Creek to Forge Creek			
S-23	Camas Creek - Silver Creek to Duck Creek			
S-24	West Fork Camas Creek - source to mouth			
S-25	Camas Creek - Castle Creek to Silver Creek			
S-26	Camas Creek - Furnance Creek to Castle Creek			
S-27	Camas Creek - White Goat Creek to Furnance Creek			
S-28	Camas Creek - South Fork Camas Creek to White Goat Creek			
S-29	South Fork Camas Creek - source to mouth			
S-30	Camas Creek - source to South Fork Camas Creek			
S-31	White Goat Creek - source to mouth			
S-32	Furnace Creek - source to mouth			
S-33	Castle Creek - source to mouth			
S-34	Silver Creek - source to mouth			
S-35	Duck Creek - source to mouth			
S-36	Forge Creek - source to mouth			
S-37	Yellowjacket Creek - Jenny Creek to mouth			
S-38	Yellowjacket Creek - Hoodoo Creek to Jenny Creek			
S-39	Yellowjacket Creek - Little Jacket Creek to Hoodoo Creek			
S-40	Little Jacket Creek - source to mouth			
S-41	Yellowjacket Creek - Trail Creek to Little Jacket Creek			
S-42	Trail Creek - source to mouth			
S-43	Yellowjacket Creek - source to Trail Creek			
S-44	Hoodoo Creek - source to mouth			
S-45	Jenny Creek - source to mouth			
S-46	Wilson Creek - source to mouth			
S-47	Waterfall Creek - source to mouth			
S-48	Ship Island Creek - source to mouth			
S-49	Roaring Creek - source to mouth			
S-50	Goat Creek - source to mouth			

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09. Middle Salmon-Chamberlain Subbasin. The Middle Salmon-Chamberlain Subbasin, HUC 17060207, is comprised of seventy-seven (77) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
S-1	Salmon River - South Fork Salmon River to river mile 106 (T24N, R04E, Sec. 18)	COLD	PCR	DWS
S-2	Fall Creek - source to mouth			
S-3	Carey Creek - source to mouth			
S-4	California Creek - source to mouth			
S-5	Cottontail Creek - source to mouth			
S-6	Rabbit Creek - source to mouth			
S-7	Warren Creek - source to mouth			
S-8	Salmon River - Chamberlain Creek to South Fork Salmon River	COLD SS	PCR	DWS
S-9	Fivemile Creek - source to mouth			
S-10	Little Fivemile Creek - source to mouth			
S-11	Lemhi Creek - source to mouth			
S-12	Fall Creek - source to mouth			
S-13	Trout Creek - source to mouth			
S-14	Richardson Creek - source to mouth			
S-15	Dillinger Creek - source to mouth			
S-16	Hot Springs Creek - source to mouth			
S-17	Big Bear Creek - source to mouth			
S-18	Salmon River - Horse Creek to Chamberlain Creek	COLD SS	PCR	DWS
S-19	Chamberlain Creek - McCalla Creek to mouth			
S-20	Chamberlain Creek - Game Creek to McCalla Creek			
S-21	Queen Creek - source to mouth			
S-22	Game Creek - source to mouth			
S-23	West Fork Game Creek - source to mouth			
S-24	Chamberlain Creek - confluence of Rim and South Fork Chamberlain Creeks to Game Creek			
S-25	Flossie Creek - source to mouth			
S-26	Rim Creek - source to mouth			
S-27	South Fork Chamberlain Creek - source to mouth			
S-28	Moose Creek - source to mouth			
S-29	Lodgepole Creek - source to mouth			
S-30	McCalla Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
S-31	Whimstick Creek - source to mouth			
S-32	Disappointment Creek - source to mouth			
S-33	Starvation Creek - source to mouth			
S-34	Hungry Creek - source to mouth			
S-35	Cottonwood Creek - source to mouth			
S-36	Peak Creek - source to mouth			
S-37	Salmon River - Middle Fork Salmon River to Horse Creek	COLD SS	PCR	DWS
S-38	Butts Creek - source to mouth			
S-39	Kitchen Creek - source to mouth			
S-40	Corn Creek - source to mouth			
S-41	Horse Creek - Little Horse Creek to mouth			
S-42	Little Horse Creek - source to mouth			
S-43	Horse Creek - Reynolds Creek to Little Horse Creek			
S-44	Horse Creek - source to Reynolds Creek			
S-45	East Fork Reynolds Creek - source to mouth			
S-46	Reynolds Creek - source to mouth			
S-47	West Horse Creek - source to mouth			
S-48	Little Squaw Creek - source to mouth			
S-49	Harrington Creek - source to mouth			
S-50	Sabe Creek - Hamilton Creek to mouth			
S-51	Hamilton Creek - source to mouth			
S-52	Sabe Creek - source to Hamilton Creek			
S-53	Center Creek - source to mouth			
S-54	Rattlesnake Creek - source to mouth			
S-55	Bargamin Creek - source to mouth			
S-56	Porcupine Creek - source to mouth			
S-57	Prospector Creek - source to mouth			
S-58	Cache Creek - source to mouth			
S-59	Salt Creek - source to mouth			
S-60	Rainey Creek - source to mouth			
S-61	Big Mallard Creek - source to mouth			
S-62	Little Mallard Creek - source to mouth			
S-63	Rhett Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
S-64	Big Blowout Creek - source to mouth			
S-65	Jersey Creek - source to mouth			
S-66	Indian Creek - source to mouth			
S-67	Crooked Creek - Lake Creek to mouth			
S-68	Crooked Creek - source to Lake Creek			
S-69	Big Creek - source to mouth			
S-70	Lake Creek - source to mouth			
S-71	Arlington Creek - source to mouth			
S-72	Bull Creek - source to mouth			
S-73	Elk Creek - source to mouth			
S-74	Sheep Creek - source to mouth			
S-75	Long Meadow Creek - source to mouth			
S-76	Wind River - source to mouth			
S-77	Meadow Creek - source to mouth			

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10. South Fork Salmon Subbasin. The South Fork Salmon Subbasin, HUC 17060208, is comprised of thirty-five (35) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
S-1	South Fork Salmon River - East Fork Salmon River to mouth	COLD SS	PCR	DWS
S-2	Raines Creek - source to mouth	COLD SS	PCR	
S-3	Pony Creek - source to mouth	COLD SS	PCR	
S-4	Bear Creek - source to mouth	COLD SS	PCR	
S-5	Secesh River - confluence of Summitt Creek and Lake Creek to mouth	COLD SS	PCR	DWS
S-6	Lake Creek - source to mouth	COLD SS	PCR	
S-7	Summit Creek - source to mouth	COLD SS	PCR	
S-8	Loon Creek - source to mouth	COLD SS	PCR	

Unit	Waters	Aquatic Life	Recreation	Other
S-9	Lick Creek - source to mouth	COLD SS	PCR	
S-10	South Fork Salmon River - source to East Fork of the South Fork Salmon River	COLD SS	PCR	DWS
S-11	Fitsum Creek - source to mouth	COLD SS	PCR	
S-12	Buckhorn Creek - source to mouth	COLD SS	PCR	
S-13	Cougar Creek - source to mouth	COLD SS	PCR	
S-14	Blackmare Creek - source to mouth	COLD SS	PCR	
S-15	Dollar Creek - source to mouth	COLD SS	PCR	
S-16	Six-bit Creek - source to mouth	COLD SS	PCR	
S-17	Trail Creek - source to mouth	COLD SS	PCR	
S-18	Rice Creek - source to mouth	COLD SS	PCR	
S-19	Cabin Creek - source to mouth	COLD SS	PCR	
S-20	Warm Lake	COLD	PCR	
S-21	Fourmile Creek - source to mouth	COLD SS	PCR	
S-22	Camp Creek - source to mouth	COLD SS	PCR	
S-23	East Fork of the South Fork Salmon River - source to mouth	COLD SS	PCR	DWS
S-24	Caton Creek - source to mouth	COLD SS	PCR	
S-25	Johnson Creek - source to mouth	COLD SS	PCR	DWS
S-26	Burntlog Creek - source to mouth	COLD SS	PCR	
S-27	Trapper Creek - source to mouth	COLD SS	PCR	
S-28	Riordan Creek - source to mouth	COLD SS	PCR	

Unit	Waters	Aquatic Life	Recreation	Other
S-29	Sugar Creek - source to mouth	COLD SS	PCR	
S-30	Tamarack Creek - source to mouth	COLD SS	PCR	
S-31	Profile Creek - source to mouth	COLD SS	PCR	
S-32	Quartz Creek - source to mouth	COLD SS	PCR	
S-33	Sheep Creek - source to mouth	COLD SS	PCR	
S-34	Elk Creek - source to mouth	COLD SS	PCR	
S-35	Porphyry Creek - source to mouth	COLD SS	PCR	

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11. Lower Salmon Subbasin. The Lower Salmon Subbasin, HUC 17060209, is comprised of sixty-five (65) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
S-1	Salmon River - Rice Creek to mouth	COLD	PCR	DWS
S-2	Flynn Creek - source to mouth			
S-3	Cottonwood Creek - source to mouth			
S-4	Billy Creek - source to mouth			
S-5	Burnt Creek - source to mouth			
S-6	Round Spring Creek - source to mouth			
S-7	Rice Creek - source to mouth			
S-8	Salmon River - Slate Creek to Rice Creek	COLD	PCR	DWS
S-9	Sotin Creek - source to mouth			
S-10	Deer Creek - source to mouth			
S-11	Salmon River - Little Salmon River to Slate Creek	COLD	PCR	DWS
S-12	China Creek- source to mouth			
S-13	Cow Creek - source to mouth			
S-14	Race Creek - confluence West and South Fork Race Creek to mouth			
S-15	West Fork Race Creek - source to mouth			
S-16	South Fork Race Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
S-17	Kessler Creek - source to mouth			
S-18	Grave Creek - source to mouth			
S-19	Salmon River - river mile 106 (T24N, R04E, Sec. 18) to Little Salmon River	COLD	PCR	DWS
S-20	Lake Creek - source to mouth			
S-21	Partridge Creek - source to mouth			
S-22	Elkhorn Creek - source to mouth			
S-23	French Creek - Little French Creek to mouth			
S-24	Little French Creek - source to mouth			
S-25	French Creek - source to Little French Creek			
S-26	Kelly Creek - source to mouth			
S-27	Van Creek - source to mouth			
S-28	Allison Creek - West Fork Allison Creek to mouth			
S-29	Allison Creek - source to West Fork Allison Creek			
S-30	West Fork Allison Creek - source to mouth			
S-31	Berg Creek - source to mouth			
S-32	Fiddle Creek - source to mouth			
S-33	John Day Creek - source to mouth			
S-34	Slate Creek - from and including Hurley Creek to mouth			
S-35	Little Van Buren Creek - source to mouth			
S-36	Slate Creek - Little Slate Creek to Hurley Creek			
S-37	Little Slate Creek - source to mouth			
S-38	Deadhorse Creek - source to mouth			
S-39	Van Buren Creek - source to mouth			
S-40	Tumble Creek - source to mouth			
S-41	Slate Creek - source to Little Slate Creek			
S-42	North Fork Slate Creek - source to mouth			
S-43	McKinzie Creek - source to mouth			
S-44	Skookumchuck Creek - confluence North and South Fork Skookumchuck Creeks to mouth			
S-45	South Fork Skookumchuck Creek - source to mouth			
S-46	North Fork Skookumchuck Creek - source to mouth			
S-47	Whitebird Creek - confluence of North and South Fork Whitebird Creeks to mouth	COLD SS	PCR	DWS
S-48	South Fork Whitebird Creek - Little Whitebird Creek to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
S-49	Little Whitebird Creek - source to mouth			
S-50	South Fork Whitebird Creek - source to Little Whitebird Creek			
S-51	Jungle Creek - source to mouth			
S-52	Asbestos Creek - source to mouth			
S-53	Teepee Creek - source to mouth			
S-54	Pinnacle Creek - source to mouth			
S-55	North Fork Whitebird Creek - source to mouth			
S-56	Rock Creek - Grave Creek to mouth	COLD SS	PCR	
S-57	Rock Creek - source to Grave Creek	COLD SS	PCR	
S-58	Grave Creek - source to mouth			
S-59	Telcher Creek - source to mouth			
S-60	Deep Creek - source to mouth			
S-61	Maloney Creek - source to mouth			
S-62	Deer Creek - source to mouth			
S-63	Eagle Creek - source to mouth			
S-64	China Creek - source to mouth			
S-65	Wapshilla Creek - source to mouth			

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12. Little Salmon Subbasin. The Little Salmon Subbasin, HUC 17060210, is comprised of sixteen (16) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
S-1	Little Salmon River - Round Valley Creek to mouth	COLD SS	PCR	DWS
S-2	Rapid River - source to mouth	COLD SS	PCR	DWS
S-3	West Fork Rapid River - source to mouth			
S-4	Paradise Creek - source to mouth			
S-5	Boulder Creek - source to mouth			
S-6	Round Valley Creek - source to mouth			
S-7	Little Salmon River - source to Round Valley Creek	COLD SS	PCR	DWS
S-8	Mud Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
S-9	Big Creek - source to mouth			
S-10	Goose Creek - source to mouth			
S-11	Brundage Reservoir			
S-12	Goose Lake			
S-13	Sixmile Creek - source to mouth			
S-14	Hazard Creek - source to mouth			
S-15	Hard Creek - source to mouth			
S-16	Elk Creek - source to mouth			

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131. -- 139. (RESERVED)

140. SOUTHWEST IDAHO BASIN.

Surface waters found within the Southwest basin total nineteen (19) subbasins and are designated as follows:

(4-5-00)

01. C.J. Strike Reservoir Subbasin. The C.J. Strike Reservoir Subbasin, HUC 17050101, is comprised of twenty-six (26) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
SW-1	Snake River - Browns Creek to C.J. Strike Dam	COLD	PCR	DWS
SW-2	Dune's Lake			
SW-3	Browns Creek - source to mouth			
SW-4	West Fork Browns Creek - source to mouth			
SW-5	Snake River - Clover Creek to Browns Creek	COLD	PCR	DWS
SW-6	Sailor Creek - source to mouth			
SW-7	Pot Hole Creek - source to mouth			
SW-8	Deadman Creek - source to mouth			
SW-9	Rosevear Gulch - source to mouth			
SW-10	King Hill Creek - source to mouth			
SW-11	West Fork King Hill Creek - source to mouth			
SW-12	Little Canyon Creek - source to mouth			
SW-13	Alkali Creek - source to mouth			
SW-14	Cold Springs Creek - source to mouth			
SW-15	Ryegrass Creek - source to mouth			
SW-16	Bennett Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
SW-17	Hot Springs Reservoir			
SW-18	Dive Creek - source to mouth			
SW-19	Rattlesnake Creek - source to mouth (T05S, R06E)			
SW-20	Mountain Home Reservoir			
SW-21	Canyon Creek - Fraiser Reservoir Dam to mouth			
SW-22	Fraiser Reservoir			
SW-23	Canyon Creek - confluence of Syrup and Long Tom Creeks to Fraiser Reservoir			
SW-24	Long Tom Creek - source to mouth			
SW-25	Syrup Creek - source to mouth			
SW-26	Squaw Creek - source to mouth			

(3-29-12)

02. Bruneau Subbasin. The Bruneau Subbasin, HUC 17050102, is comprised of thirty-five (35) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
SW-1	C.J. Strike Reservoir	COLD	PCR	
SW-2	Jacks Creek - confluence of Little and Big Jacks Creeks to C.J. Strike Reservoir			
SW-3	Little Jacks Creek - source to mouth			
SW-4	Big Jacks Creek -source to mouth			
SW-5	Cottonwood Creek - source to mouth			
SW-6	Duncan Creek - source to mouth			
SW-7	Wickahoney Creek - source to mouth			
SW-8	Sugar Valley Creek - source to mouth			
SW-9	Bruneau River - Hot Creek to C.J. Strike Reservoir	COLD SS	PCR	
SW-10	Hot Creek - source to mouth			
SW-11	Bruneau River - Clover Creek (East Fork Bruneau River) to Hot Creek	COLD SS	PCR	DWS
SW-12	Miller Water - source to mouth			
SW-13	Bruneau River - Jarbridge River to Clover Creek (East Fork Bruneau River)	COLD SS	PCR	DWS
SW-14	Sheep Creek - Idaho/Nevada border to mouth	COLD	PCR	
SW-15	Louse Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
SW-16	Marys Creek - source to mouth			
SW-17	Bull Creek - source to mouth			
SW-18	Pole Creek - Idaho/Nevada border to mouth			
SW-19	Cat Creek - Idaho/Nevada border to mouth			
SW-20	Bruneau River - Idaho/Nevada border to Jarbridge River	COLD SS	PCR	DWS
SW-21	Jarbridge River - Idaho/Nevada border to mouth	COLD SS	PCR	DWS
SW-22	Cougar Creek - source to mouth			
SW-23	Dorsey Creek - Idaho/Nevada border to mouth			
SW-24	East Fork Jarbridge River - Idaho/Nevada border to mouth	COLD SS	PCR	
SW-25	Poison Creek - Idaho/Nevada border to mouth			
SW-26	Unnamed Tributary - source to mouth (T11S, R07E, Sec. 27)			
SW-27	Sheepshead Draw - source to mouth			
SW-28	Clover Creek (East Fork Bruneau River) - confluence of Big Flat, Three, and Deadwood Creeks to mouth	COLD SS	PCR	DWS
SW-29	Juniper Draw - source to mouth			
SW-30	Big Flat Creek - Idaho/Nevada border to mouth			
SW-31	Three Creek - Idaho/Nevada border to mouth			
SW-32	Cherry Creek - Idaho/Nevada border to mouth			
SW-33	Deer Creek - Idaho/Nevada border to mouth			
SW-34	Deadwood Creek - Idaho/Nevada to mouth			
SW-35	Buck Flat Draw - source to mouth			

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03. Middle Snake-Succor Subbasin. The Middle Snake-Succor Subbasin, HUC 17050103, is comprised of twenty-six (26) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
SW-1	Snake River - river mile 425 (T02N, R04W, Sec. 02) to Idaho/Oregon border	COLD	PCR	DWS
SW-2	Succor Creek - Idaho/Oregon border to mouth	COLD SS	PCR	
SW-3	Succor Creek - source to Idaho/Oregon border	COLD SS	PCR	

Unit	Waters	Aquatic Life	Recreation	Other
SW-4	McBride Creek - source to Idaho/Oregon border			
SW-5	Jump Creek - source to mouth	COLD	PCR	
SW-6	Snake River - C.J. Strike Dam to river mile 425 (T02N, R04W, Sec. 02)	COLD	PCR	DWS
SW-7	Squaw Creek - source to mouth			
SW-8	Hardtrigger Creek - source to mouth			
SW-9	Reynolds Creek - source to mouth	COLD SS	PCR	
SW-10	West Rabbit Creek - source to mouth			
SW-11	Rabbit Creek - source to mouth			
SW-12	Sinker Creek - source to mouth	COLD SS	PCR	
SW-13	Fossil Creek - source to mouth			
SW-14	Castle Creek - source to mouth	COLD SS	PCR	
SW-15	Catherine Creek - confluence of Hart and Picket Creeks to mouth			
SW-16	Pickett Creek - source to mouth			
SW-17	Bates Creek - source to mouth			
SW-18	Hart Creek - source to mouth			
SW-19	Brown Creek - source to mouth			
SW-20	South Fork Castle Creek - source to mouth			
SW-21	Birch Creek - source to mouth			
SW-22	McKeeth Wash - source to mouth			
SW-23	Vinson Wash - source to mouth			
SW-24	Shoofly Creek - source to mouth			
SW-25	Corder Creek - source to mouth			
SW-26	Rabbit Creek - source to mouth			

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04. Upper Owyhee Subbasin. The Upper Owyhee Subbasin, HUC 17050104, is comprised of thirty-four (34) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
SW-1	Owyhee River - Juniper Creek to South Fork Owyhee River	COLD SS	PCR	DWS
SW-2	Unnamed Tributaries and playas of YP Desert (T14S, R04W)			

Unit	Waters	Aquatic Life	Recreation	Other
SW-3	Piute Creek - source to mouth			
SW-4	Juniper Creek - Juniper Basin Reservoir Dam to mouth			
SW-5	Juniper Basin Reservoir			
SW-6	Owyhee River - Idaho/Nevada border to Juniper Creek	COLD SS	PCR	DWS
SW-7	Blue Creek - Blue Creek Reservoir Dam to mouth			
SW-8	Boyle Creek Reservoir (Mt. View Lake)	COLD	PCR	
SW-9	Papoose/Mud Creek complex			
SW-10	Payne Creek - source to mouth			
SW-11	Squaw Creek - source to mouth			
SW-12	Little Blue Creek - source to mouth			
SW-13	Blue Creek - source to Blue Creek Reservoir Dam			
SW-14	Shoofly Creek - source to mouth			
SW-15	Harris Creek - source to mouth			
SW-16	Little Jarvis Lake			
SW-17	Rough Little Lake			
SW-18	Ross Lake			
SW-19	Juniper Lake			
SW-20	Henry Lake			
SW-21	Unnamed Tributary - source to mouth (T15S, R01W, Sec. 01)			
SW-22	Yatahoney Creek - source to mouth			
SW-23	Battle Creek - source to mouth			
SW-24	Dry Creek - source to mouth			
SW-25	Big Springs Creek - source to mouth			
SW-26	Deep Creek - source to mouth			
SW-27	Dickshooter Creek - source to mouth			
SW-28	Pole Creek - source to mouth			
SW-29	Camas Creek - source to mouth			
SW-30	Camel Creek - source to mouth			
SW-31	Nickel Creek - source to mouth			
SW-32	Castle Creek - source to mouth			
SW-33	Beaver Creek - source to mouth			
SW-34	Red Canyon Creek - source to mouth	COLD	PCR	

(3-29-12)

05. South Fork Owyhee Subbasin. The South Fork Owyhee Subbasin, HUC 17050105, is comprised of five (5) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
SW-1	South Fork Owyhee River - Idaho/Nevada border to mouth	COLD SS	PCR	DWS
SW-2	Spring Creek - source to mouth			
SW-3	Bull Camp Reservoir			
SW-4	Homer Wells Reservoir			
SW-5	Coyote Flat - source to mouth			

(3-29-12)

06. East Little Owyhee Subbasin. The East Little Owyhee Subbasin, HUC 17050106, is comprised of two (2) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
SW-1	Little Owyhee River - Idaho/Nevada border to mouth	COLD SS	PCR	DWS
SW-2	Tent Creek- Idaho/Oregon border to mouth			

(3-29-12)

07. Middle Owyhee Subbasin. The Middle Owyhee Subbasin, HUC 17050107, is comprised of fourteen (14) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
SW-1	Owyhee River - South Fork Owyhee River to Idaho/Oregon border	COLD SS	PCR	DWS
SW-2	Oregon Lake Creek - source to Idaho/Oregon border			
SW-3	Field Creek - source to Idaho/Oregon border			
SW-4	Middle Fork Owyhee River - source to Idaho/Oregon border	COLD SS	PCR	DWS
SW-5	Pole Creek - source to Idaho/Oregon border			
SW-6	Squaw Creek - source to Idaho/Oregon border	COLD SS	PCR	
SW-7	Cottonwood Creek - source to mouth			
SW-8	North Fork Owyhee River - source to Idaho/Oregon border	COLD SS	PCR	DWS
SW-9	Pleasant Valley Creek - source to mouth	COLD	PCR	

Unit	Waters	Aquatic Life	Recreation	Other
SW-10	Noon Creek - source to mouth	COLD SS	PCR	
SW-11	Cabin Creek - source to mouth	COLD SS	PCR	
SW-12	Juniper Creek - source to mouth	COLD SS	PCR	
SW-13	Cherry Creek - source to Idaho/Oregon border			
SW-14	Soldier Creek - source to Idaho/Oregon border			

(3-29-12)

08. Jordan Subbasin. The Jordan Subbasin, HUC 17050108, is comprised of twenty-three (23) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
SW-1	Jordan Creek - Williams Creek to Idaho/Oregon border	COLD SS	PCR	
SW-2	Lone Tree Creek - source to mouth			
SW-3	Williams Creek - source to mouth	COLD	PCR	
SW-4	Jordan Creek - source to Williams Creek	COLD SS	PCR	
SW-5	Big Boulder Creek - confluence of North and South Fork Boulder Creeks to mouth			
SW-6	South Fork Boulder Creek - source to mouth			
SW-7	North Fork Boulder Creek - source to mouth			
SW-8	Mammoth Creek - source to mouth			
SW-9	Combination Creek - source to mouth			
SW-10	Rock Creek -Triangle Reservoir Dam to mouth			
SW-11	Rose Creek - source to mouth			
SW-12	Josephine Creek - source to mouth			
SW-13	Rock Creek - source to and including Triangle Reservoir			
SW-14	Louisa Creek - source to Triangle Reservoir			
SW-15	Spring Creek - source to mouth			
SW-16	Deer Creek - source to mouth			
SW-17	Flint Creek - source to mouth			
SW-18	Louse Creek - source to mouth			
SW-19	Trout Creek - source to Idaho/Oregon border			

Unit	Waters	Aquatic Life	Recreation	Other
SW-20	Hooker Creek - source to Idaho/Oregon border			
SW-21	Cow Creek - source to Idaho/Oregon border			
SW-22	Soda Creek - source to mouth			
SW-23	Baxter Creek - source to Idaho/Oregon border			

(3-29-12)

09. North and Middle Fork Boise Subbasin. The North and Middle Fork Boise Subbasin, HUC 17050111, is comprised of seventeen (17) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
SW-1	Middle Fork Boise River - source to mouth	COLD SS	PCR	DWS
SW-2	East Fork Roaring River -source to mouth	COLD SS	PCR	
SW-3	Hot Creek - source to mouth	COLD SS	SCR	
SW-4	Yuba River - source to mouth	COLD SS	SCR	
SW-5	Decker Creek - source to mouth	COLD SS	SCR	
SW-6	Queens River - source to mouth	COLD SS	SCR	
SW-7	Little Queens River - source to mouth	COLD SS	SCR	
SW-8	Black Warrior Creek - source to mouth	COLD SS	SCR	
SW-9	Browns Creek - source to mouth	COLD SS	PCR	
SW-10	North Fork Boise River - source to mouth	COLD SS	PCR	DWS
SW-11	Johnson Creek - source to mouth	COLD SS	SCR	
SW-12	Bear River - source to mouth	COLD SS	SCR	
SW-13	Big Owl/Little Owl Creeks - source to mouth	COLD SS	PCR	
SW-14	Crooked River - source to mouth	COLD SS	PCR	

Unit	Waters	Aquatic Life	Recreation	Other
SW-15	Rabbit Creek - source to mouth	COLD SS	PCR	
SW-16	Meadow Creek - source to mouth	COLD	SCR	
SW-17	French Creek - source to mouth	COLD SS	SCR	

(3-29-12)

10. Boise-Mores Subbasin. The Boise-Mores Subbasin, HUC 17050112, is comprised of seventeen (17) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
SW-1	Lucky Peak Reservoir (Boise River)	COLD SS	PCR	DWS
SW-2	Arrowrock Reservoir (Boise River)	COLD SS	PCR	DWS
SW-3	Grouse Creek - source to Arrowrock Reservoir			
SW-4	Boise River - confluence of North and Middle Fork Boise Rivers to Arrowrock Reservoir	COLD SS	PCR	DWS
SW-5	Sheep Creek - source to mouth			
SW-6	Brown Creek - source to mouth			
SW-7	Cottonwood Creek - source to Arrowrock Reservoir			
SW-8	Deer Creek - source to Lucky Peak Reservoir			
SW-9	Mores Creek - source to Lucky Peak Reservoir	COLD SS	PCR	DWS
SW-10	Smith Creek - source to mouth			
SW-11	Thorn Creek - source to mouth			
SW-12	Elk Creek - source to mouth			
SW-13	Grimes Creek - source to mouth			
SW-14	Granite Creek - source to mouth	COLD	PCR	
SW-15	Macks Creek - source to mouth	COLD SS	PCR	
SW-16	Daggett Creek - source to mouth			
SW-17	Robie Creek - source to Lucky Peak Reservoir	COLD SS	PCR	

(3-29-12)

11. South Fork Boise Subbasin. The South Fork Boise Subbasin, HUC 17050113, is comprised of thirty-three (33) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
SW-1	Arrowrock Reservoir (Boise River)	COLD SS	PCR	DWS
SW-2a	Willow Creek - Cottonwood Creek to Arrowrock Reservoir	COLD SS	PCR	
SW-2b	Willow Creek - source to Cottonwood Creek			
SW-3	Wood Creek - source to mouth	COLD SS	PCR	
SW-4	South Fork Boise River - Anderson Ranch Dam to Arrowrock Reservoir	COLD SS	PCR	DWS
SW-5	Anderson Ranch Reservoir (Boise River)	COLD SS	PCR	DWS
SW-6	Little Camas Creek - Little Camas Reservoir Dam to Anderson Ranch Reservoir			
SW-7	Little Camas Creek Reservoir	SC	PCR	
SW-8	Little Camas Creek - source to Little Camas Creek Reservoir			
SW-9	Wood Creek - source to Anderson Ranch Reservoir			
SW-10	Lime Creek - source to Anderson Ranch Reservoir	COLD SS	SCR	
SW-11	South Fork Lime Creek - source to mouth			
SW-12	Deer Creek - source to Anderson Ranch Reservoir	COLD SS	SCR	
SW-13	South Fork Boise River - Willow Creek to Anderson Ranch Reservoir	COLD SS	PCR	DWS
SW-14	Grouse Creek - source to mouth	COLD SS	PCR	
SW-15	South Fork Boise River - Little Smoky Creek to Willow Creek	COLD SS	PCR	DWS
SW-16	Beaver Creek - source to mouth	COLD SS	SCR	
SW-17	Boardman Creek - source to mouth	COLD SS		
SW-18	Little Smoky Creek - source to mouth	COLD SS	SCR	
SW-19	Big Smoky Creek - source to mouth	COLD SS	PCR	
SW-20	Paradise Creek - source to mouth	COLD SS	SCR	

Unit	Waters	Aquatic Life	Recreation	Other
SW-21	South Fork Boise River - confluence of Ross Fork and Johnson Creeks to Little Smoky Creek	COLD SS	PCR	DWS
SW-22	Johnson Creek - source to mouth			
SW-23	Ross Fork - source to mouth	COLD SS	PCR	
SW-24	Skeleton Creek - source to mouth	COLD SS	PCR	
SW-25	Willow Creek - source to South Fork Boise River			
SW-26	Shake Creek - source to mouth	COLD SS	PCR	
SW-27	Feather Creek - source to mouth	COLD SS	PCR	
SW-28	Trinity Creek - source to mouth	COLD SS	PCR	
SW-29	Green Creek - source to mouth	COLD SS	SCR	
SW-30	Dog Creek - source to mouth	COLD SS	PCR	
SW-31	Fall Creek - source to Anderson Ranch Reservoir	COLD SS	PCR	
SW-32	Smith Creek - source to mouth	COLD SS	PCR	
SW-33	Rattlesnake Creek - source to Arrowrock Reservoir	COLD SS	SCR	

(3-29-12)

12. Lower Boise Subbasin. The Lower Boise Subbasin, HUC 17050114, is comprised of seventeen (17) water body units.

Note: Final rule submitted to EPA on June 8, 2012 (docket 58-0102-1103 - effective March 29, 2012). This revision reinstates use designations for eight Boise River tributaries to address EPA's November 29, 2004 disapproval. Until EPA approves this change, the previous standards in IDAPA 58.01.02.140.12, located at <http://www.deq.idaho.gov/epa-actions-on-proposed-standards>, continue to apply and are effective for federal Clean Water Act purposes. See also IDAPA 58.01.02.278.

Unit	Waters	Aquatic Life	Recreation	Other
SW-1	Boise River- Indian Creek to mouth	COLD	PCR	
SW-2	Indian Creek - Sugar Ave. (T03N, R02W, Sec. 15) to mouth	COLD	SCR	

Unit	Waters	Aquatic Life	Recreation	Other
SW-3a	Split between New York Canal and historic creek bed to Sugar Ave. (T03N, R02W, Sec. 15)	COLD SS	SCR	
SW-3b	Indian Creek Reservoir to split between New York Canal and historic creek bed	COLD	SCR	
SW-3c	Indian Creek Reservoir	COLD	PCR	
SW-3d	Indian Creek - source to Indian Creek Reservoir	COLD	SCR	
SW-4	Lake Lowell	WARM	PCR	
SW-5	Boise River - river mile 50 (T04N, R02W, Sec. 32) to Indian Creek	COLD SS	PCR	
SW-6	Mason Creek - New York Canal to mouth		SCR	
SW-7	Fifteenmile Creek - Miller Canal to mouth		SCR	
SW-8	Tenmile Creek - Blacks Creek Reservoir Dam to Miller Canal	COLD	SCR	
SW-9	Blacks Creek - source to and including Blacks Creek Reservoir			
SW-10	Fivemile Creek - source to Miller Canal	COLD	SCR	
SW-11a	Boise River - Diversion Dam to river mile 50 (T04N, R02W, Sec. 32)	COLD SS	PCR	DWS
SW-11b	Boise River - Lucky Peak Dam to Diversion Dam	COLD	PCR	DWS
SW-12	Stewart Gulch, Cottonwood and Crane Creeks -source to mouth			
SW-13	Dry Creek - source to mouth			
SW-14	Big/Little Gulch Creek complex			
SW-15	Willow Creek - source to mouth			
SW-16	Langley/Graveyard Gulch complex			
SW-17	Sand Hollow Creek - source to mouth		SCR	

(3-29-12)

13. Middle Snake-Payette Subbasin. The Middle Snake-Payette Subbasin, HUC 17050115, is comprised of five (5) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
SW-1	Snake River - the Idaho/Oregon border to Weiser River	COLD	PCR	DWS
SW-2	Homestead Gulch - source to mouth			
SW-3	Ashlock Gulch - source to mouth			
SW-4	Hurd Gulch - source to mouth			
SW-5	Sand Hollow - source to mouth			

(3-20-04)

14. South Fork Payette Subbasin. The South Fork Payette Subbasin, HUC 17050120, is comprised of twenty-one (21) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
SW-1	South Fork Payette River - Trail Creek to mouth	COLD SS	PCR	DWS
SW-2	Rock Creek - source to mouth			
SW-3	Tenmile Creek - source to mouth			
SW-4	Wapiti Creek - source to mouth			
SW-5	South Fork Payette River - source to and including Trail Creek	COLD SS	PCR	DWS
SW-6	Goat Creek - source to mouth			
SW-7	Baron Creek - source to mouth			
SW-8	Bear Creek - source to mouth			
SW-9	Canyon Creek - source to mouth			
SW-10	Warm Spring Creek - source to mouth			
SW-11	Eightmile Creek - source to mouth			
SW-12	Fivemile Creek - source to mouth			
SW-13	Clear Creek - source to mouth			
SW-14	Deadwood River - Deadwood Reservoir Dam to mouth	COLD SS	PCR	DWS
SW-15	Whitehawk Creek - source to mouth			
SW-16	Warm Springs Creek - source to mouth			
SW-17	Wilson Creek - source to mouth			
SW-18	Deadwood Reservoir	COLD SS	PCR	DWS
SW-19	Deadwood River - source to Deadwood Reservoir	COLD SS	PCR	DWS
SW-20	Scott Creek - source to mouth			
SW-21	Big Pine Creek - source to mouth			

(3-29-12)

15. Middle Fork Payette Subbasin. The Middle Fork Payette Subbasin, HUC 17050121, is comprised of ten (10) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
SW-1	Middle Fork Payette River - Big Bulldog Creek to mouth	COLD SS	PCR	DWS

Unit	Waters	Aquatic Life	Recreation	Other
SW-2	Anderson Creek - source to mouth	COLD SS	PCR	
SW-3	Lightning Creek - source to mouth	COLD SS	PCR	
SW-4	Big Bulldog Creek - source to mouth	COLD SS	PCR	
SW-5	Middle Fork Payette River - source to Big Bulldog Creek	COLD SS	PCR	DWS
SW-6	Rattlesnake Creek - source to mouth	COLD SS	PCR	
SW-7	Silver Creek - source to mouth	COLD SS	PCR	
SW-8	Peace Creek - source to mouth	COLD SS	PCR	
SW-9	Bull Creek - source to mouth	COLD SS	PCR	
SW-10	Scriver Creek - source to mouth	COLD SS	PCR	

(3-29-12)

16. Payette Subbasin. The Payette Subbasin, HUC 17050122, is comprised of twenty-one (21) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
SW-1	Payette River - Black Canyon Reservoir Dam to mouth	COLD SS	PCR	DWS
SW-2	Black Canyon Reservoir	COLD SS	PCR	DWS
SW-3	Payette River - confluence of the North Fork and South Fork Payette Rivers to Black Canyon Reservoir	COLD SS	PCR	DWS
SW-4	Shafer Creek - source to mouth	COLD SS	PCR	
SW-5	Harris Creek - source to mouth	COLD SS	PCR	
SW-6	Porter Creek - source to mouth			
SW-7	Hill Creek - source to mouth			
SW-8	South Fork Payette River - Middle Fork Payette River to mouth	COLD SS	PCR	DWS
SW-9	Deer Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
SW-10	Squaw Creek - source to mouth	COLD SS	PCR	
SW-11	Little Squaw Creek - source to mouth			
SW-12	Soldier Creek - source to mouth			
SW-13	Pine Creek - source to mouth			
SW-14	Second Fork Squaw Creek - source to mouth			
SW-15	Bissel Creek - source to mouth			
SW-16	Sand Hollow - source to mouth			
SW-17	Big Willow Creek - source to mouth	COLD SS	PCR	
SW-18	Little Willow Creek - Paddock Valley Reservoir Dam to mouth			
SW-19	Indian Creek - source to mouth			
SW-20	Paddock Valley Reservoir			
SW-21	Little Willow Creek - source to Paddock Valley Reservoir			

(3-29-12)

17. North Fork Payette Subbasin. The North Fork Payette Subbasin, HUC 17050123, is comprised of twenty-two (22) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
SW-1	North Fork Payette River - Cascade Reservoir Dam to mouth	COLD SS	PCR	DWS
SW-2	Round Valley Creek - source to mouth			
SW-3	Clear Creek - source to mouth			
SW-4	Big Creek - source to mouth			
SW-5	Horsethief Reservoir			
SW-6	Beaver Creek - source to mouth			
SW-7	Cascade Reservoir	COLD SS	PCR	DWS
SW-8	Gold Fork - source to Cascade Reservoir	COLD SS	PCR	DWS
SW-9	Flat Creek - source to mouth			
SW-10	Kennally Creek - source to mouth			
SW-11	Boulder Creek - source to Cascade Reservoir			
SW-12	Lake Fork - Little Payette Lake to Cascade Reservoir	COLD SS	PCR	DWS

Unit	Waters	Aquatic Life	Recreation	Other
SW-13	Little Payette Lake	COLD SS	PCR	
SW-14	Lake Fork - source to Little Payette Lake	COLD SS	PCR	DWS
SW-15	Mud Creek - source to Cascade Reservoir			
SW-16	North Fork Payette River - Payette Lake to Cascade Reservoir	COLD SS	PCR	DWS
SW-17	Payette Lake	COLD SS	PCR	DWS
SW-18	North Fork Payette River - Upper Payette Lake to Payette Lake	COLD SS	PCR	DWS
SW-19	Upper Payette Lake	COLD SS	PCR	DWS
SW-20	Twentymile Creek - source to mouth	COLD SS	PCR	
SW-21	North Fork Payette River - source to Upper Payette Lake	COLD SS	PCR	DWS
SW-22	Fisher Creek - source to mouth			

(3-29-12)

18. **Weiser Subbasin.** The Weiser Subbasin, HUC 17050124, is comprised of thirty-three (33) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
SW-1	Weiser River - Keithly Creek to mouth	COLD	PCR	DWS
SW-2	Cove Creek - source to mouth			
SW-3	Crane Creek - Crane Creek Reservoir Dam to mouth	COLD	PCR	
SW-4	Crane Creek Reservoir	COLD	PCR	
SW-5	South Fork Crane Creek - source to Crane Creek Reservoir			
SW-6	North Crane Creek - source to Crane Creek Reservoir			
SW-7	Weiser River - source to Keithly Creek	COLD	PCR	DWS
SW-8	Little Weiser River - source to mouth	COLD SS	PCR	DWS
SW-9	Ben Ross Creek - source to mouth			
SW-10	Mill Creek - source to mouth			
SW-11	Anderson Creek - source to mouth			
SW-12	Grays Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
SW-13	Bacon Creek - source to mouth			
SW-14	Middle Fork Weiser River - source to mouth	COLD SS	PCR	DWS
SW-15	Cottonwood Creek - source to mouth			
SW-16	East Fork Weiser River - source to mouth			
SW-17	West Fork Weiser River - source to mouth	COLD SS	PCR	DWS
SW-18	Lost Creek - Lost Valley Reservoir Dam to mouth			
SW-19	Lost Valley Reservoir			
SW-20	Lost Creek - source to Lost Valley Reservoir			
SW-21	Hornet Creek - source to mouth			
SW-22	Johnson Creek - source to mouth	COLD SS	PCR	
SW-23	Goodrich Creek - source to mouth			
SW-24	Cow Creek - source to mouth			
SW-25	Rush Creek - source to mouth			
SW-26	Spring Creek - source to mouth			
SW-27	Pine Creek - source to mouth	COLD SS	PCR	
SW-28	Keithly Creek - source to mouth			
SW-29	Sage Creek - source to mouth			
SW-30	Mann Creek - Mann Creek Reservoir Dam to mouth	COLD SS	PCR	
SW-31	Mann Creek Reservoir	COLD SS	PCR	
SW-32	Mann Creek - source to Mann Creek Reservoir	COLD SS	PCR	
SW-33	Monroe Creek - source to mouth			

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19. Brownlee Reservoir Subbasin. The Brownlee Reservoir Subbasin, HUC 17050201, is comprised of seventeen (17) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
SW-1	Snake River (Hells Canyon Reservoir) - Oxbow Dam to Hells Canyon Dam	COLD	PCR	DWS
SW-2	Snake River (Oxbow Reservoir) - Brownlee Dam to Oxbow Dam	COLD	PCR	DWS

Unit	Waters	Aquatic Life	Recreation	Other
SW-3	Snake River (Brownlee Reservoir) - Scott Creek to Brownlee Dam	COLD	PCR	DWS
SW-4	Snake River - Weiser River to Scott Creek	COLD	PCR	DWS
SW-5	Jenkins Creek - source to mouth	COLD	PCR	
SW-6	Scott Creek - source to mouth			
SW-7	Warm Springs Creek - source to mouth			
SW-8	Hog Creek - source to mouth			
SW-9	Grouse Creek - source to mouth			
SW-10	Rock Creek - source to mouth			
SW-11	Wolf Creek - source to mouth			
SW-12	Dennett Creek - source to mouth			
SW-13	Sturgill Creek - source to mouth			
SW-14	Brownlee Creek - source to mouth			
SW-15	Wildhorse River - confluence of Bear Creek and including Crooked River to mouth	COLD SS	PCR	
SW-16	Bear Creek - source to mouth	COLD SS	PCR	
SW-17	Indian Creek - source to mouth			

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141. -- 149. (RESERVED)

150. UPPER SNAKE BASIN.

Surface waters found within the Upper Snake basin total twenty-three (23) subbasins and are designated as follows:
 (4-5-00)

01. Palisades Subbasin. The Palisades Subbasin, HUC 17040104, is comprised of thirty-one (31) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Snake River - Black Canyon Creek to river mile 856 (T03N, R41E, Sec. 16)	COLD SS	PCR	DWS
US-2	Antelope Creek - source to mouth			
US-3	Snake River - Fall Creek to Black Canyon Creek	COLD SS	PCR	DWS
US-4	Pritchard Creek - source to mouth			
US-5	Fall Creek - South Fork Fall Creek to mouth			
US-6	Fall Creek - source to South Fork Fall Creek			
US-7	South Fork Fall Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
US-8	Snake River - Palisades Reservoir Dam to Fall Creek	COLD SS	PCR	DWS
US-9	Indian Creek - source to mouth			
US-10	Palisades Reservoir	COLD SS	PCR	DWS
US-11	Bear Creek - North Fork Bear Creek to Palisades Reservoir			
US-12	North Fork Bear Creek - source to mouth			
US-13	Bear Creek - source to North Fork Bear Creek			
US-14	McCoy Creek - Fish Creek to Palisades Reservoir			
US-15	McCoy Creek - Iowa Creek to Fish Creek			
US-16	McCoy Creek - Clear Creek to Iowa Creek			
US-17	Wolverine Creek - source to mouth			
US-18	Clear Creek - source to mouth			
US-19	McCoy Creek - source to Clear Creek			
US-20	Iowa Creek - source to mouth			
US-21	Fish Creek - source to mouth			
US-22	Trout Creek - source to mouth			
US-23	Burns Creek - source to Idaho/Wyoming border			
US-24	Indian Creek - Idaho/Wyoming border to Palisades Reservoir			
US-25	Big Elk Creek - Idaho/Wyoming border to Palisades Reservoir			
US-26	Little Elk Creek - source to Palisades Reservoir			
US-27	Palisades Creek - source to mouth			
US-28	Rainey Creek - source to mouth			
US-29	Pine Creek - source to mouth			
US-30	Black Canyon Creek - source to mouth			
US-31	Burnt Canyon Creek - source to mouth			

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02. Salt Subbasin. The Salt Subbasin, HUC 17040105, is comprised of twelve (12) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Tributaries of Salt River - source to Idaho/Wyoming border (T04S, R46E)			
US-2	Jackknife Creek - source to Idaho/Wyoming border			
US-3	Tincup Creek - source to Idaho/Wyoming border			

Unit	Waters	Aquatic Life	Recreation	Other
US-4	South Fork Tincup Creek - source to mouth			
US-5	Tributaries of Salt River - source to Idaho/Wyoming border (T06S, R46E and T07S, R46E)			
US-6	Stump Creek - source to Idaho/Wyoming border			
US-7	Tygee Creek - source to mouth			
US-8	Crow Creek - source to Idaho/Wyoming border			
US-9	Sage Creek - source to mouth			
US-10	Deer Creek - source to mouth			
US-11	Rock Creek - source to mouth			
US-12	Spring Creek - source to mouth			

(4-5-00)

03. Idaho Falls Subbasin. The Idaho Falls Subbasin, HUC 17040201, is comprised of seventeen (17) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Snake River - Dry Bed Creek to river mile 791 (T01N, R37E, Sec. 10)	COLD SS	PCR	DWS
US-2	South Fork Willow Creek - source to mouth			
US-3	North Fork Willow Creek - source to mouth			
US-4	Dry Bed Creek - source to mouth			
US-5	Sand Creek complex			
US-6	Crow Creek - Willow Creek to mouth			
US-7	Crow Creek - source to Willow Creek			
US-8	Birch Creek - source to mouth			
US-9	Snake River - Annis Slough to Dry Bed Creek	COLD SS	PCR	DWS
US-10	Spring Creek - canal (T05N, R38E) to mouth			
US-11	Spring Creek - source to canal (T05N, R38E)			
US-12	Snake River - Dry Bed to Annis Slough	COLD SS	PCR	DWS
US-13	Snake River - river mile 856 (T03N, R41E, Sec. 16) to Dry Bed Creek	COLD SS	PCR	DWS
US-14	Lyons Creek - source to mouth			
US-15	Unnamed Tributary - source to mouth (T8N, R38E)			
US-16	Market Lake			

Unit	Waters	Aquatic Life	Recreation	Other
US-17	Kettle Butte complex			

(4-5-00)

04. Upper Henrys Subbasin. The Upper Henrys Subbasin, HUC 17040202, is comprised of fifty-five (55) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Henrys Fork - Warm River to Ashton Reservoir Dam	COLD SS	PCR	DWS
US-2	Warm River - Warm River Spring to mouth	COLD SS	PCR	DWS
US-3	Moose Creek - source to confluence with Warm River			
US-4	Partridge Creek - source to mouth			
US-5	Warm River - source to Warm River Spring	COLD SS	PCR	DWS
US-6	Robinson Creek - Rock Creek to mouth			
US-7	Porcupine Creek - source to mouth	COLD SS	SCR	
US-8	Rock Creek - Wyoming Creek to mouth			
US-9	Wyoming Creek - Idaho/Wyoming border to mouth			
US-10	Rock Creek - source to Wyoming Creek			
US-11	Robinson Creek - Idaho/Wyoming border and sources west of border to Rock Creek			
US-12	Snow Creek - source to mouth			
US-13	Fish Creek - source to mouth			
US-14	Henrys Fork - Thurman Creek to Warm River	COLD SS	PCR	DWS
US-15	Henrys Fork - Island Park Reservoir Dam to Thurman Creek	COLD SS	PCR	DWS
US-16	Buffalo River - Elk Creek to mouth	COLD SS	PCR	DWS
US-17	Toms Creek - source to mouth			
US-18	Buffalo River - source to Elk Creek	COLD SS	PCR	DWS
US-19	Elk Creek - source to mouth			
US-20	Island Park Reservoir	COLD SS	PCR	DWS

Unit	Waters	Aquatic Life	Recreation	Other
US-21	Henrys Fork - Confluence of Big Springs and Henrys Lake Outlet to Island Park Reservoir	COLD SS	PCR	DWS
US-22	Moose Creek - source to confluence with Henrys Fork			
US-23	Big Springs - source to mouth	COLD SS	PCR	DWS
US-24	Thirsty Creek - Idaho/ Wyoming border to mouth	COLD SS	SCR	
US-25	Henrys Lake Outlet - Henrys Lake Dam to mouth	COLD SS	PCR	DWS
US-26	Meadows Creek - source to mouth			
US-27	Reas Pass Creek - source to sink			
US-28	Jones Creek - source to mouth			
US-29	Jesse Creek - source to mouth			
US-30	Twin Creek - source to mouth			
US-31	Tygee Creek - source to sink			
US-32	Henrys Lake	COLD	SCR	
US-33	Howard Creek - source to mouth	COLD SS	SCR	
US-34	Targhee Creek - source to mouth	COLD SS	SCR	
US-35	Timber Creek - source to mouth			
US-36	Duck Creek - source to mouth	COLD SS	SCR	
US-37	Rock Creek - source to mouth			
US-38	Hope Creek - source to mouth			
US-39	Crooked Creek - source to mouth			
US-40	Hotel Creek - source to mouth	COLD SS	SCR	
US-41	Yale Creek - source to mouth	COLD SS	SCR	
US-42	Blue Creek - source to mouth			
US-43	Sheep Creek - source to mouth			
US-44	Icehouse Creek - source to Island Park Reservoir	COLD SS	SCR	
US-45	Sheridan Creek - Kilgore Road (T13N, R41E, Sec. 07) to mouth	COLD SS	SCR	
US-46	Willow Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
US-47	Myers Creek - source to mouth			
US-48	Sheridan Creek - source to Kilgore Road (T13N, R41E, Sec. 07)	COLD SS	SCR	
US-49	Sheridan Reservoir			
US-50	Dry Creek - source to Sheridan Reservoir			
US-51	Thurman Creek - source to mouth			
US-52	Rattlesnake Creek - source to mouth			

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05. Lower Henrys Subbasin. The Lower Henrys Subbasin, HUC 17040203, is comprised of sixteen (16) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Henry's Fork - South Fork Teton River to hydrologic unit boundary	COLD SS	PCR	DWS
US-2	Henry's Fork - North Fork Teton River to South Fork Teton River	COLD SS	PCR	DWS
US-3	Henry's Fork - Falls River to North Fork Teton River	COLD SS	PCR	DWS
US-4	Falls River - Conant Creek to mouth	COLD SS	PCR	DWS
US-5	Conant Creek - Squirrel Creek to mouth			
US-6	Conant Creek - Idaho/Wyoming border to Squirrel Creek			
US-7	Squirrel Creek - Idaho/Wyoming border to mouth			
US-8	Falls River - Boone Creek to Conant Creek	COLD SS	PCR	DWS
US-9	Falls River - Idaho/Wyoming border to Boone Creek	COLD SS	PCR	DWS
US-10	Boone Creek - Idaho/Wyoming border to mouth			
US-11	Boundary Creek - Idaho/Wyoming border (T12N, R46E, Sec. 06) to Idaho/Wyoming border, (T12N, R46E, Sec. 31)			
US-12	Henry's Fork - Ashton Reservoir Dam to Falls River	COLD SS	PCR	DWS
US-13	Sand Creek - Pine Creek to mouth			
US-14	Pine Creek - source to mouth			
US-15	Sand Creek - source to Pine Creek			
US-16	Warm Slough - source to mouth			

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06. Teton Subbasin. The Teton Subbasin, HUC 17040204, is comprised of forty-four (44) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	South Fork Teton River - Teton River Forks to Henrys Fork	COLD SS	SCR	
US-2	North Fork Teton River - Teton River Forks to Henrys Fork	COLD SS	SCR	
US-3	Teton River - Teton Dam to Teton River Forks	COLD SS	PCR	DWS
US-4	Teton River - Canyon Creek to Teton Dam	COLD SS	PCR	DWS
US-5	Moody Creek - confluence of North and South Fork Moody Creeks to canal			
US-6	South Fork Moody Creek - source to mouth			
US-7	North Fork Moody Creek - source to mouth			
US-8	Canyon Creek - Warm Creek to mouth			
US-9	Canyon Creek - source to Warm Creek			
US-10	Calamity Creek - source to mouth			
US-11	Warm Creek - source to mouth			
US-12	Teton River - Milk Creek to Canyon Creek	COLD SS	PCR	DWS
US-13	Milk Creek - source to mouth			
US-14	Teton River - Felt Dam outlet to Milk Creek	COLD SS	PCR	DWS
US-15	Teton River - Felt Dam pool			
US-16	Teton River - Highway 33 bridge to Felt Dam pool	COLD SS	PCR	DWS
US-17	Teton River - Cache Bridge (NW ¼, NE ¼, Sec. 1, T5N, R44E) to Highway 33 bridge	COLD SS	PCR	DWS
US-18	Packsaddle Creek - diversion (NE ¼ Sec. 8, T5N, R44E) to mouth			
US-19	Packsaddle Creek - source to diversion (NE ¼ Sec. 8, T5N, R44E)			
US-20	Teton River - Teton Creek to Cache Bridge NW ¼, NE ¼, Sec. 1, T5N, R44E)	COLD SS	PCR	DWS
US-21	Horseshoe Creek - pipeline diversion (SE ¼, NW ¼, Sec. 27, T5N, R44E) to mouth			
US-22	Horseshoe Creek - source to pipeline diversion (SE ¼, NW ¼, Sec. 27, T5N, R44E)			

Unit	Waters	Aquatic Life	Recreation	Other
US-23	Twin Creek - source to mouth			
US-24	Mahogany Creek - pipeline diversion (NE ¼, Sec. 27, T4N, R44E) to mouth			
US-25	Mahogany Creek - source to pipeline diversion (NE ¼, Sec. 27, T4N, R44E)			
US-26	Teton River - Trail Creek to Teton Creek	COLD SS	PCR	DWS
US-27	Henderson Creek - source to sink			
US-28	Teton River - confluence of Warm Creek and Drake Creek to Trail Creek	COLD SS	PCR	DWS
US-29	Patterson Creek - pump diversion (SE ¼, Sec. 31, T4N, R44E) to mouth			
US-30	Patterson Creek - source to pump diversion (SE ¼, Sec. 31, T4N, R44E)			
US-31	Grove Creek - source to sink			
US-32	Drake Creek - source to mouth			
US-33	Little Pine Creek - source to mouth			
US-34	Warm Creek - source to mouth			
US-35	Trail Creek - Trail Creek pipeline diversion (SW ¼, SE ¼, Sec 19, T3N, R46E) to mouth			
US-36	Game Creek - diversion (SW ¼, SW ¼, Sec. 17, T3N, R46E) to mouth			
US-37	Game Creek - source to diversion (SW ¼, SW ¼, Sec. 17, T3N, R46E)			
US-38	Trail Creek - Idaho/Wyoming border to Trail Creek pipeline diversion (SW ¼, SE ¼, Sec 19, T3N, R46E)			
US-39	Moose Creek - Idaho/Wyoming border to mouth			
US-40	Fox Creek - SE ¼, SW ¼, Sec. 28, T4N, R45E to confluence with Teton River, including spring creek tributaries			
US-41	Fox Creek - North Fox Creek Canal (NW ¼, Sec 29 T4N, R46E) to SE ¼, SW ¼, Sec. 28, T4N, R45E			
US-42	Fox Creek - Idaho/Wyoming border to North Fox Creek Canal (NW ¼, Sec 29 T4N, R46E)			
US-43	Foster Creek spring creek complex - south to Fox Creek and north to Darby Creek			
US-44	Darby Creek - SW ¼, SE ¼, S10, T4N, R45E, to mouth, including spring creek tributaries			
US-45	Darby Creek - Idaho/Wyoming border to SW ¼, SE ¼, Sec. 10, T4N, R45E			

Unit	Waters	Aquatic Life	Recreation	Other
US-46	Dick Creek spring complex - south to Darby Creek and north to Teton Creek			
US-47	Teton Creek - Highway 33 bridge to mouth, including spring creek tributaries			
US-48	Teton Creek - Idaho/Wyoming border to Highway 33 bridge			
US-49	Driggs Springs spring creek complex - located between Teton Creek and Woods Creek			
US-50	Woods Creek - source to mouth, including spring creek tributaries and spring creek complex north of Woods Creek to latitude 43 degrees, 45.5 minutes north.			
US-51	Dry Creek - Idaho/Wyoming border to sinks (SE ¼, NE ¼, S12, T5N, R45E)			
US-52	South Leigh Creek - SE ¼, NE ¼, Sec. 1 T5N, R44E to mouth			
US-53	South Leigh Creek - Idaho/Wyoming border to SE ¼, NE ¼, Sec. 1 T5N, R44			
US-54	Spring Creek - North Leigh Creek to mouth			
US-55	North Leigh Creek - Idaho/Wyoming border to mouth			
US-56	Spring Creek - source to North Leigh Creek, including Spring Creek complex north of Spring Creek to latitude 43 degrees, 49.9 minutes north			
US-57	Badger Creek - spring (NW ¼, SW ¼, Sec. 26 T7N, R44E) to mouth			
US-58	Badger Creek - diversion (NW ¼, SW ¼, Sec. 9, T6N, R45E) to spring (NW ¼, SW ¼, Sec. 26 T7N, R44E)			
US-59	Badger Creek - source to diversion (NW ¼, SW ¼, Sec. 9, T6N, R45E)			
US-60	South Fork Badger Creek - diversion (NE ¼, NE ¼, Sec. 12, T6N, R45E) to mouth			
US-61	South Fork Badger Creek - Idaho/Wyoming border to diversion (NE ¼, NE ¼, Sec. 12, T6N, R45E)			
US-62	North Fork Badger Creek - Idaho/Wyoming border to mouth			
US-63	Bitch Creek - Swanner Creek to mouth			
US-64	Swanner Creek - Idaho/Wyoming border to mouth			
US-65	Bitch Creek - Idaho/Wyoming border to Swanner Creek			

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07. Willow Subbasin. The Willow Subbasin, HUC 17040205, is comprised of thirty-two (32) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Willow Creek - Ririe Reservoir Dam to Eagle Rock Canal	COLD SS	SCR	
US-2	Ririe Reservoir (Willow Creek)	COLD SS	PCR	DWS
US-3	Blacktail Creek - source to Ririe Reservoir			
US-4	Willow Creek - Bulls Fork to Ririe Reservoir	COLD SS	PCR	DWS
US-5	Willow Creek - Birch Creek to Bulls Fork	COLD SS	PCR	DWS
US-6	Birch Creek - source to mouth			
US-7	Squaw Creek - source to mouth			
US-8	Willow Creek - Mud Creek to Birch Creek	COLD SS	PCR	DWS
US-9	Mud Creek - source to mouth			
US-10	Sellars Creek - source to mouth			
US-11	Willow Creek - Crane Creek to Mud Creek	COLD SS	PCR	DWS
US-12	Mill Creek - source to mouth			
US-13	Willow Creek - source to Crane Creek	COLD SS	PCR	DWS
US-14	Crane Creek - source to mouth			
US-15	Long Valley Creek - source to mouth			
US-16	Grays Lake outlet - Hell Creek to mouth			
US-17	Grays Lake outlet - Homer Creek to Hell Creek			
US-18	Homer Creek - source to mouth			
US-19	Grays Lake outlet - Brockman Creek to Homer Creek			
US-20	Grays Lake outlet - Grays Lake to Brockman Creek			
US-21	Grays Lake			
US-22	Little Valley Creek - source to mouth			
US-23	Gravel Creek - source to mouth			
US-24	Brockman Creek - Corral Creek to mouth			
US-25	Brockman Creek - source to Corral Creek			
US-26	Corral Creek - source to mouth			
US-27	Sawmill Creek - source to mouth			
US-28	Lava Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
US-29	Hell Creek - source to mouth			
US-30	Bulls Fork - source to mouth			
US-31	Tex Creek - source to mouth			
US-32	Meadow Creek - source to Ririe Reservoir			

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08. American Falls Subbasin. The American Falls Subbasin, HUC 17040206, is comprised of twenty-six (26) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	American Falls Reservoir (Snake River)	COLD	PCR	DWS
US-2	Bannock Creek - source to American Falls Reservoir	COLD	SCR	
US-3	Starlight Creek - source to mouth			
US-4	Blind Spring - source to mouth			
US-5	Sunbeam Creek - source to mouth			
US-6	Moonshine Creek - source to mouth			
US-7	Sawmill Creek - source to mouth			
US-8	West Fork Bannock Creek - source to mouth			
US-9	Knox Creek - source to mouth			
US-10	Rattlesnake Creek - source to mouth			
US-11	Clifton Creek - source to mouth			
US-12	Midnight Creek - source to mouth			
US-13	Michaud Creek - source to mouth			
US-14	Ross Fork - Gibson Canal to American Falls Reservoir			
US-15	Ross Fork - Indian Creek to Gibson Canal			
US-16	Indian Creek - source to mouth			
US-17	South Fork Ross Fork - source to mouth			
US-18	Ross Fork - source to South Fork Ross Fork			
US-19	Clear Creek - source to American Falls Reservoir			
US-20	Spring Creek - source to American Falls Reservoir			
US-21	Big Jimmy Creek - source to American Falls Reservoir			
US-22	Snake River - river mile 791 (T01N, R37E, Sec. 10) to American Falls Reservoir	COLD SS	PCR	DWS
US-23	Jeff Cabin Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
US-24	McTucker Creek - source to American Falls Reservoir			
US-25	Little Hole Draw - source to American Falls Reservoir			
US-26	Pleasant Valley - source to American Falls Reservoir			

(4-5-00)

09. Blackfoot Subbasin. The Blackfoot Subbasin, HUC 17040207, is comprised of thirty-one (31) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Blackfoot River - Fort Hall Main Canal diversion to mouth		SCR	
US-2	Blackfoot River - Blackfoot Reservoir Dam to Fort Hall Main Canal diversion	COLD SS	PCR	
US-3	Garden Creek - source to mouth			
US-4	Wood Creek - source to mouth			
US-5	Grave Creek - source to mouth			
US-6	Corral Creek - source to mouth			
US-7	Grizzly Creek - source to mouth			
US-8	Thompson Creek - source to mouth			
US-9	Blackfoot Reservoir	COLD	PCR	
US-10	Blackfoot River - confluence of Lanes and Diamond Creeks to Blackfoot Reservoir	COLD SS	PCR	DWS
US-11	Trail Creek - source to mouth			
US-12	Slug Creek - source to mouth			
US-13	Dry Valley Creek - source to mouth			
US-14	Maybe Creek - source to mouth			
US-15	Mill Canyon - source to mouth			
US-16	Diamond Creek - source to mouth			
US-17	Timothy Creek - source to mouth			
US-18	Lanes Creek - source to mouth			
US-19	Bacon Creek - source to mouth			
US-20	Browns Canyon Creek - source to mouth			
US-21	Chippy Creek - source to mouth			
US-22	Sheep Creek - source to mouth			
US-23	Angus Creek - source to mouth			
US-24	Wooley Valley - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
US-25	Meadow Creek - source to Blackfoot Reservoir			
US-26	Brush Creek - source to mouth			
US-27	Rawlins Creek - source to mouth			
US-28	Miner Creek - source to mouth			
US-29	Cedar Creek - source to mouth			
US-30	Wolverine Creek - source to mouth			
US-31	Jones Creek - source to mouth			

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10. Portneuf Subbasin. The Portneuf Subbasin, HUC 17040208, is comprised of twenty-six (26) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Portneuf River - Marsh Creek to American Falls Reservoir	COLD SS	SCR	
US-2	City Creek - source to mouth			
US-3	Gibson Jack Creek - source to mouth			
US-4	Mink Creek - source to mouth			
US-5	Indian Creek - source to mouth			
US-6	Marsh Creek - source to mouth	COLD	SCR	
US-7	Walker Creek - source to mouth			
US-8	Bell Marsh Creek - source to mouth			
US-9	Goodenough Creek - source to mouth			
US-10	Garden Creek - source to mouth			
US-11	Hawkins Creek - Hawkins Reservoir Dam to mouth			
US-12	Hawkins Reservoir			
US-13	Hawkins Creek - source to Hawkins Reservoir			
US-14	Cherry Creek - source to mouth			
US-15	Birch Creek - source to mouth			
US-16	Portneuf River - Chesterfield Reservoir Dam to Marsh Creek	COLD SS	PCR	DWS
US-17	Dempsey Creek - source to mouth			
US-18	Twentyfourmile Creek - source to mouth			
US-19	Chesterfield Reservoir			

Unit	Waters	Aquatic Life	Recreation	Other
US-20	Portneuf River - source to Chesterfield Reservoir	COLD SS	PCR	DWS
US-21	Toponce Creek - source to mouth			
US-22	Pebble Creek - source to mouth			
US-23	Rapid Creek - source to mouth			
US-24	Pocatello Creek - confluence of North and South Fork Pocatello Creeks to mouth			
US-25	South Fork Pocatello Creek - source to mouth			
US-26	North Fork Pocatello Creek - source to mouth			

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11. Lake Walcot Subbasin. The Lake Walcot Subbasin, HUC 17040209, is comprised of thirteen (13) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Snake River - Heyburn/Burley Bridge (T10S, R23E, Sec.17) to Milner-Gooding Canal	WARM	PCR	
US-2	Snake River - Minidoka Dam to Heyburn/Burley Bridge (T10S, R23E, Sec.17)	COLD SS	PCR	
US-3	Marsh Creek - source to mouth			
US-4	Lake Walcott (Snake River)	COLD	PCR	DWS
US-5	Snake River - Raft River to Lake Walcott	COLD	PCR	DWS
US-6	Snake River - Rock Creek to Raft River	COLD	PCR	DWS
US-7	Fall Creek - source to mouth			
US-8	Rock Creek - confluence of South and East Fork Rock Creeks to mouth	COLD SS	PCR	
US-9	South Fork Rock Creek - source to mouth			
US-10	East Fork Rock Creek - source to mouth			
US-11	Snake River - American Falls Reservoir Dam to Rock Creek	COLD	PCR	DWS
US-12	Warm Creek - source to mouth			
US-13	Craters of the Moon complex			

(4-5-00)

12. Raft Subbasin. The Raft Subbasin, HUC 17040210, is comprised of twenty-three (23) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Raft River - Heglar Canyon Creek to mouth			
US-2	Raft River - Cassia Creek to Heglar Canyon Creek	COLD SS	PCR	
US-3	Cassia Creek - Conner Creek to mouth			
US-4	Conner Creek - source to mouth			
US-5	Cassia Creek - Clyde Creek to Conner Creek			
US-6	Clyde Creek - source to mouth			
US-7	Cassia Creek - source to Clyde Creek			
US-8	Raft River - Cottonwood Creek to Cassia Creek	COLD SS	PCR	
US-9	Cottonwood Creek - source to mouth			
US-10	Raft River - Unnamed Tributary (T15S, R26E, Sec. 24) to Cottonwood Creek	COLD SS	PCR	
US-11	Grape Creek - source to mouth			
US-12	Edwards Creek - source to mouth			
US-13	Raft River - Idaho/Utah border to Edwards Creek	COLD SS	PCR	
US-14	Junction Creek - source to Idaho/Utah border			
US-15	Cottonwood Creek - source to Idaho/Utah border			
US-16	Clear Creek - Idaho/Utah border to mouth			
US-17	Kelsaw Canyon Creek - source to mouth			
US-18	Meadow Creek - source to mouth			
US-19	Sublett Creek - Sublett Reservoir Dam to mouth			
US-20	Sublett Reservoir			
US-21	Sublett Creek - source to Sublett Reservoir			
US-22	Lake Fork - source to Sublett Reservoir			
US-23	Heglar Canyon Creek - source to mouth			

(4-5-00)

13. **Goose Subbasin.** The Goose Subbasin, HUC 17040211, is comprised of fourteen (14) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Big Cottonwood Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
US-2	Lower Goose Creek Reservoir	COLD SS	PCR	
US-3	Trapper Creek - from and including Squaw Creek to Lower Goose Creek Reservoir			
US-4	Trapper Creek - source to Squaw Creek			
US-5	Goose Creek - Beaverdam Creek to Lower Goose Creek Reservoir	COLD SS	PCR	
US-6	Beaverdam Creek - source to mouth			
US-7	Trout Creek - source to Idaho/Utah border			
US-8	Goose Creek - source to Idaho/Utah border	COLD SS	PCR	
US-9	Birch Creek - Idaho/Utah border to mouth			
US-10	Blue Hill Creek - source to mouth			
US-11	Cold Creek - source to mouth			
US-12	Birch Creek - source to mouth			
US-13	Mill Creek - source to mouth			
US-14	Land/Willow/Smith Creek complex			

(4-5-00)

14. Upper Snake-Rock Subbasin. The Upper Snake-Rock Subbasin, HUC 17040212, is comprised of forty-one (41) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Snake River - Lower Salmon Falls to Clover Creek	COLD SS	PCR	
US-2	Big Pilgrim Gulch - source to mouth			
US-3	Cassia Gulch - source to mouth			
US-4	Tuana Gulch - source to mouth			
US-5	Snake River - Box Canyon Creek to Lower Salmon Falls	COLD SS	PCR	
US-6	Riley Creek - source to mouth	COLD SS	PCR	DWS
US-7	Snake River - Rock Creek to Box Canyon Creek	COLD SS	PCR	
US-8	Deep Creek - High Line Canal to mouth	COLD SS	SCR	

Unit	Waters	Aquatic Life	Recreation	Other
US-9	Deep Creek - source to High Line Canal	COLD SS	SCR	
US-10	Mud Creek - Deep Creek Road (T09S, R14E) to mouth	COLD SS	SCR	
US-11	Mud Creek - source to Deep Creek Road (T09S, R14E)			
US-12	Cedar Draw - source to mouth	COLD SS	SCR	
US-13	Rock Creek -river mile 25 (T11S, R18E, Sec. 36) to mouth	COLD SS	SCR	
US-14	Cottonwood Creek - source to mouth	COLD	SCR	
US-15	McMullen Creek - source to mouth	COLD	SCR	
US-16	Rock Creek - Fifth Fork Rock Creek to river mile 25 (T11S, R18E, Sec. 36)	COLD SS	PCR	DWS
US-17	Fifth Fork Rock Creek - source to mouth	COLD	SCR	
US-18	Rock Creek - source to Fifth Fork Rock Creek	COLD SS	PCR	DWS
US-19	Snake River - Twin Falls to Rock Creek	COLD SS	PCR	
US-20	Snake River - Milner Dam to Twin Falls	COLD SS	PCR	
US-21	Murtaugh Lake			
US-22	Dry Creek - source to mouth	COLD SS	SCR	
US-23	West Fork Dry Creek - source to mouth			
US-24	East Fork Dry Creek - source to mouth	COLD	SCR	
US-25	Big Cottonwood Creek - source to mouth			
US-26	Wilson Lake Reservoir			
US-27	Vinyard Creek - Vinyard Lake to mouth	COLD	SCR	
US-28	Clear Lakes	COLD	SCR	
US-29	Banbury Springs		PCR	
US-30	Box Canyon Creek - source to mouth	COLD	SCR	
US-31	Thousand Springs	COLD	SCR	
US-32	Bickel Springs	COLD	SCR	
US-33	Billingsley Creek - source to mouth	COLD SS	PCR	DWS
US-34	Clover Creek - Pioneer Reservoir Dam to mouth	COLD SS	PCR	

Unit	Waters	Aquatic Life	Recreation	Other
US-35	Pioneer Reservoir			
US-36	Clover Creek - source to Pioneer Reservoir	COLD SS	PCR	
US-37	Cottonwood Creek - source to mouth			
US-38	Catchall Creek - source to mouth			
US-39	Deer Creek - source to mouth			
US-40	Calf Creek - source to mouth	COLD	SCR	
US-41	Dry Creek - source to mouth	COLD	SCR	

(3-29-12)

15. Salmon Falls Subbasin. The Salmon Falls Subbasin, HUC 17040213, is comprised of seventeen (17) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Salmon Falls Creek - Devil Creek to mouth	COLD SS	PCR	
US-2	Devil Creek - source to mouth			
US-3	Salmon Falls Creek - Salmon Falls Creek Dam to Devil Creek	COLD SS	PCR	
US-4	Cedar Creek Reservoir			
US-5	House Creek - source to Cedar Creek Reservoir			
US-6	Cedar Creek - source to Cedar Creek Reservoir			
US-7	Salmon Falls Creek Reservoir	COLD SS	PCR	
US-8	China, Browns, Corral, Whiskey Slough, Player Creeks - source to Salmon Falls Creek Reservoir			
US-9	Salmon Falls Creek - Idaho/Nevada border to Salmon Falls Creek Reservoir	COLD SS	PCR	
US-10	North Fork Salmon Falls Creek - source to Idaho/Nevada border			
US-11	Shoshone Creek - Hot Creek to Idaho/Nevada border			
US-12	Hot Creek - Idaho/Nevada border to mouth			
US-13	Shoshone Creek - Cottonwood Creek to Hot Creek			
US-14	Big Creek - source to mouth			
US-15	Cottonwood Creek - source to mouth			
US-16	Shoshone Creek - source to Cottonwood Creek			

(4-5-00)

16. Beaver-Camas Subbasin. The Beaver-Camas Subbasin, HUC 17040214, is comprised of twenty-six (26) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Camas Creek - Beaver Creek to Mud Lake	COLD SS	PCR	
US-2	Camas Creek - Spring Creek to Beaver Creek	COLD SS	PCR	
US-3	Beaver Creek - canal (T09N, R36E) to mouth	COLD SS	PCR	DWS
US-4	Spring Creek - Dry Creek to mouth			
US-5	Dry Creek - source to mouth			
US-6	Ching Creek - source to mouth			
US-7	Camas Creek - confluence of West and East Camas Creeks to Spring Creek	COLD SS	PCR	
US-8	Crooked/Crab Creek - source to mouth			
US-9	Warm Creek - Cottonwood Creek to mouth and East Camas Creek - T13N, R39E, Sec. 20, 6400 ft. elevation to Camas Creek			
US-10	East Camas Creek - from and including Larkspur Creek to T13N, R39E, Sec. 20, 6400 ft. elevation			
US-11	East Camas Creek - source to Larkspur Creek			
US-12	West Camas Creek - Targhee National Forest Boundary (T13N, R38E) to Camas Creek			
US-13	West Camas Creek - source to Targhee National Forest Boundary (T13N, R38E)			
US-14	Beaver Creek - Dry Creek to canal (T09N, R36E)	COLD SS	PCR	DWS
US-15	Beaver Creek - Rattlesnake Creek to Dry Creek	COLD SS	PCR	DWS
US-16	Rattlesnake Creek - source to mouth			
US-17	Threemile Creek - source to mouth			
US-18	Beaver Creek - Miners Creek to Rattlesnake Creek	COLD SS	PCR	DWS
US-19	Miners Creek - source to mouth			
US-20	Beaver Creek - Idaho Creek to Miners Creek	COLD SS	PCR	DWS
US-21	Beaver Creek - source to Idaho Creek	COLD SS	PCR	DWS

Unit	Waters	Aquatic Life	Recreation	Other
US-22	Idaho Creek - source to mouth			
US-23	Pleasant Valley Creek - source to mouth			
US-24	Huntley Canyon Creek - source to mouth			
US-25	Dry Creek - source to mouth			
US-26	Cottonwood Creek complex			

(4-5-00)

17. Medicine Lodge Subbasin. The Medicine Lodge Subbasin, HUC 17040215, is comprised of twenty-two (22) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Mud Lake			
US-2	Medicine Lodge Creek - Indian Creek to playas	COLD SS	PCR	DWS
US-3	Indian Creek - confluence of West and East Fork Indian Creeks to mouth			
US-4	East Fork Indian Creek - source to mouth			
US-5	West Fork Indian Creek - source to mouth	COLD SS	SCR	
US-6	Medicine Lodge Creek - Edie Creek to Indian Creek	COLD SS	PCR	DWS
US-7	Middle Creek - Dry Creek to mouth			
US-8	Middle Creek - source to Dry Creek			
US-9	Dry Creek - source to mouth			
US-10	Edie Creek - source to mouth	COLD SS	SCR	
US-11	Medicine Lodge Creek - confluence of Warm and Fritz Creeks to Edie Creek	COLD SS	PCR	DWS
US-12	Irving Creek - source to mouth	COLD SS	SCR	
US-13	Warm Creek - source to mouth	COLD SS	SCR	
US-14	Divide Creek - source to mouth			
US-15	Horse Creek - source to mouth			
US-16	Fritz Creek - source to mouth	COLD SS	SCR	

Unit	Waters	Aquatic Life	Recreation	Other
US-17	Webber Creek - source to mouth	COLD SS	SCR	
US-18	Deep Creek - source to mouth			
US-19	Blue Creek - source to mouth			
US-20	Warm Springs Creek - source to mouth			
US-21	Crooked Creek - source to mouth			
US-22	Chandler Canyon complex			

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18. Birch Subbasin. The Birch Subbasin, HUC 17040216, is comprised of sixteen (16) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Birch Creek - Reno Ditch to playas	COLD SS	PCR	DWS
US-2	Birch Creek - Pass Creek to Reno Ditch	COLD SS	PCR	DWS
US-3	Birch Creek - Unnamed Tributary (T11N, R11W, Sec. 35) to Pass Creek	COLD SS	PCR	DWS
US-4	Unnamed Tributary - source to mouth; includes Timber Canyon to Worthing Canyon Creeks (T11N, R11W, Sec. 35)			
US-5	Birch Creek - confluence of Mud and Scott Canyon Creeks to Unnamed Tributary (T11N, R11W, Sec. 35)	COLD SS	PCR	DWS
US-6	Scott Canyon Creek - source to mouth			
US-7	Mud Creek - Willow Creek to Scott Canyon Creek	COLD SS	PCR	DWS
US-8	Cedar Gulch and Irish Canyon - source to mouth			
US-9	Willow Creek - source to mouth			
US-10	Mud Creek - Unnamed Tributary (T12N, R11W, Sec. 29) to Willow Creek			
US-11	Mud Creek - source to Unnamed Tributary (T12N, R11W, Sec. 29)			
US-12	Unnamed Tributary - source to mouth (T12N, R11W, Sec. 29)			
US-13	Meadow Canyon Creek - source to mouth			
US-14	Rocky Canyon Creek - source to mouth			
US-15	Pass Creek - source to mouth			
US-16	Eightmile Canyon Creek - source to mouth			

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19. Little Lost Subbasin. The Little Lost Subbasin, HUC 17040217, is comprised of twenty-nine (29) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Little Lost River - canal (T06N, R28E) to playas	COLD SS	PCR	
US-2	Little Lost River - Big Spring Creek to canal (T06N, R28E)	COLD SS	PCR	
US-3	Big Spring Creek - source to mouth			
US-4	North Creek - source to mouth			
US-5	Uncle Ike Creek - source to mouth			
US-6	Unnamed Tributaries - source to mouth (T08N, R28E)			
US-7	Little Lost River - Badger Creek to Big Spring Creek	COLD SS	PCR	
US-8	Badger Creek - source to mouth			
US-9	Little Lost River - Wet Creek to Badger Creek	COLD SS	PCR	
US-10	Little Lost River - confluence of Summit and Sawmill Creeks to Wet Creek	COLD SS	PCR	
US-11	Deep Creek - source to mouth			
US-12	Sawmill Creek - Warm Creek to mouth			
US-13	Warm Creek - source to mouth			
US-14	Sawmill Creek - confluence of Timber Creek and Main Fork to Warm Creek			
US-15	Squaw Creek - source to mouth			
US-16	Bear Creek - source to mouth			
US-17	Main Fork - source to mouth			
US-18	Timber Creek - source to mouth			
US-19	Summit Creek - source to mouth			
US-20	Dry Creek - Dry Creek Canal to mouth			
US-21	Dry Creek - source to Dry Creek Canal			
US-22	Wet Creek - Squaw Creek to mouth			
US-23	Squaw Creek - source to mouth			
US-24	Wet Creek - source to Squaw Creek			
US-25	Deer Creek - source to mouth			
US-26	Taylor Canyon Creek - source to mouth			
US-27	Cabin Fork Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
US-28	Hurst Creek - source to mouth			
US-29	Unnamed Tributary - source to mouth (T5N, R29E, Sec. 04 and 09)			

(4-5-00)

20. Big Lost Subbasin. The Big Lost Subbasin, HUC 17040218, is comprised of sixty-one (61) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Big Lost River Sinks (playas) and Dry Channel	COLD SS	PCR	DWS
US-2	Big Lost River - Spring Creek to Big Lost River Sinks (playas)	COLD SS	PCR	DWS
US-3	Spring Creek - Lower Pass Creek to Big Lost River			
US-4	Big Lost River - Antelope Creek to Spring Creek	COLD SS	PCR	DWS
US-5	King, Lime Kiln, Ramshorn, and Anderson Canyon Creek - source to mouth			
US-6	Lower Pass Creek - source to mouth			
US-7	Big Lost River - Alder Creek to Antelope Creek	COLD SS	PCR	DWS
US-8	Elbow, Jepson, Clark, Maddock, and Jaggles Canyon Creek - source to mouth			
US-9	Pass Creek - source to mouth			
US-10	Big Lost River - Beck and Evan Ditch to Alder Creek	COLD SS	PCR	DWS
US-11	Big Lost River - McKay Reservoir Dam to Beck and Evan Ditch	COLD SS	PCR	DWS
US-12	McKay Reservoir	COLD SS	PCR	DWS
US-13	Big Lost River - Jones Creek to McKay Reservoir	COLD SS	PCR	DWS
US-14	Jones Creek - source to mouth			
US-15	Big Lost River - Thousand Springs Creek to Jones Creek	COLD SS	PCR	DWS
US-16	Thousand Springs Creek - source to mouth			
US-17	Lone Cedar Creek - source to mouth			
US-18	Cedar Creek - source to mouth			
US-19	Rock Creek - source to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
US-20	Willow Creek - source to mouth			
US-21	Arentson Gulch and Unnamed Tributaries - source to mouth (T10N, R22E)			
US-22	Sage Creek - source to mouth			
US-23	Parsons Creek - T8N, R22E, Sec. 24, point of perennial flow north of road to Mackay Reservoir			
US-24	Big Lost River - Burnt Creek to Thousand Springs Creek	COLD SS	PCR	DWS
US-25	Big Lost River - Summit Creek to and including Burnt Creek	COLD SS	PCR	DWS
US-26	Bridge Creek - source to mouth			
US-27	North Fork Big Lost River - source to mouth			
US-28	Summit Creek - source to mouth			
US-29	Kane Creek - source to mouth			
US-30	Wildhorse Creek - Fall Creek to mouth			
US-31	Wildhorse Creek - source to Fall Creek			
US-32	Fall Creek - source to mouth			
US-33	East Fork Big Lost River - Cabin Creek to mouth			
US-34	Fox Creek - source to mouth			
US-35	Star Hope Creek - Lake Creek to mouth			
US-36	Star Hope Creek - source to Lake Creek			
US-37	Muldoon Canyon Creek - source to mouth			
US-38	Lake Creek - source to mouth			
US-39	East Fork Big Lost River - source to Cabin Creek			
US-40	Cabin Creek - source to mouth			
US-41	Corral Creek - source to mouth			
US-42	Boone Creek - source to mouth			
US-43	Warm Springs Creek - source to mouth			
US-44	Navarre Creek - source to mouth			
US-45	Alder Creek - source to mouth			
US-46	Antelope Creek - Spring Creek to mouth			
US-47	Antelope Creek - Dry Fork Creek to Spring Creek			
US-48	Spring Creek - source to mouth			
US-49	Cherry Creek - confluence of Left Fork Cherry and Lupine Creeks to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
US-50	Lupine Creek - source to mouth			
US-51	Left Fork Cherry Creek - source to mouth			
US-52	Antelope Creek - Iron Bog Creek to Dry Fork Creek			
US-53	Bear Creek - source to mouth			
US-54	Iron Bog Creek - confluence of Left and Right Fork Iron Bog Creeks to mouth			
US-55	Right Fork Iron Bog Creek - source to mouth			
US-56	Left Fork Iron Bog Creek - source to mouth			
US-57	Antelope Creek - source to Iron Bog Creek			
US-58	Leadbelt Creek - source to mouth			
US-59	Dry Fork Creek - source to mouth			
US-60	South Fork Antelope Creek - Antelope Creek to mouth			
US-61	Hammond Spring Creek complex			

(3-29-12)

21. Big Wood Subbasin. The Big Wood Subbasin, HUC 17040219, is comprised of thirty (30) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Malad River - confluence of Black Canyon Creek and Big Wood River to mouth	COLD SS	PCR	
US-2	Big Wood River - Magic Reservoir Dam to mouth	COLD SS	PCR	
US-3	Magic Reservoir	COLD	PCR	
US-4	Big Wood River - Seamans Creek to Magic Reservoir	COLD SS	PCR	DWS
US-5	Seamans Creek - Slaughterhouse Creek to mouth			
US-6	Seamans Creek - source to and including Slaughterhouse Creek			
US-7	Big Wood River - North Fork Big Wood River to Seamans Creek	COLD SS	PCR	DWS
US-8	Quigley Creek - source to mouth			
US-9	Indian Creek - source to mouth			
US-10	East Fork Wood River - Hyndman Creek to mouth			
US-11	East Fork Wood River - source to Hyndman Creek			
US-12	Hyndman Creek - source Creek to mouth			
US-13	Trail Creek - Corral Creek to mouth			

Unit	Waters	Aquatic Life	Recreation	Other
US-14	Trail Creek - source to and including Corral Creek			
US-15	Lake Creek - source to mouth			
US-16	Eagle Creek - source to mouth			
US-17	North Fork Big Wood River - source to mouth			
US-18	Big Wood River - source to North Fork Big Wood River	COLD SS	PCR	DWS
US-19	Boulder Creek - source to mouth			
US-20	Prairie Creek - source to mouth			
US-21	Baker Creek - source to mouth			
US-22	Fox Creek - source to mouth			
US-23	Warm Springs Creek - Thompson Creek to mouth			
US-24	Warm Springs Creek - source to and including Thompson Creek			
US-25	Greenhorn Creek - source to mouth			
US-26	Deer Creek - source to mouth			
US-27	Croy Creek - source to mouth			
US-28	Rock Creek - source to mouth			
US-29	Thorn Creek - source to mouth			
US-30	Black Canyon Creek - source to mouth			

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22. Camas Subbasin. The Camas Subbasin, HUC 17040220, is comprised of twenty-seven (27) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Camas Creek - Elk Creek to Magic Reservoir	COLD SS	PCR	
US-2	Camp Creek - source to mouth			
US-3	Willow Creek - Beaver Creek to mouth			
US-4	Beaver Creek - source to mouth			
US-5	Willow Creek - source to Beaver Creek			
US-6	Elk Creek - source to mouth			
US-7	Camas Creek - Solider Creek to Elk Creek	COLD SS	PCR	
US-8	Deer Creek - Big Deer Creek to mouth			
US-9	Deer Creek - source to and including Big Deer Creek			

Unit	Waters	Aquatic Life	Recreation	Other
US-10	Powell Creek - source to mouth			
US-11	Soldier Creek - Wardrop Creek to mouth			
US-12	Soldier Creek - source to and including Wardrop Creek			
US-13	Camas Creek - Corral Creek to Soldier Creek	COLD SS	PCR	
US-14	Threemile Creek - source to mouth			
US-15	Corral Creek - confluence of East Fork and West Fork Corral Creeks to mouth			
US-16	East Fork Corral Creek - source to mouth			
US-17	West Fork Corral Creek - source to mouth			
US-18	Camas Creek - source to Corral Creek	COLD SS	PCR	
US-19	Chimney Creek - source to mouth			
US-20	Negro Creek - source to mouth			
US-21	Wildhorse Creek - source to mouth			
US-22	Malad River - source to mouth			
US-23	Mormon Reservoir			
US-24	Dairy Creek - source to Mormon Reservoir			
US-25	McKinney Creek - source to Mormon Reservoir			
US-26	Spring Creek Complex			
US-27	Kelly Reservoir			

(4-5-00)

23. Little Wood Subbasin. The Little Wood Subbasin, HUC 17040221, is comprised of twenty-three (23) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
US-1	Little Wood River - Richfield (T04S, R19E, Sec. 25) to mouth	COLD	PCR	
US-2	Little Wood River - Carey Lake outlet to Richfield (T04S, R19E, Sec. 25)	COLD SS	PCR	
US-3	Little Wood River - West Canal (north) to West Canal (south)	COLD SS	PCR	
US-4	Carey Lake outlet			
US-5	Carey Lake			
US-6	Fish Creek - Fish Creek Reservoir Dam to mouth			
US-7	Fish Creek Reservoir			

Unit	Waters	Aquatic Life	Recreation	Other
US-8	Fish Creek - source to Fish Creek Reservoir			
US-9	West Fork Fish Creek - source to Fish Creek Reservoir			
US-10	Little Wood River - Little Wood River Reservoir Dam to Carey Lake Outlet	COLD SS	PCR	
US-11	Little Fish Creek - source to mouth			
US-12	Little Wood River Reservoir	COLD SS	PCR	
US-13	Little Wood River - Muldoon Creek to Little Wood River Reservoir	COLD SS	PCR	
US-14	Muldoon Creek -source to mouth			
US-15	South Fork Muldoon Creek - Friedman Creek to mouth			
US-16	South Fork Muldoon Creek - source to Friedman Creek			
US-17	Friedman Creek - Trail Creek to mouth			
US-18	Trail Creek - source to mouth			
US-19	Friedman Creek - source to Trail Creek			
US-20	Little Wood River - source to Muldoon Creek	COLD SS	PCR	
US-21	Baugh Creek - source to mouth			
US-22	Dry Creek - source to mouth			
US-23	Silver Creek - source to mouth	COLD SS	PCR	DWS

(3-29-12)

151. -- 159. (RESERVED)

160. BEAR RIVER BASIN.

Surface waters found within the Bear River basin total six (6) subbasins and are designated as follows: (4-5-00)

01. Central Bear Subbasin. The Central Bear Subbasin, HUC 16010102, is comprised of eight (8) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
B-1	Bear River - Idaho/Wyoming border to railroad bridge (T14N, R45E, Sec. 21)	COLD SS	PCR	
B-2	Pegram Creek - source to mouth			
B-3	Thomas Fork - Idaho/Wyoming border to mouth	COLD SS	PCR	

Unit	Waters	Aquatic Life	Recreation	Other
B-4	Raymond Creek - Idaho/Wyoming border to mouth; and the Hollows - source to mouth			
B-5	Dry Creek - source to mouth	COLD SS	SCR	
B-6	Preuss Creek - source to mouth	COLD SS	SCR	
B-7	Salt Creek - source to Idaho/Wyoming border	COLD SS	SCR	
B-8	Sheep Creek - source to mouth			

(4-5-00)

02. Bear Lake Subbasin. The Bear Lake Subbasin, HUC 16010201, is comprised of twenty-five (25) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
B-1	Alexander Reservoir (Bear River)	COLD SS	PCR	
B-2	Bear River -railroad bridge (T14N, R45E, Sec. 21) to Alexander Reservoir	COLD SS	PCR	
B-3	Bailey Creek - source to mouth	COLD SS	SCR	
B-4	Eightmile Creek - source to mouth	COLD SS	SCR	
B-5	Pearl Creek - source to mouth	COLD SS	SCR	
B-6	Stauffer Creek - source to mouth	COLD SS	SCR	
B-7	Skinner Creek - source to mouth	COLD SS	SCR	
B-8	Co-op Creek - source to mouth	COLD SS	SCR	
B-9	Ovid Creek - confluence of North and Mill Creek to mouth			
B-10	North Creek - source to mouth	COLD SS	PCR	
B-11	Mill Creek - source to mouth	COLD SS	PCR	
B-12	Bear Lake Outlet - Lifton Station to Bear River	COLD SS	PCR	DWS

Unit	Waters	Aquatic Life	Recreation	Other
B-13	Paris Creek - source to mouth	COLD SS	PCR	
B-14	Bloomington Creek - source to mouth	COLD SS	PCR	DWS
B-15	Spring Creek - source to mouth			
B-16	Little and St. Charles Creeks - source to Bear Lake	COLD SS	PCR	
B-17	Dry Canyon Creek - source to mouth			
B-18	Bear Lake	COLD SS	PCR	DWS
B-19	Fish Haven Creek - source to Bear Lake	COLD SS	PCR	
B-20	Montpelier Creek - source to mouth			
B-21	Snowslide Creek - source to mouth	COLD SS	SCR	
B-22	Georgetown Creek - source to mouth	COLD SS	PCR	DWS
B-23	Soda Creek - Soda Creek Reservoir Dam to Alexander Reservoir		SCR	
B-24	Soda Creek Reservoir		SCR	
B-25	Soda Creek - source to Soda Creek Reservoir		SCR	

(3-29-12)

03. Middle Bear Subbasin. The Middle Bear Subbasin, HUC 16010202, is comprised of twenty-one (21) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
B-1	Spring Creek - source to Idaho/Utah border			
B-2	Cub River - US Hwy 91 Bridge (T16S, R40E, Sec. 20) to Idaho/Utah border	COLD	SCR	
B-3	Cub River - from and including Sugar Creek to US Hwy 91 Bridge (T16S, R40E, Sec. 20)	COLD	PCR	
B-4	Cub River - source to Sugar Creek	COLD SS	PCR	DWS
B-5	Worm Creek - source to Idaho/Utah border	COLD	SCR	
B-6	Bear River - Oneida Narrows Reservoir Dam to Idaho/Utah border	COLD SS	PCR	

Unit	Waters	Aquatic Life	Recreation	Other
B-7	Mink Creek - source to mouth	COLD SS	PCR	
B-8	Oneida Narrows Reservoir	COLD SS	PCR	
B-9	Bear River - Alexander Reservoir Dam to Oneida Narrows Reservoir	COLD SS	PCR	
B-10	Williams Creek - source to mouth			
B-11	Trout Creek - source to mouth			
B-12	Whiskey Creek - source to mouth			
B-13	Densmore Creek - source to mouth			
B-14	Cottonwood Creek - source to Oneida Narrows Reservoir			
B-15	Battle Creek - source to mouth	COLD	SCR	
B-16	Twin Lakes Reservoir			
B-17	Oxford Slough			
B-18	Swan Lake Creek Complex			
B-19	Fivemile Creek - source to mouth			
B-20	Weston Creek - source to mouth			
B-21	Jenkins Hollow - source to Idaho/Utah border			

(3-29-12)

04. Little Bear-Logan Subbasin. The Little Bear-Logan Subbasin, HUC 16010203, is comprised of two (2) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
B-1	Beaver Creek - source to Idaho/Utah border			
B-2	Logan River - source to Idaho/Utah border			

(4-5-00)

05. Lower Bear-Malad Subbasin. The Lower Bear-Malad Subbasin, HUC 16010204, is comprised of thirteen (13) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
B-1	Malad River - Little Malad River to Idaho/Utah border	COLD	SCR	
B-2	Devil Creek - Devil Creek Reservoir Dam to mouth			
B-3	Devil Creek Reservoir			
B-4	Devil Creek - source to Devil Creek Reservoir			

Unit	Waters	Aquatic Life	Recreation	Other
B-5	Deep Creek - Deep Creek Reservoir Dam to mouth			
B-6	Deep Creek Reservoir			
B-7	Deep Creek - source to Deep Creek Reservoir			
B-8	Little Malad River - Daniels Reservoir Dam to mouth	COLD	PCR	
B-9	Daniels Reservoir			
B-10	Wright Creek - source to Daniels Reservoir	COLD SS	PCR	
B-11	Dairy Creek - source to mouth			
B-12	Malad River - source to Little Malad River	COLD	PCR	DWS
B-13	Samaria Creek - source to mouth			

(4-5-00)

06. Curlew Valley Subbasin. The Curlew Valley Subbasin, HUC 16020309, is comprised of three (3) water body units.

Unit	Waters	Aquatic Life	Recreation	Other
B-1	Deep Creek - Rock Creek to Idaho/Utah border	COLD	PCR	DWS
B-2	Deep Creek - source to Rock Creek	COLD	PCR	DWS
B-3	Rock Creek - source to mouth			

(4-5-00)

161. -- 199. (RESERVED)

200. GENERAL SURFACE WATER QUALITY CRITERIA.

The following general water quality criteria apply to all surface waters of the state, in addition to the water quality criteria set forth for specifically designated waters. (4-5-00)

01. Hazardous Materials. Surface waters of the state shall be free from hazardous materials in concentrations found to be of public health significance or to impair designated beneficial uses. These materials do not include suspended sediment produced as a result of nonpoint source activities. (8-24-94)

02. Toxic Substances. Surface waters of the state shall be free from toxic substances in concentrations that impair designated beneficial uses. These substances do not include suspended sediment produced as a result of nonpoint source activities. (8-24-94)

03. Deleterious Materials. Surface waters of the state shall be free from deleterious materials in concentrations that impair designated beneficial uses. These materials do not include suspended sediment produced as a result of nonpoint source activities. (8-24-94)

04. Radioactive Materials. (7-1-93)

a. Radioactive materials or radioactivity shall not exceed the values listed in the Code of Federal Regulations, Title 10, Chapter 1, Part 20, Appendix B, Table 2, Effluent Concentrations, Column 2. (8-24-94)

b. Radioactive materials or radioactivity shall not exceed concentrations required to meet the standards set forth in Title 10, Chapter 1, Part 20, of the Code of Federal Regulations for maximum exposure of critical human organs in the case of foodstuffs harvested from these waters for human consumption. (7-1-93)

05. Floating, Suspended or Submerged Matter. Surface waters of the state shall be free from floating, suspended, or submerged matter of any kind in concentrations causing nuisance or objectionable conditions or that may impair designated beneficial uses. This matter does not include suspended sediment produced as a result of nonpoint source activities. (8-24-94)

06. Excess Nutrients. Surface waters of the state shall be free from excess nutrients that can cause visible slime growths or other nuisance aquatic growths impairing designated beneficial uses. (8-24-94)

07. Oxygen-Demanding Materials. Surface waters of the state shall be free from oxygen-demanding materials in concentrations that would result in an anaerobic water condition. (7-1-93)

08. Sediment. Sediment shall not exceed quantities specified in Sections 250 and 252, or, in the absence of specific sediment criteria, quantities which impair designated beneficial uses. Determinations of impairment shall be based on water quality monitoring and surveillance and the information utilized as described in Section 350. (4-5-00)

09. Natural Background Conditions as Criteria. When natural background conditions exceed any applicable water quality criteria set forth in Sections 210, 250, 251, 252, or 253, the applicable water quality criteria shall not apply; instead, there shall be no lowering of water quality from natural background conditions. Provided, however, that temperature may be increased above natural background conditions when allowed under Section 401. (3-30-07)

201. -- 209. (RESERVED)

210. NUMERIC CRITERIA FOR TOXIC SUBSTANCES FOR WATERS DESIGNATED FOR AQUATIC LIFE, RECREATION, OR DOMESTIC WATER SUPPLY USE.

01. Criteria for Toxic Substances. The criteria of Section 210 apply to surface waters of the state as follows. (5-3-03)

a. Columns B1 and B2 of the following table apply to waters designated for aquatic life use. (3-25-16)

b. Column C2 of the following table applies to waters designated for primary or secondary contact recreation use. (3-25-16)

c. Column C1 of the following table applies to waters designated for domestic water supply use.

Note: In 2006, Idaho updated 167 human health criteria for 88 chemicals. On May 10, 2012, EPA disapproved Idaho's 2006 update of 167 human health criteria for toxic substances and the use of 17.5 g/day fish consumption rate for human health criteria (see IDAPA 58.01.02.210.05.b.i). This action was based on EPA's judgment that the fish consumption rate used in criteria derivation was not adequately protective. As a result of this action, the human health criteria published in the 2005 version of IDAPA 58.01.02.210.01 continue to apply and are effective for federal Clean Water Act purposes. These criteria are summarized in "Numeric Criteria for Toxic Substances (2005)" located at http://www.deq.idaho.gov/media/451725-human_health_criteria.pdf.

For more information regarding this EPA disapproval, go to <http://www.deq.idaho.gov/epa-actions-on-proposed-standards>.

A		B Aquatic life			C Human health for consumption of:				
(Number) Compound	a CAS Number	b CMC (µg/L)	b CCC (µg/L)	Carcinogen?	Water & fish (µg/L)		Fish only (µg/L)		
		B1	B2		C1		C2		
1	Antimony	7440360				5.2	c	190	c
2	Arsenic	7440382	340 e	150 e	Y	10	dfq	10	dfq
3	Beryllium	7440417					h		h
4	Cadmium	7440439	1.3 i	0.6 i			h		h
5a	Chromium III	16065831	570 i	74 i			h		h
5b	Chromium VI	18540299	16 e	11 e			h		h
6	Copper	7440508	17 i	11 i		1,300	q		
7	Lead	7439921	65 i	2.5 i			h		h
8a	Mercury	7439976		g					
<p>Note: In 2005, Idaho adopted EPA's recommended methylmercury fish tissue criterion for protection of human health. The decision was made to remove the old tissue-based aquatic life criteria and rely on the fish tissue criterion to provide protection for aquatic life as well as human health. Thus, current Idaho water quality standards do not have mercury water column criteria for the protection of aquatic life. While EPA approved Idaho's adoption of the fish tissue criterion in September 2005, it had withheld judgment on Idaho's removal of aquatic life criteria. On December 12, 2008, EPA disapproved Idaho's removal of the old aquatic life criteria. The water column criteria for total recoverable mercury effective for federal Clean Water Act purposes are located at http://www.deq.idaho.gov/epa-actions-on-proposed-standards.</p>									
8b	Methylmercury	22967926						0.3 mg/kg	p
9	Nickel	7440020	470 i	52 i		58	c	100	c
10	Selenium	7782492	20 f	5 f		29	c	250	c
11	Silver	7440224	3.4 i						
12	Thallium	7440280				0.017	c	0.023	c
13	Zinc	7440666	120 i	120 i		870	c	1,500	c
14	Cyanide	57125	22 j	5.2 j		3.9	c	140	c
15	Asbestos	1332214				7,000,000 fibers/L	q		
16	2, 3, 7, 8-TCDD Dioxin	1746016			Y	1.8E-08	cl	1.9E-08	cl
17	Acrolein	107028				3.2	c	120	c
18	Acrylonitrile	107131			Y	0.60	cl	22	cl
19	Benzene	71432				3.0	cl	28	c
20	Bromoform	75252			Y	62	cl	380	cl
21	Carbon Tetrachloride	56235			Y	3.6	cl	15	cl

A		B Aquatic life			C Human health for consumption of:			
(Number) Compound	a CAS Number	b CMC (µg/L)	b CCC (µg/L)	Carcinogen?	Water & fish (µg/L)		Fish only (µg/L)	
		B1	B2		C1		C2	
22	Chlorobenzene	108907			89	c	270	c
23	Chlorodibromomethane	124481		Y	7.4	cl	67	cl
24	Chloroethane	75003				h		h
25	2-Chloroethylvinyl Ether	110758				h		h
26	Chloroform	67663			61	c	730	c
27	Dichlorobromomethane	75274		Y	8.8	cl	86	cl
28	1,1-Dichloroethane	75343				h		h
29	1,2-Dichloroethane	107062		Y	96	cl	2,000	cl
30	1,1-Dichloroethylene	75354			310	c	5,200	c
31	1,2-Dichloropropane	78875		Y	8.5	cl	98	cl
32	1,3-Dichloropropene	542756		Y	2.5	cl	38	cl
33	Ethylbenzene	100414			32	c	41	c
34	Methyl Bromide	74839			130	c	3,700	c
35	Methyl Chloride	74873				h		h
36	Methylene Chloride	75092			38	c	960	c
37	1,1,2,2-Tetrachloroethane	79345		Y	1.4	cl	8.6	cl
38	Tetrachloroethylene	127184			15	c	23	c
39	Toluene	108883			47	c	170	c
40	1,2-Trans-Dichloroethylene	156605			120	c	1,200	c
41	1,1,1-Trichloroethane	71556			11,000	c	56,000	c
42	1,1,2-Trichloroethane	79005		Y	4.9	cl	29	cl
43	Trichloroethylene	79016			2.6	c	11	c
44	Vinyl Chloride	75014		Y	0.21	cl	5.0	cl
45	2-Chlorophenol	95578			30	c	260	c
46	2,4-Dichlorophenol	120832			9.6	c	19	c
47	2,4-Dimethylphenol	105679			110	c	820	c
48	2-Methyl-4,6-Dinitrophenol	534521			1.6	c	8.6	c
49	2,4-Dinitrophenol	51285			12	c	110	c

A		B Aquatic life				C Human health for consumption of:				
(Number) Compound	a CAS Number	b CMC (µg/L)		b CCC (µg/L)		Carcinogen?	Water & fish (µg/L)		Fish only (µg/L)	
		B1	B2	B1	B2		C1		C2	
50	2-Nitrophenol	88755						h		h
51	4-Nitrophenol	100027						h		h
52	3-Methyl-4-Chlorophenol	59507					350	c	750	c
53	Pentachlorophenol	87865	20 m	13 m	Y		0.11	cl	0.12	cl
54	Phenol	108952					3,800	c	85,000	c
55	2,4,6-Trichlorophenol	88062					1.5	c	2.0	c
56	Acenaphthene	83329					26	c	28	c
57	Acenaphthylene	208968						h		h
58	Anthracene	120127					110	c	120	c
59	Benzidine	92875				Y	0.0014	cl	0.033	cl
60	Benzo(a)Anthracene	56553				Y	0.0042	cl	0.0042	cl
61	Benzo(a)Pyrene	50328				Y	0.00042	cl	0.00042	cl
62	Benzo(b)Fluoranthene	205992				Y	0.0042	cl	0.0042	cl
63	Benzo(ghi)Perylene	191242						h		h
64	Benzo(k)Fluoranthene	207089				Y	0.042	cl	0.042	cl
65	Bis(2-Chloroethoxy) Methane	111911						h		h
66	Bis(2-Chloroethyl)Ether	111444				Y	0.29	cl	6.8	cl
67	Bis(2-Chloroisopropyl) Ether	108601					220	c	1,200	c
68	Bis(2-Ethylhexyl) Phthalate	117817				Y	1.2	cl	1.2	cl
69	4-Bromophenyl Phenyl Ether	101553						h		h
70	Butylbenzyl Phthalate	85687					0.33	c	0.33	c
71	2-Chloronaphthalene	91587					330	c	380	c
72	4-Chlorophenyl Phenyl Ether	7005723						h		h
73	Chrysene	218019				Y	0.42	cl	0.42	cl
74	Dibenzo (a,h) Anthracene	53703				Y	0.00042	cl	0.00042	cl

A		B Aquatic life			C Human health for consumption of:			
(Number) Compound	a CAS Number	b CMC (µg/L)	b CCC (µg/L)	Carcinogen?	Water & fish (µg/L)		Fish only (µg/L)	
		B1	B2		C1		C2	
75	1,2-Dichlorobenzene	95501			700	c	1,100	c
76	1,3-Dichlorobenzene	541731			3.5	c	4.8	c
77	1,4-Dichlorobenzene	106467			180	c	300	c
78	3,3'-Dichlorobenzidine	91941		Y	0.29	cl	0.48	cl
79	Diethyl Phthalate	84662			200	c	210	c
80	Dimethyl Phthalate	131113			600	c	600	c
81	Di-n-Butyl Phthalate	84742			8.2	c	8.3	c
82	2,4-Dinitrotoluene	121142		Y	0.46	cl	5.5	cl
83	2,6-Dinitrotoluene	606202				h		h
84	Di-n-Octyl Phthalate	117840				h		h
85	1,2-Diphenylhydrazine	122667		Y	0.25	cl	0.65	cl
86	Fluoranthene	206440			6.3	c	6.4	c
87	Fluorene	86737			21	c	22	c
88	Hexachlorobenzene	118741		Y	0.00026	cl	0.00026	cl
89	Hexachlorobutadiene	87683		Y	0.031	cl	0.031	cl
90	Hexachloro-cyclopentadiene	77474			1.3	c	1.3	c
91	Hexachloroethane	67721			0.23	c	0.24	c
92	Ideno (1,2,3-cd) Pyrene	193395		Y	0.0042	cl	0.0042	cl
93	Isophorone	78591		Y	330	cl	6,000	cl
94	Naphthalene	91203				h		h
95	Nitrobenzene	98953			12	c	180	c
96	N-Nitrosodimethylamine	62759		Y	0.0065	cl	9.1	cl
97	N-Nitrosodi-n-Propylamine	621647		Y	0.046	cl	1.5	cl
98	N-Nitrosodiphenylamine	86306		Y	3.14	cl	18	cl
99	Phenanthrene	85018				h		h
100	Pyrene	129000			8.1	c	8.4	c
101	1,2,4-Trichlorobenzene	120821			0.24	c	0.24	c
102	Aldrin	309002	3	Y	2.5E-06	cl	2.5E-06	cl

A		B Aquatic life			C Human health for consumption of:					
(Number) Compound	a CAS Number	b CMC (µg/L)	b CCC (µg/L)	Carcinogen?	Water & fish (µg/L)		Fish only (µg/L)			
		B1	B2		C1		C2			
103	alpha-BHC	319846			Y	0.0012	cl	0.0013	cl	
104	beta-BHC	319857			Y	0.036	cl	0.045	cl	
105	gamma-BHC (Lindane)	58899	2	0.08		1.4	c	1.4	c	
106	delta-BHC	319868					h		h	
107	Chlordane	57749	2.4	0.0043	Y	0.0010	cl	0.0010	cl	
108	4,4'-DDT	50293	1.1	0.001	Y	9.8E-05	cl	9.8E-05	cl	
109	4,4'-DDE	72559			Y	5.5E-05	cl	5.5E-05	cl	
110	4,4'-DDD	72548			Y	0.00042	cl	0.00042	cl	
111	Dieldrin	60571	2.5	0.0019	Y	4.2E-06	cl	4.2E-06	cl	
112	alpha-Endosulfan	959988	0.22	0.056		7.0	c	8.5	c	
113	beta-Endosulfan	33213659	0.22	0.056		11	c	14	c	
114	Endosulfan Sulfate	1031078				9.9	c	13	c	
115	Endrin	72208	0.18	0.0023		0.011	c	0.011	c	
116	Endrin Aldehyde	7421934				0.38	c	0.40	c	
117	Heptachlor	76448	0.52	0.0038	Y	2.0E-05	cl	2.0E-05	cl	
118	Heptachlor Epoxide	1024573	0.52	0.0038	Y	0.00010	cl	0.00010	cl	
119	Polychlorinated Biphenyls PCBs:	n		0.014	n	Y	0.00019	clo	0.00019	clo
120	Toxaphene	8001352	0.73	0.0002	Y	0.0023	cl	0.0023	cl	
121	Chlorine		19	k	11	k				
122	1,2,4,5-Tetrachlorobenzene	95943				0.0093	c	0.0094	c	
123	2,4,5-Trichlorophenol	95954				140	c	190	c	
124	Bis (Chloromethyl) Ether	542881			Y	0.0015	cl	0.055	cl	
125	Chlorophenoxy Herbicide (2,4,5-TP) [Silvex]	93721				82	c	130	c	
126	Chlorophenoxy Herbicide (2,4-D)	94757				1,000	c	3,900	c	
127	Dinitrophenols	25550587				13	c	320	c	

A		B Aquatic life			C Human health for consumption of:				
(Number) Compound	a CAS Number	b CMC (µg/L)	b CCC (µg/L)	Carcinogen?	Water & fish (µg/L)		Fish only (µg/L)		
		B1	B2		C1		C2		
128	Hexachlorocyclohexane (HCH)-Technical	608731			Y	0.027	cl	0.032	cl
129	Methoxychlor	72435				0.0054	c	0.0055	c
130	Pentachlorobenzene	608935				0.035	c	0.036	c

Table Footnotes

a. Chemical Abstracts Service (CAS) registry numbers which provide a unique identification for each chemical.

b. See definitions of Acute Criteria (CMC) and Chronic Criteria (CCC), Section 010 of these rules.

c. This criterion is based on input values to human health criteria calculation specified in Idaho's Technical Support Document (TSD) for Human Health Criteria Calculations - 2015. Criteria for non-carcinogens are calculated using the formula:

$$AWQC = RfD * RSC * \left(\frac{BW}{DI + (FI * BAF)} \right)$$

and criteria for carcinogens are calculated using the formula:

$$AWQC = RSD * \left(\frac{BW}{DI + (FI * BAF)} \right)$$

Where:

AWQC = Ambient water quality criterion (mg/L)

BW = Human Body Weight (kg), 80 is used in these criteria

DI = Drinking Water Intake, (L/day), 2.4 is used in these criteria

FI = Fish Intake, (kg/day), 0.0665 is used in these criteria

BAF = Bioaccumulation Factor, L/kg, chemical specific value, see TSD

RfD = Reference dose (mg/kg-day), chemical specific value, see TSD

$$RSD = \frac{\text{Target Incremental Cancer Risk}}{\text{Cancer Potency Factor}} \text{ (mg/kg-day), chemical specific value, see TSD}$$

RSC = Relative Source Contribution, chemical specific value, see TSD

d. Inorganic forms only.

e. Criteria for these metals are expressed as a function of the water effect ratio, WER, as defined in Subsection 210.03.c.iii. CMC = column B1 value X WER. CCC = column B2 value X WER.

A		B Aquatic life			C Human health for consumption of:	
(Number) Compound	a CAS Number	b CMC (µg/L)	b CCC (µg/L)	Carcinogen?	Water & fish (µg/L)	Fish only (µg/L)
		B1	B2		C1	C2
f. Criterion expressed as total recoverable (unfiltered) concentrations.						
g. No aquatic life criterion is adopted for inorganic mercury. However, the narrative criteria for toxics in Section 200 of these rules applies. The Department believes application of the human health criterion for methylmercury will be protective of aquatic life in most situations.						
h. No numeric human health criteria has been established for this contaminant. However, permit authorities should address this contaminant in NPDES permit actions using the narrative criteria for toxics from Section 200 of these rules.						
i. Aquatic life criteria for these metals are a function of total hardness (mg/L as calcium carbonate), the pollutant's water effect ratio (WER) as defined in Subsection 210.03.c.iii. and multiplied by an appropriate dissolved conversion factor as defined in Subsection 210.02. For comparative purposes only, the example values displayed in this table are shown as dissolved metal and correspond to a total hardness of one hundred (100) mg/L and a water effect ratio of one (1.0).						
j. Criteria are expressed as weak acid dissociable (WAD) cyanide.						
k. Total chlorine residual concentrations.						
l. EPA guidance allows states to choose from a range of 10 ⁻⁴ to 10 ⁻⁶ for the incremental increase in cancer risk used in human health criteria calculation. Idaho has chosen to base this criterion on carcinogenicity of 10 ⁻⁵ risk.						
m. Aquatic life criteria for pentachlorophenol are expressed as a function of pH, and are calculated as follows. Values displayed above in the table correspond to a pH of seven and eight tenths (7.8). CMC = exp(1.005(pH)-4.830) CCC = exp(1.005(pH)-5.290)						
n. PCBs are a class of chemicals which include Aroclors, 1242, 1254, 1221, 1232, 1248, 1260, and 1016, CAS numbers 53469219, 11097691, 11104282, 11141165, 12672296, 11096825 and 12674112 respectively. The aquatic life criteria apply to this set of PCBs.						
o. This criterion applies to total PCBs, (e.g. the sum of all congener, isomer, or Aroclor analyses).						
p. This fish tissue residue criterion (TRC) for methylmercury is based on a human health reference dose (RfD) of 0.0001 mg/kg body weight-day; a relative source contribution (RSC) estimated to be 27% of the RfD; a human body weight (BW) of 70 kg (for adults); and a total fish consumption rate of 0.0175 kg/day for the general population, summed from trophic level (TL) breakdown of TL2 = 0.0038 kg fish/day + TL3 = 0.0080 kg fish/day + TL4 = 0.0057 kg fish/day. This is a criterion that is protective of the general population. A site-specific criterion or a criterion for a particular subpopulation may be calculated by using local or regional data, rather than the above default values, in the formula: TRC = [BW x {RfD - (RSCxRfD)}] / Σ TL. In waters inhabited by species listed as threatened or endangered under the Endangered Species Act or designated as their critical habitat, the Department will apply the human health fish tissue residue criterion for methylmercury to the highest trophic level available for sampling and analysis.						
q. This criterion is based on the drinking water Maximum Containment Level (MCL).						

(3-25-16)

02. Factors for Calculating Hardness Dependent Metals Criteria. Hardness dependent metals

criteria are calculated using values from the following table in the equations: (5-3-03)

- a. $CMC = WER \exp\{mA[\ln(\text{hardness})] + bA\}$ X Acute Conversion Factor. (5-3-03)
- b. $CCC = WER \exp\{mc[\ln(\text{hardness})] + bc\}$ X Chronic Conversion Factor.

Metal	mA	bA	mc	bc	aAcute Conversion Factor	aChronic Conversion Factor
Arsenic	b	b	b	b	1.0	1.0
Cadmium	0.8367	-3.560	0.6247	-3.344	0.944 see footnote a	0.909
Chromium (III)	0.819	3.7256	0.8190	0.6848	0.316	0.860
Chromium (VI)	b	b	b	b	0.982	0.962
Copper	0.9422	-1.464	0.8545	-1.465	0.960	0.960
Lead	1.273	-1.460	1.273	-4.705	0.791	0.791
Mercury	b	b	b	b	0.85	0.85
Nickel	0.846	2.255	0.8460	0.0584	0.998	0.997
Silver	1.72	-6.52	c	c	0.85	c
Zinc	0.8473	0.884	0.8473	0.884	0.978	0.986

Note to table: The term "exp" represents the base e exponential function.

Footnotes to table:

- a. Conversion factors (CF) are from "Stephan, C. E. 1995. Derivation of conversion factors for the calculation of dissolved freshwater aquatic life criteria for metals. U.S. Environmental Protection Agency, Environmental Research Laboratory – Duluth." The conversion factors for cadmium and lead are hardness-dependent and can be calculated for any hardness (see limitations in Subsection 210.03.b.i.) using the following equations. For comparative purposes, the conversion factors for a total hardness of one hundred (100) mg/L are shown in the table. The conversion factor shall not exceed one (1).
 - Cadmium
 Acute: $CF = 1.136672 - [(\ln \text{hardness})(0.041838)]$ NOTE: The cadmium acute criterion equation was derived from dissolved metals toxicity data and thus requires no conversion; this conversion factor may be used to back calculate an equivalent total recoverable concentration.
 - Chronic: $CF = 1.101672 - [(\ln \text{hardness})(0.041838)]$
 - Lead (Acute and Chronic): $CF = 1.46203 - [(\ln \text{hardness})(0.145712)]$
- b. Not applicable
- c. No chronic criteria are available for silver.

(3-29-10)

03. Applicability. The criteria established in Section 210 are subject to the general rules of applicability in the same way and to the same extent as are the other numeric chemical criteria when applied to the same use classifications. Mixing zones may be applied to toxic substance criteria subject to the limitations set forth in Section 060 and set out below. (3-25-16)

- a. For all waters for which the Department has determined mixing zones to be applicable, the toxic substance criteria apply at the boundary of the mixing zone(s) and beyond. Absent an authorized mixing zone, the toxic substance criteria apply throughout the waterbody including at the end of any discharge pipe, canal or other

discharge point. (3-25-16)

b. Low flow design conditions. Water quality-based effluent limits and mixing zones for toxic substances shall be based on the following low flows in perennial receiving streams. Numeric chemical criteria may be exceeded in perennial streams outside any applicable mixing zone only when flows are less than these values:

Aquatic Life		Human Health	
CMC (“acute” criteria)	1Q10 or 1B3	Non-carcinogens	Harmonic mean flow
CCC (“chronic” criteria)	7Q10 or 4B3	Carcinogens	Harmonic mean flow

(3-25-16)

i. Where “1Q10” is the lowest one-day flow with an average recurrence frequency of once in ten (10) years determined hydrologically; (5-3-03)

ii. Where “1B3” is biologically based and indicates an allowable exceedance of once every three (3) years. It may be determined by EPA’s computerized method (DFLOW model); (5-3-03)

iii. Where “7Q10” is the lowest average seven (7) consecutive day low flow with an average recurrence frequency of once in ten (10) years determined hydrologically; (5-3-03)

iv. Where “4B3” is biologically based and indicates an allowable exceedance for four (4) consecutive days once every three (3) years. It may be determined by EPA’s computerized method (DFLOW model); (5-3-03)

v. Where the harmonic mean flow is a long term mean flow value calculated by dividing the number of daily flows analyzed by the sum of the reciprocals of those daily flows. (5-3-03)

c. Application of aquatic life metals criteria. (3-25-16)

i. For metals other than cadmium, for purposes of calculating hardness dependent aquatic life criteria from the equations in Subsection 210.02, the minimum hardness allowed for use in those equations shall not be less than twenty-five (25) mg/l, as calcium carbonate, even if the actual ambient hardness is less than twenty-five (25) mg/l as calcium carbonate. For cadmium, the minimum hardness for use in those equations shall not be less than ten (10) mg/l, as calcium carbonate. The maximum hardness allowed for use in those equations shall not be greater than four hundred (400) mg/l, as calcium carbonate, except as specified in Subsections 210.03.c.ii. and 210.03.c.iii., even if the actual ambient hardness is greater than four hundred (400) mg/l as calcium carbonate. (3-29-10)

ii. The hardness values used for calculating aquatic life criteria for metals at design discharge conditions shall be representative of the ambient hardnesses for a receiving water that occur at the design discharge conditions given in Subsection 210.03.b. (5-3-03)

iii. Except as otherwise noted, the aquatic life criteria for metals (compounds #1 through #13 in the criteria table of Subsection 210.02) are expressed as dissolved metal concentrations. Unless otherwise specified by the Department, dissolved concentrations are considered to be concentrations recovered from a sample which has passed through a forty-five hundredths (0.45) micron filter. For the purposes of calculating aquatic life criteria for metals from the equations in footnotes e. and i. in the criteria table in Subsection 210.01, the water effect ratio is computed as a specific pollutant’s acute or chronic toxicity values measured in water from the site covered by the standard, divided by the respective acute or chronic toxicity value in laboratory dilution water. The water-effect ratio shall be assigned a value of one (1.0), except where the Department assigns a different value that protects the designated uses of the water body from the toxic effects of the pollutant, and is derived from suitable tests on sampled water representative of conditions in the affected water body, consistent with the design discharge conditions established in Subsection 210.03.b. For purposes of calculating water effects ratios, the term acute toxicity value is the toxicity test results, such as the concentration lethal one-half (1/2) of the test organisms (i.e., LC50) after ninety-six (96) hours of exposure (e.g., fish toxicity tests) or the effect concentration to one-half of the test organisms, (i.e., EC50) after forty-eight (48) hours of exposure (e.g., daphnia toxicity tests). For purposes of calculating water effects ratios, the term chronic value is the result from appropriate hypothesis testing or regression analysis of measurements

of growth, reproduction, or survival from life cycle, partial life cycle, or early life stage tests. The determination of acute and chronic values shall be according to current standard protocols (e.g., those published by the American Society for Testing and Materials (ASTM)) or other comparable methods. For calculation of criteria using site-specific values for both the hardness and the water effect ratio, the hardness used in the equations in Subsection 210.02 shall be as required in Subsection 210.03.c.ii. Water hardness shall be calculated from the measured calcium and magnesium ions present, and the ratio of calcium to magnesium shall be approximately the same in laboratory toxicity testing water as in the site water, or be similar to average ratios of laboratory waters used to derive the criteria. (4-6-05)

iv. Implementation Guidance for the Idaho Mercury Water Quality Criteria. (4-6-05)

(1) The “Implementation Guidance for the Idaho Mercury Water Quality Criteria” describes in detail suggested methods for discharge related monitoring requirements, calculation of reasonable potential to exceed (RPTE) water quality criteria in determining need for mercury effluent limits, and use of fish tissue mercury data in calculating mercury load reductions. This guidance, or its updates, will provide assistance to the Department and the public when implementing the methylmercury criterion. The “Implementation Guidance for the Idaho Mercury Water Quality Criteria” also provides basic background information on mercury in the environment, the novelty of a fish tissue criterion for water quality, the connection between human health and aquatic life protection, and the relation of environmental programs outside of Clean Water Act programs to reducing mercury contamination of the environment. The “Implementation Guidance for the Idaho Mercury Water Quality Criteria” is available at the Department of Environmental Quality, 1410 N. Hilton, Boise, Idaho 83706, and on the DEQ website at http://www.deq.idaho.gov/media/639808-idaho_mercury_wq_guidance.pdf. (4-6-05)

(2) The implementation of a fish tissue criterion in NPDES permits and TMDLs requires a non-traditional approach, as the basic criterion is not a concentration in water. In applying the methylmercury fish tissue criterion in the context of NPDES effluent limits and TMDL load reductions, the Department will assume change in fish tissue concentrations of methylmercury are proportional to change in water body loading of total mercury. Reasonable potential to exceed (RPTE) the fish tissue criterion for existing NPDES sources will be based on measured fish tissue concentrations potentially affected by the discharge exceeding a specified threshold value, based on uncertainty due to measurement variability. This threshold value is also used for TMDL decisions. Because measured fish tissue concentrations do not reflect the effect of proposed new or increased discharge of mercury, RPTE in these cases will be based upon an estimated fish tissue methylmercury concentration, using projected changes in waterbody loading of total mercury and a proportional response in fish tissue mercury. For the above purposes, mercury will be measured in the skinless filets of sport fish using techniques capable of detecting tissue concentrations down to point zero five (0.05) mg/kg. Total mercury analysis may be used, but will be assumed to be all methylmercury for purposes of implementing the criterion. (4-6-05)

d. Application of toxics criteria. (3-25-16)

i. Frequency and duration for aquatic life toxics criteria. Column B1 criteria are concentrations not to be exceeded for a one-hour average more than once in three (3) years. Column B2 criteria are concentrations not to be exceeded for a four-day average more than once in three (3) years. (3-25-16)

ii. Frequency and duration for human health toxics criteria. Columns C1 and C2 criteria are not to be exceeded based on an annual harmonic mean. (3-25-16)

04. National Pollutant Discharge Elimination System Permitting. For the purposes of NPDES permitting, interpretation and implementation of metals criteria listed in Subsection 210.02 should be governed by the following standards, that are hereby incorporated by reference, in addition to other scientifically defensible methods deemed appropriate by the Department; provided, however, any identified conversion factors within these documents are not incorporated by reference. Metals criteria conversion factors are identified in Subsection 210.02 of this rule. (5-3-03)

a. “Guidance Document on Dissolved Criteria -- Expression of Aquatic Life Criteria,” EPA, October 1993, <http://www.deq.idaho.gov/media/827413-epa-guidance-dissolved-criteria-1093.pdf>. (4-5-00)

b. “Guidance Document on Dynamic Modeling and Translators,” EPA, August 1993, <http://>

www.deq.idaho.gov/media/827417-epa-guidance-dynamic-modeling-translators-0893.pdf. (4-5-00)

c. “Guidance Document on Clean Analytical Techniques and Monitoring,” EPA, October 1993, <http://www.deq.idaho.gov/media/827421-epa-guidance-analytical-techniques-1093.pdf>. (4-5-00)

d. “Interim Guidance on Determination and Use of Water-Effect Ratios for Metals,” EPA, February 1994, <http://www.deq.idaho.gov/media/827409-epa-guidance-water-effect-ratios-for-metals-0294.pdf>. (4-5-00)

e. “Technical Support Document for Water Quality-Based Toxics Control.” EPA, March 1991. <http://www.deq.idaho.gov/media/60177101/58-0102-1201-epa-technical-support-document-1991.pdf>. (3-25-16)

05. Development of Toxic Substance Criteria. (4-5-00)

a. Aquatic Life Communities Criteria. Numeric criteria for the protection of aquatic life uses not identified in these rules for toxic substances, may be derived by the Department from the following information: (4-5-00)

i. Site-specific criteria developed pursuant to Section 275; (4-5-00)

ii. Effluent biomonitoring, toxicity testing and whole-effluent toxicity determinations; (4-5-00)

iii. The most recent recommended criteria defined in EPA's ECOTOX database. When using EPA recommended criteria to derive water quality criteria to protect aquatic life uses, the lowest observed effect concentrations (LOECs) shall be considered; or (3-25-16)

iv. Scientific studies including, but not limited to, instream benthic assessment or rapid bioassessment. (4-5-00)

b. Human Health Criteria. (4-5-00)

i. When numeric criteria for the protection of human health are not identified in these rules for toxic substances, quantifiable criteria may be derived by the Department using best available science on toxicity thresholds (i.e. reference dose or cancer slope factor), such as defined in EPA's Integrated Risk Information System (IRIS) or other peer-reviewed source acceptable to the Department. (3-25-16)

ii. When using toxicity thresholds to derive water quality criteria to protect human health, a fish consumption rate representative of the population to be protected, a mean adult body weight, an adult 90th percentile water ingestion rate, a trophic level weighted BAF or BCF, and a hazard quotient of one (1) for non-carcinogens or a cancer risk level of 10^{-5} for carcinogens shall be utilized. (3-25-16)

Note: In 2006, Idaho updated 167 human health criteria for 88 chemicals. On May 10, 2012, EPA disapproved Idaho's 2006 update of 167 human health criteria for toxic substances (see IDAPA 58.01.02.210.01) and the use of 17.5 g/day fish consumption rate for human health criteria. This action was based on EPA's judgment that the fish consumption rate used in criteria derivation was not adequately protective. As a result of this action, the fish consumption rate of 6.5 g/day published in the 2005 version of IDAPA 58.01.02.210.05.b.i. continues to apply and is effective for federal Clean Water Act purposes. For more information regarding this EPA disapproval, go to <http://www.deq.idaho.gov/epa-actions-on-proposed-standards>.

211. -- 249. (RESERVED)

250. SURFACE WATER QUALITY CRITERIA FOR AQUATIC LIFE USE DESIGNATIONS.

01. General Criteria. The following criteria apply to all aquatic life use designations. Surface waters are not to vary from the following characteristics due to human activities: (3-15-02)

a. Hydrogen Ion Concentration (pH) values within the range of six point five (6.5) to nine point zero (9.0); (3-30-01)

b. The total concentration of dissolved gas not exceeding one hundred and ten percent (110%) of saturation at atmospheric pressure at the point of sample collection; (7-1-93)

02. Cold Water. Waters designated for cold water aquatic life are not to vary from the following characteristics due to human activities: (3-15-02)

a. Dissolved Oxygen Concentrations exceeding six (6) mg/l at all times. In lakes and reservoirs this standard does not apply to: (7-1-93)

i. The bottom twenty percent (20%) of water depth in natural lakes and reservoirs where depths are thirty-five (35) meters or less. (7-1-93)

ii. The bottom seven (7) meters of water depth in natural lakes and reservoirs where depths are greater than thirty-five (35) meters. (7-1-93)

iii. Those waters of the hypolimnion in stratified lakes and reservoirs. (7-1-93)

b. Water temperatures of twenty-two (22) degrees C or less with a maximum daily average of no greater than nineteen (19) degrees C. (8-24-94)

c. Temperature in lakes shall have no measurable change from natural background conditions. Reservoirs with mean detention times of greater than fifteen (15) days are considered lakes for this purpose. (3-15-02)

d. Ammonia. The following criteria are not to be exceeded dependent upon the temperature, T (degrees C), and pH of the water body: (3-15-02)

i. Acute Criterion (Criterion Maximum Concentration (CMC)). The one (1) hour average concentration of total ammonia nitrogen (in mg N/L) is not to exceed, more than once every three (3) years, the value calculated using the following equation:

$$CMC = \frac{0.275}{1 + 10^{7.204 - pH}} + \frac{39.0}{1 + 10^{pH - 7.204}} \quad (3-15-02)$$

ii. Chronic Criterion (Criterion Continuous Concentration (CCC)). (3-15-02)

(1) The thirty (30) day average concentration of total ammonia nitrogen (in mg N/L) is not to exceed, more than once every three (3) years, the value calculated using the following equations: (3-15-02)

(a) When fish early life stages are likely present:

$$CCC = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) \bullet MIN(2.85, 1.45 \cdot 10^{0.028 \cdot (25 - T)}) \quad (3-15-02)$$

(b) When fish early life stages are likely absent:

$$CCC = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) \cdot 1.45 \cdot 10^{0.028(25 - T)}$$

(3-15-02)

(2) The highest four-day (4) average within the thirty-day (30) period should not exceed two point five (2.5) times the CCC. (3-15-02)

(3) Because the Department presumes that many waters in the state may have both spring-spawning and fall-spawning species of fish present, early life stages of fish may be present throughout much of the year. Accordingly, the Department will apply the CCC for when fish early life stages are present at all times of the year unless: (3-15-02)

(a) Time frames during the year are identified when early life stages are unlikely to be present, and (3-15-02)

(b) The Department is provided all readily available information supporting this finding such as the fish species distributions, spawning periods, nursery periods, and the duration of early life stages found in the water body; and (3-15-02)

(c) The Department determines early life stages are likely absent. (3-15-02)

e. Turbidity, below any applicable mixing zone set by the Department, shall not exceed background turbidity by more than fifty (50) NTU instantaneously or more than twenty-five (25) NTU for more than ten (10) consecutive days. (8-24-94)

f. Salmonid Spawning. The Department shall determine spawning periods on a waterbody specific basis taking into account knowledge of local fisheries biologists, published literature, records of the Idaho Department of Fish and Game, and other appropriate records of spawning and incubation, as further described in the current version of the "Water Body Assessment Guidance" published by the Idaho Department of Environmental Quality. Waters designated for salmonid spawning, in areas used for spawning and during the time spawning and incubation occurs, are not to vary from the following characteristics due to human activities: (3-30-07)

i. Dissolved Oxygen. (8-24-94)

(1) Intergravel Dissolved Oxygen. (8-24-94)

(a) One (1) day minimum of not less than five point zero (5.0) mg/l. (8-24-94)

(b) Seven (7) day average mean of not less than six point zero (6.0) mg/l. (8-24-94)

(2) Water-Column Dissolved Oxygen. (8-24-94)

(a) One (1) day minimum of not less than six point zero (6.0) mg/l or ninety percent (90%) of saturation, whichever is greater. (8-24-94)

ii. Water temperatures of thirteen (13) degrees C or less with a maximum daily average no greater than nine (9) degrees C. (8-24-94)

g. Bull Trout Temperature Criteria. Water temperatures for the waters identified under Subsection 250.02.g.i. shall not exceed thirteen degrees Celsius (13C) maximum weekly maximum temperature (MWMT) during June, July and August for juvenile bull trout rearing, and nine degrees Celsius (9C) daily average during September and October for bull trout spawning. For the purposes of measuring these criteria, the values shall be generated from a recording device with a minimum of six (6) evenly spaced measurements in a twenty-four (24) hour period. The MWMT is the mean of daily maximum water temperatures measured over the annual warmest consecutive seven (7) day period occurring during a given year. (3-30-01)

- i. The bull trout temperature criteria shall apply to all tributary waters, not including fifth order main stem rivers, located within areas above fourteen hundred (1400) meters elevation south of the Salmon River basin-Clearwater River basin divide, and above six hundred (600) meters elevation north of the Salmon River basin-Clearwater River basin divide, in the fifty-nine (59) Key Watersheds listed in Table 6, Appendix F of Governor Batt's State of Idaho Bull Trout Conservation Plan, 1996, or as designated under Sections 110 through 160 of this rule. (3-23-98)
- ii. No thermal discharges will be permitted to the waters described under Subsection 250.02.g.i. unless socially and economically justified as determined by the Department, and then only if the resultant increase in stream temperature is less than five-tenths degrees Celsius (0.5C). (4-5-00)

Note: Idaho first adopted bull trout temperature criteria in 1998. These criteria were revised in 2001 (docket 58-0102-0002) and submitted to EPA for approval. EPA has not taken action, and so the bull trout temperature criterion effective for federal Clean Water Act purposes is the 1997 federally promulgated temperature criterion of 10°C for 7-day average maximum daily temperatures from June through September for waters specified in the federal rule (see 40 CFR 131.33). However, a few waters identified in Governor Batt's 1996 bull trout conservation plan are not listed in 40 CFR 131.33. For waters not listed in 40 CFR 131.33, the 1998 criteria located at <http://www.deq.idaho.gov/epa-actions-on-proposed-standards> are effective for federal Clean Water Act purposes.

h. Kootenai River sturgeon temperature criteria. Water temperatures within the Kootenai River from Bonners Ferry to Shorty's Island, shall not exceed a seven (7) day moving average of fourteen degrees celsius (14C) based on daily average water temperatures, during May 1 through July 1. (3-23-98)

03. Seasonal Cold Water. Between the summer solstice and autumn equinox, waters designated for seasonal cold water aquatic life are not to vary from the following characteristics due to human activities. For the period from autumn equinox to summer solstice the cold water criteria will apply: (3-15-02)

a. Dissolved Oxygen Concentrations exceeding six (6) mg/l at all times. In lakes and reservoirs this standard does not apply to: (4-5-00)

i. The bottom twenty percent (20%) of water depth in natural lakes and reservoirs where depths are thirty-five (35) meters or less. (4-5-00)

ii. The bottom seven (7) meters of water depth in natural lakes and reservoirs where depths are greater than thirty-five (35) meters. (4-5-00)

iii. Those waters of the hypolimnion in stratified lakes and reservoirs. (4-5-00)

b. Water temperatures of twenty-six (26) degrees C or less as a daily maximum with a daily average of no greater than twenty-three (23) degrees C. (3-30-01)

Note: Idaho first adopted temperature criteria for the seasonal cold beneficial use in April 2000. In 2001, Idaho revised its temperature criteria for the seasonal cold beneficial use (docket 58-0102-0002). Although the criteria adopted in 2000 have not been acted on by EPA, they were adopted by Idaho and submitted to EPA prior to May 30, 2000. Therefore, the older 2000 seasonal cold temperature criteria are effective for federal Clean Water Act purposes and are located at <http://www.deq.idaho.gov/epa-actions-on-proposed-standards>.

c. Temperature in lakes shall have no measurable change from natural background conditions. Reservoirs with mean detention times of greater than fifteen (15) days are considered lakes for this purpose.

(3-15-02)

- d. Ammonia. Concentration of ammonia are not to exceed the criteria defined at Subsection 250.02.d. (3-15-02)

04. Warm Water. Waters designated for warm water aquatic life are not to vary from the following characteristics due to human activities: (3-30-07)

a. Dissolved oxygen concentrations exceeding five (5) mg/l at all times. In lakes and reservoirs this standard does not apply to: (7-1-93)

i. The bottom twenty percent (20%) of the water depth in natural lakes and reservoirs where depths are thirty-five (35) meters or less. (7-1-93)

ii. The bottom seven (7) meters of water depth in natural lakes and reservoirs where depths are greater than thirty-five (35) meters. (7-1-93)

iii. Those waters of the hypolimnion in stratified lakes and reservoirs. (7-1-93)

b. Water temperatures of thirty-three (33) degrees C or less with a maximum daily average not greater than twenty-nine (29) degrees C. (8-24-94)

c. Temperature in lakes shall have no measurable change from natural background conditions. Reservoirs with mean detention times of greater than fifteen (15) days are considered lakes for this purpose. (3-15-02)

d. Ammonia. The following criteria are to be met dependent upon the temperature, T (degrees C), and pH of the water body: (3-15-02)

i. Acute Criterion (Criterion Maximum Concentration (CMC)). The one (1) hour average concentration of total ammonia nitrogen (in mg N/L) is not to exceed, more than once every three (3) years, the value calculated using the following equation:

$$CMC = \frac{0.411}{1 + 10^{7.204 - pH}} + \frac{58.4}{1 + 10^{pH - 7.204}}$$

(3-15-02)

ii. Chronic Criterion (Criterion Continuous Concentration (CCC)). Concentrations of ammonia are not to exceed the criteria defined at Subsection 250.02.d.ii. (3-15-02)

05. Modified. Water quality criteria for modified aquatic life will be determined on a case-by-case basis reflecting the chemical, physical, and biological levels necessary to attain the existing aquatic life community. These criteria, when determined, will be adopted into these rules. (3-15-02)

251. SURFACE WATER QUALITY CRITERIA FOR RECREATION USE DESIGNATIONS.

01. E. Coli Bacteria. Waters designated for recreation are not to contain E.coli bacteria, used as indicators of human pathogens, in concentrations exceeding: (4-11-06)

a. Geometric Mean Criterion. Waters designated for primary or secondary contact recreation are not to contain E. coli bacteria in concentrations exceeding a geometric mean of one hundred twenty-six (126) E. coli organisms per one hundred (100) ml based on a minimum of five (5) samples taken every three (3) to seven (7) days over a thirty (30) day period. (4-11-06)

b. Use of Single Sample Values. A water sample exceeding the E. coli single sample maximums

below indicates likely exceedance of the geometric mean criterion, but is not alone a violation of water quality standards. If a single sample exceeds the maximums set forth in Subsections 251.01.b.i., 251.01.b.ii., and 251.01.b.iii., then additional samples must be taken as specified in Subsection 251.01.c.: (4-11-06)

- i. For waters designated as secondary contact recreation, a single sample maximum of five hundred seventy-six (576) E. coli organisms per one hundred (100) ml; or (4-11-06)
- ii. For waters designated as primary contact recreation, a single sample maximum of four hundred six (406) E. coli organisms per one hundred (100) ml; or (4-11-06)
- iii. For areas within waters designated for primary contact recreation that are additionally specified as public swimming beaches, a single sample maximum of two hundred thirty-five (235) E. coli organisms per one hundred (100) ml. Single sample counts above this value should be used in considering beach closures. (4-11-06)
- c. **Additional Sampling.** When a single sample maximum, as set forth in Subsections 251.01.b.i., 251.01.b.ii., and 251.01.b.iii., is exceeded, additional samples should be taken to assess compliance with the geometric mean E. coli criteria in Subsection 251.01.a. Sufficient additional samples should be taken by the Department to calculate a geometric mean in accordance with Subsection 251.01.a. This provision does not require additional ambient monitoring responsibilities for dischargers. (4-11-06)

252. SURFACE WATER QUALITY CRITERIA FOR WATER SUPPLY USE DESIGNATION.

01. Domestic. Waters designated for domestic water supplies are to exhibit the following characteristics: (4-5-00)

- a. Radioactive materials or radioactivity not to exceed concentrations specified in Idaho Department of Environmental Quality Rules, IDAPA 58.01.08, "Rules Governing Public Drinking Water Systems." (8-24-94)
- b. Small public water supplies (Surface Water). (8-24-94)
 - i. The following Table identifies waters, including their watersheds above the public water supply intake (except where noted), which are designated as small public water supplies.

TABLE - DESIGNATED SMALL PUBLIC WATER SUPPLIES

County	Water Body	Supply No.*	Supply System Name
Benewah	Spring	1050001	BLM Sheep Springs
Benewah	Spring	1050002	BLM Tingley Springs
Benewah	Adams Ck.	1050011	Fernwood Water Dist.
Benewah	Rochat Ck.	1050024	St Maries, City of
Boise	Elk Ck.	4080025	Idaho City Water Dept.
Boise	McBride Ck.	4080047	Terrace Lakes Rec. Ranch
Bonner	Spring	1090168	Beaver Ck Camp Assn
Bonner	Spring	1090017	Clark Fork U ID Field Campus
Bonner	Berry Ck.	1090021	Colburn Water Assn.
Bonner	Cougar Ck.	1090030	Cougar Creek Water Assn
Bonner	Strong Ck.	1090038	East Hope Water Dept.
Bonner	Composite Spring	1090052	Hope Water System

County	Water Body	Supply No.*	Supply System Name
Bonner	Spring	1090074	Lakeview Townsite Improve Assn
Bonner	Spring	1090031	Midas Water System
Bonner	Little Sand Ck.	1090121	Sandpoint Water Dept
Bonner	Schweitzer Ck.	1090124	Schweitzer Basin Water Co
Bonner	Spring #1	1090123	Schweitzer Mtn Resort
Bonner	Spring #2	1090123	Schweitzer Mtn Resort
Bonner	Springs	1090151	West Bonner WD#1
Boundary	Meadow Ck.	1110001	Bee Line Water Assn.
Boundary	Myrtle Ck.	1110003	Bonnors Ferry, City of
Boundary	Spring	1110007	Cow Ck Water Assn
Boundary	Curley Ck.	1110008	Curley Ck. Water Assn.
Boundary	Mission Ck.	1110019	Mission Creek Water Assn.
Boundary	Caribou Ck.	1110020	Moravia Water Assn.
Boundary	Spring	1110044	Northwest Academy/Ascent
Boundary	Ruby Ck.	1110044	Northwest Academy/Ascent
Boundary	Brown Creek and Cedar Ck.	1110023	Paradise Valley Water Assn.
Boundary	Spring #1	1110024	Rocky Mountain Academy
Boundary	Spring #2	1110024	Rocky Mountain Academy
Boundary	Skin Ck.	1110025	Skin Ck. Water Assn.
Boundary	Springs	1110029	Trow Creek Water Assn
Boundary	Twenty Mile Ck.	1110030	Twenty Mile Ck. Water Assn.
Clearwater	N.F. Clearwater R.**	2180001	Ahsahka Water and Sewer District
Clearwater	Reeds Ck.	2180029	Potlatch Corp-Headquarters
Custer	Garden Ck.	7190013	Challis, City of
Elmore	E.F. Montezuma Ck.	4200005	Atlanta Water Assn.
Idaho	Wall Creek	2250011	Clearwater Water Assn.
Idaho	Big Elk Ck.	2250017	Elk City Water/Sewer Assn.
Kootenai	Spring	1280068	Excelsior Beach Water
Kootenai	Rose Spring	1280161	Rose Lake Water Assn
Lemhi	Chick Ck., Jesse Ck., and Pollard Ck.	7300042	Salmon, City of
Nez Perce	Big Canyon Ck.	2350023	Peck Water System
Shoshone	Lake Ck.	1400081	Asarco Galena Unit
Shoshone	Shields Ck.	1400089	Central Shoshone County WD

County	Water Body	Supply No.*	Supply System Name
Shoshone	Big Ck.	1400089	Central Shoshone County WD
Shoshone	McFarren Ck.	1400089	Central Shoshone County WD
Shoshone	Milo Ck.	1400089	Central Shoshone County WD
Shoshone	Sawmill Gulch and Canyon Ck.	1400016	East Shoshone County WD-Burke
Shoshone	Boulder Ck.	1400017	East Shoshone County WD-Mullan
Shoshone	Cranky Gulch	1400019	East Shoshone County WD-Wallace
Shoshone	Weyer Gulch	1400019	East Shoshone County WD-Wallace
Shoshone	Experimental Ck.	1400019	East Shoshone County WD-Wallace
Shoshone	Canyon Ck.	1400016	East Shoshone County WD-Burke
Shoshone	Mill Ck.	1400017	East Shoshone County WD-Mullan
Shoshone	Placer Ck.-main channel	1400019	East Shoshone County WD-Wallace
Shoshone	Placer Ck-WF	1400019	East Shoshone County WD-Wallace
Shoshone	Deadman Ck. MF	1400028	Hecla Mining Co-Lucky Friday
Shoshone	National Tunnel	1400028	Hecla Mining Co-Lucky Friday
Shoshone	Deadman Ck. WF	1400028	Hecla Mining Co-Lucky Friday
Shoshone	Spring	1400067	Lookout Pass Ski Area
Shoshone	Alder Ck. and East Alder Ck.	1400039	Murray Water Works
Shoshone	E.F. Silver Ck.	1400046	Silver Creek Water Assn.
Shoshone	Big Ck #1	1400050	Sunshine Precious Metals
Valley	Boulder Ck.	4430059	Yellowpine Water System, Inc.

* Public water supply number assigned by IDHW/DEQ.

** Only the portion of the watershed below Dworshak Dam is included. (3-30-01)

ii. For those surface waters identified in Subsection 252.01.b.i. turbidity as measured at the public water intake shall not be: (4-5-00)

(1) Increased by more than five (5) NTU above natural background, measured at a location upstream from or not influenced by any human induced nonpoint source activity, when background turbidity is fifty (50) NTU or less. (8-24-94)

(2) Increased by more than ten percent (10%) above natural background, measured at a location upstream from or not influenced by any human induced nonpoint source activity, not to exceed twenty-five (25)

NTU, when background turbidity is greater than fifty (50) NTU. (8-24-94)

02. Agricultural. Water quality criteria for agricultural water supplies will generally be satisfied by the water quality criteria set forth in Section 200. Should specificity be desirable or necessary to protect a specific use, "Water Quality Criteria 1972" (Blue Book), Section V, Agricultural Uses of Water, EPA, March, 1973 will be used for determining criteria. This document is available for review at the Idaho Department of Environmental Quality, or can be obtained from EPA or the U.S. Government Printing Office. (4-5-00)

03. Industrial. Water quality criteria for industrial water supplies will generally be satisfied by the general water quality criteria set forth in Section 200. Should specificity be desirable or necessary to protect a specific use, appropriate criteria will be adopted in Sections 252 or 275 through 298. (4-5-00)

253. SURFACE WATER QUALITY CRITERIA FOR WILDLIFE AND AESTHETICS USE DESIGNATIONS.

01. Wildlife Habitats. Water quality criteria for wildlife habitats will generally be satisfied by the general water quality criteria set forth in Section 200. Should specificity be desirable or necessary to protect a specific use, appropriate criteria will be adopted in Sections 253 or 275 through 298. (4-5-00)

02. Aesthetics. Water quality criteria for aesthetics will generally be satisfied by the general water quality criteria set forth in Section 200. Should specificity be desirable or necessary to protect a specific use, appropriate criteria will be adopted in Sections 253 or 275 through 298. (4-5-00)

254. -- 259. (RESERVED)

260. VARIANCES FROM WATER QUALITY STANDARDS.

01. Variances. Variances from meeting certain water quality standards may be granted by the Department provided they are consistent with the following requirements: (8-24-94)

a. When granted by the Department, individual variances are to be pollutant and discharger specific, and shall be granted pursuant to the following procedure: (3-15-02)

i. Prior to granting a variance, the Department shall publish notice of the Department's tentative determination to grant a variance and shall receive written comments for not less than thirty (30) days after the date the notice is published. The notice shall contain a clear description of the impacts of the variance upon the receiving stream segment. The Department shall also provide an opportunity for oral presentation of comments, if requested in writing within fourteen (14) days of the notice, by twenty-five (25) persons, a political subdivision, or an agency. (3-15-02)

ii. The Department's final decision with respect to a variance may be appealed pursuant to IDAPA 58.01.23, "Rules of Administrative Procedure Before the Board of Environmental Quality." The Department shall maintain and make available to the public an updated list of variances. (3-15-02)

b. In order to obtain a variance from a water quality standard, the discharger must demonstrate that meeting the standard is unattainable based on one or more of the following grounds: (8-24-94)

i. Naturally occurring pollutant concentrations prevent the attainment of the standard; or (8-24-94)

ii. Natural, intermittent, or low flow conditions or water levels prevent the attainment of the standard; or (4-5-00)

iii. Human caused conditions or sources of pollution prevent the attainment of the standard and cannot be remedied or would cause more environmental damage to correct than to leave in place; or (8-24-94)

iv. Dams, diversions or other types of hydrologic modifications preclude the attainment of the standard, and it is not feasible to restore the water body to its original condition or to operate such modification in a

way that would result in attainment of the standard; or (8-24-94)

v. Physical conditions related to the natural features of the water body, unrelated to water quality, preclude attainment of the standard; or (8-24-94)

vi. Controls more stringent than technology-based effluent limitations would result in substantial and widespread economic and social impact. (8-24-94)

c. The discharger must submit to the Department documentation that treatment more advanced than required by technology-based effluent limitations have been considered and that alternative effluent control strategies have been evaluated. (8-24-94)

d. Any variance granted by the Department will remain in effect for a period of five (5) years or the life of the permit. (8-24-94)

i. Upon expiration of the five (5) year time period or permit, the discharger must either meet the standard or must re-apply for the variance in accordance with these rules. (8-24-94)

ii. In considering a re-application for a variance, the Department will require the discharger to demonstrate reasonable progress towards meeting the standard. (8-24-94)

02. Specific Variances. In addition to any variances listed separately from these rules as described in Subsection 260.01.a.ii., the following variances have also been granted by the Department in accordance with Subsection 260.01: (3-15-02)

a. The South Fork Coeur d'Alene River Sewer District (Page Wastewater Treatment Facility) is granted variances from meeting water quality standards in Section 250 for ammonia and chlorine, and Section 210 for cadmium, lead, and zinc, discharged to the West Page Swamp, located in T49N, R2E, S32, Boise Prime Meridian. (3-30-01)

b. The variances provided in Subsection 260.02.b. are conditioned upon the discharges showing reasonable progress toward reducing their discharge of ammonia and chlorine. Reasonable progress shall be measured according to the terms of the state's certification of the discharges. (3-30-01)

261. -- 274. (RESERVED)

275. SITE-SPECIFIC SURFACE WATER QUALITY CRITERIA.

01. Procedures for Establishing Site-specific Water Quality Criteria. The water quality criteria adopted in these standards may not always reflect the toxicity of a pollutant in a specific water body. These criteria also represent a limited number of the natural and human-made chemicals that exist in the environment which may pose a threat to designated or existing beneficial uses. Thus, it may be possible in some water bodies to develop new water quality criteria or modify existing criteria through site-specific analyses which will effectively protect designated and existing beneficial uses. (8-24-94)

a. The following are acceptable conditions for developing site-specific criteria: (8-24-94)

i. Resident species of a water body are more or less sensitive than those species used to develop a water quality criterion. (8-24-94)

(1) Natural adaptive processes have enabled a viable, balanced aquatic community to exist in waters where natural background levels of a pollutant exceed the water quality criterion (i.e., resident species have evolved a greater resistance to higher concentrations of a pollutant). (8-24-94)

(2) The composition of aquatic species in a water body is different from those used to derive a water quality criterion (i.e., more or less sensitive species to a pollutant are present or representative of a water body than have been used to derive a criterion). (8-24-94)

ii. Biological availability and/or toxicity of a pollutant may be altered due to differences between the physicochemical characteristics of the water in a water body and the laboratory water used in developing a water quality criterion (e.g., alkalinity, hardness, pH, salinity, total organic carbon, suspended solids, turbidity, natural complexing, fate and transport water, or temperature). (8-24-94)

iii. The affect of seasonality on the physicochemical characteristics of a water body and subsequent effects on biological availability and/or toxicity of a pollutant may justify seasonally dependent site-specific criteria. (8-24-94)

iv. Water quality criteria may be derived to protect and maintain existing ambient water quality. (8-24-94)

v. Other factors or combinations of factors that upon review of the Department may warrant modifications to the criteria. (8-24-94)

b. Any person may develop site-specific criteria in accordance with these rules. To insure that the approach to be used in developing site-specific criteria is scientifically valid, the Department shall be involved early in the planning of any site-specific analyses so that an agreement can be reached concerning the availability of existing data, additional data needs, methods to be used in generating new data, testing procedures to be used, schedules to be followed and quality control and assurance provisions to be used. (8-24-94)

c. Site-specific criteria shall not impair designated or existing beneficial uses year-round (or seasonally for seasonal dependent criteria) and shall prevent acute and chronic toxicity outside of approved mixing zones. If site-specific criteria are seasonally dependent, the period when the criteria apply shall be clearly identified. (8-24-94)

d. Site-specific criteria, if appropriate, shall include both chronic and acute concentrations to more accurately reflect the different tolerances of resident species to the inherent variability between concentrations and toxicological characteristics of a pollutant. (8-24-94)

e. Site-specific criteria shall be clearly identified as maximum (not to be exceeded) or average values. If a criterion represents an average value, the averaging period shall be specified. The conditions, if any, when the criteria apply shall be clearly stated (e.g., specific levels of hardness, pH, water temperature, or bioavailability). Specific sampling requirements (location, frequency, etc.), if any, shall also be specified. (8-24-94)

f. A site may be limited to the specific area affected by a point or nonpoint source of pollution or, if appropriate, an expanded geographical area (e.g., ecoregion, river basin, sub-basin, etc.). For a number of different water bodies to be designated as one site, their respective aquatic communities cannot vary substantially in sensitivity to a pollutant. Site boundaries shall be geographically defined. (8-24-94)

g. Proposed site-specific water quality criteria must be approved by the Board in accordance with the Idaho Administrative Procedure Act. The Department of Environmental Quality shall determine whether to approve a request for site-specific criteria in accordance with this section and within twenty-eight (28) days after receipt of the request, and will introduce acceptable site-specific criteria for rule-making. (8-24-94)

h. The following are acceptable procedures for developing site-specific criteria for aquatic life protection. (8-24-94)

i. Site-specific analyses for the development of new water quality criteria shall be conducted in a manner which is scientifically justifiable and consistent with the assumptions and rationale in "Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses," EPA 1985. This document is available for review at the Idaho Department of Environmental Quality or may be obtained from EPA or the U.S. Government Printing Office. (8-24-94)

ii. Site-specific analyses for the modification of existing water quality criteria shall be conducted in accordance with one of the following procedures, as described in the "Water Quality Standards Handbook," EPA

1983. This document is available for review at the Idaho Department of Environmental Quality or may be obtained from EPA or the U.S. Government Printing Office. (8-24-94)

(1) Recalculation Procedure. This procedure is used to account for differences in sensitivity to a pollutant between resident species and those species used in deriving the criterion. Bioassays in laboratory water may be required for untested resident species. (8-24-94)

(2) Indicator Species Procedure. This procedure is used to account for differences in biological availability and/or toxicity of a chemical between the physicochemical characteristics of the water in a water body and the laboratory water used in developing criteria. Bioassays in site water are required using resident species or acceptable nonresident species. (8-24-94)

(3) Resident Species Procedure. This procedure is used to account for differences in both resident species sensitivity and biological availability and/or toxicity of a pollutant. Bioassays in site water using resident species are required. (8-24-94)

(4) Water effects ratios as defined by EPA guidance documents. (8-24-94)

(5) Other scientifically defensible procedures such as relevant aquatic field studies, laboratory tests, biological translators, fate and distribution models, risk analyses or available scientific literature. (8-24-94)

(a) Deviations from the above described EPA procedures shall have justifications which are adequately documented and based on sound scientific rationale. (8-24-94)

(b) The data, testing procedures and application factors used to develop site-specific criteria shall reflect the nature of the pollutant (e.g., persistency, bioaccumulation potential, avoidance or attraction responses in fish, etc.), the designated and existing beneficial uses, and the most sensitive resident species of a water body. (8-24-94)

02. Water Quality Criteria for Specific Waters. Standards provided in Sections 276 through 298 for specific waters will supersede Sections 210, 250, 251, 252, and 253 when the application of the standards contained in both sections would present a conflict. (5-3-03)

276. DISSOLVED OXYGEN STANDARDS FOR WATERS DISCHARGED FROM DAMS, RESERVOIRS, AND HYDROELECTRIC FACILITIES.

Under the terms specified under this section, waters discharged from dams, reservoirs and hydroelectric facilities shall not be subject to the provisions of Subsection 250.02.a. or 250.02.f.i. (4-5-00)

01. Applicability. Subsections 276.02, 276.03 and 276.04 shall apply to all waters below dams, reservoirs, and hydroelectric facilities as far downstream as the point of measurement as defined in Subsection 276.05. Downstream of that point of measurement, all discharges to the waters shall be subject to the provisions of Subsections 250.02.a. or 250.02.f.i. (4-5-00)

02. Dissolved Oxygen Concentrations Below Existing Facilities. As of the effective date of these regulations, and except as noted in Subsections 276.03 and 276.04, waters below dams, reservoirs, and hydroelectric facilities shall contain the following dissolved oxygen concentrations during the time period indicated:

mg/l Dissolved Oxygen			
Time Period (annually)	30-day Mean	7-Day Mean Minimum	Instantaneous Minimum
June 15 - Oct 15	6.0	4.7	3.5

(7-1-93)

03. Dissolved Oxygen Concentrations for Modifications of Existing Facilities or for New

Facilities. Modifications of existing facilities or new facilities are subject to the provisions of Subsection 276.02 unless the state has documented the existence of significant fish spawning areas below the facility. If such areas exist, then waters below those facilities shall contain the dissolved oxygen concentrations shown in Subsection 276.02 during the modified time periods indicated for each species below:

Fish Species	Time Period (annually)
Cutthroat trout	July 1 - Oct 15
Kokanee and Chinook Salmon	June 15 - Aug 1
Bull Trout	June 15 - Sept 1

(7-1-93)

04. Dissolved Oxygen Concentrations Below American Falls Dam. All waters below American Falls Dam shall contain the following dissolved oxygen concentrations during the time period indicated:

mg/l Dissolved Oxygen			
Time Period (annually)	30-Day Mean	7-Day Mean Minimum	Instantaneous Minimum
May 15 - Oct 15	5.5	4.7	3.5

(7-1-93)

05. Point of Measurement. For the purpose of determining compliance with Subsections 276.02, 276.03 and 276.04, the dissolved oxygen shall be measured at a single location in the river downstream from the hydroelectric facilities. Such location shall be as close to the facilities as practical to obtain a representative measurement, but in all cases shall be sufficient distance downstream to allow thorough mixing of reaerated waters, spilled by-pass waters, and other waters that have passed through the facility. (7-1-93)

06. Instantaneous Minimum. Any measurement of dissolved oxygen below the applicable instantaneous minimum will be considered a violation unless that measurement is followed by two (2) consecutive measurements at or above the instantaneous minimum and taken within twenty (20) minutes of the initial measurement (at ten (10) minute intervals). (1-10-86)

07. Procedures and Conditions for Variances. The Board may grant a variance, on an individual basis, to the dissolved oxygen standards, the applicable dates of compliance, or both, as listed in Subsections 276.02, 276.03, or 276.04 only if: (7-1-93)

a. A written petition requesting a variance is submitted to the Department; (7-1-93)

b. The petition includes documentation of site-specific biological studies which demonstrate that no significant fishery impacts will occur as a result of the variance, if granted; and (7-1-93)

c. The requested variance will not result in departure from the three point five (3.5) mg/l instantaneous minimum dissolved oxygen requirements of this section. (1-10-86)

277. (RESERVED)

278. LOWER BOISE RIVER SUBBASIN, HUC 17050114 SUBSECTION 140.12.

Note: Final rule submitted to EPA on June 8, 2012 (docket 58-0102-1103 - effective March 29, 2012). This revision reinstates use designations for eight Boise River tributaries to address EPA's November 29, 2004 disapproval. Until EPA approves this change, the previous standards in IDAPA 58.01.02.278, located at <http://www.deq.idaho.gov/epa-actions-on-proposed-standards>, continue to apply and are effective for federal Clean Water Act purposes. See also IDAPA 58.01.02.140.12.

01. Boise River, SW-1 and SW-5 -- Salmonid Spawning and Dissolved Oxygen. The waters of the Boise River from Veterans State Park to its mouth will have dissolved oxygen concentrations of six (6) mg/l or seventy-five percent (75%) of saturation, whichever is greater, during the spawning period of salmonid fishes inhabiting those waters. (3-15-02)

02. Boise River, SW-5 and SW-11a -- Copper and Lead Aquatic Life Criteria. The water-effect ratio (WER) values used in the equations in Subsection 210.02 for calculating copper and lead CMC and CCC values shall be two and five hundred seventy-eight thousandths (2.578) for dissolved copper and two and forty-nine thousandths (2.049) for lead. These site-specific criteria shall apply to the Boise River from the Lander St. wastewater outfall to where the channels of the Boise River become fully mixed downstream of Eagle Island. (5-3-03)

03. Indian Creek, SW-3a -- Site-Specific Criteria for Water Temperature. A maximum weekly maximum temperature of thirteen degrees C (13°C) to protect brown trout and rainbow trout spawning and incubation applies from October 15 through June 30. (3-29-12)

04. Boise River, SW-5 and SW-11a -- Site-Specific Criteria for Water Temperature. A maximum weekly maximum temperature of thirteen degrees C (13°C) to protect brown trout, mountain whitefish, and rainbow trout spawning and incubation applies from November 1 through May 30. (3-29-12)

05. Point Source Thermal Treatment Requirement. With regard to the limitations set forth in Section 401 relating to point source wastewater discharges, only the limitations of Subsections 401.01.a. and 401.01.b. and the temperature limitation relating to natural background conditions shall apply to discharges to any water body within the Lower Boise River Subbasin. (3-29-12)

279. (RESERVED)

280. ROCK CREEK, CEDAR DRAW, DEEP CREEK AND BIG WOOD RIVER - CANAL SYSTEM.

01. Rock Creek, Cedar Draw, and Deep Creek. For the purposes of water quality protection, the following waterways are recognized as used by the Twin Falls Canal Company as spillways, collection and conveyance facilities and such waterways shall also be protected for those uses: Rock Creek from the intersection with the High Line Canal of the Twin Falls Canal System to the mouth; Cedar Draw from the intersection with the High Line Canal of the Twin Falls Canal System to the mouth, Deep Creek from the intersection with the High Line Canal of the Twin Falls Canal system to the mouth, all in Twin Falls County. (7-1-93)

02 Big Wood River -- Canal System. For the purposes of water quality protection, the following waterway is also recognized as used by the North Side Canal Company for the purposes of conveying canal water and shall also be protected for that use: Big Wood River from the point of union with the North Side Canal System, located in Section 31, T. 5 S., R. 15 E., Boise Meridian, downstream to the last irrigation diversion of the North Side Canal Company from the Malad River located in Section 25, T. 6 S., R. 13 E., Boise Meridian. (7-1-93)

281. -- 282. (RESERVED)

283. SPOKANE RIVER, SUBSECTION 110.12, HUC 17010305, UNITS P-3 AND P-4, SITE-SPECIFIC CRITERIA FOR AMMONIA.

The following criteria are to be met dependent upon the temperature, T (degrees C), and pH of the water body: (3-30-01)

01. Acute Criterion (Criterion Maximum Concentration (CMC)). The one (1) hour average concentration of total ammonia nitrogen (in mg N/L) is not to exceed, more than once every three (3) years, the value calculated using the following equation:

$$CMC = \frac{0.275}{1 + 10^{7.204 - pH}} + \frac{39.0}{1 + 10^{pH - 7.204}}$$

(3-30-01)

02. Chronic Criterion (Criterion Continuous Concentration (CCC)). (3-30-01)

a. The thirty (30) day average concentration of total ammonia nitrogen (in mg N/L) is not to exceed, more than once every three (3) years, the value calculated using the following equation:

$$CCC = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) \bullet MIN(2.85, 1.45 \cdot 10^{0.028 \cdot (25 - T)})$$

(3-30-01)

b. The highest four (4) day average within the thirty (30) day period should not exceed two and five tenths (2.5) times the CCC. (3-30-01)

284. SOUTH FORK COEUR D'ALENE SUBBASIN, SUBSECTION 110.09, HUC 17010302, AQUATIC LIFE CRITERIA FOR CADMIUM, LEAD AND ZINC.

The following criteria are to be met dependent upon the hardness, expressed as mg/l of calcium carbonate, of the water. Criterion maximum concentrations (CMC), one (1) hour average concentrations, and criterion continuous concentrations (CCC), four (4) day average concentrations, of the dissolved metals (in µg/l) are not to exceed, more than once every three (3) years, the values calculated using the following equations: (3-15-02)

01. Cadmium. (3-15-02)

a. $CMC = 0.973 \times e^{[(1.0166 \times \ln(\text{hardness})) - 3.924]}$ (3-15-02)

b. $CCC = [1.101672 - (\ln(\text{hardness}) \times 0.041838)] \times e^{[(0.7852 \times \ln(\text{hardness})) - 3.490]}$ (3-15-02)

02. Lead. (3-15-02)

a. $CMC = e^{[(0.9402 \times \ln(\text{hardness})) + 1.1834]}$ (3-15-02)

b. $CCC = e^{[(0.9402 \times \ln(\text{hardness})) - 0.9875]}$ (3-15-02)

03. Zinc. (3-15-02)

a. $CMC = e^{[(0.6624 \times \ln(\text{hardness})) + 2.2235]}$ (3-15-02)

b. $CCC = e^{[(0.6624 \times \ln(\text{hardness})) + 2.2235]}$ (3-15-02)

04. Application. (3-15-02)

a. The maximum hardness allowed for use in the equations in Section 284 shall not be greater than four hundred (400) mg/l even if the actual ambient hardness is greater than four hundred (400) mg/l. (3-15-02)

b. The criteria described in Section 284 apply to all surface waters within the subbasin, except for natural lakes, for which the statewide criteria given in Section 210 apply. (3-25-16)

285. SNAKE RIVER, SUBSECTION 140.13, HUC 17050115, UNIT SW1; AND SUBSECTION 140.19, HUC 17050201, UNITS SW1, SW2, SW3 AND SW4, SITE-SPECIFIC CRITERIA FOR WATER-COLUMN DISSOLVED OXYGEN.

A minimum of six and five-tenths (6.5) mg/l of water-column dissolved oxygen shall be met in the Snake River from the Idaho/Oregon border to Hell's Canyon Dam. (3-20-04)

286. SNAKE RIVER, SUBSECTION 130.01, HUC 17060101, UNIT S1, S2, AND S3; SITE-SPECIFIC CRITERIA FOR WATER TEMPERATURE.

Weekly maximum temperatures (WMT) are regulated to protect fall chinook spawning and incubation in the Snake River from Hell's Canyon Dam to the confluence with the Salmon River from October 23 through April 15. Because the WMT is a lagged seven (7) day average, the first WMT is not applicable until the seventh day of this time period, or October 29. A WMT is calculated for each day after October 29 based upon the daily maximum temperature for that day and the prior six (6) days. From October 29 through November 6, the WMT must not exceed fourteen point five degrees C (14.5°C). From November 7 through April 15, the WMT must not exceed thirteen degrees C (13°C). (3-29-12)

Note: Submitted to EPA on June 8, 2012 (docket 58-0102-1102). This water quality standard revision modified the existing site-specific temperature criterion to protect fall Chinook spawning below Hell's Canyon Dam by providing for a two week transition in temperatures from October 23 through November 6. Until EPA approves of this change, the previous criterion located at <http://www.deq.idaho.gov/epa-actions-on-proposed-standards> is effective for federal Clean Water Act purposes and continues to apply.

287. -- 299. (RESERVED)

300. GAS SUPERSATURATION.

01. Applicability of Gas Supersaturation Standard. The Director has the following authority: (7-1-93)

a. To specify the applicability of the gas supersaturation standard with respect to excess stream flow conditions; and (7-1-93)

b. To direct that all known and reasonable measures be taken to assure protection of the fishery resource; and (7-1-93)

c. To require that operational procedures or project modifications proposed for compliance for dissolved gas criterion do not contribute to increased mortalities to juvenile migrants or impose serious delays to adult migrant fishes. (7-1-93)

02. Interstate Agreements. In making determinations as to the applicability of gas supersaturation standards, the Director can seek and enter into agreements with adjoining state environmental regulatory agencies. (7-1-93)

03. Gas Supersaturation Control Program. Owners or operators of proposed water impoundment facilities subject to excessive spilling which can result in supersaturated water conditions must submit to the Department for approval a program for the detection and control of gas supersaturation. The program must include, but is not limited to: (7-1-93)

a. Time schedules for construction or installation of supersaturation control features and devices; and (7-1-93)

b. When required by the Department, a monitoring and reporting system insuring that supersaturated conditions are detected and reported to the Department. (7-1-93)

301. -- 349. (RESERVED)

350. RULES GOVERNING NONPOINT SOURCE ACTIVITIES.

01. Implementation Policy. (7-1-93)

a. Nonpoint sources are the result of activities essential to the economic and social welfare of the state. The a real extent of most nonpoint source activities prevents the practical application of conventional wastewater treatment technologies. Nonpoint source pollution management, including best management practices, is a process for protecting the designated beneficial uses and ambient water quality. Best management practices should be designed, implemented and maintained to provide full protection or maintenance of beneficial uses. Violations of water quality standards which occur in spite of implementation of best management practices will not be subject to enforcement action. However, if subsequent water quality monitoring and surveillance by the Department, based on the criteria listed in Sections 200, 210, 250, 251, 252, and 253, indicate water quality standards are not met due to nonpoint source impacts, even with the use of current best management practices, the practices will be evaluated and modified as necessary by the appropriate agencies in accordance with the provisions of the Administrative Procedure Act. If necessary, injunctive or other judicial relief may be initiated against the operator of a nonpoint source activity in accordance with the Director's authorities provided in Section 39-108, Idaho Code. In certain cases, revision of the water quality standards may be appropriate. (4-5-00)

b. As provided in Subsections 350.01.a. and 350.02.a. for nonpoint source activities, failure to meet general or specific water quality criteria, or failure to fully protect a beneficial use, shall not be considered a violation of the water quality standards for the purpose of enforcement. Instead, water quality monitoring and surveillance of nonpoint source activities will be used to evaluate the effectiveness of best management practices in protecting beneficial uses as stated in Subsections 350.01.a. and 350.02.b. (12-31-91)

02. Limitation to Nonpoint Source Restrictions. Nonpoint source activities will be subject to the following: (7-1-93)

a. Except as provided in Subsections 350.02.b. and 350.02.c., so long as a nonpoint source activity is being conducted in accordance with applicable rules, regulations and best management practices as referenced in Subsection 350.03, or in the absence of referenced applicable best management practices, conducted in a manner that demonstrates a knowledgeable and reasonable effort to minimize resulting adverse water quality impacts, the activity will not be subject to conditions or legal actions based on Subsection 080.01. In all cases, if it is determined by the Director that imminent and substantial danger to the public health or environment is occurring, or may occur as a result of a nonpoint source by itself or in combination with other point or nonpoint source activities, then the Director may seek immediate injunctive relief to stop or prevent that danger as provided in Section 39-108, Idaho Code. (3-29-12)

b. If the Director determines through water quality monitoring and surveillance that water quality criteria are not being met, or that beneficial uses are being impaired as a result of a nonpoint source activity by itself or in combination with other point and nonpoint source activities then: (3-3-87)

i. For an activity occurring in a manner not in accordance with approved best management practices, or in a manner which does not demonstrate a knowledgeable and reasonable effort to minimize resulting adverse water quality impacts, the Director may with appropriate inter-Departmental coordination. (3-3-87)

(1) Prepare a compliance schedule as provided in Section 39-116, Idaho Code; and/or (2-2-83)

(2) Institute administrative or civil proceedings including injunctive relief under Section 39-108, Idaho Code. (3-3-87)

ii. For activities conducted in compliance with approved best management practices, or conducted in a manner which demonstrates knowledgeable and reasonable effort to minimize resulting adverse water quality impacts, the Director may, with appropriate inter-Departmental coordination: (3-3-87)

(1) For those activities with approved best management practices as listed in Subsection 350.03 formally request that the responsible agency conduct a timely evaluation and modification of the practices to insure

full protection of beneficial uses. (12-31-91)

(2) For all other nonpoint source activities which do not have approved best management practices as listed in Subsection 350.03, develop and recommend to the operator control measures necessary to fully protect the beneficial uses. Such control measures may be implemented on a voluntary basis, or where necessary, through appropriate administrative or civil proceedings. (12-31-91)

(3) If, in a reasonable and timely manner the approved best management practices are not evaluated or modified by the responsible agency, or if the appropriate control measures are not implemented by the operator, then the Director may seek injunctive relief to prevent or stop imminent and substantial danger to the public health or environment as provided in Section 39-108, Idaho Code. (3-3-87)

c. The Director may review for compliance project plans for proposed nonpoint source activities, based on whether or not the proposed activity will fully maintain or protect beneficial uses as listed in Sections 200, 250, 251, 252, and 253. In the absence of relevant criteria in those Sections, the review for compliance will be based on whether or not the proposed activity: (4-5-00)

i. Will comply with approved or specialized best management practices; and (3-3-87)

ii. Provides a monitoring plan which, when implemented, will provide information to the Director adequate to determine the effectiveness of the approved or specialized best management practices in protecting the beneficial uses of water; and (3-3-87)

iii. Provides a process for modifying the approved or site-specific best management practices in order to protect beneficial uses of water. (3-3-87)

d. For projects determined not to comply with those requirements, the plan may be revised and resubmitted for additional review by the Department. Any person aggrieved by a final determination of the Director may, within thirty (30) days, file a written request for a hearing before the Board in accordance with the Idaho Administrative Procedures Act. In all cases, implementation of projects detailed in a plan shall be conducted in a manner which will not result in imminent and substantial danger to the public health or environment. (3-3-87)

03. Approved Best Management Practices. The following are approved best management practices for the purpose of Subsection 350.02: (12-31-91)

a. “Rules Pertaining to the Idaho Forest Practices Act,” IDAPA 20.02.01, as adopted by Board of Land Commissioners; (12-31-91)

b. Idaho Department of Environmental Quality Rules, IDAPA 58.01.06, “Solid Waste Management Rules and Standards”; (7-1-93)

c. Idaho Department of Environmental Quality Rules, IDAPA 58.01.03, “Individual/Subsurface Sewage Disposal Rules”; (7-1-93)

d. “Stream Channel Alteration Rules,” IDAPA 37.03.07, as adopted by the Board of Water Resources; (7-1-93)

e. For the Spokane Valley Rathdrum Prairie Aquifer, “Rathdrum Prairie Sewage Disposal Regulations,” as adopted by the Panhandle District Health Department Board of Health and approved by the Idaho Board of Environmental Quality; (7-1-93)

f. “Rules Governing Exploration, Surface Mining, and Closure of Cyanidation Facilities,” IDAPA 20.03.02, as adopted by the Board of Land Commissioners; and (7-1-93)

g. “Dredge and Placer Mining Operations in Idaho,” IDAPA 20.03.01, as adopted by the Board of Land Commissioners. (7-1-93)

- h. "Rules Governing Dairy Waste," IDAPA 02.04.14, as adopted by the Department of Agriculture. (3-20-97)

351. -- 399. (RESERVED)

400. RULES GOVERNING POINT SOURCE DISCHARGES.

01. Implementation Policy. (7-1-93)

a. As provided for in Subsection 080.01, and Sections 200, 210, 250, 251, 252, 253, 275, and 400 for point source discharges, failure to meet general or specific water quality criteria is a violation of the water quality standards. (4-5-00)

b. No unauthorized discharge from a point source shall occur to waters of the state. (4-11-06)

02. Limitations to Point Source Restrictions. So long as a point source discharge or wastewater treatment facility is regulated by the terms and conditions of an authorization pursuant to Subsection 080.02, a Board order, decree or compliance schedule, or a valid NPDES permit issued by the EPA, the discharge or facility will not be subject to additional restrictions or conditions based on Subsection 080.01 and Sections 200, 210, 250, 251, 252, and 253. (3-29-12)

03. Compliance Schedules for Water Quality-Based Effluent Limitations. Discharge permits for point sources may incorporate compliance schedules which allow a discharger to phase in, over time, compliance with water quality-based effluent limitations when new limitations are in the permit for the first time. (3-15-02)

04. Wetlands Used for Wastewater Treatment. (8-24-94)

a. Waters contained within wetlands intentionally created from non-wetland sites for the purpose of wastewater or stormwater treatment, and operated in compliance with NPDES permit conditions, shall not be subject to the application of general water quality-based or site-specific criteria and standards. (8-24-94)

b. Waters contained within wetlands intentionally created from non-wetland sites for the purpose of treatment of nonpoint sources of pollution, and operated in compliance with best management practices, shall not be subject to the application of general water quality-based or site specific criteria and standards. (8-24-94)

c. Discharges from treatment systems described in Sections 400.04.a. and 400.04.b. to waters of the state are subject to all applicable rules and requirements governing such discharges. (8-24-94)

05. Flow Tiered NPDES Permit Limitations. Discharge permits for point sources discharging to waters exhibiting unidirectional flow may incorporate tiered limitations for conventional and toxic constituents at the discretion of the department. (8-24-94)

06. Intake Credits for Water Quality-Based Effluent Limitations. Discharge permits for point sources may incorporate intake credits for water quality-based effluent limits. These credits are subject to the limitations specified in IDAPA 58.01.25, "Rules Regulating the Idaho Pollutant Discharge Elimination System Program." (3-25-16)

401. POINT SOURCE WASTEWATER TREATMENT REQUIREMENTS.

Unless more stringent limitations are necessary to meet the applicable requirements of Sections 200 through 300, or unless specific exemptions are made pursuant to Subsection 080.02, wastewaters discharged into surface waters of the state must have the following characteristics: (4-11-06)

01. Temperature. The wastewater must not affect the receiving water outside the mixing zone so that: (7-1-93)

a. The temperature of the receiving water or of downstream waters will interfere with designated beneficial uses. (7-1-93)

b. Daily and seasonal temperature cycles characteristic of the water body are not maintained. (7-1-93)

c. If temperature criteria for the designated aquatic life use are exceeded in the receiving waters upstream of the discharge due to natural background conditions, then wastewater must not raise the receiving water temperatures by more than three tenths (0.3) degrees C. (3-29-12)

Note: Submitted to EPA as a temporary rule on July 20, 2011, and as a final rule on August 7, 2012 (docket 58-0102-1101). This water quality standard revision removed the numeric limits on point source induced changes in receiving water temperature. Until EPA approves of this change, the previous treatment requirements located at <http://www.deq.idaho.gov/epa-actions-on-proposed-standards> are effective for federal Clean Water Act purposes and continue to apply.

02. Turbidity. The wastewater must not increase the turbidity of the receiving water outside the mixing zone by: (7-1-93)

a. More than five (5) NTU (Nephelometric Turbidity Units) over background turbidity, when background turbidity is fifty (50) NTU or less; or (7-1-93)

b. More than ten percent (10%) increase in turbidity when background turbidity is more than fifty (50) NTU, not to exceed a maximum increase of twenty-five (25) NTU. (7-1-93)

03. Total Chlorine Residual. The wastewater must not affect the receiving water outside the mixing zone so that its total chlorine residual concentration exceeds eleven one-thousandths (0.011) mg/l. (1-1-89)

402. -- 799. (RESERVED)

800. HAZARDOUS AND DELETERIOUS MATERIAL STORAGE.

Hazardous and deleterious materials must not be stored, disposed of, or accumulated adjacent to or in the immediate vicinity of state waters unless adequate measures and controls are provided to insure that those materials will not enter state waters as a result of high water, precipitation runoff, wind, storage facility failure, accidents in operation, or unauthorized third party activities. (7-1-93)

01. Criteria to Be Evaluated. Measures and controls will be judged by the Department on the basis of the following: (7-1-93)

a. Potential of a given occurrence; and (7-1-93)

b. The potential injury to beneficial uses presented by the nature and quantity of the material and on the physical design of the facility. (7-1-93)

02. Delineation of Materials. Such material includes, but is not limited to, trash, rubbish, garbage, oil, gasoline, chemicals, sawdust, and accumulations of manure. (7-1-93)

801. -- 848. (RESERVED)

849. OIL FILLED ELECTRIC EQUIPMENT.

Releases of Dielectric Oil from oil filled electric equipment are subject to the following requirements: (3-20-97)

01. Unauthorized Releases. In the case of an unauthorized release of dielectric oil to state waters or to land such that there is a likelihood that it will enter state waters, the persons in charge must: (3-20-97)

a. Stop Continuing Releases. Make every reasonable effort to abate and stop a continuing release. Provided however, that seepage normally associated with oil filled electrical equipment occurring in substations or distribution facilities with restricted access and not causing a threat to waters of the state is not considered a continuing release. (3-20-97)

b. Contain Material. Make every reasonable effort to contain released dielectric oil in such a manner that it will not reach surface or ground water of the state. (3-20-97)

c. Department Notification Required. Notify the Department or designated agent within forty-eight (48) hours of discovery of any release over twenty-five (25) gallons, or any release causing a threat to waters of the state, from any piece of electrical equipment. (3-20-97)

d. Collect, Remove, and Dispose. Collect, remove, and dispose of the released dielectric oil and any contaminated media in a manner approved by the Department. (3-20-97)

e. Compliance with Section 852. If collection, removal, and disposal cannot be accomplished within thirty (30) days after discovery of a release, the persons in charge shall comply with Section 852. (3-20-97)

02. Applicability. This section applies only to equipment used in the transmission of electricity such as transformers, regulators, reactors, circuit breakers, switch gear and attendant equipment which is filled with mineral insulating oil of a petroleum origin. This section does not pertain to bulk storage of dielectric oil which is not contained in electrical equipment. (3-20-97)

850. HAZARDOUS MATERIAL SPILLS.

In the case of an unauthorized release of hazardous materials to state waters or to land such that there is a likelihood that it will enter state waters, the responsible persons in charge must: (7-1-93)

01. Stop Continuing Spills. Make every reasonable effort to abate and stop a continuing spill. (7-1-93)

02. Contain Material. Make every reasonable effort to contain spilled material in such a manner that it will not reach surface or groundwaters of the state. (7-1-93)

03. Department Notification Required. Immediately notify the Department or designated agent of the spills. (7-1-93)

04. Collect, Remove and Dispose. Collect, remove, and dispose of the spilled material in a manner approved by the Department. (7-1-93)

851. PETROLEUM RELEASE REPORTING, INVESTIGATION, AND CONFIRMATION.

01. Reporting of Suspected Releases for All Petroleum Storage Tank Systems. Owners and operators of petroleum storage tank (PST) systems shall report to the Department within twenty-four (24) hours and follow the procedures in Subsection 851.03 for any of the following conditions: (7-1-93)

a. The discovery by owners and operators or others of a petroleum release at the PST site or in the surrounding area other than spills and overfills described in Subsection 851.04, such as the presence of free product or dissolved product in nearby surface water or ground water or vapors in soils, basements, sewer or utility lines. (7-1-93)

b. Unusual operating conditions observed by owners and operators such as the erratic behavior of product dispensing equipment, the sudden loss of product from the PST system, or an unexplained presence of water in the PST system, unless system equipment is found to be defective but not leaking, and is immediately repaired or replaced. (7-1-93)

c. Monitoring results from a release detection method that indicate a release may have occurred unless: (7-1-93)

i. The monitoring device is found to be defective, and is immediately repaired, recalibrated or replaced, and additional monitoring does not confirm the initial result; or (7-1-93)

ii. In the case of inventory control, a second month of data does not confirm the initial result. (7-1-93)

02. Investigation Due to Off-Site Impacts. When required by the Department, owners and operators shall follow the procedures in Subsection 851.03 to determine if the PST system is the source of off-site impacts. These impacts include the discovery of petroleum, such as the presence of free product or dissolved product in nearby surface water or ground water or vapors in soils, basements, sewer and utility lines, that has been observed by the Department or brought to its attention by another party. (7-1-93)

03. Release Investigation and Confirmation Steps. Unless corrective action is initiated in accordance with Section 852, owners and operators shall immediately investigate and confirm all suspected releases of petroleum within seven (7) days, or another time period specified by the Department, of discovery and using at least one (1) of the following steps or another procedure approved by the Department: (7-1-93)

a. Owners and operators shall conduct tightness tests that determine whether a leak exists in any portion of the PST system, including the tank, the attached delivery piping, and any connected tanks and piping. All such portions shall be tested either separately or together or in combinations thereof, as required by the Department. (7-1-93)

i. Owners and operators shall repair, replace or upgrade the PST system in accordance with applicable federal, state and local laws, and begin corrective action in accordance with Section 852 if the test results for the system, tank, or delivery piping indicate that a leak exists. (7-1-93)

ii. Further investigation is not required if the test results for the system, tank, and delivery piping do not indicate that a leak exists and if environmental contamination is not the basis for suspecting a release. (7-1-93)

iii. Owners and operators shall conduct a site check as described in Subsection 851.03.b. if the test results for the system, tank, and delivery piping do not indicate that a leak exists but environmental contamination is the basis for suspecting a release. (7-1-93)

b. Owners and operators shall measure for the presence of a release where contamination is most likely to be present. In selecting sample types, sample locations, and measurement methods, owners and operators shall consider the nature of the petroleum, the type of initial alarm or cause for suspicion, the type of backfill, the depth of ground water, and other factors appropriate for identifying the presence and source of the release. Methods of sample collection and sample analysis are subject to Department approval. (7-1-93)

i. If release has occurred, owners and operators shall begin corrective action in accordance with Section 852. (7-1-93)

ii. If test results for the PST system do not indicate that a release has occurred, further investigation is not required. (7-1-93)

04. Reporting and Cleanup of Above Ground Spills and Overfills. Owners and operators shall contain and immediately clean up an above ground spill or overflow of petroleum only after identifying and mitigating any fire, explosion and vapor hazards. (7-1-93)

a. An above ground spill or overflow of petroleum that results in a release that exceeds twenty-five (25) gallons or that causes a sheen on nearby surface water shall be reported to the Department within twenty-four (24) hours and owners and operators shall begin corrective action in accordance with Section 852. (7-1-93)

b. An above ground spill or overflow of petroleum that results in a release that is less than twenty-five (25) gallons and does not cause a sheen on nearby surface water shall be reported to the Department only if cleanup cannot be accomplished within twenty-four (24) hours. (7-1-93)

852. PETROLEUM RELEASE RESPONSE AND CORRECTIVE ACTION.

01. Release Response. Upon confirmation of a petroleum release in accordance with Section 851 or after a release from the PST system is identified in any other manner, owners and operators shall perform the following initial response actions within twenty-four (24) hours: (7-1-93)

- a. Identify and mitigate fire, explosion and vapor hazards; (7-1-93)
 - b. Take immediate action to prevent any further release of petroleum into the environment; and (7-1-93)
 - c. Report the release to the Department. (7-1-93)
- 02. Initial Abatement Measures.** Unless directed to do otherwise by the Department, owners and operators shall perform the following abatement measures: (7-1-93)
- a. Remove as much of the petroleum from the leaking PST system as is necessary to prevent further release to the environment; (7-1-93)
 - b. Visually inspect any above ground releases or exposed below ground releases and prevent further migration of the released substance into surrounding soils, surface water and ground water; (7-1-93)
 - c. Continue to monitor and mitigate any additional fire and safety hazards posed by vapors or free product that have migrated from the PST site and entered into subsurface structures such as sewers or basements; (7-1-93)
 - d. Remedy hazards posed by contaminated soils that are excavated or exposed as a result of release confirmation, site investigation, abatement, or corrective action activities. If these remedies include treatment or disposal of soils, the owner and operator shall comply with applicable state and local requirements. (7-1-93)
- 03. Initial Site Characterization.** Unless directed to do otherwise by the Department, owners and operators shall assemble information about the site and the nature of the release, including information gained while confirming the release or completing the initial abatement measures in Subsection 852.02. This information shall include, but is not necessarily limited to the following: (7-1-93)
- a. Data on the nature and estimated quantity of release; (7-1-93)
 - b. Data from available sources and/or site investigations concerning the following factors: surrounding populations, water quality, use and approximate location of wells potentially affected by the release, subsurface soil condition, locations of subsurface sewers, climatological conditions and land use; and (7-1-93)
 - c. Data from measurements that assess the site for the presence of petroleum contamination including: (7-1-93)
 - i. Measurements for the presence of a release where contamination is most likely to be present, unless the presence and source of the release have been confirmed in accordance with the site check required by Subsection 851.03.b. or the closure site assessments required by applicable federal, state, or local laws. Sample types, sample locations and analytical methods are subject to Department approval and shall be based on consideration of the nature of the petroleum, the type of backfill, depth to ground water and other factors appropriate for identifying the presence and source of the release; and (7-1-93)
 - ii. Measurements to determine the presence of free product. (7-1-93)
 - d. Within forty-five (45) days of release confirmation, or another time specified by the Department, owners and operators shall submit the information collected in compliance with Subsection 852.03 to the Department in a manner that demonstrates its applicability and technical adequacy to be reviewed as follows: (7-1-93)
 - i. If the Department determines that the information shows that no further corrective action is required, owners and operators shall be notified accordingly. (7-1-93)
 - ii. If the Department determines that the information shows petroleum contamination is limited to soils, owners and operators shall treat or dispose of contaminated soils in accordance with Department guidelines,

and need not perform any further corrective action. (7-1-93)

iii. If the Department determines that the information shows that any of the conditions in Subsections 852.05.a. through 852.05.c. exist, owners and operators shall comply with the requirements in Subsections 852.04 through 852.07. (7-1-93)

04. Free Product Removal. At sites where investigations under Subsection 852.03.c.ii. indicate the presence of free product, owners and operators shall remove free product to the maximum extent practicable as determined by the Department while continuing, as necessary, any actions initiated under Subsections 852.01 through 852.03 or preparing for actions required under Subsections 852.05 and 852.06. In meeting the requirements of Subsection 852.04, owners and operators shall: (7-1-93)

a. Conduct free product removal in a manner that minimizes the spread of contamination into previously uncontaminated areas by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the site, and that properly treats, discharges or disposes of recovery by-products in compliance with applicable local, state and federal regulations; (7-1-93)

b. Use abatement of free product migration as a minimum objective for the design of the free product removal system; (7-1-93)

c. Handle any flammable products in a safe and competent manner to prevent fires or explosions; and (7-1-93)

d. Unless directed to do otherwise by the Department, prepare and submit to the Department for review and approval, within forty-five (45) days after confirming a release, a free product removal report that provides at least the following information: (7-1-93)

i. The name of the person(s) responsible for implementing the free product removal measures; (7-1-93)

ii. The estimated quantity, type and thickness of free product observed or measured in wells, boreholes, and excavations; (7-1-93)

iii. The type of free product recovery system used; (7-1-93)

iv. Whether any discharge will take place on-site or off-site during the recovery operation and where this discharge will be located; (7-1-93)

v. The type of treatment applied to, and the effluent quality expected from, any discharge; (7-1-93)

vi. The steps that have been or are being taken to obtain necessary permits for any discharge; and (7-1-93)

vii. The disposition of the recovered free product. (7-1-93)

05. Investigations for Soil and Water Cleanup. If any of the conditions in Subsections 852.05.a. through 852.05.c. exist, and unless directed to do otherwise by the Department, owners and operators shall notify the Department and conduct investigations in accordance with Subsection 852.05.d. of the release, the release site, and the surrounding area possibly affected by the release in order to determine the full extent and location of soils contaminated by the petroleum release and the presence and concentrations of dissolved product contamination in the ground water or surface water: (7-1-93)

a. There is evidence that ground water or surface water has been affected by the release such as found during release confirmation or previous corrective action measures; (7-1-93)

b. Free product is found to need recovery in compliance with Subsection 852.04; (7-1-93)

c. There is evidence that contaminated soils may affect nearby ground water, surface water or the public health and have not been treated or disposed of in accordance with Subsection 852.03.d.ii. (7-1-93)

d. Unless determined otherwise by the Department, investigations conducted under this Subsection, 852.05, shall include, but are not necessarily limited to the following: (7-1-93)

i. The physical and chemical characteristics of the petroleum product including its toxicity, persistence, and potential for migration; (7-1-93)

ii. The type and age of the PST system, inventory loss, and type of containment failure; (7-1-93)

iii. The hydrogeologic characteristics of the release site and the surrounding area; (7-1-93)

iv. The background concentrations of contaminants in soil, surface water and ground water; (7-1-93)

v. A site drawing, showing boring and monitoring well locations, nearby structures, under ground utilities, drainage ditches, streams, suspected locations of leakage, direction of ground water flow, and any domestic or irrigation wells within a one-fourth (1/4) mile radius of the site; (7-1-93)

vi. Information on ownership and use of any well identified pursuant to Subsection 852.05.d.v.; (7-1-93)

vii. Site borings and well logs and rationale for choosing drilling locations, and a description of methods and equipment used for all water and soil sampling; (7-1-93)

viii. A description of contaminant stratigraphy with accompanying geologic cross-section drawings; (7-1-93)

ix. A demonstration and description of the horizontal and vertical extent of contamination, free product thickness, modes and rate of contaminant transport, and concentrations of dissolved constituents in surface water and ground water; (7-1-93)

x. The potential effects of residual contamination on nearby surface water and ground water; and (7-1-93)

xi. A discussion of laboratory analytical methods and information pertaining to laboratory certification. (7-1-93)

e. Owners and operators shall submit the information collected in investigating the release site in compliance with Subsection 852.05 for the Department's review and approval in accordance with a schedule established by the Department as provided in Subsection 852.07. (7-1-93)

06. Corrective Action Plan. At any point after reviewing the information submitted in compliance with Subsections 852.01 through 852.05, the Department may require owners and operators to submit additional information or to develop and submit a corrective action plan for responding to contaminated soils, surface water and ground water. If a plan is required, owners and operators shall submit the plan according to a schedule and criteria established by the Department as provided in Subsection 852.07. Alternatively, owners and operators may, after fulfilling the requirements of Subsections 852.01 through 852.05, choose to submit a corrective action plan for responding to contaminated soil, surface water and ground water. In either case, owners and operators are responsible for submitting a plan that provides for adequate protection of human health and the environment as determined by the Department, and shall modify their plan as necessary to meet the Department's standards. (7-1-93)

a. The Department will approve the corrective action plan only after ensuring that implementation of the plan will adequately protect human health and the environment. In making this determination, the Department should consider the following factors as appropriate: (7-1-93)

i. The maximum contaminant levels for drinking water or other health-based levels for water and soil

which consider the potential exposure pathway of the petroleum product; (3-18-94)

- ii. The physical and chemical characteristics of the petroleum product including its toxicity, persistence, and potential for migration; (7-1-93)
- iii. The hydrogeologic characteristics of the release site and the surrounding area; (7-1-93)
- iv. The proximity, quality, and current and future uses of nearby surface water and ground water; (7-1-93)
- v. The potential effects of residual contamination on nearby surface water and ground water; and (7-1-93)
- vi. Other information assembled in compliance with Section 851. (7-1-93)

b. Upon approval of the corrective action plan or as directed by the Department, owners and operators shall implement the plan including modification to the plan made by the Department. Owners and operators shall monitor, evaluate, and report the results of implementing the plan in accordance with a schedule and criteria established by the Department as provided in Subsection 852.07. (7-1-93)

c. Owners and operators may, in the interest of minimizing environmental contamination and promoting more effective cleanup, begin cleanup of soil, surface water, and ground water before the corrective action plan is approved provided that they: (7-1-93)

- i. Notify the Department of their intention to begin cleanup; (7-1-93)
- ii. Comply with any conditions imposed by the Department, including halting cleanup or mitigating adverse consequences from cleanup activities; and (7-1-93)
- iii. Incorporate these self-initiated cleanup measures in the corrective action plan that is submitted to the Department for approval. (7-1-93)

07. Compliance. If the Department determines that any of the conditions in 852.05.a. through 852.05.c. exist, owners and operators shall be given an opportunity to enter into a consent order with the Department. (7-1-93)

a. The Department shall send owners and operators a consent order that sets forth at least the following: (7-1-93)

- i. A schedule for owners and operators to submit the information collected in investigating the release site in compliance with Subsection 852.05. (7-1-93)
- ii. A schedule for owners and operators to submit, and a criteria for, a corrective action plan in compliance with Subsection 852.06. (7-1-93)
- iii. A schedule for the Department to review, modify, and approve the site release investigation and corrective action plan. (7-1-93)
- iv. A schedule and criteria for owners and operators to implement a corrective action plan, and monitor, evaluate, and report the results of implementing the corrective action plan. (7-1-93)

b. Owners and operators shall be given thirty (30) days from receipt of the consent order in which to reach an agreement with the Department regarding the terms of the consent order. (7-1-93)

c. If owners and operators cannot reach an agreement with the Department within thirty (30) days, the Department shall establish a schedule and criteria with which owners and operators shall comply in order to meet the requirements of Subsections 852.05 and 852.06. (7-1-93)

853. -- 999. (RESERVED)

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List of Applicable Websites:

- <https://adminrules.idaho.gov/rules/current/58/0102.pdf>
- <http://www.deq.idaho.gov/water-quality/surface-water/monitoring-assessment/integrated-report.aspx>
- http://iaspub.epa.gov/tmdl/attains_impaired_waters.impaired_waters_list?p_state=ID&p_cycle=2012
- http://iaspub.epa.gov/tmdl/attains_watershed.control
- http://ofmpub.epa.gov/waters10/attains_index.search_wb?p_area=ID&p_cycle=2012
- http://ofmpub.epa.gov/tmdl_waters10/attains_waterbody.control?p_area=ID&p_report_type=#attainments



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- [TMDLs That Apply to This Waterbody](#)

2012 Waterbody Report for Buffalo River - Elk Creek to mouth

State: [Idaho](#)
Waterbody ID: ID17040202SK016_03
Location: HUC: 17040202
State Waterbody Type: River
EPA Waterbody Type: Rivers and Streams
Water Size: 2.33
Units: miles
Watershed Name: [Upper Henrys](#)

Click on the waterbody for an interactive map

Features

- [About This Database \(Integrated Report\)](#)
- [Assessing Water Quality \(Questions and Answers\)](#)
- [Integrated Reporting Guidance](#)
- [Previous National Water Quality Reports](#)
- [EnviroMapper for Water](#)
- [AskWATERS](#)
- [EPA WATERS Homepage](#)
- [Exchange Network](#)
- [Assessment Database](#)
- [Statewide Statistical Surveys](#)
- [How's My Waterway Local Search tool](#)
- [Pollution Categories Summary Document](#)
- [Nitrogen and Phosphorus Pollution Data Access Tool \(NPDAT\)](#)

[Waterbody History Report](#)

Data are also available for these years: [2010](#) [2008](#) [2002](#)

Water Quality Assessment Status for Reporting Year 2012

The overall status of this waterbody is Not_Assessed.

[Description of this table](#)

Designated Use	Designated Use Group	Status
Aesthetic	Aesthetic Value	Not Assessed
Agricultural Water Supply	Agricultural	Not Assessed
Cold Water Aquatic Life	Fish, Shellfish, And Wildlife Protection And Propagation	Not Assessed
Domestic Water Supply	Public Water Supply	Not Assessed
Industrial Water Supply	Industrial	Not Assessed
Primary Contact Recreation	Recreation	Not Assessed

Salmonid Spawning	Fish, Shellfish, And Wildlife Protection And Propagation	Not Assessed
Wildlife Habitat	Fish, Shellfish, And Wildlife Protection And Propagation	Not Assessed

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Causes of Impairment for Reporting Year 2012

No impairment data have been reported to EPA for this waterbody.

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Probable Sources Contributing to Impairment for Reporting Year 2012

No probable source data have been reported to EPA for this waterbody.

↑ Top of page

TMDLs That Apply to this waterbody

No TMDL data have been recorded by EPA for this waterbody.

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http://ofmpub.epa.gov/tmdl_waters10/attains_waterbody.control?p_au_id=ID17040202SK016_03&p_cycle=2012&p_state=ID&p_report_type=#attainments
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APPENDIX F
FISH PASSAGE

UNITED STATES OF AMERICA 112 FERC ¶62,008
FEDERAL ENERGY REGULATORY COMMISSION

Fall River Rural Electric
Cooperative, Inc.

Project No. 1413-038

ORDER MODIFYING AND APPROVING FISHWAY AND FISH SCREEN
MONITORING PLAN PURSUANT TO ARTICLE 407

(Issued July 6, 2005)

On May 13, 2005, Fall River Rural Electric Cooperative, Inc. (licensee) filed its fishway and fish screen monitoring plan (plan) as required by article 407 of the license for the Buffalo River Hydroelectric Project.¹ The project is located on the Buffalo River near its confluence with the Henry's Fork River, north of Ashton, in Fremont County, Idaho, where it also occupies about 9.8 acres of land within the Targhee National Forest, administered by the U.S. Forest Service (FS).

ARTICLE 407

License article 407 requires the licensee, within one year of licensee issuance, file for Commission approval a plan for conducting post-construction monitoring and evaluation of the fishway and fish screen required by articles 405 and 406, respectively, for a period of 3 years and every third year thereafter for the term of the license. In addition to the monitoring provision specified in the FS section 4(e) condition no. 14, which requires the plan include monitoring fish mortality associated with the fish screen, the plan must also include, at a minimum, a provision for monitoring and documenting fishway use and effectiveness; recording the species, length, and quantity of fish found impinged on the fish screen; a description of the procedures for maintenance of the fishway and fish screen; and a schedule for:

(1) implementation;

(2) consultation with the Idaho Department of Fish and Game (IDFG), FS, U.S. Fish and Wildlife Service (FWS), and Henry's Fork Foundation (Foundation) concerning the results of the monitoring and evaluation; and

(3) filing the monitoring and evaluation results, the agencies' and Foundation's

¹ 109 FERC ¶ 62,077 (2004)

comments, and the licensee's response to the agencies' and Foundation's comments with the Commission in years when monitoring takes place.

The licensee is also required to prepare the plan after consultation with the IDFG, FS, FWS, and Foundation. Upon Commission approval, the licensee is required to implement the plan, including any changes required by the Commission.

LICENSEE'S PLAN

Fish screen monitoring

During the first three years of operation and every third year thereafter, operating personnel will record the number, species, lengths, and likely causes of death of fishes found on the project's fish screen on a daily basis, except Saturdays and Sundays. The licensee will provide the data to the FS, IDFG, FWS and the Foundation in spreadsheet format on a semi-annual basis in July and December.

The licensee proposes to make no physical or operational changes to the fish screen facility once construction has been completed as long as the facility meets the required specifications. FS section 4(e) condition no. 14 requires screen approach velocities not to exceed 0.80 feet per second (fps).

Fish ladder monitoring

The licensee proposes to install a fish trap on the upstream exit of the ladder. During the first three years of operation and every third year thereafter, operating personnel will inspect the trap daily Monday through Friday. Data collected daily would include the date, fish species and fish lengths and will be provided to the resource agencies and the Foundation in a spreadsheet format on a semi annual basis in July and December.

After the first year of monitoring, the licensee proposes to review the data collected to determine if monitoring times can be consolidated to specific periods when the ladder is most used. The licensee notes that any changes to the monitoring schedule would require a consensus of the resource agencies and the Foundation. The licensee is also responsible for minor modifications to enhance passage, such as the size, shape, and position of flow orifices (if applicable), and to provide attraction flow as well as adequate flow within the ladder.

AGENCY COMMENTS/LICENSEE RESPONSES

The licensee provided its monitoring plan to the Commission, resource agencies, the Foundation, and Idaho Rivers United in letters seeking comment dated April 15,

2004. Responses were received from the FWS (letter dated April 28, 2004), IDFG (letters dated May 4, 2004, and April 13, 2005), FS (May 19, 2004, and April 21, 2005), and the Foundation (letter dated April 22, 2005).

The agencies generally agreed with the licensee's plan; however, the IDFG, FS, and Foundation had several issues that needed to be addressed by the licensee.

The IDFG requested the licensee document approach velocity to and "sweeping" velocities along the fish screen, provide conceptual drawings of the fish trap, allow access to the IDFG and the FS to all fishway facilities and the screen in order to monitor conditions, and that fish screen monitoring data be provided on a quarterly basis. The IDFG also stated that the licensee is responsible for collecting data adequate to document fish use of the fish ladder and will be responsible for minor modifications to enhance passage, if needed.

The licensee agreed to document flow velocities to and across the screen, concurs that it is responsible for proper operation of the fish ladder and will provide minor enhancements as necessary to ensure passage efficiency, will allow access to the agencies and the Foundation to all fishway facilities and the screen, and included drawings of the fishtrap in its May 29, 2005 filing. The licensee did not address IDFG's request to provide data on a quarterly basis.

The FS stated that the licensee should include "likely cause of death" as a component of monitoring of the screen, and that the screen should be cleaned and checked twice daily. The FS also requested that the plan include a sentence stating that the licensee shall be responsible for ensuring proper function of the fish ladder for the term of the license, listed its specifications for the fish trap, stated that the licensee should be responsible for ensuring proper flow patterns below the dam, requested ongoing cooperation with the Foundation concerning video monitoring of fish movement, and that the licensee's April 15, 2004 letter be incorporated by reference into the plan.

The licensee included "likely cause of death" as a component of its screen monitoring, but believes that once daily monitoring and screen cleaning should be sufficient. The licensee also agrees to immediately report high mortality events, to ensure that the fish ladder functions properly, included a conceptual diagram of the fish trap in its May 2005 filing, agrees to modify as necessary the area below the fish ladder to ensure efficient attraction of fish to the fishway, will continue to cooperate with the Foundation concerning video monitoring at the fish ladder, and included its April 2004 letter in its May 2005 filing.

The Foundation commented on several issues to which the licensee agreed. These include that the licensee continue to cooperate with the Foundation with respect to the video recording camera in the fish ladder, review the data collected after one year to help

guide sampling when most efficient, to measure flow and velocities within the fish ladder to ensure that they meet design criteria, and to measure velocities in front of the fish screens. The Foundation also requested that the licensee monitor outmigration of juvenile trout at the project. The licensee responds that it does not propose to monitor downstream fish migration, but stated that it would provide onsite personnel as available should the resource agencies and the Foundation take on such an endeavor.

DISCUSSION/RECOMMENDATIONS

The licensee's upstream fishway and fish screen monitoring plan partially complies with the requirements of license article 407. It includes monitoring fish mortality associated with the fish screen, monitoring and documenting fishway use and effectiveness, and recording the species, length, and quantity of fish found impinged on the fish screen. However, the plan does not include an implementation schedule, a description of the procedures for maintenance of the fishway and fish screen, or a schedule for responding to agency comments on the data review and provisions to file the results and comments with the Commission. In addition, the licensee has agreed to several additions to the plan in its responses to agency comments, yet these are not reflected in the plan as filed on May 13, 2005. We will modify the plan accordingly herein to ensure that the required goals of the plan are met, it complies with article 407, and, therefore, should be approved. These modifications or additions include: 1) an implementation schedule based on completion of construction by the end of October 2005;² 2) documentation of approach and sweeping velocities; 3) allowing IDFG, FS, FWS, and Foundation personnel access to the fishway and screen in order to monitor conditions; 4) cleaning schedule as necessary to ensure unimpaired operation of both screen and fishway; 5) continuing cooperation with the Foundation with respect to video monitoring; and 6) the immediate reporting of any high mortality events at the project to the agencies.

We also note that the plan filed May 13, 2005, differs from that sent to the resource agencies and the Foundation on April 15, 2004, requesting comments. The April 2004 plan states that screen monitoring data will be provided to the parties on a quarterly basis, while the May 2005 plan states the data would be provided on a semi-annual basis. With respect to fish ladder monitoring, the April 2004 plan states that the fish ladder monitoring data will be provided to the parties annually, while the May 2005 plan states the data would be provided on a semi-annual basis.

We recommend that the data for both screen and ladder monitoring be provided to the resource agencies and the Foundation on a quarterly basis for the first year. After one

² See Order Approving Upstream Fishway Construction Plan and Schedule Pursuant to Article 408, issued April 22, 2005. 111 FERC ¶ 62,087 (2005).

year of monitoring, the licensee should consult with the parties to determine if annual or semi-annual reporting may be sufficient for their needs.

With respect to the requirement of article 407 that the licensee file the monitoring and evaluation results, along with agency and Foundation comments, and licensee response to comments with the Commission in years when monitoring takes place, we recommend that these reports need only be completed on an annual basis. Based on the reports and the agency and Foundation comments, the Commission should retain the right to require changes in project structures or operations as needed to ensure the effectiveness of both fish screen and ladder.

Finally, the Foundation requested the licensee monitor outmigration of juvenile trout at the project. The licensee responds that it does not propose to monitor downstream fish migration, but stated that it would provide onsite personnel as available should the resource agencies and the Foundation take on such an endeavor. We note the project license does not require the licensee to monitor outmigration of juvenile trout through the project. We also note that the environmental assessment prepared by Commission staff on the application for a new license for the project fully explored fishery issues of interest and did not recommend studying outmigration of trout from the Buffalo River. We have been presented with no new information for us to conclude otherwise.

The Director orders:

(A) Fall River Rural Electric Cooperative, Inc.'s (licensee) fishway and fish screen monitoring plan (plan) as required by article 407 of the license for the Buffalo River Hydroelectric Project and filed on May 13, 2005, is approved as modified in paragraphs B through D below.

(B) The plan shall include the following provisions:

1. The licensee shall implement the plan at the completion of construction/installation of the fishway and fish screen pursuant to the Commission Order Approving Upstream Fishway Construction Plan and Schedule Pursuant to Article 408, issued April 22, 2005.³
2. Within 90 days of installation of the fish screen, the licensee shall measure screen approach and sweeping velocities. The licensee shall provide the results to the Idaho Department of Fish and Game (IDFG), U.S. Forest Service (FS), U.S. Fish and Wildlife Service (FWS), and Henry's

³ 111 FERC ¶ 62,087 (2005)

Fork Foundation (Foundation). If the approach velocity of 0.8 feet per second and zero sweeping is not met, the licensee shall file a report with the Commission within 30 days that includes recommendations for any changes needed to the fish screen to ensure that it meets the screening criteria.

3. The licensee shall make arrangements to allow IDFG, FS, FWS, and Foundation personnel access to the fishway facility and the fish screen in order to monitor operational conditions.

4. Upon initiation of operation of the fish ladder and screen, the licensee shall inspect, clean, and maintain the facilities as necessary to ensure unimpaired operation of the facilities.

5. The licensee shall cooperate with the Foundation with respect to video monitoring at the project.

6. The licensee shall immediately report any high fish mortality event at the project to the IDFG, FS, FWS, and Foundation.

(C) The licensee shall provide data for both fish screen and fishway monitoring to the resource agencies and the Foundation on a quarterly basis for the first year of monitoring. After one year of monitoring, the licensee may request the Commission revise this schedule based on project-specific information. The licensee should consult with the agencies and the Foundation to determine if annual or semi-annual reporting may be sufficient for their needs.

(D) The licensee shall file annual reports that include fish screen and fishway monitoring and evaluation results with the Commission by March 1 of the year following the monitoring year for the first three years of operation and every third year thereafter. The report shall also include comments on the results from the agencies' and Foundation, the licensee's response to the agencies' and Foundation's comments, and for Commission approval, any recommendations for changes in project structures or operations as needed to ensure the effectiveness of both fish screen and ladder. Prior to filing the report with the Commission, the licensee shall allow the agencies and the Foundation at least 30 days to provide comments. The Commission should reserves the authority to require changes in project structures or operations as needed to ensure the effectiveness of both fish screen and fishway.

Project No. 1413-038

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(E) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of 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

UNITED STATES OF AMERICA 112 FERC ¶62,042
FEDERAL ENERGY REGULATORY COMMISSION

Fall River Rural Electric
Cooperative, Inc.

Project No. 1413-044

ORDER APPROVING FISH SCREEN DESIGN DRAWINGS PURSUANT TO
LICENSE ARTICLE 406

(Issued July 15, 2005)

On June 1, 2005, Fall River Rural Electric Cooperative, Inc. (licensee) filed its fish screen design drawings required by article 406 of the license for the Buffalo River Hydroelectric Project.¹ The project is located on the Buffalo River near its confluence with the Henry's Fork River, north of Ashton, in Fremont County, Idaho, where it also occupies about 9.8 acres of land within the Targhee National Forest, administered by the U.S. Forest Service (FS).

ARTICLE 406

Article 406 requires the licensee file for Commission approval detailed design drawings of the fish screen required by Condition No. 14 of Appendix A of the project license, together with a schedule to construct or install, operate, and maintain the fish screen. The design for the fish screen must be filed with the project plans and specifications required by license article 301.

The licensee is required to prepare the drawings and schedule after consultation with the Idaho Department of Fish and Game (IDFG), U.S. Forest Service (FS), U.S. Fish and Wildlife Service (FWS), and Henry's Fork Foundation (Foundation). The Commission also reserves the right to require changes to the proposed fish screen and schedule. Construction or installation of the fishway can not begin until the licensee is notified by the Commission that the filing is approved and the Commission's Regional Office authorizes start of construction.

Condition No. 14 of license Appendix A, a section 4(e) condition filed by the FS on July 29, 2004, requires the licensee to install a screen device on the intake structure of the project's penstock to prevent entrainment of salmonid fingerlings into the conduit and penstock systems. The FS requires the intake be screened with openings no greater than 0.25 inches. In addition, approach velocities should not exceed 0.80 feet per second. The

¹ 109 FERC ¶ 62,077 (2004)

licensee must also provide for the frequent removal of debris and trash in order to constantly maintain proper approach velocities. The fish screen design is required to be developed in consultation with the FWS, IDFG, and the FS, with the design drawings being approved by the agencies.

LICENSEE'S DESIGN DRAWINGS AND SCHEDULE

The proposed fish screen (composed of 2 sections) will be about 25 feet wide by 10 feet tall, with the required 1/4-inch openings. Details of the fish screen are shown in design drawings 8, Screened Intake Structure Details, and 9, Intake Screen detail.

AGENCY COMMENTS

Comments specific to the licensee's proposed fish screen design drawings were received from the IDFG, the Foundation, and the FS, in letters dated April 11 and 22 and May 27, 2005, respectively.

The IDFG states it supports the fish screen as shown in the drawings. The agency finds the dimensions of the screen and estimated approach velocities acceptable.

The Foundation states that the design of the proposed fish screen appears to address the desire to keep approach velocities around 0.8 feet per second. Upon completion of the screen, however, the Foundation wants velocity measurements taken to verify screen criteria. Also, records should be kept of any fish mortalities or impingements on the screen.

The FS states that it approves the construction plan, although it notes that some details of the type of screen cleaner have not been fully decided upon.

DISCUSSION/RECOMMENDATIONS

The licensee's design drawings generally meet the requirements of license article 406 and the design criteria required. When completed, the facility should be adequate to protect area fish from adverse impacts of entrainment and impingement.

The licensee did not, however, include a schedule for construction or maintenance of the facility. The licensee did include a schedule for installation of the fish screen though in its March 3, 2005 filing pursuant to license article 408. That filing schedules installation of fish screens during the period August through October, 2005. We will approve that schedule herein as it is the most appropriate period to avoid disturbance to rainbow trout spawning, rearing of trout fry, and displacement of wintering swans and

would allow screen installation concurrent with the fishway installation.² With respect to screen maintenance, measurements of approach velocities, and recording fish impingement and mortalities, our Order Modifying and Approving Fishway and Fish Screen Monitoring Plan Pursuant to Article 407, issued July 6, 2005,³ requires the licensee to inspect, clean, and maintain the facility as necessary to ensure unimpaired operation of the facility, to measure screen approach velocities, and to record observations of fish impingement and any fish mortality.

The licensee is reminded that, pursuant to article 405, installation or construction of the fishway can not begin until authorized by the Commission's Regional Office. After the fishway is constructed, the licensee should then file as-built drawings of the upstream fish passage facility, for Commission approval.

The Director orders:

(A) Fall River Rural Electric Cooperative, Inc.'s (licensee) fish screen design drawings, filed on June 1, 2005, pursuant to article 406 of the license for the Buffalo River Hydroelectric Project, are approved.

(B) Within 90 days of completion of construction, the licensee shall file as-built drawings of the upstream fish passage facility, for Commission approval.

(C) The licensee shall install the fish screen concurrent with installation of the fishway required by license article 405, as provided in the licensee's filing of March 3, 2005.

(D) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of 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

² See Order Approving Upstream Fishway Construction Plan and Schedule Pursuant to Article 408, issued April 28, 2005. 111 FERC ¶ 62,087 (2005)

³ 112 FERC ¶ 62,008 (2005)

117 FERC ¶ 62, 079
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Fall River Rural Electric Cooperative, Inc.

Project No. 1413-053

ORDER APPROVING AS-BUILT EXHIBIT F DRAWINGS

(Issued October 27, 2006)

On March 28, 2006, Fall River Rural Electric Cooperative, Inc. (Fall River), licensee for the Buffalo River Hydroelectric Project, FERC No. 1413, filed as-built Exhibit F drawings to show the completed installation of fish screen and upstream fishway structures. Fall River submitted the filing in compliance with Article 305 of the project license.¹ The project is located on the Buffalo River near its confluence with the Henry's Fork River, north of Ashton, in Fremont County, Idaho. Portions of the project occupy lands within the Targhee National Forest.

BACKGROUND

License Articles 405 and 406 authorize the installation of an upstream fishway and a fish screen as required by Condition No. 14 of Appendix A of the project license, respectively. The fishway is required to be operated continuously and designed to pass all life history stages of rainbow trout of at least 100 millimeters total length and, together with a new sluiceway, maintain the wetted area at the base of the west end of the project dam. Condition No. 14 of license Appendix A, a section 4(e) condition filed by the U.S. Forest Service (FS) on July 29, 2004, requires the licensee to install a screen device on the intake structure of the project's penstock to prevent entrainment of salmonid fingerlings into the conduit and penstock systems. The FS requires the intake be screened with openings no greater than 0.25 inches. In addition, approach velocities should not exceed 0.80 feet per second. The licensee must also provide for the frequent removal of debris and trash in order to constantly maintain proper approach velocities.

License Article 305 directs Fall River to file for approval with the Commission revised exhibits showing the upstream fishway and fish screen facilities as built.

¹ 109 FERC ¶ 62,077 Order Issuing Subsequent License, issued November 5, 2004.

Project No. 1413-053

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Construction work was authorized by the Commission's Portland Regional Office in a letter dated August 4, 2005. In a letter filed with the Commission on March 6, 2006, the licensee states that the construction was completed in January 2006 and certifies that the project was constructed in accordance with the plans and specifications.

REVIEW

In the March 28, 2006 filing, Fall River submitted as-built Exhibit F drawings for the Commission's approval. The exhibits show the completed upstream fishway and fish screen structures as authorized in the license. In addition to an index sheet, the licensee filed eleven drawing sheets; however, three of them (G1, D4, and D6) are not approved by this order. These three drawings depict: (1) construction notes, abbreviations, and a legend; (2) temporary cofferdam detail; and (3) intake screen detail, which do not warrant Commission approval. The remaining revised exhibits conform to the Commission's rules and regulations, and are approved by this order. Ordering paragraph (B) of this order requires the licensee to file aperture cards and electronic files of the approved Exhibit F drawings.

The Director orders:

(A) The following exhibit drawings, filed on March 28, 2006, conform to the Commission's rules and regulations, and are approved and made a part of the license. Superseded exhibits are eliminated from the license.

Exhibit No.	FERC Drawing No.	Licensee's Drawing No.	Drawing Title	Superseded FERC Drawing No.
F-5	1413-1006	P1	Site Plan	1413-1002 1413-1005
F-6	1413-1007	D1	Fish Ladder Plan and Hydraulic Profile View	-
F-7	1413-1008	D2	Fish Ladder Details	-
F-8	1413-1009	D3	Sheet Pile Details	-
F-9	1413-1010	D5	Screened Intake Structure Details	-
F-10	1413-1011	S1	Fish Ladder Section Views	-
F-11	1413-1012	S2	Fish Ladder Section Views	-
F-12	1413-1013	S3	Intake and Sheet Pile Cross Sections	-

Project No. 1413-053

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(B) Within 45 days of the date of issuance of this order, the licensee shall file the approved exhibit drawings in aperture card and electronic file formats.

a) Three sets of the approved exhibit drawings shall be reproduced on silver or gelatin 35mm microfilm. All microfilm shall be mounted on type D (3-1/4" X 7-3/8") aperture cards. Prior to microfilming, the FERC Project Drawing Number (i.e., P-1413-1006 through P-1413-1013) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number shall be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (i.e., F-5, etc.), Drawing Title, and date of this order shall be typed on the upper left corner of each aperture card. See Fig. 1.

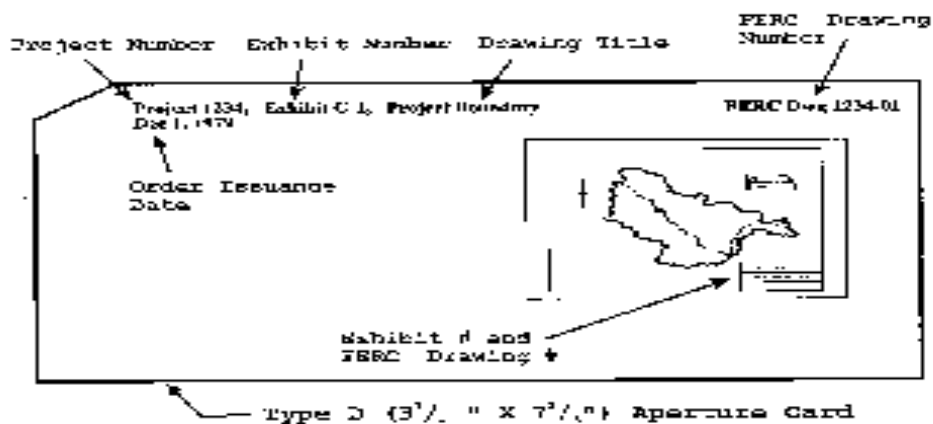


Figure 1 Sample Aperture Card Format

Two of the sets of aperture cards shall be filed with the Secretary of the Commission, ATTN: OEP/DHAC. The third set shall be filed with the Commission's Division of Dam Safety and Inspections Portland Regional Office.

b) The licensee shall file two separate sets of exhibit drawings in electronic raster format with the Secretary of the Commission, ATTN: OEP/DHAC. A third set shall be filed with the Commission's Division of Dam Safety and Inspections Portland Regional Office. The drawings must be identified as **(CEII) material under 18 CFR § 388.113(c)**. Each drawing must be a separate electronic file, and the file name shall include: FERC Project Drawing Number, FERC Exhibit, Drawing Title, date of this order, and file

Project No. 1413-053

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extension [i.e., P-1413-1006, F-5, Site Plan, MM-DD-YYYY.TIF]. Electronic drawings shall meet the following format specification:

IMAGERY - black & white raster file
FILE TYPE – Tagged Image File Format, (TIFF) CCITT Group 4
RESOLUTION – 300 dpi desired, (200 dpi min.)
DRAWING SIZE FORMAT – 24” X 36” (min), 28” X 40” (max)
FILE SIZE – less than 1 MB desired

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

William Guey-Lee
Chief, Engineering and Jurisdiction Branch
Division of Hydropower Administration
and Compliance



Northwest Power Services, Inc.

Filed Electronically

February 14, 2013

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: Buffalo River Hydroelectric Project, FERC Project #1413, Fish-way and Fish Screen
Monitoring Plan

Dear Ms. Bose,

Please find attached the data from 2012 fish-way and fish screen for the Buffalo River Hydroelectric Project. This report is in compliance with Article 407 of the license and the order approving this monitoring plan. This report has been sent to the agencies, any comments they provide will be forwarded to the FERC.

If you have any questions or need additional information, please contact Corey Smith at (208) 881-1455 or email at csmith@nwpwrservices.com.

Sincerely,

A handwritten signature in blue ink that reads 'Brent L. Smith'.

Brent L. Smith
Chief Operating Officer
Rigby, Idaho

cc: Mr. Bryan Case, Fall River Electric
Tom P. Bassista, Environmental Staff Biologist, Idaho Department of
Fish and Game
Anne Marie, Conservation Director, Henry's Fork Foundation
Lee Mabey, US Forest Service
Elizabeth Davy, US Forest Service
Deb Mignogno, US Fish & Wildlife Service
Michael Morse, US Fish & Wildlife Service
Scott, A. Grunder, Fishery Program Coordinator, Idaho Department
of Fish & Game

Buffalo River Hydroelectric Project

FERC Project #1413

Fish-way and Fish Screen Monitoring Plan



Prepared for:

Fall River Rural Electric Cooperative, Inc.
Ashton, Idaho

Prepared by:

Northwest Power Services, INC.
Rigby, Idaho

February 2013

Buffalo River Hydroelectric Project

FERC Project #1413

Fish-way and Fish Screen Monitoring Plan

Prepared for:

Fall River Rural Electric Cooperative, Inc.
Ashton, Idaho

Prepared by:

Northwest Power Services, INC.
Rigby, Idaho

February 2013

1.0 Introduction

A license was issued to Fall River Rural Electric Cooperative, Inc. (Fall River) in November of 2004 by the Federal Energy Regulatory Commission (Commission) for the alteration and continued operation of the Buffalo River Hydroelectric Project. The 250-kilowatt (kW) run-of-river project is located on the Buffalo River near its confluence with the Henry's Fork of the Snake River, north of Ashton, in Fremont County, Idaho. The purpose of this document is to report the fish screen and fish-way monitoring and evaluate the results of the data that was collected during the 2012 year.

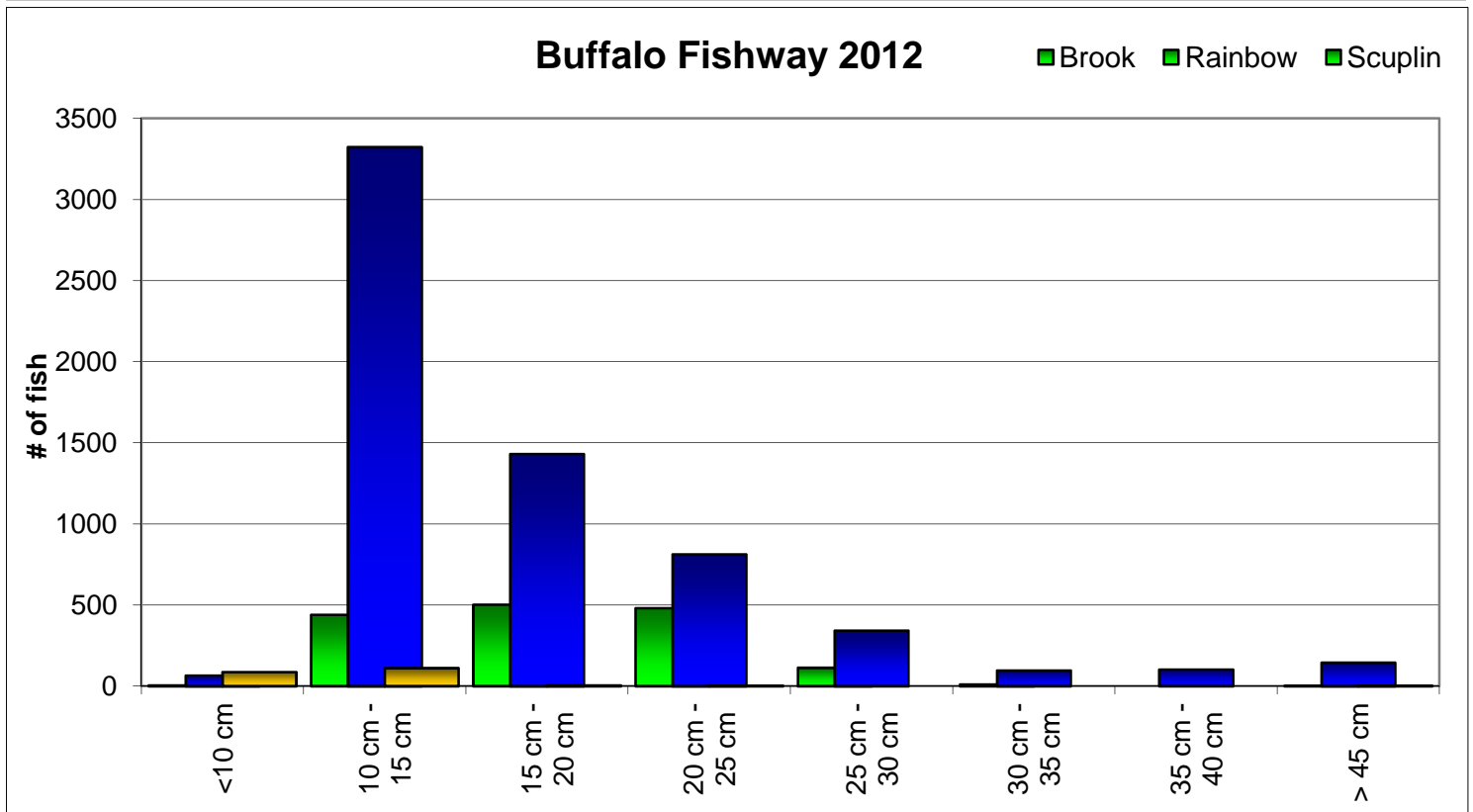
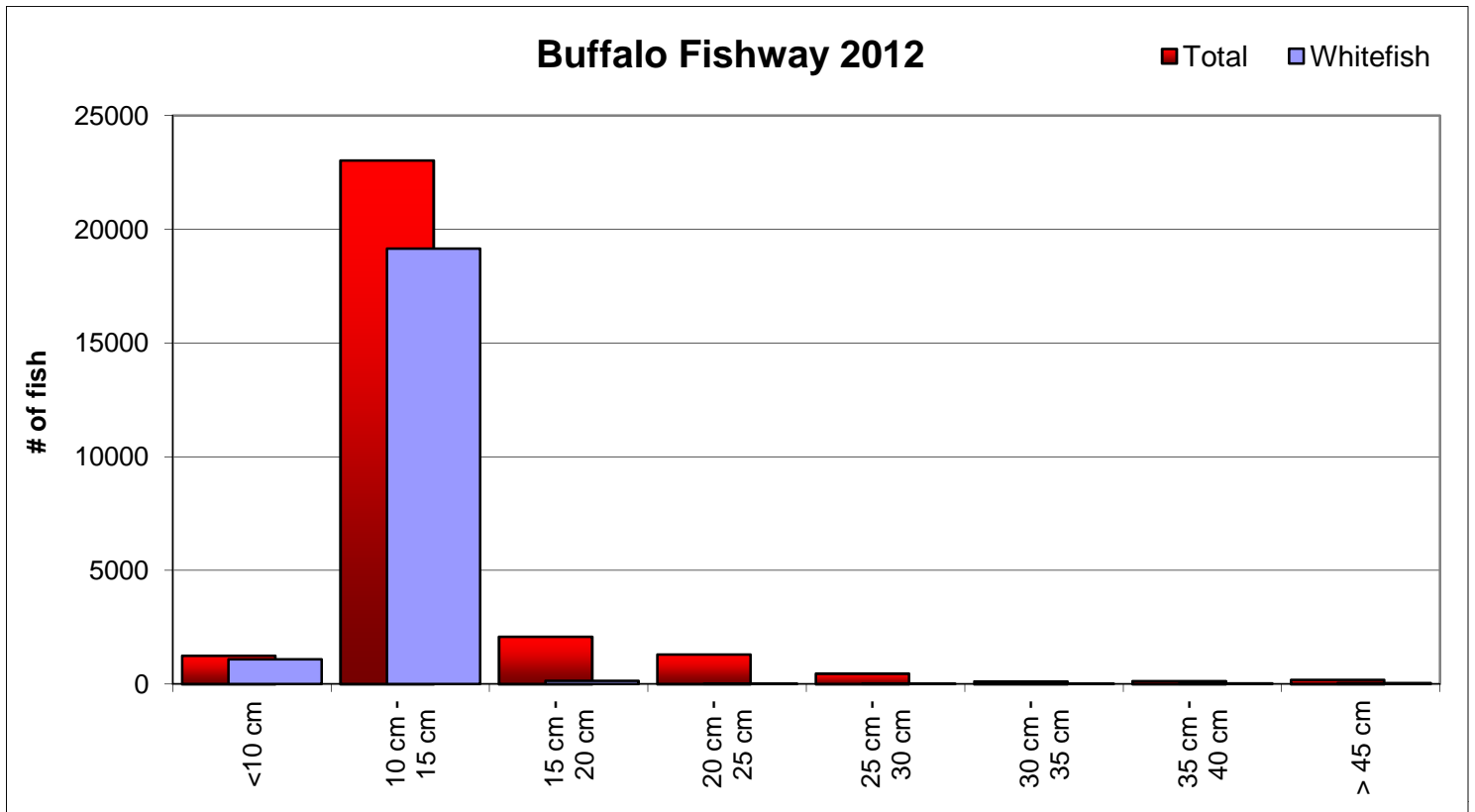
Fish Screen Monitoring

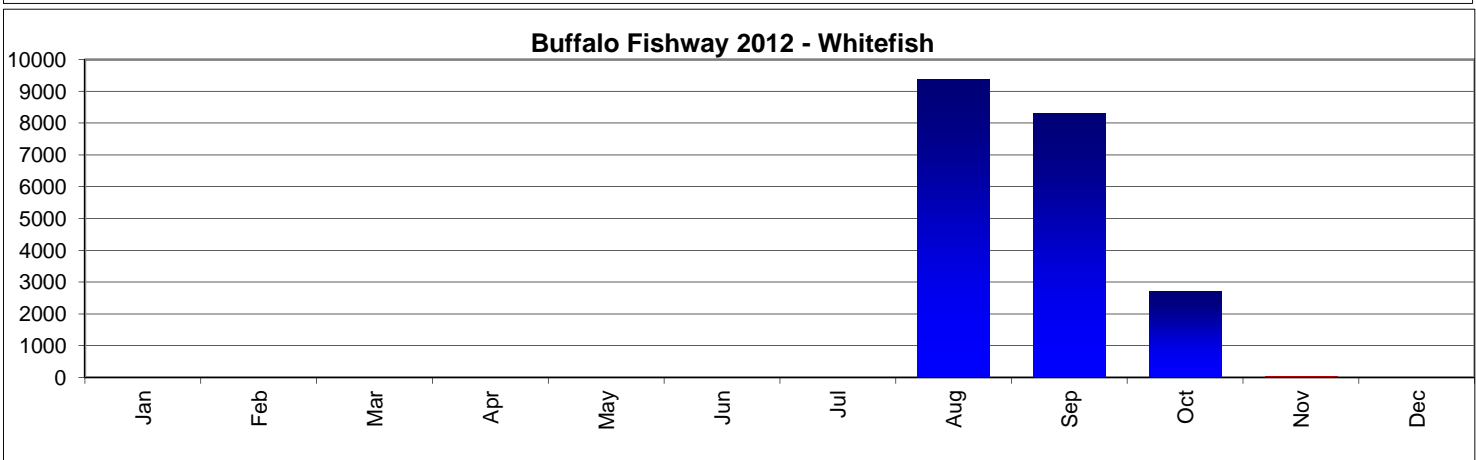
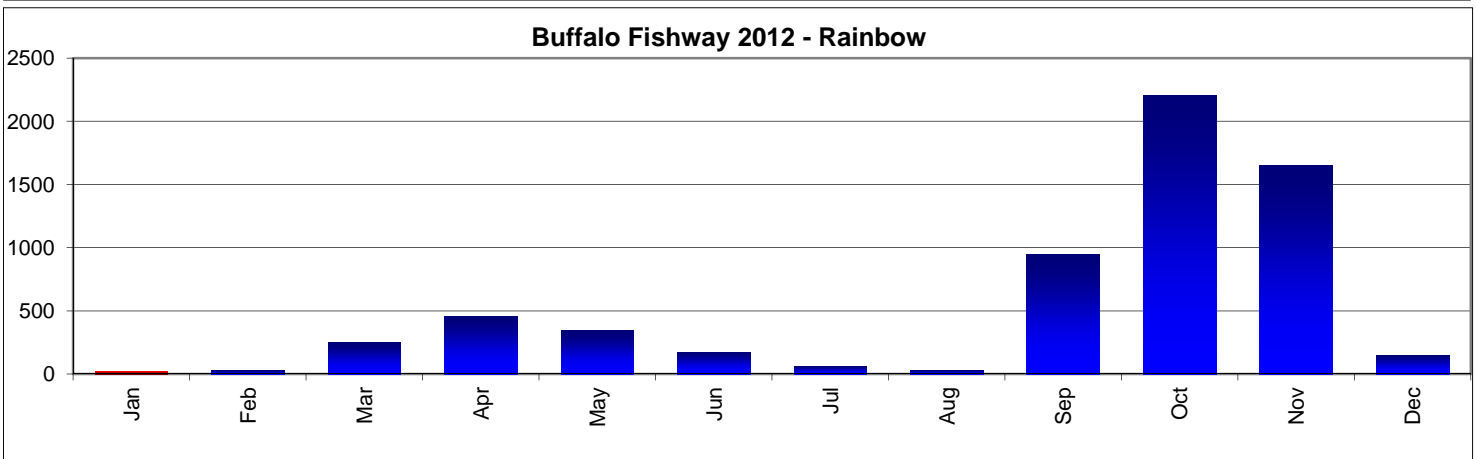
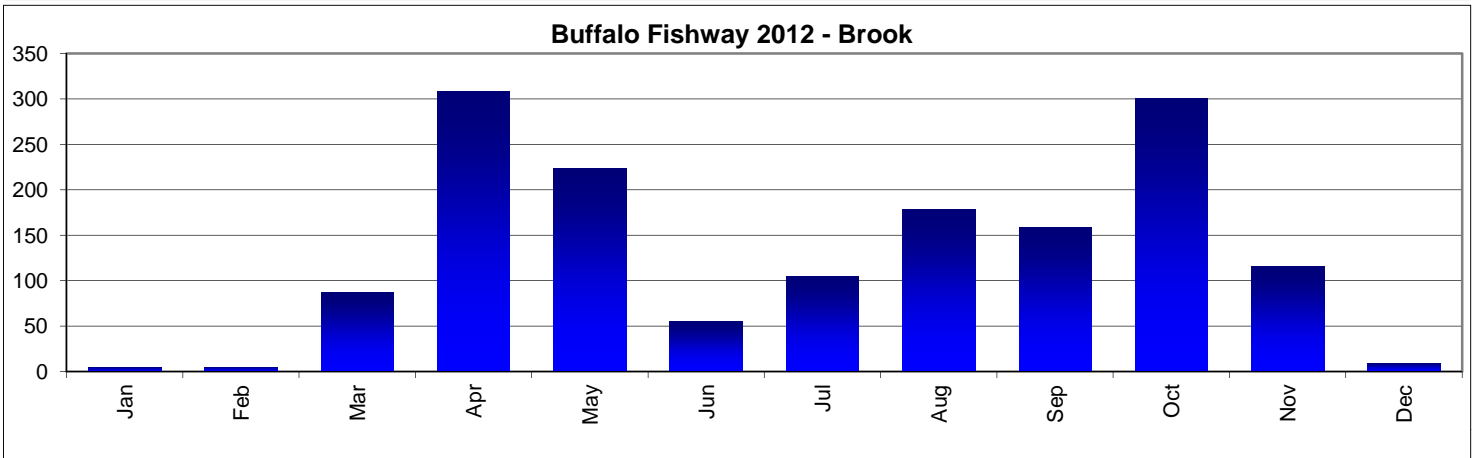
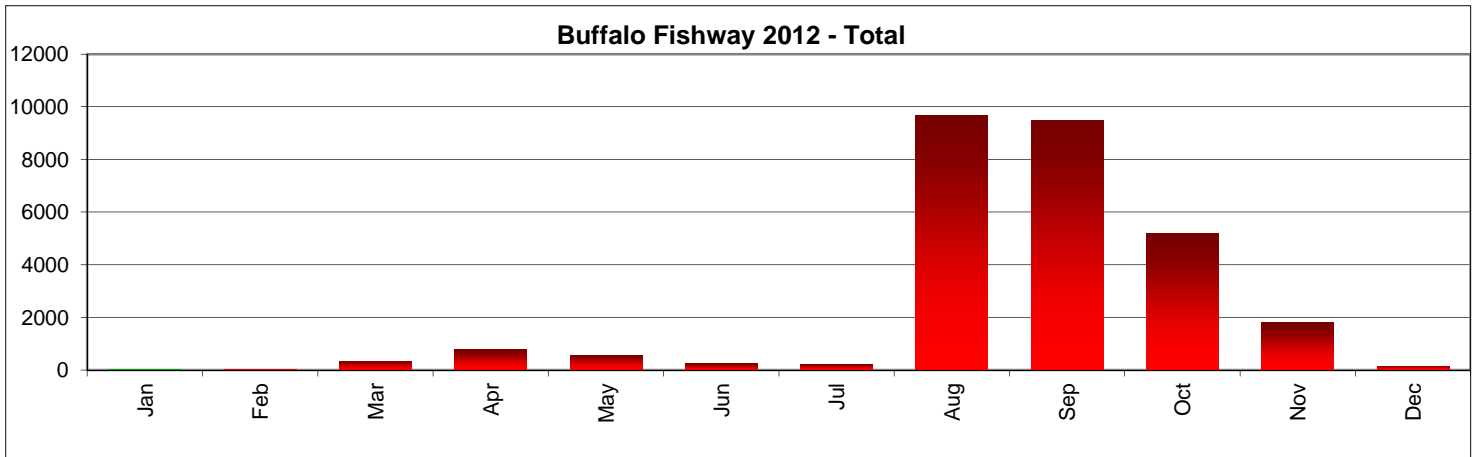
The operating personnel monitored the fish screen and recorded the number, species, length and likely causes of death of fishes found on the project's fish screen. During the previous year no fish were found on the project intake screen.

Fish-way Monitoring

A fish trap was installed on the upstream exit of the ladder. Henry's Fork Foundation volunteers collected data of the fish found within the trap. This data included date, fish species and fish lengths. This data is attached in Appendix A. During this period of 2012 it was found that 28,809 fish used the fish-way as monitored by the trap. The following five charts summarize the data found in (Appendix A), and all data collected is found in the accompanied CD.

Appendix A





Document Content(s)

Fish report 2012.PDF.....1-7

FEDERAL ENERGY REGULATORY COMMISSION
Washington, D. C. 20426

OFFICE OF ENERGY PROJECTS

Project Nos. 1413-063--Idaho
Buffalo River Hydroelectric Project
Fall River Rural Electric
Cooperative Inc.

April 11, 2013

Brent Smith, President
Northwest Power Services, Inc.
P.O. Box 535
Rigby, ID 83442

Re: 2012 fishway and fish screen monitoring

Dear Mr. Smith:

This acknowledges receipt of your 2012 fishway and fish screen monitoring report, filed with the Commission on February 15, 2013, under ordering paragraph (D) of the July 6, 2005 order¹ for the Buffalo River Hydroelectric Project. Article 407 required you to file, for Commission approval, a plan for conducting post-construction monitoring and evaluation of the project's fishway and fish screen for a period of 3 years and every third year thereafter for the term of the license. Your annual reports are required to include fish screen and fishway monitoring and evaluation results, and be filed with the Commission by March 1 of the year following the required monitoring year.

Your report states that operation personnel monitored the fish screen and that no fish were found on the project intake screen in 2012. Additionally, operation personnel collected data on the fish found in the fish trap, installed at the upstream exit of the ladder. You indicate that your report was filed with the requisite resource agencies and that any forthcoming comments would be forwarded to the Commission. You are reminded that ordering paragraph (D) of the July 2005 order requires that you allow the resource agencies and Henry's Fork Foundation (Foundation) 30 days to review and comment on your reports prior to filing with the Commission. Furthermore, your reports are required to include any resource agency or Foundation comments and your response to any such comments. If any recommendations for

¹ Order Modifying and Approving Fishway and Fish Screen Monitoring Plan Pursuant to Article 407. 112 FERC ¶62,008

changes in project structures or operations are recommended to ensure the effectiveness of the fish screen and/or fish ladder, you are required to file any such changes for Commission approval.

Please ensure that your next report includes any comments or recommendations received from the resource agencies or Foundation prior to filing the report with the Commission. We will expect your next report by March 1, 2016. Your filing meets the requirements of Article 407 and the July 2005 order. Thank you for your cooperation and if you have any questions regarding this letter, please contact the undersigned at (212) 273-5917.

Sincerely,

Joseph G. Enrico
Aquatic Resources Branch
Division of Hydropower
Administration and Compliance



GeoSense LLC
2742 Saint Charles Ave
Idaho Falls, ID 83404
208-528-6152; gsense@cableone.net

August 8, 2016

Secretary
Federal Energy Regulatory Commission
888 First Street NE
Washington, DC 20426

Subject: Article 407 fishway report - Buffalo River Hydroelectric Project - FERC No. P-1413

Dear Secretary:

Please find attached a comprehensive report on fish passage at the Buffalo River Hydroelectric Project for the period from 2006 to 2016. The report includes new monitoring data from 2013 – 2016. This report is in compliance with Article 407 of the FERC license for the project. The report includes a recommendation to continue fishway monitoring from February to June, but to amend Article 407 to eliminate monitoring from July to January. This recommendation was based on the conclusion that monitoring has produced adequate data to characterize upstream movement of small trout in the fall.

The 2016 report and the recommendation to eliminate Jul-Jan monitoring was reviewed and approved by Idaho Fish and Game, US Forest Service, US Fish and Wildlife Service and the Henry's Fork Foundation (author of the report). The e-mail distribution of the final report and Forest Service comments are attached. No other agencies commented.

In accordance with the recommendation in the 2016 report we request that Article 407 be modified to eliminate the requirement for fishway monitoring between July and January.

Please contact me if you have any questions or need additional information.

Regards,

Nicholas E. Josten
Agent for Fall River Electric

Attachments

Buffalo River Fish Ladder 2006-2016 Comprehensive Report
Report distribution e-mail dated 7/26/2016
FS comments dated 8/3/2016

Copies (via e-mail)

Rob Van Kirk, Henry's Fork Foundation
Dan Garren, Idaho Fish and Game
Lee Mabey, US Forest Service
Cary Myler, US Fish and Wildlife Service
Dave Peterson, Fall River Electric

Buffalo River Fish Ladder 2006-2016 Comprehensive Report | August 2016

Prepared by Christina Morrisett
Henry's Fork Foundation
PO Box 550
Ashton, ID 83420



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Introduction

In the 1930s, construction of the Buffalo River Dam blocked upstream fish passage to the Buffalo River, the only large tributary to the Henry's Fork between Island Park Dam and Mesa Falls. In 1996, a working group of the Henry's Fork Watershed Council realized the goal of restoring fish migration from the Henry's Fork into the Buffalo River with the completion of a fish ladder on the Buffalo River Dam. The fish ladder was improved in 2006 to allow juvenile trout access to winter habitat and to increase the number of spawning trout migrating upstream in hopes of increasing recruitment to the Henry's Fork fishery. This report details the history of the cooperative fish ladder project, reviews reports and data from the 1996-1999 period, and provides analysis and discussion of data from the last decade of operation.

History

The Buffalo River Dam was built in 1936 to generate hydroelectric power for the construction of Island Park Dam. It was subsequently acquired by Pond's Lodge and provided power for the lodge until the powerhouse was struck by lightning and burned in 1986. Buffalo Hydro, Inc. acquired a new license for the project in 1989 and rebuilt the powerhouse, resuming hydroelectric operation in 1994. Although the Federal Energy Regulatory Commission (FERC) acknowledged that the existing fish ladder from the 1930s was ineffective, the 1989 license did not require its reconstruction, citing the need for "additional information on the need for and benefits of such a fishway."

While downstream migration had always been possible over the spillway, fish were unable to migrate upstream, except during a brief period each spring when high water spilled over the dam in sufficient quantity for fish to swim up and over. During the 1980s and 1990s, research indicated that while the Henry's Fork below Island Park Dam provides good habitat and ample food supply for growing large adult fish (Rohrer 1983; Angradi and Contor 1989), it is limited in overwintering habitat for juvenile fish (Gregory 2000; Mitro and Zale 2002). The amount of overwinter habitat available to juvenile fish is strongly and positively dependent on winter outflow from Island Park Reservoir (Gregory 2000; Mitro et al. 2003; Garren et al. 2006). Furthermore, spawning Rainbow Trout concentrate in the reach of the Henry's Fork immediately downstream of Island Park Dam (Gregory 1997; Gregory et al. 2011), making spawning success potentially dependent on flow and water quality below the dam, both of which can be highly variable from year to year. Conversely, the Buffalo River has good juvenile overwintering habitat and spawning areas, but lacks the habitat and food supply for producing large adult fish (Gregory 1997; Gregory and Van Kirk 1998). In response to recruitment declines in the Henry's Fork in the early 1980s, fisheries interests proposed that a fish ladder on the Buffalo River Dam could connect these two areas and thus provide for a wider range of trout needs.

In December 1994, The Henry's Fork Watershed Council formed a working group consisting of Buffalo Hydro, Inc. (the hydropower licensee at the time), Idaho Department of Fish and Game, the U.S. Fish and Wildlife Service, the U.S. Forest Service, and the Henry's Fork Foundation concerning fish passage at the Buffalo River Dam. A request to amend the license to mandate fish passage construction was approved in September 1996 and the fish ladder was completed in October of that year with funding provided by Buffalo Hydro, Inc. In 1997, Buffalo Hydro, Inc. sold their operation to Fall River Rural Electric Cooperative, Inc. (FRREC).

In November 2004, FRREC received a new 40-year license to continue generating power conditioned upon the installation of a fish screen and improved fish ladder capable of passing fish at least 100 mm in length. The fish ladder constructed in 1996 had a steep approach up to the concrete apron that likely prevented many fish from entering the ladder and typically passed less than 100 adult trout each spring. An improved design would allow young-of-the-year Rainbow Trout to emigrate from the Henry's Fork to overwinter in the Buffalo River as well as increase the number of spawning migrants to the Buffalo River, whose offspring could also overwinter before recruiting to the Henry's Fork population, achieving original goals for the project. The improved fish ladder was installed in 2005 and continuous monitoring began in 2006.

Monitoring of downstream migration was explored in conjunction with ladder operations shortly after each reconstruction in 1996 and 2006. A rotary screw trap was used upstream of the dam in 1997 and 1998 to study age class and migration timing of summer outmigrants, but was removed given low capture efficiency. In 2009, a downstream trap was constructed at the lip of the spillway to monitor trout moving out of the Buffalo River, but was removed in October 2015 due to its low capture efficiency and high cost of maintenance.

In 2013, research and monitoring of the Buffalo River Fish Ladder shifted from effectiveness of the ladder in passing individual fish to if and how the Buffalo River contributes to the Henry's Fork fishery. In partnership with the Idaho Department of Fish and Game, the Henry's Fork Foundation initiated a genetics study to better understand life histories of Rainbow Trout migrating between the Henry's Fork and Buffalo River. The study collected tissue for genetic testing and outfitted individuals with Passive Integrated Transponder (P.I.T) tags. A tag detector antenna was installed at the spillway to monitor downstream movement of trout out of the Buffalo River. Tagging concluded in 2015 and genetic sampling will conclude in 2017. Preliminary genetic analysis has been conducted and the results will be shared in this document, but the study is ongoing.

Fish Ladder Operation

Operation of the fish ladder has changed multiple times throughout the history of the project. A timeline is given below using information from meeting summaries, internal HFF reports (Dillinger 1999; Dillinger 2000), archived HFF newsletters, and other correspondence:

1997:

- Open the ladder on 1 December 1996.
- Begin counting trout 16 inches and longer towards the closure quota on 1 February 1997 (via video monitoring).
- Allow unhindered escapement until 1 April 1997, regardless of how many fish migrate upstream between 1 January and 1 April.

- On or after 1 April, close the ladder once 500 Rainbow Trout 16 inches and longer have migrated through the ladder, on the day the checkboards are removed¹ from the Buffalo River Dam, or 15 May 1997, whichever comes first².

1998:

- Operational criteria were the same as in 1997, with the modification that the ladder was opened on 1 October 1997 instead of 1 December 1997 as initially planned, due to anecdotal evidence that small fish had attempted to use the ladder to move upstream in October 1996.
- Video monitoring took place from 28 January to 23 April 1998.

1999:

- Operational criteria were the same as the previous year, with the modification that the ladder was opened on 1 February 2000.
- Video monitoring took place from 1 February to 2 April 1999.

2000:

- Operational criteria were the same as the previous year, with the modification that the ladder was opened on 4 February 2000.
- Video monitoring took place from 15 February 2000 to 15 May 2000.

2001: Operational criteria were the same as the previous year, with the modification that the ladder was opened and video monitoring took place from 15 February 2001 to 29 April 2001.

2002:

- The ladder remained open for fish passage throughout the year³.
- Video monitoring took place from 14 December 2001 to 25 April 2002.

2003-July 2005: No written record of ladder operations.

2005:

- Monitoring efforts suspended from August to October 2005 as construction of new fish ladder and improved screening of the turbine intake took place.

¹ Checkboards in the Buffalo River Dam are removed for approximately 30 days each spring when the water level rises to the point where it would spill over the top of the dam. Once the checkboards are removed, the number of large fish (16 inches and over) using the ladder declined immediately, presumably because the large fish were able to migrate over the dam without using the ladder.

² This operational criterion was influenced by concerns that Henry's Fork spawners in the Buffalo River would be vulnerable to harvest. The Buffalo River is managed under general regulations (six trout possession limit, no gear or size restrictions); the Henry's Fork is managed under catch-and-release regulations, with artificial lures with single barbless hooks required. Additional concerns were expressed about the potential for harvest of Henry's Fork spawners before they have spawned in the Buffalo River, and the harvest of potential Henry's Fork recruits in the Buffalo River, before they migrate to the Henry's Fork.

³ This change in operation was ordered by FERC on 22 January 2001 by a recommendation of the Henry's Fork Foundation submitted on 18 December 2000.

- The fish ladder became operational and open for fish passage in November 2005.

2006-2012

- Continuous trapping of fish moving up the ladder began in March 2006.
- The fish trap was checked at least three times per week.⁴
- All fish were measured and identified to species before being released upstream.

2013:

- Operational criteria were the same as over the 2006-2012 time period, with the modification that the trap screen was removed, allowing free passage through the ladder for July and August 2013.
- From September to December 2013, in addition to measuring and identifying all fish to species, a sample of upstream-migrating Rainbow Trout of all sizes were fitted with a P.I.T tag as part of the newly initiated life history study with IDFG.

2014:

- The fish trap screen was removed from 2 December 2013 to 25 February 2014 and 1 July to 5 September 2014, allowing free passage through the ladder. Monitoring did not occur during this time, but the fish trap was otherwise checked at least three times per week.
- All fish were measured and identified to species.
- During the spring sampling period, tissue samples were taken from all upstream-migrating spawning-sized Rainbow Trout (≥ 300 mm). These individuals were also fitted with a P.I.T tag.
- During the fall sampling period, a sample of upstream-migrating Rainbow Trout of all sizes were fitted with a P.I.T. tag.

2015:

- The fish trap screen was removed from 13 November 2014 to 22 February 2015, allowing free passage through the ladder. Monitoring did not occur during this time.
- The fish trap was operational and monitored at least three times per week between 22 February and 19 June 2015.
- The fish trap screen was removed on 19 June 2015 and only replaced once in October and once in November for two three-day trapping periods.⁵
- All fish were measured and identified to species.
- During the spring sampling period, tissue samples were taken from all upstream-migrating spawning-sized Rainbow Trout and all upstream-migrating Rainbow

⁴ The 2007, the fish trap was processed once or twice per week. In 2009 and 2012, the fish trap was not monitored in January.

⁵ Continuous fall sampling was eliminated from the Buffalo River Fish Ladder Operational Criteria at a work group meeting on 30 September 2015 due to the collection of satisfactory data demonstrating that small trout move upstream in the fall to presumably overwinter in the Buffalo River.

Trout were fitted with a P.I.T tag. Any recaptures were scanned with a tag reader and their tag code recorded.

2016:

- The fish trap screen was removed from 13 November 2015 to 18 February 2016, allowing free passage through the ladder. Monitoring did not occur during this time.
- The fish trap was operational and monitored at least three times per week between 18 February and 15 June 2016.
- The fish ladder was opened for free passage on 15 June 2016 and is anticipated to remain so until mid-February 2017 for the spring sampling season.
- All fish were measured and identified to species. Any recaptures were scanned with a tag reader and their tag code recorded.

Review of Reports from the late 1990s

Construction of the Buffalo River Fish Ladder in 1996 caused concern that spawning trout migrating from the Henry's Fork to the Buffalo River would be at risk for harvest given that the Buffalo River is managed under general regulations (six trout possession limit, no size or gear restrictions), while the Henry's Fork is managed under catch-and-release regulations. In response to this concern, the Henry's Fork Foundation conducted creel surveys in 1996-1998 to determine the composition of trout harvested in the Buffalo River and whether the Henry's Fork Rainbow Trout population is impacted by harvest of migrants into the Buffalo River via the fish ladder.

Results indicated that although there was a large increase in angling effort in 1997 and 1998 compared to a 1988 IDFG study, annual harvest of wild Rainbow Trout was lower in 1997 and 1998 after installation of the fish ladder than it was in 1988 (Van Kirk et al. 1997; Van Kirk and Giese 1999). Thus, while the data showed an increase in effort, they did not suggest any increase in the number of wild Rainbow Trout harvested in the Buffalo River after the ladder was installed. Additionally, the checkboards were removed from the Buffalo River dam on 22 April, allowing Henry's Fork spawners to migrate into the Buffalo River without the aid of the fish ladder. Thus, many of the large Henry's Fork fish harvested in the Buffalo were likely fish that would have migrated upstream after 22 April regardless of whether the ladder was present. Furthermore, migration of trout 400 mm and longer peaked in early April, six weeks before the beginning of fishing season. This allowed ample lag time for up-migrating spawners to return to the Henry's Fork before opening day.

Van Kirk et al. (1997) and Van Kirk and Giese (1999) concluded that any harvest due to the fish ladder did not appear to have a negative impact on the Box Canyon Rainbow Trout population, which increased significantly in the two years after the ladder was installed. In fact, both studies concluded that the fish ladder project likely had a net benefit on both the Henry's Fork population and the Buffalo River fishery.

In addition to the creel survey, a study was conducted in 1997 and 1998 to investigate the Buffalo River's contribution to the Henry's Fork fishery and a rotary screw trap was installed upstream of the Buffalo River dam to monitor downstream migration. Data from this study and

from the fish ladder monitoring program suggest that Henry's Fork Rainbow Trout are successfully spawning in the Buffalo River, that the majority of downstream migrants to the Henry's Fork fishery as a result of spawning activity are young-of-year (at least based on fish size), and that at least a few offspring of Henry's Fork spawners remain in the Buffalo River for one year before out-migrating (Van Kirk and Beesley 1999). The study recommended that the Buffalo River fish ladder remain open to allow Henry's Fork spawner access to the Buffalo and that monitoring activities of upstream and downstream migrants continue.

Overview of FERC License

Fall River Rural Electric Cooperative, Inc. filed an application on October 30, 2002 for a subsequent minor license to continue to operate the existing 250-kilowatt Buffalo River Hydroelectric Project. The existing license at the time was issued on March 14, 1980 and would expire on October 31, 2004. The Federal Energy Regulatory Commission issued a subsequent license for P-1413-032 on November 5, 2004.

In the license, FERC mandated the following:

- **Article 403. *Operational Compliance Monitoring Plan.*** Within six months of the effective date of this license, the licensee shall file for Commission approval an operational monitoring compliance plan. The plan shall include at a minimum:
 - A description of the exact location of each gage or measuring device, the method of calibration for each gage or measuring device, the frequency of recording for each gage or measuring device, and a monitoring schedule;...
- **Article 405. *Upstream Fishway.***
 - Within one year of license issuance, FRREC shall file for Commission approval detailed design drawings of proposed upstream fishway together with a schedule to construct or install, operate, and maintain the fishway.
 - The fishway shall be continuously operational and designed to pass all life history stages of Rainbow Trout of at least 100 mm in length.
- **Article 407. *Fishway and Fish Screen Effectiveness Monitoring, Evaluation, and Maintenance.***
 - Within one year of license issuance, FRREC shall file for Commission approval a plan for conducting post-construction monitoring and evaluation of the fishway required by Article 405 for a period of three years and every third year thereafter for the term of the license.
 - In addition to monitoring, the plan shall include, at minimum, a provision for monitoring and documenting fishway use and effectiveness: recording the species, length, and quantity of fish found impinged on the fish screen.

FERC also mandated that the proposed fishway design and monitoring plan be prepared after consultation with the Idaho Department of Fish and Game, U.S. Forest Service, U.S. Fish and Wildlife Service, and the Henry's Fork Foundation.

Previous Reporting Under Current License

Northwest Power Services, Inc. reported data from the fishway and fish screen for the Buffalo River Hydroelectric Project for ladder monitoring conducted in 2006, 2007, 2008, and 2009, in compliance with Article 407 of the license on behalf of FRREC. Symbiotics, LCC submitted the

2011 fish ladder monitoring data. These reports satisfied the minimum reporting requirement of documenting species and length of individual fish using the fish ladder for upstream passage and may be accessed through FERC's online library for P-1413.

Examination of 2006-2016 Data

This section of the document analyzes and presents the last decade of data collected on streamflow and fish passage in compliance with articles 403, 405, and 407, as well as an update on the genetic and migration study initiated with IDFG in 2014.

Streamflow Record

The U.S. Geological Survey (USGS) established a streamflow gage on the Buffalo River in 1935 (USGS 13043000 Buffalo River at Island Park ID). The gage is located at the Highway 20 bridge near Pond's Lodge. Continuous daily streamflow was recorded at that gage from May 1, 1935 through January 2, 1941. Since that time, USGS has taken periodic field measurements at the gage location but has not recorded streamflow data on a regular basis. The operational compliance monitoring plan (Article 403), which was approved by FERC on March 2, 2007, specifies:

To update the rating curve the USGS will need to make at least three visits to the site during different flow conditions to take measurements. Once the rating curve has been updated the USGS will need to return to the site approximately twice annually to take measurements and adjust the rating curve as needed. The Licensee has agreed to reimburse the USGS for this work. The Licensee will take stage measurements of the water elevation with the current measuring gauge.

In January 2013, Northwest Power Services proposed to the stakeholders an amendment to this paragraph that would have reduced the frequency of field measurements at the gage site. However, a request for amendment was not filed with FERC, and the paragraph above remains in effect. Fall River Rural Electric began recording daily stage measurements in January 2006. Since 2007, USGS has made 29 field measurements of stage and discharge at the Buffalo River gage and maintained the rating curve.

Objective:

In the section of the FERC license entitled "Recommendations of Federal and State Fish and Wildlife Agencies," item 24 reads:

IDFG recommended that if future changes occur to the hydrology of the Buffalo River, then Fall River should provide a minimum flow of at least 50 cubic feet per second to the bypassed reach. Including a requirement for a minimum flow based on an uncertain future event is premature; however, this license includes, in standard Article 11, the Commission's reservation of authority to reopen the license to modify project structures and operations for the conservation and development of fish and wildlife resources in response to future events.

The objective of recording daily discharge measurements in the Buffalo River is to provide the long-term data needed to support this recommendation.

Methods:

The USGS has provided the current rating curve to HFF and records its field measurements and rating-curve shifts in the National Water Information System database, which is available online. Once each month, FRREC provides the daily stage measurements to HFF, which then uses the rating curve and applicable shifts to calculate discharge. The rating shift for any given day was calculated by linear interpolation between field-measured rating shifts. For days when stage data are missing, discharge was estimated by cubic-spline interpolation.

Results:

Calculated and estimated daily discharge show seasonal patterns typical of other groundwater-dominated streams in the Henry's Fork watershed (Benjamin 2000). Baseflow in the Buffalo River averages around 200 cfs; annual snowmelt peaks are short in duration, occur in late April and early May, and range between 300 cfs and 600 cfs in magnitude (Figure 1). Heavy rain in May of 2011 resulted in apparent discharge of over 2,000 cfs; however, the stage recorded during this runoff event exceeded the range of the rating curve, so the daily flows may not be accurate. Nonetheless, streamflows recorded at other gages in the watershed corroborate the data from the Buffalo River gage during that high-flow event. Regardless of the exact magnitude, flow in the Buffalo River certainly exceeded 1,000 cfs for several days in May of 2011. Otherwise, the 10-year flow record in the Buffalo River documents a generally decreasing trend, particularly from 2012 through the summer of 2016.

Discussion:

The current three-party process involving USGS, FRREC, and HFF is providing timely streamflow data of sufficient accuracy to document variability in streamflow within and across water years. The data are also of sufficient accuracy to investigate statistical responses of ecological processes to streamflow in the Buffalo River. Although sample size is still small at this point, continued compilation of streamflow data using the current process will meet the objective of collecting streamflow data, as outlined in the FERC license.

Trout Migration

With eleven sampling seasons (2006-2016) worth of data on spawning-sized Rainbow Trout up-migrating in the spring and nine sampling seasons (2006-2014) worth of data on young Rainbow Trout seeking to over-winter in the Buffalo River in the fall, we investigated if and how regulated and unregulated environmental factors in the region influence migration timing and cohort size of spawning-sized and "young" Rainbow Trout. We also considered species composition.

Objectives:

- Identify size of migration cohort and timing of peak migration for up-migrating spawning-sized Rainbow Trout in the spring and young Rainbow Trout seeking to overwinter in the Buffalo River in the fall.
- Explore how migration timing and cohort size of spring up-migrating spawning-sized Rainbow Trout and fall up-migrating young Rainbow Trout relate to streamflow and air temperature.
- Investigate if species composition of up-migrating fish changes by season and/or by year.

Methods:

UPSTREAM MIGRATION TIMING & COHORT SIZE

We compared the number of spring up-migrating spawners (≥ 300 mm) to mean daily spring runoff (1 April to 30 June) between Henry's Lake and Island Park Dam three years prior to and two years prior to mean daily spring runoff in the Buffalo River in the current year, to mean Buffalo River flow in March, April, and May, and to mean air temperature in March, April, and May. Runoff between Henry's Lake and Island Park Dam was calculated as unregulated inflow to the reach, using USGS streamflow data and Island Park Reservoir volume data from the U.S. Bureau of Reclamation Hydromet website. Air temperature data were also obtained from Reclamation's Hydromet website.

We evaluated the timing of spring up-migration by first computing the date on which half of the spawners for that year had migrated upstream (median migration date). Because temporal distribution of migration was symmetric, the median migration date represents the peak migration date. We then compared this peak migration date with mean daily spring runoff in the Buffalo River in the current year, mean temperature in March, April, and May, and the date on which half of the seven day runoff maximum in the Buffalo River occurred.

For fall up-migrants, we compared the number of fall up-migrants (≤ 150 mm) with mean temperature in September and October, mean minimum temperature in September, mean maximum temperature in September, and mean daily flow out of Island Park Dam in September and October. We evaluated the timing of fall up-migration by comparing the median migration date (again, peak migration date) of young Rainbow Trout (≤ 150 mm) with the same parameters in addition to the first and second date on which flow out of Island Park Dam was reduced.

All comparisons were first visually assessed with scatterplots. For comparisons that appeared to show a relationship between response and predictor, significance was tested with the appropriate linear regression model. All statistical tests were performed in the statistical computing environment R (R Core Team 2016).

SPECIES COMPOSITION

Species composition was calculated for each season and year. The spring season was defined as 15 February to 30 June; the fall season was defined as 1 September to 31 December. Species analyzed were Brook Trout (*Salvelinus fontinalis*), Rainbow Trout (*Oncorhynchus mykiss*), Mountain Whitefish (*Prosopium williamsoni*), and "other." The "other" category included

shiners, dace, chubs, sculpins, and suckers – species that are captured in the trap, but are too few in number to be analyzed separately.

Results:

UPSTREAM MIGRATION TIMING & COHORT SIZE – Table 1

- The median size of the spring migration cohort over the period 2006-2016 was 202 spawning-sized Rainbow Trout. The largest spawning cohort was 419 individuals, in 2013; the smallest spawning cohort was 75 individuals, in 2015.
- Median date of peak spawning over the period 2006-2016 was 6 May. The earliest peak in the last decade was during the 2016 spawning season, occurring on 18 April. The latest peak was in 2013, occurring on 20 May.
- The median size of the fall cohort migrating out of the Henry's Fork and into the Buffalo River over the period 2006-2014 was 1,800 young Rainbow Trout. The largest fall up-migrant cohort occurred in 2010 with 3,234 individuals; the smallest fall up-migrant cohort occurred in 2007 with 923 individuals.
- Median date of fall up-migration over the 2006-2014 period was 20 October. The earliest peak occurred in 2006 on 4 October. The latest peak occurred in 2007 and 2009 on 26 October.
- There appears to be a cyclic trend to the number of spawners that migrate into the Buffalo River to spawn (Figure 2), but we were unable to identify a statistically significant relationship between migration timing or migration class size for fall up-migrating young trout or spring up-migrating spawners with streamflow or air temperature data (Figures 3-6).

SPECIES COMPOSITION– Figure 7

- Brook trout and Rainbow Trout are the primary users of the fish ladder in the spring, while Rainbow Trout and Mountain Whitefish are the primary users in the fall.
- A logistic regression model identified a significant decrease in the fraction of Brook Trout migrating upstream in the spring over the 2006-2016 period.
- Species composition of fall up-migration showed a larger number of Mountain Whitefish in 2010-2012 compared to the other years.

Discussion:

We were unable to find any statistically significant relationship between migration timing or migration cohort size and regulated and unregulated environmental factors. This is likely due to a small sample size; each sampling season generates only one data point. More data are needed to identify statistically significant environmental determinants of migration timing or size of migration cohort.

However, compiling the last decade of data allowed us to learn some more general information about Rainbow Trout migration between the Henry's Fork and the Buffalo River. Peak spawning runs typically occur during the first week of May, but have occurred between mid-April and late-

May. There does not appear to be any temporal trend in timing of spawning migration over the past decade. Peak migration of young trout to overwintering habitat in the Buffalo River always occurs in October. Seasonal use of the fish ladder does not appear to be shifting towards one species or another. Species that primarily use the ladder in the spring and fall have remained consistent over the last decade. This information can help guide management actions in the region as well as provide a baseline for comparison to the next decade of data.

Genetics and Population Contribution

The migration data clearly show that a large number of fish of a variety of species successfully migrate through the Buffalo River fish ladder each spring and fall. However, evidence of successful migration is not sufficient on its own to indicate whether the fish ladder is having any effect on the Rainbow Trout population in the Henry's Fork. For example, despite fall up-migrations of around 2000 young Rainbow Trout, examination of length data of young Rainbow Trout migrating in and out of the Buffalo River indicated that the juveniles moving downstream in the spring were not the same individuals that had moved upstream during the previous autumn (Figure 8). Juveniles moving upstream in the fall were typically between 110 and 140 millimeters in length, while those moving downstream six months later were 70 to 100 millimeters in length. Given that one of the primary motivations for constructing the new fish ladder was to allow young-of-year Rainbow Trout from the Henry's Fork to winter in the Buffalo River, this discrepancy in sizes of young Rainbow Trout moving into and out of the Buffalo River raised the question of whether spawning, rather than over-wintering, is the greater contribution of the Buffalo River to the Henry's Fork fishery.

As a result, the Henry's Fork Foundation partnered with the Idaho Department of Fish and Game to investigate the life histories of Rainbow Trout migrating into and out of the Buffalo River to assess the extent to which the Buffalo River population contributes to the Henry's Fork fishery. The study was two-pronged, using genetic analysis to infer parentage of migrants and Passive Integrated Transponder (P.I.T) tags to identify migration timing as well as if individuals migrate between the Henry's Fork and Buffalo River multiple times.

Genetics

The first phase of the genetics study was completed in fall 2015 (Redfield et al. 2016). We summarize that study here.

Objectives:

- Establish the origin and diversity of the Henry's Fork population.
- Determine whether fluvial Henry's Fork adults are using the Buffalo River to spawn.
- Estimate contributions to the Henry's Fork fishery resulting from spawning activity in the Buffalo River.
- Assess the relative contribution of fluvial Henry's Fork Rainbow Trout and Buffalo River resident trout to the Henry's Fork fishery.

Methods:

Tissue was taken from 643 Rainbow Trout, assembled from four sample groups. A total of 289 samples were from trapped migrating into the Buffalo River from 2014 and 2015, 79 Buffalo

River juvenile outmigrants collected in 2015, and 275 adults and juveniles captured in electrofishing surveys from Henry's Fork in 2015.

All samples were genotyped at 186 single nucleotide polymorphisms (SNPs). Multi-locus SNP data was used to evaluate the genetic diversity among the samples and to estimate the origin of the Buffalo River and Henry's Fork populations. Analyses include:

- Percentage of polymorphic SNPs and average expected heterozygosity (H_E) for Buffalo River and Henry's Fork populations were estimated using GENALEX v6.3 (Peakall and Smouse 2006).
- We used SNPPIT (Anderson 2010) and CERVUS 3.0.3 (Kalinowski et al. 2007) to perform double- and single-parentage assignments, respectively.
- We estimated effective population size (N_E) on all populations using Colony v2.0 (Jones and Wang 2010) and assuming monogamy and random mating.
- Population structure was evaluated using Structure 2.3.4 (Pritchard 2009). Two populations were confirmed using STRUCTURE Harvester (Earl and vonHoldt 2012).

Results:

GENALEX:

- Although the study area has been stocked with *O. mykiss* from various strains, genetic assignment results continue to demonstrate that *O. mykiss* in Buffalo River and the Henry's Fork are primarily of a coastal hatchery lineage.
- Genetic diversity, measured as parentage of polymorphic SNPs and expected heterozygosity (H_E), was high for all for all of the sample groups. All four groups were polymorphic at an average of 96% of SNPs screened. The average H_E was 32%.
- We observed low, but significant genetic differentiation between Rainbow Trout samples from the Henry's Fork and Buffalo River populations.

COLONY:

- We calculated the effective population size (N_E) to be 1,264 individuals for the 2014 Buffalo River adults, 1,873 for the 2015 Buffalo River adults, 462 for the 2015 Buffalo River juveniles, and 3,004 for the 2015 Henry's Fork samples.

CERVUS and SNPPIT:

- Of the 275 fish collected from the Henry's Fork in 2015, 28 were juveniles (<150 mm). Of those juveniles, only one assigned to a single parent sample from the Buffalo River in 2015.
- Of the 79 down-migrating juveniles collected from the Buffalo River in 2015, 16 (20%) assigned to either a single parent or parent pair captured in the ladder during the 2014 spawning migration. Of these 16 fish, 6 were assigned to two parents that were captured as they migrated upstream from the Henry's Fork during the spring of 2014. Nine of these 16 juveniles received single-parent assignments to Henry's Fork spawners that had migrated upstream during 2014, the other parent presumably being a Buffalo River resident fish. One juvenile captured in 2015 assigned back to an adult captured in the Henry's Fork in 2015 and an adult that had migrated upstream through the fish ladder in 2014. The other 80% were not related to any Henry's Fork spawners that we had

sampled in the spring of 2014. Presumably, these fish were offspring of resident Buffalo River fish.

STRUCTURE:

- Analysis of the four Buffalo River and Henry's Fork sample groups demonstrate differentiation between Buffalo River and Henry's Fork. Two populations were delineated, one for the Buffalo River samples and one for the Henry's Fork samples.

Discussion:

A substantial effective population size (N_E), and high expected heterozygosity (H_E) indicate that the Rainbow Trout population from the Henry's Fork is large and very genetically diverse. The Henry's Fork and Buffalo River populations exhibit low differentiation; however our STRUCTURE and GENALEX results indicate that samples from these areas were not drawn from a single randomly mating population. The parentage assignment for juveniles sampled in 2015 establish evidence of Buffalo River Rainbow Trout contributing to the Henry's Fork fishery.

To improve our baseline for parentage assignment, we recommend sampling Buffalo River residents above the trap as well as Henry's Fork spawners. To verify the source of Henry's Fork age-2 recruits, we would need to continue sampling in the Henry's Fork in 2016 and 2017. This sampling would allow us to investigate the range of Rainbow Trout life histories in these rivers. We hope to further understand how Buffalo River Rainbow Trout contribute to the Henry's Fork fishery, which continues to be one of the most important fisheries in the state.

P.I.T Tag Study

A sample of upstream- and downstream- migrating Rainbow Trout from multiple size classes were outfitted with a P.I.T tag in 2014 and 2015. Installation of a P.I.T. tag detector antenna in January 2014 allowed monitoring efforts to track downstream movement out of the Buffalo River. Although tagging was concluded in June 2015, the antenna has continued to record the downstream-migrating movement of tagged individuals into June 2016.

P.I.T tag retention has been studied extensively in juvenile fish species. In southern Idaho streams, long-term tag retention of smaller Rainbow Trout (≤ 150 mm) was high (95%), a tad lower than the general range of 98% to 100% (Bateman et al. 2009). To estimate short-term P.I.T tag retentions in juvenile trout (≤ 150 mm) for this project, HFF staff held a subsample of tagged trout in the fish ladder trap for a few days. Of 59 marked fish that were recovered from the trap several days later, 58 (98%) had retained the P.I.T tags. Although long-term retention could be lower, we assumed 98% retention rate over the study duration.

Objectives:

Young Rainbow Trout⁶

⁶ Defined as ≤ 150 mm in the fall and ≤ 180 mm in the spring to allow for growth between fall and spring, so that the same cohort could be identified in both seasons. Data from a few recaptured fish suggested that 30 mm of growth is reasonable for these fish. 150 mm was used because it is the maximum length of age-0 Rainbow Trout at the end of their first summer, based on previous age growth studies.

- Identify if “young” Rainbow Trout that migrate upstream in the fall contribute to increased over-winter success of their cohort as a whole.
- Investigate what fraction of “young” spring out-migrants is made up of upstream-migrants from the previous fall.
- Determine if “young” Rainbow Trout that migrate upstream in the fall or downstream in the spring return to migrate upstream again.

Spawning-sized Rainbow Trout⁷

- Identify how many spawners migrate downstream shortly after spawning (same spring or summer).
- Determine the frequency of repeat spawning in subsequent years.

Methods:

- February-June 2014 and 2015: tag⁸ all spawning-sized Rainbow Trout migrating upstream; tag a sample of all Rainbow Trout migrating downstream
- September-December 2013 and 2014: tag a sample of Rainbow Trout ≤ 150 mm migrating upstream
- Clip the adipose fin of all tagged individuals, and release trout in migration direction
- Scan recaptured individuals, as indicated by absence of adipose, encountered in upstream and downstream traps with tag reader to obtain tag code and track migration history
- Periodically download and erase the tag detector antenna memory
- Estimate efficiency of downstream trap:

To estimate downstream trap efficiency, HFF conducted two tests in 2014. On each of 7 April 2014 and 21 April 2014, a subsample of down-migrating fish was marked with a visible external mark and released upstream of the trap. The fraction of these marked fish subsequently recaptured in the downstream trap is an estimate of the fraction of all fish migrating downstream that are captured in the trap. Eleven of 164 fish marked on 7 April and one of 104 fish marked on 21 April were recaptured in the trap. These two data points were combined with seven observations made in 2012 and five made in 2013. The combined set of 14 efficiency tests yielded an estimated trap efficiency of 0.0386, with a 95% confidence interval of [0.0278, 0.0520]. Of the 153 P.I.T.-tagged fish that were detected by the antenna, six (3.9%) were also captured in the downstream trap, consistent with the efficiency estimated by the mark-recapture tests. Thus, the data suggest a capture efficiency of around 3.9%.

Results:

Young Rainbow Trout – Fall Up-migrants (Table 2)

- Of the 3,393 young Rainbow Trout tagged migrating upstream in the fall (September to December), 1,605 were tagged in 2013 and 1,788 were tagged in 2014.

⁷ Defined as ≥ 300 mm

⁸ Tagged trout were marked internally with a Passive Integrated Transponder (P.I.T) tag injected into the abdominal cavity.

- Of the 1,605 young Rainbow Trout tagged migrating upstream in Fall 2013, 115 were detected moving downstream. The majority of these detections occurred the subsequent spring (January to June 2014), with 105 trout detected. Seven trout were detected downstream the following summer/fall, while three were detected down-migrating in Spring 2015 after having spent a year and a half in the Buffalo River. No trout initially tagged up-migrating in Fall 2013 have been recaptured up-migrating to the Buffalo River from the Henry's Fork.
- Of the 2,806 Rainbow Trout ($\leq 180\text{mm}$) captured in the downstream out-migrant trap during Spring 2014, five were individuals initially tagged migrating upstream Fall 2013.
- Of the 1,788 young Rainbow Trout tagged migrating upstream in Fall 2014, 195 were detected moving downstream. The majority of these detections occurred in the subsequent spring (2015), with 152 detected. Nine detections from the Fall 2014 tag class occurred the following fall, while ten out-migrated the second subsequent spring (2016). Twenty-four detections occurred during the same fall as initially tagged. Zero trout initially tagged up-migrating in Fall 2014 has been recaptured moving upstream.

Young Rainbow Trout – Spring Out-migrants (Table 3)

- Of the 618 young Rainbow Trout tagged out-migrating in the Spring (January – June), three were tagged in 2014 and 615 were tagged in 2015.
- None of the three out-migrating young Rainbow Trout tagged in Spring 2014 were recaptured moving upstream or detected moving downstream.
- Three of the 615 young out-migrating Rainbow Trout were recaptured moving upstream. Two were recaptured the same spring with no later detections, while one was recaptured returning upstream the following fall (2015) and detected moving downstream the subsequent spring (2016).
- Seven other young out-migrating Rainbow Trout tagged in 2015 were detected moving downstream the subsequent spring (2016). These individuals presumably migrated upstream when the ladder was open for free passage during Fall 2015 as they were not recaptured in the upstream trap.

Spawning-sized Rainbow Trout – Spring Up-migrants (Table 4)

- Of the 202 spawning-sized Rainbow Trout tagged migrating upstream in the spring, 130 were tagged in 2014 and 72 were tagged in 2015.
- Of the 130 spawners initially tagged in 2014, 33 were detected moving downstream. Thirty of these detections occurred during the same spring or summer, while three of these detections occurred much later – one the following fall and two the subsequent spring/summer. The median amount of time spawning-sized Rainbow Trout spent in the Buffalo River was 34 days in 2014.
- Four of the 2014 tagged spawning-class were recaptured moving downstream the same spring. One was recaptured moving upstream the same spring. One was recaptured moving upstream in a subsequent spring.

- Of the 72 spawners initially tagged in 2015, 20 were detected moving downstream. Nineteen of these detections occurred during the same spring or summer, while one occurred the subsequent spring. The median amount of time spawning-sized Rainbow Trout spent in the Buffalo River was 31 days in 2015.
- Two of the 2015 tagged spawning-class were recaptured moving downstream the same spring. Four were recaptured moving upstream the subsequent spring.

Discussion:

Although overwintering habitat between Island Park Dam and Harriman State Park is cited as a limiting factor for juvenile Rainbow Trout populations in the upper Henry's Fork (Mitro and Zale 2002) and was a motivating factor in improving the Buffalo River Fish Ladder in 2005, it does not appear as if juvenile trout migrating into the Buffalo River to overwinter substantially contribute to increased over-winter success of their cohort as a whole. P.I.T tag data revealed that 6.5% and 8.5% of young trout up-migrating in the fall of 2013 and 2014, respectively, were detected migrating back downstream the subsequent spring, whereas apparent autumn-to-spring survival of age-0 Rainbow Trout between Island Park Dam and Harriman State Park is around 10% (Mitro and Zale 2002). Trout that overwinter in the Buffalo River contribute approximately 150 individuals annually to the Henry's Fork. At average annual survival for trout in the Henry's Fork, only half of these would be expected to contribute to the cohort of two-year old fish that recruit to the fishable population in the subsequent year. This is in comparison to the mean two-year old recruit-class size of 3,200 fish. This small addition demonstrates that while young trout do use the Buffalo River for overwintering habitat, the Henry's Fork provides the majority of overwintering habitat for young fish. Thus, maintaining high winter flows in Box Canyon remains the most important practice for improving natural recruitment.

Young fall up-migrants (≤ 150 mm) tagged in 2013 and 2014 made up 0.18% and 1.42% of out-migrants (≤ 180 mm) caught in the downstream trap the subsequent spring, respectively. This information, combined with length information demonstrating that fall up-migrants are larger than spring out-migrants (Figure X), indicate that spring out-migrants are primarily "new" fish to the Henry's Fork system – individuals born to resident Buffalo River and migrating Henry's Fork spawners that have spent nine to twelve months in the Buffalo River before migrating downstream. Results from the genetics study further support this conclusion. Based on numbers of spawners migrating upstream from the Henry's Fork and on typical sex ratios and fecundities, this spawning run produces 8,000 to 30,000 fry annually, providing recruitment insurance in years with low spawning success in the Henry's Fork. These results imply that the Buffalo River is a very important spawning tributary and that habitat enhancement activities in the Buffalo River and its tributaries focus on spawning and rearing habitat rather than strictly on winter habitat.

P.I.T tag analysis of spawning-sized Rainbow Trout indicate that at least 23.1% and 26.4% of spawners migrated back to the Henry's Fork after about 30 days in the Buffalo River in 2014 and 2015, respectively. Of those that return to the Henry's Fork, at least 3% of the 2014 spawning tag class and 20% of the 2015 spawning class returned to spawn in the Buffalo for at least the second time. Percentages of out-migration and spawning-return may be greater given that tag retention

in mature Rainbow Trout may be negatively affected by spawning (Bateman et al. 2009; Meyer et al. 2011). The presence of dual return to the Buffalo River to spawn indicates that these migrants were likely born in the Buffalo River and are returning to their natal grounds to spawn (Scott and Crossman 1973).

Conclusion

Through cooperation of multiple partners, fish passage has been successfully restored between the Henry's Fork and Buffalo Rivers. Examination of the last decade of data in combination with the genetics and tagging study has demonstrated the following:

- Young-of-year sized trout migrate from the Henry's Fork to the Buffalo River in the fall, but only a small number appear to out-migrate the following spring.
- The vast majority of out-migrants appear to have been born in the Buffalo River, and the vast majority of those are offspring of resident Buffalo River fish.
- There is a relatively stable annual run of approximately 200 spawners from the Henry's Fork into the Buffalo River. It appears as if 20% of young fish in the Henry's Fork are related to these spawners. Thus, primary contribution of the Buffalo River to the Henry's Fork fishery appears to be spawning and not overwintering habitat, although spring outmigrants have spent a winter in the Buffalo River. Improving spawning and rearing habitat in the Buffalo River and its tributaries is important to the Henry's Fork fishery.
- Given that trout recruitment is dependent on winter flow and that the young fish that recruit to the Henry's Fork fishery primarily overwinter in the Henry's Fork and not the Buffalo River, winter flows out of Island Park Dam remain important for increasing overwinter survival of young fish, regardless of their origin.

Recommendations

The partners listed below have reviewed this document and agree on the following recommendations:

- Continue monitoring springtime (February-June) migration according to the monitoring schedule in Article 407.
- Amend Article 407 to eliminate the requirement of monitoring upstream migration during the remainder of the year (July-January).
- Complete the genetics study prior to making any additional management and monitoring recommendations.

Partners

- Caribou-Targhee National Forest: owner/manager of land on which the fish passage facility sits and manager of most of the land in the Buffalo River watershed. Forest personnel are involved in monitoring and study design, provide permission for work on Forest land, and incorporate information gained from the project into management actions.

- Fall River Rural Electric Cooperative and its contractors: owner of hydroelectric plant, dam, and fish passage facilities. Fall River Electric permits access to the facility, collects stream flow data, maintains functionality of attractant flow pipe and crowder when trap is not in operation, and provides electricity to power the P.I.T-tag detection antenna.
- Henry's Fork Foundation: non-profit fisheries conservation organization. Foundation personnel monitor fish migration, compile and analyze flow and fisheries data, and maintains functionality of attractant flow pipe and crowder when trap is in operation.
- Idaho Department of Fish and Game: sole authority for managing recreational fisheries in State. Department personnel help design monitoring and study procedures, incorporate information gained from the project into their management, and issue the permit that allows us to handle fish at the facility.

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Tables

Table 1. Summary information on the number of spawning-sized Rainbow Trout (≥ 300 mm) to up-migrate in the spring and the number of age-0 trout (≤ 150 mm) to up-migrate in the fall with their associated dates of peak migration.

Year	Number of spring up-migrating spawners	Date of peak spring spawning migration	Number of young fall up-migrants	Date of peak fall migration
2006	90	15-May	1095	4-Oct
2007	145	27-Apr	928	26-Oct
2008	356	7-May	2444	20-Oct
2009	152	13-May	1032	26-Oct
2010	386	13-May	3234	8-Oct
2011	213	2-May	1749	18-Oct
2012	264	27-Apr	3016	20-Oct
2013	419	20-May	1792	21-Oct
2014	142	5-May	1796	8-Oct
2015	75	6-May	NA	NA
2016	202	18-Apr	NA	NA
Median	202	6-May	1792	20-Oct

Table 2. Summary information on young Rainbow Trout ($\leq 150\text{mm}$) tagged migrating upstream in the fall of 2013 and 2014 and their detections in subsequent seasons.

Upstream Trap – “Young” Rainbow Trout Up-migrants								
Sampling period	Tagged	Detected downstream				Recaptured in downstream trap subsequent spring	Total RBT $\leq 180\text{mm}$ captured in downstream trap subsequent spring	Recaptured moving upstream
		Same fall	Subsequent spring	Subsequent fall	Second subsequent spring			
Fall 2013	1605	0	105	7	3	5	2806	0
Fall 2014	1788	24	152	9	10	9	635	0

Table 3. Summary information on young Rainbow Trout ($\leq 180\text{mm}$) tagged migrating downstream in the spring of 2014 and 2015 and their detections in subsequent seasons.

Downstream Trap – “Young” Rainbow Trout Out-migrants				
Sampling period	Tagged	Recaptured moving upstream		Detected moving downstream subsequent spring
		Same spring	Subsequent fall	
Spring 2014	3	0	0	0
Spring 2015	615	2	1	8

Table 4. Summary information on spawning-sized Rainbow Trout ($\geq 300\text{mm}$) tagged migrating upstream in the spring of 2014 and 2015 and their detections in subsequent seasons.

Upstream Trap – “Spawning-sized” Rainbow Trout Up-Migrants							
Season	Year	Tagged	Detected moving downstream		Median time spent in Buffalo River	Recaptured moving downstream	Recaptured moving upstream
			Same spring/summer	Other			
Spring	2014	130	30	3	34 days	4	2*
Spring	2015	72	19	1	31 days	2	4

*One spawner was recaptured moving upstream the same spring.

Figures

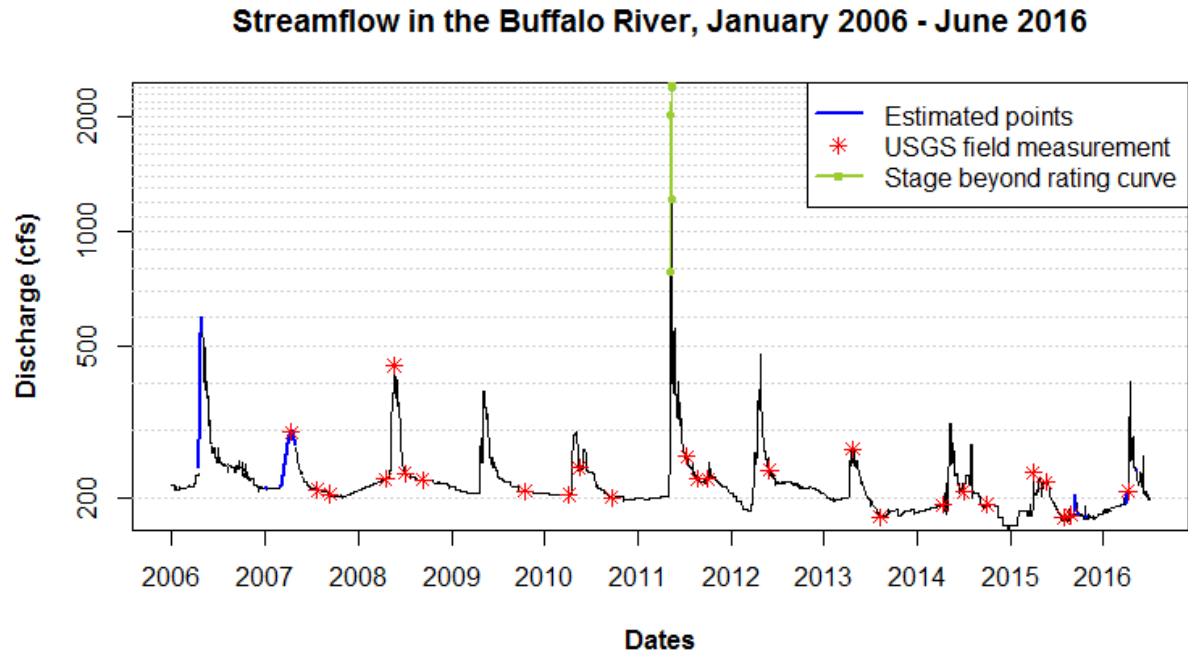


Figure 1. Streamflow record plotted using daily stage measurements collected by FRREC and the rating curve provided by USGS.

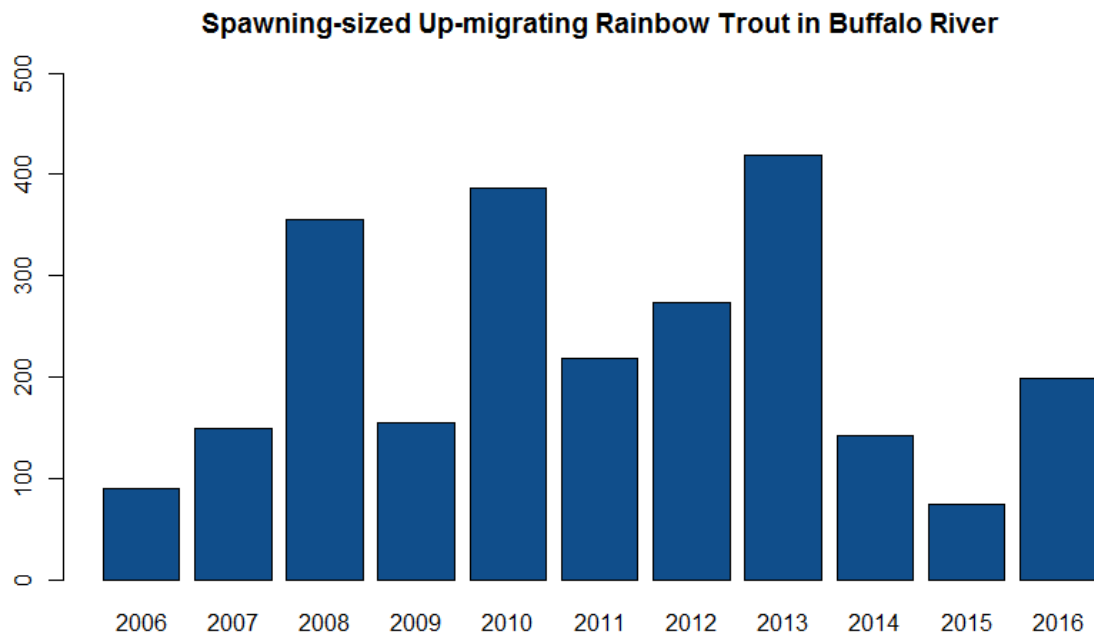


Figure 2. The number of spawning-sized Rainbow Trout ($\geq 300\text{mm}$) to migrate from the Henry's Fork to the Buffalo River between 15 February and 30 June.

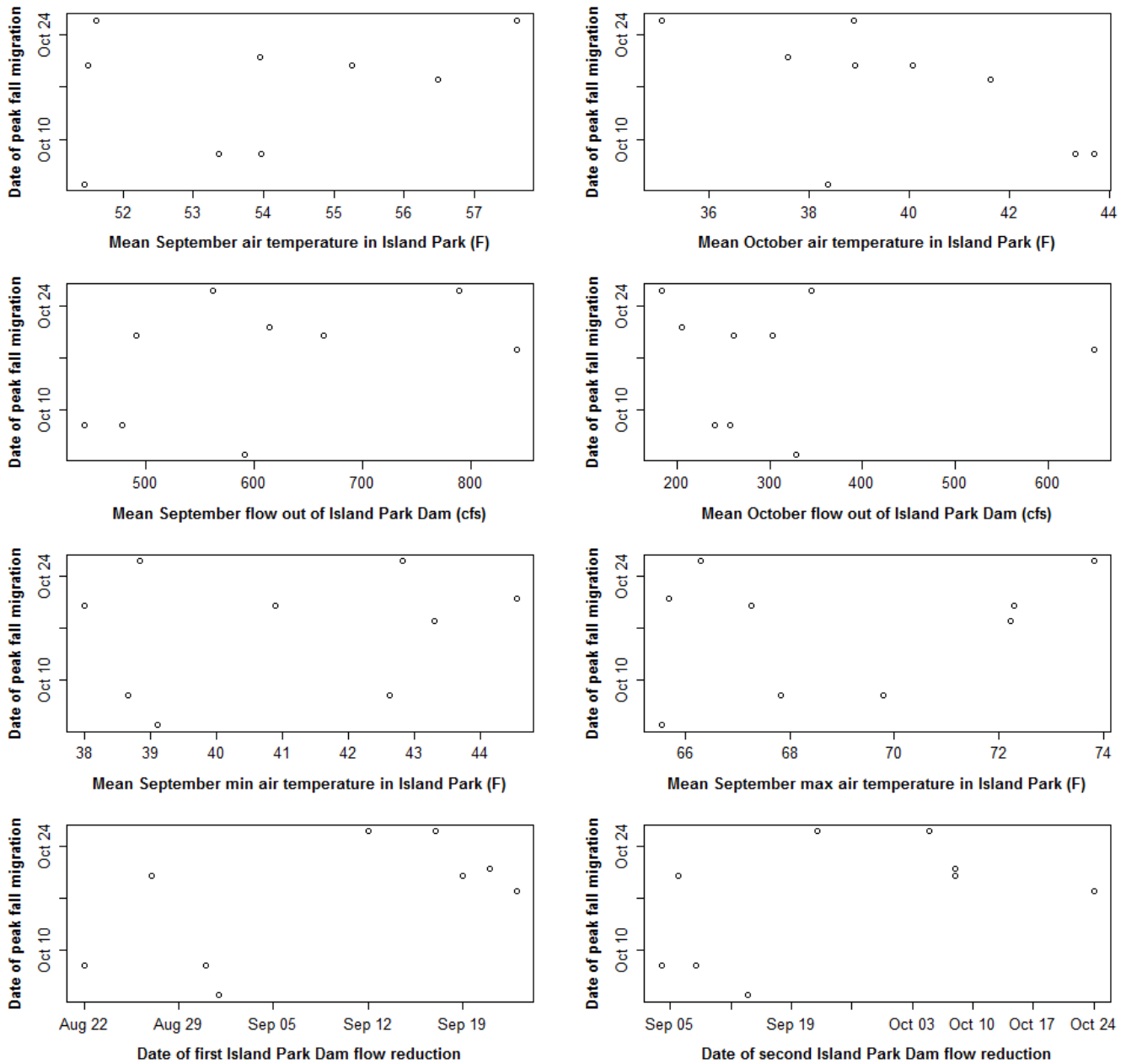


Figure 3. Scatterplots showing relationship the date a peak fall migration of age-0 Rainbow Trout ($\leq 150\text{mm}$) from the Henry's Fork to the Buffalo River as a response along with several other regulated and unregulated predictors.

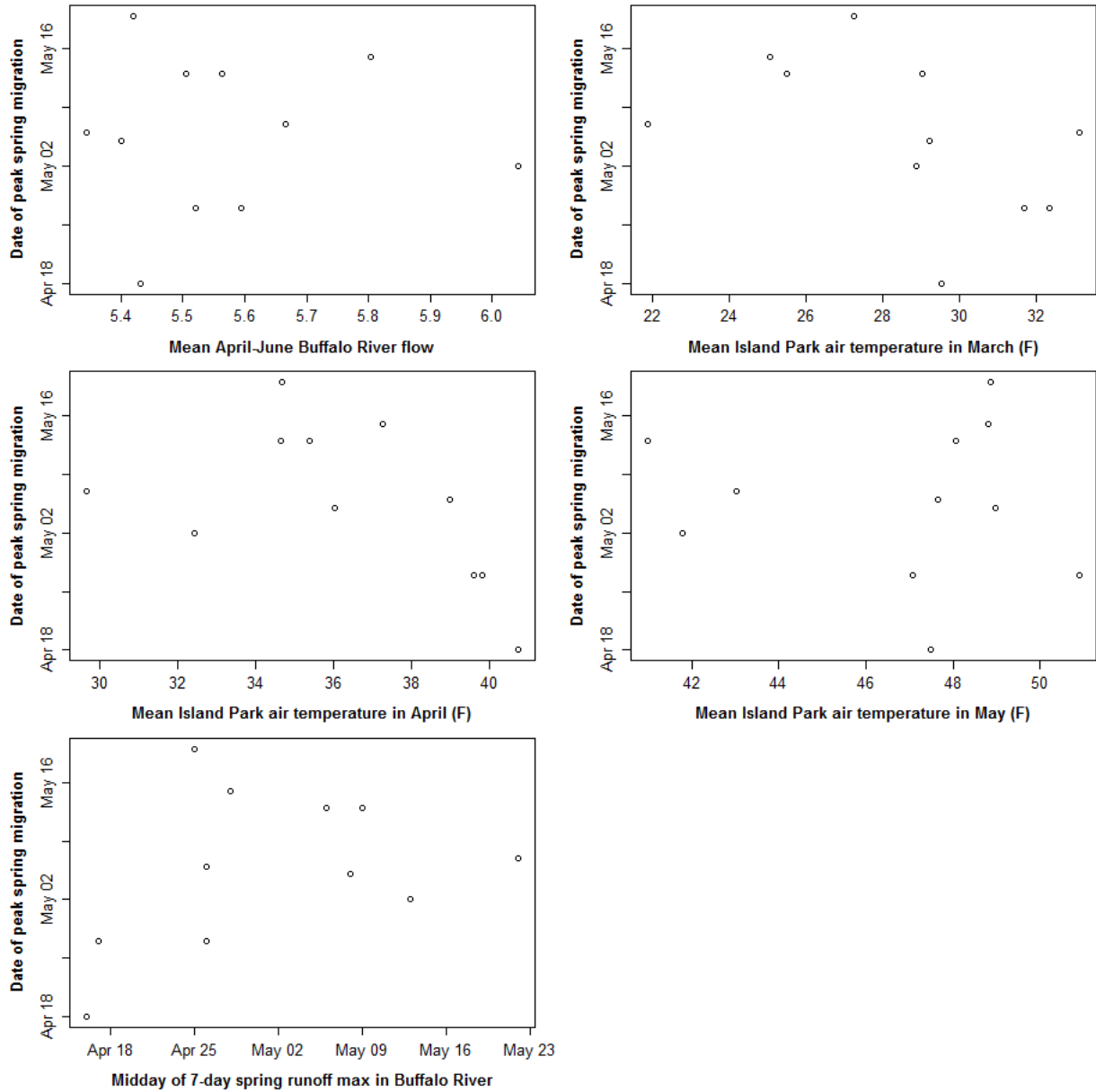


Figure 4. Scatterplots showing relationship between date of peak spring migration of spawning-sized Rainbow Trout ($\geq 300\text{mm}$) as a response and along with several other predictors.

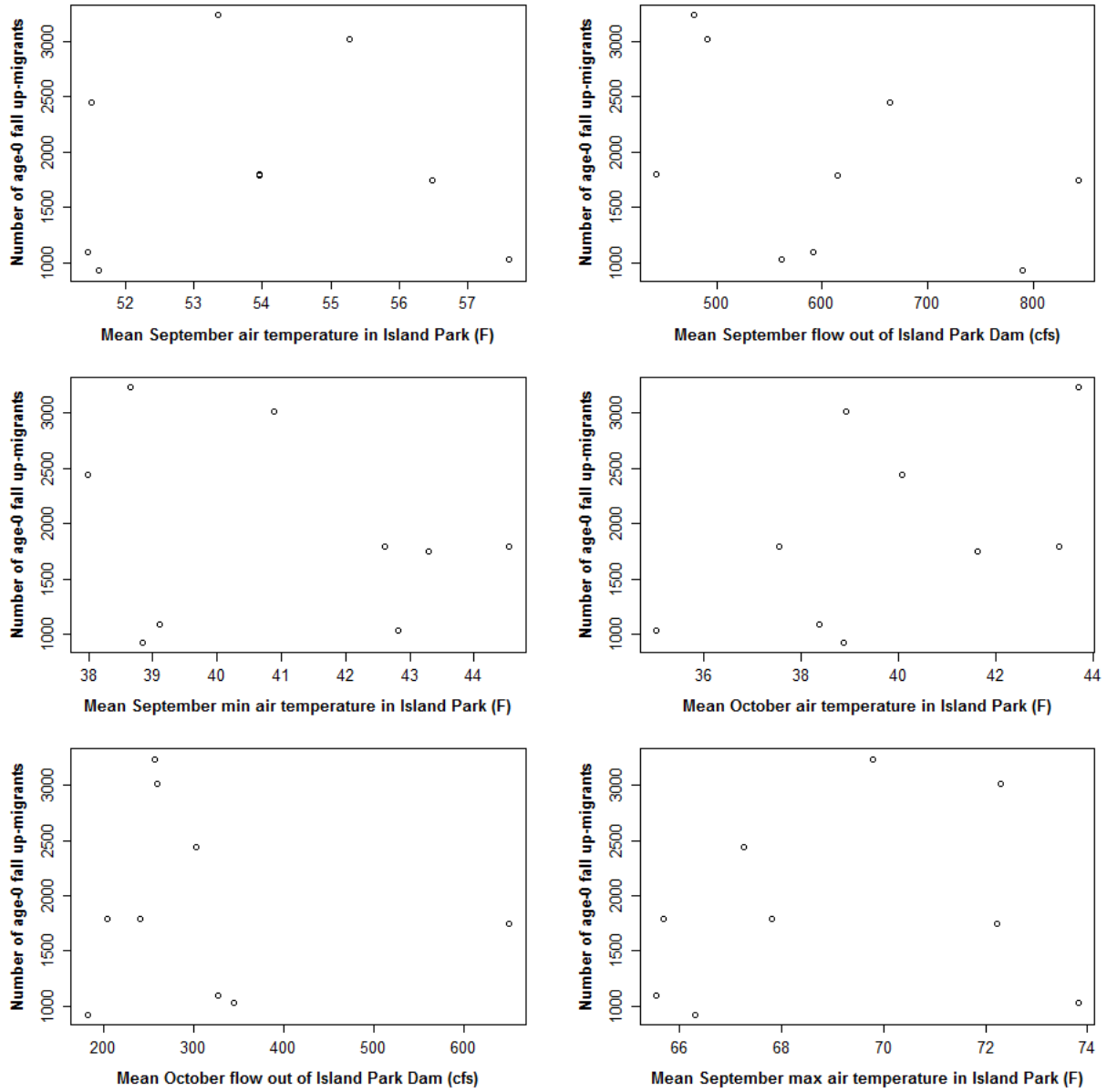


Figure 5. Scatterplots showing relationship between the number of age-0 up-migrating Rainbow Trout ($\leq 150\text{mm}$) in the fall as a response and along with several other predictors.

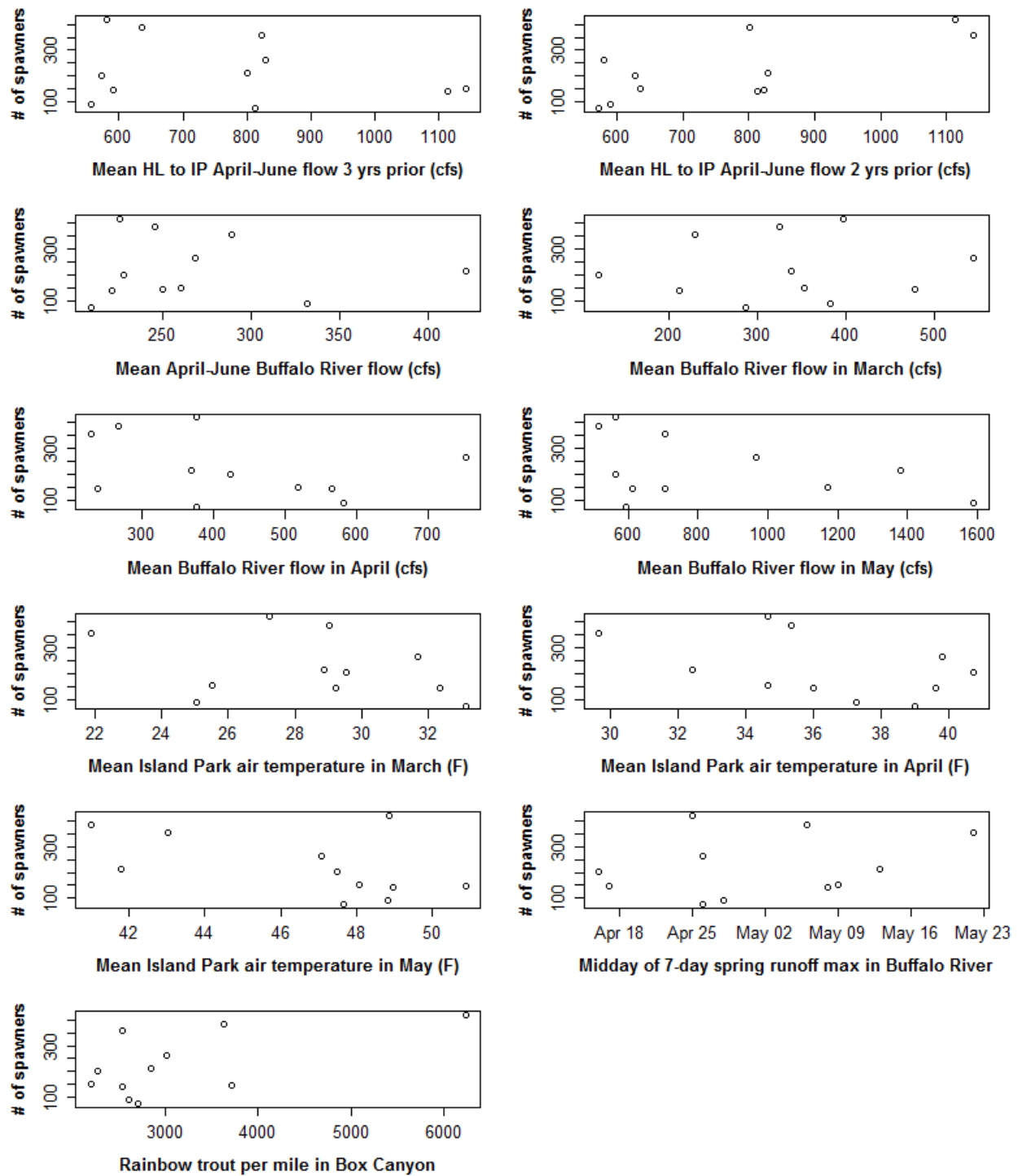


Figure 6. Scatterplot showing relationship between the number of spawning-sized Rainbow Trout migrating from the Henry's Fork to the Buffalo River ($\geq 300\text{mm}$) as a response and along with several other predictors.

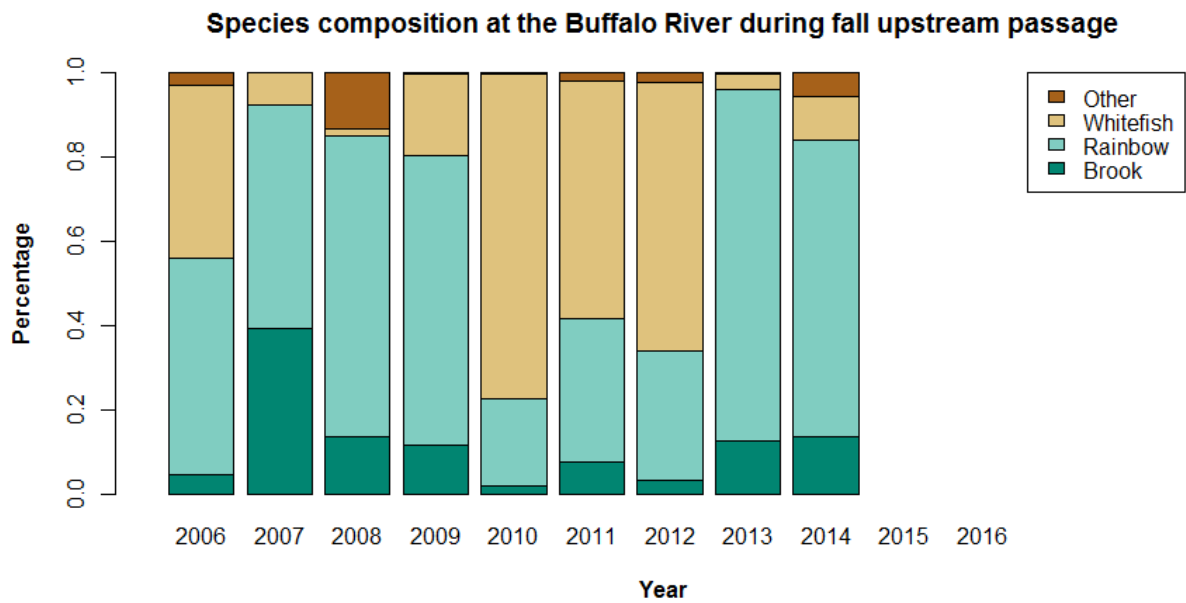
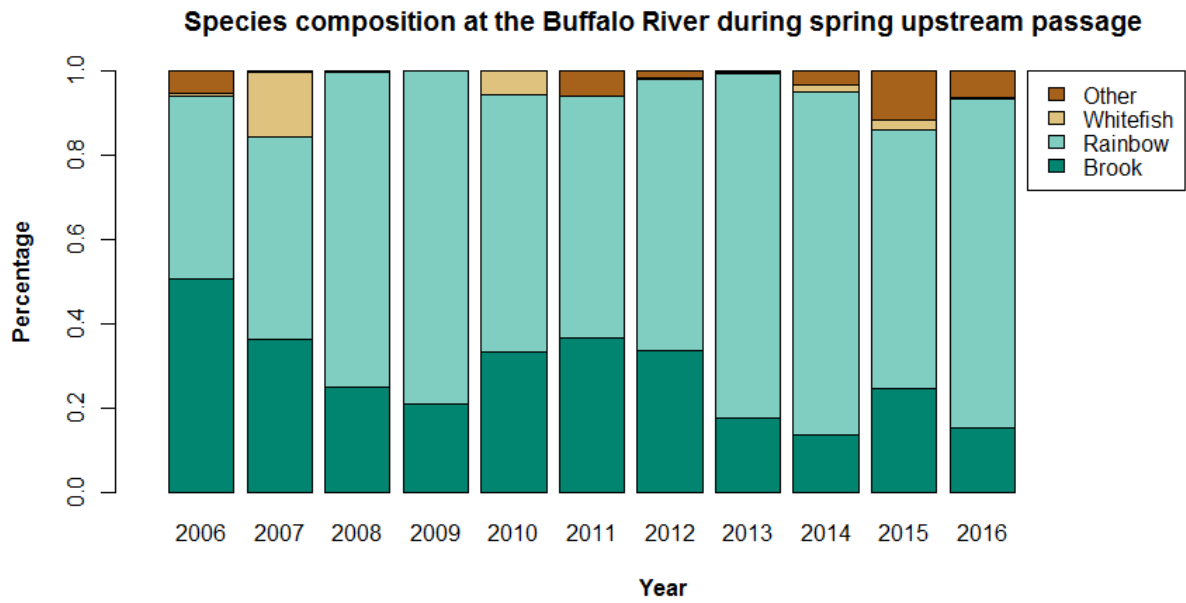


Figure 7. Species composition of up-migration into the Buffalo River in the spring (15 February – 30 June) and the fall (1 September to 30 December).

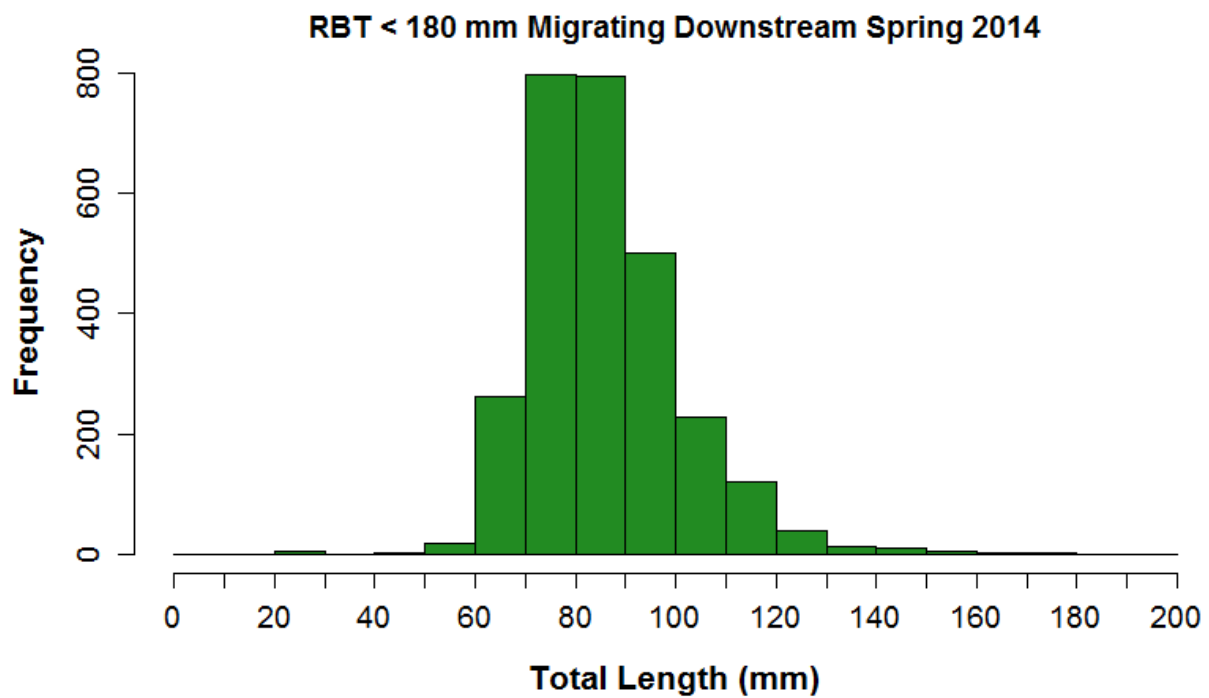
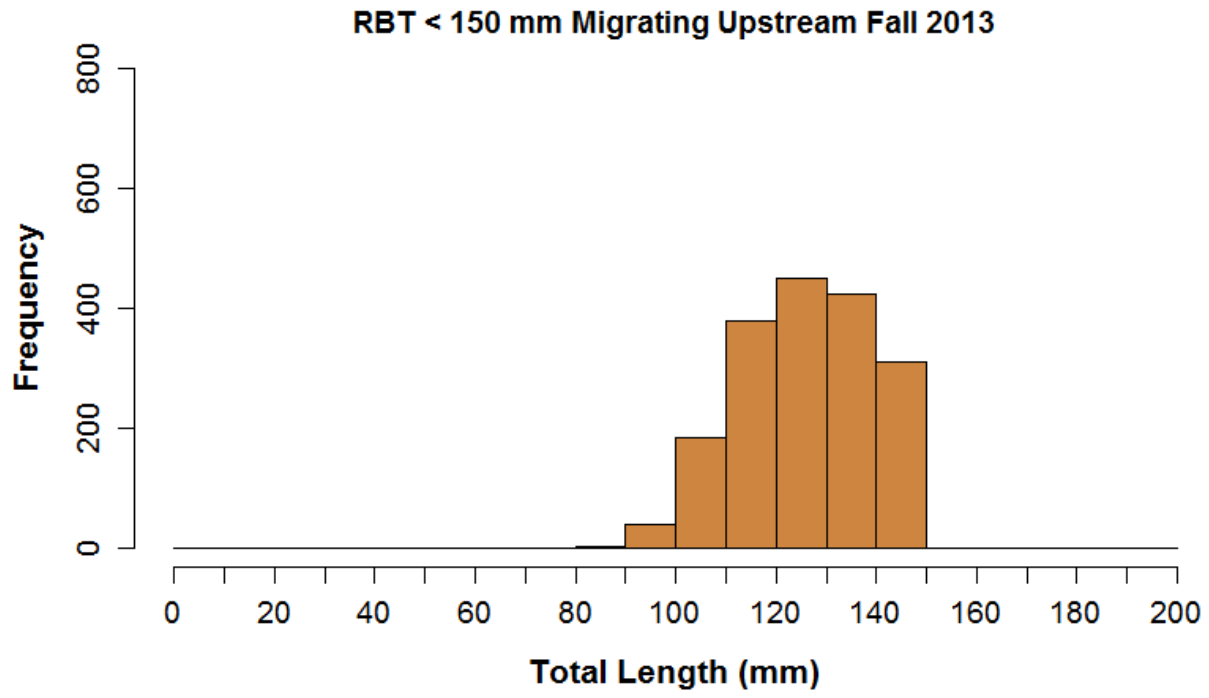
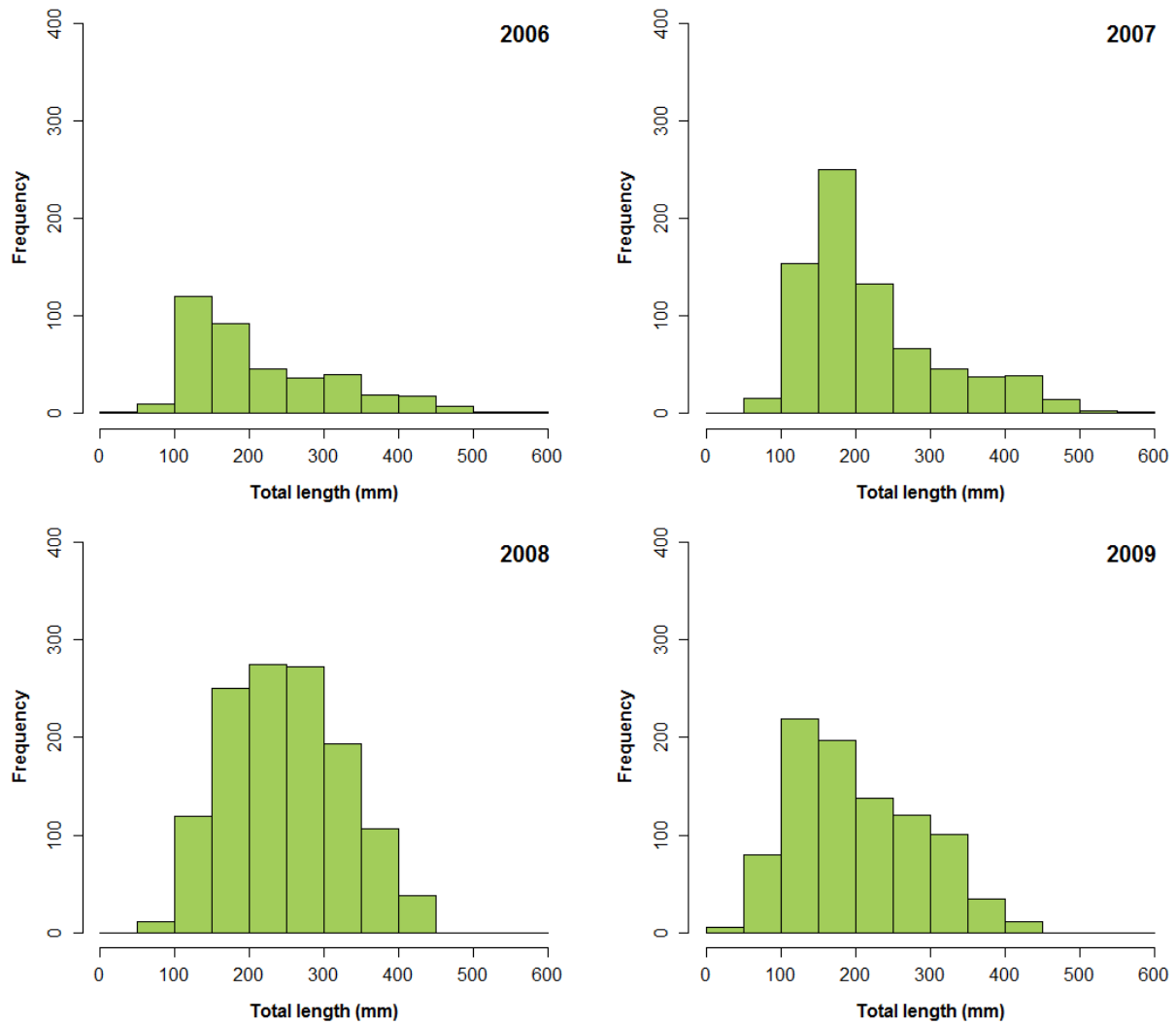


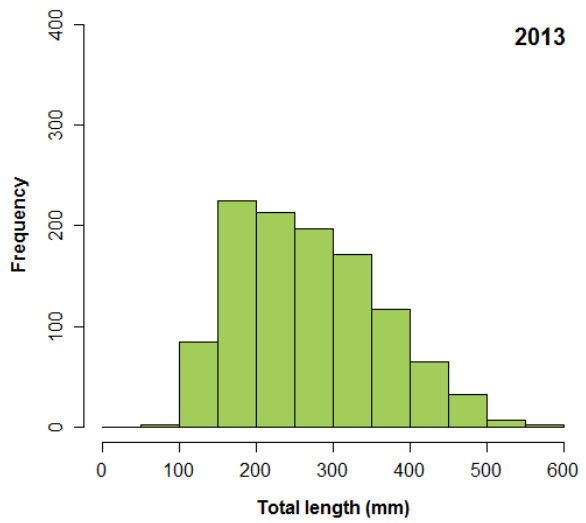
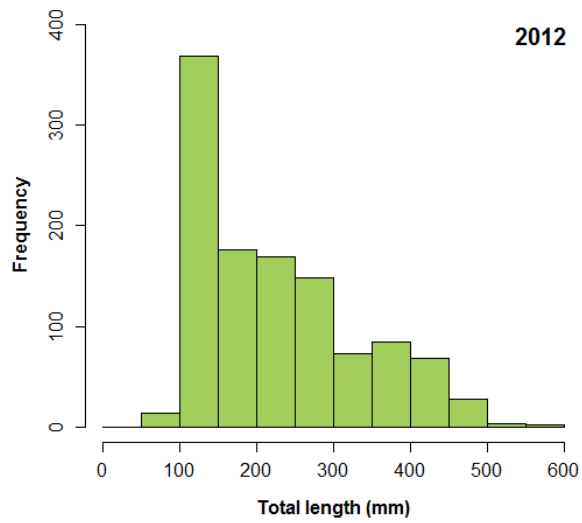
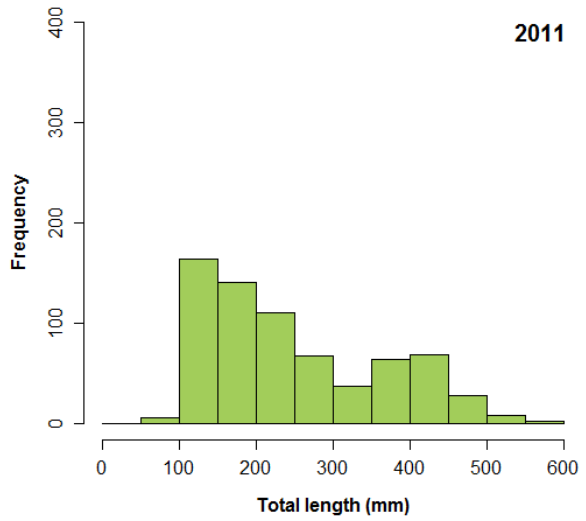
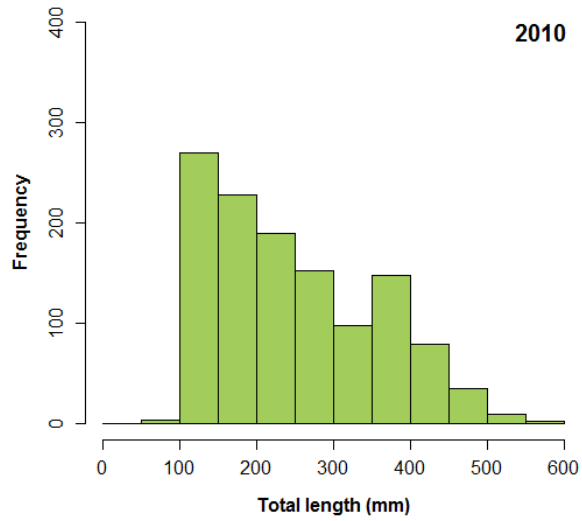
Figure 8. An example of how young trout migrating upstream in the fall are not the same cohort of young trout migrating downstream in the spring.

Supplemental information

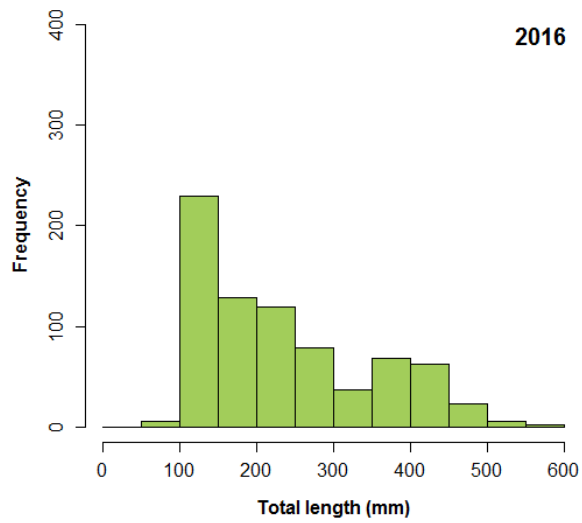
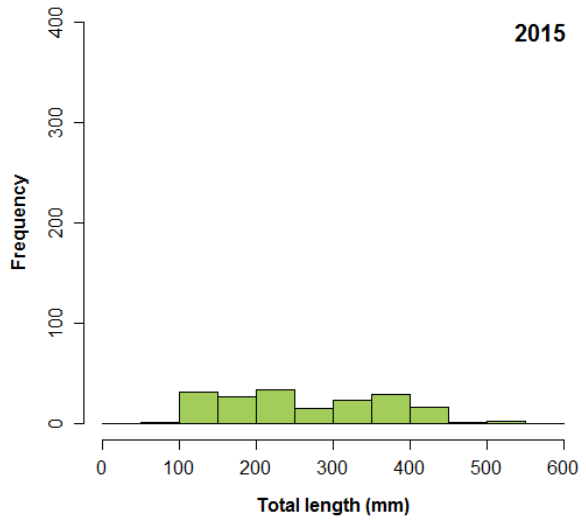
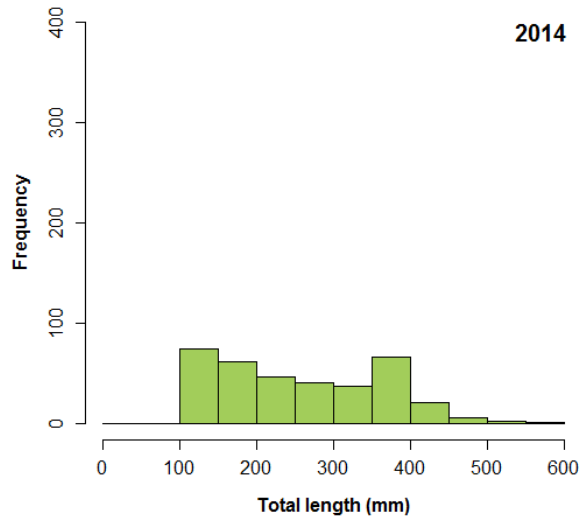
This section shares plots not otherwise discussed in the document to accompany those submitted in previous reports to FERC as well as infographics to demonstrate tables 2-4 from the P.I.T. tag study.



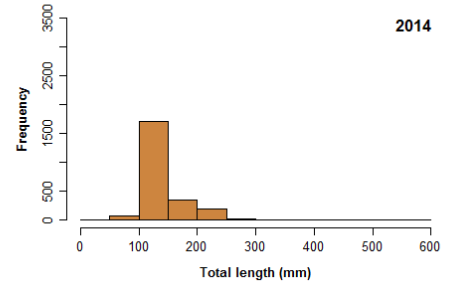
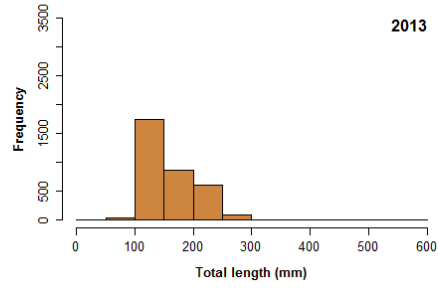
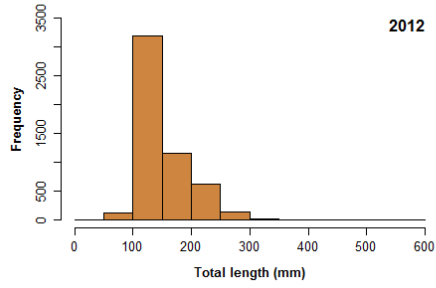
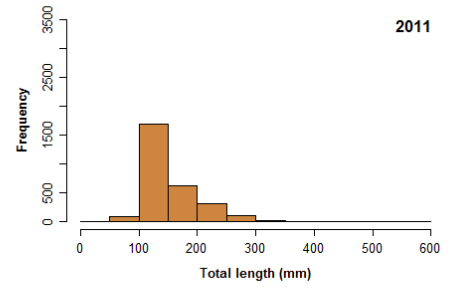
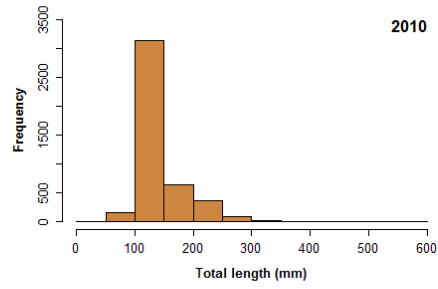
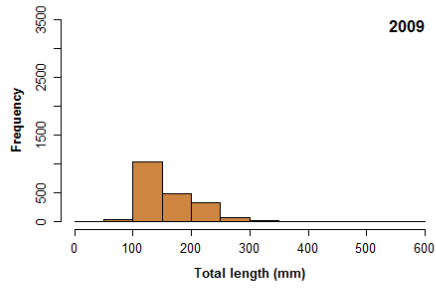
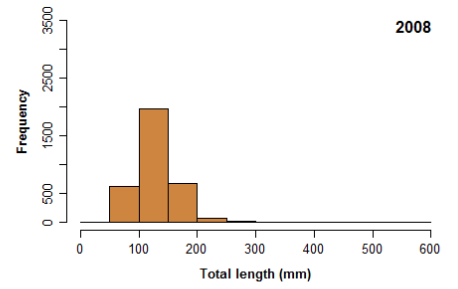
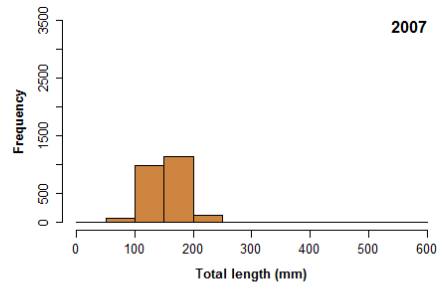
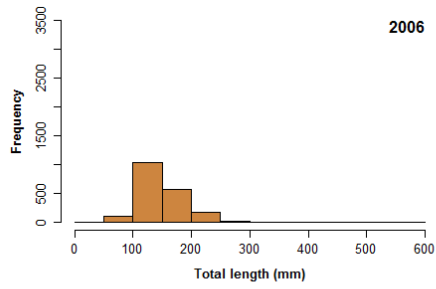
Supplement 1. Size distribution of Rainbow Trout migrating upstream in the spring (15 February to 30 June) from 2006-2009.



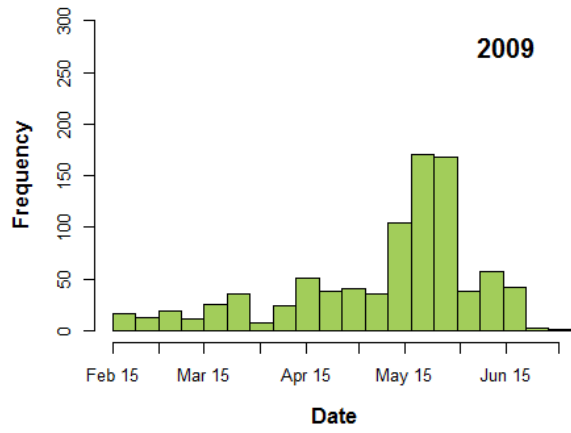
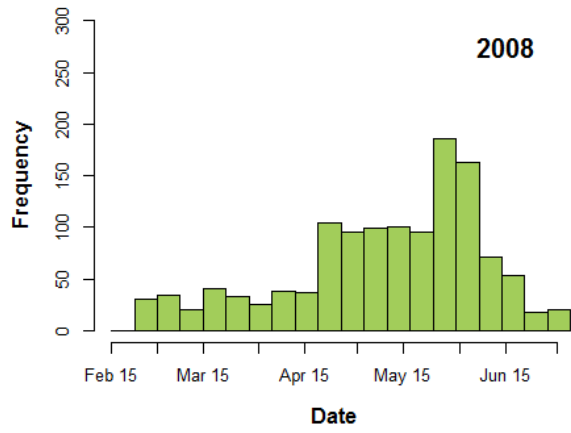
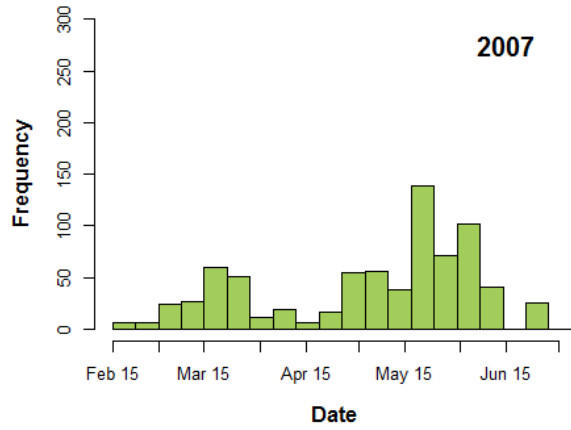
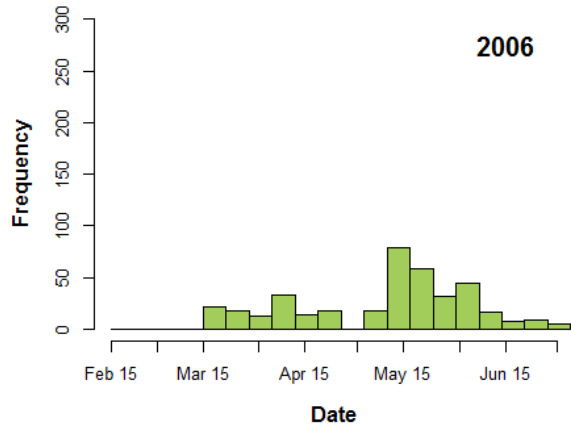
Supplement 2. Size distribution of Rainbow Trout migrating upstream in the spring (15 February to 30 June) from 2010-2013.



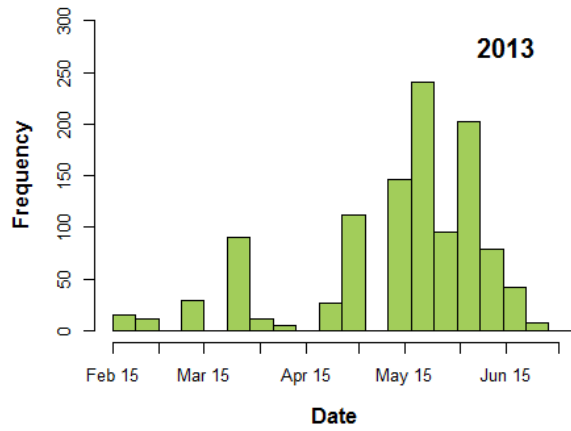
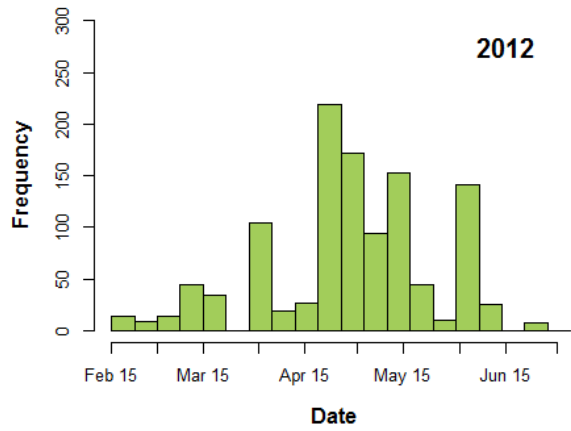
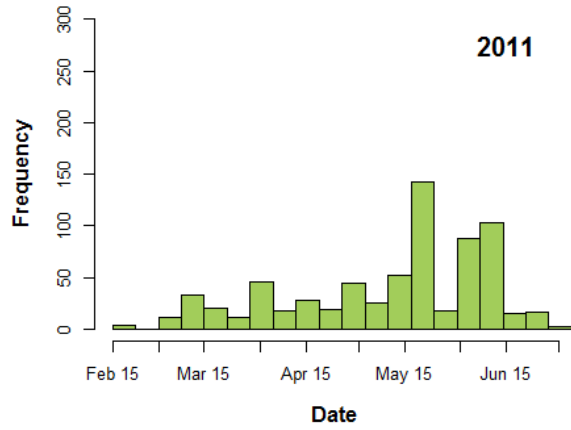
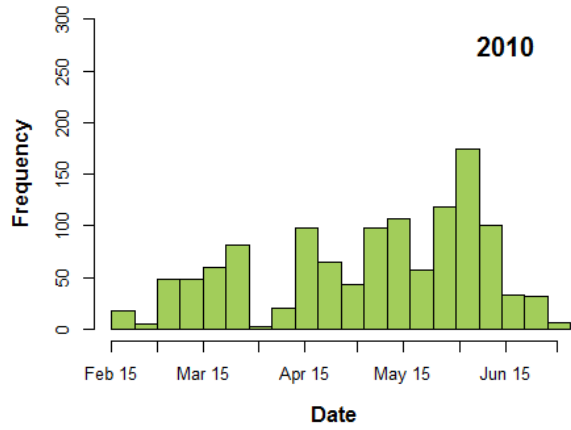
Supplement 3. Size distribution of Rainbow Trout migrating upstream in the spring (15 February to 30 June) from 2014-2016.



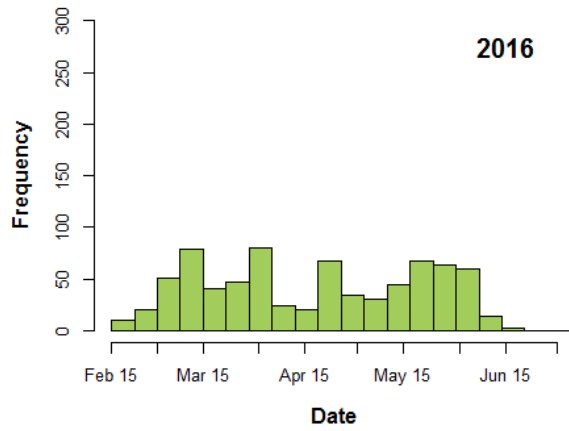
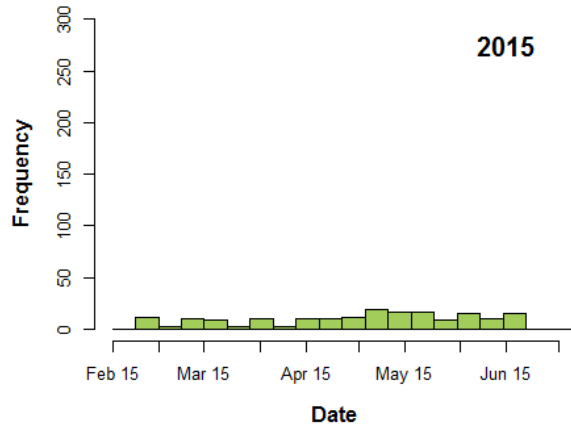
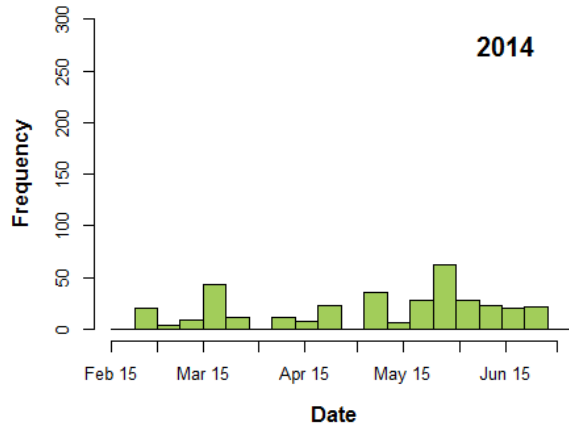
Supplement 4. Size distribution of Rainbow Trout migrating upstream in the fall (1 September to 31 December).



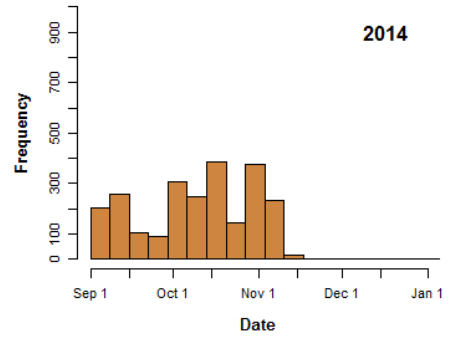
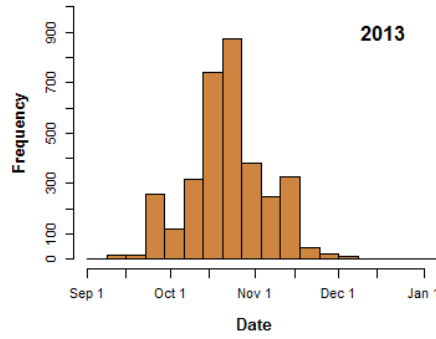
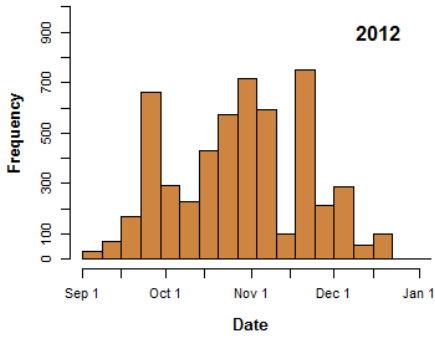
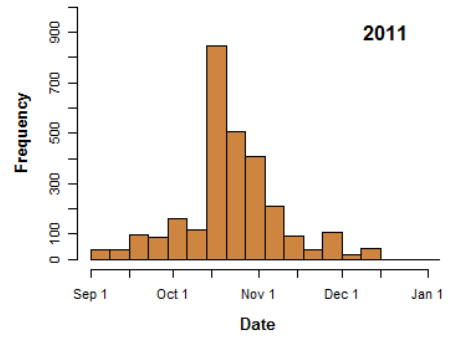
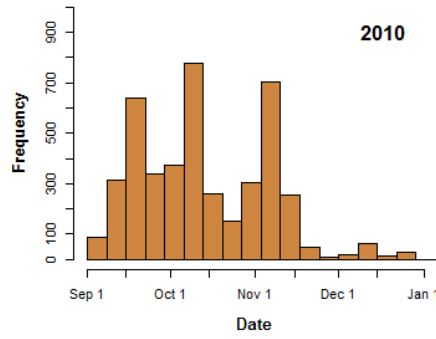
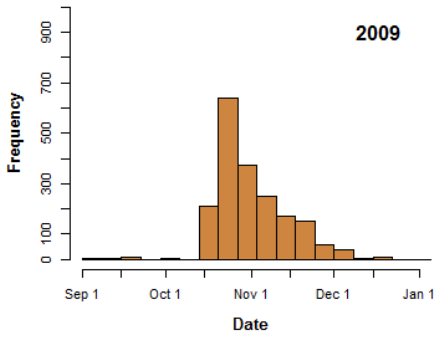
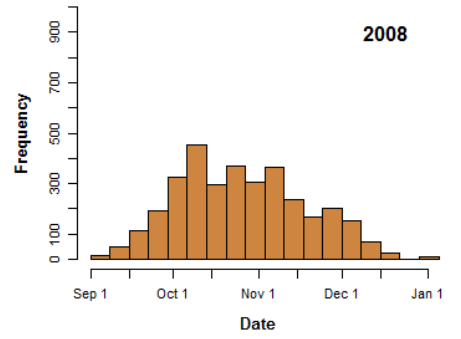
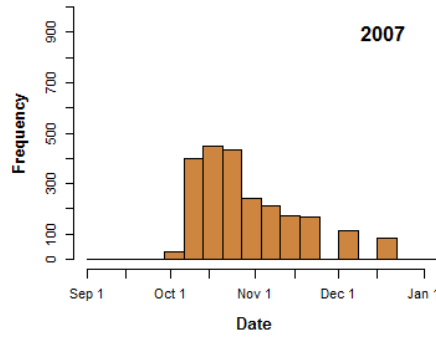
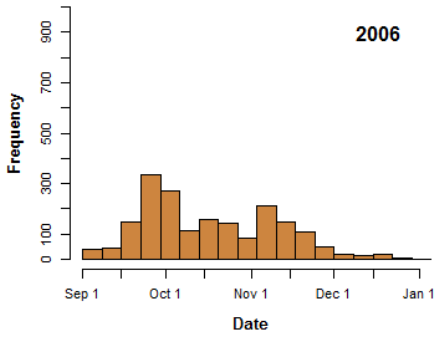
Supplement 5. Temporal distribution of Rainbow Trout migrating upstream in the spring (15 February to 30 June) from 2006-2009.



Supplement 6. Temporal distribution of Rainbow Trout migrating upstream in the spring (15 February to 30 June) from 2010-2013.

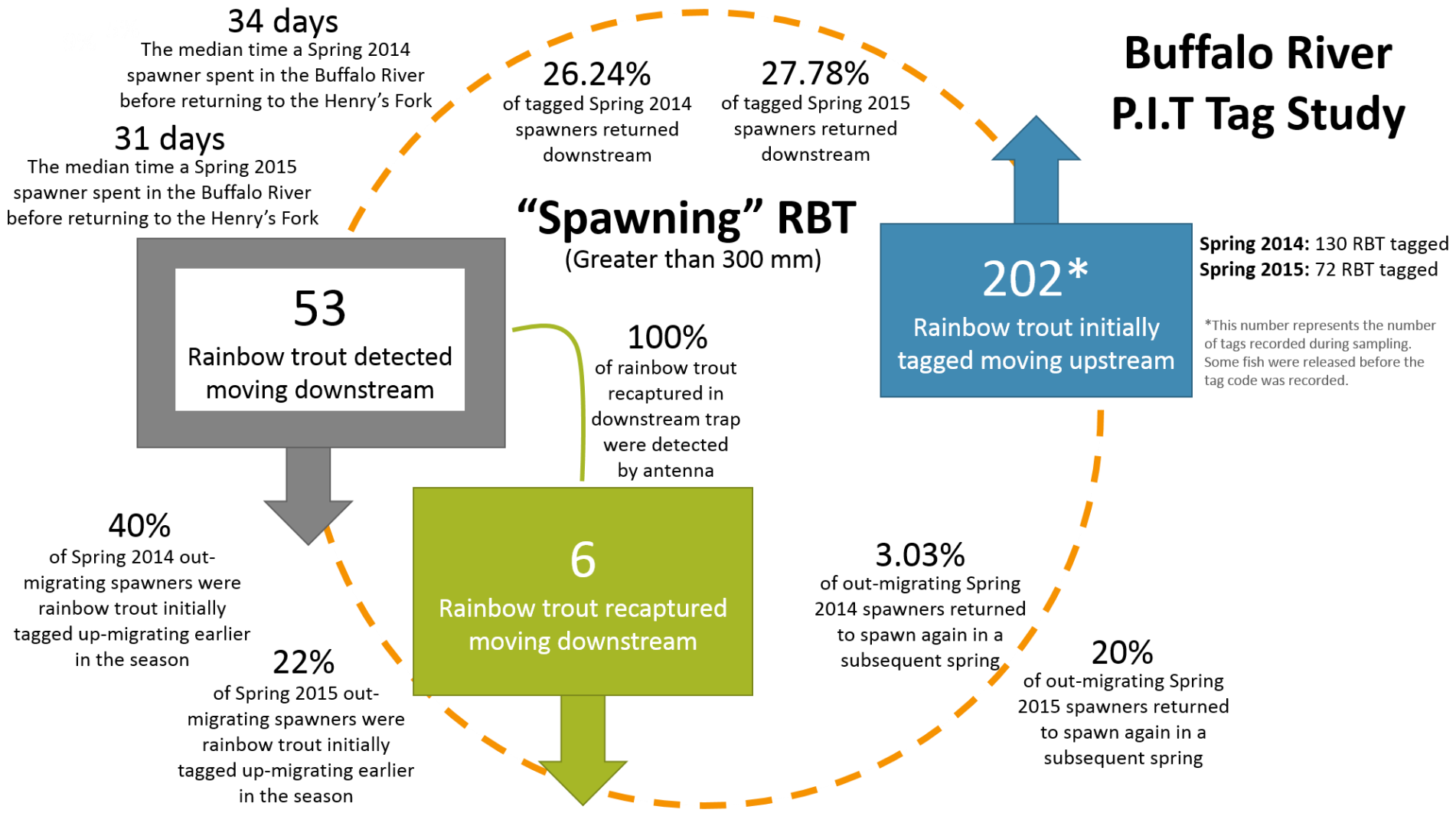


Supplement 7. Temporal distribution of Rainbow Trout migrating upstream in the spring (15 February to 30 June) from 2014-2016.

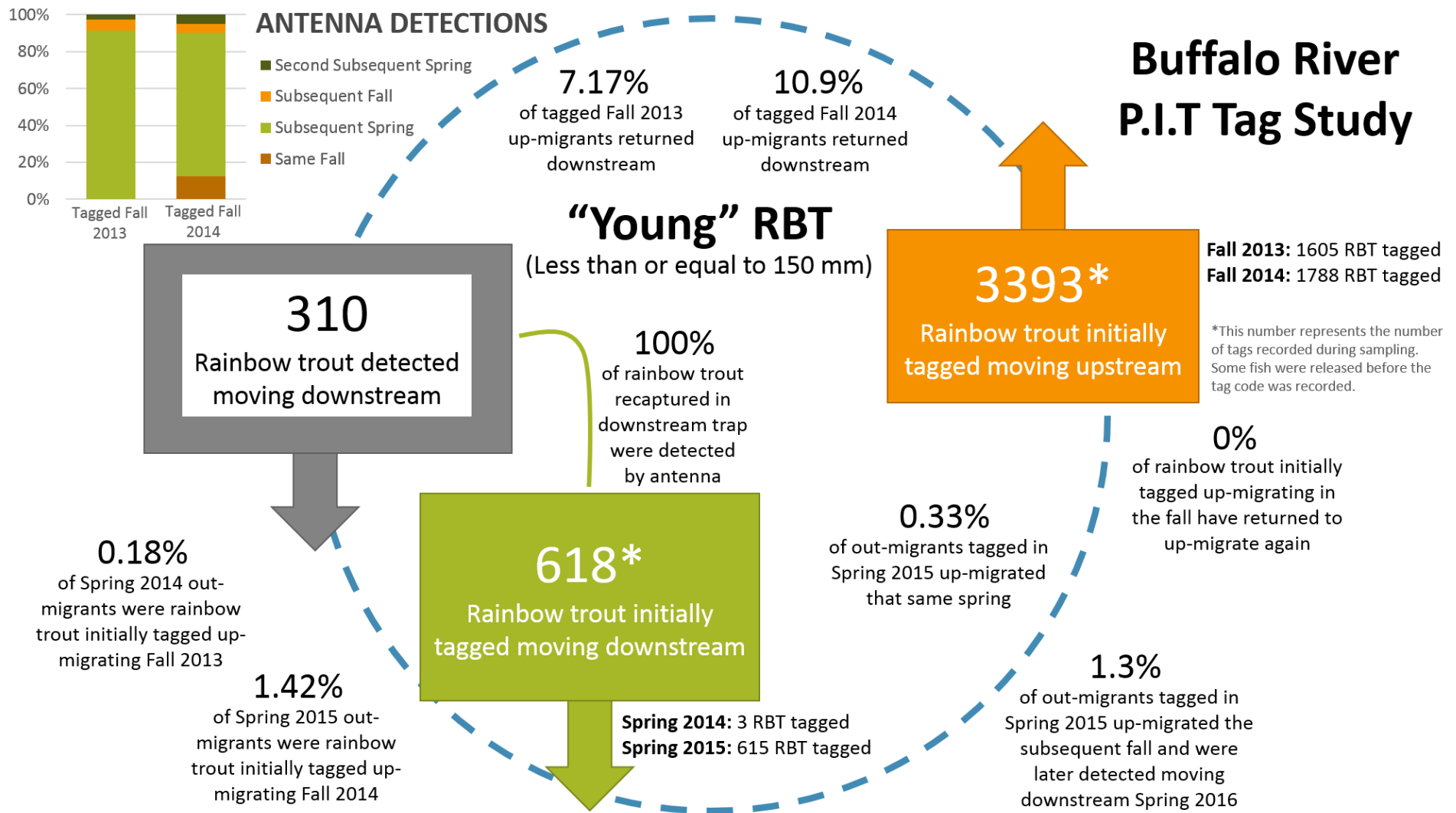


Supplement 8. Temporal distribution of Rainbow Trout migrating upstream in the fall (1 September to 31 December).

Buffalo River P.I.T Tag Study



Supplement 9. Infographic demonstrating how many spawning-sized Rainbow Trout were tagged in the spring of 2014 and 2015, how many returned, how long they spent in the Buffalo River before returning, and how many have returned to spawn a second time.



Supplement 10. Infographic demonstrating how many young Rainbow Trout were tagged migrating upstream in the fall of 2013 and 2014, how many returned downstream, when they returned downstream, the fall up-migrant contribution to spring out-migrant cohort, and if they have since returned.

Nicholas E Josten

From: Rob Van Kirk <rob@henrysfork.org>
Sent: Tuesday, July 26, 2016 3:22 PM
To: Mabey, Lee -FS; Dan Garren; Dave Peterson; Flinders,Jon; Nicholas E Josten
Cc: Christina Morrisett
Subject: Buffalo River report
Attachments: BuffaloRiverFishLadder-DecadalReport.pdf

Hi everyone,

Attached is the final Buffalo River report, including all of the changes we discussed at last week's meeting plus some other edits based on subsequent comments. The report is ready to be submitted to FERC.

Unless something else comes up, I don't see any reason for us to meet again regarding operation of the Buffalo River fish ladder until we get all results back from the genetics study. Recall that IDFG will collect samples from two-year old fish in Box Canyon in spring of 2017, to map back to samples collected from the 2015 spawning run. In the meanwhile, operations and responsibilities are:

Fish ladder remains open from July through January; FRREC keeps ladder and attractant-flow intake clean, but let us know if you need assistance or if there is a need for major maintenance or repairs. HFF will occasionally download PIT-tag data from the antenna throughout the summer and fall.

HFF will operate the upstream trap from February through June and continue to download antenna data.

Let me know if you have questions.

Rob

Rob Van Kirk, Ph.D.
Senior Scientist
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Version: 2016.0.7294 / Virus Database: 4627/12687 - Release Date: 07/26/16

Nicholas E Josten

From: Mabey, Lee -FS <lmabey@fs.fed.us>
Sent: Wednesday, August 03, 2016 10:53 AM
To: rob@henrysfork.org; Dan Garren; Dave Peterson; Flinders,Jon; Nicholas E Josten
Cc: Christina Morrisett
Subject: RE: Buffalo River report

Rob,
I have reviewed the final document and have no substantive changes to suggest. It was always believed that spawning fish would contribute more to recruitment in the henrys fork than the overwintering age-0's. The percent return that has been shown of the up migrating age-0's is disappointing. One variable I do not know how to account for is the subbing or leakage under the dam and how this could be affecting our estimates.

I have checked our 4(e) conditions and that the Forest Service placed on the project as well as our special use permit with FRREC and see no conflict or restrictions to the proposed changes in monitoring of the Fishway that we would need to amend on our end. We certainly know a lot more about fish movement and survival within the Buffalo and its contributions to the Henrys Fork than we knew previously.

Lee



Lee Mabey
Forest Fisheries Biologist

Forest Service
Caribou-Targhee National Forest

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Idaho Falls, ID 83401
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Caring for the land and serving people

From: Rob Van Kirk [mailto:rob@henrysfork.org]
Sent: Tuesday, July 26, 2016 3:22 PM
To: Mabey, Lee -FS <lmabey@fs.fed.us>; Dan Garren <dgarren@idfg.idaho.gov>; Dave Peterson <Dave.Peterson@fallriverelectric.com>; Flinders,Jon <jon.flinders@idfg.idaho.gov>; Nicholas E Josten <gsense@cableone.net>
Cc: Christina Morrisett <christina.morrisett@gmail.com>
Subject: Buffalo River report

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HFF will operate the upstream trap from February through June and continue to download antenna data.

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Rob

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From: [Bingman, Mark -FS](#)
To: [Katie Sellers](#)
Cc: [Mabey, Lee -FS](#); [Davy, Elizabeth -FS](#); gsmelser@fed.us; [Laura Cowan](#)
Subject: RE: Buffalo River Hydroelectric Project LIHI Certification - Request for US Forest Service Feedback
Date: Thursday, May 12, 2016 1:29:07 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image006.png](#)
[102715_FS_inspection_letter.pdf](#)

Hello Katie,

Our response to your questions is shown in **blue font** below.

Please, let me know if you need something more. Thanks!



Mark Bingman
Natural Resource Specialist
Forest Service
Caribou-Targhee National Forest
Ashton/Island Park/Dubois Ranger Districts

p: 208-652-1228
c: 208-313-7820
f: 208-652-7863
mbingman@fs.fed.us

PO Box 858
46 Highway 20
Ashton, ID 83420
www.fs.fed.us



Caring for the land and serving people

From: Katie Sellers [<mailto:Katie.Sellers@KleinschmidtGroup.com>]
Sent: Wednesday, April 13, 2016 9:41 AM
To: gsmelser@fed.us; Davy, Elizabeth -FS <edavy@fs.fed.us>
Subject: Buffalo River Hydroelectric Project LIHI Certification - Request for US Forest Service Feedback

Dear Mr. Smelser,

Kleinschmidt Associates is assisting Fall River Rural Electric Cooperative, Inc. (Fall River) with applying for certifications from the Low Impact Hydropower Institute (LIHI) for the Buffalo River Hydroelectric Project (FERC No. 1413) (Project). LIHI is a non-profit organization dedicated to reducing the impacts of hydropower generation through the certification of hydropower projects that have avoided or reduced their environmental impacts pursuant to LIHI criteria. LIHI has taken a first review of the Buffalo River LIHI certification application and has asked, before the submission of a final certification application, that we follow-up with the US Forest Service (USFS) to confer that the Project is operating in compliance with USFS conditions. With that said, could you please confirm/comment on the following?

-Confirm that USFS fish entrainment protection conditions issued during the Project's 2004 FERC relicensing process are still valid and the most recent conditions from your resource agency.

Entrapment conditions are still valid. (See attached inspection letter.)

-Confirm that the Project is operating in compliance with the USFS most recent fish entrainment protection conditions.

Fall River is in compliance.

-Confirm that the Project is operating in compliance with 2004 USFS Condition No. 12 Heritage Resource Protection.

Fall River is in compliance.

-Confirm that the Project is operating in compliance with 2004 USFS Condition No. 10 Recreation Plan.

Fall River is in compliance.

Please do let me know if I can provide you with any further information for this review or if I should be directed to another point of contact.

Thank you in advance for your time,
Katie Sellers

Katie Sellers

Regulatory Coordinator

Kleinschmidt

Office: 207-416-1218

www.KleinschmidtGroup.com



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United States
Department of
Agriculture

Forest
Service

Ashton/Island Park Ranger District

46 South Highway 20
P.O. Box 858
Ashton, ID 83420
208-652-7442
FAX: 208-652-7863

File Code: 2720
Date: October 27, 2015

Nicholas E. Josten
Geo Sense
2742 St. Charles Ave
Idaho Falls, ID 83404

Dear Nick,

The Island Park Hydroelectric facilities at Island Park Dam and Buffalo River Dam were inspected for compliance on September 25, 2015.

The facilities were found to be in compliance with the terms and conditions of the Special Use Permit and the 4(e) condition required by the Forest Service and the FERC License.

This constitutes our annual review of the facility and its operation as specified in the Forest Service manual Section 2770 and Article 104 of the FERC project license.

Sincerely,

ELIZABETH DAVY
District Ranger

cc: Fall River Electric 1150 North 3400 East, Ashton, ID 83420



Buffalo River Hydroelectric Project (FERC No. 1413)

Low Impact Hydroelectric Power Facility Certification

1. Contact Information for person completing the questionnaire:

Name & Title: GARY M VECCINO NATURAL RESOURCES PLAN COORD
Organization: Idaho Fish and Game
Address: 4279 COMMERCE CIRCLE
IDAHO FALLS ID 83401
Phone: 208 525 7290
Email: GARY.VECCINO@IDFG.IDAHO.GOV

2. To the best of your knowledge, is Buffalo River Hydroelectric Project (FERC License No. 1413) 2004 License Article 405 *Upstream Fishway* still valid?

- Yes No
 N/A or Unknown. If N/A or Unknown please explain:

2(a) Is the Buffalo River Hydroelectric Project (FERC License No. 1413) currently in compliance with 2004 License Article 405 *Upstream Fishway*?

- Yes No
 N/A or Unknown. If N/A or Unknown please explain:

3. To the best of your knowledge, do Buffalo River Hydroelectric Project (FERC License No. 1413) operations negatively affect any state or federally listed threatened and endangered species?

- Yes No
 N/A or Unknown. If N/A or Unknown please explain:

Buffalo River Hydroelectric Project (FERC No. 1413)

Low Impact Hydroelectric Power Facility Certification

If you have any additional comments, please provide them here:

FERC 1413 AND OWNERS / APPLICANTS HAVE ALWAYS BEEN
COMPLIANT WITH AND WORTHY OF LOW-IMPACT HYDRO
ENERGY

**Please return this Questionnaire to Laura Cowan by email at
Laura.Cowan@KleinschmidtGroup.com within 15 days of receipt.**

From: Katie Sellers
To: ["Cary Myler"](#)
Cc: toni_davidson@fws.gov; [Laura Cowan](#)
Subject: RE: Buffalo River Hydroelectric Project LIHI Certification - Request for USFWS Feedback
Date: Wednesday, June 22, 2016 11:05:00 AM
Attachments: [image002.png](#)

Thank you

Katie Sellers
Regulatory Coordinator
Kleinschmidt
Office: 207-416-1218
www.KleinschmidtGroup.com



From: Cary Myler [mailto:cary_myler@fws.gov]
Sent: Tuesday, June 21, 2016 6:59 PM
To: Katie Sellers <Katie.Sellers@KleinschmidtGroup.com>
Cc: toni_davidson@fws.gov; [Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>](mailto:Laura.Cowan@KleinschmidtGroup.com)
Subject: Re: Buffalo River Hydroelectric Project LIHI Certification - Request for USFWS Feedback

Please contact Michael Morse @ Michael_morse@fws.gov.

Sent from my iPad

On Jun 21, 2016, at 4:44 PM, Katie Sellers <Katie.Sellers@kleinschmidtgroup.com> wrote:

Hi Cary – I am just checking in on the Buffalo River Hydroelectric Project questions provided below.

Please let me know if I can be of any help during your review, or if I should make contact with someone else for this review.

Best
Katie

Katie Sellers
Regulatory Coordinator

<image001.gif>

Office: 207-416-1218

www.KleinschmidtGroup.com

<image002.png>

From: Katie Sellers

Sent: Wednesday, May 11, 2016 8:59 AM

To: 'cary_myler@fws.gov' <cary_myler@fws.gov>; 'toni_davidson@fws.gov'

<toni_davidson@fws.gov>

Cc: Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>

Subject: RE: Buffalo River Hydroelectric Project LIHI Certification - Request for USFWS Feedback

Hi Cary- Have you had a chance to address the below compliance questions for the Buffalo River Project? Please let me know if I can provide you with any further information or if I should touch base with another point of contact.

Thank you,
Katie Sellers

Katie Sellers

Regulatory Coordinator

<image001.gif>

Office: 207-416-1218

www.KleinschmidtGroup.com

<image002.png>

From: Katie Sellers

Sent: Wednesday, April 13, 2016 11:50 AM

To: 'cary_myler@fws.gov' <cary_myler@fws.gov>; 'toni_davidson@fws.gov'

<toni_davidson@fws.gov>

Cc: Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>

Subject: RE: Buffalo River Hydroelectric Project LIHI Certification - Request for USFWS Feedback

Dear Mr. Myler,

As afore noted, Kleinschmidt Associates is assisting Fall River Rural Electric Cooperative, Inc. (Fall River) with applying for certifications from the Low Impact Hydropower Institute (LIHI) for the Buffalo River Hydroelectric Project (FERC No. 1413) (Project). LIHI is a non-profit organization dedicated to reducing the impacts of hydropower generation through the certification of hydropower projects that have avoided or

reduced their environmental impacts pursuant to LIHI criteria. LIHI has taken a first review of the Buffalo River LIHI certification application and has asked, before the submission of a final certification application, that we follow-up with the US Fish and Wildlife Service to confer the following Buffalo River Project compliance information:

-Confirm that USFWS fish entrainment protection recommendations issued during the Project's 2004 FERC relicensing process are still valid and the most recent recommendations from your resource agency.

-Confirm that the Project is operating in compliance with the most recent USFWS fish entrainment protection recommendations.

-Confirm that Project operations do not negatively impact federally listed threatened or endangered species identified to potentially occur within the Project vicinity.

Please do let me know if I can provide you with any further information for this review or if I should reach out to another point of contact.

Thank you in advance for your time,
Katie

Katie Sellers
Regulatory Coordinator
<image001.gif>
Office: 207-416-1218
www.KleinschmidtGroup.com
<image002.png>

From: Katie Sellers
Sent: Friday, September 18, 2015 4:29 PM
To: 'cary_myler@fws.gov' <cary_myler@fws.gov>
Cc: Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>
Subject: RE: LIHI Certification - Request for USFWS Feedback

Dear Mr. Myler,

Please let me know if you have any questions during your review of both Buffalo River Hydroelectric Project and Island Park Hydroelectric Project compliance with relevant prescriptions and/or license articles listed in the previously provided questionnaires.

Best,
Katie Sellers

Katie Sellers

Regulatory Coordinator
<image001.gif>
Office: 207-416-1218
www.KleinschmidtGroup.com

From: Katie Sellers
Sent: Tuesday, September 08, 2015 1:51 PM
To: 'cary_myler@fws.gov' <cary_myler@fws.gov>
Cc: Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>
Subject: RE: LIHI Certification - Request for USFWS Feedback

Dear Mr. Myler,

Please let me know if you have any questions while reviewing both Buffalo River Hydroelectric Project and Island Park Hydroelectric Project compliance with relevant prescriptions and/or license articles listed in the previously provided questionnaires.

Thank you for your help with the LIHI Certification process and I look forward to your responses.

Best,
Katie Sellers

Katie Sellers
Regulatory Coordinator
<image001.gif>
Office: 207-416-1218
www.KleinschmidtGroup.com

From: Katie Sellers
Sent: Tuesday, August 25, 2015 4:42 PM
To: 'cary_myler@fws.gov' <cary_myler@fws.gov>
Cc: Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>
Subject: LIHI Certification - Request for USFWS Feedback

Dear Mr. Myler,

Kleinschmidt Associates is assisting Fall River Rural Electric Cooperative, Inc. (Fall River) with applying for certifications from the Low Impact Hydropower Institute (LIHI) for the Buffalo River Hydroelectric Project (FERC No. 1413) and the Island Park Hydroelectric Project (FERC No. 2973). LIHI is a non-profit organization dedicated to reducing the impacts of hydropower generation through the certification of hydropower projects

that have avoided or reduced their environmental impacts pursuant to LHI criteria.

As part of the application process, LHI requests correspondence from relevant resource agencies to confirm that projects are in compliance with prescriptions and license articles. To that end, Kleinschmidt is requesting feedback from regulatory agencies to confirm validity and compliance with relevant prescriptions and/or articles.

Attached, you will find questionnaires for Buffalo River Hydroelectric Project and Island Park Hydroelectric Project. If you could please complete each of the enclosed questionnaires and return to the attention of Laura Cowan by email (laura.cowan@kleinschmidtgrou.com) within 15 days of receipt, it would be much appreciated.

Thank you in advance for your time,

Katie Sellers

Katie Sellers
Regulatory Coordinator
<image001.gif>
Office: 207-416-1218
www.KleinschmidtGroup.com

From: Katie Sellers
To: ["Michael_morse@fws.gov"](mailto:Michael_morse@fws.gov)
Cc: [Laura Cowan](#); ["Cary Myler"](#)
Subject: Buffalo River Hydroelectric Project LIHI Certification - Request for USFWS Feedback
Date: Wednesday, June 22, 2016 11:19:00 AM
Attachments: [image002.png](#)

Good Morning Michael,

Kleinschmidt Associates is assisting Fall River Rural Electric Cooperative, Inc. (Fall River) with applying for certifications from the Low Impact Hydropower Institute (LIHI) for the Buffalo River Hydroelectric Project (FERC No. 1413) (Project). LIHI is a non-profit organization dedicated to reducing the impacts of hydropower generation through the certification of hydropower projects that have avoided or reduced their environmental impacts pursuant to LIHI criteria. LIHI has taken a first review of the Buffalo River LIHI certification application and has asked, before the submission of a final certification application, that we follow-up with the US Fish and Wildlife Service to confer the following Buffalo River Project compliance information:

- Confirm that USFWS fish entrainment protection recommendations issued during the Project's 2004 FERC relicensing process are still valid and the most recent recommendations from your resource agency.
- Confirm that the Project is operating in compliance with the most recent USFWS fish entrainment protection recommendations.
- Confirm that Project operations do not negatively impact federally listed threatened or endangered species identified to potentially occur within the Project vicinity.

Carly Myler has recommended I make contact with you in regards to the above questions. Please do let me know if I can provide you with any further information for this review.

Thank you in advance for your time,
Katie Sellers

Katie Sellers
Regulatory Coordinator
Kleinschmidt
Office: 207-416-1218
www.KleinschmidtGroup.com



From: Katie Sellers
To: ["michael_morse@fws.gov"](mailto:michael_morse@fws.gov)
Cc: [Laura Cowan](#)
Subject: RE: Buffalo River Hydroelectric Project - USFWS Review for LIHI Certification Application
Date: Friday, September 30, 2016 1:32:00 PM
Attachments: [image002.png](#)

Hi Michael – Just wanted to follow-up on this topic.

Thank you in advance for your time,
Katie

Katie Sellers
Regulatory Coordinator
Kleinschmidt
Office: 207-416-1218
www.KleinschmidtGroup.com



From: Katie Sellers
Sent: Thursday, September 22, 2016 2:36 PM
To: 'michael_morse@fws.gov' <michael_morse@fws.gov>
Cc: Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>
Subject: Buffalo River Hydroelectric Project - USFWS Review for LIHI Certification Application

Hi Michael – I just left you a voicemail but wanted to follow-up via email. You had left me a voicemail earlier this summer in regards to reviewing the Buffalo River Hydroelectric Project and its associated compliance for a Low Impact Hydropower Institute (LIHI) Certification Application. Sadly I am just jumping back into this project now – I apologize for my delay in getting back to you.

Essentially we are looking for your verification that USFWS recommendations/conditions issued for the Project's FERC license are still valid and that the project operates in compliance with USFWS issued recommendations/conditions (Article 405, *Continuous Operation of Upstream Fishway* and Article 407, *Fishway Effectiveness Monitoring and Evaluation Plan*).

Also, we are hoping that you can confirm that the facility continues to not negatively affect listed species that may be located within the facility area.

Please keep me posted on your thoughts. Thank you again and I apologize for the delay.

Katie Sellers

Katie Sellers
Regulatory Coordinator

Kleinschmidt

Office: 207-416-1218

www.KleinschmidtGroup.com



APPENDIX G

SHORELAND MANAGEMENT PLAN

ORIGINAL



Northwest Power Services, Inc.

May 11, 2005

Ms. Magalie R Salas, Secretary
Federal Energy Regulatory Commission
Mail Code: DHAC, PJ-12
888 First Street, NE
Washington, DC 20426

FILED
OFFICE OF THE
SECRETARY
2005 MAY 13 A 10:08
FEDERAL ENERGY
REGULATORY COMMISSION

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Ms. Salas,

For your review and approval, for the proposed construction activities at the Buffalo River Hydroelectric Project, FERC Project #1413, please find attached the following plans:

- Erosion control Plan (Article #302) - ~~035~~ CANCELED
- Temporary Emergency Action Plan (Article #304)
- Hazardous Substance Plan (Article #404) - 036
- Fishway & Fish Screen Monitoring Plan (Article #407) - 038
- Diversion Operation Plan (Article #410 & USFS Condition #15) - 040
- Public Safety Plan (USFS Condition #7)
- Heritage Resource Protection Plan (USFS Condition #12) - 039
- Vegetation Management Plan (USFS Condition #17) - 037
- B E/A for Threatened, Endangered, and Sensitive Species (USFS Condition #18 & 19) - 041

If you have any questions or need additional information please contact me at (208) 745-0834 or e-mail me at bsmith@nwpwtservices.com.

Sincerely,

NORTHWEST POWER SERVICES, INC.

Brent I. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric
Constantine Tjoumas, Director, D2SI, FERC - Washington
Harry T. Hall, Regional Engineer, FERC - Portland

Gary Vecellio, Environmental Staff Biologist, Idaho Department of Fish & Game
Gerrish Willis, Regional Hydropower Coordinator
Jim De Rito, Conservation Director, Henry's Fork Foundation
Steve Trafton, Executive Director, Henry's Fork Foundation
Lee Mabey, US Forest Service
Adrienne Keller, US Forest Service
Deb Mignogno, US Fish & Wildlife Service
Jim Esch, US Fish & Wildlife Service
Scott, A. Grunder, Fishery Program Coordinator, Idaho Department of Fish & Game
Troy Saffle, Idaho DEQ
Keith Hobbs, Idaho Department of Parks & Recreation

Section H

***Vegetation Management
Plan***

Vegetation Management Plan

1.0 Introduction

A license was issued to Fall River Rural Electric Cooperative, Inc. (Fall River) in November, 2004 by the Federal Energy Regulatory Commission (Commission) for the alteration and continued operation of the Buffalo River Hydroelectric Project. The 250-kilowatt (kW) run-of-river project is located on the Buffalo River near its confluence with the Henry's Fork of the Snake River, north of Ashton, in Fremont County, Idaho. The license stipulates several terms and conditions which must be met with approval from various resource agencies including a vegetation management plan. The vegetation management plan is designed to prevent the movement of invasive weeds into the project area during construction, the spread of weeds within disturbed areas, and re establish native plant species in the disturbed areas to control soil erosion. This document has been developed in response to Article #401 4(e)-17 and US Forest Service Condition #17 of the license which states:

At least 90 days prior to any ground disturbing activity the licensee shall file with the Commission a vegetation management plan that is prepared in consultation with and approved by the US Forest Service (USFS). At a minimum the plan shall:

Identify and prioritize (into high, moderate and low priority sites) all inadequately vegetated areas to be re-vegetated or rehabilitated along with an implementation schedule. List the species to be used along with planting locations, methods, and densities (emphasis shall be given to use of native species),

Identify site preparation, irrigation, mulch, fertilizer, and herbivore protection requirements for plant establishment.

Identify methods for prevention and control of noxious weeds. Treatment of existing infestations of highest priority weeds shall be initiated immediately upon approval of the vegetation management plan by the Commission.

Identify all vegetation control methods the Licensee proposes to use at or along all project facilities along project facilities.

Explain how re-vegetation and vegetation control methods and materials meet objectives for integrated noxious weed management, erosion control, wildlife habitat and other management direction.

Develop a monitoring program to evaluate the effectiveness of re-vegetation, vegetation control, and noxious weed control measures.

Develop procedures for identification of additional measures that the licensee shall implement if monitoring reveals that re-vegetation and vegetation control is not successful or does not meet intended objectives.

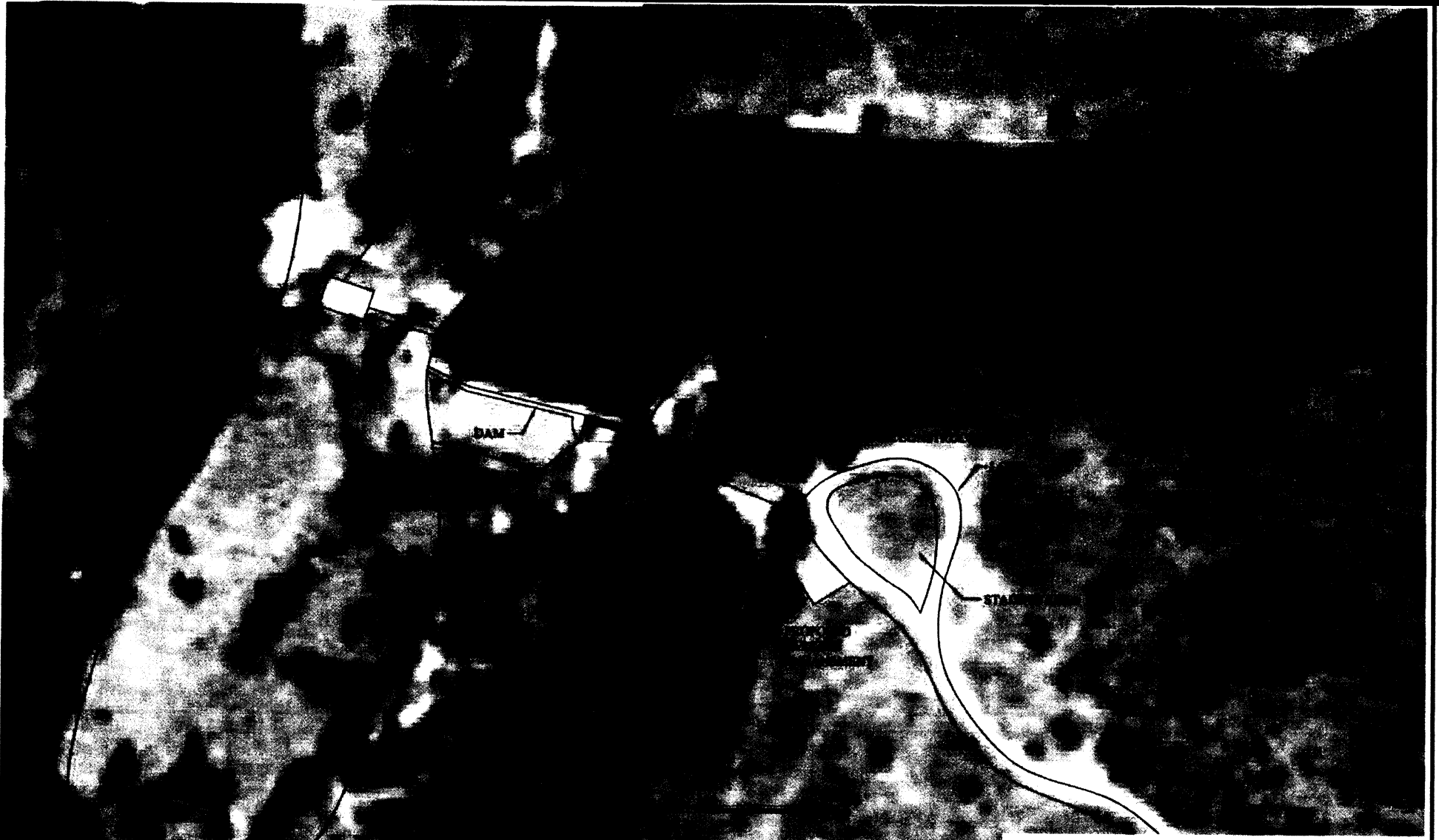
In addition to consultation with the USFS the licensee shall prepare the above plans after consultation with the Idaho Department of Fish and Game (IDFG), Fish and Wildlife Service (FWS), Idaho Department of Environmental Quality (IDEQ), and the Idaho Department of Parks and Recreation (IDPR). The licensee shall include with the plans documentation of consultation, copies of comments and recommendations on the completed plans after the plans have been prepared and provided to the agencies, and specific descriptions of how agencies' comments are accommodated by the plans. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plans with the Commission. If the licensee does not adopt a recommendation, the filings shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to make changes to any plan submitted. Upon Commission approval, the plan becomes a requirement of the license, and the licensee shall implement the plan or changes in the project operations or facilities, including any changes required by the Commission.

2.0 Vegetation Impacts During Construction

The slope to the east of Buffalo Dam includes several areas with poor vegetation cover due to trampling. Recreational foot traffic is concentrated in the area between the parking lot and the margins of the forebay near the dam crest. In addition, the movement of construction equipment to repair Buffalo Dam may disturb up to 2,500 square feet of upland vegetation in this area (Figure H-1). In addition, repairs may change the depth and flow of water through approximately 500 square feet of wet meadow on the west side of the tailrace (Figure H-1).

Without appropriate management, weedy species may expand their coverage in disturbed areas and compete with native plants. Furthermore, disturbed soils may negatively effect aesthetics and promote erosion. In the presence of adequate re-vegetation and weed control efforts desirable native vegetation should become re-established on disturbed soils. Under this scenario the project will have minimal long-term effects on upland vegetation.



**BUFFALO RIVER
HYDROELECTRIC PROJECT**

GENERAL LOCATION

PO BOX 535
RIGBY, ID 83442
208-745-0834

FERC NO. 1413

SCALE:
1" = 100'-0"

REVISION NO. 1

Date 03/15/2005

DRAWN DKB



Northwest Power Services, Inc.

FIGURE H-1

3.0 Noxious Weed Control Plan

3.1 Introduction

There are only a few noxious weed species known to occur within the project area (See the Ute Ladies Tresses/Pink Agoseris Surveys and Vegetation Characterization. ERI Report October 2003). Although there are currently no dense patches of noxious weeds, ground disturbance during construction creates opportunities for invasive weeds to become established. Specifically, Canada thistle has the greatest potential to expand its coverage as the soils in the west side meadow become drier.

This weed control plan is designed to prevent the movement of weeds to and from the project area during construction and the spread of weeds within disturbed project areas. The plan applies to all areas where ground-disturbing activities will occur. The project licensee and its contractors will be responsible for carrying out the methods described in this plan. The weed control plan has three main objectives:

- 1) To prevent the transport of weeds to and from the project area during construction.
- 2) To prevent noxious weeds from becoming established on disturbed soils.
- 3) To provide long-term protection from weeds by establishing healthy native plant communities within the project area.

3.2 Noxious Weed Management

Noxious weed management has been divided into three stages. Pre-construction management is designed to prevent the introduction of weeds into the project area and limit the spread of existing infestations. Construction management is planned to minimize the effects of ground disturbance and inhibit the spread of weeds already present. Reclamation and reseeded measures (See Section 4.0) are intended to protect the project area from future infestations.

3.2.1 Preconstruction Management

Construction supervisors responsible for implementing the weed management plan will review and understand the plan and will provide written confirmation as to this fact.. The plan and photographs of target species will be readily accessible to responsible personnel.

Any straw bales or other natural material used in erosion-control will be certified weed-free. All seed used in revegetation will also be weed-free. Gravel and fill materials will originate from inspected, weed-free sources.

All vehicles and equipment will arrive at the work site clean and weed free. Prior to entering and leaving the construction site, an inspector will ensure that vehicles and equipment are free of soil and debris capable of transporting noxious weed seeds, roots, or rhizomes.

Prior to ground disturbing activity the project area will be inspected for noxious weeds. Weed infestations will be marked and treated. Efforts will be made to treat weeds prior to revegetation. Inspection/treatment ability and options will vary depending on the season, extent of infestation, and weeds present (Table 1). A type of marking will remain in place to designate the site as an area where additional weed precautions must be taken.

Table 1. Vegetation control methods for noxious weeds known from the project area.

Weed Species	Extent of Infestation	Recommended Control Method
Canada Thistle (<i>Cirsium arvensis</i>) Bull Thistle (<i>Cirsium vulgare</i>) Meadow Hawkweed (<i>Hieracium pratense</i>)	Less than 25 plants or less than two square meters	Hand pull or dig. Dispose of weeds with seed heads by burning off-site.
Canada Thistle (<i>Cirsium arvensis</i>) Bull Thistle (<i>Cirsium vulgare</i>) Meadow Hawkweed (<i>Hieracium pratense</i>)	Greater than 25 Plants or greater than two square meters.	Herbicide control under appropriate conditions with products approved for sue near water (Aua-Kleen, Landmaster, Glyphomate, or Rodeo)

3.2.2 Construction Management

All project areas will be inspected and treated bi-monthly (if necessary) for noxious weds during construction. Preferred treatment methods will vary based on the species, location and extent of infestation (Table 1).

Additional precautions will be taken within sites that have been marked as infested by noxious weeds. Topsoil will not be moved from infested sites into adjacent areas. Equipment will be cleaned to the extent possible prior to leaving such sites. Excess soil will be scraped from equipment and the undercarriage and tires will be inspected for weeds and weed fragments.

4.0 Revegetation Management Plan

4.1 Soil Preparation

Original topography will be preserved or recreated wherever possible. Soils compacted by construction equipment will be ripped to depth of six inches to restore permeability. Noxious weeds will be removed on and adjacent to prepared soils prior to reseeding.

4.2 Reseeding and Planting

All disturbed soils will be reseeded or planted with a mix of native plants. Rehabilitation and initial plantings will begin immediately following the completion of repairs to the dam. Additional plantings will extend into the following growing season, and monitoring and maintenance will continue for a period of 3 years (Table 2)

Table 2. Implementation schedule for revegetation/rehabilitation of disturbed and poorly vegetated sites.

Action	Timeframe
Control Weeds	May/June 2005
Control Weeds	July/August 2005
Place Sediment Catch Structures	Prior to ground disturbance -August 2005
Salvage Topsoil (if applicable)	Prior to ground disturbance -August 2005
Contour Site, Replace/Rip Topsoil (if necessary)	Immediately following disturbance -October 2005
Establish and Mark Pathways for Foot Traffic Through the Area	October 2005
Seed All Disturbed Soils	October 2005
Apply Mulch/Erosion Control Fiber Mat	October 2005
Plant Seedlings and Shrubs	October 2005
Monitor Cover Within Seeded Areas Based on Established Protocols and Goal Parameters	June/July 2006
Control Weeds	August 2006
Monitor Cover Within Seeded Areas Based on Established Protocols and Goal Parameters	June/July 2007

Evaluate Survival of Seedlings and Shrubs Based on Established Protocols and Goal Parameters	June/July 2007
Replace Lost Seedlings/Shrubs—Modify Locations and Methods Based on Results of Evaluation	October 2007
Monitor Cover and Seedling Vigor Based on Established Protocols and Goal Parameters	Annually for initial three years or until goal parameters are met
Reseed, Replant, Amend Soils	As necessary

Primary project disturbance will occur in the project’s upland areas; unfortunately, species diversity in the upland sites is currently low with respect to species that can quickly and successfully stabilize the soil following disturbance. Table 3 describes the seed mix planned for upland areas. All of the species are native to the region, although not all were found during our site visits. Several grasses that that have been recorded in the area are excluded because they are not native (i.e. *Phleum pratense*, *Bromus inermis*). Elk sedge (*Carex geyeri*), Idaho fescue (*Festuca idahoensis*), sheep fescue (*Festuca ovina*) and silky lupine (*Lupinus sericeus*) are included to create a long-term, ground-stabilizing and aesthetically pleasing cover on the site. Slender wheatgrass (*Agropyron trachycaulum*) and mountain brome (*Bromus marginatus*) are included for their first-year vigor and ability to rapidly stabilize project soils.

All of these species are best seeded during the fall. The size of the site should allow for seeding of the area using manual spreaders. Prior to seeding, the area should be contoured, as appropriate, and salvaged topsoil should be spread. Any compacted areas should be ripped to a depth of six inches.

Table 3. Seeding mix for disturbed upland sites.

Scientific Name	Common Name	Location	Method	Density	Notes
<i>Festuca idahoensis</i>	Idaho fescue	Uplands	broadcast	10 lbs/ac	Shade tolerant, long lived perennial, slow to develop, but long lasting cover
<i>Festuca ovina</i>	Sheep fescue	Uplands	broadcast	5 lbs/ac	Very persistent, drought and winter hardy, slow to develop
<i>Agropyron trachycaulum</i>	Slender Wheatgrass	Uplands	broadcast	5 lbs/ac	Excellent first-year seeding vigor, short lived
<i>Bromus marginatus</i>	Mtn. Bromes	Uplands	broadcast	10 lbs/ac	Good seedling vigor, short-lived
<i>Carex geyeri</i>	Elk Sedge	Uplands	broadcast	10 lbs/ac	Most common plant within upland areas at the site, effective at stabilizing soil, competitive and hardy
<i>Lupinus sericeus</i>	Silky Lupine	Uplands	broadcast	2 lbs/ac	Nitrogen fixing and showy, used in rehab in Gand Teton NP

The eastern banks of the Buffalo River in the project area transition abruptly to upland. If a small area of riparian influenced vegetation will be disturbed, the areas will be seeded with a mix of narrow-spike reedgrass (*Calamagrostis inexpansa*)/Bluejoint reedgrass (*Calamagrostis canadensis*), Nebraska sedge (*Carex nebrascensis*), Cusick's sedge (*Carex cusickii*) and Baltic rush (*Juncus balticus*)/Tracey's rush (*Juncus traceyi*). The seeding rate for all wetland species combined will be 1 lb/1,000 ft² or 8 lbs/ac, at a ratio of 50 percent *Carex*, 25 percent *Calamagrostis* and 25 percent *Juncus*.

Shrubs are the major component of the understory along the east banks of the Buffalo River. As such, shrub plantings will receive strong emphasis in rehabilitation efforts. A variety of shrub species currently known from the site will be planted in clusters within natural and created favorable microsites (Table 4). Seedling subalpine fir (*Abies lasiocarpa*) and quaking aspen (*Populus tremuloides*) will also be planted to contribute to the aesthetics and long-term stability of the site.

Table 4. Shrubs to be used in the rehabilitation of disturbed sites

Access Trail (2000sq/ft)	Mature crown size plants sq/ft	#plants	Shrub cover sq/ft
<i>Vaccinium caespitosum</i> 0.125sq/ft	0.50	1000	125
<i>Ceanothus velutinus</i> 16 sq/ft	0.00	2	32
<i>Amelanchier alnifolia</i> 10 sq/ft	0.02	40	400
<i>Arctostaphylos uva-ursi</i> 2 sq/ft	0.09	180	360
<i>Spiraea betulifolia</i> 0.5 sq/ft	0.20	400	200
<i>Cornus stolonifera</i> 10 sq/ft	0.00	na	0
<i>Ribes viscosissimum</i> 8 sq/ft	0.00	na	0
Total Area Covered			1117
% Shrub Cover			0.56
Concrete Truck Access (2750sq/ft)	Mature crown size plants sq/ft	#plants	Shrub cover sq/ft
<i>Vaccinium caespitosum</i> 0.125sq/ft	0.50	1375	172
<i>Ceanothus velutinus</i> 16 sq/ft	0.00	3	44
<i>Amelanchier alnifolia</i> 10 sq/ft	0.02	55	550
<i>Arctostaphylos uva-ursi</i> 2 sq/ft	0.09	248	495
<i>Spiraea betulifolia</i> 0.5 sq/ft	0.20	550	275
<i>Cornus stolonifera</i> 10 sq/ft	0.00	na	0
<i>Ribes viscosissimum</i> 8 sq/ft	0.00	na	0
Total Area Covered			1536
% Shrub Cover			0.56

Inside of Parking Loop (7500sq/ft)	Mature crown size plants sq/ft	#plants	Shrub cover sq/ft
<i>Vaccinium caespitosum</i> 0.125sq/ft	0.00	na	0
<i>Ceanothus velutinus</i> 16 sq/ft	0.00	4	60
<i>Amelanchier alnifolia</i> 10 sq/ft	0.02	150	1500
<i>Arctostaphylos uva-ursi</i> 2 sq/ft	0.09	675	1350
<i>Spirea betulifolia</i> 0.5 sq/ft	0.00	na	0
<i>Cornus stolonifera</i> 10 sq/ft	0.00	na	0
<i>Ribes viscosissimum</i> 8 sq/ft	0.00	na	0
Total Area Covered			2910
% Shrub Cover			0.39
Potential Riparian Vegetation (250 sq/ft)	Mature crown size plants sq/ft	#plants	Shrub cover sq/ft
<i>Vaccinium caespitosum</i> 0.125sq/ft	0.00	na	0
<i>Ceanothus velutinus</i> 16 sq/ft	0.00	na	0
<i>Amelanchier alnifolia</i> 10 sq/ft	0.00	na	0
<i>Arctostaphylos uva-ursi</i> 2 sq/ft	0.00	na	0
<i>Spirea betulifolia</i> 0.5 sq/ft	0.00	na	0
<i>Cornus stolonifera</i> 10 sq/ft	0.05	13	125
<i>Ribes viscosissimum</i> 8 sq/ft	0.03	6	50
Total Area Covered			175
% Shrub Cover			0.7

Topsoil will be salvaged and stockpiled (if applicable) prior to initiating repairs from any areas where excavation or ground disturbance could result in its removal. When upgrades to the dam are completed, the topsoil will be re-spread to match the natural contours of the site. Where excessive soil compaction has occurred, soils will be ripped to a depth of six inches. In places where foot traffic or construction equipment has altered the natural slope of the bank, equipment will be used to

contour the site to correspond with similar areas along the Buffalo River and minimize the area's susceptibility to erosion (See Erosion Control Plan). Any existing weeds within or immediately adjacent to the seedbed will be hand-pulled and/or mechanically removed prior to seeding efforts.

Plantings of native species are designed to rely on natural precipitation. Shrub and seedling plantings will be located within favorable microsites designed to trap available moisture and hand watered during the initial planting. Additional irrigation is not planned because it could encourage weedy species and/or erosion.

Certified weed-free mulch and/or straw will be spread over seeded areas to retain moisture and protect the site from erosion. Fertilizer will not be used during the initial plantings. The species selected for planting are adapted to conditions on the site; use of fertilizer could encourage the growth of weedy species. If the growth and condition of seeded and planted species fails to meet goal parameters, soil samples may be analyzed for nutrient content/texture, and appropriate amendments recommended for the site.

Those shrubs and seedlings deemed vulnerable to loss due to rodent herbivory will be planted within protective sheaths. Vulnerable species may include: subalpine fir, quaking aspen, serviceberry and red osier dogwood. If browsing is noted as a problem during site evaluations, affected species will be treated with browse deterrent. Red osier dogwood, serviceberry and aspen may be particularly affected by browsing, and a subgroup may be treated with deterrent during the first season to test for efficacy.

5.0 Monitoring and Maintenance

Long-term monitoring and maintenance are fundamental to the effective control of weeds in the project area. The establishment of native plant communities is necessary to prevent the spread of weeds on disturbed soil. Monitoring and maintenance will focus on the condition of seeded and planted areas as well as the control of invasive weeds.

5.1 Monitoring and Rehabilitation Measures

Four to five, 30 meter vegetation monitoring transects will be randomly laid out on a map of the project area prior to the first season of monitoring (2006). Two reference transects will also be established for comparison within adjacent, similar, but undisturbed habitats. The location coordinates and bearing of each transect will be recorded and GPS for future reference. One end of each monitoring transect will be marked on the ground to facilitate the positioning of transects in subsequent years.

Herbaceous sampling plots (0.25 m²) will be placed at 5 meter intervals along each transect (a total of 6 plots per transect). Plant species composition, relative abundance, and horizontal structure will be quantified by estimating the cover of each species within established plots. To facilitate precision and consistency among observers, the sampling frame will be divided

into 0.025 m² sections. Cover by rock, mulch/straw, litter and coarse woody debris will also be recorded within each plot.

The following parameters will be calculated from the data recorded within each plot (see Brower and Zar 1984);

- frequency* – the proportion of plots within which a species occurs,
- relative frequency* – the frequency of a given species as a proportion of the sum of the frequencies for all species,
- cover* – the proportion of the sampling frame occupied by the vertical projection to the ground of the aerial parts of the plant, cover is presented as a mean value derived from all the plots within a sampling area,
- relative cover* – the cover for a given species expressed as a proportion of total vegetation cover within the area sampled,
- importance value* – the sum of the relative frequency and relative cover values for a given species. Importance value ranges from 0 to 2; a value of 2 indicates a community entirely composed of one species. The importance value serves as an index of the dominance of a species within its community.

Each transect will also serve as the midline for three-meter wide belt transects used to evaluate the survival and recruitment of seedlings and shrubs. All seedlings and shrubs will be recorded within each transect. Each tree/shrub will be classified as healthy (plants with no evident discoloration, dying or dead branches), stunted/stressed (plants with discoloration, deformity, or a high proportion of dead leaves), part dead (plants with multiple branches showing no green leaves or needles), or dead (stems with no green leaves evident). The following parameters will be derived from the recorded data;

- total stems per acre* – the tally of all plants, divided by the area sampled (broken down by species),
- live trees/shrubs per acre* – the total of all healthy and stunted/stressed stems, divided by the area sampled.
- proportion healthy, stressed etc.* – the number of plants within a given category as a proportion of the total number of stems.

Monitoring will be used to determine progress toward, or attainment of the following rehabilitation parameters:

Cover within access trail areas		
-Herbaceous cover	40% on treated areas	or 80% of control areas
-Shrub/seedling cover	50% on treated areas	or 80% of control areas
-Total ground cover	90% on treated areas	or 80% of control areas

Cover within parking loop area

- Herbaceous cover 70% on treated areas or 80% of control areas
- Shrub/seedling cover 20% on treated areas or 80% of control areas
- Total ground cover 90% on treated areas or 80% of control areas

Structure

- Frequency of trees and shrubs 50% on treated areas or 80% of control areas
- Live trees/shrubs per acre 200 on treated areas or 80% of control areas

Structure within parking loop area

- Frequency of trees and shrubs 10% on treated areas or 80% of control areas
- Live seedlings per acre 100 on treated areas or 80% of control areas

Composition

- Sum of the importance values for the five dominant herbs will be less than 1.75.
- Noxious weeds will be controlled with no infestations larger than one square meter.

5.2 Monitoring Schedule

The project area will be inventoried annually for revegetation success for the first three years or until the goal parameters are met. During these annual inventories, species composition, percent cover, and condition will be described within all planted areas.

Additional monitoring/rehabilitation measures will be necessary if the

- target parameters are not met within three years. Or the monitored parameters drop below target by 15 percent or more any time after their initial attainment
- herbaceous cover fails to increase annually for the initial three years
- seedling mortality exceeds 30 percent
- the proportion of stressed, part-dead and dead seedlings/shrubs exceeds 40 percent

The type and extent of additional rehabilitation measures will be determined by the factors limiting rehabilitation success. Measures may include:

- seeding with the same or a modified seed mix
- addition of amendments such as fertilizer or soil texture modifiers
- planting additional seedlings and shrubs with browse and or rodent protective shields
- planting additional seedlings/shrubs at a larger size

-using enclosures to limit foot and ungulate traffic through vulnerable parts of the rehabilitated area

6.0 Herbicide Use

Where weed infestations are small (<25 plants) mechanical control of weeds may be preferable to herbicide use. Herbicides will be selected in consultation with Forest Service staff. Those herbicides with minimal non-target effects will be favored. Sensitive areas where herbicides are not to be used will be identified in coordination with Forest Service staff. Chemical treatments will be performed by a licensed pesticide applicator in accordance with relevant regulations. The licensee or its contractors will submit a Pesticide Use Proposal (where herbicide will be applied on federally administered lands) prior to herbicide application and a pesticide application report within 48 hours of spraying. It is expected that certified pesticide applicator is trained in the safe handling of herbicides; thus, all foreseeable precautions are not stipulated in this document.

6.1 Herbicide Application

Due to the site's proximity to the Buffalo River, no ester formulations of herbicides will be used. Only herbicide approved for use near water will be used (Aua-Klen, Landmaster, Glyphomate, or Rodeo). The licensed pesticide applicator will adhere strictly to herbicide label instructions and will keep a record of herbicide use. The herbicide record will include:

- Product name and EPA registration number (if applicable)
- Total amount of herbicide applied
- Size of the treated area
- Location of the treated area
- Date
- Applicator's name and certification information

Vehicle mounted sprayers may be used in areas that are easily accessed. Operators will not drive such vehicles off of established roads and their immediate right-of-ways. Such vehicles will be inspected and cleaned before leaving infested areas to prevent the spread of weeds along roadways. Backpack spraying may be used in less accessible areas. Prior to leaving an infested site the applicator will ensure that he/she is not transporting weed seed or propagules. Equipment will be calibrated prior to spraying and checked at intervals thereafter to confirm the correct application rate. Weather conditions that will preclude herbicide application include:

- Wind exceeding six miles per hour for liquid herbicides or 15 miles per hour for granular herbicides;
- Precipitation or imminent threat of precipitation; or, snow or ice covering foliage.

Herbicides will not be stored on-site. Transport of herbicides will adhere to the following guidelines:

- Chemical concentrate will be transported in sealed containers in a manner that prevents spilling
- Concentrate will be isolated from food, clothing, and safety equipment during transport
- All herbicide containers will be inspected daily for leaks

6.2 Herbicide Spills and Cleanup

Precautions will be taken to avoid spills and minimize their potential effects. Herbicides will not be mixed within 200 feet of wetlands or open water. When possible, herbicides will be mixed in parking areas, turnouts or other non-vegetated sites. Appropriate funnels and other aids will be used to facilitate spill-free mixing. Vehicles transporting herbicides will carry and spill kit to allow effective response to chemical spills. Such a spill kit will contain:

- Protective clothing and gloves
- Absorptive material
- Plastic bags and bucket
- Shovel
- Fiber brush
- Dust Pan

In the event of a spill, priority will be place on protecting workers, containing the spill, and cleaning up. Workers will wear appropriate protective clothing. After leaks are contained, contaminated adsorptive material and soil will be deposited in an authorized disposal site.

6.3 Worker Safety

All herbicide applicators will have readily accessible copies of the project's herbicide handling plan. Herbicide label instructions will be strictly adhered to at all times. The certified applicator will wear appropriate protective clothing. At least two-gallons of fresh water, mild soap, and an eye-wash bottle will be readily available. Directions to the nearest medical facility and emergency phone numbers will be carried in the vehicle transporting herbicides.

7.0 Summary

These revegetation and rehabilitation measures are designed to create a sustainable native community of plants within the project's disturbed areas that will aid in curbing erosion, increase local wildlife habitat, and add to the area's scenic qualities.

8.0 Comments and Responses

USFS April 21, 2005

USFS Comment 1

Section J - 8, Table 3. The Forest suggests removing sheep fescue (*Festuca ovina*) and elk sedge (*Carex geyerii*) from the seeding mix. The available cultivars of sheep fescue are all non-native and elk sedge should come in on its own and would be extremely expensive to purchase as seed - if found available. Increase the percentage of slender wheatgrass to replace sheep fescue and elk sedge.

Response: The licensee is in agreement

USFS Comment 2

There should be a section or paragraph detailing the quality and point of origin of seed and seedlings used. All seed needs to be certified weed free.

Response: The licensee will keep the USFS informed about the point of origin and quality of all seedlings used.

USFS Comment 3

The number of shrubs to be used seems very extensive for the level of disturbance. Instead we recommend that the site be prepared and seeded the first year and plant the shrubs the next year if needed as determined by monitoring, i.e. are there shrubs and trees resprouting and establishing on their own. To preserve local site adaptations it is recommended that local stock be used or transplanted from approved surrounding locations. Topsoil should only be removed and stockpiled if absolutely necessary for construction. For example revegetation would be more effective for the concrete truck access for the fishway if topsoil could be left in place and then ripped post construction. This would preserve the native seed bank and allow resprouting of some shrubs.

Response: The licensee is in agreement.

USFS Comment 4

The Revegetation Plan may need modification through the Scenery Management Plan as there may be areas where the concern is more over visuals than erosion. For example from a visual standpoint we may request fewer and larger shrubs strategically placed.

Response: The licensee is in agreement.

USFS Comment 5

Ripping should be done to a depth of at least 12 inches or to the depth practical where bedrock occurs.

Response: The licensee is in agreement.

UNITED STATES OF AMERICA 112 FERC ¶62,099
FEDERAL ENERGY REGULATORY COMMISSION

Fall River Rural Electric Cooperative, Inc.

Project No. 1413-037

ORDER APPROVING VEGETATION MANAGEMENT PLAN
PURSUANT TO ARTICLE 401 AND CONDITION NO. 17

(Issued August 2, 2005)

On May 13, 2005, Fall River Rural Electric Cooperative, Inc. (licensee) filed its vegetation management plan pursuant to article 401 and Condition No. 17 of the Order Issuing Subsequent License for the Buffalo River Hydroelectric Project, issued November 5, 2004.¹ The project is located on the Buffalo River near its confluence with the Henry's Fork River, north of Ashton, in Fremont County, Idaho, where it also occupies about 9.8 acres of land within the Targhee National Forest, administered by the U.S. Forest Service (FS).

ARTICLE 401

Article 401, in part, requires the licensee to file a vegetation management plan, for Commission approval, consistent with FS Condition No. 17 which was attached to the project license.

Condition No. 17 requires that within 90-days prior to any ground-disturbing activity, the licensee must file with the Commission a vegetation management plan that is prepared in consultation with and approved by the FS. The licensee shall identify and prioritize all inadequately vegetated areas to be re-vegetated or rehabilitated along with an implementation schedule. The plan shall include species to be used along with planting locations, methods, densities, and measures for site preparation. The plan shall also identify methods for prevention and control of noxious weeds. The plan shall explain how re-vegetation and control methods will meet objectives for integrated noxious weed management, erosion control, wildlife habitat and other management directions. The licensee shall also develop a monitoring program to evaluate the effectiveness of re-vegetation, vegetation control, and noxious weed control measures. The plan shall include additional measures if monitoring reveals that the plan's objectives are not successfully met.

¹ 109 FERC ¶ 62,077.

LICENSEE'S PLAN

The vegetation management plan includes noxious weed control measures to prevent the transport of weeds to and from the project area during construction, to prevent noxious weeds from becoming established on disturbed soils, and to provide long-term protection from weeds by establishing healthy native plant communities within the project area. The plan identifies measures for pre-construction management, construction management, and reclamation and reseeding measures.

The filed plan describes how the soil will be prepared, and states that all disturbed soils will be reseeded or planted with a mix of native plants. Rehabilitation will begin immediately after the completion of dam repairs. Additional plantings may extend into the following growing season, and monitoring and maintenance will continue for three years. The plan included an implementation schedule for re-vegetation/rehabilitation of disturbed and poorly vegetated sites.

The vegetation management plan included a long-term monitoring and maintenance plan and schedule that identify methods for monitoring each of the disturbed areas and how success will be determined at each of these sites. The plan identifies situations where herbicides may be used in consultation with the FS. The plan describes how the herbicides will be applied, stored, transported, and how any spills will be handled.

AGENCY COMMENTS

The FS, by letter dated April 21, 2005, provided comments on the plan, but stated that once its comments were incorporated into the vegetation management plan, the plan would be considered approved. The licensee incorporated all of the FS's comments into the plan.

CONCLUSION

The licensee's vegetation management plan should create a sustainable native community of plants within the project's disturbed areas to help protect against erosion and increase wildlife habitat. The filed plan meets the requirements of article 401 and FS Conditions No. 17 and should, therefore, be approved.

The Director orders:

(A) Fall River Rural Electric Cooperative, Inc.'s vegetation management plan, filed May 13, 2005, pursuant to article 401 and Condition No. 17, of the license for the Buffalo River Hydroelectric Project, issued on November 5, 2004, is approved.

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

John E. Estep
Chief, Land Resources Branch
Division of Hydropower Administration
and Compliance

APPENDIX H

ENDANGERED AND THREATENED SPECIES



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[ECOS](#) / [Species Reports](#) / Species By County Report

Species By County Report

The following report contains Species that are known to or are believed to occur in this county. Species with range unrefined past the state level are now excluded from this report. If you are looking for the Section 7 range (for Section 7 Consultations), please visit the [IPaC](#) application.

County: Fremont, Idaho

CSV

Need to contact a FWS field office about a species? Follow [this link](#) to find your local FWS Office.

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status	Recovery Plan Stage
Birds	Yellow-billed Cuckoo (Coccyzus americanus)	Western U.S. DPS	Threatened	Sacramento Fish and Wildlife Office			
Conifers and Cycads	Whitebark pine (Pinus albicaulis)	Wherever found	Candidate	Wyoming Ecological Services Field Office			
Flowering Plants	Ute ladies'-tresses (Spiranthes diluvialis)	Wherever found	Threatened	Utah Ecological Services Field Office	Ute Ladies'-Tresses Draft Recovery Plan	Implementation Progress	Draft
Mammals	Grizzly bear (Ursus arctos horribilis)	U.S.A., conterminous (lower 48) States, except where listed as an experimental population	Threatened	Grizzly Bear Recovery Coordinator	Revised Grizzly Bear Recovery Plan	Implementation Progress	Final Revision 1
Mammals	Gray wolf (Canis lupus)	Northern Rocky Mountain	Recovery	Office of the Regional Director			

		DPS except WY					
Mammals	Canada Lynx (Lynx canadensis)	Contiguous U.S. DPS	Threatened	Montana Ecological Services Field Office	Recovery Outline for the Contiguous United States Distinct Population Segment of Canada Lynx (Lynx canadensis)	Recovery efforts in progress, but no implementation information yet to display.	Outline
Mammals	North American wolverine (Gulo gulo luscus)	Wherever found	Proposed Threatened	Montana Ecological Services Field Office			

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Buffalo River Hydroelectric Project

IPaC Trust Resources Report

Generated September 22, 2016 02:41 PM MDT, IPaC v3.0.9

This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.

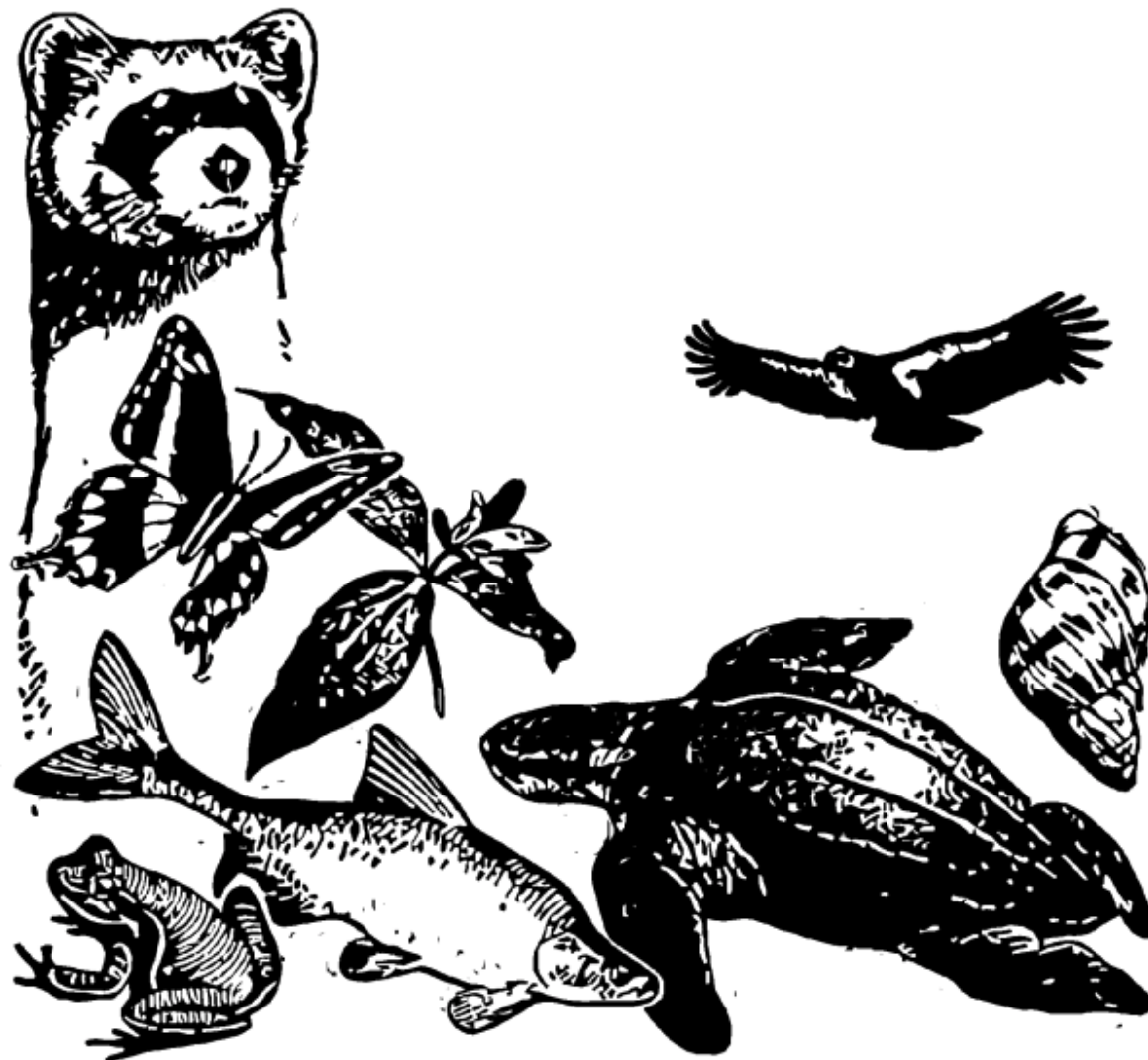


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U.S. Fish & Wildlife Service

IPaC Trust Resources Report



NAME

Buffalo River Hydroelectric Project

LOCATION

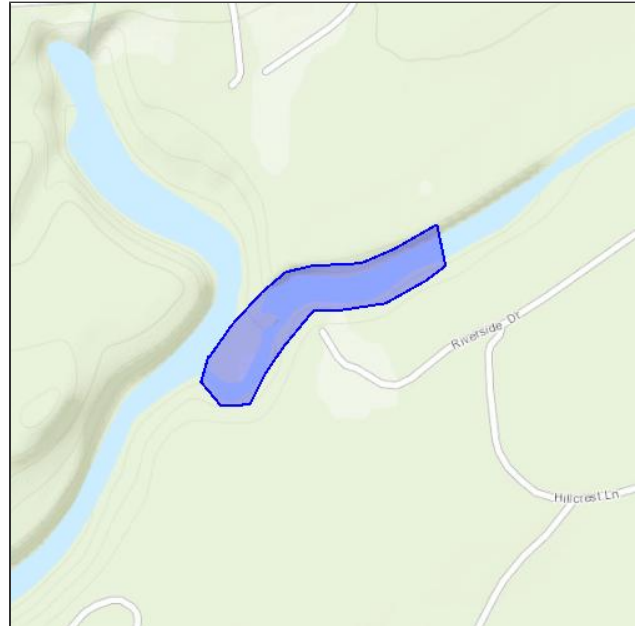
Fremont County, Idaho

DESCRIPTION

LHI Certification

IPAC LINK

<https://ecos.fws.gov/ipac/project/V75A6-7P3TR-EQLBK-VCTRT-MBQWFY>



U.S. Fish & Wildlife Service Contact Information

Trust resources in this location are managed by:

Idaho Fish And Wildlife Office

1387 South Vinnell Way, Suite 368

Boise, ID 83709-1657

(208) 378-5243

Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the [Endangered Species Program](#) of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

[Section 7](#) of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list either from the Regulatory Documents section in IPaC or from the local field office directly.

The list of species below are those that may occur or could potentially be affected by activities in this location:

Mammals

Canada Lynx *Lynx canadensis* Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=A073

Grizzly Bear *Ursus arctos horribilis* Threatened

CRITICAL HABITAT

No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=A001

North American Wolverine *Gulo gulo luscus* Proposed Threatened

CRITICAL HABITAT

No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=A0FA

Critical Habitats

There are no critical habitats in this location

Migratory Birds

Birds are protected by the [Migratory Bird Treaty Act](#) and the [Bald and Golden Eagle Protection Act](#).

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish & Wildlife Service.^[1] There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

1. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern
<http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Conservation measures for birds
<http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Year-round bird occurrence data
<http://www.birdscanada.org/birdmon/default/datasummaries.jsp>

The following species of migratory birds could potentially be affected by activities in this location:

Bald Eagle <i>Haliaeetus leucocephalus</i>	Bird of conservation concern
Season: Year-round http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B008	
Black Rosy-finch <i>Leucosticte atrata</i>	Bird of conservation concern
Season: Year-round http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0J4	
Brewer's Sparrow <i>Spizella breweri</i>	Bird of conservation concern
Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0HA	
Burrowing Owl <i>Athene cucularia</i>	Bird of conservation concern
Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0NC	

Calliope Hummingbird <i>Stellula calliope</i> Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?scode=B0K3	Bird of conservation concern
Cassin's Finch <i>Carpodacus cassinii</i> Season: Year-round http://ecos.fws.gov/tess_public/profile/speciesProfile.action?scode=B0J6	Bird of conservation concern
Ferruginous Hawk <i>Buteo regalis</i> Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?scode=B06X	Bird of conservation concern
Fox Sparrow <i>Passerella iliaca</i> Season: Breeding	Bird of conservation concern
Greater Sage-grouse <i>Centrocercus urophasianus</i> Season: Year-round http://ecos.fws.gov/tess_public/profile/speciesProfile.action?scode=B06W	Bird of conservation concern
Green-tailed Towhee <i>Pipilo chlorurus</i> Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?scode=B0IO	Bird of conservation concern
Lewis's Woodpecker <i>Melanerpes lewis</i> Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?scode=B0HQ	Bird of conservation concern
Loggerhead Shrike <i>Lanius ludovicianus</i> Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?scode=B0FY	Bird of conservation concern
Long-billed Curlew <i>Numenius americanus</i> Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?scode=B06S	Bird of conservation concern
Olive-sided Flycatcher <i>Contopus cooperi</i> Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?scode=B0AN	Bird of conservation concern
Peregrine Falcon <i>Falco peregrinus</i> Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?scode=B0FU	Bird of conservation concern
Rufous Hummingbird <i>selasphorus rufus</i> Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?scode=B0E1	Bird of conservation concern
Sage Thrasher <i>Oreoscoptes montanus</i> Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?scode=B0ID	Bird of conservation concern

Short-eared Owl *Asio flammeus*

Season: Year-round

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0HD

Bird of conservation concern

Swainson's Hawk *Buteo swainsoni*

Season: Breeding

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B070

Bird of conservation concern

Western Grebe *aechmophorus occidentalis*

Season: Breeding

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0EA

Bird of conservation concern

Williamson's Sapsucker *Sphyrapicus thyroideus*

Season: Breeding

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0FX

Bird of conservation concern

Willow Flycatcher *Empidonax traillii*

Season: Breeding

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0F6

Bird of conservation concern

Wildlife refuges and fish hatcheries

There are no refuges or fish hatcheries in this location

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

This location overlaps all or part of the following wetlands:

Riverine

[R3UBH](#)

A full description for each wetland code can be found at the National Wetlands Inventory website: <http://107.20.228.18/decoders/wetlands.aspx>

ORIGINAL



Northwest Power Services, Inc.

May 11, 2005

Ms. Magalie R Salas, Secretary
Federal Energy Regulatory Commission
Mail Code: DHAC, PJ-12
888 First Street, NE
Washington, DC 20426

FILED
OFFICE OF THE
SECRETARY
2005 MAY 13 A 10:08
FEDERAL ENERGY
REGULATORY COMMISSION

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Ms. Salas,

For your review and approval, for the proposed construction activities at the Buffalo River Hydroelectric Project, FERC Project #1413, please find attached the following plans:

- Erosion control Plan (Article #302) - ~~035~~ CANCELED
- Temporary Emergency Action Plan (Article #304)
- Hazardous Substance Plan (Article #404) - 036
- Fishway & Fish Screen Monitoring Plan (Article #407) - 038
- Diversion Operation Plan (Article #410 & USFS Condition #15) - 040
- Public Safety Plan (USFS Condition #7)
- Heritage Resource Protection Plan (USFS Condition #12) - 039
- Vegetation Management Plan (USFS Condition #17) - 037
- B E/A for Threatened, Endangered, and Sensitive Species (USFS Condition #18 & 19) - 041

If you have any questions or need additional information please contact me at (208) 745-0834 or e-mail me at bsmith@nwpwtservices.com.

Sincerely,

NORTHWEST POWER SERVICES, INC.

Brent I. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric
Constantine Tjoumas, Director, D2SI, FERC - Washington
Harry T. Hall, Regional Engineer, FERC - Portland

Gary Vecellio, Environmental Staff Biologist, Idaho Department of Fish & Game
Gerrish Willis, Regional Hydropower Coordinator
Jim De Rito, Conservation Director, Henry's Fork Foundation
Steve Trafton, Executive Director, Henry's Fork Foundation
Lee Mabey, US Forest Service
Adrienne Keller, US Forest Service
Deb Mignogno, US Fish & Wildlife Service
Jim Esch, US Fish & Wildlife Service
Scott, A. Grunder, Fishery Program Coordinator, Idaho Department of Fish & Game
Troy Saffle, Idaho DEQ
Keith Hobbs, Idaho Department of Parks & Recreation

Section I

B E/A for Threatened, Endangered, and Sensitive Species

Biological Evaluation/Assessment for Threatened, Endangered, and Sensitive Species

1.0 Introduction

A license was issued to Fall River Rural Electric Cooperative, Inc. (Fall River) in November of 2004 by the Federal Energy Regulatory Commission (Commission) for the alteration and continued operation of the Buffalo River Hydroelectric Project. The 250-kilowatt (kW) run-of-river project is located on the Buffalo River near its confluence with the Henry's Fork of the Snake River, north of Ashton, in Fremont County, Idaho. The license stipulates several terms and conditions which must be met with approval from various resource agencies. The purpose of this biological evaluation is to describe the site specific effects the construction and operation of this project will have on the area's sensitive species and species protected under the Federal Endangered Species Act. This document has been developed in response to Article #401 4(e) 18-19 and US Forest Service (USFS) Condition #'s 18-19 of the license which states:

Condition No. 18 - Protection of Threatened and Endangered Species Plan

Within 90-days prior to any ground-disturbing activity that may affect a federally listed or proposed species and their critical habitat, the Licensee shall file with the Commission a Threatened, Endangered, and Proposed for Listing Species Plan that is approved by the Forest Service in consultation with appropriate Federal and State agencies. This Plan shall describe how the Licensee shall coordinate, consult, and prepare a biological assessment evaluating the potential impact that any action may have on listed and proposed species and their habitat. At a minimum the plan shall:

- Develop procedures to minimize adverse effects to listed species,***
- Ensure project-related activities shall meet restrictions included in site management plans for listed species,***
- Develop implementation and effectiveness monitoring of measures taken or employed to reduce effects to listed species,***
- Identify required elements contained within a biological assessment.***
- All construction shall be timed to avoid conflicts with sensitive species.***

Condition No. 19 – Forest Service Sensitive Species Biological Evaluation

Within 90-days prior to implementing any activity that may affect a Forest Service sensitive species and their habitat, the Licensee shall file with the Commission a biological evaluation (BE) for Sensitive Species that is approved by the Forest Service.

At a minimum incorporate the following mitigation in the BE:

- Develop procedures to minimize adverse effects to sensitive species.***
- Develop implementation and effectiveness monitoring of measures taken or employed to reduce effects to sensitive species.***
- All construction shall be timed to avoid conflicts with sensitive species.***

This evaluation considers all USFS sensitive species, and species protected under the Federal Endangered Species Act that may occur in the project area. Twelve species of wildlife and two species of plants are included. Information in this evaluation was compiled from agency records, species accounts, staff correspondence, and site specific surveys of the project area for sensitive species and potential habitat.

2.0 Summary of Effects

The licensee proposes to construct a new concrete intake structure with fish screens, a fish ladder, and seal the face of the dam. Construction of the Buffalo River Hydroelectric Project will take place over a three month period (August-October 2005).

Sensitive species may experience the following project effects:

- temporary disturbance due to construction noise, including disturbance outside the immediate project area
- temporary displacement during construction from habitats at the base of the dam or along the staging area.
- temporary reduction in the quality of habitat within areas disturbed during construction
- potential for impaired water quality during construction.

Of the 14 species considered in this biological evaluation one is likely to be affected by project construction. Bald eagles may temporarily avoid foraging in the project area during construction. However, no associated effects are anticipated to disrupt reproductive success or survival of local bald eagles.

3.0 Effects on Sensitive Wildlife

3.1 Northern goshawk

The northern goshawk is a species of special concern in Idaho and a USFWS watch species (IDFG 2002). It nests from northern Canada and Alaska south to the Great Lakes and through the Rocky Mountains and forests of the Pacific Northwest.

3.1.1 Assessment of Habitat

Northern goshawks nest in coniferous forests and hunt forest birds, particularly grouse. It may also take mammals as large as rabbits. Goshawks occur as permanent residents in the project region. These birds may be seen incidentally near the project site, but are not known to nest nearby or use project areas for feeding. The project will not affect nearby forests.

3.1.2 Protection and Mitigation Measures

No protection or mitigation measures are proposed because the project is not expected to affect northern goshawks.

3.1.3 Effects of Construction and Operation

No effects are anticipated because the project will not alter suitable habitat for northern goshawks and construction noise is not expected to penetrate potential habitat.

3.2 Western Toad

The western toad is listed as an Idaho state species of concern and a USFWS species of concern in the project region (IDFG 2002). Criteria for listing include population declines, threatened habitat, or declines in closely related taxa. Western toad populations appear to be declining in the Greater Yellowstone Ecosystem and other parts of the western U.S. No records of toads in the immediate project vicinity exist, although sightings have been recorded north and immediately south of the project area (Link et al. 2001; Nussbaum et al. 1983). Nearly all of Fremont County is identified as potential range for the Western toad (Link et al. 2001).

Western toads are largely terrestrial, although usually found in the proximity of water. They

are found from lowlands to montane elevations and from moist coastal areas to northern deserts.

3.2.1 Assessment of Habitat

Toads use small mammal burrows or dig in loose soil, and hibernate through the winter months (Link et al. 2001; Nussbaum et al. 1983). They feed on insects, worms, and crayfish. Western toads breed during early summer in shallow, still or slow moving water (Link et al. 2001).

The project site is not likely to contain habitat significant to western toad populations. The immediate project vicinity is not a suitable breeding area for this species, as toads require still or slow moving water for breeding and larval development. However, western toads may use the banks of the project site for feeding or hibernating.

3.2.2 Protection and Mitigation Measures

The following protective measures are designed to protect western toads should they occur in the proposed project area:

- Limit construction to late summer/early fall to avoid disturbance to breeding amphibians.
- Where disturbed areas are up-slope from aquatic habitat, stake erosion control fiber mat in place over exposed soil. Protective mat or equivalent structure should remain in place until vegetation cover becomes established.
- If herbicide application becomes necessary within areas up-slope from aquatic habitat, select a contact herbicide with no residual effects in the soil.

3.2.3 Effects of Construction and Operation

Given the recommended protection and mitigation measures, potential habitats for this species should not be affected by project activities. No effects are anticipated.

3.3 Gray wolf

The gray wolf is listed as endangered outside of Alaska under the Endangered Species Act. It currently ranges throughout Canada and Alaska and is also found in northern Washington, Idaho, and Montana. Wolves have also been reintroduced to Yellowstone National Park and wilderness areas of central Idaho. These reintroduced populations are listed as experimental non-essential populations under the Endangered Species Act (IDFG 2002).

3.3.1 Assessment of Habitat

The occurrence of this species has not been fully documented in the project area. Wolves from Yellowstone National Park have the potential to range near here. However, the project does not occupy important feeding or denning areas.

3.3.2 Protection and Mitigation Measures

No protective measures are planned for gray wolves because no effects are anticipated.

3.3.3 Effects of Construction and Operation

Project construction and operation are not expected to affect gray wolves. The project will not disturb any feeding or potential denning areas.

3.4 Townsend's big-eared bat

The Townsend's big-eared bat is an Idaho state species of concern and a USFWS species of concern in the region (IDFG 2002). Concern over the species arises because of declines in the number of bats found in hibernacula in southern Idaho. This bat is found from British Columbia, east through Montana, south into western south Dakota, Nebraska, Kansas, Oklahoma and Texas, into Mexico and along the Pacific Coastal States of California, Oregon, and Washington. It has been collected from 17 counties in Idaho and may occur near the project site (Link et al. 2001).

3.4.1 Assessment of Habitat

Townsend's big-eared bats use a variety of habitats from shrub steppe to coniferous and deciduous forests. In Idaho, abandoned mines, old buildings, and lava tube caves provide winter hibernacula and maternity sites. During the summer they roost in these areas and also in trees and under bridges. Townsend's big-eared bats feed predominantly on moths, but also ingest beetles and flies (Link et al. 2001). Although Townsend's big-eared bats may occur or feed incidentally near the project area, no important habitat occurs at the site.

3.4.2 Protection and Mitigation Measures

No protective measures are planned for Townsend's big-eared bats because no effects are anticipated.

3.4.3 Effects of Construction and Operation

Project Construction and operation are not expected to affect Townsend's big-eared

bats. The project will not disturb potential roosting habitats or interfere with feeding activities.

3.5 Trumpeter swan

The trumpeter swan is listed as an Idaho state species of concern as well as a USFWS species of concern in the region (IDFG 2002). Their range extends from Alaska to southeastern Oregon, Idaho, and Wyoming. Winter migrants can be found south into California, Utah, New Mexico, and Colorado (DeGraaf et al. 1991). The Rocky Mountain population of trumpeter swans was near extinction in 1935 and now numbers over 2,000 individuals. Over 500 swans reside year-round in the Greater Yellowstone region; the remaining birds nest in Canada during the summer (Shea 1993). The Buffalo and Henry's Fork Rivers are important wintering areas for trumpeter swans.

3.5.1 Assessment of Habitat

Nesting swans require emergent and submerged aquatic vegetation and prefer fertile marshes or lakes. During winter, swans use shallow rivers with open water and level terrain nearby (DeGraaf et al. 1991; Link et al. 2001). Trumpeter swans feed on aquatic vegetation and occasionally graze upland areas. In Idaho, they feed primarily on pondweed and water-milfoil (Link et al. 2001).

Trumpeter swans can be observed in the project area from mid-November to early April. High concentrations of wintering swans in the project region have created concern over habitat deterioration and vulnerability of the flock to localized severe weather (Shea and Drewien 1999). Efforts to disperse and relocate this concentration of swans have been in place since 1990 and have resulted in fewer swans in the project area. During 2001, mid-winter surveys recorded 989 trumpeter swans in the Island Park area.

3.5.2 Protection and Mitigation Measures

No permanent protection or mitigation measure are planned for the trumpeter swans because the project is not expected to affect this species.

3.5.3 Effects of Construction and Operation

Since project construction will be completed by October of 2005, no negative construction related impacts to wintering trumpeter swans are anticipated. Swan habitat will not be permanently altered during project construction or operation.

3.6 Whooping crane

The whooping crane is listed as an endangered species by the state of Idaho and as a federal endangered species under the ESA. However, whooping cranes in Idaho, introduced to the Grays Lake NWR, are classified as an experimental/nonessential population (IDFG 2002). Only 163 wild whooping cranes remain, 13 of these in the Gray's Lake flock (DeGraaf et al. 1991). Whooping cranes breed in south central Mackenzie and northern Alberta and winter on the Gulf Coast of Texas (DeGraaf et al. 1991). The Gray's Lake birds winter in central New Mexico. Whooping cranes have been documented in eastern Idaho, including Island Park Reservoir, and may migrate through or incidentally occur near the project site (Link et al. 2001).

3.6.1 Assessment of Habitat

Whooping cranes nest in open marshes on mounds of emergent vegetation and inhabit aspen parkland, northern forests, short grass plains, river deltas, and tundra during the summer. They winter on tall grass prairies, salt flats, coastal marshes and lagoons. Winter foods include crustaceans, insects, sedges, and sprouting grain (DeGraaf et al. 1991). During the summer whooping cranes feed on insects, crustaceans and berries (Link et al. 2001). Whooping cranes may incidentally occur on the project site, but suitable nesting habitat does not occur near the Buffalo River hydroelectric project.

3.6.2 Protection and Mitigation Measures

No protection or mitigation measures are planned for whooping cranes because the project is not expected to affect this species.

3.6.3 Effects of Construction and Operation

Due to the lack of appropriate habitat in affected project areas no effects on whooping crane are anticipated.

3.7 North American wolverine

The North American Wolverine is Idaho state species of concern and a USFWS watch species (IDFG 2002). It is found from northern Canada south to northern Washington, Idaho, and Montana. It occurs further south in the Rocky, Cascades, and Sierra Nevada Mountains.

3.7.1 Assessment of Habitat

Wolverines are secretive and feed primarily on carrion and a variety of mammals. They may also eat berries and roots. Adults typically have home ranges of 150-200 square miles (Zeveloff and Collett 1988). Young are born in the early spring in

protected areas. Wolverines occur in the project region, but are rarely observed due to their secretive habits. The project area does not provide unique habitat for this species and frequent recreation use also diminishes the possibility of the area being suitable wolverine habitat.

3.7.2 Protection and Mitigation Measures

No protection measures are specifically planned for wolverines.

3.7.3 Effects of Construction and Operation

The project is not expected to affect wolverines. Wolverines do not frequent the project area and construction activity should not disturb wolverines or alter their habitat.

3.8 Bald eagle

The bald eagle is listed by the state of Idaho as endangered and by the USFWS as threatened under the ESA (IDFG 2002). Bald eagles breed locally through the western U.S., primarily along rivers, large lakes, and reservoirs (Link et al. 2001). Populations in Idaho have risen from 11 documented territories in 1979 to 138 in 2000 (Beals and Melquist 2001; Link et al. 2001). Breeding eagles are permanent residents in the project area and may be joined by migratory individuals from Canada during the fall, winter, and spring. Wintering bald eagles feed on carrion, fish and waterfowl, while in summer, diet is predominately fish and waterfowl.

3.8.1 Assessment of Habitat

There are at least 12 known active eagle nest sites within the project region. Three territories occur in the vicinity of the Pond's Lodge hydroelectric project, one on the Buffalo River (IDFG nest # 18IC17), two on the Henry's Fork River downstream (Box Canyon and Last Chance; IDFG nest # 18IC03 and 18IC12 respectively; Figure 3-14) and one nearby on state owned lands (IP Bills; IDFG nest # 18IC13; Beals and Melquist 2001; Figure 3-14). The Box Canyon pair are known to feed at the base of Island Park Dam during the winter and may also use the tailrace from the Pond's Lodge hydroelectric project (Stricklan 1992). Winter feeding areas are particularly important because nesting is initiated before ice has cleared off of many summer feeding sites. The Buffalo River nest was not occupied in 2000. During the same year the Box Canyon nest failed and the Last Chance and IP Bills nests each fledged one eagle.

3.8.2 Protection and Mitigation Measures

The following protective measures are designed to protect bald eagles in the proposed project area:

- Construction activity will begin after 8:00 a.m. and end before 6:00 p.m. to minimize disturbance during peak eagle foraging hours.
- Limit construction activity to August-October
- Keep construction traffic and speeds on existing roads comparable to existing conditions

3.8.3 Effects of Construction and Operation

Minimal effects are anticipated on eagles foraging during the early morning and late evening when equipment will be idle. However, it is expected that some mid-day foraging eagles will be displaced due to construction activity. These eagles are expected to use other suitable habitats either below Island Park Dam in the River or above in the Reservoir.

3.9 Yuma myotis

The yuma myotis is not protected by the state of Idaho, but is a USFWS watch species in the region, indicating unique habitat needs or a lack of information on the population (IDFG 2002). Yuma myotis are found from western British Columbia, south into western Montana, Idaho, eastern Washington, Colorado, New Mexico, and Arizona to central Mexico. Populations also extend along the Pacific Coastal areas of Baja California, California, Oregon, and Washington. They range throughout Idaho, although little is known about maternity colonies and winter roosts (Link et al. 2001).

3.9.1 Assessment of Habitat

Yuma myotis are closely associated with water and riparian habitats. They feed on moths and emerging aquatic insects. Maternity colonies may form in mines and caves with high humidity and low human disturbance. During the summer they roost in crevices in cliffs, old buildings, mines, caves, bridges, and abandoned cliff swallow nests. No large winter concentrations of this species have been studied in Idaho (Link et al. 2001). The Pond's Lodge area may provide feeding habitat for the yuma myotis. No roosting areas are obvious in the project vicinity.

3.9.2 Protection and Mitigation Measures

No protection or mitigation measures are proposed because the project is not expected affect yuma myotis

3.9.3 Effects of Construction and Operation

No effects are anticipated because suitable habitat for yuma myotis will not be significantly altered within or adjacent to affected project areas.

3.10 Western small-footed myotis

The western small-footed myotis is not protected by the state of Idaho, but is a USFWS watch species in the region, indicating unique habitat needs or little information about the species (IDFG 2002). This species ranges from southern British Columbia, Alberta and Saskatchewan along the western edge of the Dakotas, Nebraska, Kansas, Oklahoma, and northern Texas into central Mexico, then west to northern Baja California and along the eastern half of the Pacific Coast states of California, Oregon and Washington. In Idaho, it is known to occur in most of the southern part of the state (Link et al. 2001).

3.10.1 Assessment of Habitat

Western small-footed myotis are found in a variety of habitats including arid shrub steppe, talus slopes, coniferous forest, and grasslands. In Idaho, they are associated with lava-tube caves where they hibernate in cracks and crevices. Western small-footed myotis forage for moths, flies, and other insects along cliffs and rocky slopes. Summer roosts include rock crevices, boulders, loose bark, and buildings (Link et al. 2001). Although the western small-footed myotis may incidentally occur at the project site, habitats important to this species are not found in the project area.

3.10.2 Protection and Mitigation Measures

No protection or mitigation measures are proposed because the project is not expected to effect western small-footed myotis.

3.10.3 Effects of Construction and Operation

No effects are anticipated because suitable habitat for western small-footed myotis does not occur within the affected project areas.

3.11 Columbia spotted frog

The Columbia spotted frog is a species of concern in Idaho and a species of concern on the Targhee National Forest (IDFG 2002). Spotted frogs are found from extreme southeastern Alaska, south through western Alberta to coastal Oregon and Washington, and east to northern Wyoming, northern Utah, and central Nevada (Link et al. 2001). Records of this species do exist within the project vicinity (Nussbaum et al. 1983).

3.11.1 Assessment of Habitat

Spotted frogs occupy the margins of lakes, ponds, and slow-moving backwater pools. They breed among emergent vegetation. Spring amphibian surveys (2002) did not find spotted frogs at the project site. Although a limited amount of suitable habitat may occur within the project area it is not an ideal area for the species because of the vulnerability of high flows in the area.

3.11.2 Protection and Mitigation Measures

The following protective measures are designed to protect spotted frogs should they occur in the proposed project area:

- Limit construction to late summer/early fall to avoid disturbance to breeding amphibians.
- Where disturbed areas are up-slope from aquatic habitat, stake erosion control fiber mat in place over exposed soil. Protective mat or equivalent structure should remain in place until vegetation cover becomes established.
- If herbicide application becomes necessary within areas up-slope from aquatic habitat, select a contact herbicide with no residual effects in the soil.

3.11.3 Effects of Construction and Operation

Given the recommended protection and mitigation measures, potential habitats for this species should not be affected by project activities. No effects are anticipated.

3.12 Grizzly bear

Grizzly bear are listed as threatened under the Endangered Species Act. This species is found in northern and western Canada south to extreme northern Washington and Idaho. It also occurs in Glacier and Yellowstone National Parks.

3.12.1 Assessment of Habitat

Bears are omnivores and habitat generalists. Although they once ranged throughout the western United States, human conflicts currently limit their distribution. Human development negatively affects grizzly populations because of conflicts arising from livestock predation and direct human-bear encounters. In general, the project area lacks development with the exception of recreational use areas. The project area is classified "Management Situation III" grizzly bear habitat. This type of habitat is

defined as areas where bear presence is possible but infrequent, and where habitat maintenance and improvement are not management considerations.

3.12.2 Protection and Mitigation Measures

No measures are proposed for the protection of grizzly bears because the project is not expected to affect this species.

3.12.3 Effects of Construction and Operation

Construction and operation of the proposed hydro power project are not expected to affect grizzly bears.

4.0 Effects on Sensitive Plants

The Buffalo River Hydroelectric project is located at the juncture of three different vegetation regions. The dominant species are from the Rocky Mountain Association, but Intermountain and Great Basin species are also present. Upland areas are characterized by lodgepole pine (*Pinus contorta*), occasional Douglas-fir (*Pseudotsuga menziesii*) and subalpine fir (*Abies lasiocarpa*) also occur. Forests are fairly open and dry, and the relatively consistent topography at approximately 6,300 ft. encourages somewhat uniform plant communities.

Microclimatic and edaphic conditions encourage greater plant diversity along the Henry's Fork and Buffalo Rivers. Douglas-fir is dominant in pockets and subalpine fir is particularly common along the Buffalo River. Riparian shrub species include chokecherry (*Prunus virginiana*), wild rose (*Rosa nutkana*), white spirea (*Spirea betulifolia*), birch (*Betula* sp.), willow (*Salix* sp.), and aspen (*Populus tremuloides*).

The immediate project vicinity is characterized by a steep basalt face along one bank of the forebay and a marshy area dominated by grasses, sedges, and rushes along the other bank. Downstream along the tailrace, upland vegetation frequently grows to the river margins. In many reaches, riparian shrubs are limited to a narrow strip.

Historically, fire shaped local plant communities. More recently, timber management has been the primary disturbance. During the 1980s a severe mountain pine beetle infestation necessitated intensive salvage logging and revegetation efforts (USDA Forest Service 1985). Concentrated use of the project area by anglers and other recreational users has created disturbance to forb and graminoid communities.

The Targhee National Forest manages the majority of land in the project region, including the project site. Currently there are 12 sensitive species tracked on the forest and one threatened species. None of these species are documented within or near the project area (USFS 2002). Only one sensitive species, pink agoseris (*Agoseris lackschewitzii*), may find suitable habitat within the project area (USFS 2002).

The movement of construction equipment to repair the dam may disturb up to 2,500 square feet of upland vegetation. Repairs could change the depth and flow of water through approximately 500 square feet of wet meadow on the west side of the tailrace.

Prior to 2002 no site specific vegetation study had been completed in the project area. To adequately determine the effects of dam repairs on vegetation, surveys were conducted in 2002 by Ecosystems Research Institute with the following objectives: to locate pink agoseris and Ute ladies' tresses within potentially disturbed areas; and to characterize plant species composition, relative abundance, and structure within areas that may be disturbed. Neither Ute ladies' tresses nor pink agoseris were encountered in the surveys.

No measures specifically designed to protect sensitive, threatened, or endangered plants have been recommended because no species with this designation has been found within affected project areas. General measures designed to control weeds and restore disturbed areas have been proposed and will indirectly benefit those sensitive plants with potential habitat in the project vicinity by preserving/restoring these habitats for potential future occupancy. These protection and mitigation recommendations include:

- Implement the comprehensive Vegetation Management Plan.
- Limit construction traffic as much as possible to established roads, parking lots, and staging areas.
- Establish designated parking and walkway areas for long-term access to the powerhouse to limit trampling of vegetation.
- Review all revegetation plans with USFS personnel that have experience establishing plantings in the project region prior to ground disturbance.

Since no sensitive, threatened, or endangered species were located during surveys, no direct effects are anticipated.

5.0 Cumulative Effects

Several aspects of the proposed Buffalo River Hydroelectric Project may contribute to additive effects on sensitive wildlife and plants. A discussion of these cumulative facts is included below, along with a summary of how each will affect sensitive, threatened, or endangered plants and wildlife.

5.1 Disturbance Caused by Construction Activity

Disturbance to wildlife from sound and human presence at the base of the dam in addition to angling and other recreational activities may magnify effects to sensitive species. Sensitive species that forage or breed in the vicinity may be affected by such disturbance. Bald eagles have the potential for this type of affect. Other species either do not have

suitable habitat within areas affected by construction disturbance, or use affected habitats incidentally and would not be negatively affected by cumulative disturbance..

Foraging bald eagles may be sensitive to this cumulative impact because angling activity is high within favorable foraging habitats elsewhere surrounding the project area. However, because project construction will occur outside of peak eagle foraging hours and abundant fish and water fowl are available in the Henrys Fork and Island Park Reservoir, effects are expected to be minimal.

5.2 Soil Disturbance and Weed Introductions

Activities that introduce weed propagules or additional soil disturbance to affected project areas may increase the potential for noxious weed impacts within and adjacent to the project area. Such activities may include recreationists entering the area from weed-infested locales, concentrated recreational use that could cause soil disturbance, and illegal off-road vehicle use. These factors may combine to introduce and spread noxious weeds in the project area and the adjacent habitats. In addition, disturbed project soils may provide a seedbed for noxious weeds that could then expand their distribution into less disturbed habitats. No sensitive plants have been located within the project area; however, these cumulative effects have potential to affect sensitive species in two ways. First, weeds may degrade potential habitats that occur in the project vicinity. These habitats are not currently occupied, but provide habitat for future populations of sensitive plants. Second, robust weed populations could contribute to the expansion and colonization of new areas. Habitats outside of the project area that are currently occupied by sensitive plants may be indirectly affected by noxious weeds promoted by project related ground disturbance. These cumulative effects are not expected to be significant if the comprehensive vegetation management plan is adhered to. This plan provides for frequent/regular control of weeds in and adjacent to the project area for the term of the license. The vegetation management plan also specifies restoration guidelines, because healthy native plant communities are more resistant to weed invasion.

6.0 Comments and Responses

USFS April 21, 2005

USFS Comment 1

Yellowstone cutthroat is also a sensitive species that occurs within the Henrys Fork and needs to be addressed in the BE. A "May Impact" determination would be appropriate.

Response: The licensee is in agreement, please see Table I - 1.

USFS Comment 2

Incorporate a summary table that displays the determinations for all sensitive species such as the one below.

Species	No Impact	May Impact Individuals Or Habitat, But Will Not Likely Contribute To A Trend Towards Federal Listing Or Loss Of Viability To The Population Or Species	Will Impact Individuals Or Habitat With A Consequence That The Action May Contribute To A Trend Towards Federal Listing Or Cause A Loss of Viability To The Population Or Species	Beneficial Impact
Yellowstone Cutthroat		X		

Response: The following page contains the requested table, Table I - 1.

Species	No Impact	May Impact Individuals Or Habitat, But Will Not Likely Contribute To A Trend Towards Federal Listing Or Loss Of Viability To The Population Or Species	Will Impact Individuals Or Habitat With A Consequence That The Action May Contribute To A Trend Towards Federal Listing Or Cause A Loss of Viability To The Population Or Species	Beneficial Impact
Yellowstone Cutthroat		x		
Northern Goshawk	x			
Western Toad		x		
Gray Wolf	x			
Townsend's Big-eared Bat	x			
Trumpeter Swan	x			
Whooping Crane	x			
North American Wolverine	x			
Bald Eagle		x		
Yuma Myotis	x			
Western Small-footed Myotis	x			
Columbia Spotted Frog		x		
Grizzly Bear	x			
Pink Agoseris	x			

Table I - 1

7.0 Sources Cited

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- Whitfield, M.B. et al. 1997. Bald eagles of eastern Idaho/Greater Yellowstone Ecosystem: 1997 annual productivity report. USBLM, USFS Targhee National Forest, IDFG and Northern Rockies Conservation Cooperative.
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UNITED STATES OF AMERICA 112FERC ¶62,028
FEDERAL ENERGY REGULATORY COMMISSION

Fall River Rural Electric Cooperative, Inc.

Project No. 1413-041

ORDER APPROVING ENDANGERED SPECIES PROTECTION
PLAN UNDER ARTICLE 401

(Issued July 13, 2005)

On May 13, 2005, Fall River Rural Electric Cooperative, Inc. (licensee) filed its endangered species protection plan under article 401 of the license for the Buffalo River Hydroelectric Project.¹ The project is located on the Buffalo River near its confluence with the Henry's Fork River, north of Ashton, in Fremont County, Idaho, where it also occupies about 9.8 acres of land within the Targhee National Forest, administered by the U.S. Forest Service (FS).

ARTICLE 401

Article 401, in part, requires the licensee to file an endangered species protection plan, for Commission approval, consistent with FS Condition No. 18 and Condition No. 19 which was attached to the project license.

Condition No. 18 requires that within 90-days prior to any ground-disturbing activity that may affect a federally listed or proposed species and their critical habitat, the licensee must file with the Commission a Threatened, Endangered, and Proposed for Listing Species Plan that is approved by the Forest Service in consultation with appropriate Federal and State agencies. This Plan must describe how the licensee will coordinate, consult, and prepare a biological assessment evaluating the potential impact that any action may have on listed and proposed species and their habitat. At a minimum the plan shall: (1) develop procedures to minimize adverse effects to listed species; (2) ensure project-related activities meet restrictions included in site management plans for listed species, (3) develop implementation and effectiveness monitoring of measures taken or employed to reduce effects to listed species, (4) identify required elements contained within a biological assessment; and (5) all construction shall be timed to avoid conflicts with sensitive species.

Condition No. 19 requires that within 90-days prior to implementing any activity that may affect a Forest Service sensitive species and their habitat, the licensee must file with the Commission a biological evaluation (BE) for Sensitive Species that is approved by the Forest Service. At a minimum, the plan must incorporate the following mitigation

¹ 109 FERC ¶ 62,077 (2004)

in the BE: (1) develop procedures to minimize adverse effects to sensitive species; (2) develop implementation and effectiveness monitoring of measures taken or employed to reduce effects to sensitive species; and (3) all construction shall be timed to avoid conflicts with sensitive species.

LICENSEE'S PLAN

The licensee states the purpose of the BE is to describe site specific effects the construction and operation of the project will have on the area's sensitive species and species protected under the Endangered Species Act. Assessments and protection measure for the 13 species of wildlife and 2 species of plants are included within the BE.² Information in the BE was compiled from agency records, species accounts, licensee correspondence, and site specific surveys of the project area for sensitive species and potential habitat.

The licensee proposes to construct a new concrete intake structure with fish screens, a fish ladder, and seal the face of the dam. Sensitive species may experience the following project effects: temporary disturbance due to construction noise, including disturbance outside the immediate project area; temporary displacement during construction from habitats at the base of the dam or along the staging area; temporary reduction in the quality of habitat within areas disturbed during construction; and potential for impaired water quality during construction. The licensee states there will be no effect to 14 of the 15 species considered. The bald eagle may temporarily avoid foraging in the project area during construction, but no associated effects are anticipated to otherwise disrupt the bald eagles.

AGENCY COMMENTS

The FS, by letter dated April 21, 2005, approved the plan and indicated in its letter that the U.S. Fish and Wildlife Service (FWS) concurred with the determinations.³

² The sensitive species listed include: Yellowstone cutthroat, northern goshawk, western toad, gray wolf, Townsend's big-eared bat, Trumpeter swan, Whooping crane, North American wolverine, bald eagle, Yuma myotis, Western small-footed myotis, Columbia spotted frog, grizzly bear, pink agoseris, and Ute ladies' tresses.

³ By letter dated July 7, 2004, the Commission staff requested the concurrence from the FWS on the staff's determination that issuance of a subsequent license and related construction activities associated with project operations would not be likely to adversely affect the bald eagle, Canada lynx, and grizzly bear, and would not jeopardize the experimental, nonessential population of the gray wolf. The FWS provided its concurrence with the staff's findings by letter dated July 28, 2004.

Project No. 1413-041

3

DISCUSSION

The licensee's endangered species protection plan meets the requirements of article 401 and FS Conditions Nos. 18 and 19 and should, therefore, be approved.

The Director orders:

(A) Fall River Rural Electric Cooperative, Inc.'s endangered species protection plan under article 401 of the license for the Buffalo River Hydroelectric Project, as filed on May 13, 2005, is approved.

(B) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of 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

Buffalo River Hydroelectric Project (FERC No. 1413)

Low Impact Hydroelectric Power Facility Certification

1. Contact Information for person completing the questionnaire:

Name & Title: GARY M VECCHIO NATURAL RESOURCES PLAN COORD
Organization: Idaho Fish and Game
Address: 4279 COMMERCE CIRCLE
IDAHO FALLS ID 83401
Phone: 208 525 7290
Email: GARY.VECCHIO@IDFG.IDAHO.GOV

2. To the best of your knowledge, is Buffalo River Hydroelectric Project (FERC License No. 1413) 2004 License Article 405 *Upstream Fishway* still valid?

- Yes No
 N/A or Unknown. If N/A or Unknown please explain:

2(a) Is the Buffalo River Hydroelectric Project (FERC License No. 1413) currently in compliance with 2004 License Article 405 *Upstream Fishway*?

- Yes No
 N/A or Unknown. If N/A or Unknown please explain:

3. To the best of your knowledge, do Buffalo River Hydroelectric Project (FERC License No. 1413) operations negatively affect any state or federally listed threatened and endangered species?

- Yes No
 N/A or Unknown. If N/A or Unknown please explain:

Buffalo River Hydroelectric Project (FERC No. 1413)

Low Impact Hydroelectric Power Facility Certification

If you have any additional comments, please provide them here:

FERC 1413 AND OWNERS / APPLICANTS HAVE ALWAYS BEEN
COMPLIANT WITH AND WORTHY OF LOW-IMPACT HYDRO
ENERGY

**Please return this Questionnaire to Laura Cowan by email at
Laura.Cowan@KleinschmidtGroup.com within 15 days of receipt.**

From: [Bassista, Tom](#)
To: [Katie Sellers](#)
Subject: RE: LIHI Certification for Chester Diversion Dam - Request for IDFG Feedback
Date: Thursday, July 07, 2016 3:39:01 PM
Attachments: [image002.png](#)
[Fremont county species list.xlsx](#)

Here is the most current list I have for Fremont County.
Without doing any biological surveys I would concur that the project is not causing any significant impacts to species on the list.

Thanks,

Tom Bassista
Environmental Staff Biologist

Idaho Department of Fish and Game-Upper Snake Region
4279 Commerce Circle
Idaho Falls, ID 83401
208.525.7290

From: Bassista, Tom
Sent: Thursday, July 07, 2016 1:28 PM
To: 'Katie Sellers'
Subject: RE: LIHI Certification for Chester Diversion Dam - Request for IDFG Feedback

Katie-could you please send me the original list of species you speak about below? I don't know if the project just used federally listed species or also state sensitive species? Having that original list would help your request greatly.

"During Project licensing it was agreed that the Project would not cause negative effects on listed species" Question-are these federally listed species?

Also to obtain an list of known state sensitive species in the area please submit a form and fee at the following webpage:

<https://idfg.idaho.gov/species/request-data>.

If you need additional assistance on a list and map of known species please contact Nikki:

Nikki Wade
Zoology Data Coordinator
Idaho Fish and Wildlife Information System (IFWIS)
Idaho Department of Fish and Game
600 South Walnut, P.O. Box 25
Boise, ID 83707 USA

208-287-2761

nikki.wade@idfg.idaho.gov

<https://fishandgame.idaho.gov/species>

From: Katie Sellers

Sent: Wednesday, May 11, 2016 10:37 AM

To: 'Bassista, Tom' <thomas.bassista@idfg.idaho.gov>

Cc: Vecellio, Gary <gary.vecellio@idfg.idaho.gov>; Laura Cowan
<Laura.Cowan@KleinschmidtGroup.com>

Subject: LIHI Certification for Chester Diversion Dam - Request for IDFG Feedback

Hi Tom and Gary,

I am helping Fall River Rural Electric Cooperative, Inc. with another Low Impact Hydropower Institute (LIHI) certification application for the Chester Diversion Hydroelectric Project (FERC No. 11879) (Project).

Before submitting the application for LIHI's review, we are required to gain and/or confirm the following information with you:

-Could you please provide an updated **list of the potential state threatened and endangered species that may occur** within the Project area?

-**During Project licensing it was agreed that the Project would not cause negative effects on listed species.** Could you please confirm that this is still the case with the updated list of species that may potentially occur within the Project area?

Thank you for all of your help with these questions.

All the best,
Katie

Katie Sellers

Regulatory Coordinator

Kleinschmidt

Office: 207-416-1218

www.KleinschmidtGroup.com



Fremont	<i>Accipiter cooperii</i>	Cooper's Hawk	G5	S4						protection-nongame	
Fremont	<i>Accipiter gentilis</i>	Northern Goshawk	G5	S4			Sensitive	Sensitive	TYPE 3	protection-nongame	
Fremont	<i>Accipiter striatus</i>	Sharp-shinned Hawk	G5	S5						protection-nongame	
Fremont	<i>Actitis macularia</i>	Spotted Sandpiper	G5	S5B						protection-nongame	
Fremont	<i>Aechmophorus</i>	<i>Aechmophorus</i> sp.				Yes				protection-nongame	
Fremont	<i>Aechmophorus clarkii</i>	Clark's Grebe	G5	S2B		Yes				protection-nongame	
Fremont	<i>Aechmophorus occidentalis</i>	Western Grebe	G5	S2B		Yes				protection-nongame	
Fremont	<i>Aegolius funereus</i>	Boreal Owl	G5	S2		Yes		Sensitive	TYPE 5	protection-nongame	
Fremont	<i>Agelaius phoeniceus</i>	Red-winged Blackbird	G5	S5B,S3N						protection-nongame	
Fremont	<i>Agoseris lackschewitzii</i>	Pink Agoseris	G4	S2				Sensitive	TYPE 4		State Sensitive
Fremont	<i>Ambystoma tigrinum</i>	Tiger Salamander	G5	S5						protection-nongame	
Fremont	<i>Ameletus sparsatus</i>	A Mayfly	G3G4	S2		Yes					
Fremont	<i>Anas acuta</i>	Northern Pintail	G5	S5B,S2N		Yes				protection-nongame	
Fremont	<i>Aquila chrysaetos</i>	Golden Eagle	G5							protection-nongame	
Fremont	<i>Ardea alba</i>	Great Egret	G5	S1B		Yes				protection-nongame	
Fremont	<i>Ardea herodias</i>	Great Blue Heron	G5	S5B,S5N						protection-nongame	
Fremont	<i>Astragalus bisulcatus</i> var. <i>bisulcatus</i>	Two-grooved Milkvetch	G5T5	S2					TYPE 4		State Sensitive
Fremont	<i>Astragalus gilviflorus</i>	Plains Milkvetch	G5	S2					TYPE 3		State Sensitive
Fremont	<i>Aythya affinis</i>	Lesser Scaup	G5	S3		Yes				protection-nongame	
Fremont	<i>Bartramia longicauda</i>	Upland Sandpiper	G5	S1B		Yes			TYPE 4	protection-nongame	
Fremont	<i>Boloria kriemhild</i>	Kriemhild Fritillary	G3G4	S2		Yes					

Fremont	<i>Botaurus lentiginosus</i>	American Bittern	G4	S4B						protection-nongame	
Fremont	<i>Brachylagus idahoensis</i>	Pygmy Rabbit	G4	S2		Yes		Sensitive	TYPE 2	protection-game	
Fremont	<i>Bubo virginianus</i>	Great Horned Owl	G5	S5						protection-nongame	
Fremont	<i>Bucephala islandica</i>	Barrow's Goldeneye	G5	S3B,S3N					TYPE 5	protection-	
Fremont	<i>Bufo boreas</i>	Western Toad	G4	S4			Sensitive		TYPE 2/TYPE 3	protection-nongame	
Fremont	<i>Buteo jamaicensis</i>	Red-tailed Hawk	G5	S5B,S5N						protection-nongame	
Fremont	<i>Buteo regalis</i>	Ferruginous Hawk	G4	S3B		Yes			TYPE 3	protection-nongame	
Fremont	<i>Calcarius mccownii</i>	McCown's Longspur	G4	SNA						protection-nongame	
Fremont	<i>Calidris melanotos</i>	Pectoral Sandpiper	G5	SNA						protection-nongame	
Fremont	<i>Calidris minutilla</i>	Least Sandpiper	G5	S2N						protection-nongame	
Fremont	<i>Canis Lupus</i>	Gray Wolf	G4	S3	XN	Yes		Endangered	TYPE 1	protection-game	
Fremont	<i>Carduelis psaltria</i>	Lesser Goldfinch	G5	S2B		Yes				protection-nongame	
Fremont	<i>Carex livida</i>	Pale Sedge	G5	S2			Sensitive		TYPE 4		State Sensitive
Fremont	<i>Catoptrophorus semipalmatus</i>	Willet	G5	S4B						protection-nongame	
Fremont	<i>Centrocercus urophasianus</i>	Greater-Sage Grouse	G4	S2	C	Yes		Sensitive	TYPE 2	protection-upland-game-	
Fremont	<i>Charadrius vociferus</i>	Killdeer	G5	S5B,S3N						protection-nongame	
Fremont	<i>Charina bottae</i>	Rubber Boa	G5	S5						protection-nongame	
Fremont	Chiroptera	Unclassified Bat								protection-nongame	
Fremont	<i>Chlidonias niger</i>	Black Tern	G4	S1B		Yes			TYPE 3	protection-nongame	
Fremont	<i>Cicindela arenicola</i>	Idaho Dunes Tiger Beetle	G1G2	S2		Yes			TYPE 2		
Fremont	<i>Cicuta bulbifera</i>	Bulb-bearing Waterhemlock	G5	S2			Sensitive		TYPE 4		State Sensitive

Fremont	<i>Circus cyaneus</i>	Northern Harrier	G5	S5B,S5N						protection-nongame	
Fremont	<i>Cistothorus palustris</i>	Marsh Wren	G5	S5B						protection-nongame	
Fremont	<i>Coccyzus americanus</i>	Yellow-billed Cuckoo	G5	S2B	C	Yes			TYPE 1	protection-nongame	
Fremont	<i>Corvus corax</i>	Common Raven	G5	S5						protection-nongame	
Fremont	<i>Corynorhinus townsendii</i>	Townsend's Big-eared Bat	G4	S3		Yes	Sensitive	Sensitive	TYPE 3	protection-nongame	
Fremont	<i>Cygnus buccinator</i>	Trumpeter Swan	G4	S1B,S2N		Yes		Sensitive	TYPE 3	protection-nongame	
Fremont	<i>Dendroica petechia</i>	Yellow Warbler	G5	S5B						protection-nongame	
Fremont	<i>Egretta thula</i>	Snowy Egret	G5	S2B		Yes				protection-nongame	
Fremont	<i>Empidonax traillii</i>	Willow Flycatcher	G5	S5B					TYPE 3	protection-nongame	
Fremont	<i>Epilobium palustre</i>	Swamp Willow-weed	G5	S3			Sensitive		TYPE 5		State Monitor
Fremont	<i>Eptesicus fuscus</i>	Big Brown Bat	G5	S4?						protection-nongame	
Fremont	<i>Eriophorum viridicarinum</i>	Green Keeled Cotton-grass	G5	S2			Sensitive				State Priority 1
Fremont	<i>Euphydryas gillettii</i>	Gillette's Checkerspot	G2G3	S3		Yes					
Fremont	<i>Falco columbarius</i>	Merlin	G5	S2B,S2N		Yes				protection-nongame	
Fremont	<i>Falco peregrinus anatum</i>	Peregrine Falcon	G4T4	S2B		Yes	Sensitive	Sensitive	TYPE 3	protection-nongame	
Fremont	<i>Fluminicola fuscus</i>	Columbia Pebblesnail	G2	S1					TYPE 3		
Fremont	<i>Gavia immer</i>	Common Loon	G5	S1B,S2N		Yes	Sensitive	Sensitive		protection-nongame	
Fremont	<i>Geothlypis trichas</i>	Common Yellowthroat	G5	S5B						protection-nongame	
Fremont	<i>Glacivicola bathyscioides</i>	Blind Cave Leiodid Beetle	G1G3	S1		Yes			TYPE 2		
Fremont	<i>Glaucidium gnoma</i>	Northern Pygmy-Owl	G5	S4					TYPE 5	protection-nongame	
Fremont	<i>Glaucomys sabrinus</i>	Northern Flying Squirrel	G5	S4						protection-nongame	

Fremont	<i>Grus americana</i>	Whooping Crane	G1	SNA	XN			Endangered			
Fremont	<i>Grus canadensis</i>	Sandhill Crane	G5	S3B		Yes				protection-	
Fremont	<i>Gulo gulo luscus</i>	North American Wolverine	G4T4	S2	C	Yes	Sensitive	Sensitive	TYPE 3	protection-	nongame
Fremont	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3B,S4N		Yes		Threatened	TYPE 1	protection-	nongame
Fremont	<i>Himantopus mexicanus</i>	Black-necked Stilt	G5	S3B		Yes				protection-	nongame
Fremont	<i>Larus argentatus</i>	Herring Gull	G5	S2N						protection-	nongame
Fremont	<i>Larus californicus</i>	California Gull	G5	S2B,S3N		Yes				protection-	nongame
Fremont	<i>Larus delawarensis</i>	Ring-billed Gull	G5	S2S3B,S3N						protection-	nongame
Fremont	<i>Larus philadelphia</i>	Bonaparte's Gull	G5	SNA						protection-	nongame
Fremont	<i>Larus pipixcan</i>	Franklin's Gull	G4G5	S2B		Yes				protection-	nongame
Fremont	<i>Lasionycteris noctivagans</i>	Silver-haired Bat	G5	S4?						protection-	nongame
Fremont	<i>Lasiurus cinereus</i>	Hoary Bat	G5	S4?						protection-	nongame
Fremont	<i>Limnodromus scolopaceus</i>	Long-billed Dowitcher	G5	S2N						protection-	nongame
Fremont	<i>Limosa fedoa</i>	Marbled Godwit	G5	S2N						protection-	nongame
Fremont	<i>Lophodytes cucullatus</i>	Hooded Merganser	G5	S2B,S3N		Yes				protection-	nongame
Fremont	<i>Loxia leucoptera</i>	White-winged Crossbill	G5	S1		Yes				protection-	nongame
Fremont	<i>Lycopodiella inundata</i>	Northern Bog Clubmoss	G5	S2			Sensitive				State Priority 2
Fremont	<i>Lynx canadensis</i>	Lynx	G5	S1	LT	Yes		Sensitive	TYPE 1	protection-	
Fremont	<i>Margaritifera falcata</i>	Western Pearlshell	G4G5	S3		Yes					
Fremont	<i>Martes pennanti</i>	Fisher	G5	S1		Yes	Sensitive	Sensitive	TYPE 3	protection-	
Fremont	<i>Melospiza melodia</i>	Song Sparrow	G5	S5B,S5N						protection-	nongame
Fremont	<i>Molothrus ater</i>	Brown-headed Cowbird	G5	S5B						protection-	nongame

Fremont	<i>Myotis ciliolabrum</i>	Western Small-footed Myotis	G5	S4?					TYPE 5	protection-nongame	
Fremont	<i>Myotis evotis</i>	Long-eared Myotis	G5	S3?					TYPE 5	protection-nongame	
Fremont	<i>Myotis lucifugus</i>	Little Brown Myotis	G5	S5						protection-nongame	
Fremont	<i>Myotis volans</i>	Long-legged Myotis	G5	S3?					TYPE 5	protection-nongame	
Fremont	<i>Myotis yumanensis</i>	Yuma Myotis	G5	S3?					TYPE 5	protection-nongame	
Fremont	<i>Neotamias minimus</i>	Least Chipmunk	G5	S5						protection-nongame	
Fremont	<i>Neotamias amoenus</i>	Yellow-pine Chipmunk	G5	S5						protection-nongame	
Fremont	<i>Numenius americanus</i>	Long-billed Curlew	G5	S2B		Yes			TYPE 5	protection-nongame	
Fremont	<i>Nycticorax nycticorax</i>	Black-crowned Night-Heron	G5	S2B		Yes				protection-nongame	
Fremont	<i>Oenothera psammophila</i>	St. Anthony Evening Primrose	G3	S3					TYPE 2		Global Priority 3
Fremont	<i>Oreoscoptes montanus</i>	Sage Thrasher	G5	S5B					TYPE 5	protection-nongame	
Fremont	<i>Otus flammeolus</i>	Flammulated Owl	G4	S3B		Yes	Sensitive	Sensitive	TYPE 3	protection-nongame	
Fremont	<i>Pandion haliaetus</i>	Osprey	G5	S5B						protection-nongame	
Fremont	<i>Pelecanus erythrorhynchos</i>	American White Pelican	G3	S1B		Yes			TYPE 2	protection-nongame	
Fremont	<i>Phalacrocorax auritus</i>	Double-crested Cormorant	G5	S2B						protection-nongame	
Fremont	<i>Phalaropus tricolor</i>	Wilson's Phalarope	G5	S3B		Yes			TYPE 5	protection-nongame	
Fremont	<i>Picea glauca</i>	White Spruce	G5	S1					TYPE 4		State Priority 2
Fremont	<i>Picoides arcticus</i>	Black-backed Woodpecker	G5	S3			Sensitive		TYPE 5	protection-nongame	
Fremont	<i>Plegadis chihi</i>	White-faced Ibis	G5	S2B		Yes			TYPE 4	protection-nongame	
Fremont	<i>Podiceps auritus</i>	Horned Grebe	G5	S1?						protection-nongame	

Fremont	<i>Podiceps grisegena</i>	Red-necked Grebe	G5	S2B		Yes				protection-nongame	
Fremont	<i>Podiceps nigricollis</i>	Eared Grebe	G5	S4B						protection-nongame	
Fremont	<i>Podilymbus podiceps</i>	Pied-billed Grebe	G5	S4B,S3N						protection-nongame	
Fremont	<i>Porzana carolina</i>	Sora	G5	S5B						protection-nongame	
Fremont	<i>Progne subis</i>	Purple Martin	G5	S1?B						protection-nongame	
Fremont	<i>Pseudacris maculata</i>	Boreal Chorus Frog	G5	S4						protection-nongame	
Fremont	<i>Rallus limicola</i>	Virginia Rail	G5	S5B						protection-nongame	
Fremont	<i>Rana luteiventris</i>	Columbia Spotted Frog	G4	S3S4				Sensitive	TYPE 1	protection-nongame	
Fremont	<i>Rana pipiens</i>	Northern Leopard Frog	G5	S2		Yes			TYPE 2	protection-nongame	
Fremont	<i>Recurvirostra americana</i>	American Avocet	G5	S5B		Yes				protection-nongame	
Fremont	<i>Salix candida</i>	Hoary Willow	G5	S2			Sensitive		TYPE 4		State Sensitive
Fremont	<i>Salix pseudomonticola</i>	False Mountain Willow	G4G5	S1					TYPE 3		State Priority 2
Fremont	<i>Sceloporus graciosus</i>	Sagebrush Lizard	G5	S5						protection-nongame	
Fremont	<i>Scheuchzeria palustris</i>	Pod Grass	G5	S2			Sensitive				State Priority 2
Fremont	<i>Schoenoplectus subterminalis</i>	Water Clubrush	G4G5	S3			Sensitive		TYPE 4		State Sensitive
Fremont	<i>Seiurus noveboracensis</i>	Northern Waterthrush	G5	S3?						protection-nongame	
Fremont	<i>Spermophilus elegans</i>	Wyoming Ground Squirrel	G5	S4?		Yes				protection-nongame	
Fremont	<i>Spermophilus lateralis</i>	Golden-mantled Ground Squirrel	G5	S5						protection-nongame	
Fremont	<i>Sphyrapicus thyroideus</i>	Williamson's Sapsucker	G5	S5B					TYPE 3	protection-nongame	

Fremont	<i>Spiranthes diluvialis</i>	Ute Ladies' Tresses	G2	S1	T					TYPE 1		Global Priority 3
Fremont	<i>Spizella breweri</i>	Brewer's Sparrow	G5	S3B		Yes				TYPE 3	protection- nongame	
Fremont	<i>Stagnicola hinkleyi</i>	Rustic Pondsnailed	G2	S1		Yes						
Fremont	<i>Sterna caspia</i>	Caspian Tern	G5	S2B		Yes					protection- nongame	
Fremont	<i>Sterna forsteri</i>	Forster's Tern	G5	S1B		Yes					protection- nongame	
Fremont	<i>Sterna hirundo</i>	Common Tern	G5	S1B							protection- nongame	
Fremont	<i>Strix nebulosa</i>	Great Gray Owl	G5	S3					Sensitive	TYPE 5	protection- nongame	
Fremont	<i>Surnia ulula</i>	Northern Hawk-owl	G5	SNA							protection- nongame	
Fremont	<i>Symphotrichum boreale</i>	Rush Aster	G5	S2				Sensitive		TYPE 4		State Sensitive
Fremont	<i>Tamiasciurus hudsonicus</i>	Red Squirrel	G5	S5							protection- nongame	
Fremont	<i>Thalictrum dasycarpum</i>	Purple Meadow-rue	G5	S1						TYPE 3		State Priority 1
Fremont	<i>Thamnophis elegans</i>	Western Terrestrial Garter Snake	G5	S5							protection- nongame	
Fremont	<i>Thamnophis sirtalis</i>	Common Garter Snake	G5	S5						TYPE 3	protection- nongame	
Fremont	<i>Tringa flavipes</i>	Lesser Yellowlegs	G5	S2N							protection- nongame	
Fremont	<i>Tringa melanoleuca</i>	Greater Yellowlegs	G5	S2N							protection- nongame	
Fremont	<i>Tympanuchus phasianellus columbianus</i>	Columbian Sharp-tailed Grouse	G4T3	S1		YES			Sensitive	TYPE 3	idapa- protection- upland-game-	
Fremont	<i>Ursus arctos</i>	Grizzly Bear	G4	S1	LT					TYPE 1		
Fremont	<i>Xanthocephalus xanthocephalus</i>	Yellow-headed Blackbird	G5	S5B							protection- nongame	

From: Katie Sellers
To: ["Cary Myler"](#)
Cc: toni_davidson@fws.gov; [Laura Cowan](#)
Subject: RE: Buffalo River Hydroelectric Project LIHI Certification - Request for USFWS Feedback
Date: Wednesday, June 22, 2016 11:05:00 AM
Attachments: [image002.png](#)

Thank you

Katie Sellers
Regulatory Coordinator
Kleinschmidt
Office: 207-416-1218
www.KleinschmidtGroup.com



From: Cary Myler [mailto:cary_myler@fws.gov]
Sent: Tuesday, June 21, 2016 6:59 PM
To: Katie Sellers <Katie.Sellers@KleinschmidtGroup.com>
Cc: toni_davidson@fws.gov; [Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>](mailto:Laura.Cowan@KleinschmidtGroup.com)
Subject: Re: Buffalo River Hydroelectric Project LIHI Certification - Request for USFWS Feedback

Please contact Michael Morse @ Michael_morse@fws.gov.

Sent from my iPad

On Jun 21, 2016, at 4:44 PM, Katie Sellers <Katie.Sellers@kleinschmidtgroup.com> wrote:

Hi Cary – I am just checking in on the Buffalo River Hydroelectric Project questions provided below.

Please let me know if I can be of any help during your review, or if I should make contact with someone else for this review.

Best
Katie

Katie Sellers
Regulatory Coordinator

<image001.gif>

Office: 207-416-1218

www.KleinschmidtGroup.com

<image002.png>

From: Katie Sellers

Sent: Wednesday, May 11, 2016 8:59 AM

To: 'cary_myler@fws.gov' <cary_myler@fws.gov>; 'toni_davidson@fws.gov' <toni_davidson@fws.gov>

Cc: Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>

Subject: RE: Buffalo River Hydroelectric Project LIHI Certification - Request for USFWS Feedback

Hi Cary- Have you had a chance to address the below compliance questions for the Buffalo River Project? Please let me know if I can provide you with any further information or if I should touch base with another point of contact.

Thank you,
Katie Sellers

Katie Sellers

Regulatory Coordinator

<image001.gif>

Office: 207-416-1218

www.KleinschmidtGroup.com

<image002.png>

From: Katie Sellers

Sent: Wednesday, April 13, 2016 11:50 AM

To: 'cary_myler@fws.gov' <cary_myler@fws.gov>; 'toni_davidson@fws.gov' <toni_davidson@fws.gov>

Cc: Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>

Subject: RE: Buffalo River Hydroelectric Project LIHI Certification - Request for USFWS Feedback

Dear Mr. Myler,

As afore noted, Kleinschmidt Associates is assisting Fall River Rural Electric Cooperative, Inc. (Fall River) with applying for certifications from the Low Impact Hydropower Institute (LIHI) for the Buffalo River Hydroelectric Project (FERC No. 1413) (Project). LIHI is a non-profit organization dedicated to reducing the impacts of hydropower generation through the certification of hydropower projects that have avoided or

reduced their environmental impacts pursuant to LIHI criteria. LIHI has taken a first review of the Buffalo River LIHI certification application and has asked, before the submission of a final certification application, that we follow-up with the US Fish and Wildlife Service to confer the following Buffalo River Project compliance information:

-Confirm that USFWS fish entrainment protection recommendations issued during the Project's 2004 FERC relicensing process are still valid and the most recent recommendations from your resource agency.

-Confirm that the Project is operating in compliance with the most recent USFWS fish entrainment protection recommendations.

-Confirm that Project operations do not negatively impact federally listed threatened or endangered species identified to potentially occur within the Project vicinity.

Please do let me know if I can provide you with any further information for this review or if I should reach out to another point of contact.

Thank you in advance for your time,
Katie

Katie Sellers
Regulatory Coordinator
<image001.gif>
Office: 207-416-1218
www.KleinschmidtGroup.com
<image002.png>

From: Katie Sellers
Sent: Friday, September 18, 2015 4:29 PM
To: 'cary_myler@fws.gov' <cary_myler@fws.gov>
Cc: Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>
Subject: RE: LIHI Certification - Request for USFWS Feedback

Dear Mr. Myler,

Please let me know if you have any questions during your review of both Buffalo River Hydroelectric Project and Island Park Hydroelectric Project compliance with relevant prescriptions and/or license articles listed in the previously provided questionnaires.

Best,
Katie Sellers

Katie Sellers

Regulatory Coordinator
<image001.gif>
Office: 207-416-1218
www.KleinschmidtGroup.com

From: Katie Sellers
Sent: Tuesday, September 08, 2015 1:51 PM
To: 'cary_myler@fws.gov' <cary_myler@fws.gov>
Cc: Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>
Subject: RE: LIHI Certification - Request for USFWS Feedback

Dear Mr. Myler,

Please let me know if you have any questions while reviewing both Buffalo River Hydroelectric Project and Island Park Hydroelectric Project compliance with relevant prescriptions and/or license articles listed in the previously provided questionnaires.

Thank you for your help with the LIHI Certification process and I look forward to your responses.

Best,
Katie Sellers

Katie Sellers
Regulatory Coordinator
<image001.gif>
Office: 207-416-1218
www.KleinschmidtGroup.com

From: Katie Sellers
Sent: Tuesday, August 25, 2015 4:42 PM
To: 'cary_myler@fws.gov' <cary_myler@fws.gov>
Cc: Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>
Subject: LIHI Certification - Request for USFWS Feedback

Dear Mr. Myler,

Kleinschmidt Associates is assisting Fall River Rural Electric Cooperative, Inc. (Fall River) with applying for certifications from the Low Impact Hydropower Institute (LIHI) for the Buffalo River Hydroelectric Project (FERC No. 1413) and the Island Park Hydroelectric Project (FERC No. 2973). LIHI is a non-profit organization dedicated to reducing the impacts of hydropower generation through the certification of hydropower projects

that have avoided or reduced their environmental impacts pursuant to LHI criteria.

As part of the application process, LHI requests correspondence from relevant resource agencies to confirm that projects are in compliance with prescriptions and license articles. To that end, Kleinschmidt is requesting feedback from regulatory agencies to confirm validity and compliance with relevant prescriptions and/or articles.

Attached, you will find questionnaires for Buffalo River Hydroelectric Project and Island Park Hydroelectric Project. If you could please complete each of the enclosed questionnaires and return to the attention of Laura Cowan by email (laura.cowan@kleinschmidtgrou.com) within 15 days of receipt, it would be much appreciated.

Thank you in advance for your time,

Katie Sellers

Katie Sellers
Regulatory Coordinator
<image001.gif>
Office: 207-416-1218
www.KleinschmidtGroup.com

From: Katie Sellers
To: ["Michael_morse@fws.gov"](mailto:Michael_morse@fws.gov)
Cc: [Laura Cowan](#); ["Cary Myler"](#)
Subject: Buffalo River Hydroelectric Project LIHI Certification - Request for USFWS Feedback
Date: Wednesday, June 22, 2016 11:19:00 AM
Attachments: [image002.png](#)

Good Morning Michael,

Kleinschmidt Associates is assisting Fall River Rural Electric Cooperative, Inc. (Fall River) with applying for certifications from the Low Impact Hydropower Institute (LIHI) for the Buffalo River Hydroelectric Project (FERC No. 1413) (Project). LIHI is a non-profit organization dedicated to reducing the impacts of hydropower generation through the certification of hydropower projects that have avoided or reduced their environmental impacts pursuant to LIHI criteria. LIHI has taken a first review of the Buffalo River LIHI certification application and has asked, before the submission of a final certification application, that we follow-up with the US Fish and Wildlife Service to confer the following Buffalo River Project compliance information:

-Confirm that USFWS fish entrainment protection recommendations issued during the Project's 2004 FERC relicensing process are still valid and the most recent recommendations from your resource agency.

-Confirm that the Project is operating in compliance with the most recent USFWS fish entrainment protection recommendations.

-Confirm that Project operations do not negatively impact federally listed threatened or endangered species identified to potentially occur within the Project vicinity.

Carly Myler has recommended I make contact with you in regards to the above questions. Please do let me know if I can provide you with any further information for this review.

Thank you in advance for your time,
Katie Sellers

Katie Sellers
Regulatory Coordinator

Kleinschmidt

Office: 207-416-1218

www.KleinschmidtGroup.com



From: Katie Sellers
To: ["michael_morse@fws.gov"](mailto:michael_morse@fws.gov)
Cc: [Laura Cowan](#)
Subject: RE: Buffalo River Hydroelectric Project - USFWS Review for LIHI Certification Application
Date: Friday, September 30, 2016 1:32:00 PM
Attachments: [image002.png](#)

Hi Michael – Just wanted to follow-up on this topic.

Thank you in advance for your time,
Katie

Katie Sellers
Regulatory Coordinator
Kleinschmidt
Office: 207-416-1218
www.KleinschmidtGroup.com



From: Katie Sellers
Sent: Thursday, September 22, 2016 2:36 PM
To: 'michael_morse@fws.gov' <michael_morse@fws.gov>
Cc: Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>
Subject: Buffalo River Hydroelectric Project - USFWS Review for LIHI Certification Application

Hi Michael – I just left you a voicemail but wanted to follow-up via email. You had left me a voicemail earlier this summer in regards to reviewing the Buffalo River Hydroelectric Project and its associated compliance for a Low Impact Hydropower Institute (LIHI) Certification Application. Sadly I am just jumping back into this project now – I apologize for my delay in getting back to you.

Essentially we are looking for your verification that USFWS recommendations/conditions issued for the Project's FERC license are still valid and that the project operates in compliance with USFWS issued recommendations/conditions (Article 405, *Continuous Operation of Upstream Fishway* and Article 407, *Fishway Effectiveness Monitoring and Evaluation Plan*).

Also, we are hoping that you can confirm that the facility continues to not negatively affect listed species that may be located within the facility area.

Please keep me posted on your thoughts. Thank you again and I apologize for the delay.

Katie Sellers

Katie Sellers
Regulatory Coordinator

Kleinschmidt

Office: 207-416-1218

www.KleinschmidtGroup.com



APPENDIX I
CULTURAL RESOURCE PROTECTION

ORIGINAL



Northwest Power Services, Inc.

May 11, 2005

Ms. Magalie R Salas, Secretary
Federal Energy Regulatory Commission
Mail Code: DHAC, PJ-12
888 First Street, NE
Washington, DC 20426

FILED
OFFICE OF THE
SECRETARY
2005 MAY 13 A 10:08
FEDERAL ENERGY
REGULATORY COMMISSION

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Ms. Salas,

For your review and approval, for the proposed construction activities at the Buffalo River Hydroelectric Project, FERC Project #1413, please find attached the following plans:

- Erosion control Plan (Article #302) - ~~035~~ CANCELED
- Temporary Emergency Action Plan (Article #304)
- Hazardous Substance Plan (Article #404) - 036
- Fishway & Fish Screen Monitoring Plan (Article #407) - 038
- Diversion Operation Plan (Article #410 & USFS Condition #15) - 040
- Public Safety Plan (USFS Condition #7)
- Heritage Resource Protection Plan (USFS Condition #12) - 039
- Vegetation Management Plan (USFS Condition #17) - 037
- B E/A for Threatened, Endangered, and Sensitive Species (USFS Condition #18 & 19) - 041

If you have any questions or need additional information please contact me at (208) 745-0834 or e-mail me at bsmith@nwpwtservices.com.

Sincerely,

NORTHWEST POWER SERVICES, INC.

Brent I. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric
Constantine Tjoumas, Director, D2SI, FERC - Washington
Harry T. Hall, Regional Engineer, FERC - Portland

Gary Vecellio, Environmental Staff Biologist, Idaho Department of Fish & Game
Gerrish Willis, Regional Hydropower Coordinator
Jim De Rito, Conservation Director, Henry's Fork Foundation
Steve Trafton, Executive Director, Henry's Fork Foundation
Lee Mabey, US Forest Service
Adrienne Keller, US Forest Service
Deb Mignogno, US Fish & Wildlife Service
Jim Esch, US Fish & Wildlife Service
Scott, A. Grunder, Fishery Program Coordinator, Idaho Department of Fish & Game
Troy Saffle, Idaho DEQ
Keith Hobbs, Idaho Department of Parks & Recreation

Section G

Heritage Resource Protection Plan

Heritage Resource Protection Plan

Forest Service's Condition No. 12 of the License requires a Heritage Resource Protection be developed. This plan is intended to fulfill this requirement, the following is the Condition from the license:

Condition No. 12 - Heritage Resource Protection
If during ground-disturbing activities or as a result of project operations, items of potential cultural, historical, archeological, or paleontological value are reported or discovered, or a known deposit of such items is disturbed on National Forest System lands the Licensee shall immediately cease work in the area so affected. The Licensee shall then notify the Forest Service and the Commission and shall not resume work on ground-disturbing activity until it receives written approval from the Forest Service.

If it deems it necessary, the Forest Service may require the Licensee to perform recovery, excavation, and preservation of the site and its artifacts at the Licensee's expense through provisions of an Archaeological Resources Protection Act permit issued by the Forest Service.

PROPOSED PLAN

Fall River proposes the following Heritage Resource Protection Plan for review and approval.

Procedures in case items are found

1. The Licensee shall stop all work in the affected area
2. The Licensee shall call the Forest Service at the following contact:

USFS Island Park Ranger District
Adrienne Keller-District Ranger
(208) 558-7301

Caribou- Targhee National Forest
Ali Abusaidi Forest Archaeologist
(208)-557-5777
3. The Licensee shall call the Commission at the following contact:

	Office	Cell	Home
Mr. Harry T. Hall	(503) 552-2700	(503) 706-8842	(503) 636-1111
Mr. Pat Regan	(503) 522-2741	(503) 706-8733	(503) 534-2621
4. The Licensee shall wait for written approval from Forest Service prior to continuing work in the affected area.

UNITED STATES OF AMERICA 111 FERC ¶62,265
FEDERAL ENERGY REGULATORY COMMISSION

Northwest Power Services, Inc.

Project No. 1413-039

ORDER APPROVING HERITAGE RESOURCE PROTECTION PLAN

(Issued June 08, 2005)

On May 13, 2005, Northwest Power Services, Inc. (Licensee) filed a Heritage Resource Protection Plan (HRMP), pursuant to Article 401 of the license¹ and U.S. Forest Service (USFS) Condition No. 12, for the Buffalo River Hydroelectric Project No. 1413. The project is located on the Buffalo River in Fremont County, Idaho, and occupies lands within the Targhee National Forest

Article 401 requires the Licensee to develop an HRMP, in consultation with the USFS, to mitigate the project's effect on items of potential cultural, historical, archeological, or paleontological value discovered or reported during ground-disturbing activities or as a result of project operations. The Licensee sent a copy of the draft HRMP to the USFS on March 13, 2005. On April 21, 2005 the USFS responded with revisions to the plan, which were incorporated into the final HRMP.

Commission staff concludes that the final HRMP is consistent with the requirements of Article 401 and USFS Condition No. 12 and should be approved. Upon issuance of this order, the licensee should implement the HRMP.

The Director orders:

(A) The Heritage Resource Protection Plan, pursuant to Article 401 of the project license and USFS Condition No. 12 for the Buffalo River Hydroelectric Project, filed on May 13, 2005, is approved and made part of the license.

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

John E. Estep
Division of Hydropower Administration
and Compliance

¹ 109 FERC ¶ 62,077(2004).

From: [Bingman, Mark -FS](#)
To: [Katie Sellers](#)
Cc: [Mabey, Lee -FS](#); [Davy, Elizabeth -FS](#); gsmelser@fed.us; [Laura Cowan](#)
Subject: RE: Buffalo River Hydroelectric Project LIHI Certification - Request for US Forest Service Feedback
Date: Thursday, May 12, 2016 1:29:07 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image006.png](#)
[102715_FS_inspection_letter.pdf](#)

Hello Katie,

Our response to your questions is shown in **blue font** below.

Please, let me know if you need something more. Thanks!



Mark Bingman
Natural Resource Specialist
Forest Service
Caribou-Targhee National Forest
Ashton/Island Park/Dubois Ranger Districts

p: 208-652-1228
c: 208-313-7820
f: 208-652-7863
mbingman@fs.fed.us

PO Box 858
46 Highway 20
Ashton, ID 83420
www.fs.fed.us



Caring for the land and serving people

From: Katie Sellers [<mailto:Katie.Sellers@KleinschmidtGroup.com>]
Sent: Wednesday, April 13, 2016 9:41 AM
To: gsmelser@fed.us; Davy, Elizabeth -FS <edavy@fs.fed.us>
Subject: Buffalo River Hydroelectric Project LIHI Certification - Request for US Forest Service Feedback

Dear Mr. Smelser,

Kleinschmidt Associates is assisting Fall River Rural Electric Cooperative, Inc. (Fall River) with applying for certifications from the Low Impact Hydropower Institute (LIHI) for the Buffalo River Hydroelectric Project (FERC No. 1413) (Project). LIHI is a non-profit organization dedicated to reducing the impacts of hydropower generation through the certification of hydropower projects that have avoided or reduced their environmental impacts pursuant to LIHI criteria. LIHI has taken a first review of the Buffalo River LIHI certification application and has asked, before the submission of a final certification application, that we follow-up with the US Forest Service (USFS) to confer that the Project is operating in compliance with USFS conditions. With that said, could you please confirm/comment on the following?

-Confirm that USFS fish entrainment protection conditions issued during the Project's 2004 FERC relicensing process are still valid and the most recent conditions from your resource agency.

Entrapment conditions are still valid. (See attached inspection letter.)

-Confirm that the Project is operating in compliance with the USFS most recent fish entrainment protection conditions.

Fall River is in compliance.

-Confirm that the Project is operating in compliance with 2004 USFS Condition No. 12 Heritage Resource Protection.

Fall River is in compliance.

-Confirm that the Project is operating in compliance with 2004 USFS Condition No. 10 Recreation Plan.

Fall River is in compliance.

Please do let me know if I can provide you with any further information for this review or if I should be directed to another point of contact.

Thank you in advance for your time,
Katie Sellers

Katie Sellers

Regulatory Coordinator

Kleinschmidt

Office: 207-416-1218

www.KleinschmidtGroup.com



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penalties. If you believe you have received this message in error, please notify the sender and delete the email immediately.



United States
Department of
Agriculture

Forest
Service

Ashton/Island Park Ranger District

46 South Highway 20
P.O. Box 858
Ashton, ID 83420
208-652-7442
FAX: 208-652-7863

File Code: 2720
Date: October 27, 2015

Nicholas E. Josten
Geo Sense
2742 St. Charles Ave
Idaho Falls, ID 83404

Dear Nick,

The Island Park Hydroelectric facilities at Island Park Dam and Buffalo River Dam were inspected for compliance on September 25, 2015.

The facilities were found to be in compliance with the terms and conditions of the Special Use Permit and the 4(e) condition required by the Forest Service and the FERC License.

This constitutes our annual review of the facility and its operation as specified in the Forest Service manual Section 2770 and Article 104 of the FERC project license.

Sincerely,

ELIZABETH DAVY
District Ranger

cc: Fall River Electric 1150 North 3400 East, Ashton, ID 83420



APPENDIX J
RECREATION





Northwest Power Services, Inc.

ORIGINAL

July 22, 2005

Ms. Magalie R Salas, Secretary
Federal Energy Regulatory Commission
Mail Code: DHAC, PJ-12
888 First Street, NE
Washington, DC 20426

FILED
OFFICE OF THE
SECRETARY
2005 JUL 26 P 2:25
FEDERAL ENERGY
REGULATORY COMMISSION

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Ms. Salas,

For your review and approval, for the proposed construction activities at the Euffalo River Hydroelectric Project, FERC Project #1413, please find attached the following plans:

- Recreation Plan (USFS Condition #10) - 045
- Scenery Management Plan (USFS Condition #13) - 046

If you have any questions or need additional information please contact me at (208) 745-0834 or e-mail me at bsmith@nwpwrservices.com.

Sincerely,

NORTHWEST POWER SERVICES, INC.

Brent L. Smith
President

- cc:
- Mr. Dec Reynolds, Fall River Electric
 - Constantine Ijoumas, Director, D2S1, FERC - Washington
 - Harry T. Hall, Regional Engineer, FERC - Portland
 - Gary Vocellio, Environmental Staff Biologist, Idaho Department of Fish & Game
 - Gerrish Willis, Regional Hydropower Coordinator
 - Jim De Rito, Conseration Director, Henry's Fork Foundation
 - Steve Trafton, Executive Director, Henry's Fork Foundation
 - Lec Mabey, US Forest Service
 - Adrienne Keller, US Forest Service
 - Deb Mignogno, US Fish & Wildlife Service
 - Jim Fisch, US Fish & Wildlife Service
 - Scott, A. Grunder, Fishery Program Coordinator, Idaho Department of Fish & Game
 - Troy Sattle, Idaho DEQ
 - Keith Hobbs, Idaho Department of Parks & Recreation

Buffalo River Hydroelectric Project

FERC Project #1413

Recreation Management Plan



Prepared for:

Fall River Rural Electric Cooperative, Inc.
Ashton, Idaho

Prepared by:

Northwest Power Services, Inc.
Rigby, Idaho

Ecosystems Research Institute, Inc.
Logan, Utah

July 2005

Buffalo River Hydroelectric Project

FERC Project No. 1413

Recreation Management Plan

Prepared for:

Fall River Rural Electric Cooperative, Inc.
1150 North 3400 East
Ashton, Idaho 83420

Prepared by:

Northwest Power Services, Inc.
PO Box 535
Rigby, Idaho 83442

Ecosystems Research Institute
975 South State Highway
Logan, Utah 84321

Recreation Management Plan

1.0 Introduction

A license was issued to Fall River Rural Electric Cooperative, Inc. (Fall River) in November of 2004 by the Federal Energy Regulatory Commission (Commission) for the alteration and continued operation of the Buffalo River Hydroelectric Project. The 250-kilowatt (kW) run-of-river project is located on the Buffalo River near its confluence with the Henry's Fork of the Snake River, north of Ashton, in Fremont County, Idaho. The license stipulates several terms and conditions which must be met with approval from various resource agencies. The purpose of this document is to describe the site specific effects the construction and operation of this project will have on the area's recreational resources. It has been developed in response to Article #401.4(e) 10 and US Forest Service (USFS) Condition #10 of the license which states:

Within one year of license issuance the licensee shall file with the Commission a Recreation Management Plan that is approved by the Forest Service. The plan shall include:

-Licensee responsibility for construction, operation, and maintenance of recreation facilities and sites on National Forest System lands,

-Specific mitigation measures for existing recreation facilities and sites, including compliance with the Americans with Disabilities Act. The plan should include accommodations for the existing parking area and turn-around at the end of Forest Road #80136, Riverside Drive.

-Planning for future development or rehabilitation of recreation facilities or sites. Future development or rehabilitation of recreation sites shall include the parking area, the short trail connecting parking area to Box Canyon Trailhead and turn around on the south side of the Buffalo River, access via Forest Road 80136, Riverside Drive. Other future recreation developments should include interpretive signing for hydropower facilities and the Box Canyon trail along the Henrys Fork River. A site plan should be provided at scale of one inch equals 30, 40, 50 feet and approved by the Forest Service prior to construction activities.

In addition to consultation with the Forest Service, the licensee shall prepare the above plans after consultation with IDFG, FWS, IDEQ, and IDPR. The licensee shall include with the plans documentation

of consultation, copies of comments, and recommendations on the completed plans after the plans have been prepared and provided to the agencies, and specific descriptions of how agencies's comments are accommodated by the plans. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plans with the Commission. If the licensee does not adopt a recommendation, the filings shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to make changes to any plan submitted. Upon Commission approval, the plan becomes a requirement of the license, and the licensee shall implement the plan or changes in the project operations or facilities, including any changes required by the Commission.

2.0 Existing Recreation

Recreational use is considered an essential element to the Buffalo River Hydroelectric Project by the Forest Service. The project area supports numerous activities including fishing, swimming, non-motorized boating, bird watching, hiking, cross-country skiing, and snowmobiling. Streambank enterprises upstream of the project along the Buffalo River include a large developed campground site with 122 individual camping areas, sewer system, electrical hook-ups, a universally accessible fishing dock, two cross-country ski trails, the Buffalo Summer Home Area, a railroad right-of-way trail crossing the Buffalo River, Ponds Lodge (a year-round resort), and numerous private homes bordering the river. The project area is accessible from Highway 20 to the east on both the south and north side of the river. The southern access road, referred to as Riverside Drive or Road 80136 by the Forest Service, provides an undeveloped parking area and turnaround resulting from increased recreation activity (USFS 2002).

3.0 Recreational Development

The licensee will provide the following recreational improvements:

- Upgrades to the parking area associated with public access to the dam and the project's staging area. Including the short trail connecting the parking area to Box Canyon Trailhead and turn around on the south side of the Buffalo River, access via Forest Road 80136, Riverside Drive.
- Installation of a sign describing the project to visitors at the site, and a trail to the sign location.
- A 4 foot by 6 foot sign board will be installed at the parking area for the Box Canyon Trailhead and USFS use.

The following sections will address each of the recreational improvements the licensee is proposing in the project vicinity.

3.1 Parking Area and Turn Around

The current parking area and turn around is an ungraded pull off area lacking well defined boundaries. Once improved, the area will be well defined and will include one handicapped parking area. Improvements will include (see Site Plan):

- Defining the parking area boundaries by placing large rock either obtained during project excavation or from an outside source around the perimeter of the parking area.
- Designating a handicapped parking spot which will be 16 feet by 20 feet, clearly defined, and marked with the appropriate sign.
- leveling and grading (if necessary) the parking area and turn around.

3.2 Interpretive Sign

An interpretative sign will be located at the end of the proposed trail, within view of the dam and forebay. The sign will provide a history of the hydropower facility, describe its operations, benefits, and measures taken to mitigate environmental effects. The exact verbiage of the sign will be determined at a later date and will be approved by the USFS. See the Site Plan for location.

3.3 Trail to the Interpretive Sign

The interpretive sign will be located at the end of the proposed trail. The trail will be limited to a maximum of 5% slope. The interpretive sign will overlook the forebay and dam, also the interpretive sign location will have a 60 inch by 60 inch area that will have 6 inch barriers on three sides of the area and if needed handrails. See the Site Plan for location.

3.4 Box Canyon Trailhead Sign

A 4 foot by 6 foot sign board will be installed at the parking area for the Box Canyon Trailhead. In addition, it will allow an area for the Forest Service to post information about current recreational opportunities or other information of possible interest to the public. See the Site Plan for location.

4.0 Maintenance

The licensee will be responsible to build the recreational developments describe in these plan. After the completion of the construction activates the licensee will remain responsible for the Interpretive Sign, all other recreational developments will be turned over to the USFS.

5.0 Comments and Responses

IDFG April 13, 2005

IDFG Comments 1

This section addresses, in part, "future development or rehabilitation of recreation facilities or sites". We request that the facility owners/operators cooperate with IDFG, Idaho Department of Parks and Recreation, and the USFS and consider building a non-motorized boating access in the backwaters of the facility. This river corridor is, in our opinion, not appropriate for motorized boating. However, it is designated by the USFS as "Eligible Recreational River" from the confluence of Elk Creek to the forebay of the hydropower project.

Response: The licensee will work in cooperation with IDFG and the USFS in outlining future recreational developments associated with the project area. The addition of boat ramp as a project feature has little potential to conflict with the hydroelectric project's features. However, it is not the licensee's intent to include this addition as one of "their" development features.

IDFG Comment 2

IDFG believes that quality recreational fishing and wildlife watching opportunities would perhaps be opened by allowing people to take out canoes or personal non-motorized watercraft such as pontoon boats near where the "Danger-No-Boating" signs now are. Canoes and personal non-motorized watercraft would be able to enter the river either at the USFS fishing pier, USFS campground, or Highway 20 bridge for a leisurely and youth-friendly fishing and floating experience. This would necessitate a landing and path to take their boat out near the parking area at the end of Riverside Drive. We believe that the groups should cooperate and explore this possibility as part of your recreational plan.

Response: The licensee will work in cooperation with IDFG and the USFS in outlining future recreational developments associated with the project area. The addition of a landing/boat ramp as a project feature has little potential to conflict with the hydroelectric project's features. However, it is not the licensee's intent to include this addition as one of "their" development features.

IDFG Comment 3

We understand that operators of the hydropower facility are perhaps the primary user of the USFS road on the northern shore of the Buffalo River Below the Highway 20 bridge. Please disclose any plans you have to gravel, grade, harden or upgrade this road for access to your facility which may be used by the public.

Response: As was previously discussed with the USFS, the Licensee will continue to put

pit-run in the low areas of the road. The Licensee responsibilities will be outlined in the USFS Special Use Permit.

USFS April 21, 2005

USFS Comment 1

In general, the Recreation Plan as stated in section G is an outline of objectives to be included in the site plan that is to be developed. In general we agree with these objectives with some exceptions. The Forests objectives for this site are as follows:

- **Parking Lot** - A gravel surface parking lot with six parking spaces. Located on the southwest side of existing loop on the end of the road. Parking lot will include rock parking barriers that are partially buried. (Precautions will need to be taken to preserve the island that exists in the loop drive on the end of the road prior to construction.)
- **Trailhead Bulletin Board** - A 4 by 6 foot wood bulletin board mounted on treated 4"x4" posts. This would be located next to the parking lot at the Box Canyon Trailhead
- **Interpretive Trail Overlook and Signs** - A gravel surface trail from the parking lot to the overlook where 2-3 interpretive signs would be placed that provide interpretation for the hydro project. This trail and overlook would be accessible with a gravel surface of 3/4" minus gravel. The location for this overlook and signing is tentatively identified as an area just below the dam on a naturally occurring shelf above the river.
- **Trail to Dam** - A trail from the parking lot to the dam that is constructed of treated timber steps (if needed) that are backfilled with 3/4" minus gravel. (It may be possible to just gravel the trail depending on the grade of the trail)

No formal consultation has occurred between the licensee and the Forest Service regarding the preparation of the recreation plans. And to our knowledge the site plan requested in Condition No. 10 has not been prepared by the licensee or approved by the Forest Service.

Response: It is the licensee's intent to construct and install one sign, as is required under Condition #11 of the license. The remainder of proposed recreational improvements can be found in the Recreational Management Plan (Pages 2-4) which includes another sign for the Box Canyon Trail. The following page contain the site plans has been added to this plan.

HFF April 22, 2005

HFF Comment 1

Will the Box Canyon trailhead at the parking area be accessible for hikers during the construction? If so, will a parking area be designated for these users during construction?

Response: No, after consultation with the USFS, the Licensee will close the trailhead.

LARGE-FORMAT IMAGES

One or more large-format images (over 8½" X 11") go here. These images are available in E-Library at:

For Large-Format(s):
Accession No.: 20050727-0187

Security/Availability:

- PUBLIC
- NIP
- CEH
- NON-PUBLIC/PRIVILEGED

File Date: 7/26/05 Docket No.: P-1413

Parent Accession No.: 20050727-0185

Set No.: 1 of 1

Number of page(s) in set: 3

***Correspondence
on
Plan***



United States
Department of
Agriculture

Forest
Service

Caribou-Targhee
National
Forest

1405 Hollipark Drive
Idaho Falls, ID 83401
208-524-7500

File Code: 2770
Date: April 7, 2005

Brent L. Smith
Northwest Power Services, Inc
P.O. Box 535
Rigby, ID 83442

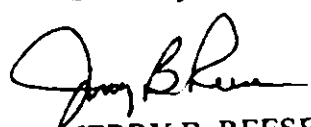
Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Brent:

The USDA Forest Service has received for review and comment several plans submitted by Northwest Power Services, Inc. These plans are required by the Buffalo River Hydroelectric Project, Federal Energy Regulatory Commission (FERC) Project # 1413 License issued November 5, 2004. These plans are dated March 11-23, 2005 and request comments within 30 days. As identified and agreed upon in your telephone conversation with Lee Mabey on March 30, 2005, the USDA Forest Service will review all of these plans and provide one response to Northwest Power Services, Inc. by April 23, 2005, which is 30 days from the date the last plan was submitted.

If you have any questions or need additional information, please contact Lee Mabey, Team Leader at (208) 557-5784.

Sincerely,


JERRY B. REESE
Forest Supervisor

cc: Ms. Magalie R. Salas, Secretary, Federal Energy Regulatory Commission, 888 First Street
N.E., Washington, DC 20426



IDAHO FISH & GAME

Upper Snake Region
4279 Commerce Circle
Idaho Falls, Idaho 83401

8

Dirk Kempthorne / Governor
Steven Huffaker / Director

11 April 2005

Brent Smith
President, Northwest Power Services Inc.
PO Box 535
Rigby ID 83442

**RE Buffalo River Hydroelectric FERC #1413 Article 406 Condition 14 Fish Screen,
and Article 405 Fishway Design:**

Dear Brent:

Idaho Department of Fish and Game (IDFG) has reviewed the above referenced letters and accompanying diagrams. IDFG has been involved in FERC #1413 re-licensing and associated articles of the license since the process' inception. We are in receipt of letters and engineering drawings for (1) the proposed fish screen mechanism as required in article 406, letter dated March 22, 2005 and (2) the proposed fishway design as required by article 405, letter dated March 11, 2005.

Fish Screen Mechanism, Article 406:

We support the intake and fish screen as proposed in the drawings. We believe that the intake section of the screen, and the 1/4 inch design openings, will serve to protect all but the very smallest of fish from passing into the turbines. Other documents relate to the estimated 0.8 feet per second approach velocity of the water going through the intake screen. This velocity should serve to protect all but the smallest of fish from becoming impinged upon the intake screen. The dimensions and estimated water velocities approaching the screen are acceptable to us.

We understand that the re-licensing process necessitates monitoring of this intake screen. We are unsure at this point, how the screen will be cleaned and are accepting that it will somehow occur manually. That is, no additional hardware, or grates will be attached to the screen mechanism. We would like to see the proposed method of cleaning the intake screen, the schedule it might occur, and any conceptual plan you might have for monitoring fish impingement.

Fishway Design, Article 405:

IDFG staff has worked in conjunction with your staff and consultants, and with those from the U.S. Forest Service, and the Henry's Fork Foundation to develop the best design possible given the conditions under which this fishway must be built and function. We believe that together, we have provided recommendations resulting in a design with an excellent likelihood of functioning successfully. We are satisfied that you have provided ample opportunity for IDFG to review and consult in the design phase, and you have recommended a final design acceptable to us.

It will be critical to monitor construction of the fishway to assure that slopes, pool sizes, pool width/length ratios, and all other design features are constructed appropriately. To this end, we anticipate having our Environmental Staff Biologist Gary Vecellio observe construction as the plan becomes a reality. We also hope you will invite others who helped in this design, and hope you have retained the services of the engineering firm (Sunrise Engineering Inc.) responsible for the drawings to monitor fishway construction.

We are concerned that several very specific design recommendations actually appear in the final product. Critical design features include:

- Pool width/depth ratios of 1:1 or larger. Each pool must be as long, or longer than it is wide to reduce the likelihood of patterns of turbulence within and among pools.
- Wing walls where the water inside the fishway turns 180 degrees must be angled at 45 degrees as shown in sheet number 4.
- Piping for the auxiliary water flow is critical to fishway efficiency. The additional flow provided at the valve box near the downriver end of the fishway must be angled parallel to the outflow of the fishway.
- It is critical that the entrance pool (large drawing, sheet 10) of the fishway (for fish moving upstream) be located in the existing natural pool of the Buffalo River. The pool length and fishway total length is designed to utilize this natural resting pool for fish to begin swimming into the fishway.
- Rock to be used to line the floor of the fishway must be rounded river rock, not angular broken basalt. These should average 4" to 6" mean diameter (sheet 4).
- Baffle boards installed between pool sections are to be designed specifically as shown in Drawing C, Sheet 5. To achieve both streaming and plunging flows within the fishway, we anticipate needing this specific design. The orifice within the baffle board sections should initially be placed opposite (not below) the notch in the top baffle board (drawing C, Sheet 5).
- It is critical that the design is able to be modified post-construction. By this we mean that the baffles will be able to be removed, replaced, and changed in design and orifice location. This will necessitate that slots are used to place these baffle boards (drawings C & E, sheet 5).

We are concerned that you may need to engineer and construct some form of cage, or catch holding mechanism at the upstream end of the fishway for use in your monitoring program. This is not shown in your drawings. Also, is additional engineering necessary to de-water the fishway for moving or replacing baffles. Should drawings of the mechanisms needed to de-water the fishway accompany this package?

IDFG supports your plans and engineering for the fish screen and fishway. We believe that the designs and engineering approaches taken will be likely to allow upstream and downstream passage of salmonids down to 100mm in length. We appreciate being an integral part of the design process for these components. We believe you have entirely complied with FERC requirements within Articles 405 and 406 to provide consultation to IDFG in these phases.

If you have any questions, please contact our Environmental Staff Biologist Gary Vecellio at 525-7290.

Sincerely,



Robert J. Saban
Regional Supervisor

RJS:gmv

Cc: Natural Resource Policy Bureau, IDFG
Phil Jeppson, IDFG Engineering
Fisheries Bureau, IDFG
Jim Fredericks, IDFG
Lee Mabey, USFS
Jim DeRito, HFF
Scott Christensen, GYC



IDAHO FISH & GAME

Upper Snake Region
4279 Commerce Circle
Idaho Falls, Idaho 83401

Dirk Kempthorne / Governor
Steven Huffaker / Director

13 April 2005

Brent Smith
President, Northwest Power Services Inc.
PO Box 535
Rigby ID 83442

RE Buffalo River Hydroelectric Project, FERC 1413, Construction Plans:

Dear Mr. Smith :

Idaho Department of Fish and Game (IDFG) has reviewed the above referenced report and plans, consulted with the U.S. Forest Service (USFS) and several non-governmental entities, and we submit the following comments for your consideration. IDFG has been involved in FERC #1413 relicensing and associated articles of the license since the beginning. The construction plans cover 11 sections pertaining to FERC #1413, including Fishway and Fish screen monitoring plan (Article 407), Public Safety Plan (Article 410, and USFS Condition #15), and Recreation Plan (USFS Condition #10).

Fishway & Fish Screen Monitoring Plan (Article 407), Section D:

As noted in our letter dated 11 April 2005, we support the intake and fish screen as proposed in the drawings. We also support the fishway diagrams with consideration to our comments of 11 April 2005.

Section 2.1 Fish Screen Monitoring states that the approach velocity of water toward the fish screen will be 0.8 feet per second. We request that basic measurements be made to establish this approach velocity upon plant operation. Further, we request that you attempt to document a zero 'sweeping' velocity along the fish screen.

Section 2.2 Fish Ladder Monitoring- Please provide a diagram or engineering drawings of the fish trap to be used in monitoring upstream fish use of the fishway. We recognize that the drawing may be conceptual at this point. We request that the monitoring project be designed to verify that downstream fish passage through the fishway occurs as well as upstream fish passage. We recognize that the majority of flow, and presumably fish, will wash downstream via the overflow.

Please state that you will allow access to IDFG, and the U.S. Forest Service (USFS) to all fishway facilities and screens in order to monitor conditions. We intend to take flow measurements within the fishway at varying water levels in hopes of achieving the best fish passage conditions possible by altering baffle shapes and orifice positions if necessary.

Diversion Operation Plan, Article 410, Section E:

Please comment on your need to remove sediment from the forebay of the project in the past. Your statement that it will not be necessary may be correct. But, if sediment removal is necessary due to an upstream event, we would like your plans on how it will occur.

Under Procedures for flood conditions, you state that you intend to "pull the stop logs increasing flow through the dam spillway" if this becomes necessary. IDFG requests that, should this occur, you closely monitor for changes in the streambed at the downstream entrance to the fishway and below. The fishway is designed to begin at a critical pool along the upstream migration path. If pulling stop logs to increase flow through this section occurs, we need to ensure that the stream channel is monitored for alteration. If the fishway entrance pool is changed or destroyed, or the fishway entrance conditions altered, IDFG needs assurance that it will be reconstructed. Your procedures for flood conditions must incorporate monitoring of the channel from the fishway entrance downstream at least 50 meters.

Public Safety Plan, USFS Condition #7, Section F:

You claim that the river corridor between the highway 20 bridge and the hydropower backwaters is "a very low use recreational area". We do not agree, but suggest that fishing is an important recreational use in this area. Other uses such as skiing and waterfowl watching are also popular. We suggest that the primary factor keeping fishing use lower than what might be expected is a lack of access along this section of river. The Buffalo Summer Home area on the south river shore detracts from the public accessing the river corridor along the most frequently traveled shore (Forest Road 136). We suggest that the hydropower facility owners consider cooperative efforts to increase recreational access to this river from the southern shore (see next section).

Exhibit B shows approximate locations of "Danger-No Boating or Swimming Beyond this Point" signs. We would like to know the rationale for the location of these signs. Are there conditions in your FERC license stating that these signs are placed a specific distance from the dam? Are these recommendations or regulations given to you in your Special Use Permit by the USFS? We would like you to consider and report what is necessary (by law or permit condition) in terms of this signage. If this signage is entirely voluntary, then we would like to cooperatively re-consider what boating usage may be reasonable and safe in the forebay above the dam.

Recreation Plan, USFS Condition #10, Section G:

This section addresses, in part, "future development or rehabilitation of recreation facilities or sites". We request that the facility owners/operators cooperate with IDFG, Idaho Department of Parks and Recreation, and the USFS and consider building a non-motorized boating access in the backwaters of the facility. This river corridor is, in our opinion, not appropriate for motorized boating. However, it is designated by the USFS as "Eligible Recreational River" from the confluence of Elk Creek to the forebay of the hydropower project.

IDFG believes that quality recreational fishing and wildlife watching opportunities would perhaps be opened by allowing people to take out canoes or personal non-motorized watercraft such as pontoon boats near where the "Danger-No Boating" signs now are. Canoes and personal non-motorized watercraft would be able to enter the river either at the USFS fishing pier, USFS

campground, or Highway 20 bridge for a leisurely and youth-friendly fishing and floating experience. This would necessitate a landing and path to take their boat out near the parking area at the end of Riverside Drive. We believe that the groups should cooperate and explore this possibility as part of your recreational plan.

We understand that operators of the hydropower facility are perhaps the primary users of the USFS road on the northern shore of the Buffalo River below the Highway 20 bridge. Please disclose any plans you have to gravel, grade, harden or upgrade this road for access to your facility which may be used by the public.

Thank you for the opportunity to comment on this document. If you have any questions, please contact our Environmental Staff Biologist Gary Vecellio at 525-7290.

Sincerely,



R. J. Saban
Regional Supervisor

RJS:gmv

Cc: Natural Resource Policy Bureau, IDFG
Adrienne Keller, USFS
Lee Mabey, USFS
Jim DeRito, HFF
Scott Christensen, GYC
Mary Lucachick, IDPR



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

900 North Skyline Dr., Suite B • Idaho Falls, Idaho 83402-1718 • (208) 528-2650

Dirk Kempthorne, Governor
Tony Hardesty, Director

April 20, 2005

Mr. Brent Smith
Northwest Power Services, Inc.
PO Box 535
Rigby, Idaho 83442

RE: BUFFALO RIVER HYDROELECTRIC PROJECT (FERC # 1413) CONSTRUCTION PLANS

Dear Mr. Smith:

The Idaho Department of Environmental Quality (IDEQ) has reviewed your construction plans, dated March 16, 2005. We would offer the following comments and suggestions:

General Comments

All in-stream excavation should be conducted in a manner which minimizes sediment transport and turbidity. This can be accomplished through effective use of best management practices (BMPs), timing, and precise excavation.

Specific Comments

Section 3.1.1. The temporary storage area should be separated from the river with silt fence or suitable erosion control best management practice.

Section 3.2.1. The turbidity of the river below the location of the coffer dam and removed water shall not exceed state water quality standards (see IDAPA 58.01.02 for details). Real time monitoring should be reviewed during the activity so that construction or pumping activities can be curtailed if necessary.

In addition, IDEQ will not be issuing any additional water quality certifications for the construction outlined in the plan. The November 28, 2003 water quality certification issued by this office covers the construction activities detailed in your construction plans.

If IDEQ can clarify any of our comments or can be of additional assistance, please do not hesitate to contact me at 208.528.2650 or tsaffle@deq.idaho.gov.

Sincerely,

Troy Saffle
Regional Water Quality Manager
Idaho Falls Regional Office

- c: James Johnston, Regional Administrator
- Gary Vecellio, IDFG
- Lee Mabey, USFS

IFRO

30061



United States
Department of
Agriculture

Forest
Service

Caribou-Targhee
National
Forest

1405 Hollipark Drive
Idaho Falls, ID 83401
208-524-7500

File Code: 2770

Date: April 21, 2005

Brent L. Smith
Northwest Power Services, Inc
P.O. Box 535
Rigby, ID 83442

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Brent:

The USDA Forest Service has received for review and comment several plans submitted by Northwest Power Services, Inc. These plans are required by the Buffalo River Hydroelectric Project, Federal Energy Regulatory Commission Project No. 1413 License issued November 5, 2004. These plans are dated March 11 to 23, 2005 and request comments within 30 days. As identified and agreed upon in your telephone conversation with Lee Mabey on March 30, 2005 and documented in my letter to you dated April 7, 2005, the USDA Forest Service has reviewed all of these plans and is providing one response to Northwest Power Services, Inc. by April 23, 2005, which is 30 days from the date the last plan was submitted.

Detailed Forest Service comments on the attached plans are included within Enclosure 1. A total of twelve plans were submitted and the Forest Service is approving eight of the twelve plans with some edits (see Enclosure 1). The plans which are not approved include the Construction, Recreation, Safety and Scenery Plans. It is anticipated that Forest Service comments will be addressed in all the plans and additional details (as requested in Enclosure 1) will be provided to the Construction, Recreation, and Scenery Plans prior to them being resubmitted for approval.

We appreciate the opportunity to review and comment on these plans and look forward to working with you on the approval of the Construction, Recreation, and Scenery Plans.

If you have any questions or need additional information, please contact Lee Mabey, Team Leader at (208) 557-5784.

Sincerely,

JERRY B. REESE
Forest Supervisor

Enclosure



cc: Ms. Magalie R. Salas, Secretary, Federal Energy Regulatory Commission, 888 First Street
N.E., Washington, DC 20426

Enclosure 1

Comments on Buffalo River Hydroelectric Project (P-1413) Plans

Condition No. 1 - Approval of Final Design (Article #401)

Prior to undertaking activities on National Forest System lands, the Licensee shall obtain written approval from the Forest Service for all final design plans for project components that the Forest Service deems as affecting or potentially affecting National Forest System lands and resources. As part of such prior written approval, the Forest Service may require adjustments in final design plans and facility locations to preclude or mitigate impacts and to assure that the project is compatible with on-the-ground conditions. Should the Forest Service, the Commission, or the Licensee determine that necessary changes are a substantial change, the Licensee shall follow the procedures of Article 2 of the license. Any changes to the license made for any reason pursuant to Article 2 or Article 3 shall be made subject to any new terms and conditions the Secretary of Agriculture may make pursuant to section 4(e) of the Federal Power Act.

The Forest has received for approval stamped engineering plans for the intake structure and screen, fish ladder, and sheet piling. The fish ladder will be commented on under Article 405 Upstream Fishway Design Drawings and under Condition No. 13 Scenery Management Plan.

We offer the following comments on the Final Design Plans and Specifications:

- The sheet piles placed around the dam structure are supposed to be grouted in place using a tremie. It is important that the tremie be positioned as close to the point of placement as possible to avoid segregation of the grout as it passes through the water. A note in the specs or plans would be appropriate.
- The Erosion Control Plan Section 3.2 indicates that continuous turbidity monitoring will take place during construction of the intake, grouting sheet piles, construction of fish ladder, and removal of coffer dam. There does not appear to be any mention of turbidity monitoring in the plans or specs. There should be a spec indicating the required type of sampling device, max turbidity, and action to take if levels are exceeded. Monitoring of pH levels is recommended during the grouting process (see Erosion Control Plan comments).
- The Erosion Control Plan Sections 3.2.7 and 3.2.8 indicates the use of erosion control devices such as silt fence and straw bales to limit the intrusion of sediment into the river. There is no mention of erosion control in the plans or specs, therefore, it is recommended that the required erosion control devices and placement be included in the plans and specs.
- There is a lack of detail in the construction plans which do not allow a full determination of how changes due to project construction may impact or change

recreational access or affect scenic values. For example the rocky cliff area between the intake and the powerhouse is likely to be modified to provide a safer access to the screen, dam and fish ladder facilities, however, there is no acknowledgement or description of these changes identified. Previously there was mention of a self cleaning mechanism for cleaning the intake screen yet no detail has been given. In addition the construction of the access across the dam is not described. In earlier conversations we discussed the need that rock used to create a flat driveable surface across the top of the dam needed to be similar in color to the existing rock. We also provided information regarding a possible pit source on the Forest where arrangements could be made to secure the needed rock.

- Plans need to show full detail of fish ladder exit or water entrance.

At this time without full detail it is not possible for the Forest to approve these plans or predict the full impacts of this project on other items of concern to the Forest.

Condition No. 16 - Erosion Control Measures Plan (Article # 302 - Section A of Construction Plans)

At least 90-days prior to any ground-disturbing activity, the Licensee shall file with the Commission an Erosion Control Measures Plan that is approved by the Forest Service. The Plan shall include measures to control erosion, stream sedimentation, dust, and soil mass movement. Upon approval, the Licensee shall implement the plan.

We have the following comments regarding Section A of the Construction Plan:

General Erosion Control Measures

3.1 - 1 The Forest requests that the staging area be moved to an approved location southwest of the proposed staging site. The staging area needs specific locations to be identified for spoil storage, a hazardous materials storage area and a concrete cleaning area to avoid unnecessary site impacts. The plan needs to state specifically that the area outside of the staging area will not be used. The edge of the spoil piles needs to be at least 50 feet away from the slope break near the edge of the trees not 50 feet from the river. The hazardous materials need to be located at least 150 feet from the river. A suggestion would be to place it in the southeast corner of the staging area. The staging area needs to have a silt fence or equivalent between it and the river. Restoration of the staging area needs detailing in the Revegetation Plan.

3.1 - 2 It is stated that disturbances beyond permanent roads and parking areas will be revegetated. Treatment of access roads, project roads and parking areas need to be defined and approved in the recreation site plan, Road Use Permit and Special Use Permit. A recreation site plan has not yet been prepared (see comments under Recreation Plan). The Erosion Control Plan should state the specific page and section in the Vegetation Management Plan that addresses how areas will be revegetated.

3.1 - 4 Practices to confine, remove and dispose of excess concrete, cement, and other mortars or bonding agents, including measures for washout facilities needs to be incorporated. A silt fence or equivalent needs to surround the cleaning area. Any waste materials deposited during the cleaning process are to be removed and disposed of properly. Runoff into the river is not permitted. Equipment cleaning needs to be done at least 50 feet away from the slope break near the edge of the trees.

3.1 -5 The Forest requests that decomposable fiber mats are replaced by hydro mulch as hydro mulch is less susceptible to impacts by animals that sometimes get entangled in fiber mats. If straw or straw bales are used they shall be certified weed free. Figure A-3 shows an access road in red to the dam with no explanation of surfacing or how it will be made passable nor does the Vegetation Management Plan provide details concerning its restoration. No detail is given on the concrete truck access, the more native soil that can be left in place the easier site restoration will be.

3.1 -7 The agreement and terms of use for the Riverside Road access road will be covered under the Road Use Permit Condition # 8.

In general sediment and erosion control should include project perimeter controls such as silt fencing, fiber wattle barriers and/or dikes, and ditches, as needed. To the extent practicable, best management practices (BMPs) will be used to contain, control and screen stormwater from entering the river and associated wetlands and/or riparian areas. Inside the perimeter protection, BMPs will be used to limit and control the velocity of water running over and through the construction site to limit the amount of sediment picked up by stormwater. This will include placing check dams or channel liners in drainage channels, covering high use areas with coarse materials that will allow water infiltration but resist erosion and prevent rutting and mud puddles from forming during storms.

Construction of the New Intake Structure

3.2.1 How and to what degree will the existing rock outcrop in the area by the intake be modified? Incorporate state standards for turbidity as listed in 4.2 if standards are exceeded work should be halted until turbidity can be minimized to acceptable standards.

Water pumped from any in-river excavation or other disturbances should not be placed into any waterbody until it meets Idaho Department of Environmental Quality (IDEQ) water quality standards. The water should be land applied to suitable uplands or stored in settling basins that are large enough to treat all pumped water.

Sealing the Upstream Face of the Dam

3.2.2 Incorporate state standards for turbidity and pH as listed in 4.2 if standards are exceeded work should be halted until turbidity or pH can be minimized to acceptable standards. Cleaning of concrete and grout implements needs to be done at least 50 feet away from the slope break near the edge of the trees and within the confines of a defined area within the staging site. Waste and residue from the cleaning site must be removed and disposed of properly offsite.

Pre-Construction Excavation

3.2.3.1 Include state standards listed in 4.2, if standards are exceeded work should be halted until turbidity or pH can be minimized to acceptable standards. Rock generated by construction activities, such as fishway shelf excavation, may be used for construction purposes. Use of native rocks, such as rocks within the stream channel or dam face, for construction purposes is prohibited. Disturbance to the stream channel should be addressed so that at the end of the project the area looks much like it did at the beginning of the project while insuring the fish ladder functions appropriately.

Construction of the Fish ladder

Berms need to be removed and the area left in a manner that the aesthetics are preserved and the fish ladder functions appropriately. Include state standards for turbidity and pH listed in 4.2 of which if standards are exceeded work should be halted until turbidity or pH can meet state standards.

Staging Area

3.2.7 Hydro mulch is preferred over fiber mats (such as excelsior rolls with plastic mesh) since the plastic mesh is an entanglement hazard for people and wildlife.

Dam Access

3.2.8 Restoration of this area needs to be done in coordination with the site plan. Hydro mulch is preferred over fiber mats.

Construction Area

4.1 Specify certified weed free straw will be used as identified in the revegetation section.

Buffalo River Water Quality

4.2 The Idaho DEQ standard for pH of 6.5-9.0 needs to be incorporated. The lower monitoring site should be within the Buffalo River proper above the confluence with the Henrys Fork. Field monitoring should be done with field calibrated equipment so if standards are exceeded, construction can be stopped immediately and construction methods can be evaluated and changed to ensure standards are met. Any violations along with changes made to avoid further violations shall be reported within one day of the occurrence to the designated Forest Service Inspector and Troy Saffle of Idaho DEQ. Any resulting fish kills and their extent (although not expected) shall be reported immediately to Idaho Fish and Game and the Forest Service. All state standards need to be met.

It is not sufficient to provide continuous monitoring and then report violations post construction. Field monitoring is recommended during times likely to create problems such as: the initial dewatering and building of cofferdams, sheet pile placement and fish ladder construction. Field monitoring of pH is needed during grouting procedures and cement work. The Forest recommends an additional monitoring site or at least grab samples be taken in the immediate discharge area or point of impact.

Upon incorporation of these comments this plan is considered approved.

Temporary Emergency Action Plan (Article #304 - Section B of Construction Plans)

The Forest accepts this plan as written.

Hazardous Substance Plan (Article #404 – Section C of Construction Plans)

2.1 Hazardous Substances to be on Site

Please add: fueling of equipment will occur at least 150 feet from any stream waterbody, except for equipment that is permanently stationed (*i.e.*, crane) or onsite pumps that are continuously running. In these instances precautions will be taken so if spilled, fuel will be contained and contamination prevented. Machinery and implements that are used during the project will be in good repair, and free of excessive leaks. When changing hydraulic lines, care will be taken to keep hydraulic fluid from entering any waterbody or soils. It is recommended as a preventative measure that refueling in the staging area be done within a containment cell.

2.2 Storage and Containment of Hazardous Materials

Locate the hazardous material storage area in the southeast corner of the staging area at least 150 feet from the stream. Fueling and other chemicals, including small fuel cans, oil and hydraulic fluid containers and concrete chemicals, will be stored at least 150 feet from any stream channel, wetland or waterbody and must be fully contained.

2.3 Cleanup and Spill Containment

Spill containment kits, capable of containing the amount of hazardous products capable of being spilled, will be kept at the construction site and used in case of spills. Delete “the contaminated soil will be removed and disposed of in a manner predetermined by the USFS” and replace with “Reporting and Remediation guidelines as required by IDEQ, OSHA, and EPA will be followed.”

Upon incorporation of these comments the Hazardous Substance Plan is considered approved.

Fishway and Fish Screen Monitoring Plan (Article # 407 – Construction plans Section D)

2.1 Fish Screen Monitoring

Change first sentence spelling of mortalities to mortalities. In addition to recording species, number and length please add likely cause of death such as: angling, impingement, or avian. Predators in the area are likely to key into mortalities if they are occurring and will likely remove many dead fish before they can be enumerated. Observations should include looking for signs of predators (presence, tracks, scat, etc.) and recording these instances. To minimize possible loss to predators, screens need to be cleaned and checked early in the morning and late in the afternoon.

Only occasional mortalities are expected. If high numbers of mortalities are observed these will be reported immediately. Reporting of mortality data is requested to be given in an electronic format using Microsoft Excel or in a format capable of being imported easily into Excel.

2.2 Fish Ladder Monitoring

Please add a sentence stating that the licensee shall be responsible for the term of the license to ensure proper function of the ladder. The ladder shall be considered properly functioning when it is working as designed with the orifices and auxiliary intake being free of debris with a uniform depth of water over each weir and the entrance submerged to the proper depth with sufficient flows to provide attraction to the entrance. Proper function of the ladder needs to be assured daily and documented on a weekly basis with frequency and type of problems reported.

The fish trap that is to be installed at the exit of the fish ladder needs to conform to the following:

- have a screen or vertical opening of no greater than 5/8"
- be 3-5 feet wide and at least 5 feet long to provide refuge from intake
- be secured to prevent tampering with access provided to IDFG, HFF, and USFS,
- designed to allow processing in the dry
- have a secured opening where fish can pass quickly through when not being captured
- be designed so as to prevent fall back into the fish ladder of trapped fish
- be designed to allow crowding of the fish to ensure efficient capture for processing
- be removable
- designed so flows to the ladder can be shut off for maintenance or inspection

Under licensee responsibilities, please add that modifications to flow patterns below the dam could include minor restructuring of the dam face or approach channel to assure efficient attraction and passage. If sealing of the dam is not successful and a majority of water continues to leak through the dam it may be necessary to alter portions of the channel below the dam to facilitate fish finding the ladder.

As mentioned in NPSI April 15, 2004 letter the ongoing cooperation with HFF concerning the video monitoring is expected to continue. In this same spirit of cooperation it is expected that if agencies or NGO's wish to further investigate questions concerning the effects of the Buffalo River Hydroelectric Project that the licensee would provide assistance through on-site personnel.

3.0 Agency Cooperation and Design Modifications

It is requested that NPSI's April 15, 2004 letter regarding monitoring be incorporated by reference into the monitoring plan.

Upon incorporation of these comments the Fishway and Fish Screen Effectiveness Monitoring, Evaluation, and Maintenance Plan is considered approved.

Condition No. 15 - Diversion Operation Plan (Article #410 – Construction Plans Section E)

Within 1 year of license issuance the Licensee shall file with the Commission a Diversion Operation Plan that is approved by the Forest Service. At a minimum the Plan shall address:

- *A policy and methodology for passing large woody debris fully intact over the dam as mentioned in license application,*
- *Methods for sediment flushing or removal,*
- *Procedures for flood conditions, methods of erosion prevention in the diversion area and spillway channel,*
- *Trash and debris removal, and*
- *An implementation schedule and maintenance program.*

Upon Commission approval, the licensee shall implement the plan. The Commission may require changes to the plan to ensure adequate protection of the environmental scenic and cultural values of the project area.

Continued equipment access across the dam post construction has not been approved. It would be prudent during construction to incorporate other methods to pass large debris through the spillway such as a winching system.

Fine sediment is currently flushed during periods of high runoff. We agree sediment flushing is not an issue given past operation and stream type.

As part of the maintenance plan ensure that the spillway is kept free of debris that could hinder its effectiveness during high flow events. All debris needs to pass beyond the concrete sill and at an elevation below the concrete apron. The fish ladder is likely to provide a new catch point for debris. This debris may need to be passed on to minimize erosion and conflicts with ladder operation.

Upon incorporation of these comments the Diversion Operation Plan is considered approved.

Condition No. 7 – Public Safety Plan (Construction Plans Section F)

Within 6 months of the license issuance, the Licensee shall file with the Commission a Public Safety Plan approved by the Forest Service. This plan will identify potential hazardous situations, evaluate all project facilities for conformance with the International Building Code, and identify measures necessary to bring project facilities in conformance with the Code, and shall include a schedule for completion of any hazard abatement measures. The plan will also identify how the project complies with FERC's Guidelines for Public Safety at Hydropower Projects (March 1992).

The Licensee shall perform daily (or on a schedule otherwise agreed to by the Forest Service) inspections of Licensee's construction operations on National Forest System lands while construction is in progress. The Licensee shall document these inspections (informal writing sufficient) and shall deliver such documentation to the Forest Service on a schedule agreed to by the Forest Service. The inspections must include fire plan compliance, measures to provide for public safety, and environmental protection. The Licensee shall act immediately to correct any items found to need correction.

This plan is to identify potential hazardous situations, evaluate all project facilities for conformance with the International Building Code, and identify measures necessary to bring project facilities in conformance with the Code, and shall include a schedule for completion of any hazard abatement measures. The plan will also identify how the project complies with FERC's Guidelines for Public Safety at Hydropower Projects (March 1992). The Forest has no knowledge or evidence that this has been completed.

The Forest has the following additional comments:

- Reference within Safety Plan what standards are being followed for example OSHA, Manual of Uniform Traffic Control Devices (USDOT), or local ITD standards.
- Correct spelling in the plan from sight to site.
- It should be stated that the area will be signed and closed to public access during construction at an appropriate turnaround location such as the snowmobile parking area or intersection of road from the Box Canyon Campground. Area closure signing needs to be coordinated with issuance of a Forest Service Closure Order for the site.
- To facilitate public safety and awareness post weekly a construction schedule at the snowmobile parking area and provide a copy to the Island Park Forest Service Office.
- Local residents will need access to summer homes.
- Roads and highways should be signed as appropriate to comply with federal and state highway standards for construction and heavy truck traffic.
- As warranted signs should be posted upstream with appropriate warnings.
- Documentation of inspections and compliance shall be provided twice a week for the project inspector on Monday and Thursday.
- A sign stating there is "no designated take out ahead" needs to be placed near Highway 20 or canoe takeouts need to be allowed at the project site if it is safe to do so.

Until compliance with paragraph one of this condition has been satisfied and the additional comments included this plan is not approved.

Condition No. 10 - Recreation Plan (Construction Plans Section G)

Within 1 year of license issuance the Licensee shall file with the Commission a Recreation Plan that is approved by the Forest Service. The Plan shall, as appropriate, include:

- *Licensee responsibility for construction, operation and maintenance of recreation facilities and sites on National Forest System lands,*
- *Specific mitigation measures for existing recreation facilities and sites, including compliance with the Americans with Disabilities Act. The plan should include accommodations for the existing parking area and turn-around at the end of Forest Road #80136, Riverside Drive.*
- *Planning for future development or rehabilitation of recreation facilities or sites. Future development or rehabilitation of recreation sites shall include the parking area, the short trail connecting parking area to Box Canyon Trailhead and turn around on the south side of the Buffalo River, access via Forest Road 80136, Riverside Drive. Other future recreation developments should include interpretive signing for hydropower facilities and the Box Canyon trail along the Henry's Fork River. A site plan should be provided at a scale of one inch equals 30, 40 or 50 feet and approved by the Forest Service prior to construction activities.*

In general, the Recreation Plan as stated in section G is an outline of objectives to be included in the site plan that is to be developed. In general we agree with these objectives with some exceptions. The Forests objectives for this site are as follows:

- **Parking Lot** - A gravel surface parking lot with six parking spaces. Located on the southwest side of existing loop on the end of the road. Parking lot will include rock parking barriers that are partially buried. (Precautions will need to be taken to preserve the island that exists in the loop drive on the end of the road prior to construction.)
- **Trailhead Bulletin Board** - A 4 by 6 foot wood bulletin board mounted on treated 4"x4" posts. This would be located next to the parking lot at the Box Canyon Trailhead.
- **Interpretive Trail/Overlook and Signs** - A gravel surface trail from the parking lot to the overlook where 2-3 interpretive signs would be placed that provide interpretation for the hydro project. This trail and overlook would be accessible with a gravel surface of 3/4" minus gravel. The location for this overlook and signing is tentatively identified as an area just below the dam on a naturally occurring shelf above the river.
- **Trail to Dam** - A trail from the parking lot to the dam that is constructed of treated timber steps (if needed) that are backfilled with 3/4" minus gravel. (It may be possible to just gravel the trail depending on the grade of the trail)

No formal consultation has occurred between the licensee and the Forest Service regarding the preparation of the recreation plans. And to our knowledge the site plan

requested in Condition No. 10 has not been prepared by the licensee or approved by the Forest Service.

Until such time that these requirements have been met through a reiterative planning process the Recreation Plan is not approved.

Condition No. 12 - Heritage Resource Protection (Construction Plans Section H)

If during ground-disturbing activities or as a result of project operations, items of potential cultural, historical, archeological, or paleontological value are reported or discovered, or a known deposit of such items is disturbed on National Forest System lands the Licensee shall immediately cease work in the area so affected. The Licensee shall then notify the Forest Service and the Commission and shall not resume work on ground-disturbing activity until it receives written approval from the Forest Service.

If it deems it necessary, the Forest Service may require the Licensee to perform recovery, excavation, and preservation of the site and its artifacts at the Licensee's expense through provisions of an Archaeological Resources Protection Act permit issued by the Forest Service.

Under procedure 2 add the additional contact: Caribou-Targhee National Forest
Ali Abusaidi Forest Archaeologist
(208)-557-5777

Upon the addition of this contact information the Heritage Resource Protection Plan is considered approved.

Condition No. 13 - Scenery Management (Construction Plans Section I)

Within 1 year of license issuance the Licensee shall file with the Commission a Scenery Management Plan that is approved by the Forest Service. At a minimum, the Plan shall address:

- *Clearings, spoil piles, and project facilities including diversion structures, penstocks, pipes, ditches, powerhouses, other buildings, transmission line corridors, fish ladders and access roads,*
- *Facility configurations, alignments, building materials, colors, landscaping, and screening,*
- *Proposed mitigation and implementation schedules necessary to bring project facilities into compliance with Targhee National Forest Land and Resource Management Plan direction and provide protection of scenic value, one of the outstanding and remarkable values (ORV's) of the eligible Wild Henry's Fork and Buffalo Rivers. The plan will include measures to protect visual resources during construction which involve ground disturbance and vegetation removal.*

Mitigation measures shall include, but are not limited to:

- *Surface materials and colors of the exterior of the powerhouse,*
- *Use of native plant materials to screen facilities from view,*
- *Surface treatment colors and use of native rock on new concrete exposures,*
- *Use of barrier rocks around parking area,*
- *Reshaping and revegetating disturbed areas*

In general this plan is vague and will need more detail before it can be approved. We need to know what is going to be removed or added and how those changes may affect the appearance of the site. It may work well to incorporate this plan with the site plan requested in the Recreation Plan to provide a visual sense of what will occur. The revegetation plan is also a critical component of mitigation that should be integrated.

3.1 Intake Structure and Fish Screens

The plan should indicate what the concrete structure will look like in terms of surface treatment and color. The Forest recommends that the concrete be cast to resemble adjacent rock surfaces (to match the fish ladder structure) in terms of pattern, texture and color. All exposed concrete needs concrete dye mixed throughout. Please provide additional information regarding the height of the proposed mechanical screen cleaner or on its visibility from the Henrys Fork.

3.2 Sealing the Dam Face

The steel sheet piles that are proposed need to be of a type of steel that will readily rust or darken to blend into the surroundings. Please provide details on how the top edge is to be finished.

3.3 Re-texturing the Powerhouse

It is our understanding that Kodiak Black is the color of the existing block powerhouse and that the exposed concrete will be stuccoed in a suitable color that blends the exposed concrete with the block and lava outcrops. In addition if practical, please add shrub, tree plantings or large rocks around the foundation to give a lower profile to the structure as well as hide some of the foundation.

3.4 Parking and Staging Area

A site plan needs to be prepared and approved.

3.4 Fish Ladder

Alternative 1 as depicted in the final fishway design submitted March 11th is the preferred design. We have the following additional comments:

1. Match the color of the exposed concrete structure to the natural color of the surrounding basalt rock using dyed concrete for all visible surfaces.
2. Provide *horizontal relief and texture (varied depth of the face of the wall on a large scale to make use of natural light and shadow)* along the exposed vertical concrete surfaces as exists in the natural faces occurring in the area. Drawing number 2 depicts a 3" depth to provide texture in the wall. Depth should be varied across the face of the wall from as little as 3" to as much as 6" to take the most advantage of natural light and shadow to blend into the natural surroundings. Alternative 1 indicates a rough textured surface that is not obvious from drawing 2. The surface should contain as much texture as depicted in alternative 1.
3. Please provide *random* blocking along the vertical concrete surfaces to closely match the natural faces occurring in the area. The natural landscape in the river corridor is a combination of angular, irregular sized rectangular blocks and angular, irregular shaped boulders in a columnar and boulder arrangement. The final exterior of the fishway wall should be a combination of all of these elements: angular, irregular sized rectangular blocks, angular, irregular shaped boulders, a columnar pattern and a boulder like pattern matching the natural pattern behind the ladder.
4. The alternative 1 artist's rendition random relief pattern appears closer together than the 6" to 12" indicated in drawing 2. The artist's rendition is preferable than what appears to be wider spacing in drawing 2.
5. Please provide *random* vertical or edge relief along the top of the horizontal surfaces of the concrete *to break up the visual line*, similar in relief to surrounding natural surfaces. The top of the wall will be 7 1/2" wide according to drawing 2 and still allow for steel grating. This 7" portion of the wall must be randomly broken up horizontally to eliminate the unnaturally straight line. Straight lines and angles, along with random heights and lengths along the top of the wall would be sufficient. Too much symmetry should not be incorporated so it does not appear like the top of a castle wall.
6. The north elevation of the ladder in drawing 2 does not show any of the random relief patterns overlapping the top edge of the wall. Overlapping should occur randomly (so only a portion of the boulder/block is created) to help mimic the natural environment.
7. Native rock removed during construction should be backfilled along the base of the fishway in the river to hide the foundation.
8. The river channel west of the fishway and south of the dam should not appear to be dredged clean of native materials. Native rock and debris should be placed back in the river after construction on the dam is finished.
9. The east side of the ladder needs to "hug" the bank/rock wall as much as possible. Then rock can be placed behind and up to the top of the ladder wall. It will tie the ladder into the existing landscape and look much more natural from all viewing angles.
10. If feasible willow plantings and other shrubs could be planted in between the rocks next to the walls. This would help break up the long flat horizontal surface of the walls.

Condition No. 17 - Vegetation Management Plan (Construction Plans Section J)

Prior to any ground-disturbing activity, the Licensee shall file with the Commission a Vegetation Management Plan that is approved by the Forest Service. At a minimum the Plan shall:

- *Identify and prioritize (into high, moderate and low priority sites) all inadequately vegetated areas to be re-vegetated or rehabilitated along with an implementation schedule,*
- *List the species to be used along with planting locations, methods, and densities (emphasis shall be given to use of native species),*
- *Identify site preparation, irrigation, mulch, fertilizer, and herbivore protection requirements for plant establishment,*
- *Identify methods for prevention and control of noxious weeds. Treatment of existing infestations of highest priority weeds shall be initiated immediately upon approval of the vegetation management plan by the Commission,*
- *Identify all vegetation control methods the Licensee proposes to use at or along all project facilities,*
- *Explain re-vegetation and vegetation control methods and materials meet objectives for integrated noxious weed management, erosion control, wildlife habitat and other management direction,*
- *Develop a monitoring program to evaluate the effectiveness of re-vegetation, vegetation control, and noxious weed control measures, and*
- *Develop procedures for identification of additional measures that the licensee shall implement if monitoring reveals that re-vegetation and vegetation control is not successful or does not meet intended objectives.*

The Vegetation Management Plan is considered approved upon incorporation of the recommendations.

Section J - 8, Table 3. The Forest suggests removing sheep fescue (*Festuca ovina*) and elk sedge (*Carex geyeri*) from the seeding mix. The available cultivars of sheep fescue are all non-native and elk sedge should come in on its own and would be extremely expensive to purchase as seed - if found available. Increase the percentage of slender wheatgrass to replace sheep fescue and elk sedge.

There should be a section or paragraph detailing the quality and point of origin of seed and seedlings used. All seed needs to be certified weed free.

The number of shrubs to be used seems very extensive for the level of disturbance. Instead we recommend that the site be prepared and seeded the first year and plant the shrubs the next year if needed as determined by monitoring, i.e. are there shrubs and trees resprouting and establishing on their own. To preserve local site adaptations it is recommended that local stock be used or transplanted from approved surrounding locations. Topsoil should only be removed and stockpiled if absolutely necessary for construction. For example revegetation would be more effective for the concrete truck

access for the fishway if topsoil could be left in place and then ripped post construction. This would preserve the native seed bank and allow resprouting of some shrubs.

The Revegetation Plan may need modification through the Scenery Management Plan as there may be areas where the concern is more over visuals than erosion. For example from a visual standpoint we may request fewer and larger shrubs strategically placed.

Ripping should be done to a depth of at least 12 inches or to the depth practical where bedrock occurs.

Condition No. 18 & 19 BE and BA for Threatened, Endangered, and Sensitive Species (Construction plans Section K)

Condition No. 18 - Protection of Threatened and Endangered Species Plan

Within 90-days prior to any ground-disturbing activity that may affect a federally listed or proposed species and their critical habitat, the Licensee shall file with the Commission a Threatened, Endangered, and Proposed for Listing Species Plan that is approved by the Forest Service in consultation with appropriate Federal and State agencies. This Plan shall describe how the Licensee shall coordinate, consult, and prepare a biological assessment evaluating the potential impact that any action may have on listed and proposed species and their habitat. At a minimum the plan shall:

- *Develop procedures to minimize adverse effects to listed species,*
- *Ensure project-related activities shall meet restrictions included in site management plans for listed species,*
- *Develop implementation and effectiveness monitoring of measures taken or employed to reduce effects to listed species,*
- *Identify required elements contained within a biological assessment.*
- *All construction shall be timed to avoid conflicts with sensitive species.*

Condition No. 19 – Forest Service Sensitive Species Biological Evaluation

Within 90-days prior to implementing any activity that may affect a Forest Service sensitive species and their habitat, the Licensee shall file with the Commission a biological evaluation (BE) for Sensitive Species that is approved by the Forest Service. At a minimum incorporate the following mitigation in the BE:

- *Develop procedures to minimize adverse effects to sensitive species,*
- *Develop implementation and effectiveness monitoring of measures taken or employed to reduce effects to sensitive species,*
- *All construction shall be timed to avoid conflicts with sensitive species.*

The US Fish and Wildlife Service have accepted the determinations for Threatened and Endangered species.

The BE for Forest Service sensitive species is lacking in some details, however, we do not disagree with the determination of effects and we will consider the plan approved upon incorporation of the following changes.

Yellowstone cutthroat is also a sensitive species that occurs within the Henrys Fork and needs to be addressed in the BE. A "May Impact" determination would be appropriate.

Incorporate a summary table that displays the determinations for all sensitive species such as the one below.

Species	No Impact	May Impact Individuals Or Habitat, But Will Not Likely Contribute To A Trend Towards Federal Listing Or Loss Of Viability To The Population Or Species	Will Impact Individuals Or Habitat With A Consequence That The Action May Contribute To A Trend Towards Federal Listing Or Cause A Loss Of Viability To The Population Or Species	Beneficial Impact
Yellowstone Cutthroat		X		

Fishway Design Comments

Upon incorporation of the following comments the Forest Service considers the Fishway Design approved.

- The 4-6 inch rock to be placed within the ladder needs to be specified as 4-5" rounded river cobble.
- Drawings need to show water intake detail. There is no indication of how flows into ladder will be controlled or shut off.
- A short Guide wall (5 feet) at the exit is needed to guide fish away from entrainment into spillway or auxiliary flows to eliminate fall back. The fish trap will provide this ability when it is installed but, if it is not to be left permanently a guide wall will need to be constructed.
- Profile two on sheet 10 of 12 appears to be in error as the streambed profile is above the top of the weir.
- There is a risk that the 45 degree angled wall upstream of the fishway entrance will create a back eddy at the entrance disorienting fish and impeding the ability of fish to detect the entrance to the fishway. It is suggested to shorten the length

of wall that extends out into the pool, turn the entrance downstream, or lessen the angle of the wall so it is more parallel with the flows.

- Auxiliary water entering the last (bottom) pool needs to have a diffuser installed so maximum velocities are 1 foot per second or less so fish are attracted to the weir and orifice not the auxiliary water inflow.

THE HENRY'S FORK FOUNDATION, INC.



April 22, 2005

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RE: Buffalo River Hydroelectric Project, FERC Project #1413 Articles 405, 406, and construction plans.

Dear Brent:

The Henry's Fork Foundation (HFF) has received your letters of March 11th, 16th, and 22nd of 2005, requesting comments on proposed work identified in the license for FERC Project #1413. These three letters concern: 1) article 405 (proposed fishway design), 2) construction plans, and 3) article 406/Condition No. 14 (proposed fish screen on the powerhouse intake). The HFF offers the following comments for each of these three letters:

1) Article 405, fishway design

In general, the design characteristics of the fish ladder, i.e., the length, gradient, and predicted water velocities within, are all very conducive to the objective to pass four inch rainbow trout, at a minimum.

Will the plate on the side spill need to be adjusted manually to regulate flow in the ladder and will the side spill be managed in conjunction with a headgate (no detail is given for the exit of the ladder)? Similarly, no design (i.e., a guidewall) is shown for a means of preventing fish that exit the ladder from falling back over the adjacent spillway. Furthermore no design is presented for the fish trap to be constructed at the ladder exit. Please incorporate the designs of the above into your diagrams.

The 8" axillary water pipe that is situated along side the wall to the entrance of the fish ladder should likely be extended so that it is even with the end of the wall and the entrance. As currently designed, fish may be attracted to the axillary flow outlet and bypass the ladder entrance. Fish attraction to the axillary flow may be further lessened if a diffuser is installed on the outlet to the axillary flow.

The current sill, water flow, or both, that is downstream of the spillway should be modified so that fish are not attracted to or able to navigate upstream in this direction. Adult rainbow trout currently navigate in this direction to enter the orifice of the existing fishway. The proposed fish

ladder would have no means to pass fish around the dam if they migrate upstream past the proposed ladder entrance. If a blockage or impediments were placed downstream of the spillway then fish would then be more likely to enter the fish ladder rather than spending time and energy trying to navigate towards the spillway.

It is recommended that the notch on the top of the weirs and the orifices through the weirs be located on the same side of the pools within the fish ladder. This should provide for better orientation of the fish moving upstream in addition to providing resting areas on the opposite side of the pools.

It has come to my attention, by way of Lee Mabey's consultation with Brent Mefford (BOR Hydraulic Engineer), that the 45° angle of the ladder entrance may be problematic and that the angle should be lessened. Brent Mefford's suggestions of shortening the length of wall that extends into exit pool and turning the entrance downstream so that it is more parallel with the flow should be incorporated into the design.

2) Construction plans

Erosion Control Plan

3.2.3.2 Construction of the Fish Ladder:

Daily grab samples will be taken downstream of the fish ladder during construction. Where and when will the grab samples be taken?

4.2 Buffalo River Water Quality:

A compliance report of water quality monitoring will be furnished to the listed organizations three months after completion of the project. However, no mention is made of providing water quality information to the organizations during the construction phase. It is recommended that this information be made available to the organizations on a weekly basis during the construction.

Fishway and fish screen effectiveness monitoring, evaluation, and maintenance plan

2.1 Fish Screen Monitoring:

It is recommended that water velocity measurements be taken in front of the fish screen to evaluate if approach velocities meet the 0.8 feet per second for which the screen is designed.

2.2 Fish Ladder Monitoring:

No mention is made on the installation and maintenance of the video recording camera in the fish ladder. This camera (Henry's Fork Foundation equipment) had been used in the existing fish ladder to document upstream fish movement and was maintained (changing video tapes, etc) by the hydroelectric facility personnel. Furthermore, it is noted in Northwest Power Services letter of April 15, 2004 in appendix D-1 of this section of the plan that: "operating personnel...maintain recording equipment...for a period of three years..". Please include this language in the body of the construction plan document.

Data collected from the fish trapping at the ladder will be reviewed after one year. This review is proposed to help guide sampling when it is most efficient, i.e., data collection can be consolidated when the ladder is most used. In addition, it should also be included that data collection, i.e., frequency of trap checking, could potentially be expanded, when the fish ladder is most used.

It is also recommended that upon completion of the fish ladder that flow and velocity measurements are taken at several places within the ladder. This would allow an evaluation of the velocities predicted by the design criteria within holding pools and at orifices.

One of the primary objectives of facilitating better fish passage upstream of the Buffalo River hydroelectric project is to allow fish access to habitat in the Buffalo River, i.e., winter rearing habitat, which may be limiting in the Henry's Fork River. This access should facilitate increased recruitment of age 1-year old rainbow trout to the Henry's Fork River. As such, part of the objective of the dam modifications is to not only enhance upstream fish passage, but also to facilitate downstream passage. Therefore, some consideration should be given to an evaluation of the outmigration of juvenile trout at the Buffalo River hydroelectric facility. Previous attempts by the Henry's Fork Foundation to monitor juvenile outmigration were not very successful because of the difficulty of sampling in the Buffalo River upstream of the hydroelectric facility. In addition, sampling at the dam was inefficient because of the movement of fish into the turbine intake or under the dam. The proposed work on the facility such as: installing a smaller screen on the turbine intake and sealing the face of the dam should provide an enhanced opportunity to determine the outmigration of fish at the dam. This is especially important given that upstream passage should be greatly enhanced with the proposed fish ladder. Given the above, it is recommended that the operating personnel be made available to check an outmigrant trap if this type of sampling is deemed valuable by the reviewing organizations at a later date.

Recreation Plan

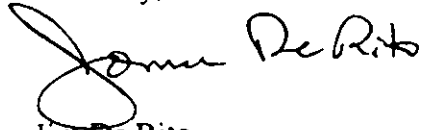
Will the Box Canyon trailhead at the parking area be accessible for hikers during the construction? If so, will a parking area be designated for these users during construction?

3) Article 406/Condition No. 14, proposed fish screen

The design of the proposed fish screen (1/4 inch mesh size with a large overall surface area of the screen) appears to address the desire to keep approach velocities around 0.8 feet per second. As noted above, upon completion of the intake structure then velocity measurements should be taken to verify that these screen criteria do result in the desired approach velocities. In addition, detailed records should be kept of any fish mortalities or impingements on the screen.

Thank you for informing the HFF about these license requirements and considering our comments.

Sincerely,



Jim De Rito
Conservation Director
Henry's Fork Foundation

cc: Lee Mabey, USFS
Gary Vecellio, IDFG
Scott Christensen, GYC



United States Department of the Interior
FISH AND WILDLIFE SERVICE
Snake River Fish and Wildlife Office
1387 S Vinnell Way, Suite 368
Boise, Idaho 83709



MAY 05 2005

Brent L. Smith
NW Power Services, Inc.
P.O. Box 535
Rigby, Idaho 83442

Subject: Buffalo River Hydroelectric Project, Fremont County, Idaho
-- Comments on Final Fishway Design
FERC #1413-032 OALS #05-0525

Dear Mr. Smith:

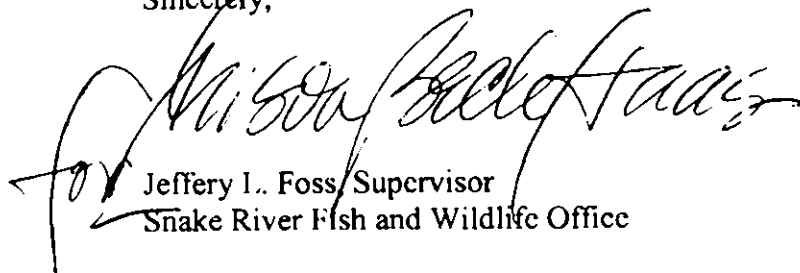
The Fish and Wildlife Service (Service) is writing to provide comments on the final design for the Buffalo River fishway (fishway). We received the final design and request for comments on March 14, 2005. We recognize that these comments will be received after the 30 day comment period you requested in your letter, and we request that they be considered to the extent possible. The Service is providing comments pursuant to our authorities under the Federal Power Act, as amended (16 U.S.C. 791 et seq.) and the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.).

The final fishway design proposed by Northwest Power Services, Inc., is intended to meet the requirements of Article 405 of the Subsequent License for the Buffalo River project issued by the Federal Energy Regulatory Commission on November 5, 2004. Based on our review, the final design meets the fish passage criteria previously recommended by the Service, USDA Forest Service, and Idaho Department of Fish and Game. The Service has the following two comments on the final design.

1. A short guide wall (e.g., 5 feet) located at the fishway exit is necessary to guide fish away from the spillway and auxiliary flows to prevent fall back and increase passage effectiveness. If the fish trap used for monitoring is left in place permanently a guide wall would not be necessary.
2. It is possible that the 45-degree angled wall at the entrance to the fishway may create a back eddy when higher flows occur, which could make it difficult for fish to detect the entrance of the fishway. This could be remedied by shortening the length of the wall, or by turning the entrance downstream, thereby lessening the angle and orienting the wall more parallel with the river flow.

The Service appreciates the Applicant's cooperative approach, and looks forward to continued discussions regarding this project. If you have any questions regarding our comments, please contact Kendra Womack at (208) 685-6955.

Sincerely,



for Jeffrey L. Foss, Supervisor
Snake River Fish and Wildlife Office

cc: FWS, Chubbuck (Deb Mignogno)
CTNF, Idaho Falls (Lee Mabey)
IDFG, HQ-Boise (Scott Grunder)
IDFG, Idaho Falls (Gary Vecellio)
FERC, Washington DC



United States
Department of
Agriculture

Forest
Service

Caribou-Targhee
National
Forest

1405 Hollipark Drive
Idaho Falls, ID 83401
208-524-7500

File Code: 2770
Date: July 11, 2005

Brent L. Smith
Northwest Power Services, Inc.
P.O. Box 535
Rigby, ID 83442

Re: Buffalo River Hydropower Project, FERC Project # 1413

Dear Brent:

The USDA Forest Service has received for review and comment the updated Recreation and Scenery Management Plans in your letter dated May 16, 2005. The Forest Service approves the Recreation and Scenery Management Plans as sufficient to meet Conditions No. 10, and 13(Article 401) of the license. This approval is based upon the Licensee's agreement with our previous comments and there incorporation into the plans.

Condition 11, Interpretive Display Plan, has been incorporated into the Recreation Management Plan. That plan relative to placement of the sign is approved. As agreed to at our May 27, 2005 meeting, the exact wording of the interpretive sign will be submitted to the Forest Service for approval.

We appreciate the opportunity to review these plans.

If you have any questions or need additional information, please contact Lee Mabey, Team Leader at (208) 557-5784.

Sincerely,

WES STUMBO
Acting Forest Supervisor



UNITED STATES OF AMERICA 114 FERC ¶62,196
FEDERAL ENERGY REGULATORY COMMISSION

Fall River Rural Electric Cooperative, Inc.

Project No. 1413-045 & 051

ORDER MODIFYING AND APPROVING RECREATION PLAN
AND INTERPRETIVE DISPLAY PLAN

(Issued February 28, 2006)

On July 26, 2005, Fall River Rural Electric Cooperative, Inc. (licensee) filed its recreation plan pursuant to article 401, and Forest Service (FS) condition No. 10, of the license for the Buffalo River Hydroelectric Project, issued November 5, 2004.¹ The recreation plan incorporates the interpretive display plan required under article 401, and FS condition No. 11 of the project license. The project is located on the Buffalo River near its confluence with the Henry's Fork River, north of Ashton, in Fremont County, Idaho, where it also occupies about 9.8 acres of land within the Targhee National Forest, administered by the FS.

ARTICLE 401

Article 401, in part, requires the licensee to file a recreation plan and interpretive display plan, for Commission approval, consistent with FS condition nos. 10 and 11, respectively, which are attached to the project license. The article also requires the licensee to prepare the plans in consultation with the Idaho Department of Fish and Game (IDFG), the Idaho Department of Environmental Quality (IDEQ), the Idaho Department of Parks and Recreation (IDPR), the U.S. Fish and Wildlife Service (FWS), and the Henry's Fork Foundation (HFF), and to include in its filing documentation of its consultation with these agencies.

Condition no. 10 requires the licensee to file for Commission approval, within one year of license issuance, a recreation plan that is approved by the FS. The plan, as appropriate, is to include:

- Licensee responsibility for construction, operation and maintenance of recreation facilities and sites on National Forest System lands.
- Specific mitigation measures for existing recreation facilities and sites, including compliance with the Americans with Disabilities Act (ADA). The plan should include ADA accommodations for the existing parking area and turn-around at the end of Forest Road #80136, Riverside Drive.

¹ 109 FERC ¶ 62,077.

- Planning for future development or rehabilitation of recreation facilities or sites. Future recreation improvements are to include parking area and the short trail connecting the parking area to Box Canyon Trailhead and turn-around on the south side of the Buffalo River. Other future recreation improvements should include interpretive signage for hydropower facilities, and the Box Canyon Trail along the Henry's Fork River. A site plan should be provided at a scale of one inch equals 30, 40 or 50 feet and approved by the FS prior to construction activities.

Condition no. 11 requires the licensee to file for Commission approval, within one year of license issuance, an interpretive display plan approved by the FS. The interpretive display is to provide a narrative history of the project; a description of project operations, benefits, and environmental measures; and allow the FS to provide general information about recreation opportunities and other public information.

LICENSEE'S PLANS

The proposed recreation plan describes existing recreation use in the project area; identifies specific recreation improvements, including interpretive signage, to be provided at the project; and contains site plans showing the type and location of the recreation improvements. The plan states the licensee will construct the recreation improvements and maintain the installed interpretive sign, while the FS will maintain all other recreation improvements. Regarding the interpretive display plan, the licensee proposes to install an interpretive sign at the project that includes the specific information identified in condition no. 11. Finally, the filing provides documentation of consultation with the required resource agencies, including the licensee's responses to agency comments.

AGENCY COMMENTS

By letter dated July 11, 2005, the FS approves the proposed recreation plan and interpretive display plan, based on the licensee's prior agreement to incorporate the FS's April 21, 2005 comments on the plans, and notes that the licensee has also agreed to submit the exact wording for the proposed interpretive display to the FS for approval. By letter dated April 13, 2005, the IDFG provided comments on the proposed recreation plan, recommending the installation of a boat landing at the site. The FWS, the IDPR, the IDEQ, and the HFF did not provide any substantive comments on the proposed plans.

DISCUSSION

Implementation Schedule

Article 401 requires, among other things, the licensee to file a recreation plan and interpretive display plan approved by the FS. The FS approved the proposed plans, based on the licensee's incorporation of FS comments (design objectives) in its April 21, 2005 letter and its submission of the exact wording of the interpretive display to the FS for approval. Although it is implied in its filing, the licensee does not specifically state the proposed recreation improvements and interpretive display will meet the FS's conditions of approval. To ensure that the proposed facilities are designed and constructed in accordance with the FS's approval, any Commission approval of the proposed plans should specifically require the licensee's full compliance with the FS's approval of the plans. In addition, we note the proposed plans do not specify when the proposed facilities would be constructed. Given the relatively minor nature of these facilities, we believe they can be completed and available for public use by July 15, 2006.

As-Built Drawings

In order to ensure that the facilities and improvements identified in the proposed plans are fully implemented, the licensee should file with the Commission as-built drawings of the proposed enhancements/improvements. These drawings should be filed within six months from the completion date of the facilities and should show the type and location of all existing and proposed facilities and improvements, including all facilities accessible by disabled persons and all interpretive signage.

Boat Landing Site

The IDFG requests the licensee to work with the IDFG, the IDPR, and the FS to consider building a non-motorized boating take-out site. Specifically, the IDFG states that the potential for improved recreational boating opportunities exists in the project area and that the installation of a boat landing and path to the parking area at the end of Riverside Drive would allow people with canoes or personal, non-motorized watercraft to exit the river near the parking area. The IDFG recommends the licensee and interested parties cooperate and explore the possibility of including such a facility as part of the project's recreation plan. The licensee states that it will cooperate with the IDFG and FS in planning future recreation development in the project area, and that the suggested recreation facilities are not likely to conflict with project features. However, it does not intend to include such a facility as a project feature.

The proposed recreation plan has been approved by the FS and contains the specific recreation improvements identified in article 401 (FS condition no.10) of the license. The recommended boat landing is not listed as one of the required

improvements. The Commission recently issued the license for the Buffalo River Project. Our review of the license and the associated environmental assessment indicates that the recommended boating facility was not raised as an issue during the recent licensing proceeding and there is no indication that such a facility is needed at the site. Further, IDFG's April 13, 2005 letter contains very little information in support of the recommended facility.

Given this information, we do not believe the recommended facility is appropriate at this time and we concur with the licensee's plans to work with appropriate agencies to address future recreation needs in the project area. In the future, if the licensee decides to install a boat landing at the project, it should file an application with the Commission to amend its approved recreation plan to provide the facility.

CONCLUSION

Implementation of the proposed recreation plan and proposed interpretive display plan, as modified by staff, would enhance recreational opportunities in the project area. The filed plans meet the requirements of article 401 and FS condition nos. 10 and 11 and should, therefore, be approved.

The Director orders:

(A) Fall River Rural Electric Cooperative, Inc.'s recreation plan and interpretive display plan, filed July 26, 2005 pursuant to article 401, and Forest Service condition nos. 10 and 11, of the license for the Buffalo River Hydroelectric Project, as modified by ordering paragraphs (B), (C), and (D), are approved.

(B) The recreation improvements identified in the plans, including the interpretive display, shall be designed, constructed, and maintained in accordance with the Forest Service's approval of the plans.

(C) The recreation improvements identified in the recreation plan, including the interpretive display, shall be completed and available for public use no later than July 15, 2006.

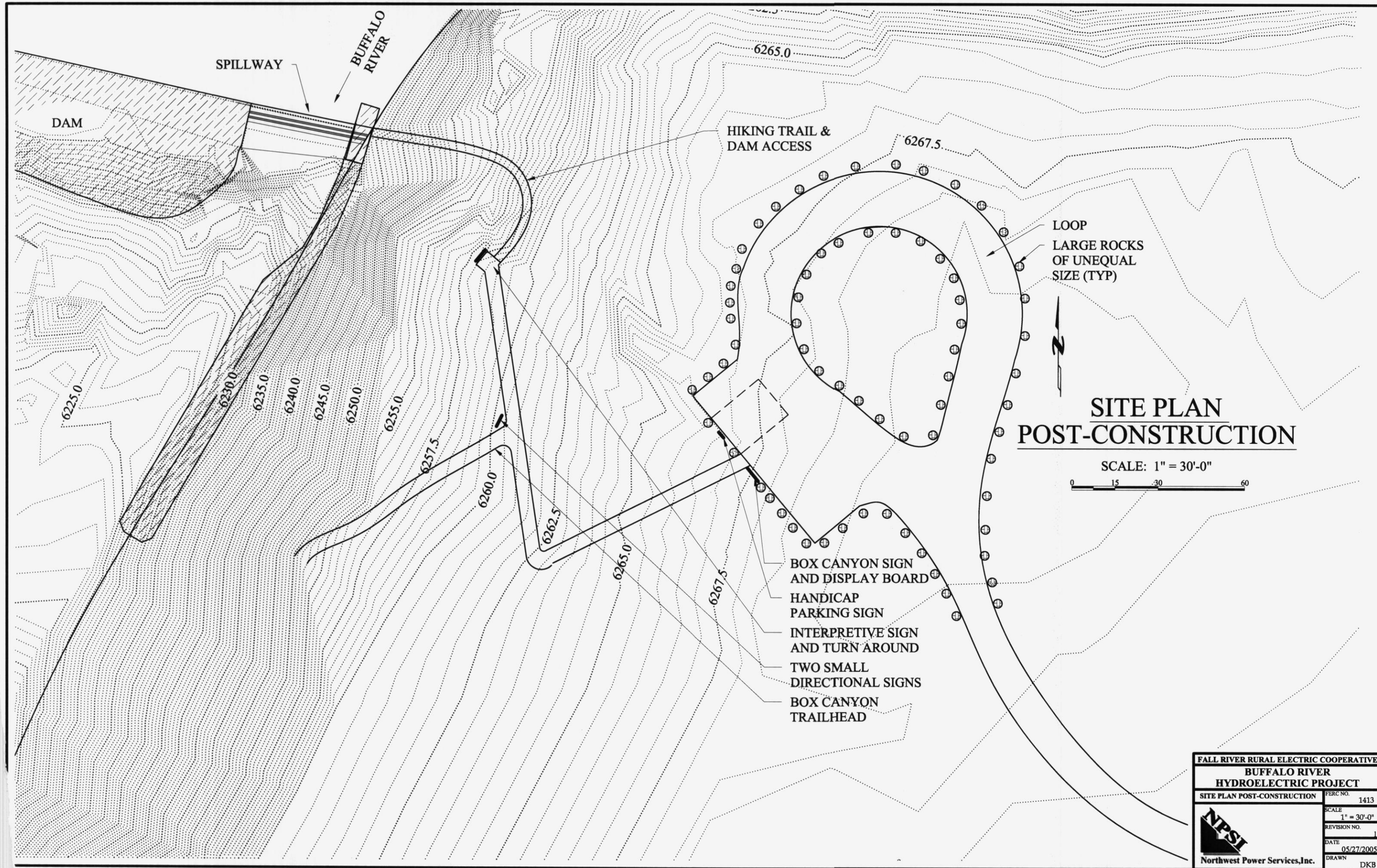
(D) Within six months from the completion date of the facilities and improvements identified in the plans, the licensee shall file with the Commission as-built drawings of the proposed enhancements/improvements. The drawings shall show the type and location of all existing and proposed facilities and improvements in relation to the project boundary, including all facilities accessible by disabled persons and all interpretive signage.

Project No. 1413-045 & -051

5

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

John E. Estep
Chief, Land Resources Branch
Division of Hydropower
Administration and Compliance



**SITE PLAN
POST-CONSTRUCTION**

SCALE: 1" = 30'-0"



- BOX CANYON SIGN AND DISPLAY BOARD
- HANDICAP PARKING SIGN
- INTERPRETIVE SIGN AND TURN AROUND
- TWO SMALL DIRECTIONAL SIGNS
- BOX CANYON TRAILHEAD

FALL RIVER RURAL ELECTRIC COOPERATIVE	
BUFFALO RIVER HYDROELECTRIC PROJECT	
SITE PLAN POST-CONSTRUCTION	PERC NO. 1413
 Northwest Power Services, Inc.	SCALE 1" = 30'-0"
	REVISION NO. 1
	DATE 05/27/2005
	DRAWN DKB

0507270187-003

Figure 3

UNITED STATES OF AMERICA 121 FERC ¶ 62,075
FEDERAL ENERGY REGULATORY COMMISSION

Fall River Rural Electric Cooperative, Inc.

Project No. 1413-058

ORDER APPROVING AS-BUILT RECREATION DRAWING

(Issued October 30, 2007)

On September 4, 2007 Northwest Power Services Inc., on behalf of Fall River Rural Electric Cooperative, Inc. (licensee), filed an as-built drawing of specific recreation enhancements/improvements completed for the Buffalo River Hydroelectric Project, FERC No. 1413 pursuant to the Order Modifying and Approving Recreation Plan and Interpretive Display Plan issued February 28, 2006. The Buffalo River Hydroelectric Project is located on the Buffalo River near its confluence with the Henry's Fork River in Fremont County, Idaho. The project occupies about 9.8 acres of land with the Targhee National Forest, administered by the U.S. Forest Service (FS).

Pursuant to ordering paragraph (D) of the February 28 order, the Commission required the licensee to file as-built drawings of specific recreation facilities within six months of their completion. These facilities include a parking area with a handicapped parking spot at the Box Canyon trailhead; an access trail; vehicle turn-around area; and interpretive and directional signage. The drawings are to show the type and location of all existing and proposed facilities and improvements in relation to the project boundary, including all facilities accessible to disabled persons and all interpretive signage.

LICENSEE'S FILING

The licensee filed the required as-built drawing (i.e. Exhibit R drawing) on September 4, 2007. On October 15, 2007, the licensee provided Commission staff additional information about the interpretive signage and the FS's approval of the signage. The Exhibit R drawing accurately depicts the required recreation facilities and signage and fulfills the requirements of ordering paragraph (D) of the Commission's February 28 order. For these reasons, the drawing is approved by this order.

The Director orders:

(A) The following Exhibit R Drawing, filed on September 4, 2007, is approved and made part of the license:

Exhibit	FERC No.	Superseding	Title
R-1	1413-1014	none	As-Built (Recreation Improvements)

(B) Within 45 days of the date of issuance of this order, the Licensee shall file the approved exhibit drawing in aperture card and electronic file formats.

(a) Three sets of the approved exhibit drawings shall be reproduced on silver or gelatin 35mm microfilm. All microfilm shall be mounted on type D (3-1/4" X 7-3/8") aperture cards. Prior to microfilming, the FERC Project Drawing Number (i.e., P- 1413-1014) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number shall be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (e.g., R-1), Drawing Title, and date of this order shall be typed on the upper left corner of each aperture card. See Figure 1.

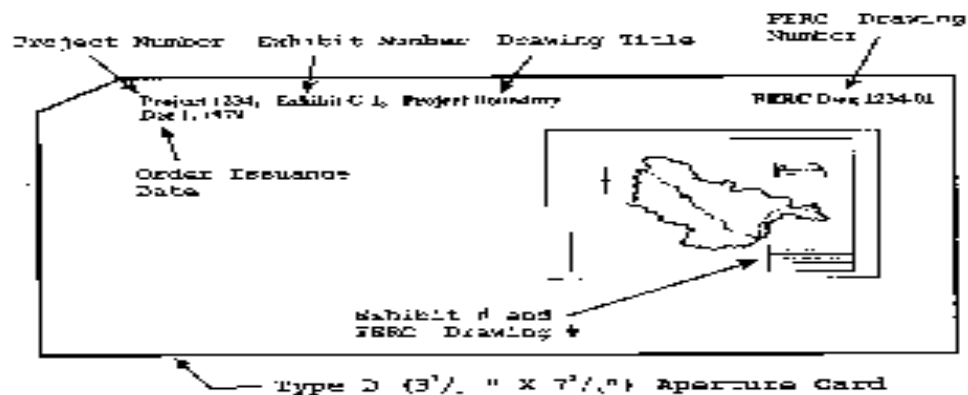


Figure 1 Sample Aperture Card Format

Two of the sets of aperture cards shall be filed with the Secretary of the Commission, ATTN: OEP/DHAC. The third set shall be filed with the Commission's Division of Dam Safety and Inspections Portland Regional Office.

(b) The licensee shall file two separate sets of exhibit drawings in electronic format with the Secretary of the Commission, ATTN: OEP/DHAC. A third set shall be filed with the Commission's Division of Dam Safety and Inspections Portland Regional Office. Exhibit R drawings must be identified as **(NIP)**

material under 18 CFR §388.112. Each drawing must be a separate electronic file, and the file name shall include: FERC Drawing Number, FERC Exhibit, Drawing Title, date of this order, and file extension [e.g., P-1413-1014, R-1, MM-DD-2007.TIF]. Electronic drawings shall meet the following format specification:

IMAGERY - black & white raster file

FILE TYPE – Tagged Image File Format, (TIFF) CCITT Group 4

RESOLUTION – 300 dpi

DRAWING SIZE FORMAT – 24” X 36” (min), 28” X 40” (max)

FILE SIZE – less than 1 MB

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

Robert J. Fletcher
Chief, Land Resources Branch
Division of Hydropower
Administration and Compliance

**ENVIRONMENTAL INSPECTION REPORT
(ELECTRONICALLY SUBMITTED)
FEDERAL ENERGY REGULATORY COMMISSION**

PORTLAND REGIONAL OFFICE

	Date of Inspection	<u>July 27, 2010</u>	
Name	<u>Buffalo River</u>	Project No.	<u>1413</u>
Licensee/Exemptee	<u>Fall River Rural Electric Coop., Inc.</u>	License Type	<u>Minor</u>
License Issued	<u>November 1, 2004</u>	License Expires	<u>October 21, 2044</u>
Location	<u>Buffalo River</u>		<u>Targhee National Forest</u>
	Waterway		Reservation
	<u>Freemont</u>		<u>Idaho</u>
	County		State
Inspector	<u>Blake Condo</u>	Date	<u>August 27, 2010</u>
Licensee Representatives	<u>Mr. Brent Smith</u>		
Other Participants	<u>None</u>		

Summary of Findings

This report covers conditions observed on the day of the inspection and the availability of recreational facilities, public safety signage and devices, and compliance with the environmental license requirements for the Buffalo River Hydroelectric Project.

Flow information: 100 cubic feet per second (cfs) diverted for power generation;
Approximately 190 cfs in Buffalo River

The licensee was able to demonstrate overall compliance with relevant articles through the examination of records, testing of works, and visual inspection of facilities with the exception of three follow-up action items that were noted during the inspection of the project:

- 1) The posted Part 8 sign does not meet all the requirements set forth in Section 8.2 (a) of the Federal Power Act;

FERC Project No. 1413

- 2) Removal of an old section of trashrack located adjacent to the stairwell to the powerhouse; and
- 3) Installation of an oil separator or other method of oil capture on the sump pump line in the powerhouse that feeds directly into the Buffalo River tailrace.

The licensee was informed of the follow-up items during the inspection and again by letter dated August 19, 2010.

Submitted August 27, 2010

Blake Condo
Senior Environmental Scientist

FERC Project No. 1413

A. PROJECT PROFILE

The Buffalo River Hydroelectric Project is owned and operated by Fall River Rural Electric Cooperative, Inc. The run-of-river project is located on the Buffalo River near its confluence with the Henry's Fork River, north of Ashton, in Fremont County, Idaho. The project occupies almost 10 acres of land within the Targhee National Forest, administered by the U.S. Department of Agriculture, Forest Service (Forest Service). The project continuously diverts 100 cfs for power generation while the excess remains in the natural stream course via a fish ladder release and a surface outlet spillway.

The project consist of: (1) a 142-foot-long by 12-foot-high timber-faced rock-filled diversion dam; (2) a 40-foot-long by 3-foot-high concrete slab spillway with stop logs; (3) a 270-foot-long fish passage structure; (4) a concrete intake structure with a 5-foot steel slide gate; (5) a trashrack; (6) a 52-foot-long by 5-foot-diameter concrete encased steel penstock; (7) a 34-foot-long by 22-foot-high masonry block powerhouse containing a 250-kW Bouvier Kaplan inclined shaft turbine; (8) a 1,800-foot-long underground transmission line; and (9) other appurtenant facilities.

The previous Environmental Inspection was conducted on August 16, 2006. All environmental and public use aspects of the project were found satisfactory and no follow-up actions were required.

B. INSPECTION FINDINGS

Requirements	Date of Requirement	Follow-Up Needed	Photo Nos.
FISH AND WILDLIFE RESOURCES			
Standard Article 6 requires the licensee to install and thereafter maintain gages and stream gaging stations for the purpose of determining the stage and flow of the stream on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works.	O: 11/5/04	No	--
Standard Article 11 requires the licensee to construct, maintain, and operate facilities for the conservation and development of fish and wildlife resources.	O: 11/5/04	No	2, 4
Article 402 requires the licensee to operate the project in a run-of-river mode for the protection of aquatic resources in the Buffalo River and Henry's Fork River in the project area.	O: 11/5/04 F: 11/7/05 AP: 8/10/05	No	--

FERC Project No. 1413

Requirements	Date of Requirement	Follow-Up Needed	Photo Nos.
<p>Article 403 requires the license after consultation with the U.S. Geological Survey (USGS), Idaho Department of Fish and Game (IDFG), Forest Service, and U.S. Fish and Wildlife Service (FWS), and Idaho Department of Environmental Quality (IDEQ) to develop an operational compliance monitoring plan.</p> <p>Operational Compliance Plan filed by the licensee.</p> <p>Plan approved by the Commission.</p>	<p>O: 11/5/04 F: 12/19/06 AP: 3/2/07</p>	No	--
<p>Article 404 requires the licensee after consultation with IDFG, Forest Service, FWS, and IDEQ to create a Hazardous Substances Plan to protect fish and wildlife resources from adverse effects associated with fuel and hazardous substance spills at the project.</p> <p>Hazardous Substances Plan filed by the licensee.</p> <p>Plan approved by the Commission.</p>	<p>O: 11/5/04 F: 5/11/05 AP: 5/31/05</p>	No	--
<p>Article 405 requires the licensee to construct or install, operate, and maintain a fishway.</p>	<p>O: 11/5/04</p>	No	2, 4
<p>Article 406 requires the licensee to construct or install, operate, and maintain a fish screen.</p>	<p>O: 11/5/04</p>	No	2, 4
<p>Article 407 requires the licensee to develop a plan of conducting post-construction monitoring and evaluation of the fishway and fish screen required by articles 405 and 406 for a period of 3 years and every third year thereafter for the term of the license.</p> <p>Most recent monitoring report filed by the licensee.</p> <p>Report received and approved by the Commission.</p>	<p>O: 11/5/04 F: 5/17/10 AP: 8/23/10</p>	No	--
<p>Article 408 requires that at least six months before the start of fishway construction/installation required by license article 405, the licensee shall file a construction/installation plan and schedule that includes a provision for conducting a fishway construction activities only during the months of August through October in order to avoid disturbance to rainbow trout spawning movements and rearing of newly hatched rainbow trout fry and displacement of wintering trumpeter swans.</p>	<p>O: 11/5/04</p>	No	--
<p>Article 409 requires the license to construct, operate, and maintain, or to provide for the construction, operation and maintenance of such fishways as may be prescribed by the Secretary of the Interior under Section 18 of the Federal Power Act.</p>	<p>O: 11/5/04</p>	No	--
RECREATION RESOURCES			
<p>Standard Article 10 requires on the application of any person, association, corporation, federal agency, state or municipality, the licensee to permit such reasonable use of its reservoir or other project properties.</p>	<p>O: 11/5/04</p>	No	--
<p>Standard Article 13 requires the licensee to allow free public access, to a reasonable extent, to project waters and adjacent project lands.</p>	<p>O: 11/5/04</p>	No	9
<p>18 CFR, Part 8 requirements: Recreation signage and posting.</p>	<p>O: 11/5/04</p>	Yes	--

FERC Project No. 1413

Requirements	Date of Requirement	Follow-Up Needed	Photo Nos.
<p>Article 401 requires the licensee to develop a recreation plan within a year of license issuance.</p> <p>Recreation plan filed by the licensee.</p> <p>Recreation plan approved by the Commission.</p> <p>As-built drawings of recreation enhancements/improvements filed.</p> <p>As-built drawings approved by the Commission.</p>	<p>O: 11/5/04 F: 7/22/05 AP: 2/28/06 F: 9/4/07 AP: 10/30/07</p>	No	5, 9
CULTURAL RESOURCES			
<p>Article 401 requires the licensee to develop a Heritage Resource Protection Plan (HRPP) if items of potential cultural, historical, archeological, or paleontological value are reported or discovered at the project area.</p>	<p>O: 11/5/04 F: 5/11/05 AP: 6/8/05</p>	No	--
<p>Article 411 requires the licensee to consult with the State Historic Preservation Officer (SHPO) before starting any future land-clearing or land-disturbing activities.</p>	<p>O: 11/5/04</p>	No	--
PUBLIC SAFETY			
<p>Article 401 requires the licensee to develop a public safety plan within 6 months of license issuance.</p>	<p>O: 11/5/04 F: 5/13/05</p>	No	7
<p>18 CFR, Part 12: requires facilities and measures to ensure public safety.</p>	<p>O: 11/5/04</p>	No	7
OTHER ENVIRONMENTAL RESOURCES			
<p>Standard Article 14 requires the licensee to take measures to prevent soil erosion, stream sedimentation, and any form of water or air pollution.</p>	<p>O: 11/5/04</p>	Yes	--
<p>Standard Article 15 requires the licensee to clear and keep clear all lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which result from maintenance, operation, or alteration of project works.</p>	<p>O: 11/5/04</p>	Yes	8
<p>Standard Article 22 requires the licensee to make a provision for avoiding inductive interference between any project transmission line or other project facility and any radio installation, telephone line, or other communication facility installed or constructed before or after construction of such project transmission line or other project facility and owned, operated, or used by such agency of the United States in administering the lands under its jurisdiction.</p>	<p>O: 11/5/04</p>	No	--
<p>Standard Article 23 requires the licensee to keep the transmission line right of ways clear of new growth, all refuse, and inflammable materials.</p>	<p>O: 11/5/04</p>	No	--
<p>Article 401 requires the licensee to develop plans such as a public safety plan; a road use permit; a recreation plan; an interpretive display; a heritage resource protection plan; a scenery management plan; an erosion control plan; a vegetation management plan; a protection of threatened and endangered species plan; and a sensitive species biological evaluation.</p>	<p>O: 11/5/04 F: 5/11/05 F: 7/22/05 AP: 2/28/06</p>	No	5, 7, 9

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Requirements	Date of Requirement	Follow-Up Needed	Photo Nos.
Article 410 requires the licensee, after consultation with IDFG, Forest Service, and FWS, to develop a Diversion Operation Plan to maintain the Buffalo River channel in the project area and pass large woody debris past the project.	O: 11/5/04 F: 5/11/05	No	--

O: Order; 18 CFR: Title 18 Code of Federal Regulations; AP: Approved; AM: Amended; F: Filed; Form L-16 Standard Articles for Constructed minor project affecting lands of the United States (October 1975).

Note: Form 80 exempted 3/98

C. COMMENTS AND FOLLOW-UP

Based on file reviews, discussions, and field observations made during the inspection, no items of noncompliance were found with the exception of three follow up items discussed below. The licensee was informed of the follow-up items on the day of the inspection and again by letter dated August 19, 2010. The following comments and observations are included:

(1) Fish and Wildlife Resources: The licensee maintains a manual gage upstream of the dam on a bridge over the Buffalo River. The trashrack and fish screen at the project intake is cleaned anywhere from once a day to few times a week depending on the need. The trashrack has a new automated rake which was placed into service in 2005, along with expanded sidewalk and decking. The licensee has constructed a new fish ladder that is being monitored using a fish trap to determine the ladder's effectiveness. The licensee filed the 2009 fishway and fish screen monitoring reports on May 17, 2010, pursuant to the Order Modifying and Approving Fishway and Fish Screen Monitoring Plan (article 407). The 2009 report states that operating personnel monitored the fish screen and that during this effort, no fish were found on the project intake screen. In addition, operating personnel reported 1,009 fish using the fishway as monitored by the trap. The next report is due March 1, 2013.

(2) Recreation Resources: The licensee filed as-built drawings of the recently installed recreation enhancements and improvements at the project on September 4, 2007. The Commission approved the drawings on October 30, 2007. The public access area is located to east of the dam and includes a parking area with a handicapped parking spot at the Box Canyon trailhead, an access trail with overlook, vehicle turn-around area, and interpretive and directional signage (photos 5 and 9).

Signage for the project did not include all the requirements for recreational signage (see 18 CFR Chapter 1, Part 8.2 (a)). Possible revision or replacement of the existing sign that would meet the Part 8 requirements to include all the necessary missing language was discussed with the licensee during the inspection and in the August 19, 2010 follow up letter.

(3) Cultural Resources: Article 401 requires the licensee to develop a Heritage Resource Protection Plan (HRMP), in consultation with the Forest Service, to mitigate

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the project's effect on items of potential cultural, historical, archeological, or paleontological value discovered or reported during ground-disturbing activities or as a result of project operations. On May 13, 2005, the licensee filed its HRMP pursuant to article 401 of the license and Forest Service Condition No. 12. The plan, which included revisions from the Forest Service, was approved by the Commission on June 8, 2005. The licensee appears to be in compliance with cultural resource requirements.

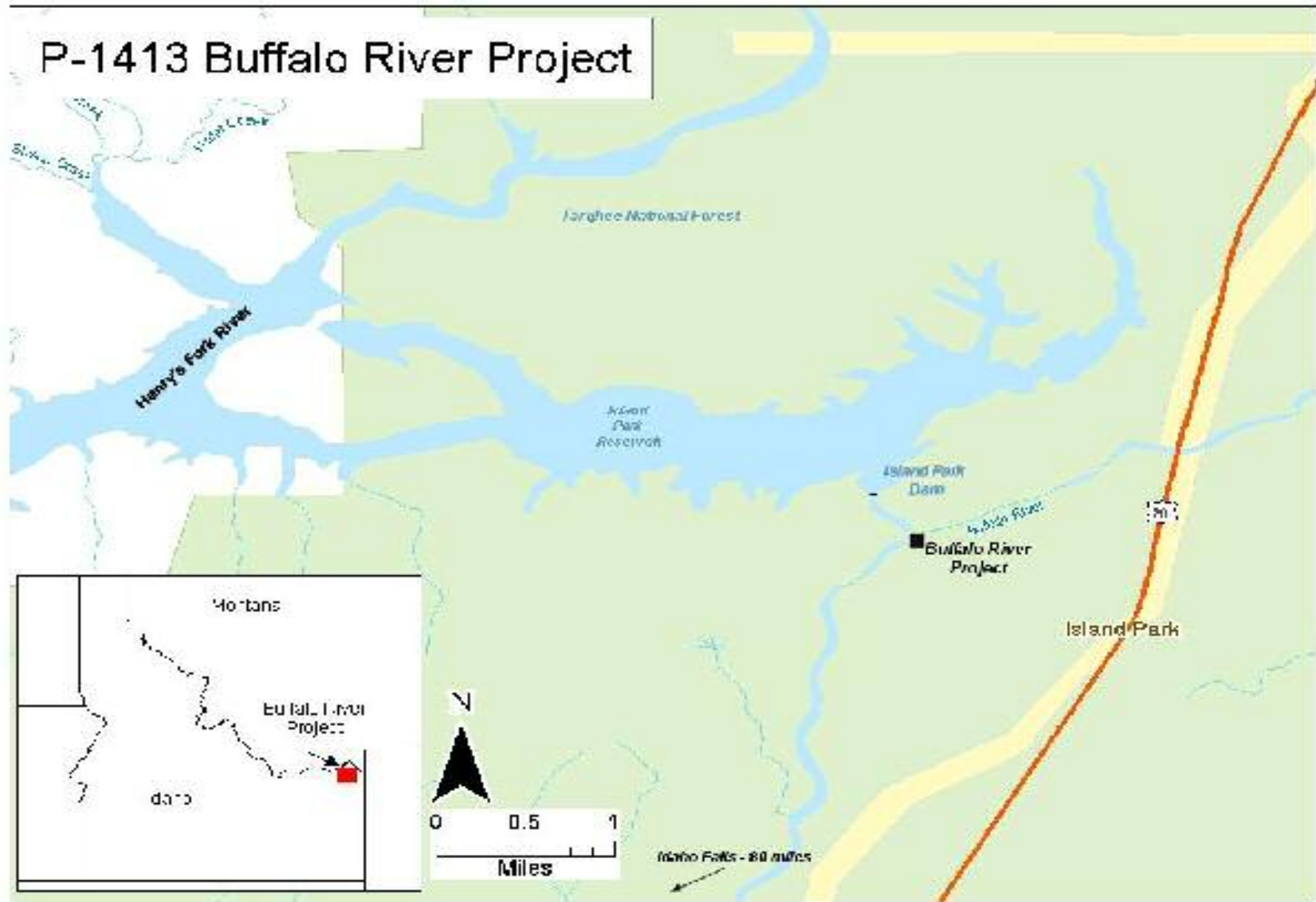
(4) Public Safety: The licensee filed a public safety plan on May 13, 2005 in accordance with article 401 of the license. The project facilities were secured and warning signs notifying users of potential hazards were prominently displayed throughout the project area.

An old section of trashrack (photo 8) and woody debris located adjacent to the powerhouse stairwell was confirmed as rubbish during the inspection. The trashrack may pose a safety hazard and should be removed and disposed of properly. No other public safety concerns were observed at the project.

(5) Other Environmental Resources: No new or on-going erosion problems currently exist at the project. It was observed that your pumps for the sump pit return line drain directly into the Buffalo River tailrace. In order to ensure protection of water quality and to avoid contamination, it was discussed onsite that an oil separator or other method of oil capture needs to be installed in the return line to extract any petroleum products that may drain into the sump. This is a follow up item.

D. EXHIBITS AND PHOTOGRAPHS

The following are provided to show the location of the project and to illustrate project features: project location map, photo location map, and 9 photographs.



Project location map for the Buffalo River Project, FERC No. 1413.

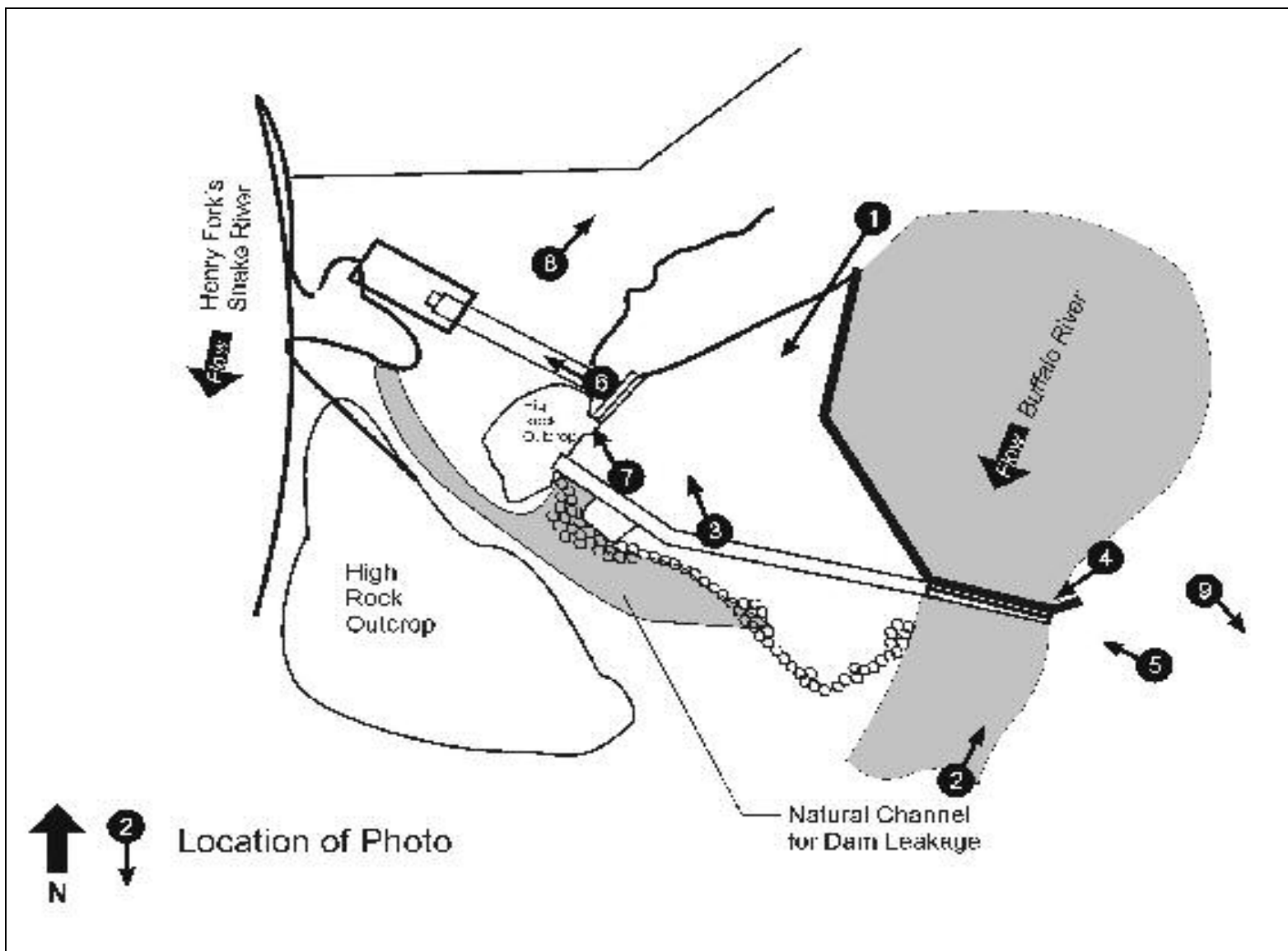


Photo location map for the Buffalo River Project, FERC No. 1413.

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Photo 1: View looking south from the reservoir looking at the trashrack and automated rake on the right. The fishway is located in the background.



Photo 2: View looking north from downstream showing the spillway. The fishway is located along the right shoreline.

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Photo 3: View looking north at the cleaned section of the intake trashrack.



Photo 4: View looking west at the fishway intake.

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Photo 5: A view of the descriptive signage with the project in the background, from the scenic overlook, just down from the public access parking area.



Photo 6: View looking west at the penstock towards the powerhouse. Henry's Fork River is in the background.

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Photo 7: Warning sign located near the intake posted on the outcropping.



Photo 8: Photo of the discarded trashrack and debris located adjacent to the stairs to the powerhouse that needs to be removed. This is a follow up item.

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Photo 9: New recreational access area located to the east of the dam. Facilities include a parking area with a handicapped parking spot at the Box Canyon trailhead, and dam access trail, vehicle turn-around area, and interpretive and directional signage.

Document Content(s)

p-1413 2010 Environmental Inspection Report.DOC.....1-14

From: [Bingman, Mark -FS](#)
To: [Katie Sellers](#)
Cc: [Mabey, Lee -FS](#); [Davy, Elizabeth -FS](#); gsmelser@fed.us; [Laura Cowan](#)
Subject: RE: Buffalo River Hydroelectric Project LIHI Certification - Request for US Forest Service Feedback
Date: Thursday, May 12, 2016 1:29:07 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image006.png](#)
[102715_FS_inspection_letter.pdf](#)

Hello Katie,

Our response to your questions is shown in **blue font** below.

Please, let me know if you need something more. Thanks!



Mark Bingman
Natural Resource Specialist
Forest Service
Caribou-Targhee National Forest
Ashton/Island Park/Dubois Ranger Districts

p: 208-652-1228
c: 208-313-7820
f: 208-652-7863
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PO Box 858
46 Highway 20
Ashton, ID 83420
www.fs.fed.us



Caring for the land and serving people

From: Katie Sellers [<mailto:Katie.Sellers@KleinschmidtGroup.com>]
Sent: Wednesday, April 13, 2016 9:41 AM
To: gsmelser@fed.us; Davy, Elizabeth -FS <edavy@fs.fed.us>
Subject: Buffalo River Hydroelectric Project LIHI Certification - Request for US Forest Service Feedback

Dear Mr. Smelser,

Kleinschmidt Associates is assisting Fall River Rural Electric Cooperative, Inc. (Fall River) with applying for certifications from the Low Impact Hydropower Institute (LIHI) for the Buffalo River Hydroelectric Project (FERC No. 1413) (Project). LIHI is a non-profit organization dedicated to reducing the impacts of hydropower generation through the certification of hydropower projects that have avoided or reduced their environmental impacts pursuant to LIHI criteria. LIHI has taken a first review of the Buffalo River LIHI certification application and has asked, before the submission of a final certification application, that we follow-up with the US Forest Service (USFS) to confer that the Project is operating in compliance with USFS conditions. With that said, could you please confirm/comment on the following?

-Confirm that USFS fish entrainment protection conditions issued during the Project's 2004 FERC relicensing process are still valid and the most recent conditions from your resource agency.

Entrapment conditions are still valid. (See attached inspection letter.)

-Confirm that the Project is operating in compliance with the USFS most recent fish entrainment protection conditions.

Fall River is in compliance.

-Confirm that the Project is operating in compliance with 2004 USFS Condition No. 12 Heritage Resource Protection.

Fall River is in compliance.

-Confirm that the Project is operating in compliance with 2004 USFS Condition No. 10 Recreation Plan.

Fall River is in compliance.

Please do let me know if I can provide you with any further information for this review or if I should be directed to another point of contact.

Thank you in advance for your time,
Katie Sellers

Katie Sellers

Regulatory Coordinator

Kleinschmidt

Office: 207-416-1218

www.KleinschmidtGroup.com



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United States
Department of
Agriculture

Forest
Service

Ashton/Island Park Ranger District

46 South Highway 20
P.O. Box 858
Ashton, ID 83420
208-652-7442
FAX: 208-652-7863

File Code: 2720
Date: October 27, 2015

Nicholas E. Josten
Geo Sense
2742 St. Charles Ave
Idaho Falls, ID 83404

Dear Nick,

The Island Park Hydroelectric facilities at Island Park Dam and Buffalo River Dam were inspected for compliance on September 25, 2015.

The facilities were found to be in compliance with the terms and conditions of the Special Use Permit and the 4(e) condition required by the Forest Service and the FERC License.

This constitutes our annual review of the facility and its operation as specified in the Forest Service manual Section 2770 and Article 104 of the FERC project license.

Sincerely,

ELIZABETH DAVY
District Ranger

cc: Fall River Electric 1150 North 3400 East, Ashton, ID 83420



EXHIBIT A

PROJECT CONTACT INFORMATION FORM

PROJECT CONTACT FORM

Project Name: Buffalo River Hydroelectric Project FERC No. P-1413

Project Owner/Operator:

Name and Title Bryan Case, General Manager

Company Fall River Rural Electric Cooperative, Inc.

Phone 208-652-7051

Email address bryan.case@fallriverelectric.com

Please include this email address in LIHI e-newsletter distribution _____

Mailing Address 1150 North 3400 East, Ashton, Idaho 83420

Consulting firm that manages LIHI program participation (if applicable):

Name Laura Cowan, Regulatory Coordinator

Company Kleinschmidt Associates

Phone 717-983-4056

Email address Laura.Cowan@KleinschmidtGroup.com

Please include this email address in LIHI e-newsletter distribution _____

Mailing Address P.O. Box 278, 400 Historic Drive, Strasburg, PA 17579

Party responsible for compliance with LIHI certification requirements:

Name and Title Mark Chandler, Hydro Supervisor

Phone 208-652-7051

Email address Mark.Chandler@fallriverelectric.com

Please include this email address in LIHI e-newsletter distribution _____

Mailing Address 1150 North 3400 East, Ashton, Idaho 83420

Party responsible for accounts payable:

Name and Title Roz Jenkins, Accounting Specialist

Phone 208-652-7431

Email address roz.jenkins2@fallriverelectric.com

Mailing Address 1150 North 3400 East, Ashton, Idaho 83420

Project Owner/Operator Signature

10-26-16
Date